IMPACT OF INTERNATIONAL FINANCIAL REPORTING STANDARD 9 (IFRS 9) IMPLEMENTATION ON FINANCIAL PERFORMANCE OF COMMERCIAL BANKS IN KENYA

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DECLARATION

I declare that this research project is my original work and has not been previously published or submitted elsewhere for award of a degree. I also declare that this document contains no material written or published by other people except where due reference is made and author duly acknowledged.

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DEDICATION

I dedicate this work to my parents for their sacrifice and commitment to ensuring that I always had the best educational opportunities. I also dedicate this to my family, especially my partner, for the constant support throughout my academic life.

ACKNOWLEDGEMENT

I greatly acknowledge and pay gratitude to my supervisor for the guidance throughout the course of this project. My academic colleagues have been invaluable. I also salute my research assistants for the gruelling work of collecting data to satisfy the demands of this study.

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LIST OF ACRONYMS AND ABBREVIATIONS

CBK: Central Bank of Kenya

IFRS: International Financial Reporting Standard

IASB: International Accounting Standards Board

IAS: International Accounting Standards

ECL: Expected Credit Loss

GFC: Global Financial Crisis

NPL: Non-Performing Loans

AAA: American Accounting Association

FVM: Fair Value Measurement

HCA: Historical Cost Accounting

FVOCI: Fair Value Through Other Comprehensive Income

FVTPL: Fair Value Through Profit and Loss

LAC: Loan Amortisation Costs

ROA: Return on Assets

OPERATIONAL DEFINITIONS OF TERMS

Fair Value Adjustment	The fair value adjustment through other comprehensive income refers to adjusting the current carrying value to fair value of an asset, in terms of contractual cash flows from an asset and the value of an asset were it to be sold in the future (Amaefule, Okoye, Kalu, & Nwosu., 2018).
Expected Credit Loss Impairment Method	This is used to compute the impairments likely to occur in the lifetime of a financial asset. Under IFRS 9, it refers to taking into account all impairments that can arise from all exposures to a loan, from the moment it is originated, and is based on the deterioration of credit risk since initial recognition. The impairment is calculated on the basis of a weighted average of future credit losses (KPMG, 2018).
Loan Amortisation Approach	Amortization is the process of paying off a debt over time through regular payments. Each payment has an interest component and a component for repaying the principal balance. The armotized cost refers to the value of financial assets or liabilities based on the initial recognition amount, subsequent recognition of interest income/expense using the effective interest method, repayments and, and credit losses (Humblot, 2018).
Financial Performance	This refers to the financial health of an enterprise over a given period of time. There are various measures of financial performance. This study utilizes the return on assets (ROA), which is an indicator of how profitable a firm is relative to its total assets (Sacer, Malis, & Pavic, 2016).

ABSTRACT

The purpose of this study was to do a comparative analysis of the effect of IFRS 9 on performance of Kenyan commercial banks. The study compared the financial performance before and after the implementation of IFRS 9 reporting standard. The specific objectives were to determine the effect of fair value adjustment on performance of commercial banks in Kenya following the implementation of IFRS 9; to establish the effect of expected credit loss impairment review method on financial performance of commercial banks in Kenya following the implementation of IFRS 9; and to establish the effect of loan amortisation approach on performance of commercial banks in Kenya following the implementation of IFRS 9. The study used descriptive research design and targeted all commercial banks in Kenya for the period of 2017 to 2018. All the 42 commercial banks licensed by the Central Bank of Kenya were selected for the study. Secondary data was obtained from audited financial statements. A total of 26 commercial banks had complete financial data for the computation of fair value adjustment, expected credit loss and loan amortization variables. STATA software was used for descriptive and inferential statistical analyses. Descriptive analysis was used to compute means and standard deviations, while inferential analyses, specifically paired sample t tests and panel data regression, was used to determine the relationship between the implementation of IFRS 9 and financial performance of commercial banks in Kenya. The findings were presented using tables. Findings show that fair value adjustments were higher in 2017 than 2018; however, there was differences in means was not statistically significant. Panel regressions showed that fair value adjustments had a positive but statistically insignificant influence on financial performance. Expected credit loss impairments were higher in 2018 than 2017, with paired sample t tests indicating a statistically significant difference in reported expected credit loss impairments before and after the implementation of IFRS 9. Expected credit loss impairments had a negative effect on ROA; the influence was not significant. Loan amortisation costs remained stagnant in 2017 and 2018, and the differences in means was not statistically significant. Panel regressions demonstrated that loan amortization approach had a negative effect on the financial performance of commercial banks. These findings indicate that considerations for the changes in classification and calculation of credit losses need to be taken into account in strategies for profitability growth and financial stability.

Keywords: IFRS 9, fair value adjustment, expected credit loss, loan amortization, financial performance

CHAPTER ONE

INTRODUCTION

1.1. Background of the Study

Financial statements represent the most important source of information about the financial position of a company (Sacer, Malis, & Pavic, 2016). Management executives rely on financial statements to make day to day strategic, tactical, and operational decisions. The principal objective of financial information is for proper decision-making (KPMG, 2015). However, since financial statements are the basis for evaluating business performance, they are of critical importance not only to the firm and regulators, but also shareholders, investors, creditors, and analysis that depend on the information for informed decisions and allocation of resources (Zicke & Kiy, 2017).

Over time, different methodologies for establishing accounting estimates have evolved into accounting standards which specify how companies should perform accounting estimates, report, and disclose financial information. Accounting standards are "principles, opinions, interpretations, rules and regulations that guide companies or organizations in preparing their financial reports" (Asuquo, 2013). Accounting standards allow for the judgement of financial information within a principles-based framework (ICAS, 2012). To ensure that business entities conform to a specific methodology for making estimates, assumptions and disclosures, International Financial Reporting Standards (IFRS) were developed and issued by the International Accounting Standards Board (IASB) and the IFRS Foundation. Currently, IFRS standard are required in more than 140 jurisdictions in the world, with many other jurisdictions permitting their use. It is also permitted in other parts of the world that have not exclusively adopted the standards as the basis for analysing and presenting a firm's financial information in a standardized, understandable, and comparable format across hundreds of jurisdictions (IFRS, 2020).

IASB issued IFRS 9: *Financial Instruments* on November 12, 2009 to replace IAS 39: International Accounting Standards (IAS) *Financial Instruments: Recognition and Measurement.* In place of IAS 39 *Recognition and Measurement*, IFRS 9 *Financial Instruments* included new requirements governing the recognition and measurements of impairments. IFRS 9 introduced three main changes: classification and measurement of

financial assets and liabilities, impairment methodology, and hedge accounting (Humblot, 2018).

In terms of classification and measurement of financial assets, IFRS 9 replaced the categorization as defined in IAS 39. The new categorization is based on a new measurement approach, specifically: amortised cost, fair value through other comprehensive income, and fair value through profit and loss (ICPAK, 2018). With regard to amortized cost, assets are held to collect contractual cash flows on specified dates as payments of principal and interest on the principal amount outstanding. Fair value through other comprehensive income means that the purpose of the asset is to collect contractual cash flows and sell the financial asset in future. Fair value through profit or loss is for assets not valued using the above methods. The decision of allocating financial assets to the categories is grounded on two tests: the cash flow test and the business model test. The cash flow test determines whether the contractual cash flows are solely payments of principal and interest. The business model test determines whether the assets are held to collect contractual cash, a mixture of collecting contractual cash flows and selling (PWC, 2017).

In terms of impairment methodology, IFRS 9 deviated from IAS 39. Under IAS 39, an incurred losses approach was used to compute impairment. This meant that impairments were only recognize when there was objective evidence of impairment of a financial asset. Under the IFRS 9, an expected losses model is used. In this scenario, business entities must consider the potential for impairment throughout the lifetime of the financial asset. In this way, the entity ensures that the credit risk associated with the risk is captured (Humblot, 2018). The impairment is calculated on the basis of a weighted average of future credit losses. The calculation of the expected credit loss involves: the identification of default scenarios, estimation of cash shortfalls associated with every default scenario, multiplication of the expected losses with the probability of the occurrence of the default, and summation of the results of all possible default events (PWC, 2017). The risk of default is used as the weights, and a loss allowance is made. This allowance, which is essentially the sum of probability weighted outcomes, implies that every loan and receivable has a risk of default, hence every asset measurement incorporates an expected loss from the moment it is originated or acquired (PWC, 2017).

While the adoption of financial accounting standards is a prerequisite to determining the performance of any business entity (Bare, 2016), changes in accounting standards can influence a firm's financial performance. According to Zicke and Kiy (2017) reforming accounting standards is supposed to have a positive effect on the reporting quality of firms and improve the value of financial reports to regulators and individual firms. Since accounting information is a method of gathering, organizing, and presenting information, changes in accounting standards can have far reaching effects on business transactions and performance.

According to Kund and Rugilo (2020) IFRS 9 has a substantial effect on the financial sector since it profoundly changes the impairment methodology for computing credit losses. The researchers noted that the main effect of IFRS9 were the cliff effect and the cost of front-loading impairments. In a study of European banks, the study established that IFRS 9 led to a sudden increase in impairments. Front-loading of impairments adversely affected the resilience of banks and increased the probability of insolvency as a result of lowered capital levels. However, these effects were mostly pronounced in the short term. Over the long term IFRS 9 increased stability by mitigating procyclical effects via staging model even though this came at the expense of front loading expected credit losses. The net result is that banks incur higher costs when these credit losses are initially recognized, an effect which increases the likelihood of credit supply shocks. In this situation, banks desist from acquiring loans in the secondary market (Kund & Rugilo, 2020).

Banks usually preserve a basic level of capital adequacy as required by the regulators. When the requirements are adhered to it helps banks avoid taking capital actions which may include raising equity, deleveraging their balance sheet or transitioning to less risky and more profitable activities. Additional impairment acts as a drag on capital resources. Over time, due to additional provisions that eat into the capital for banks, smaller banks may be forced to consolidate to raise capital adequacy to the required levels (Zicke & Kiv, 2017)

The evidence on the effect of accounting standards on financial performance is not conclusive. Kund and Rugilo (2020) found out that there was a significant effect of changes in financial standards on financial performance among European banks as a result of the cliff effect and the cost of front-loading impairments. Zicke and Kiy (2017)

established that the effect of financial standards was affected by firm size and growth rate of the firm. The researchers also established that while that larger, less profitable, and faster growing companies with higher cashflows were more likely to adopt IFRS, there was a strong negative association between the adoption of IFRS and ROA. A study carried out in Kenya by Bare (2016) among SMEs did not find a significant relationship between financial standards and the financial performance of SMEs.

According to Maggi et al (2017) there is a likelihood that the new IFRS 9 framework will lead to reduced profitability margins as a result of capital consumption caused by higher provisioning levels required for stage 2, particularly for medium-term and long-term exposures, for low-rated clients and poor guarantees. Long-term loans, longer than ten years, will attract up 15 to 20 times higher lifetime expected credit losses compared to stage 1 provisions. To counter the negative effect on profitability, banks can make adjustments on their commercial strategies, particularly on pricing and product characteristics (Maggi, Natale, Pepanides, Risso, & Schröck, 2017). Banks will be expected to tighten their credit appraisal processes to avoid losses from non-performing loans. The Central Bank of Kenya noted that the implementation of IFRS 9 had a negative effect on banking profitability. The regulator reported that IFRS 9 reduced the volume and magnitude of unsecured lending. There was a reduced appetite for bank credit. Further there was tightening of credit standards, and subsequent reduction in unsecured lending in favour of secured lending (CBK, 2018).

IFRS 9 came into force was adopted in January 2018 and came into force in April 2018. As such, the framework remains a novel approach among firms, including commercial banks. Nonetheless, fundamental changes relating to classification of assets into amortised cost, fair value through other comprehensive income, and fair value through profit and loss and measurement using the cash flow test and the business model test (Kiraithe, 2018; ICPAK, 2018), as well as the transition from the actual incurred credit loss model to the expected loss model present substantial effects on financial performance of firms (Humblot, 2018). This study investigates the extent to which the changes in accounting standards influenced the reporting of financial performance among commercial banks in Kenya.

1.1.1. Commercial Banks in Kenya

According to the Central Bank of Kenya, commercial banks are institutions licensed under the Banking Act, Cap. 488 (CBK, 2016). The Banking Act defines commercial banks as institutions transacting a banking business, financial business or the business of a mortgage company, and which provides financial services after applying for and receiving a license from the Central Bank of Kenya. The Act defines a financial business as (a) "accepting from members of the public money on deposit repayable on demand or at the expiry of a fixed period or after notice; and", (b) the employing of money held on deposit or any part of the money, by lending, investment, or in any other manner for the account and at the risk of the person so employing the money" (Banking Act, 2012).

Commercial banks are intermediaries in every financial and economic activity in the modern society. Commercial banks create credit to deserving units and service credit deficits in the economy (Mumbi, 2017). While the primary revenue source for commercial banks is revenue creation, it involves significant risks for both the commercial bank; the lender, and the customer; the borrower. To manage these risks, International Financial Reporting Standards (IFRS) have been established to provide a standardized framework for reporting of all credit transactions commercial banks are involved in.

The banking sector in Kenya is comprised of domestic banking institutions, representative offices of foreign banks, microfinance banks, credit reference bureaus, money remittance providers, non-operating bank-holding companies, and foreign exchange bureaus. The focus of this study are the domestic banking institutions. Out of these, there are 42 commercial banks and 1 mortgage finance company licensed by the Central Bank of Kenya (CBK) to operate in the country. The Government of Kenya has a stake in 40 of the banking institutions, with majority shareholding in 3 banking institutions (Central Bank of Kenya, 2017).

Commercial banks are grouped into three tiers based on weighted average incorporating the market share, asset base, and customer deposits. Tier 1 banks are the biggest and there are 6 banks, Tier 2 has 14 banks, and Tier 3 has 22 banks. Amongst these 42 banks, 2 banks are under receivership and one is under statutory management (Central Bank of Kenya, 2017).

1.2. Problem Statement

The adoption of IFRS 9 is raising pertinent questions on how it affects financial performance. While some studies have showed that IFRS 9 increases stability by mitigating procyclical effects, other researcher are showing that IFRS 9 weakens capital adequacy and increases the probability of default (Kund & Rugilo, 2020). Increased likelihood of credit supply shocks can make it difficult for banks to acquire loans in the secondary market. There is a risk that additional provisions in IFRS 9 that eat into the capital for banks, smaller banks may be forced to consolidate to raise capital adequacy to the required levels. The IFRS 9 came into force in 2018, as such there is a paucity of studies on how it impacts on commercial banks in Kenya, or whether the size of the bank has a moderating effect on the impact on financial performance.

Reforming accounting standards are expected to have a positive effect on the reporting quality of firms and improve the value of financial reports to regulators and individual firms Zicke and Kiy (2017), but emerging evidence following the adoption of IFRS 9 shows a negative impact on financial performance. The Central Bank of Kenya is the principal regulatory authority of commercial banks. However, even the CBK has cited challenges in the implementation of IFRS 9, and voiced concerns that IFRS 9 requirements are causing capital adequacy constraints (CBK, 2018). The CBK Credit Survey Report published in Q2 also reported that IFRS 9 will have a negative effect on profit margins due to its negative effect on unsecured lending. The Credit Survey Report noted that there was credit shifting from unsecured to secured loans, as showed by a 4.66 percent shift in the balance sheet from KES 4.08 trillion in March to KES 4.27 trillion in June 2018 as a result of increased investments in government securities (CBK, 2018). Gross non-performing to gross loans increased from 11.81% in March to 11.97% in June 2018 (CBK, 2018).

There are various studies that have been carried on the effect of the relationship between accounting standards and performance across the world. A study of private firms in Germany found out that there was a strong negative association between the adoption of IFRS and ROA among larger firms, while among medium-sized firms, the transition to IFRS was smooth. The researchers noted that characteristics such as firm size and firm growth rate moderate the influence of accounting standards on financial performance, and that changes in accounting standards had a negative effect on ROA (Zicke & Kiy, 2017).

In Kenya, researchers such as Bare (2016) found out that adopting international financial standards did not have a significant effect on the financial performance of SMEs. On the contrary, Asuquo (2013), investigating how financial accounting standards affect financial reporting and practices, found a strong positive correlation. These studies show that the effect may vary depending on firm level characteristics across jurisdictions. In addition, Kund and Rugilo (2020) noted that early assessments of the implications of IFRS 9 based on forecasted data showed that there were cliff effects and the cost of frontloading impairments, aspects which opened up a plurality of questions requiring further research using actual data. Further, banks main income generating activity is through credit creation, which also results in huge risks to the lender and the borrower (Isanzu, 2017). Therefore, any effect on the banks' ability to generate profits from lending requires additional research.

IFRS came into force in 2018, and presents a new area of research to establish the effect in the short term. Given the paucity of research in Kenya, this study will bridge the gap in empirical analysis by investigating the extent to which the new methods of classifying assets: amortised cost, fair value through other comprehensive income, and fair value through profit and loss, are affecting financial performance among commercial banks in Kenya.

1.3. Research Objectives

1.3.1. General Objectives

The study will establish the impact of IFRS 9 implementation on the financial performance of commercial banks in Kenya.

1.3.2. Specific Objectives

i. To determine the impact of fair value adjustment on the financial performance of commercial banks in Kenya.

ii. To establish the impact of expected credit loss impairment method on the financial performance of commercial banks in Kenya.

iii. To establish the impact of loan amortisation approach on the financial performance of commercial banks in Kenya.

1.4. Research Questions

i. Does fair value adjustment under IFRS 9 have an impact on the financial performance of commercial banks in Kenya?

ii. Does expected credit loss review method impact financial performance of commercial banks in Kenya?

iii. Does loan amortisation method impact financial performance of commercial banks in Kenya?

1.5. Significance of the Study

1.5.1. Policymakers

The main regulatory agency of commercial banks is Central Bank of Kenya. For commercial banks that are listed at the Nairobi Security Exchange (NSE), the Capital Markets Authority (CMA) provides an additional layer of regulation. Both CBK and CMA require commercial banks to comply to IFRS 9 standards. The study provided insights on how the adoption of these standards are impacting on the reporting of financial performance of commercial banks in Kenya. The insights can be used in developing domestic guidelines governing the application of IFRS 9 in the country.

1.5.2. Commercial Banks

Commercial banks use statements of financial performance to make strategic, tactical and operational decisions. Annual audited financial statements are also sent to shareholders and investors for use in evaluating the financial position of the company. Disclosures that underestimate or overestimate the true financial position of the company can lead to negative consequences in the short or long term. As a result, how compliance with IFR 9 standards signals the banks performance is of utmost importance to the firm.

1.5.3. Academicians and Researchers

The study offered new methodological approaches to enlighten students and other users interested in performing comparative analyses, particularly in the financial sector. Academicians can benefit from the content of the study as it will contribute to the existing body of knowledge.

1.6. Scope of the Study

The study targets the 42 commercial banks in Kenya. Census as used and all the banks were included in the study. The independent variables were limited to the components of IFRS 9; notably: fair value judgement, expected credit loss impairment review method, and loan amortization approach. Financial performance was the dependent variable. Secondary data was obtained from audited statements of financial performance, covering the year prior to the implementation (2017) and after implementation (2018).

CHAPTER TWO

LITERATURE REVIEW

2.1.Introduction

The chapter reviews available literature on IFRS 9 implementation. It covers the financial disclosure theories, empirical literature on the effect of IFRS 9 Implementation on performance of commercial banks in Kenya, and the summary of the literature reviewed. It comprises of theoretical review, empirical review, knowledge gaps, conceptual framework and operationalization.

2.2.Theoretical Review

The sub-section describes relevant theories grounding the study, in particular, the agency theory, decision usefulness theory, and signalling theory.

2.2.1. The Agency Theory

The roots of this theory can be traced to the economic theories (Demsetz, 1972) which were later developed into what is known today as the agency theory (Jensen, 1976). According to Jensen (1976), managers will not act to maximize returns to shareholders unless appropriate governance structures are implemented in the large corporation to safeguard the interest of the shareholders. The relationship between the owners and the management is that of principal and agent respectively whereby agents perform services on behalf of their principals. This creates the agency problem, where shareholders employ professional executives to run a firm on their behalf. However, these executives are self-interested and opportunities and can pursue their own interests as opposed to those of the shareholders. To prevent this, shareholders have to incur agency costs, which includes giving the agents incentives and monitoring them to ensure that they do not detract from pursuing the interests of the shareholders, which is maximizing shareholder wealth (Jensen, 1976).

Agency theory is founded on the understanding that managers are rational-minded and have self-interest. This implies that they are more likely to favour their own profit before that of the corporation. As a result, agency theory, when applied to managerial accounting, is used to determine the most appropriate performance management strategies, reward system, and internal control mechanisms (Bouckova, 2015). Conflicts

of interest between the agents (managers) and the principals (shareholders) can cause companies to lose money. Conflicts occur when CEOs prioritize their interests as opposed to that of maximizing shareholder wealth (Cecchetti, 2008).

On the basis of the agency theory, one of the ways of monitoring the agents' behaviour is through using indicators of governance and financial performance. The accuracy of financial statements is therefore of importance to the shareholders as a way of managing the agency problem (Kimeli, 2017). The management as agents of depositors and other shareholders may be conflicted in wanting the books of accounts to reflect profits and good performance so as not to impend investors to lose faith. The IFRS conceptual framework acknowledges investors as privileged financial users, and that investors' use of accounting information lies at the core of reporting standards (Colasse, 2006). Provisioning of loans on the expected credit loss model leads to greater expenses in the profit and loss which may in turn cause management to put practices in place that ensure non-performing loans have been reduced to the maximum. Thus, high quality accounting and financial reporting is used by firms to reduce agency costs.

2.2.2. Decision Usefulness Theory

The decision usefulness approach as relates to financial reporting lays emphasis on investor's decision making in deciding what types of information and the nature of presentation that is necessary for investors (Dandago & Hassan, 2013). The principal focus is to ensure that the primary users, in this case, investors and creditors, have access to the right information. The firm can adopt other reporting frameworks to satisfy the needs of other stakeholders based on whether they need information on the financial or non-financial activities.

The decision usefulness approach was developed by the American Accounting Association (AAA) Committee given the responsibility to design *A Statement of Basic Accounting Theory* (ASOBAT). The Committee decided that the most critical criterion informing the choice of an accounting measurement method is the decision usefulness of accounting information to various users. The decision usefulness is evaluated based on the predictive quality of the accounting information, hence the ability to predict financial and economic events from the accounting reporting is the main indicator of usefulness (Djayoon & Zoumaro, 2003).

In general, the phrase decision usefulness relates to the relevance, reliability, comparability and understand ability of accounting information (Wang, 2012). The IASB conceptual framework notes that the objective of financial reporting is the provision of financial information about the reporting entity, and this information is of importance to creditors and other lenders, as well as existing and potential investors. It enables these users to make decisions relating to the entity in question. For investors, such decisions may involve buying equity, selling equity or holding equity or debt instruments. Capital providers can make a decision on whether to invest or disinvest in a company based on published accounting information (Djayoon & Zoumaro, 2003).

For creditors, such decisions revolve around providing or repayment of loans. Financial information also allows various users to assess prospects for future cash inflows, ability of the entity to generate net cash inflows, and the estimated market value of the entity. The information is also important for comparative analyses that take into account the political, environmental, legal, social, and economic outlooks (Soyinka, Fagbayimu, Adegoroye, & Ogunmola, 2017).

The approach is relevant to the study because IFRS implementation requires the provisioning of credit items, which in turn impact on the performance of the bank. The performance, under the new reporting framework is therefore of importance to users of financial information, such as investors and creditors who rely on such reports to ascertain the status of a firm.

2.2.3. Signalling Theory

The theory was originated by Ross (1977). The central tenet of the theory is that managers possess inside information and depending on their choice of capital structure, this information can signal information in the capital market. The theory is premised on the assumption that there is information asymmetry, that is, not all parties have equal access to information. The theory indicates that financial information published by corporations are signals that a company sends to the market as an indicator of its position (Ross, 1977).

Signalling theory is premised on the position that highly profitable companies provide the market with more accurate and valuable information. The rationale behind this position is that the in formativeness of voluntary disclosures reduce cost of capital and increase firm

value. The reporting entity can increase its value through how it reports its financial results. For instance, it is assumed that increase in debt in a firm is a positive sign that managers are confident about the firm's future earnings. The extent of voluntary disclosures signals company performance. However, studies have also showed that the influence is dependent on the nature of the voluntary disclosures. For instance, the effect of strategic, corporate governance, or financial performance differ greatly (Hamrouni, Miloudi, & Benkraiem, 2015).

On the other hand, while there are many factors that determine the influence of general disclosure, the principal function is that they send signals to the financial market which utilizes them as profitability indicators. On this basis, it generally expected that highly profitable companies are more likely to disclose more profitability indicators. Further, studies have also demonstrated that the market has the ability to control how information is produced and used and that the market can concentrate such information to gain insights on the agency relationship, as a way of establishing the role of managers in driving profitability objectives. As such, while companies strive to meet produce and disseminate financial reporting as stipulated by legal requirements, it is still expected that less profitable firms are more likely to massage their disclosures and present doctored financial ratios (Bini, Giunta, & Dainelli, 2011).

This theory is relevant to the study because IFRS 9 requires banks to adopt a standard reporting structure. The requirements are mandatory and banks must comply with the regulatory framework. Researchers have noted that the changes brought by IFRS 9 may affect the level of profitability reported in financial disclosures cost (Martin & Osma, 2018). Therefore, while companies that issue shares in the capital market have an incentive to disclose all available financial information through their financial statements and fully comply with regulator demands, the relationship between disclosures and market signalling means companies are talking disclosures do not undermine the perception of the firm's profitability. IFRS 9 are market instruments for standardizing reporting and disclosures, hence firms that comply and present transparent, accountable, and comprehensive reporting are more likely signal positive firm performance.

2.3.Empirical Review

2.3.1. Fair Value Adjustment and Financial Performance

According to the IFRS 13, fair value is defined as the price received upon selling an asset or the price paid when transferring a liability between market participants at a specified date. The fair value relies on assumptions that market participants can employ in pricing assets and liabilities at current market conditions, while also incorporating risk. As a result, the intention to hold an asset or the intention to settle a liability is not necessary in the measurement of fair value (Humblot, 2018). The fair value accounting approach has gained increased popularity over the past decade in the aftermath of the global financial crisis. It is a core measurement model in accounting standards and its preference is related to the evolving nature of financial markets coupled with the rise of complex financial instruments. It has also risen on the backdrop of the declining use of the cost and transaction model and its replacement with the market value approach. The fair value model is instrumental balance sheet measurement and computation of accounting income. It is believed that it presents a higher quality measurement model of market-based values (Kimeli, 2017).

Martin and Osma (2018) investigated the use of fair value assessment in firms in Spain. The researchers noted that the preference of fair value adjustment is linked to the fact that it is presumed to be a better measurement when used on market prices, it satisfies the needs of sophisticated users of financial statements, it provides numerical information in the primary document hence reducing overreliance on the notes of financial statements, and finally, it allows users to consider other comprehensive income when analysing performance. Recognizing the use of the business model and the Solely Payments of Principal and Interest (SPPI) used in determining the treatment of financial instruments in IFRS 9, the study found out that the new standards lean more towards satisfying the objectives of the profit/loss statement without taking into consideration other objectives of financial statements. The study also found out that this orientation may cause undesirable outcomes when fair value adjustment is greater than the amortized cost (Martin & Osma, 2018).

Amaefule et al (2018) carried out a comparative analysis of the fair value measurement and historical accounting in estimating the performance of listed companies in Nigeria. The study covered a ten-year period. The results showed that there was a positive but not significant difference in the profit after tax when analysed using the fair value and historical cost accounting. On the contrary, the findings revealed a negative but insignificant difference in the measurement of earnings per share and Return on Equity (ROE). Overall, the researchers concluded that there was no statistically significant difference between the two measurement approaches (Amaefule, Okoye, Kalu, & Nwosu., 2018).

Bare (2016) investigated the influence of the adoption of financial accounting standards on the financial performance of SMEs in Nairobi County Kenya. The researcher drew a sample of 86 from a population of 868 SMEs. Questionnaires were used to collect data to establish how international financial accounting standards affected financial performance. Using regression statistics, the study found out that there was no significant relationship between financial standards and the financial performance of SMEs.

Khurana and Kim (2003) investigated the relevance of fair value in the examination of the validity of a proposition. The researchers wanted to find out if fair value had more informational quality that was superior to historical cost accounting. The period of study was the 1995 to 1998 period when the standards in use were the SFAS 107 and SFAS 115. The comparison was done with regard to the value of equity instruments in banks. The findings did not find a statistically significant difference between the two measurements (Khurana & Kim, 2003).

In the United Kingdom, Aboody, Barth and Rasznik (1999) looked at the association between fair values of fixed assets and their links to future cash flows and earnings. The findings indicated that there was a positive association between fair value revaluations and future operating performance of UK companies. In essence, fair value had predictive quality (Aboody, Barth , & Kasznik, 1999). In the same vein other researchers in the banking industry have found out that increased exposure to fair value accounting has a positive effect on financial reporting and ability to predict future cash flows (Bratten, 2012), and predict future bank earnings (Evans, Hodder, & Hopkins, 2010).

On the contrary, other researchers have reported that changes in fair values that are reported in income are transitory and do not in any way increase the earnings or the ability of a firm to predict future cash flows and earnings (Jones & Smith, 2011), and recommended a cautious approach when interpreting the predictive ability of fair values and avoiding the generalization of results particularly in volatile market conditions (Hill, 2009).

Under IFRS 9 financial assets can be measured at fair value or at amortised cost. When dealing with financial assets, IAS 39 requires that embedded derivatives be separated and measured at amortised cost and accounted for separately at FVTPL (BDOGlobal, 2018). However, under IFRS 9, when an entity is designated as a financial liability, its fair value changes relate to its own credit status. This eliminates the counterintuitive effect when the financial entity is in a poor financial condition because when the discount rate applied in the process of measuring the fair value is higher, the higher the associated gain that is recognized in profit or loss reporting (BDOGlobal, 2018).

Lachman, Stefani, and Wohrmann (2015) investigated fair value assessments in IAS 39, particularly the requirement that firm should adjust financial assets and liabilities to their fair values. Based on the provisions under IFRS 9, the credit risk in net income was to be presented under other comprehensive income (OCI) as opposed to net incomes. The study found out that the change in presentation affected how knowledgeable nonprofessional investors evaluated financial statements. The study showed that under the OCI provision, the percieved importance of credit risk is slightly lower and this increases the probability of credit risk misintepretation (Lachman, Stefani, & Wohrmann, 2015).

Shafii and Rahman (2016) investigated the effect of identification and measurement under IFRS 9 on Islamic banks due to concerns over the adoption of fair use adjustments in Shariah compliant banks. The study used a qualitative approach to review existing documents and perform a textual analysis of the data. The findings indicated that the provisions of identification and measurement as presented under the new accounting standard do not align with the default classification of amortized cost since the future cash flow recievable does not constitute SPPI (solely the payment of principle and interest). Due to uncertainty, Shariah banks have problems with fair value at level 2; refencing of asset values from input other than quoted prices in active markets, and level 3; using discounted cash flow method to calculate asset valuation. Shariah banks are more aligned

to level 1; where the fair value referred to quoted prices of similar assets. The unique natire of Shariah compliant financial instruments demands additional customization of the accounting standards for them to be useful in the day to day decisions at the banks (Shafii & Rahman, 2016).

Procházka (2011) investigated whether fair value accounting was appropriate for measuring the performance of a company. The data was drawn from the stock market in Jordan, specifically randomly selected 50 out of the 78 companies that are listed in the Amman Stock Exchange. To achieve this, the researchers posed a set of questions. The first question was whether the application of fair value accounting was appropriate for financial data from listed companies. The researcher found out that fair value accounting positively affected financial performance. The second question was whether fair value accounting was positively associated with ordinary earnings per share and profits that are distributed to shareholders. The results indicated that when fair value accounting is applied, it affects the levels of ordinary earnings and dividends as reflected in the financial statements. The third question sought to determine application of fair value accounting affected those indicators of financial performance that were related to the financial position of the company at that time, such as debt ratio, liquidity ratio, and trading ratio. The results were positive, indicating that fair value accounting influences all indicators of financial performance.

Shaffer (2011) investigated whether the standards bet set, particularly fair value accounting had improved the quality of financial information and their utilization in decision making, or whether the application of these standards had unintended consequences, with regard to the financial performance of these companies. The researcher used systematic review to evaluate the evidence available on the effects of fair value accounting, including analysis of financial statements. The approach used for bank supervisory rating was adopted in this study to allow the researcher to categorize the impact of fair value accounting on financial performance and usefulness to investors. Critical analysis of existing literature showed that fair value accounting did not necessarily provide more value to users of financial information. Further, studies showed that fair value accounting had a negative impact on the financial stability of companies (Shaffer, 2011).

Oyanik (2017) sought to test whether fair value measurement had any relationship with financial performance ratios. The study was carried out in Sweden. The researchers were interested in whether there was any change before and after the implementation of fair value accounting. To control for firm ownership structure, the companies were categorized as either family owned or dispersed ownership structure. The main source of the data was from the aggregated annual reports hosted on online databases for Swedish Stock Exchange. A total of 20 firms were taken from the Stockholm Stock Exchange and covered various sectors in the economy. The data covered the 2000 to 2010 period. Multiple regression analysis showed that fair value accounting did not have a statistically significant effect on return on equity (Oyanik, 2017).

In another study, the researcher compared the compared USA and China, on whether the application of fair value method had increased CEO compensation. The study showed that the application of fair value had led to an exponential increase in CEO compensation (Al-Rahamneh, 2018). In the same vein, Salzsieder (2016) investigated whether fair value adjustment increased the external valuation of the company in the absence of the opinions of the auditor or the board of directors. The study showed that disclosure plays an important role in the fair value opinion shop, and was ineffective in determining how external experts viewed the effects of fair value accounting on the firm. Disclosures were seen as directly swaying the opinions of external stakeholders (Salzsieder, 2016).

Mclnnis et al. (2013) looked into whether fair value income can be used as a measure of the performance of a bank, and whether it was more useful than the net income which was proposed under the generally accepted accounting principles (GAAP). The results obtained from the study indicated that fair value accounting lowers the weight of valuation of the stock prices and lowers the incentives in contracts for compensation for net income. Fair value income us also less comparable and less predictable than GAAP net income. The researchers concluded that it was a less useful measure of the performance of the bank when compared to GAAP net income (McInnis , Yu, & Yust, 2013).

2.3.2. Expected Credit Loss Impairment Review Method and Financial Performance

The recent global financial crisis of 2008 brought into surface the significant negative effect that the untimely recognition of credit losses has on the financial position of banks.

The response of the International Accounting Standards Board (IASB) was the introduction of the International Financial Reporting Standard 9-IFRS 9, effective after 1 January 2018, which aims to create a more stable financial and banking system. (Ntaikou, Vousinas, & Kenourgios, 2018).

The global financial crisis showed the weaknesses of the incurred loss approach. It was realized that the approach was characteristic of "too little, too late", meaning that recognition of credit losses is less timely and delays in recognition is associated with excessive risk-taking (Hui & Laeven, 2012). The valuation of financial instruments in accordance with IAS 39 is one of the causes of the financial crisis in 2008 (Mojca & Gornjak, 2018). The G20, the Ecofin Council, the Committee on financial stability suggested an improvement to IAS 39 after 2008 with the focus on; the complexity of the IAS 39 for financial instruments, the extent to which the financial instrument is subject to fair value, and the procedure of recognition and measurement of financial instruments.

The global financial crisis forced the G20 leaders to call for a review of accounting standards, particularly the need to change the incurred loss model and introduce new models that recognized and measured loan losses from existing credit information. It is on this basis that the expected credit loss approach was recommended. The model took into consideration a broad set of credit information as well as macroeconomic information so as to come up with a more forward-looking view of credit losses. It was on this basis that in 2014, work on expected credit loss approach began. It provided a single measurement approach for calculating credit losses throughout the life of a loan. It was also easier to implement from the operational perspective (ESRB, 2019)

According to the IFR9, a financial asset can be defined as a simple debt instrument. It is held by a business for the purpose of collecting its contractual cash flows. In the case of a loan, these cash flows are interest payments to the principal and the financial asset is held at an amortised cost. The expected credit loss framework is applied to these assets as part of IFRS 9's requirements on impairment accounting, including loan commitments, lease receivables, and financial guarantee contracts. In 2009, the G20 called for the development of new accounting standards adopting the expected loss approach so as to provide a more comprehensive and timely recognition of credit losses, as opposed to the delayed recognition in the incurred loss approach (Hui & Laeven, 2012). Delayed

recognition has a negative impact on financial stability as showed by the global financial crisis (Laeven & MaJnoni, 2003).

Every year, banks publicly disclose information, through their financial statement, that reports loan yield, loan duration, and loan composition, including such measures such as nonperforming loans (NPLs). Each of the measures reveals the banks credit quality. In the same vein, banks also write off loans that they evaluate as being uncollectible and record them as charge-offs, so that when they are preparing the balance sheets and disclosing financial information, the disclosure accurately reflects the reserve for future write-offs of period-end loans. This is based on the outstanding loan balances and nonperforming loans, and additionally on probable and estimable losses. These probable and estimable losses are what are referred to as incurred losses. However, to accurately estimate the credit risk exposure of the bank, there is need to compute expected losses (Harris, Khan, & Nissim, 2018). The Financial Accounting Standards Board (FASB) introduced the expected loss model that emphasizes on forward looking financial decisions. This model is justified by the belief that when loan losses are recognized early, it can dampen cyclical moves when financial crisis occurs. Further, early identification of credit losses is consistent with the financial statement users' call for transparency and prudential soundness (Mann, 2018).

According to KPMG (2018) the implementation of the expected loss approach, introduced by IFRS 9, would present a challenge to most companies over the short term. KPMG (2018) noted that IFRS 9 incorporated the impairment model which provided allowances for expected credit losses. This was a major shift from the previous approaches used for measuring incurred losses. This shift in approach also implied that financial reporting evolved towards credit-risk management approaches (KPMG, 2018).

According to Nadia and Rosa (2014) financial standards can affect the performance of financial institutions, due to the relationship between capital markets and liquidity needs of commercial banks. The replacement of IAS 39 with IFRS 9 which sought to improve the classification and measurement of financial instruments has been associated with liquidity issues. The researchers established that there is need for more attention to be paid to the provisions about business model and how behavioural liquidity is linked to financial standards. The study found out that these accounting standards had a significant effect on liquidity (Nadia & Rosa, 2014).

Novorty-Farkas (2016) investigated the expected loss model and how it interacts with supervisory roles in the European Union. The researcher noted that the expected loss model utilized in IFRS 9 is closely associated with regulatory expected loss. With increased disclosure, it was expected that the expected loss model, will increase stability and the ability of the regulatory framework to foster market discipline. However, owing to the use of point-in-time estimates when computing the probability of default and the loss given default, the expected losses model increases the volatility of regulatory capital in the commercial banking sector (Novorty-Farkas, 2016).

Kund and Rugilo (2020) investigated the effect of IFRS 9, particularly the impairment methodology, and how it affects credit losses. The paper examined the provisions of IAS 39 and IFRS 9 and established how they affect financial stability. The researchers showed that there were two main effects. The first effect, called "cliff effect" refers to the sudden increase in impairments. Since IAS 39 provided that credit losses be recognized only when they occurred. This means that impairments came late and abruptly. On the other hand, the change to IFRS 9 means that companies will now apply a staging approach, implying that expected credit losses (ECL) are recognized throughout the loan's lifetime. The second effect is the cost of "front-loading" impairments, referring to how banks recognize the adverse impact of losses on resilience and lower capital levels. Empirical tests of these effect using data drawn from European banks covering the 2014-2018 period found out that even though IFRS 9 increases stability by mitigating procyclical effects, it weakens capital adequacy and increases the probability of default, in the short term. However, over time the staging model under IFRS increases financial stability. On the other hand, IFRS diminishes the cliff effect and increases financial stability, this comes at the expense of front loading expected credit losses. The net result is that banks incur higher costs when these credit losses are initially recognized, an effect which increases the likelihood of credit supply shocks. In this situation, banks desist from acquiring loans in the secondary market (Kund & Rugilo, 2020).

The same findings were established in an assessment of the interplay between impairment and procyclicality and determined whether the supposed cure was worse than the disease. Fair value adjustment under IFRS 9 was introduced to increase stability of the financial sector. However, the treatment of accounting loss can cause a delayed second-order impact on procyclicality. Further, fair value adjustment increases the level of subjectivity

and complexity of models when assessing expected future credit losses, as a result of dependence on unobservable values (Jane, 2018).

Another researcher used a multi-period estimation and macroeconomic forecast to determine the probability of default under IFRS 9 in the Czech Republic. The concept drew from Markov models, that is, the estimated economic adjustment coefficient and official economic forecasts. The focus was on the Czech National Bank. Considerations were taken into place to differentiate between systemic and idiosyncratic risk. The model reported that IFRS 9 increases expected credit losses and increases the probability of default (Vaněk & Hampel, 2017).

Harris, Khan, and Nissim (2018) noted that estimating the expected credit losses on the portfolio of a bank was a difficult process. As such, the model has to be consistently improved at the bank level to meet regulatory provisions. The researchers sought to design a measure that could be ysed to measure expected credit lpsses one year ahead based on the disclosured provided by banks. The researchers adopted a cross sectional design in the study. The duration of interest ran from 1996 to 2015 and only covered banks that had consolidated assets that were above $150 million. The findings showed that the one year ahead expected credit losses substantially outperformed net charge-offs in the prediction of one-year-ajead realized credit losses. It reflected nearly all the credit loss-re;ated information contained in the charge-offs. The developed model also contained incremental information obout the one-year-ahead realized credit losses relative to the allowance and provision for loan loasses and the fair value of loans. The model was a significant predictor of loan losses and was comparatively more useful than other credit risk metrics used in predicting bank failure upto one year ahead (Harris, Khan, & Nissim, 2018).

2.3.3. Loan Amortization Approach and Financial Performance

According to IAS 39, the amortized cost is the value of a financial asset or liability at the initial recognition minus principal repayments, or the value plus or minus the cumulative amortization measured using the effective interest method showing the difference between the initial and maturity amount minus any reductions for impairment or uncollectibility. According to IFRS 9, entities must recognize expected losses for all financial assets that are held at the amortized cost. This includes intercompany loans analyzed from the perfective of the lending entity. Under IFRS 9, a financial asset is

measured at amortized cost if it is held within a business model that has the objective of holding the asset for the purposes of collecting contractual cash flows or in cases where the financial asset gives cash flows that are SPPI (solely payments of principal interest) on the principal accounts outstanding at a specified date (BDOGlobal, 2018).

The measurement of amortised cost as well as the effective interest rate method did not change from IAS 39. The same approach has been adopted under IFRS 9. It is applied to financial assets and liabilities measured at amortised cost and debt instrument assets measured at FVOCI. The requirements for measuring amortised cost are applicable to debt instruments assessed at FVOCI since IFRS 9 has provisions requiring that debt instruments should affect profit or losses in the same way irrespective of whether they were measured at amortised cost or not. Amortised cost is calculated via the effective interest method, and the effective interest rate is calculated from estimations of expected cash flows, taking into account all the contractual terms such as transaction fees, costs, discounts and premiums. In essence, the classification of financial assets and financial liabilities allows for estimations on how they affect the financial performance, measured in terms of profits and losses (Humblot, 2018).

In financial institutions, loan amortization is a multicolumn listing of each payment that is needed to service the loan over a specific period of time. Each of these payments have an interest component, a principal payment, and computation of the remaining balance that is yet to be paid. The interest is calculated based on the unpaid principal balance calculated after the previous payment. With each payment, the interest portion decreases while the principal payment increases. As a result, an amortised cost can be understood as a cost-based measure of an asset or liability that adjusts with changes in initial cash inflows and cash outflows (ICPAK, 2018).

Zicke and Kiy (2017) investigated the effect of accounting standards on how private firms report their financial performance. The study was necessitated by the German Accounting Law Modernization Act. It focused on how the new law affected reporting and accounting performance of firms in Germany, with particular emphasis on amortization. The study utilized four methods to measure financial reporting, notably: discretionary accruals, correlation between the accruals and operating cash flow, persistence of earnings and the predictability of the earnings reported. The objective of the German Accounting Law Modernization Act was to align the German GAAP with the IFRS and enhance the

quality of financial statements. The researchers collected financial data from madeus-Bureau van Dijk database. In total, financial data from 436 companies covering the period 2005-2014 were obtained. Using regression analysis, the study established that larger, less profitable, and faster growing companies with higher cash flows were more likely to adopt IFRS. However, there was a strong negative association between the adoption of IFRS and ROA.

According to Lukic, Hanic, and Hanic (2016) carried out a study among retail chains to determine how amortization, depreciation and profits relate. The researchers sought to establish the extent to which efficient management of depreciation expenses affect the profit of retail chains. Depreciation expenses affect overall operational costs, profit margins and tax liabilities. Tax liabilities can reduce when the formula for calculating depreciation is changed, leading to accelerated depreciation. The researchers noted that the application of the new provisions for depreciation showed that it shortens the lifetime duration by 20% to 30%, leading to significant cost savings, in terms of depreciation expenses and tax liabilities. In a study which covered firms in the United States, European Union, Japan, Russia and Serbia, the researchers analyzed depreciation expenses and established that efficient management of depreciation expenses has a significant effect on profitability (Lukic, Hanic, & Hanic, 2016).

Hulzen, Alfonso, Georgekopoulos, and Sotiropoulos (2011) compared amortization and impairment methods when accounting for goodwill, in a bit to establish how these provisions affect accounting quality. The provisions examined were those formulated by the International Accounting Standards Board (IASB) and the researchers used the value relevance and timeliness model. The data was obtained from European companies. Findings showed that impairment of goodwill had less value that amortization, however, it did not yield timely accounting information. Noting that the objective of the standards set by International Accounting Standards Board was to increase timely information, it means that it does not meet the objective and only partially contributes to the goal of improving the quality of accounting (Hulzen, Alfonso, Georgekopoulos, & Sotiropoulos, 2011).

2.4.Research Gap

It's evident that there's a relationship between IFRS 9 and firm performance. Whereas the studies conducted indicate strong correlation with firm performance. Most studies cite

that the result of delaying to effect the expected credit loss affects financial stability negatively since the losses tend not to be recognised and distributed over time. In Kenya, there are no studies that have carried out a comparative analysis of financial performance, using the fair value judgement, expected credit loss impairment, and loan amortization approach.

In the same vein, there is very little literature done on IFRS 9 and its effect on firm performance across the globe. There's no study done in Kenya to show the comparative evaluation of the impact of IFRS 9 on firm performance. It is against this background that the researcher found it necessary to carry out a comparative study on the impact of IFRS 9 on performance of commercial banks in Kenya.

2.5.Conceptual Framework

Conceptual framework involves forming an idea about the relationship between variables in the study and showing relationship graphically or diagrammatically (Mugenda O. M., 2003). The conceptual framework seeks to portray the linkages and relationship of the impact of adoption of IFRS 9 on firm performance of Commercial banks in Kenya.

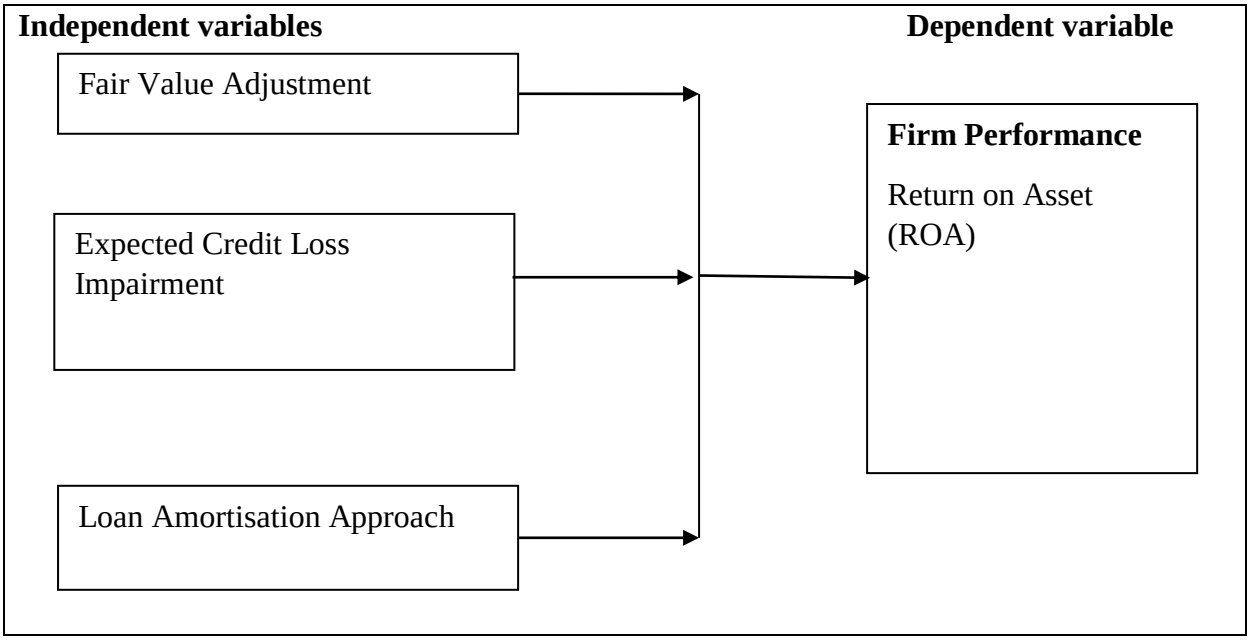

Figure 2.1: Conceptual framework

Table 2.1: Operationalization of Variables

Variables	Indicator	Measurement	Scale
Independent Variables			
Fair value adjustment	Fair value through other comprehensive income to fair value profit/loss	FVOCI/FVPL	Ratio
Expected credit loss impairment	Non-performing loans to total loans	NPL/TL	Ratio
Loan amortisation approach	Loan amortisation cost to total loans	LAC/TL	Ratio
Dependent Variable			
Firm performance	Profit	ROA	Ratio

CHAPTER THREE

METHODOLOGY

3.1.Introduction

This chapter explains the methodology the researcher used, with respect to research paradigm, research design, target population, sampling design, instrumentation, validity and reliability of instruments, data collection data analysis and ethics. The chapter focuses on the research process and the procedures and tools to be used.

3.2.Research Design

A research design is the procedural plan a researcher adopts to investigate and answer research questions using valid, objective, accurate and economical procedures. It encompasses the generation of an operational plan; sampling techniques, design of data collection instrument, validation and standardization of data collection instrument, administration of data collection tools, and data analysis (Kumar, 2005).

In business research, five research designs are discussed by most scholars. The research designs include; experimental, cross section or social survey, longitudinal, case study and comparative designs. The experimental research design entails largely the use of field experiments, which are real life situations that a researcher is attempting to describe or explain. They are used as yardsticks against which non experimental research is assessed. Experimental research tends to be very strong in terms of internal validity.

Cross sectional or social survey designs are applied in instances where the researcher is interested in variation. These variations could be in respect to people, organizations or states. The variation works where there is more than one case being studied and the researcher is attempting to differentiate the cases. Longitudinal research designs involve the drawing of phenomena at vertical and horizontal levels of analysis and the interconnections between them over a period of time. Case study research design entails a detailed and intensive analysis of a single organization, in a particular location, for an event, activity or phenomena. The comparative design is the use of one or more identical methods on two or more contrasting cases. It is aimed at understanding social phenomena better, when they are compared to meaningfully contrasting situations or scenarios (Bryman & Bell, 2015).

Cross sectional surveys refer to any collection of data from a sample of individuals (or groups) at a particular point in time as a basis for inferring the characteristics of the population from which the sample comes from (Bryman & Bell, 2015). A cross-sectional survey of a population can be one-off or repeated at regular intervals thereby providing a means of 'monitoring' changes in the population in response to societal and policy change. A population census is in effect a 'bench mark' social survey in which all population members form the sample. Cross-sectional sample surveys are described as 'descriptive' or 'analytic' depending on whether the prime purpose is to provide descriptive estimates of the population's parameters or to test hypotheses about the relationships between the variables encompassed by it (Blanche, Durrheim, & Painter, 2006).

Descriptive surveys are interested in addressing specific characteristics of a selected population of subjects at a point in time, or at varying times for the purpose of comparing the relationship between variables (Leavy, 2017). Descriptive studies are concerned with finding out who, what, where, when, and how much. They try to measure the types of activities, how often, when, where and by whom. Descriptive studies are helpful in revealing patterns and connections that might otherwise go unnoticed. Unlike exploratory studies, descriptive studies are structured, have clear hypothesis, and are guided by research questions (Creswell & Creswell, 2017). Descriptive research measures variables or set of variables as they exist naturally. The goal of descriptive research is not primarily concerned with relationships between variables but rather with the description of individual variables (Cooper & Schindler, 2014).

This study investigates the effect of an event on financial performance. Event studies are empirical analyses that examine the impact of a contingent event or a significant catalyst occurrence on other financial measures (Mugenda & Mugenda, 2003). In this case, the event is the implementation of IFRS 9 standards, and the study is interested in determining whether the adoption of those standards are responsible for the differences in financial performance of commercial banks in the pre-implementation year (2017) and the post-implementation year (2018). Descriptive statistics and inferential statistics will aid in describing the data and calculating whether there was a statistically significant difference in performance between the two years and whether the difference is attributable to the implementation of IFRS 9 standards.

3.3.Target Population

A population is the total collection of elements from which a researcher makes inferences. It is the totality of all subjects or a set that contains the entire group of persons a researcher is interested on. The target population is the complete set of cases, objects, or individuals from which a researcher can observe a specific set of characteristics. In this study, the target population are the 42 commercial banks registered and licensed by the Central Bank of Kenya (Central Bank of Kenya, 2017).

Table 3.1: Target Population

Tier	Target population
Tier 1: Large-sized Banks	6
Tier 2: Medium-sized Banks	14
Tier 3: Small- sized Banks	22
Total	42

3.4.Sampling Technique

The study employed census, in that, all the commercial banks registered and operating in the country for the duration of the study, 2017-2018. The sample consisted of all the 42 commercial banks.

3.4.1. Sample size

The study covered 39 commercial banks excluding the two banks under receivership and one under statutory management which include Imperial bank, Chase bank and Charterhouse Bank respectively.

Table 3.2: Sample Size

Tier	Target population	Sample size	Sampling Procedure
Tier 1: Large-sized Banks	6	6	Census
Tier 2: Medium-sized Banks	14	12	Census
Tier 3: Small- sized Banks	22	21	Census
Total	**42**	**39**	

3.5.Data Collection

The study used secondary data. Secondary data is data which has already been collected for purposes other than the problem at hand. These data can be located quickly and inexpensively. Secondary data is that which has been collected by someone other than the current user (Melissa, 2014). The secondary data was obtained from audited annual statements of financial performance downloaded from Investor Relations pages in the websites of individual commercial banks.

3.5.1. Data Collection Instruments

Secondary data collection sheet was designed for use in the data collection exercise. The datasheet presented as Appendix 1. The data collection sheet captured data for computing fair value adjustment (fair value through other comprehensive (FVOCI) and fair value profit and loss (FVPL)), expected credit loss (non-performing loans, total loans, and non-performing loan ratio), loan amortization (amortisation cost), and performance (return on assets).

3.5.2. Ethical Considerations

To avoid ethical breaches, the study quoted authors of studies, article and books to be referred during the study to avoid being accused of plagiarism of infringing copy right. In order to safeguard the privacy of organizations under research, the researcher took the initiative of giving the assurance to the study group of the purpose of the research being for academic purpose therefore the data to be gathered would remain confidential. The

data of interest is in the public domain hence there was no threat to the privacy and confidentiality of participants. The presentation of findings does not include the specific names of commercial banks since data was aggregated per variable and year, and not per commercial bank. The researcher obtained a research approval letter from the University.

3.5.3. Data Collection Procedures

The data was collected from annual audited statements of financial performance. These audited statements are published by commercial banks on their Investor Relations segment in official corporate websites. The annual audited statements are also published by the industry regulator: Central Bank of Kenya. The researcher downloaded online pdf copies of annual audited statements for the commercial banks for the two years (2017-2018) under study. The data for the banks covering a period of 2 years formed a panel data with 74 observations. The data collected was used to calculate for the variables in the study.

3.6.Data Analysis

All the data obtained from statements of financial performance were entered in Excel sheet for each of the variables, for all listed companies, covering the two years under study. The data was then cleaned to eliminate units with incomplete data for the years under study. Data analysis was employed to compute both the descriptive and inferential statistics that are relevant for the study.

3.6.1. Trend Analysis

Descriptive analysis was used to summarized the data on fair value adjustment (FVOCI/FVPL), expected credit loss (non-performing loans, total loans, and non-performing loan ratio), loan amortization, and performance (return on assets and return on capital employed). The trends in these variables was plotted as percentages in graphs.

3.6.2. Comparative Analysis

The study carried out a comparative analysis to establish whether there was a statistically significant difference in the means of fair value adjustment ratios, expected credit loss impairments and amortized costs between the pre-implementation period and post-implementation period for IFRS 9. Paired samples *t* test was used to compare the means for the values obtained through the fair value adjustment, expected credit loss review

method, and loan amortization approach to establish whether they were statistically significant differences in performance between 2017 and 2018.

3.6.3. Panel Data Analysis

Panel data analysis was used to establish the effect of fair value adjustment on performance of commercial banks in Kenya following the implementation of IFRS 9, the effect of expected credit loss impairment review method on performance of commercial banks in Kenya following the implementation of IFRS 9, and the effect of loan amortisation approach on performance of commercial banks in Kenya following the implementation of IFRS 9.

Panel data analysis uses longitudinal data, or data that has been collected at different points in time. This means that the dataset has repeated observations of the same units over time, hence N (units), T (time) and NT (number of observations). Panel data can be time series data (such as stock prices, aggregate national statistics), pooled cross-sectional data (such as general social surveys, census and population surveys) or panel data (such as aggregated data covering a period of time, or surveys covering different time points). In this study, the data is aggregated financial ratios for 2017 and 2018, to capture the pre- and post-implementation period for IFRS 9.

3.6.4. Model Specification

A panel regression model was used to establish the relationship between the independent variables and the dependent variable.

The regression model took the form of:

$y = \beta_0 + \beta_1 x_1 + \mathcal{E}$

Where:

y intercept is the endogenous variable

β_0 denotes the y intercept where *x* is zero; β_1 is regression weights attached to the exogenous variables: *x1* and Ɛ is the error term.

Replacing for the variables:

$y = \beta_0 + \beta_1 x_1 + \beta_2 x_{2+} \beta_3 x_{3+} \mathcal{E}$

$$FP_{it} = \beta_0 + \beta_1 FVAit + \beta_2 ECL_{it} + \beta_3 LAC_{it} + \mathcal{E}_{it}$$

Where

FP denotes financial performance (Return on Assets (ROA)

FVA denotes fair value adjustment (fair value of other comprehensive income (FVOCI)/fair value adjusted profit/loss (FVPL)), ECL is expected credit loss (non-performing loans/total loans), and LAC is the loan amortization cost.

The linear model is assumed to be correct if it meets the assumptions of autocorrelation, multicollinearity and homoskedasticity. In this study, random effects regression was used because it is best suited for the panel data.

3.6.5. Diagnostic Tests

The diagnostic tests were carried to check for existence of autocorrelation, multicollinearity and heteroscedasticity.

3.6.5.1.Autocorrelation Tests

Autocorrelation is the similarity of a time series over successive time intervals. It can lead to underestimates of the standard error and can cause you to think predictors are significant when they are not. A common method of testing for autocorrelation is the Durbin-Watson test. The statistical software Stata has an option for running the Durbin-Watson test when conducting panel regression analysis. The Durbin-Watson tests produces a test statistic that ranges from 0 to 4. A value of 2 means that there is no autocorrelation detected in the sample. Values from 0 to less than 2 indicate positive autocorrelation and values from 2 to 4 indicate negative autocorrelation. The results show a Dublin-Watson value of 0.998, indicating positive autocorrelation.

3.6.5.2.Multicollinearity Tests

Multicollinearity occurs when there is a high correlation between independent variables in a regression model. Multicollinearity is a potential problem because the goal of the regression analysis is to isolate the relationship between each independent variable and the dependent variable, and if the degree of correlation between the variables is high, it can affect fitting the model and interpreting the results. This is so because, when interpreting the regression coefficient, it should be maintained that it is the mean change

in the dependent variable is caused by a 1-unit change in an independent variable, when the other independent variables are held constant.

In Stata, multicollinearity is measured using the variance inflation factor (VIF), a metric measuring the existence of correlation and the strength of the correlation between the independent variables in a regression model. The minimum VIF value is 1 and there is no upper limit. As a general rule, VIF is 1 if there is no correlation between the explanatory variables. VIF values between 1 and 5 show moderate correlation that is not severe enough to affect the interpretation of results. VIF values above 5 indicate potentially severe correlation that can make coefficient values and p-values in the regression output to be unreliable. As a solution, multicollinearity is reduced by removing the problematic variables hence reducing the redundancy until the VIF value is below 5.

On Stata, the test was run using the command "vif" and the results showed that the VIF value for fair value adjustment was 1.04, for expected credit loss impairment was 1.02 and the VIF value for loan amortization was 1.03, with an overall Mean VIF computed as 1.03. Since the VIF values were below 5, it demonstrated that the strength of correlation between the explanatory variables was minimal and not a threat to regression analysis.

Table 3.3: Multicollinearity statistics

Variable	**VIF**	**1/VIF**
Fair value adjustment	1.04	0.959479
Expected credit loss impairment	1.02	0.977211
Loan amortization	1.03	0.966760
Mean VIF	1.03	

3.6.5.3.Heteroscedasticity Tests

Heteroskedasticity occurs when the standard deviations of a dependent variable, monitored over different values of an independent variable, are not constant. This scenario violates the assumptions of linear regression modelling. While heteroskedasticity does not cause bias in the coefficient estimates, it lowers their precision hence lowering

their value in predicting relationships at a population level. When there is constant variance, the condition is called homoskedasticity while when it is non-constant it is called heteroskedasticity, and the latter violates Ordinary Least Squares (OLS) linear regression assumptions.

In Stata, the Breusch-Pagan/ Cook Weisberg test is designed to detect any linear form of heteroskedasticity. It tests the presence of conditional heteroskedasticity. If the Chi Squared value is significant with p-value below an appropriate threshold (such as $p<0.05$) then the null hypothesis of homoskedasticity is rejected and heteroskedasticity assumed.

On running the Breusch-Pagan test using the "estat hettest" command directly after running your regression, the findings show a high p-value ($p= 0.7161$) indicating that heteroskedasticity is not a problem in the dataset, as a result homoscedasticity is accepted and heteroskedasticity is rejected.

Table 3.5: Breusch-Pagan / Cook-Weisberg test for heteroskedasticity

Ho: Constant variance	
Variables: fitted values of ROA	
chi2(1)	0.13
Prob > chi2	0.7161

CHAPTER FOUR

DATA ANALYSIS AND INTERPRETATION

4.1. Introduction

The chapter presents the analysis and interpretation of results. The section presents findings under each research objective and captures the trend analysis, comparative analysis and panel data analysis, to establish if fair value adjustment, expected credit loss, and loan amortization approaches introduced by IFRS 9 differ in the two years covered in the analysis.

4.2. Fair Value Adjustment and Financial Performance

4.2.1. Trend Analysis

The fair value of other comprehensive income of the year as a percentage of comprehensive income reported by commercial banks was used as a measure of the extent of fair value adjustment before the implementation of IFRS 9 and after the implementation of IFRS 9. The findings show that in 2017 the FVOCI to FVPL was 3.72% for large-sized banks, 11.87% for medium-sized banks and 1.51% for small banks. In aggregate, the ratio was 5.21% for all commercial banks in 2017. In 2018, the fair value of other comprehensive income as a percentage of reported comprehensive income was 3.72% for large banks, -9.24% for medium banks, and 4.24% for small sized banks.

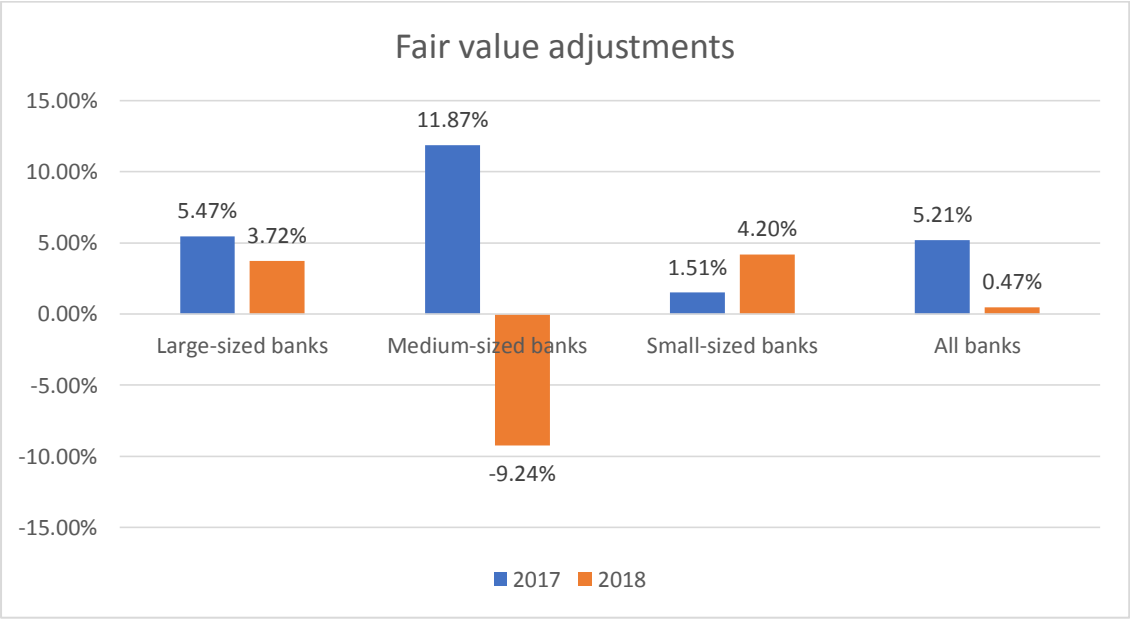

Figure 4.1: Fair value adjustment trend analysis

Overall, in 2018 was 0.47%. There is a marked difference on comprehensive income, with 2018 reporting generally lower levels for all banks, with the exception of smaller banks, a majority of which are yet to incorporate fair value adjustments of comprehensive income in their financial disclosures.

4.2.2. Comparative Analysis

Paired-samples t tests were used to test whether there is a difference between the averages of two groups: pre-implementation (2017) and post-implementation (2018). The results show a mean of 0.0521 (5.21%) in 2017 and 0.0046 (0.46%) in 2018, and a mean difference of 0.4746. Computing `ttest FVOCI/FVPL2017 == FVOCI/FVPL2018` on Stata, the results show a t value of 0.4981. The statistical difference (2-tailed p-value) of the paired t test (Pr(|T| > |t|) under Ha: mean(diff) != 0 was 0.6227. This is higher than *p*-value < 0.05 meaning that the difference between the means of fair value adjustments in 2017 and 2018 are not statistically significant. The interpretation is that the transition caused by IFRS 9 implementation did not have any significant effect on fair value of other comprehensive income as a proportion of comprehensive income reported by commercial banks in Kenya. The findings are reported in Table 4.1.

Table 4.1: Fair Value Adjustment Paired Samples T Test

Variable	Obs	Mean	Std. Err.	Std. Dev.	95% Conf. Interval	
FVOCI/FVPL 2017	26	.052148	.0180937	.0922603	.0148833	.0894128
FVOCI/FVPL 2018	26	.0046905	.0863939	.440524	-.1732409	.182622
Diff	26	.0474575	.0952713	.4857901	-.1487574	.2436723

mean(diff) = mean (FVOCI/FVPL2017 – FVOCI/FVPL2018) t = 0.4981

Ho: mean(diff) = 0 degrees of freedom = 25

Ha: mean(diff) < 0 Ha: mean(diff)!= 0 Ha: mean(diff) > 0

Pr(T < t) = 0.6886 Pr(|T| > |t|) = 0.6227 Pr(T > t) = 0.3114

4.2.3. Panel Data Analysis

Panel data regression analysis was used to determine the effect of fair value adjustments on financial performance. Findings on the Walden Ch-square test reported a value of 0.01. As a rule, if the value is <0.05, then the model is significant. The test determines whether all the coefficients in the model are different than zero. The `rho` value = 0.8954 means that 89.54% variation in the level of financial performance as measured by ROA can be explained by changes in fair value adjustments. The regression results show a positive influence of the fair value adjustments on financial performance, at β = .0002948, p=0.930; but the relationship was not statistically significant at 95% confidence interval.

Table 4.2: Fair Value Adjustments Panel Data Regression

Panel variable: Bank (strongly balanced)
Time variable: Year, 2017 to 2018
Delta: 1 unit

Random-effects GLS regression		Number of obs	= 52
Group variable:	Bank	Number of groups	= 26
R-sq: within	= 0.0000	Obs per group: min	= 2
between	= 0.0038	avg	= 2.0
overall	= 0.0016	max	= 2
		Wald chi2(3)	= 0.01
corr(u_i, X)	= 0 (assumed)	Prob > chi2	= 0.9298

ROA	Coef.	Std. Err.	Z	P>|z|	95% Conf.	Interval
FVA	.0002948	.0033448	0.09	0.930	-.006261	.0068505
_cons	.0107912	.0034761	3.10	0.002	.0039782	.0176042
sigma_u	.01738229					
sigma_e	.00593987					
Rho	.89543778 (fraction of variance due to u_i)					

4.3. Expected Credit Loss Impairment and Financial Performance

4.3.1. Trend Analysis

Impairments were computed in terms of loans and advances impairments and non-performing loan impairments as recorded by the banks. The variances were presented as a percentage of total loans for each bank. The findings show that ECL impairment was higher in 2018 compared to 2017. The ratio of non-performing loans to total loans was 4.30% in 2017 and 4.55% in 2018 for large banks. In medium banks, the non-performing loan rate was 12.90% in 2017 compared to 14.60% in 2018. In small banks, the rate was 13.31% in 2017 and 18.19% in 2018. Overall, credit impairment was higher in 2017 at 11.12% compared to 2018 at 14.08%.

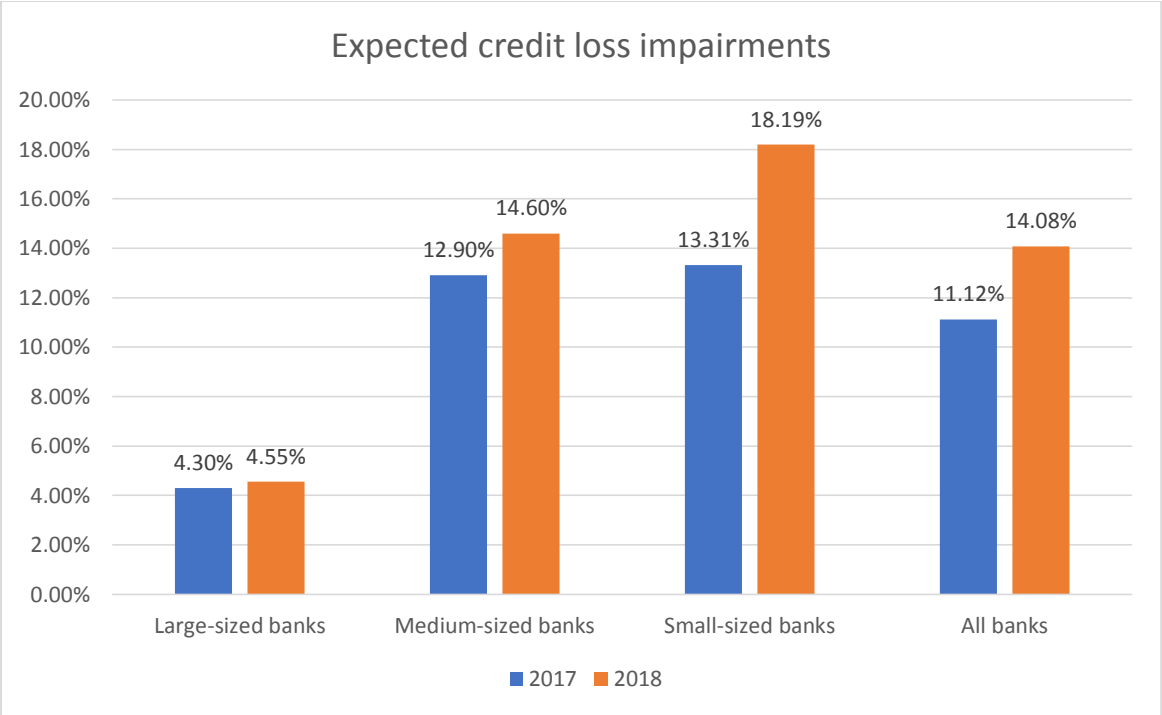

Figure 4.2: Expected credit loss impairment trend analysis

4.3.2. Comparative Analysis

Paired-samples t tests were used to test whether there is a difference between the means of expected credit loss impairments in pre-implementation (2017) and post-implementation (2018) phases of IFRS 9. Findings for expected credit loss impairments show that the mean in 2017 was 0.1112 (11.2%) while that of 2018 was 0.1407 (14.07%), with a mean difference of -0.0295 (2.95%). Paired samples t test results obtained from running `ttest ECL2017 == ECL2018` on Stata show that the t value was -2.3873.

The statistical difference (2-tailed p-value) of the paired t test (Pr(|T| > |t|) under Ha: mean(diff) != 0 was 0.0249, indicating a statistically significant difference in the means. This indicates that there was a statistically significant difference in reported expected credit loss impairments before and after the implementation of IFRS 9, as indicated in Table 4.3.

Table 4.3: Expected Credit Loss Impairments Paired Samples T Test

Variable	Obs	Mean	Std. Err.	Std. Dev.	95% Conf. Interval	
ECL 2017	26	.111203	.0190601	.0971877	.071948	.1504579
ECL 2018	26	.1407829	.0245117	.1249856	.0903001	.1912657
Diff	26	-.0295799	.0123904	.063179	-.0550985	-.0040614

mean(diff) = mean (ECL2017 - ECL2018) t = -2.3873

Ho: mean(diff) = 0 degrees of freedom = 25

Ha: mean(diff) < 0 Ha: mean(diff) != 0 Ha: mean(diff) > 0

Pr(T < t) = 0.0124 Pr(|T| > |t|) = 0.0249 Pr(T > t) = 0.9876

4.3.3. Panel Data Analysis

Panel data regression analysis was used to determine the effect of expected credit loss impairments on financial performance. Findings on the Walden Ch-square test reported a value of 2.33. As a rule, if the value is <0.05, then the model is significant. The test determines whether all the coefficients in the model are different than zero. The `rho` value = 0.8598 means that 85.98% variation in the level of financial performance as measured by ROA can be explained by changes in expected credit loss impairments. The regression results show that the expected credit loss impairments had a negative effect on ROA; the influence was not significant, β = -.0294557, p=0.127 at 95% confidence level.

Table 4.4: Expected Credit Loss Impairments Panel Data Regression

Panel variable: Bank (strongly balanced)
Time variable: Year, 2017 to 2018
Delta: 1 unit
Random-effects GLS regression — Number of obs = 52

Group variable: Bank — Number of groups = 26
R-sq: within = 0.0078 — Obs per group: min = 2
between = 0.2765 — avg = 2.0
overall = 0.2303 — max = 2
Wald chi2(3) = 2.33
corr(u_i, X) = 0 (assumed) — Prob > chi2 = 0.1271

ROA	Coef.	Std. Err.	Z	P>|z|	95% Conf.	Interval
ECL	-.0294557	.0193086	-1.53	0.127	-.067297	.0083884
_cons	.0145108	.0039852	3.64	0.000	.0066999	.0223217
sigma_u	.01465378					
sigma_e	.00591664					
Rho	.85982769 (fraction of variance due to u_i)					

4.4. Loan Amortization and Financial Performance

4.4.1. Trend Analysis

In terms of the amortization cost as a percentage of the total loans awarded by a bank for the years under study, the findings show that for large banks, the amortization cost relative to total loans was higher in 2017 than 2018, that is 1.09% to 0.99% for large banks. The amortization cost relative to loans was the same for medium sized banks for the two years under analysis, 0.40%. On the other hand, for smaller banks, the amortization cost was higher in 2018 when compared to 2017, at 0.29% and 0.23% respectively. Overall, there was no change in loan amortization in 2017 and 2018, at 0.48%, with the implementation of IFRS 9.

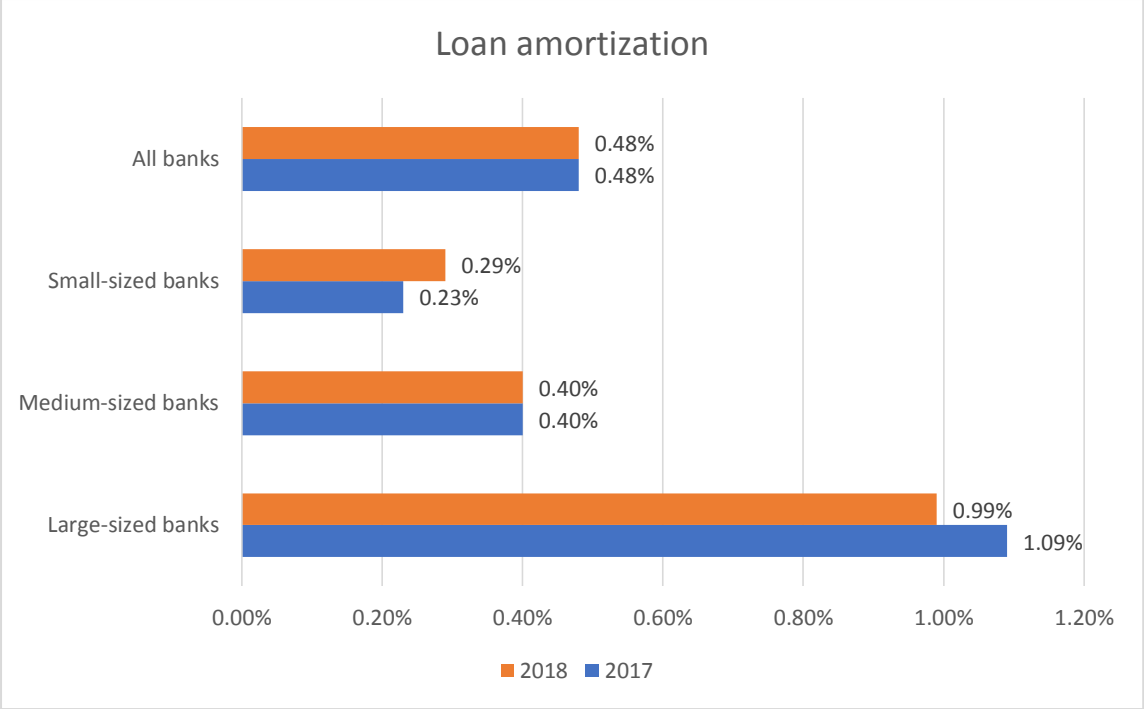

Figure 4.3: Loan amortization trend analysis

4.4.2. Comparative Analysis

Paired-samples t tests were test if there was a significant difference in amortised costs in the IFRS 9 pre-implementation (2017) and post-implementation (2018) years. The mean for amortised cost in 2017 was 0.0048 (0.48%) and 0.0048 (0.48%) in 2018, showing a mean difference of -0.00005. Analysis for t test `ttest LAC_TL2017 == LAC_TL2018` reported a value of -0.0615. The statistical difference (2-tailed p-value) of the paired t test (Pr(|T| > |t|) under Ha: mean(diff) != 0 was 0.9515. At 95% confidence level, the results imply that there was no statistically significant difference between loan amortization costs in 2017 and 2018, thus no effect of IFRS 9 on pre- and post-implementation years. The findings are presented in Table 4.5.

Table 4.5: Loan Amortization Paired Samples T Test

Variable	Obs	Mean	Std. Err.	Std. Dev.	95% Conf. Interval	
LAC 2017	26	.0047659	.0013392	.0068288	.0020077	.0075241
LAC 2018	26	.0048115	.0011605	.0068288	.0024213	.0072016
Diff	26	-.0000456	.0007415	.0037808	-.0015727	.0014815

mean(diff) = mean (LAC/TL2017 – LAC/TL2018) t = -0.0615

Ho: mean(diff) = 0 degrees of freedom = 25

Ha: mean(diff) < 0 Ha: mean(diff) != 0 Ha: mean(diff) > 0

Pr(T < t) = 0.4757 Pr(|T| > |t|) = 0.9515 Pr(T > t) = 0.5243

4.4.3. Panel Data Analysis

Panel data regression analysis was used to determine the effect of loan amortization on financial performance. Findings on the Walden Ch-square test reported a value of 0.19. As a rule, if the value is <0.05, then the model is significant. The test determines whether all the coefficients in the model are different than zero. The `rho` value = 0.8969 means that 89.69% variation in the level of financial performance as measured by ROA can be explained by changes in loan amortization costs. The regression results show a negative effect on the financial performance of commercial banks, β = -.1538261, p=0.660, but the effect was not statistically significant.

Table 4.6: Loan Amortization Panel Data Regression

Panel variable: Bank (strongly balanced)
Time variable: Year, 2017 to 2018
Delta: 1 unit
Random-effects GLS regression — Number of obs = 52

Group variable: Bank — Number of groups = 26
R-sq: within = 0.0120 — Obs per group: min = 2
between = 0.0000 — avg = 2.0
overall = 0.0000 — max = 2
Wald chi2(3) = 0.19
corr(u_i, X) = 0 (assumed) — Prob > chi2 = 0.6601

ROA	Coef.	Std. Err.	Z	P>|z|	95% Conf.	Interval
LAC	-.1538261	.3498031	-0.44	0.660	-.8394277	.5317754
_cons	.0115362	.0038643	2.99	0.003	.0039623	.0191102
sigma_u	.01742312					
sigma_e	.00590427					
Rho	.89699236 (fraction of variance due to u_i)					

CHAPTER FIVE

DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS

5.1.Introduction

This section presents the discussions, conclusions and recommendations of the study. The section presents a summary of the findings, discussions in line with existing literature, the conclusions for each objective, recommendations that can be drawn from the findings and suggestions for further research.

5.2.Summary of Major Findings

The purpose of this study was to establish whether IFRS 9 had an effect on financial performance in the pre- and post-implementation years. The pre-implementation year was 2017 and the post-implementation year was 2018. IFRS 9 included changes in calculating and disclosing fair value adjustments, expected credit loss and amortised costs. This study therefore sought to tackle three specific objectives: to determine the effect of fair value adjustment on performance of commercial banks in Kenya following the implementation of IFRS 9; to establish the effect of expected credit loss impairment review method on financial performance of commercial banks in Kenya following the implementation of IFRS 9; and to establish the effect of loan amortisation approach on performance of commercial banks in Kenya following the implementation of IFRS 9.

The population of the study was commercial banks licensed and operating in Kenya. All the 42 the commercial banks were included in the sample size; however, only 26 had complete data for the computation of the variables of interest: fair value adjustments, expected credit loss, amortised cost and financial performance. Fair value adjustment was calculated as a ratio of fair value through other comprehensive income (FVOCI) to fair value comprehensive profit and loss (FVPL). Expected credit loss impairments was calculated as a ratio of nonperforming loans to total loans. Loan amortization cost was calculated as a ratio of amortised cost to total loans. The findings were presented as absolute values and percentages and subjected to descriptive analysis, paired sample t tests and panel regressions.

The first objective was to determine the effect of fair value adjustment on performance of commercial banks in Kenya following the implementation of IFRS 9. The findings show

that the fair value adjustment in 2017 was 5.21% and 0.47% in 2018. Paired sample t tests revealed that the difference between the means of fair value adjustments in 2017 and 2018 are not statistically significant, meaning that the transition caused by IFRS 9 implementation did not have any significant effect on fair value of other comprehensive income as a proportion of comprehensive income reported by commercial banks in Kenya. In terms of the relationship between fair value adjustment and financial performance. panel regression results show a positive influence of the fair value adjustments on financial performance, p=0.930; but the relationship was not statistically significant at 95% confidence interval.

The second objective was to establish the effect of expected credit loss impairment review method on financial performance of commercial banks in Kenya following the implementation of IFRS 9. The results show that ECL impairment was higher in 2018 compared to 2017, that 14.08% compared to 11.12%, respectively. T tests indicate a statistically significant difference in reported expected credit loss impairments before and after the implementation of IFRS 9. In terms of the influence on financial performance, panel regression results indicated that expected credit loss impairments had a negative effect on ROA; the influence was not significant, p=0.127 at 95% confidence level.

The third objective was to establish the effect of loan amortisation approach on performance of commercial banks in Kenya following the implementation of IFRS 9. Findings show that the was no change in loan amortization in 2017 and 2018. In terms of the differences in means, the study found no statistically significant difference between loan amortization costs in 2017 and 2018, thus no effect of IFRS 9 on amortised costs. Panel regression results revealed that loan amortization approach had a negative effect on the financial performance of commercial banks, p=0.660, but the effect was not statistically significant.

4.5. Discussions

4.5.1. Fair Value Adjustment and Financial Performance

The IFRS 9 includes provisions for fair value adjustment of financial assets and liabilities. In this case, fair value is the price that would be received when an asset is sold, or received when a liability is transferred in an orderly transaction between market participants. Fair value through other income statements means that in the case of debt

instruments, the gains or losses to the fair value are directly recognized in the fair value through the other comprehensive income reserve. When the debt instrument is disposed of, cumulative fair value adjustments are made and the reserve is reclassified.

This study found out that the fair value of other comprehensive income of the year as a percentage of comprehensive income was higher in 2017 compared to 2018, across all bank sizes, with the exception of small banks. In aggregate, commercial banks showed a higher fair value adjustment in 2017, meaning that the implementation of IFRS 9 reported a reduced proportion of other comprehensive income relative to comprehensive income reported. Pair samples t test showed that there was no significant statistical difference in the means of fair value adjustments in 2017 and 2018.

Regression statistics show that fair value adjustment had a positive influence on the financial performance of commercial firms; however, the influence is not statistically significant. There are studies that have established a significant relationship between fair value adjustments and financial performance. Amaefule et al (2018) carried out a study in Nigeria, covering listed companies. Even though the financial ratio used to measure performance, ROE, in the study differs from ROA used in the current study, the researchers found out that the relationship between fair value measurement and performance was insignificant, and there was no statistically significant difference between using fair value assessment and historical accounting when estimating the performance of listed firms.

In the UK, Aboody et al (1999) had established that fair value assessments of fixed assets predicted future cash flows and earnings. There was a positive link between fair value evaluations and the operating performance of UK companies. However, these findings were not replicated by John and Smith (2011) who established that changes in performance are transitory in nature and do not predict the ability of a firm to generate positive cashflows and earnings in the future, and cautioned against generalization of findings that attempt to establish if changes in accounting standards affected financial performance of companies.

As to the reason why fair value adjustments can predict future positive profitability, Lachman et al (2015) explains that adjusting the credit risk in net incomes by including other comprehensive income is important because it can show whether a firm has a lower or higher credit risk, and this knowledge can help a firm to manage credit risk better.

In Kenya, Bare (2019) focused on the SME sector. The robust study did not find any significant relationship between the implementation of accounting standards and the financial performance of SMEs. The study mirrored what had earlier been established by Khurana and Kim (2003) who also found out that the transition from SFAS 107 to SFAS 115 did not cause any change in performance and that there was no statistically significant difference in using the two measurements.

According to Kemeli (2017) fair value adjustment presents a higher quality model for assessing market-based values, and is preferred by sophisticated users of financial instruments, especially those who want to consider the magnitude of other comprehensive income when evaluating the performance of a firm. However, while sophisticated users may prefer these adjustments in order to make accurate, objective analysis of the financial position of a firm, Martin and Osma (2019) contends that undesirable outcomes may occur when the fair value adjustment is higher than the amortized cost. In the study, the fair value adjustments were higher than the amortized costs. Martin and Osma (2019) do not go further to define the nature of this undesirability.

4.5.2. Expected Credit Loss Impairments and Financial Performance

In general, companies calculate amortized cost for their assets according to the tax laws applicable in their jurisdictions and accounting standards established by international organizations and adopted by member countries. The mount calculated is based on the useful life of the assets as established by accounting standards, tax regulations and depreciation rates and they are recognised as expenses. The amount of expenses affects profit and loss, and it is crucial for companies to calculate fixed asset's useful life using the right method, which will also relate to the performance of a firm.

Expected credit losses are recognized on debt financial assets, where they are either classified at fair value or amortised costs. The rationale behind ECL is that there has been a significant increase in credit risk at the reporting date which includes forward-looking information that is available without undue cost or effort at the reporting date about past events, current conditions or future economic forecasts. ECL is measured via an unbiased and probability-weighted amount that takes into account a range of possible outcomes. ECL takes into account various shared risk characteristics such as the type of instrument, credit risk grade, collateral type, date of initial recognition, remaining term to maturity, the industry and the value of the collateral relative to the financial asset in determining

the probability of default. Considerations for expected credit losses influence the level of profitability reported by the commercial bank.

The current findings illustrate that the value of expected credit loss impairments increased with the adoption of IFRS 9 as demonstrated by higher nonperforming loans ratios in 2018 compared to 2017 across all bank tiers. The industry reported higher expected credit loss impairment in 2018's audited financial statements than 2017's statements. An examination of differences between the means showed that there was a statistically significant difference in the means of expected credit loss impairments in 2017 and 2018.

This study shows that expected credit loss impairments exert a negative effect on the financial performance of commercial banks; however, the effect is not statistically significant. Researchers such as Ntaikou (2018) contend that IFRS 9, especially the provision for expected credit loss impairment is necessary for creating a more stable banking system. Hui and Laeven (2012), in examining the roots of the 2008 financial crisis found out that delayed recognition of credit losses destabilized the banking system and called for timely recognition of such credit losses. These concerns were the basis of the spirited development of a new accounting framework adopting an expected losses approach as opposed to the incurred losses approach.

Nadia and Rosa (2014) noted that how firms deal with losses, whether incurred or expected, can act as signaling mechanism in the capital market. The researchers noted that the capital market is often focused on the level of profitability disclosed by firms. As a result, if an accounting standard can reduce the amount of profitability disclosed by a firm, it can affect the behavior of investors at the capital market and this can pose a significant effect on the liquidity and performance of the company. On the contrary Norty-Farkers (2016) is of the opinion that the expected loss approach aligns closely to the regulatory loss approach and offer a much better framework that can advance the stability of the financial system.

In addition, Kund and Rugilo (2020) explain that when there is a sudden increase in impairments, it can pose a negative effect on the company, hence the benefit of a staged credit loss approach which prevents concerns about capital inadequacy while mitigating the probability of procyclical effects. On the other hand, Jane (2018) reiterates that the complexity of the expected credit loss computation and the high level of subjectivity when modelling increases the dependence on unobservable values when managing risks.

4.5.3. Loan Amortization and Financial Performance

Amortized cost of a financial asset or liability is the amount the asset or liability is measures at initial recognition, minus principal repayments, plus or minus the cumulative amortization via the effective interest rate method. Amortized cost can be understood as part credit impairment charges.

Findings reported in the present study show lower amortized costs in 2018 when compared to 2017. Amortized costs across all bank tiers were relatively lower in 2018, with the exception of small-sized banks. However, the industry average shows that loan amortization costs did not change, for instance it remained 0.48% in 2017 and 2018, indicating that the implementation of IFRS 9 did not change the level amortization charges in the banking sector. In the present study, paired sample t tests showed that there was no statistically significant difference in amortised costs in 2017 and 2018. Panel regression revealed that amortized costs were associated with a negative effect on the financial performance of commercial banks. However, even though the effect is negative, analysis revealed that it was not statistically significant.

While fair value adjustment and credit loss impairments were changed when transitioning to IFRS 9, the formula for calculating amortized cost remained as was stipulated in IAS 39. Under IFRS 9, they are applicable to debt instruments assed at FVOCI using the effective interest rate method. According to Humblot (2018) since amortized cost affects how assets and liabilities are classified, it also means that it affects the level of financial performance as reported in terms of profits or losses. ICPAK (2018) reiterated that amortized cost ensures that assets and liabilities adjust with changes in cash inflows and cash outflows. When investigating how accounting standards affect financial performance, Zicke and Kiv (2017) found out that while larger, less profitable and faster growing companies are more likely to adopt IFRS 9, there was a strong negative association between IFRS 9 and return on assets.

5.3.Conclusions

Reforms of accounting and reporting standards are typical and professional bodies consistently propose better ways of achieving the highest quality standards in practice. The adoption of IFRS 9 is one of the most recent exercises. IFRS 9 introduced three main changes: classification and measurement of financial assets and liabilities, impairment

methodology, and hedge accounting. Classification brought to the fore a new categorization that is based on amortised cost, fair value through other comprehensive income, and fair value through profit and loss. IFRS 9 also replaced the incurred losses approach with expected losses approach, which takes into account the identification of default scenarios, estimation of cash shortfalls associated with every default scenario, multiplication of the expected losses with the probability of the occurrence of the default, and summation of the results of all possible default events. Owing to pertinent questions on the possible effect of the new standards on financial performance, this study carried out a comparative analysis of fair value adjustment, expected credit losses, and amortised cost and how these influences financial performance and has come up with the following conclusions.

5.3.1. Fair Value Adjustment and Financial Performance

Fair value adjustment values were found to be comparatively higher in 2017 than 2018. However, when paired t tests was carried out, the findings showed that the differences in means was not statistically significant. This means that implementation of IFRS 9 did not have a significant effect on the fair value through comprehensive income and fair value through profit and loss that commercial banks reported in the two years under analysis. Panel regression results carried out to determine whether changes in fair values affected financial performance established that while there was a positive association between fair value adjustment and financial performance, it was not statistically significant.

5.3.2. Expected Credit Loss Impairments and Financial Performance

Credit impairments causes variances in the amount of profits disclosed. The findings showed that credit impairments were higher in 2018 when compared to 2017. Paired sample t tests demonstrated that there was a statistically significant difference in reported expected credit loss impairments before and after the implementation of IFRS 9. Panel regression results show that credit impairments had a negative effect on financial performance, but the effect was not statistically significant. This indicates that even though there was a statistically significant mean difference in credit impairments in 2017 and 2017, it did not exert a significant effect on the financial performance of commercial banks.

5.3.3. Loan Amortization and Financial Performance

Loan amortization captures the cost of an asset or liability that is disclosed in the financial statements. In the study, amortised costs relative to total loans, remained the same in 2017 and 2018, even with the implementation of IFRS 9. Paired sample t tests also revealed no statistically significant difference between loan amortization costs in 2017 and 2018. Panel regression statistics indicate that amortised costs had a negative effect on the financial performance of commercial banks; however, the association was not statistically significant.

5.4.Recommendations

5.4.1. Recommendations for Practice

5.4.1.1.Fair Value Adjustment and Financial Performance

Financial accounting standards have been found to improve the relevance, reliability, and utility of financial statements. Accounting reporting and disclosures provide useful information to users such as investors. Users of financial information consider the different performance values reported in the profit and loss statement as well as in other comprehensive income. Even though additional information on fair value adjustments are disclosed in the notes, it is crucial that fair value measurements be based on observable variables rather than non-observable variables. The study shows that there is a positive association between fair value adjustments and financial performance, as such banks can develop strategic plans that allow them to exploit the positive signaling nature of this association to enhance its standing among investors.

5.4.1.2.Expected Credit Loss Impairments and Financial Performance

Credit impairment methodologies influence a firm's risk management processes. Under the expected credit losses model, firms are able to consider the potential impairment throughout the lifetime of the financial asset or liabilities. The study found out that credit impairment had a negative but insignificant effect on financial performance. Commercial banks should routinely update their financial risk modeling and data analytics, in addition to evaluating the appropriateness of credit impairment methodologies to increase the accuracy of assessing the probability of default, loss given default, and exposure at default assumptions.

5.4.1.3.Loan Amortization and Financial Performance

Amortized cost guides commercial banks on collecting contractual cashflows on specified dates in the course of loan repayment. As such, the negative association between amortized cost and financial performance is of critical importance to lenders. Commercial banks should routinely assess the classification and measurement of financial assets and liabilities to ensure that they are aligned with the contractual cash flow characteristics of the entity under examination.

5.4.2. Suggestions for Further Research

IFRS 9 came into force in January 2018. In collecting data for the study, the researcher only found complete data in 26 out of 42 commercial banks in Kenya. In essence, the implementation of IFRS 9 is still in a transitionary phase and not all commercial banks have complied with the provisions. Further studies can examine whether the findings reported in this study stand in the mid-term and long-term, that is after the standard have been operational for at least 5 years and more.

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APPENDICES

APPENDIX I: SECONDARY DATA COLLECTION SHEET

BANKS	Performance	Fair Value Adjustment	Expected Credit Loss			Loan Amortisation
	ROA	FVOCI	Non-performing loans	Total Loans	NPLR	LA
Commercial Bank						
2017						
2018						

APPENDIX 2: CLASSIFICATION OF COMMERCIAL BANKS

Tier 1 Banks

1. Kenya Commercial Bank
2. Equity Bank
3. Barclays Bank
4. Standard Chartered Bank
5. Cooperative Bank
6. Commercial Bank of Africa
7. Diamond Trust Bank

Tier 2 Banks

1. Bank of Africa Kenya
2. Eco Bank
3. Family Bank
4. CFC Stanbic Bank
5. NIC Bank
6. I&M Bank
7. Housing Finance Bank
8. National Bank
9. Bank of Baroda
10. Bank of India

Tier 3 Banks

1. African Banking Corporation (ABC)
2. Jamii Bora Bank
3. Paramount Universal Bank
4. Citibank N.A Kenya
5. Consolidated Bank
6. Credit Bank
7. Development Bank
8. Fidelity Bank
9. Guardian Bank
10. Transnational Bank
11. Oriental Commercial Bank
12. Gulf Africa Bank

13. First Community Bank
14. Equatorial Bank
15. Giro Commercial Bank
16. Habib Bank AG Zurich
17. Sidian Bank
18. United Bank of Africa (UBA)
19. Middle East Bank
20. Victoria Commercial Bank
21. Charterhouse Bank

Banks Under Receivership

1. Chase Bank
2. Imperial Bank
3. Dubai Bank

APPENDIX 3: FINANCIAL RATIOS (2017 - 2018)

	BANK	Bank tier	ROA2017	ROA2018	FVOCI_FVPL2017	FVOCI_FVPL2018	ECL2017	ECL2018	LAC_TL2017	LAC_TL2018
1	Kenya Commercial Bank	1	0.03	0.03	0.0971	0.0018	0.0758	0.0601	0.0026	0.0142
2	Equity Bank	1	0.04	0.03	0.0110	0.0455	0.0187	0.0656	0.0034	0.0047
3	Barclays Bank	1	0.02	0.02	0.0437	0.0394	0.0558	0.0609	0.0332	0.0274
4	Standard Chartered Bank	1	0.02	0.03	0.0919	0.0483	0.0299	0.0114	0.0070	0.0067
5	Commercial Bank of Africa	1	0.02	0.03	0.0848	0.0305	0.0602	0.0646	0.0057	0.0049
6	Diamond Trust Bank	1	0.02	0.02	0.0000	0.0578	0.0179	0.0106	0.0135	0.0013
7	Bank of Africa Kenya	2	0.00	0.00	0.3600	-1.9892	0.3001	0.3383	0.0009	0.0009
8	Family Bank	2	-0.01	0.00	-0.0010	0.3653	0.1923	0.1618	0.0034	0.0029
9	CFC Stanbic Bank	2	0.02	0.02	0.0797	0.1041	0.0202	0.0143	0.0047	0.0045
10	I&M Bank	2	0.03	0.03	0.0347	0.0286	0.0940	0.0680	0.0008	0.0008
11	Housing Finance Bank	2	0.00	0.00	0.0000	0.0000	0.0598	0.0733	0.0071	0.0088
12	National Bank	2	0.00	0.00	0.2984	0.7931	0.1778	0.2784	0.0103	0.0100
13	Bank of Baroda	2	0.04	0.03	0.0592	0.0509	0.0586	0.0882	0.0009	0.0001
14	African Banking Corporation (ABC)	3	0.01	0.00	0.1609	0.2769	0.1887	0.2042	0.0011	0.0012
15	Paramount Universal Bank	3	0.01	0.02	0.0000	0.0000	0.1056	0.1318	0.0006	0.0007
16	Citibank N.A Kenya	3	0.04	0.04	0.0138	0.0512	0.0458	0.0162	0.0000	0.0000
17	Consolidated Bank	3	-0.02	-0.04	-0.0031	-0.0008	0.2043	0.2171	0.0092	0.0107
18	Credit Bank	3	0.01	0.01	0.0248	0.0584	0.0754	0.0724	0.0047	0.0038
19	Development Bank	3	0.00	0.01	0.0000	0.1598	0.2098	0.2981	0.0000	0.0000
20	Transnational Bank	3	0.00	-0.01	0.0000	0.0000	0.2066	0.2211	0.0006	0.0055
21	Oriental Commercial Bank	3	0.01	0.01	0.0000	0.0000	0.0300	0.0940	0.0003	0.0005
22	Gulf Africa Bank	3	0.00	0.00	0.0000	0.0000	0.0929	0.1064	0.0010	0.0013
23	First Community Bank	3	0.01	-0.01	0.0000	0.0000	0.4078	0.4882	0.0022	0.0029
24	Sidian Bank	3	-0.02	-0.01	0.0000	0.0000	0.0394	0.0292	0.0076	0.0060
25	United Bank of Africa (UBA)	3	0.00	0.00	0.0000	0.0000	0.0436	0.1276	0.0016	0.0016
26	Middle East Bank	3	-0.01	0.00	0.0000	0.0000	0.0803	0.3587	0.0014	0.0035

APPENDIX 4: PANEL DATASET

Bank	Year	ROA	FVOCItoFVPL	NPLtoTL	LACtoLC
1	2017	0.034619	0.097093	0.075799	0.002576
1	2018	0.033592	0.00183	0.060052	0.014184
2	2017	0.036071	0.010955	0.018689	0.00344
2	2018	0.033757	0.045524	0.065631	0.004666
3	2017	0.024594	0.043671	0.05582	0.033225
3	2018	0.02196	0.039398	0.060895	0.027442
4	2017	0.022877	0.091932	0.029855	0.006969
4	2018	0.027662	0.048338	0.011361	0.006726
5	2017	0.024775	0.084783	0.060212	0.005683
5	2018	0.026094	0.030547	0.064556	0.004939
6	2017	0.020363	0	0.017911	0.013513
6	2018	0.020556	0.057815	0.010589	0.001296
7	2017	0.001248	0.360003	0.300083	0.000878
7	2018	0.003575	-1.98919	0.338338	0.00094
8	2017	-0.01448	-0.00101	0.192311	0.00336
8	2018	0.00351	0.365346	0.161751	0.002941
9	2017	0.017325	0.079667	0.020184	0.004696
9	2018	0.021603	0.104098	0.014307	0.00454
10	2017	0.029831	0.034737	0.094003	0.000801
10	2018	0.027661	0.028634	0.068019	0.00085
11	2017	0.00272	0	0.059802	0.00714
11	2018	0.000685	0	0.073296	0.008837
12	2017	0.003456	0.298386	0.177804	0.01031
12	2018	0.001356	0.793101	0.278366	0.009952
13	2017	0.040808	0.059208	0.05864	0.000885
13	2018	0.031944	0.050887	0.088242	9.11E-05

14	2017	0.005527	0.160929	0.188698	0.001142
14	2018	0.002308	0.27694	0.20416	0.001158
15	2017	0.012315	0	0.10561	0.000588
15	2018	0.0239	0	0.13184	0.000705
16	2017	0.039808	0.013806	0.045811	0
16	2018	0.03692	0.051193	0.016216	0
17	2017	-0.02495	-0.00311	0.20427	0.00923
17	2018	-0.0419	-0.00076	0.217126	0.010689
18	2017	0.008977	0.024799	0.075357	0.004734
18	2018	0.013537	0.05845	0.072421	0.003843
19	2017	0.001618	0	0.209829	6.63E-06
19	2018	0.007469	0.159802	0.298073	7.27E-06
20	2017	0.003539	0	0.20657	0.000635
20	2018	-0.00702	0	0.221108	0.005519
21	2017	0.009125	0	0.030044	0.000256
21	2018	0.007841	0	0.093989	0.000548
22	2017	0.004906	0	0.092856	0.000996
22	2018	0.003949	0	0.106354	0.001294
23	2017	0.008744	0	0.40781	0.002246
23	2018	-0.01186	0	0.488169	0.002883
24	2017	-0.02185	0	0.039423	0.007573
24	2018	-0.01335	0	0.02917	0.005989
25	2017	0.002861	0	0.043568	0.001602
25	2018	0.003461	0	0.127634	0.001603
26	2017	-0.01294	0	0.080316	0.001428
26	2018	0.000487	0	0.358692	0.003458