

**LOAN LOSS PROVISIONS AND INCOME SMOOTHING:
EVIDENCE FROM COMMERCIAL BANKS IN KENYA.**

BY

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DECLARATION

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

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DEDICATION

Dedicated to my wife Rose and sons Gabriel and Michael

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LIST OF ABBREVIATIONS

CBK	-	Central Bank of Kenya
DMB	-	Deposit Money Banks
ECL	-	Expected Credit Loss
GAAP	-	Generally Accepted Accounting Principles
GDP	-	Gross Domestic Product
IAS	-	International Accounting Standards
IFRS	-	International Financial Reporting Standards
Kshs.	-	Kenya Shillings
LLPs	-	Loan Loss Provisions
MFB	-	Microfinance Banks
MRPs	-	Money Remittance Providers
NPL	-	Non-Performing Loans
NSE	-	Nairobi Securities Exchange

ABSTRACT

According to CBK's 2017 report, Loan Loss Provisions (LLPs) accounted for 12% of the total expenses incurred by commercial banks in Kenya in 2017. Given the magnitude of the expense and their role, it is clear that LLPs play a critical role in indicating the banking sector's stability and soundness. Regulators demand that for the expected losses on the loan portfolio, sufficient LLPs should be kept but there is no agreement for what sufficient or adequate LLPs really are. The guidelines for estimating LLPs allow for managers to exercise their own discretion in estimating what they would consider sufficient LLPs. This provides room for the managers to use the LLPs estimate to achieve other objectives which are not related to the credit. This study sought to determine the relationship between loan loss provisions and income smoothing among commercial banks in Kenya. The population for the study was all the 43 commercial banks operating in Kenya. The independent variable for the study was income smoothing as measured by EBTP divided by beginning total assets. The control variables were non-performing loans as measured by the ratio of NPLs to beginning total assets, loan growth as measured by change in outstanding loans, economic growth as measured by change in GDP growth rate, being listed at the NSE as represented by a dummy and being audited by a big 4 firm also measured using a dummy. Loan loss provisions as measured by provisions for losses divided by beginning total assets was the dependent variable. Secondary data was collected for a period of 11 years (January 2007 to December 2017) on an annual basis. The study employed a descriptive cross-sectional research design and a multiple linear regression model was used to analyze the relationship between the variables. Statistical package for social sciences version 21 was used for data analysis purposes. The results of the study produced R-square value of 0.239 which means that about 23.9 percent of the variation in loan loss provisions of commercial banks in Kenya can be explained by the six selected independent variables while 76.1 percent in the variation of loan loss provisions was associated with other factors not covered in this research. The study also found that the independent variables had a weak correlation with loan loss provisions ($R=0.489$). ANOVA results show that the F statistic was significant at 5% level with a $p=0.000$. Therefore, the model was fit to explain the relationship between the selected variables. The results further revealed that only non-performing loans and choice of an auditor produced positive and statistically significant values for this study. Income smoothing, loan growth, GDP growth rate and being listed at the NSE were found to be statistically insignificant determinants of loan loss provisions among commercial banks. This study recommended that adequate measures should be put into place to control and regulate prevailing levels of non-performing loans as they significantly influence loan loss provisions among commercial banks. The study further recommends that banks should make an informed decision before settling on an auditor as this too has an effect on loan loss provisions.

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

Commercial banks receive deposits from their customers and use the same deposits for investments purposes, mainly issuing of loans. Credit risk arises when borrowers are unable to repay the loans advanced (for whatever reasons) and is inherent in the process of issuing loans by banks (Rose & Hudgins, 2013). To cover for any expected losses, which may occur in the loan portfolio, banks reserve a specific of money to serve as a cushion for absorbing such losses. This amount set aside is called loan loss provisions (LLPs) which is charged from the banks revenues and constitutes one of banks' main accruals. Over time, these provisions are either grown or decreased in line with the expected credit losses (White, Sondhi & Fried. 2003).

On the other hand, unexpected losses in the loan portfolio, which are the negative variations from the expected credit losses, are supposed to be absorbed by the bank's equity (Norden & Stoian, 2013). When a bank keeps high LLPs, it increases the available cushion for expected credit losses but at the same time lowering profits. On the contrary, keeping low LLPs increases profits and at the same time increases the threat that of being required to use equity to cover for large credit losses should they arise (Laeven & Majnoni, 2003). Though banks and their financial reporting systems are highly regulated, there is still room for managers to apply their own discretion in deciding whether or not a loan is impaired and hence provisions should be held for it (Curcio, Simone & Gallo, 2015).

Bank regulators insist that LLPs should be adequate to absorb any loan portfolio losses. Regulators and issuers of accounting standards emphasize on transparency and prudence in the measurement and recognition of provision estimates. However, there is emerging empirical indication that the provisions, apart from reflecting expected credit losses they can be used for other purposes (Curcio, Simone & Gallo, 2015). The evidence points to the fact that banks could be using the LLPs figures for other purposes, including the intended purpose, which include income and capital management, signalling of loan quality among others (Cornet, McNutt & Tehranian, 2006; Greenawalt & Sinkey, 1988; Wahlen, 1994; Ozili, 2017; Fernando & Ekanayake, 2015; Duru & Tsitinidis, 2013; Acar & Ipci, 2015). Some other studies (e.g. Beatty, Chamberlain & Magliolo, 1995; Wetmore & Brick, 1994) found no prove of LLPs being used to affect income, capital or for signalling purposes.

Income smoothing raises banks' opaqueness (Bhattacharya, Daouk & Welker, 2003), it lowers the revealing nature of earnings which are reported (Leventis, Dimitropoulos & Anandarajan, 2010) and reported earning quality is reduced (Ahmed, Mohammed & Adisa, 2014); therefore, the question whether banks smooth reported income is topical and has attracted much debate in the banking literature. In this study, I shall seek to for empirical evidence on whether commercial banks in Kenya use LLPs to smooth reported income. I will also investigate whether income smoothing is affected, and to what level, by; a bank being listed in the Nairobi Securities Exchange (NSE) and the banks' auditor

1.1.1 Loan Loss Provisions

Loan loss provisions (LLPs) is an item of expense which is put aside to serve as an allowance for probable losses in the loan portfolio (<http://www.investopedia.com>). Where it becomes probable that a bank may be unable to recover all the due amounts in their loan portfolio, it identifies and recognizes impairment those loans. According to International Accounting Standards (IAS), each bank is supposed to assess all its financial assets measured at amortized cost for impairment. Where there is unbiased evidence that an asset is impaired then impairment losses have been suffered. The loss is the adverse variance of the carrying amount of the asset and the present value of projected future cash flows and it is charged to the bank's income (Healy & Wahlen, 1999).

The standard requires use of experienced judgment by bank managers to estimate impairment losses and this provides managers with a certain amount of discretion. It is normally this discretion which offers a conducive situation for income management. A key feature that makes LLPs an interesting subject of study is that they concurrently impact both the bank's risk and GDP growth rate resulting in a trade-off (Bushman & Williams, 2012).

According to the Central Bank of Kenya (CBK) prudential guidelines (2013), banks should consider all applicable factors in assessing the probable loss which could occur in specific loans or the total loan portfolio. The guidelines provide a criterion for classifying loans, based on their performance, into five categories namely, Normal, Watch, Substandard, Doubtful and Loss. Minimum provisions for each category are defined as 1%, 3%, 20%, 100% and 100% respectively. For normal and watch, the

provision percentage is applied to the gross while for the rest of the categories, it is applied on the loan amount net of any suspended interest and discounted valued of collateral. The CBK guidelines requires that if the impairment losses computed based on International Accounting Standards are different from those calculated based on the guidelines, the difference is recognized and accounted for as an appropriation of retained earnings.

Noteworthy, bank loan loss provisioning (as per accounting standards) for the period under study have been backward-looking but effective January 2018 IAS39 was replaced by International Financial Reporting Standards 9 (IFRS 9). The major change expected with the adoption of the new standard is the model change to expected credit losses (ECL) from the incurred loss. IFRS9 increases in the complexity and number of judgments involved in the calculation of ECL (Ozili, 2015). The new standard came about because regulators have identified the delayed recognition of credit losses under IAS 39 as a contributory factor in the 2008 Global Financial Crisis (Outa, 2013). This is why IFRS 9 is designed to make banks recognize expected credit losses in a timely manner.

1.1.2 Income Smoothing

Income smoothing involves the tactful process meant to remove peaks and valleys from income which also includes reducing and 'storing' profits made when performance is good so they can be use during rough patches (Mulford & Comiskey, 2002). It refers to reducing to decreasing fluctuations in income over time so as to achieve smoother income flows. It happens when management applies judgment in monetary transaction to changes financial statements and hence the period's

performance to firm-specific mean or to the industry benchmark (Healy and Wahlen, 1999).

Income smoothing refers to be the accounting procedures or policies which the management select for purposes of attaining a certain level of income due to stakeholder pressure and the constrictions of Generally Accepted Accounting Principles (GAAP) (Rahman, Moniruzzaman, & Sharif 2013). It is meant to lower the risk perception of the organization because stakeholders perceive a less volatile flow of income as less risky (DeFond & Park, 1997). Bhat (1996) found evidence that bank managers use income smoothing to minimise the bank stock price fluctuations, to even out managers' remuneration and improve the bank's risk perception.

When income smoothing is done outside the confines relevant standards and regulations it is taken as fraud and when used within the regulations and standards frameworks, it is considered acceptable (Stolowy & Breton, 2004). To achieve the latter managers exploit the suppleness of regulations and accounting standards which, reasonably, allows the managers some discretion in deciding the quantity of some financial statement items. Whether income management is ethical or not can be determined based on the basis of the motives of doing so, if done for the benefit of all stakeholders it can be considered ethical and unethical if done for selfish reasons like increasing management bonuses (Ozili & Outa, 2017).

Healy and Wahlen (1998) mentioned two ways of income smoothing; first, accounting earnings management where managers use their own judgment to take advantage of the options allowed GAAP and alter reported earnings without changing the original

past transactions. Secondly, there is the economic earnings management which involves altering operating choices, for example, schedule of maintenance or delivery so as to manage the fundamental cash flows which will impact reported income. The most popular and extensively used income smoothing methods are grouped into several classes of which include; “Cookie jar reserve” method, “Flushing” the investment portfolio, big bath technique, changing the GAAP and “Throw out” a problem child method.

1.1.3 Loan Loss Provisions and Income Smoothing

Loan loss provisions and capital ratios regulations and standards are intertwined in the handling of credit risk. A certain amount of LLPs are set aside for purposes of covering expected losses in the loan portfolio, these are an expense charged to income and on the other hand, equity is meant to absorb the unexpected loan losses (Curcio, Simone & Gallo, 2015). If LLPs are underestimated, the amount charged to the profit will decrease, leading to an increase in profits and the contagion effect is that the increased profits lead to overconfidence and hence more lending. On the flip side, an increase in LLPs, caused by impairment of loan leads to decrease in reported income.

LLPs and income smoothing relationship has been studied by various researchers. Greenawalt & Sinkey (1988) and Wahlen (1994) found out that banks use LLPs to even income and so it can appear stable over time so as to adhere to regulatory requirements plus meet some financial reporting goals. There have been empirical studies which have confirmed a statistical relationship between LLPs and income (e.g. Ahmed, Takeda & Thomas, 1999; Anandarajan, Hasan & McCarthy, 2007; Perez, Salas-Fumas & Saurina, 2008; Fonseca & Gonzalez, 2008; Leventis, Dimitropoulos

& Anandarajan, 2010; El Sood, 2012; Curcio & Hasan, 2015; Skała, 2015; Ozili, 2017a, b).

Banks' motivators to use of LLPs in income smoothing are subject to business performance measured against the set goal and governance (Fan & Wong, 2002). The association between LLPs and income can also be affected how effective the regulation framework is in curtailing the extent of bank manager's discretion. If regulators have higher powers to supervise and hold managers responsible for their actions, it reduces the incentive to abuse LLPs discretions and cases of moral hazard (Fonseca & Gonzales, 2008).

According to Goel and Thakor (2003), at times of poor performance caused by other factors apart from rise in credit risk, LLPs are consciously decreased to control the impact of the other factors on income. While analysing Australian commercial banks, Anandarajan, Hasan & McCarthy (2007) established evidence that some of the sampled banks were using LLP for the capital management. Bouvatier and Lepetit (2008) drew the same conclusion from their study on a sample of European credit institutions. Several studies concluded that because LLPs are elements of bank's capital, it will motivate managers to use their discretion in estimating LLP so as to ensure that the regulatory capital meets or is above regulatory requirements (Ahmed, Takeda & Thomas, 1999; Scholes, Wilson, & Wolfson, 1990). In addition, it is argued that the punitive effects of the costs of breaking regulatory capital requirements is a motivation for managers to apply their discretion in determining LLPs estimates for purposes of complying.

1.1.4 Commercial Banks in Kenya

The Central Bank of Kenya (CBK) regulates commercial bank operating in Kenya and the banking industry comprises of CBK, as the regulator, 43 banks, 42 of which are commercial banks and 1 is a Mortgage Finance Company, 8 foreign banks offices representatives, 77 Seven foreign exchange (forex) bureaus (CBK, 13 Microfinance Banks (MFBs), 17 Money Remittance Providers (MRPs) and 3 credit reference bureaus (CRBs) (CBK, 2017).

Total net assets of Kenyan banking industry as at December 2017 were at Kshs 4 trillion having grown by 8.1% from Kshs. 2.29 trillion in 2016. Gross loans and advances stood at 2.16 trillion having declined by 6% from Kshs. 2.29 trillion in 2016. The decrease in lending was mainly attributed to the capping of interest rates which has seen banks move to risk free government investments at the expense of risky lending to customers. The decreased lending is expected to lead to a decrease in LLPs.

Gross NPL to total loans ratio rose from 9.2% in 2016 to 12.3%, attributed to the challenging environment in 2017 especially the protracted electioneering period, delayed payments from public and private entities and poor weather conditions. Gross NPLs increased by 23.4% from Kshs. 214 billion in December 2016 to Ksh.264.6 billion in December 2017. The growth of NPL is expected to cause an increase in LLPs and a decrease in EBTP. LLPs expense was Kshs. 41.2B, accounting for 18% of total operating expenses. While industry wide profit before tax was Kshs 133B mainly due to a decrease in income margins (CBK, 2017).

According to the CBK 2017 annual report, current LLPs as per the prudential guideline are higher than provisions required under IAS 39. However, it is expected that LLPs under IFRS 9 will be higher and they will impact banks' reported profits adversely.

1.2 Research Problem

According to CBK's 2017 report, LLPs accounted for 12% of the total expenses incurred by commercial banks in Kenya in 2016. Given the magnitude of the expense and their role, it is clear that LLPs play a critical role in indicating the banking sector's stability and soundness. For this reason, regulators demand that for the expected losses on the loan portfolio, sufficient LLPs should be kept but there is no agreement for what sufficient or adequate LLPs really are (Ozili & Okuta, 2017). The guidelines for estimating LLPs allow for managers to exercise their own discretion in estimating what they would consider sufficient LLPs. This provides room for the managers to use the LLPs estimate to achieve other objectives which are not related to the credit. Regulators and standard setters do acknowledge that the provisions do not exactly tie with actual loan losses and have a margin for error called discretionary component of the provisions (Montgomery, 1998).

The subject continues to attract a lot of interest and research has established that under various regulation regimes, managers take advantage of their discretion to overstated or understated LLPs (Hamadi, Linder, Heinen, & Porumb, 2016; Alali & Jaggi, 2011). Previous studies on the subject have concentrated on banks in Europe and the United States and their findings were that LLPs were used for income smoothing (e.g. Ahmed, Takeda & Thomas, 1999; Greenawalt & Sinkey, 1988; among others). As at now, no research has been done to establish whether or not and how commercial

banks in Kenya are using LLP to smooth income. It is imperative, therefore, to study and find evidence, if any, of use of LLPs in income smoothing by Kenyan banks so as advance literature by filling the research gap on this topic in Kenya.

Financial statements and disclosures are a critical means of passing information between investors and the managers running the companies and they largely affect the assessments and decisions made by stakeholders including investors and regulators. Faithful representation and relevance are the essential qualitative aspects financial statements and hence, for financial statements and disclosures to be beneficial to its consumers, they must be relevant and faithfully represents what it is intended to represent (IASB, 2010). Nevertheless, at times financial reports can be prepared to attain selfish interests of the preparers by influencing some figures, either legally or illegally to influence investors and other stakeholders' decisions (Kellogg a& Kellogg, 1991). In this study, I shall seek the evidence of income smoothing which in-turn leads to an element of financial reports in the Kenyan banking industry.

Banks serve a critical role in the economy, they are the main source of financing for businesses as wells as persons and are one of the principal government lenders investing in bills and bonds to fund public expenditure. Consequently, any possible irregularities in how they perform their business might have dire ramifications on the economy at large, as we observed when the Lehman Brothers went down in 2008 (Rose & Hudgins, 2013). It is therefore imperative that this study extends knowledge of income smoothing within the financial sector.

Further, the Kenyan banking sector has undergone several regulatory regime changes starting with the CBK prudential guidelines of 2006 to the current prudential guidelines of 2013 which are based Basel II Accord. There has also been the implementation of IFRS in financial reporting by the banks from 2009. These changes have had an impact on how LLPs are estimated and on regulatory capital ratios. In this regard, there is need to review how use of LLPs for income smoothing has evolved with changes in regulations and financial reporting standards so as to inform future reviews of these standards and regulations. Lastly, there is also need to establish whether being listed in the NSE and/or being audited by a big 4 audit firm, namely; PriceWaterhouseCoopers, Ernst and Young, Deloitte and KPMG, has an impact on income smoothing using LLPs. To this end, we arrive at the question investigated by this research; Do commercial banks in Kenya use loan loss provisions to smooth income?

1.3 Research Objectives

The general objective was to establish the relationship between loan loss provisions and income smoothing among commercial banks in Kenya.

1.3.1 Specific objectives were:

- i. To establish the relationship between LLPs and income smoothing by commercial banks in Kenya
- ii. Establish whether the level of income smoothing differs between listed and non-listed banks and between those audited by big4 audit firms.

1.4 Value of the Study

Reducing information asymmetry; Investors and other stakeholders who are consumers of the reported financial performance of banks will be better informed of

the effects of managers' discretions in estimating LLPs, to the figures reported on the financial statements. They will then be able to make informed decisions based on their evaluation of banks' performance and putting into consideration the impact of discretionary estimates on the performance.

Regulation and accounting standards; Regulatory authorities and policy makers, mainly those involved in setting accounting standards, in the banking sector will be able to evaluate how the current regulations and standards on LLP are being applied by banks for other objectives. With this information, they will be able to establish the effectiveness of the regulations and standards and the study findings will form a useful basis for embarking on any reforms if required.

Academia; The study will add to existing literature on uses of LLPs and income smoothing by banks, it will also fill the gap of knowledge and lay a foundation for further research in regard to the banking sector.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This part reviews the literature that is already in existence on the uses of LLPs for other objectives by financial institutions. It is divided into five parts, beginning with the related theoretical background, then there is a mention of other methods through which banks manipulate earnings. The next section will cover relevant empirical studies followed by conceptual framework then the conclusion.

2.2 Theoretical Review

In this section theories relevant to income smoothing will be reviewed. Focus is on the theories which try to explain managers try exploit available options to smooth reported income.

2.2.1 Dividend and Income Smoothing Theory

This theory is founded on incumbency rents. It was developed by Fudenberg and Tirole (1995) based on the results of their analytical model. Their theory suggests that managers envisage future and current performance in their judgement to smooth income due to job security concerns. More incisively, from their results they concluded that if present performance compared to peers is poor, the managers will be motivated to move future anticipated income into the present period to minimize chances getting reprimanded.

It points to the fact that if present income is somewhat low, and the managers project that upcoming income will be considerably high, they use discretionary accruals to increase current income. In essence, they are using income from the future. Fudenberg

and Tirole (1995) referred to this group of managers as the poor-good group. On the contrary, when future income is anticipated to be low but the current one is good, managers have an inducement to move the present income to the future so as to lower the probability of a poor results in the future. They called this group of banks the good-poor group.

The theory was advanced by Acharya and Lambrecht (2015) who developed income smoothing theory founded on asymmetric information. They considered a situation where managers possess information concerning income that outside stakeholders do not have, however, the outside stakeholders particularly shareholders have property rights to enforce a certain pay-out. They concluded that, to avoid the intervention of outside shareholders, the insiders report income which is consistent with the outsider's expectations. The reported income might not be the true income and in some instances, the insiders under-produce so as not to unduly raise outsider's expectations. They further noted that adequate quality auditing could mitigate this problem.

2.2.2 Positive Accounting Theory

Pioneered by Watts and Zimmerman (1978, 1986), the theory goes past the agency theory and seeks to answer the following questions; what motivates managers to act in ways to maximize their self-benefit? Why managers influence or manipulate accounting numbers? and what motivates managers to make certain accounting choices?

According to Watts and Zimmerman (1986), the main evidence of PAT is that the accounting information produced by a company is not simply a product of a

company's actions or operational events but rather it is subject to the accounting methods used to produce that information which then is subject to clear contracts and targets to managers. They contend that the targets and contracts given to managers encourage them to use particular accounting methods to manage reported earnings so as to meet financial reporting goals that are depended on the reported earnings. Watts and Zimmerman (1986) consequently conclude that the accounting information produced by management in financial statements echo several aspects that were taken into consideration when producing financial statements, for example; management remuneration, resources allocation, regulatory requirements and debt covenant constraints. This indicates that reported earnings in the financial statements of companies replicate both accounting and non-accounting decisions of managers.

PAT then proceeds to provide three rivalling elucidations or hypotheses that illustrate why managers use several accounting methods to influence the quantity of earnings which are reported. The hypotheses include: political price, bonus strategy and debt restrictions hypotheses. Facts on suggested hypotheses forms the foundation for much research on earnings management.

2.2.3 Information Asymmetry and Signalling Theory

The process of decision making is affected by the information held (both public and private information). When various parties have differing information since some information is not available to the public then information asymmetry occurs. (Stiglitz 2002). This theory helps in explaining the relationship between two parties which possess varying information. Normally, one party (considered the originator), chooses what and how to pass (signal) the information they possess to the other party

(recipient). The recipient then chooses how to infer the information (signal) received (Connelly, Certo, Ireland & Reutzel, 2011).

Zhang and Wiersema, 2009 observed that firms use their financial statements to signal their unseen quality to potential investors. Increasing of ownership stakes by the top managers is another method of signalling confidence in the company's potential to the outsiders (Goranova, Alessandri, Brandes, & Dharwadkar, 2007).

Managers have more detailed and precise information regarding the company they are running than the outside stakeholders. This contradicts the assumption by Miller and Modigliani (1961) that outsiders and insiders possess perfect information regarding the organization's activities. Reported income and dividends are tools used to close the information gap between the two. Ross (1977) established that stable income and dividends payout considerably leads to an increase in the perceived value of the firm and declining or volatile income and dividends pay out can cause a decline in the firm's value. In an inefficient market, manager use income smoothing as a means of signal to the market critical information which only them are aware of. Reporting stable income signals stability in future and is information to the outsiders that the firm will continue to be profitable in the future.

2.3 Determinants of Loss Loan Provision

As alluded earlier, LLPs are set aside in accordance with the accounting standards and set regulations. This section looks at the determinants of LLPs which can be divided in two, that is, internal and external determinants. The internal ones are the ones within the bank's control which include EBTP (measure of income smoothing), equity ratio, loan size, bank size, non-performing loans (NPL) and loan growth rate. The external ones which are not under control of the management constitute the macroeconomic

environment which include gross domestic product (GDP), business cycle and lending rates. Some of these determinants are described below;

2.3.1 Non-Performing Loans

Findings from studies by Kanagaretnam, Lobo and Yang (2004) and Eng and Nabar (2007) concluded that NPL has a significant effect on LLPs. It implies that as the level on NPL increases (and by extension credit risk increases), there will be an increase in LLPs. Consequently, a positive association exists between NPL and LLPs. Several other studies collaborate these findings (e.g. Fonseca & Gonzalez, 2008; Leventis, Dimitropoulos & Anandarajan, 2010; El Sood, 2012). Conversely, Boudriga, Taktak and Jellouli (2009) found a significant negative association between LLPs and NPL.

Ozili (2018), while studying the determinants of LLPs in Africa established a positive function exists between NPL and LLPs up to a certain level after which LLPs do not grow at the same rate with NPLs. It gets to a point after which LLPs do not increase as NPLs increase.

2.3.2 Loan Size

This is measured using the loan to asset ratio and can be considered to be a measure of the risk level of the portfolio. Studies (e.g. Sinkey & Greenawalt, 1991; Laeven & Majnoni, 2003; Hasan & Wall, 2004) have found out that as the loan size increases, the level of LLPs increases as banks create sufficient buffer to absorb and losses which may occur in the portfolio.

Sinkey and Greenawalt (1991), established positive association existed between LLPs and loan size and it was significant. Hasan and Wall (2004) in their study on the factors affecting LLPs among United States, Canadian and Japanese bank, the established that loan to asset ratio was related positively and significantly with LLPs for Japanese and US banks but for Canadian banks the relationship was negative and insignificant.

2.3.3 Bank Size

This is measured as log of total assets. Findings on the study of the relationship between bank size and LLPs vary. Eng and Nabar (2007) established that there was a substantial negative association between LLPs and bank size, implying big banks keep comparatively small provisions. Dahl, O’Keefe, and Hanweck (1998) found a positive and significant relationship between bank size and LLPs. These findings were also supported by Anandarajan, Hasan, and Vivas (2005).

Size can also be considered a proxy for exposure to regulatory scrutiny and political sensitivity, it is therefore probable that large banks will keep high LLPs just to avoid being in the limelight.

2.3.4 Business Cycle

Business cycle refers to the different economic stages, that is, the cycle from recession to and economic boom and back to recession. Several studies (e.g. Bikker & Metzmakers, 2005; Ozili, 2015; Skala, 2015; Ozili, 2017) have been done on the relationship between the LLPs and the cycle of business. Bikker and Metzmakers (2005) established prove of changing nature of LLPs meaning that at times of

recession banks kept lower provisions than in times of economic boom and higher ones during recession.

Ozili (2015) while studying the association between LLPs and business cycle in Nigeria found that they were negatively related. Pain (2003) studied the causes of increases in LLPs of significant UK banks. The established that increased lending during times of economic growth is a significant factor for LLPs number.

2.3.5 Gross Domestic Product

Craigwell and Elliott (2011) studied the association between GDP growth and LLPs and found out that a negative relationship existed between the two. The reasoning behind that relationship is that when economy is doing well and expanding, chances of loans going bad are low due to increased repayment capacity of the borrowers and hence low provisions are kept. The reverse is true, since when GDP growth is low, it adversely affects borrower's repayment capacity increasing default rate and hence the need for more provisions. Bikker and Metzmakers (2005) finding were similar to those of Craigwell and Elliott (2011).

Laeven and Majnoni (2002) also found out that GDP growth and LLPs have negative association owing to the fact that banks set low provision when the times are good but are required to increase them at times of economic downturns.

2.4 Empirical Studies

This section highlights studies which have been done on use of LLPs for income smoothing, both globally and locally.

2.4.1 International Evidence

Duru and Tsitinidis (2013) did a study with an overall objective to determine presence of income smoothing through the use of LLPs under different accounting standards (IFRS and GAAP). The dataset for the study was limited to Nordic countries (Sweden, Denmark, Norway and Finland) and the samples comprised of 20 large banks from this region which are listed. Period under study as 1996 to 2012. They employed a multiple regression model to analyse the data. Overall findings showed that under both IFRS and GAAP there was some level of income smoothing by use of LLPs. One again, considering the large region under study, the sample size was small and also the auditor impact was not studied.

Fernando and Ekanayake (2015) did a study aimed at ascertaining if Sri Lankan commercial banks use LLPs to smooth their income from 2003 to 2012. They used eight bank specific and from the twelve Local Commercial Banks (LCBs) they selected a sample of eleven. They applied descriptive statistics to analyse the use of LLPs for income smoothing and a developed a regression model. Overall, their finding showed that there was some element of income smoothing activities using LLPs by the sampled private banks however there was no evidence of income smoothing by the public banks. The impact of type of auditors on the level income smoothening by the private banks was however not tested.

Adzis, Anuar and Hishamuddin (2015) did a study with the aim looking for the proof of capital management, signalling, pro-cyclical behaviour and income smoothing using LLPs by Malaysian commercial banks for the time frame between 2002-2012. They selected a sample of 15 banks from a population of 27. With some adjustments,

the study adopted the regression model established by Curcio and Hasan (2013). As per their findings, the studied bank use LLPs for income smoothing. On the use of LLPs for pro-cyclicality, capital management and signalling the evidence was not conclusive. Though the sample size was small, it is commendable that the study had deployed controls to cover the impact of the global financial crisis of 2008.

Acar and Ipci (2015) did a study to examine the income smoothing activities of banks in Turkey. 28 banks operating in Turkey formed the sample and the period of the study was quarterly periods between 2000-2014. They used panel regression analysis model done using Eviews statistical programme. Empirical evidence obtained show an element of the income smoothing which disappears between 2007-2009, the period of global financial sector crisis. They further noted that the degree of income smoothing was lower among the local banks than that noted among foreign banks. They did not have controls in their model to cover for the global financial crisis period which could be the reason why they could not find evidence of income smoothing during this period.

Ozili (2017) did a study to examine if income smoothing or credit risk pushes LLPs by Western European banks. They used a population of Western European banking institutions in the Bankscope database out of which a final sample of 144 banks were selected. To investigate income smoothing, he adopted ordinary least square (OLS) regression to study the link between LLPs and EBTP. His findings were that provisioning by the sampled banks is determined by both; income smoothing motivations, predominantly, among the listed banks and credit risk elements, largely, loan growth and the level of non-performing loans (NPL). He also noted that

provisioning by these banks oscillates with the economic phase. The researcher's work was comprehensive and covered most aspects I will cover except the effect of auditors.

Closer home, Ahmed, Mohammed and Adisa (2014) examined earnings management and loan loss provision by Nigerian Deposit Money Banks (DMBs) for the period 2007-2011. A sample of 8 was selected from all 18 DMBs quoted on the Nigerian Stock Exchange as of end of 2011. The employed used OLS multiple regression (robust) for analysis. Their results indicated that the relationship between LLPs and earnings smoothing in Nigerian DMBS was positive alluding to use of LLPs in earnings management. They recommended that, integrity of financial statements is to be maintained, regulators should devise methods of curbing earnings management by banks.

Still on the African continent, Ozili (2017b) researched on African banks use of LLPs to manage reported income and whether this conduct is subjective to institutional factors and other cross-country dissimilarities in Africa. In his adopted model, he expressed LLPs as a function of its non-subjective factors and other variables that influence the level of LLPs. Fixed effect regression and GMM estimation techniques were used to estimate the model. The results showed that African banks manage earnings using LLPs. They also indicated that African banks use LLPs to alter bank income when profits are high and the economy is thriving. The findings further show that use of LLPs to manage income is more prominent amongst listed banks when they are more profitable.

2.4.2 Local Evidence

Noteworthy, there has been no studies on the use of LLP for Income smoothing in Kenya and I have selected several previous studies relating to income smoothing which are highlighted below;

Bulle (2014) did a research aimed at determining the impact of corporate governance on earnings management among the companies quoted at NSE in Kenya. Corporate governance variables used in the study were independence of audit committee, income smoothing and independence, and amount of shares owned by CEO while subjective accrual was used to proxy for earnings management. Sample sizes of thirty (30) companies were selected from listed companies at NSE for the period 2009 to 2013. Regression Analysis was used in the analysis of data and result interpreted based on the R-squared, adjusted R-squared, coefficients of the independent variables and their p-values. The study concluded that corporate governance has a semi-strong positive association with earnings management.

Oduma (2015) studied the association between earnings smoothing and returns at stock market of firms quoted at the NSE. The population was the 66 companies listed in the NSE as at 31 December 2014. The research employed a census approach and employed a descriptive research design. Data was analysed using both regression and correlation analysis. Results indicated that earning management positively influenced stock return. In a similar study, Ngunjiri (2017) did a research to establish the relationship between earnings smoothing and financial performance of companies listed in the NSE. Using a similar approach as Oduma (2015) the research findings

indicated that earnings management positively and significantly influenced financial performance of firms listed in the NSE.

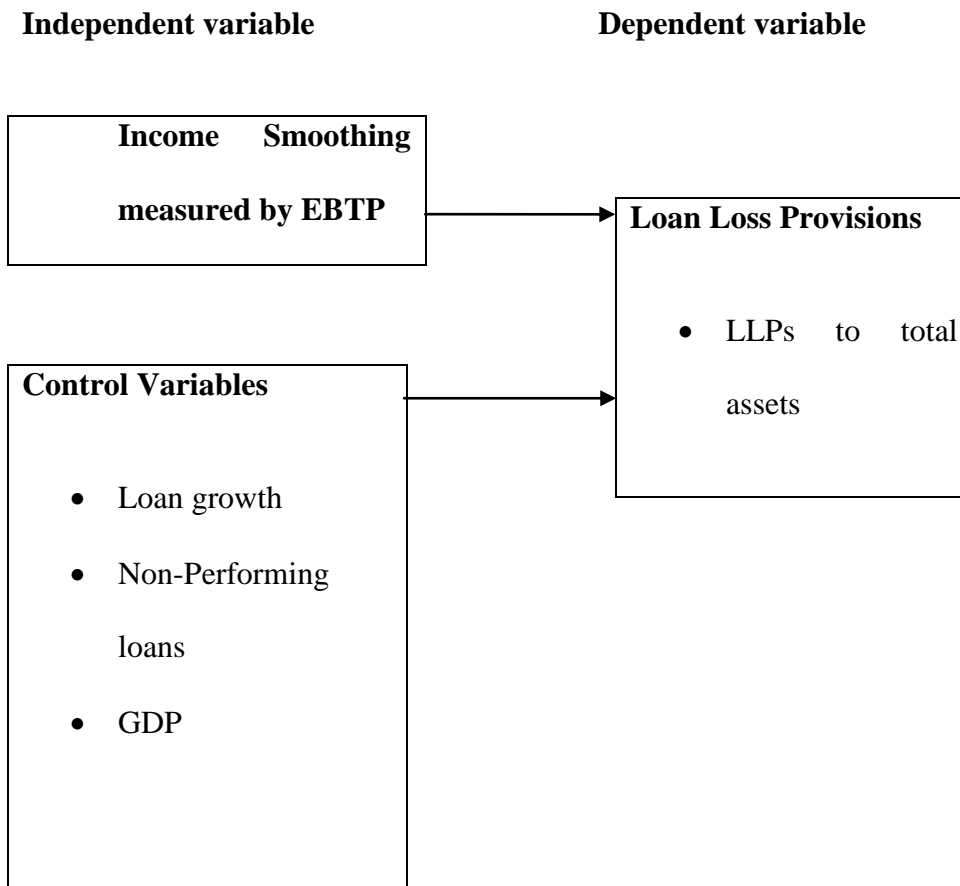
To show the impact of earnings smoothing, Swaleh (2016) investigated the impact of the earnings declarations on the stock prices of companies listed at the NSE. In her study, she sought to investigate the earnings announcements effects on share prices at the NSE on the back drop of new technological developments. The population of the study was all 65 firms listed at NSE for a period of 2 years, that is, 2014-2015. She used an event study research design and selected an event window of 30 days. The data she used was the daily share price data from 65 listed companies in the NSE and the data scope was 2 years (2014 and 2015). The market model was used for data analysis. The investigation provided sufficient evidence that earnings announcements are a significant factor that influence share prices. Proving that managers have a motivation to smooth earnings in order to affect the organization's perceived value.

2.5 Conceptual Frame work

A conceptual framework is an analytical research tool represented diagrammatically for researcher's use in developing and understanding of the condition being scrutinized, Ware and Sherbourne (1992). Therefore, conceptual framework in research is useful in outlining all the likely causes of action or used in presenting an appropriate choice of a new idea or thought.

The independent variables in the study will be Earnings before tax and provisions. The control variables in this study will be total amount of loans to total assets ratio, total assets, the growth in loan, level of non-performing loans, bank size as measured by capital to asset ratio and economic performance measured by change in GDP.

Figure 2.1: Conceptual Model



Source: Researcher (2018)

2.6 Summary of Literature and Research Gap

In this chapter, the theoretical framework that explains the reason why managers influence specific accounting figures to meet manage income and to achieve other unscrupulous financial reporting objectives have been reviewed. This chapter discussed PAT as the main theoretical explanation for income management in companies although it is not the only explanation. The methods used by managers to manage earnings were also discussed with the use of accruals like LLPs also covered.

The chapter also reviewed the empirical literature on income smoothing using LLPs. Several studies across the globe were reviewed and concluded that income smoothing is present in varying degrees across globe from the developed economies to the developing ones. Studies have also explored the factors which influence earnings managements in banks and other ways LLPs can be used. Studies have shown that, apart from income smoothing, LLPs can also be used in signalling and capital management.

Knowledge about the income smoothing practices of African banks is scanty and remains uncertain whether these banks use LLPs to manage reported income and whether the degree of this practice is to any extent subjective to institutional factors and regional characteristics specific to Africa (Ozili, 2017). Therefore, there exists some gaps in the literature and it has been established that income smoothing, in this context, in African banks and more specifically Kenya has not been examined. It is under this background that this study looks at income smoothing through the use of LLPs among Kenyan banks. The next chapter presents the sample data and methodology.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This part entails a presentation of a summary of the research methodology used in the study. Focus was on research design, data collection and was finalized with data analysis and methods of data presentation that were used in this study.

3.2 Research Design

The research design was descriptive and included cross-sectional data. A descriptive study is where data is collected from the information provided without changing or manipulating the outcome. The reason for using this design is that descriptive research determines and reports the way things are (Cooper and Schindler, 2008). This research design is considered suitable for the current research as for enables the person studying to make conclusions about the variables under the study without experiencing any form of manipulation hence full control of the measurements.

3.3 Population of the Study

A study population comprises of collection of entities or persons being investigated in a study (Sekaran & Bougie, 2010). It is specified in terms of specific time frame, topic of interest, basics availability and geographical boundaries. The research employed a census approach and the population comprised of all the commercial banks operating in Kenya as at end on 2017. According to the Central bank of Kenya (CBK), as at the end of year 2017, there were 42 banks that operated in Kenya (Appendix II) which formed the study population.

3.4 Data Collection

In this study secondary data was obtained from annual CBK's supervisory reports, commercial banks annual reports and financial statements from 2007 – 2017 from the sampled commercial banks. The data collection was from 2007 to 2017 which is considered adequate to account for at the very least one full economic cycle so as to capture economic slumps and booms in the country. From the financial statements, the researcher collected data on the banks LLPs and independent variables; EBTP, NPL, loan size and growth, total equity, total assets, and change in GDP.

3.5 Diagnostic Tests

Linearity show that two variables X and Y are related by a mathematical equation $Y=c+bx$ where c is a constant number. The linearity test was obtained through the scatterplot testing or F-statistic in ANOVA. Stationarity test is a process where the statistical properties such as mean, variance and autocorrelation structure do not change with time. Stationarity was obtained from the run sequence plot. Normality is a test for the assumption that the residual of the response variable are normally distributed around the mean. This was determined by Shapiro-walk test or Kolmogorov-Smirnov test. Autocorrelation is the measurement of the similarity between a certain time series and a lagged value of the same time series over successive time intervals. It was tested using Durbin-Watson statistic.

Multicollinearity is said to occur when there is a nearly exact or exact linear relation among two or more of the independent variables. This was tested by the determinant of the correlation matrices, which varies from zero to one. Orthogonal independent variable is an indication that the determinant is one while it is zero if there is a

complete linear dependence between them and as it approaches to zero then the multicollinearity becomes more intense. Variance Inflation Factors (VIF) and tolerance levels were also carried out to show the degree of multicollinearity (Burns & Burns, 2008).

3.6 Data Analysis

The data collected from the different sources was organized in a manner that can help address the research objective. Statistical Package for Social Sciences version 22 was utilized for data analysis purposes. Both descriptive and inferential statistics were carried out. In descriptive statistics, the minimum, maximum, mean, standard deviation, skewness and kurtosis were computed for each variable. In inferential statistics, both regression and correlation analysis were carried out. Correlation analysis involved determining the extent of relationship between the study variables while regression analysis involved establishing the cause and effect between the dependent variable, LLPs, and independent variables; EBTP, NPL, loan growth, total equity, total assets, and change in GDP.

3.6.1 Analytical Model

The model employed in this research is comparable to the model used in previous studies (for example; Ozili, 2017; Kanagaretnam, Lobo, & Yang, 2004; Curcio and Hasan, 2015; Bushman and William, 2012; among others); and is expressed as;

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \text{LISTED+BIG 4} + \varepsilon$$

Where:

Y = Total loan loss provisions divided by beginning total assets.

B_0 = Constant (Y intercept)

$B_1- \beta_6$ = Regression coefficient for independent variables

X_1 = Income smoothing as measured by EBTP divided by beginning total assets.

X_2 = non-performing/impaired loans divided by beginning total assets.

X_3 = loan growth or change in gross outstanding loans

X_4 = real gross domestic product growth rate

LISTED = Dummy variable (1 if listed bank; 0 if unlisted bank)

BIG4 = Dummy variable that take the value of one bank is audited by a Big 4 audit firm (PriceWaterhouseCoopers, Ernst and Young, Deliotte and KPMG) and take the value of zero if it is not audited by Big 4 audit firm.

ε = Error term

3.6.2 Test of Significance

Parametric tests were done to check the statistical significance of both the overall model and individual parameters. F-test was used to determine the significance of the overall model and it was obtained from Analysis of Variance (ANOVA) while a t-test was used to establish statistical significance of individual variables.

CHAPTER FOUR: DATA ANALYSIS, FINDINGS AND INTERPRETATION

4.1 Introduction

This section focuses on the analysis of data collected from the bank's financial statements and CBK reports to establish the association between loan loss provisions and income smoothing among Kenyan commercial banks. Correlation analysis, descriptive statistics and regression analysis were used and the results of the study presented in table forms as shown in the following sections.

4.2 Response Rate

This study was meant to cover all 43 banks operating in Kenya as at the end of 2017. The rate of response of 88.37% indicating that, the researcher was able to obtain data from 38 banks. From the banks financial reports, the researcher obtained secondary data on both the dependent and independent variables for this study.

4.3 Diagnostic Tests

The researcher carried out diagnostic tests on the collected data. The research assumed a 95 percent confidence interval or 5 percent significance level (both leading to identical conclusions) for the data used. These values helped to authenticate the correctness or the falseness of the data. Thus, the closer to 100 percent the confidence interval (and thus, the closer to 0 percent the significance level), the higher the accuracy of the data used and analyzed is assumed to be.

A test of Multicollinearity was done. Variable tolerance plus the VIF value were used where values lower than 10 for VIF and results greater than 0.2 for Tolerance indicate that Multicollinearity does not exist. The findings established that all the variables

had VIF values lower than 10 and tolerance values greater than 0.2 and as illustrated in table 4.1 suggesting Multicollinearity does not exist.

Table 4.1: Multicollinearity Test for Tolerance and VIF

Variable	Collinearity Statistics	
	Tolerance	VIF
Income smoothing	0.352	1.356
Non-performing loans	0.360	1.382
Loan growth	0.392	1.463
GDP growth rate	0.646	1.434
Listed in NSE	0.398	1.982
Audited by big 4	0.376	1.398

Source: Research Findings (2018)

Shapiro-walk test and Kolmogorov-Smirnov test was applied in testing for normality. The null hypothesis for the test was that the secondary data was not normal. If the p-value recorded was more than 0.05, the researcher would reject it. The test results are illustrated in table 4.2.

Both Shapiro-Wilk and Kolmogorov-Smirnova tests produced zero values larger than 0.05 which implies that the research data was distributed normally and consequently the null hypothesis was rejected. The data was thus suitable for use to perform parametric tests such as regression analysis, Pearson's correlation and analysis of variance.

Table 4.2: Normality Test

Loan provisions	loss	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	Df	Sig.	Statistic	Df	Sig.
Income smoothing		.178	415	.300	.881	415	.723
NPLs		.173	415	.300	.918	415	.822
Loan growth		.176	414	.300	.892	414	.784
GDP growth rate		.173	418	.300	.918	418	.822
Listed in NSE		.175	418	.300	.874	418	.812
Audited by big 4		.176	418	.300	.892	418	.784

a. Lilliefors Significance Correction

Source: Research Findings (2018)

A check for correlation of error terms across time periods was done by applying Autocorrelation tests. This was checked by applying the Durbin Watson test. The durbin-watson statistic fell within the tolerable range of between 1.5 and 2.5 at 1.667 indicating that the variable residuals were not serially correlated as indicated on table 3 below.

Table 3: Autocorrelation Test

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.489 ^a	.239	.228	.0096030	1.667

a. Predictors: (Constant), Audited by big 4, GDP growth rate, Income smoothing, Loan growth, NPL, Listed in NSE

b. Dependent Variable: LLPs

Source: Research Findings (2018)

4.4 Descriptive Analysis

Descriptive statistics gives a presentation of the average, maximum and minimum values of variables applied together with their standard deviations in this study. Table 4.4 illustrates the descriptive statistics for the applied variables in the study. Using SPSS software, an analysis of all the variables was gotten for the eleven years period (2007 to 2017).

Table 4.4: Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
LLPs	415	-.0106	.0794	.009466	.0109260
Income smoothing	415	-.1135	.8568	.038495	.0516210
NPL	415	-.0022	.4301	.074966	.0783067
Loan growth	414	-.2815	2.6692	.213032	.2902426
GDP growth rate	418	.2000	8.4000	5.209091	2.0085103
Listed in NSE	418	0	1	.29	.454
Audited by big 4	418	0	1	.76	.426
Valid N (listwise)	414				

Source: Research Findings (2018)

4.5 Correlation Analysis

Correlation analysis is relayed to find out if there subsists an association amongst two variables which lies from strong negative (-) correlation to perfect positive (+) correlation. Pearson correlation was employed to analyze the level of association between the loan loss provisions and the independent variables for this study (income smoothing, NPLs, loan growth, GDP growth rate, listed in the NSE and audited by big 4).

Table 4.5: Correlation Analysis

		LLPs	Income smoothing	NPL	Loan growth	GDP growth rate	Listed in NSE	Audited by big 4
LLPs	Pearson Correlation Sig. (2- tailed)	1						
Income smoothing	Pearson Correlation Sig. (2- tailed)	.049	1					
NPL	Pearson Correlation Sig. (2- tailed)	.470**	-.059	1				
Loan growth	Pearson Correlation Sig. (2- tailed)	-.087	-.002	-.113*	1			
GDP growth rate	Pearson Correlation Sig. (2- tailed)	-.030	.037	-.057	-.006	1		
Listed in NSE	Pearson Correlation Sig. (2- tailed)	-.019	.315**	-.194**	.004	-.002	1	
Audited by big 4	Pearson Correlation Sig. (2- tailed)	.076	-.022	-.051	.073	.001	.360**	1

** . Correlation is significant at the 0.01 level (2-tailed).
* . Correlation is significant at the 0.05 level (2-tailed).
c. Listwise N=414

Source: Research Findings (2018)

The study established a statistically significant positive correlation ($r = .470$, $p = .000$) was present between non-performing loans and loan loss provisions. Income

smoothing and being audited by big four exhibited positive but non-statistically significant correlation with loan loss provisions as shown by p values that were more than 0.05. In addition, the study found out that that GDP growth rate, loan growth and being listed at the NSE has a negative but statistically insignificant association with loan loss provisions as showed by p values that were more than 0.05. Although the independent variables had an association to each other, the association was not strong to cause Multicollinearity as all the r values were less than 0.70. This indicates that multi-collinearity does not exist among the independent variables and therefore they can be used as determinants of loan loss provisions in regression analysis.

4.6 Regression Analysis

Loan loss provisions was regressed against six predictor variables; income smoothing, NPLs, loan growth, GDP growth rate, listed in the NSE and audited by big 4. The regression analysis carried out at 5% significance level. The critical value obtained from the F – table was done comparison with the same acquired from the regression analysis. The study obtained the model summary statistics as indicated in table 4.6

Table 4.6: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.489 ^a	.239	.228	.0096030	1.667

a. Predictors: (Constant), Audited by big 4, GDP growth rate, Income smoothing, Loan growth, NPL, Listed in NSE

b. Dependent Variable: LLPs

Source: Research Findings (2018)

R squared, being the coefficient of determination indicates the deviations in the response variable that is as a resulted through variations in the predictor variables. From the outcome in table 4.6, the R square value was 0.239, a discovery that 23.9% of the deviations in loan loss provisions of studied banks is caused by changes in income smoothing, NPLs, loan growth, GDP growth rate, NSE listings and having big 4 auditor. 76.1% of the variations in loan loss provisions of Kenyan commercial banks are justified by other variables outside the model. Also, the findings indicated that there exists a frail relationship among the selected variables that are independent and the loan loss provisions as revealed by the correlation coefficient (R) equal to 0.489. A durbin-watson statistic of 1.667 indicated that the variable residuals were not serially correlated since the value was more than 1.5.

Table 4.7: Analysis of Variance

Model	Sum of Squares	df	Mean Square	F	Sig.	
1	Regression	.012	6	.002	21.326	.000 ^b
	Residual	.038	407	.000		
	Total	.049	413			

a. Dependent Variable: LLPs

b. Predictors: (Constant), Audited by big 4, GDP growth rate, Income smoothing, Loan growth, NPL, Listed in NSE

Source: Research Findings (2018)

The significance value is 0.000 which is lower than $p=0.05$ implying the model was significant statistically in predicting the way income smoothing, NPLs, loan growth,

GDP growth rate, being listed at the NSE and BEING audited by big 4 affects loan loss provisions of commercial banks in Kenya.

Coefficients of determination were used as indicators of the relationship direction between the independent variables and loan loss provisions of commercial banks. The p-value under sig. column was used as an indicator of the relationship significance between the dependent and the independent variables. At 95% confidence level, a p-value lower than 0.05 was construed as a statistical significance measure. As such, a p-value above 0.05 indicates a statistically insignificant association between the variables which are dependent and the independent variables.

Table 4.8: Model Coefficients

Model	Unstandardized		Standardized	T	Sig.
	Coefficients		Coefficients		
	B	Std. Error	Beta		
(Constant)	.002	.002		1.325	.186
Income smoothing	.016	.010	.075	1.636	.103
NPL	.067	.006	.478	10.739	.000
1 Loan growth	-.002	.002	-.040	-.915	.361
GDP growth rate	-3.376E-005	.000	-.006	-.142	.887
Listed in NSE	.000	.001	.014	.280	.780
Audited by big 4	.003	.001	.100	2.117	.035

a. Dependent Variable: LLPs

Source: Research Findings (2018)

From the results above, it is manifest that only non-performing loans and being audited by big 4 produced positive and statistically significant values for this study (high t-values (10.739 and 2.117), $p < 0.05$). Income smoothing, loan growth, GDP growth rate and being listed at the NSE were found to be statistically insignificant for this study as evidenced by p values that were more than 0.05.

The following regression equation was estimated:

$$Y = 0.002 + 0.067X_1 + 0.003X_2$$

Where,

Y = Loan loss provisions

X_1 = Non-performing loans

X_2 = Audited by big 4

On the estimated regression model above, the constant = 0.002 indicates that if selected dependent variables (income smoothing, NPLs, loan growth, GDP growth rate, being listed at the NSE and audited by big 4) were rated zero, the loan loss provisions will be 0.002. An increase in non-performing loans by 1 unit would cause a rise in loan loss provisions by 0.067 while being audited by big 4 would cause an increase in loan loss provisions by 0.003. The four other selected independent variables for this study do not have an important effect on loan loss provisions.

4.7 Interpretation of the Research Findings

The study pursued to find out the relationship between income smoothing and loan loss provisions of commercial banks in Kenya. Independent variables for the study were income smoothing as measured by EBTP divided by beginning total assets. Control variables were non-performing loans as measured by the ratio of NPLs to

beginning total assets, loan growth as measured by change in outstanding loans, economic growth as measured by change in GDP growth rate, being listed at the NSE as represented by a dummy and being audited by a big 4 firm also measured using a dummy. Loan loss provisions as measured by provisions for losses divided by beginning total assets was the dependent variable. How each of the independent variable affects dependent variable was investigated on the basis of strength and direction.

The Pearson correlation coefficients between the variables showed a weak positive correlation existing between non-performing loans and loan loss provisions. Income smoothing and being audited by big four exhibited positive but non-statistically significant correlation with loan loss provisions. In addition, the study found out that GDP growth rate, loan growth and being listed at the NSE has a negative but statistically insignificant association with loan loss provisions.

The model summary revealed that the independent variables: income smoothing, NPLs, GDP growth rate, loan growth, being listed at the NSE and being audited by big 4 explains 23.9% of variation in the dependent variable as depicted by the R^2 value which means that there are other factors outside this model which explain 76.1% of variations in loan loss provisions. The model is suitable at 95% confidence level since the F-value is 8.191. This endorses that total multiple regression model is significant statistically, since it is an appropriate forecast model for explanation on how the independent variables selected affects loan loss provisions of Kenyan commercial banks.

These study findings are in line with Ozili (2017) who did a study to examine if income smoothing or credit risk pushes LLPs by Western European banks. They used a population of Western European banking institutions in the Bankscope database out

of which a final sample of 144 banks were selected. To investigate income smoothing, he adopted ordinary least square (OLS) regression to study the link between LLPs and EBTP. His findings were that provisioning by the sampled banks is determined by both; income smoothing motivations, predominantly, among the listed banks and credit risk elements, largely, loan growth and the level of non-performing loans (NPL).

This study is also in agreement with Closer home, Ahmed, Mohammed and Adisa (2014) who examined earnings management and loan loss provision by Nigerian Deposit Money Banks (DMBs) for the period 2007-2011. As sample of 8 was selected from all 18 DMBs quoted on the Nigerian Stock Exchange as of end of 2011. The employed used OLS multiple regression (robust) for analysis. There results indicated that the relationship between LLPs and earnings smoothing in Nigerian DMBS was positive alluding to use of LLPs in earnings management. They recommended that, integrity of financial statements is to be maintained, regulators should device methods of curbing earnings management by banks.

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This section recaps the previous chapter's findings, establishments, limitations encountered during the research study. This chapter also elucidates the policy recommendations that policy makers can implement to achieve the expected loan loss provisions of commercial banks in Kenya. The section also gives suggestions for further studies

5.2 Summary

The study search for to explore the effect of income smoothing on loan loss provisions of commercial banks in Kenya. Variables that were independent for the study were income smoothing, NPLs, loan growth, GDP growth rate, being listed at the NSE and being audited by a big 4 firm. A descriptive cross-sectional research design was employed in the study. From the Central Bank of Kenya reports and banks financial reports, secondary data was gotten and was analyzed using SPSS software version 21. The study used annual data for 38 commercial banks covering an 11 year period from beginning of 2007 to end of 2017.

From the results of correlation analysis, a weak positive correlation was found to exist between loan loss provisions and non-performing loans. Income smoothing and being audited by big four exhibited positive but non-statistically significant correlation with loan loss provisions. In addition, the study found out that GDP growth rate, loan growth and being listed at the NSE has a negative but statistically insignificant association with loan loss provisions.

The co-efficient of determination R-square value was 0.239 which means that about 23.9 percent in loan loss provisions variation of commercial banks in Kenya can be explained by the six selected independent variables while 76.1 percent in the variation of loan loss provisions was associated with other factors not covered in this research. The study also found that the independent variables had a weak correlation with loan loss provisions ($R=0.489$). ANOVA results show that the F statistic was significant at 5% level with a $p=0.000$. Hence, the model explanation of the relationship between the selected variables was fit.

The regression finding indicate that when all the independent variables chosen for the research have zero value the loan loss provisions will be 0.002. An increase in non-performing loans by 1 unit would cause a rise in loan loss provisions by 0.067 while being audited by big 4 would cause a rise in loan loss provisions by 0.003. The other four selected independent variables for this study do not have a significant effect on loan loss provisions.

5.3 Conclusion

As a result of the study outcomes, the study concludes that loan loss provisions among Kenyan commercial banks are significantly affected by the level of non-performing loans and the choice of auditor. The study found out that the level of non-performing loans has a significant positive effect on loan loss provisions. The study therefore concludes that high levels of non-performing loans of commercial banks lead to a statistically significant increase in loan loss provisions. The study found that having a big 4 firm as the auditor had a significant and positive effect on loan loss provisions and therefore it is concluded that the choice of an auditor has a significant influence on loan loss provisions. Income smoothing, loan growth, GDP growth rate

and being listed at the NSE were found to be statistically insignificant elements of loan loss provisions and therefore this study concludes that these variables do not significantly influence the loan loss provisions among commercial banks in Kenya.

This study concludes that independent variables selected for this study; income smoothing, NPLs, loan growth, GDP growth rate, being listed at the NSE and being audited by a big 4 firm influence to a large extent loan loss provisions of commercial banks in Kenya. It is thus worthwhile to argue that these variables significantly affect the loan loss provisions as shown by the p value in anova summary. The fact that the six independent variables explain 23.9% of changes in loan loss provisions implies that there are variables outside the model which explain 76.1% of changes in loan loss provisions.

This finding concurs with Ozili (2017) who did a study to examine if income smoothing or credit risk pushes LLPs by Western European banks. They used a population of Western European banking institutions in the Bankscope database out of which a final sample of 144 banks were selected. To investigate income smoothing, he adopted ordinary least square (OLS) regression to study the link between LLPs and EBTP. His findings were that provisioning by the sampled banks is determined by both; income smoothing motivations, predominantly, among the listed banks and credit risk elements, largely, loan growth and the level of non-performing loans (NPL).

5.4 Recommendations for Policy and Practice

The study established that there was a positive influence of non-performing loans on loan loss provisions of commercial banks in Kenya. It recommends adequate measures be instituted to manage and control the level of non-performing loans

among commercial banks. Policy makers and all managers of commercial banks should undertake due diligence before extending credit to customers to minimize the level of non-performing loans in their books.

The study found out that banks that have big 4 firms as auditors are more likely to report a higher loan loss provision figure compared to banks using other auditors. The influence of auditor choice was found to be statistically significant. This study proposes that commercial banks should make an informed decision before settling on an auditor as it has been statistically proven that auditors have a statistically significant effect on loan loss provisions.

The findings of this study revealed that there exists a positive correlation between income smoothing and loan loss provision although the influence was not statistically significant. This study recommends that regulators and banking industry policy makers should lookout for income smoothing among commercial banks as it may be applied to influence loan loss provisions.

5.5 Limitations of the Study

The scope of this research was 11 years from start of 2007 to end of 2017. It has not been established if the findings would be the same for a longer study period. Also, it is unclear if similar findings would result after 2017. A longer research period is more dependable as it covers major economic conditions such as booms and recessions.

The quality of the data was one limitation for this study. It cannot be concluded with certainty that the findings depict a true picture of the actual situation. The data that has been used is only presumed to be correct. Measures used may keep on varying from one year after year subject to prevailing condition. The study employed secondary data in the public domain, which had already been obtained, unlike the

first-hand information presented by primary data. The study also considered selected determinants of and not all the factors affecting the loan loss provisions mainly due to limitation of data availability.

For data analysis purposes, the researcher applied a multiple linear regression model. Due to the shortcomings involved when using regression models such as erroneous and misleading results when the variable values change, the researcher cannot be able to generalize the findings with certainty. If more and more data is added to the functional regression model, the hypothesized relationship between two or more variables may not hold.

5.6 Suggestions for Further Research

This study covered income smoothing and loan loss provisions of Kenyan commercial banks and relied on secondary data. A research study where data collection relies on primary data, that is, questionnaires and interviews covering all the 43 commercial banks licensed by the Central Bank of Kenya is recommended so as to compliment this research.

The study did not cover all the independent variables which affect loan loss provisions of commercial banks in Kenya and it recommends that further research to be done to incorporate other variables including growth opportunities, industry practices, a firm lifecycle stage, political stability, ownership structure and other macro-economic variables. Establishing the effect of each variable on loan loss provisions will enable policy makers know what tool to use when controlling the loan loss provisions.

The study concentrated on the last eleven years since it was the most recent data available. Future studies may use a range of many years e.g. from 1970 to date and

this can be useful to approve or disapprove the findings of this study. The study limited itself by focusing on financial institutions. The recommendations of this study are that further studies be conducted on other non-financial institutions operating in Kenya. Finally, due to the shortcomings of regression models, other models such as the Vector Error Correction Model (VECM) can be used to explain the various relationships between the variables.

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APPENDICES

Appendix I: Data Collection Form I

Name of the Bank.....

Variable	Description of the Variable	Measurement of the Variable	2007	2008	2009	2010	2011...2017
Y	LLPs	LLPs/Beginning Total Assets						
X₁	Income Smoothing	EBTP/Beginning Total Assets						
X₂	NPL	NPL/Beginning Total Assets						
X₃	Loan Growth	Change in gross loan outstanding						
X₄	GDP	Real GDP growth rate						
Listed	Listed in NSE	Yes/No						
Big 4	Audited by big4	Yes/No						

Appendix II: Licensed Commercial Banks in Kenya 31st Dec 2017

- 1 ABC Bank (Kenya)
 1. Bank of Africa
 2. Bank of Baroda
 3. Bank of India
 4. Barclays Bank of Kenya
 5. Chase Bank Kenya (In Receivership)
 6. Citibank
 7. Commercial Bank of Africa
 8. Consolidated Bank of Kenya
 9. Cooperative Bank of Kenya
 10. Credit Bank
 11. Development Bank of Kenya
 12. Diamond Trust Bank
 13. DIB Bank
 14. Ecobank Kenya
 15. Equity Bank
 16. Family Bank
 17. First Community Ban
 18. Guaranty Trust Bank Kenya
 19. Guardian Bank
 20. Gulf African Bank
 21. Habib Bank AG Zurich
 22. Housing Finance Company of Kenya

23. I&M Bank
24. Imperial Bank Kenya (In Receivership)
25. Jamii Bora Bank
26. Kenya Commercial Bank
27. Mayfair Bank
28. Middle East Bank Kenya
29. National Bank of Kenya
30. NIC Bank
31. Oriental Commercial Bank
32. Paramount Universal Bank
33. Prime Bank (Kenya)
34. SBM Bank Kenya Limited
35. Sidian Bank
36. Spire Bank
37. Stanbic Bank Kenya
38. Standard Chartered Kenya
39. Trans National Bank Kenya
40. United Bank for Africa
41. Victoria Commercial Bank

Source: Central Bank of Kenya (CBK) report 2018