

Loan Portfolio Growth and Financial Performance of Commercial banks in Kenya

Paul Kiama Thiong'o

Post Graduate Student, Department of Business Administration, Technical University of Mombasa, Kenya

Dr. Kilungu Matata

Department of Business Administration, Technical University of Mombasa, Kenya

Dr. Charles G. Kamau

Department of Accounting and Finance, Technical University of Mombasa, Kenya

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Abstract:

Loans comprise the single largest asset for commercial banks. To grow the bank's assets, bank managers focus on increasing the number of loans granted by the bank. The general objective of this study was to evaluate the effect of growth in loan portfolios on the financial performance of commercial banks in Kenya. The study used a regression research design. The population of interest consisted of the 44 commercial banks in Kenya. A sample of 31 commercial banks was selected. The study covered a five-year period, from 2011 to 2015. Multiple-linear regression was also used in the analysis. The study found that growth in loan portfolios had a negative effect on the financial performance of commercial banks in Kenya. The effect of loan growth on the financial performance of commercial banks in subsequent years was found to be adverse. This study found that the quality of bank assets had a positive effect on the financial performance of commercial banks in Kenya. However, the effect of liquidity management was not significant. The study found that capital adequacy had a positive effect on the financial performance of commercial banks. The effect of capital adequacy was significant. The study concluded that growth in a bank's loan portfolio had a negative and significant effect on the financial performance of commercial banks. The study recommended that commercial banks should strategically execute their loan portfolio growth strategies so as to minimize the problem of loan losses in subsequent years

Keywords: Loan Portfolio, Capital adequacy, liquidity management, Bank assets, Financial Performance

1. Introduction

One of the major core businesses of many commercial banks is lending. According to experts, the loan portfolio is one of the largest sources of revenue and assets. [Salas and Saurina \(2012\)](#) defined loan growth as the change in a bank's loan portfolio. Growth in a bank's loan book is seen as a significant measure of managerial performance and portrays bank credit policies. Most of the time, banks tend to alleviate the level of credit standards with the aim of achieving higher market shares. Such actions may lead to a problem with adverse selection and a significant increase in non-performing loans. [Keeton \(2009\)](#) attributed faster loan growth to increased loan losses and supply shifts, resulting in an increased willingness of banks to lend. As a result, banks tend to increase lending through a reduction in borrowing interest rates and minimize the interest rates charged on loans by lowering the minimum credit standards for most loans. For example, the banks may decide to minimize the amount of securities a lender must have to be granted a loan, accept lenders who do not have a powerful credit history, or put in place policies that allow people with less proof of having enough cash flow to service the loans to obtain a loan. Most of the time, such approaches mean that the bank might see an increase in the number of defaulted loans. Therefore, if financial institutions lower their credit standards and minimize loan rates, there will be an increase in lending due to supply shifts, and without a doubt there will be an increase in loan losses in the future.

[Islam and Rajan \(2009\)](#) made an interesting argument that an increase in bank loan growth can be attributed to the myopic concern for banks to increase their reputation, but only in the short term. Since a bank may have difficulties recovering losses from questionable loans, it may take an approach to increasing short-term profits at the expense of long-term profits by easing credit standards and boosting loan growth. Therefore, banks have a powerful chance of influencing the masses through the manipulation of earnings since outsiders will interpret the low profits as a sign of poor management. [Keeton \(2009\)](#) attributes banks willingness to lend to euphoria and competition. Most of the time, banks tend to become optimistic in the business expansion process, making them underestimate the risk of default on new loans. Based on this perspective, therefore, financial institutions will operate carefully during and after periods of incurring huge losses and later lend at a high interval when the memory of the losses recedes. Ideally, banks will compete

vigorously during times of prosperity since high profits lead to an increase in new entries. As a result, the competition will lead to a decline in loan rates and credit standards.

Loan growth can also be due to other reasons other than a shift in supply. Keeton (2009) offers two explanations for this. One of the explanations is that there could be an increase in demand that is not in any way related to the borrower's creditworthiness or a shift in the productivity of the borrower's investments. The increase in credit demand, not related to borrowers' creditworthiness, will play a role in boosting loan growth, raising credit standards, and reducing future losses. In the process, if banks are faced with an increase in credit demand, they will raise their loan lending rates and tighten credit standards. If there is elasticity in the supply of funds, there will be an increase in total bank lending. However, the likelihood of making losses in the future will reduce as credit standards are tightened, increasing the creditworthiness of lenders. On the effect of productivity on the borrowers' investments, a productivity shock will make borrowers embrace huge investments and increase their demand for credit. The efforts to ease credit standards and an increase in borrower demand for loans will boost the growth of bank loans.

In instances of a pure demand shift, an increase in loans leads to upward pressure on loan rates and credit standards, leading to an uncertain net change in credit standards. Egert, Backe, and Zumer (2006) noted that there has been an increase in lending in the private sector, especially among transition economies. They attributed this growth to different aspects such as macroeconomic stabilization, comprehensive reforms and privatization in the financial sector, the introduction of market institutions, and legal reforms.

In Kenya, the Central Bank of Kenya (CBK) regulates and supervises the banking sector. During the year ending December 2015, the sector comprised 44 commercial banks, 1 mortgage finance company, 10 microfinance banks, 8 representative offices of foreign banks, 86 foreign exchange bureaus, 14 money remittance providers, and 2 credit reference bureaus. Commercial banks play critical roles in financial intermediation, liquidity transformation, and risk transformation. In Kenya, commercial banks dominate the financial sector, so it is no surprise that financial intermediation solely relies on commercial banks. The banks operate and are guided by the stipulations laid forth in the Banking Act and by the CBK. The CBK offers the banks an opportunity to develop, implement, and regularly review a sound lending policy (CBK, 2015). In a nation where

commercial banks are a major dominant group in the financial sector, credit growth has immense implications for the economic growth of the nation.

In Kenya, the banking sector has, with time, witnessed a significant growth in consumer lending and corporate lending (Afandi, 2017). This is evidenced by the growth in demand for credit, as the amount of gross loans increased by 23.125% in the year across all sectors. The major areas that saw an increase in demand for credit were the personal, trade, and agriculture and communication sectors, among others. Commercial banks in Kenya diversify their loan portfolios across different economic sectors (CBK, 2015).

2. Problem Statement

Loan growth is a crude measure of credit risk, but its role in generating subsequent non-performing loans is indisputable. As banks increase their desire to lend, credit standards will be the first to be affected, followed closely by a growth in loans and, lastly, loan losses. As a result, more lenders will qualify for loans, and the existing lenders will request larger loans, while total borrowing will increase. However, the losses attributed to bank loans may take a longer period of time to respond since bad loans also often face repayment periods in the first year (Keeton, 2009). Foos, Norden, and Weber (2010) argued that loan growth may have a tremendous negative impact on bank risk. The situation is usually riskier when new loans are given to lenders that had been rejected before, were unknown or non-existent, and had too little collateral compared to the credit quality. Salas and Saurina (2012) noted that an explosion in credit demand is one of the issues that leads to problems with loans. Hardy and Pazarbasioglu (1998) noted that a distress in the banking sector is always preceded by an explosion in credit. Rajan (2004) posited that most of the time, bank managers may be forced to twist earnings in a manner that will make the general public think that they are having a favorable credit policy and loan portfolio, such as through rapid loan growth resulting in high earnings. However, unavoidable losses take more time to materialize. As a result, most banks tend to develop strategies that will realize these losses when every bank is facing a downturn since a bank's image may be less sensitive to poor earnings when most banks are admitting to poor earnings. Further, banks may try to create coordination between their tight credit policies and lending booms. As a result, the banks may demonstrate that the credit cycles, including those in loan growth, have not been created by external situations but through their own policies.

There have been numerous studies that have tried to investigate the impact of loan growth on the performance of commercial banks. In yet another study, Foos et al. (2010) analyzed the situation in relation to loan growth and risk. They made an interesting argument that there exists a strong relationship between risk and loan growth. Barajas, Giovanni, and Levchenko (2007) noted that in periods that are marked by an increase in loans, there is always some kind of system distress. In another study, Laidroo (2012) noted that there is a powerful negative correlation between a bank's credit risks and lending growth. However, they also maintained that there is a powerful relationship that exists between lending growth and the level of equity, deposit ratio, and liquidity of any bank. It is important to mention that the existing literature on the subject fails to show the connection that exists between loan growth and the financial performance of commercial banks. However, there have been some steps and efforts taken in this direction, where some studies have evaluated the determinants of financial performance in Kenya's commercial banks (Ongore & Kasu, 2013; Muthee, 2010; Onuonga, 2014). In a study by Ongore and Kasu (2013), they focused on the impact of capital adequacy, asset quality, management efficiency, liquidity, GDP, and inflation on the financial performance of commercial banks. In another study by Oneonta (2014), he considered the effect of bank assets, loans, capital, deposits, and asset quality on bank profitability. Muthee (2010) focused on the relationship between credit risk management and profitability. The aforementioned local studies failed to consider the effect of growth in a bank's loan portfolio on the financial performance of commercial banks. It is this gap in knowledge that this study was seeking to fill by evaluating the effect of growth in loan portfolios for Kenya's commercial banks on financial performance. The study contributed to the empirical evidence of the factors affecting the financial performance of commercial banks in Kenya.

3. Theoretical Framework

Several theories have been suggested to explain the growth in commercial bank lending. This study is anchored on three theories, namely the institutional memory hypothesis (Berger & Udell, 2008), the financial fragility hypothesis, the financial accelerator theory (Bernanke & Gertler, 1989), and the information content hypothesis.

3.1 Institutional Memory Theory

Berger and Udell (2008) articulated the institutional memory theory linking loan growth to credit standards. According to this theory, a bank loan grows due to the easing of credit standards as time lapses since their last credit bust. As time passes since the last experience with problem loans, the ability of loan departments to effectively evaluate risks

and point out potential problems decreases. During the early lending cycle of banks, the lessons of the last bust are usually fresh in the memories of loan officers who witnessed the ex-post realization of their prior loan decisions. According to Foos et al. (2010), loan officers' skills tend to deteriorate with time since, especially if their banks stay for a long period before experiencing a loan bust, In particular, Foos et al. (2010) noted how loan officers end up originating loans without proper screening, analysis, and structuring while paying little or no monitoring of loans once they are granted. The result is substantial growth in a bank's loan portfolio without due consideration of inherent credit risk. Consequently, the loan boom of such banks turns into a bust, prompting loan officers to take drastic measures aimed at managing their distressed credits. As the officers address such loan problems, they end up re-learning the strategies for ensuring good loans and monitoring them; thus, they avoid bad loans that might paralyze the operations of their banks.

According to Foos et al. (2010), the factors that cause the deterioration in credit standards can be attributed to a number of factors. Firstly, losing skilled and experienced loan officers can adversely affect the ability of the bank to manage its lending. Experienced officers may be promoted to senior positions within the same bank or may leave the said bank, often calling for a replacement by new, inexperienced officers. The new officers not only lack the much-needed experience of loan portfolios but also lack the background knowledge regarding the last loan bust of the bank. Secondly, a bank's loan review function is likely to be less effective since the last bust because few observed problem loans are available to use in evaluating the skills and performance of loan officers. In other words, few observed problem loans provide inadequate evidence to show how the loan officers acted or reacted before and after the bank experienced such loan problems. According to Berger & Udell (2008), fewer problems with loans tend to worsen the agency problem between loan officers and bank management, making the loan review process less effective. If loan growth is due to deterioration in credit standards, as suggested by the institutional memory hypothesis, loan growth would result in poor financial performance by the commercial banks. The research conducted by Mutiso and Kamau (2013) arrived at the determination that heightened regulations did not yield any noteworthy impact on the intricacy of the process involved in the creation of financial reports within the realm of the banking sector. It is worth noting that financial statements constitute an integral component of the institutional recollection.

3.2 Financial Fragility

Amri, Prabha, and Wihlborg (2012) examined the financial fragility hypothesis by explaining the link between high loan growth and the subsequent banking crises. According to Amri et al. (2012), indicators of financial friability are linked to major distortions or imbalances within the financial sector. The financial fragility theory identifies six potential indicators of financial fragility that may lead to a banking crisis following periods of high loan growth: financial reformation; a rise in capital inflows; escalation of asset prices; high leverage of firms and households; definite or absolute protection of banks' creditors; and banking regulation and supervision that is ineffectual. As households increase consumption and production increases in firms during economic surges, demand for credit increases, causing a sudden increase in asset prices, net worth, and positive expectations of the future (Amri et al. 2012). The hope to increase incomes and revenues for both households and firms, respectively, leads them to take on more debt with the aim of increasing their profits and net worth. While the same can boost gains, it can also heighten the susceptibility to losses. The theory predicts that a high advantage increases the likelihood that a banking crisis will follow high credit growth.

Amri et al. (2012) noted that the quick growth in loans and prices of assets experienced during economic surges is often transitory in nature. Anytime the profit expectations are not attained, both the net worth and prices of the assets of the borrowing firms. Consequently, the lenders experience loan losses, and confidence in the financial sector is lost, leading to problems when the formerly economic booms turn to bust. Tornell & Westermann (2006) argued that the tendency of bankers to carry out risky loan lending without an effective risk monitor is caused by financial liberalization. Also, if financial liberalization occurs through the removal of controls imposed on lending rates and credit allocation, it loosens credit limitations, therefore boosting private credit growth. With financial liberalization, competition among various banks increases, which, in turn, reduces net income as well as gross income margins. In order to compensate for losses caused by the plunge in profitability, bank managers are prompted to increase loan growth (Amri et al. 2012). Government expenditure serves as a commendable fiscal policy instrument, which holds a favorable impact on the operational efficiency of commercial banks (Orodi, 2022). During periods of economic prosperity, when the loan market is characterized by optimism, banks tend to augment their loan portfolio. This can be done even without paying much attention to the status and quality of their loan portfolios.

Following the argument in this theory, banks tend to grow their loan portfolio during periods of economic prosperity when the loan market is characterized by optimism. The rapid expansion of a bank's loan portfolio by lending to the private sector during economic

booms is likely to be followed by a banking crisis and periods of poor banking financial performance during the downturn. Following this hypothesis, it would be expected that banks financial performance and the quality of their assets would be cyclical to loan growth; financial performance would improve in an economic upturn. However, in the downturn, the financial performance of the banks deteriorates as the quality of the loans extended during the upturn is exposed.

3.2 Financial Accelerator Theory

Bernanke & Gertler (1989) suggested a financial accelerator theory to explain the impact of economic shocks on the aggregate economic activity of a bank. In particular, the theory provides crucial insights regarding the adverse effects of small economic shocks on aggregate economic activity due to the imperfections associated with financial markets. Bernanke & Gertler (1989) defined the financial accelerator as a mechanism of economic shock amplification and propagation. The financial accelerator theory considers an interchange between the net worth of economic agents and the external finance premium due to the uneven information shared by lenders and borrowers. Specifically, a positive correlation between economic agents' net worth and aggregate economic activity results in a change in the latter. The net worth of economic agents is inversely related to the terms on which they are able to raise external finance and the external finance premium due to imperfect information. The inverse relationship between output change and external financing makes borrowing easier during a phase of economic expansion than during a recession.

Bernanke, Gertler, & Gilchrist (2009) asserted that different loan market conflicts that may increase financial disturbances may be investigated using the same mechanism as how the financial accelerator effect is studied with regard to monetary transmission policy. In yet another study, Boissay (2011) complemented the financial accelerator theory with the loan-supply transmission channel. Borrower's balance sheets are used by potential lenders to get information that helps them decide whether to loan borrowers as per market rates or not. During economic expansions, corporations' balance sheets are better in that there emerges a "virtuous" cycle during the expansions and a "vicious" cycle in times of recession. Asset prices and positive customer expectations increase during expansions, causing heightened credit demand for companies. For this reason, there is an upsurge in bank lending, along with a relaxation of credit standards and increased credit risk.

As opposed to economic expansion, when an economic downturn starts, the companies' asset prices fall, their financial status worsens, and customers begin to have pessimistic expectations (Boissay, 2011). According to Boissay (2011), these outcomes

reduce the companies' value of collateral. As a result, the banks' nonperforming assets and loan losses increase as their profitability and capital adequacy decrease. Bank-dependent borrowers are usually affected during the recession period when the bank restricts lending, which leads to lower investment and credit demand (Boissay, 2011). This theory suggests that banks' loan portfolios are likely to grow substantially, resulting in improved financial performance during periods of economic expansion. However, during a recession, banks will find it more difficult to lend, resulting in a contraction in the loan portfolio. Also, loan growth over an economic expansionary period may have an adverse effect on banks financial performance in a recessionary period as the borrowers find it difficult to service their loans.

4. Methodology

The Kenyan banking sector has been characterized by significant growth in bank loan books year over year. Mugenda (2004) asserts that the target population is one where the researcher generalizes the results of a study. The target population was the 44 commercial banks operating between 2011 and 2015. This period was selected as it was a period of rapid credit expansion by commercial banks. Multiple regression analysis was used to evaluate the effect of independent variables on the dependent variable. The regression focused on describing and evaluating the relationship that exists between one variable and another. More specifically, regression is employed to explain movements in a variable by focusing on movements in one or more other variables. The regression technique is based on a cause-and-effect relationship between the dependent and independent variables (Brooks, 2008). The significance of the independent variables was tested using a t-test at the 5% level of significance. The adequacy of the regression was tested using the F-test, while the coefficient of determination (R^2) was used to evaluate the explanatory power of the independent variables.

The multiple regression model used was specified as follows:

$$ROA = \alpha + \beta_1 LPG + \beta_2 ASSQ + \beta_3 LIQ + \beta_4 CAR + \varepsilon_i$$

Where:

ROA= Return on assets

LPG=Loan growth percentage

LIQ= liquidity level

ASSQ=Asset quality

CAR= Capital adequacy

α = constant term

β_j = Coefficients for the independent variables ($j=1\cdots 4$)

ε_i = Error term/residual

5. Research findings

5.1 Response Rate

The analysis of the rate at which questionnaires were given out to the respondents and how they were returned for analysis in complete form is as analyzed in Table 1.

Table 1: The Response Rate of Respondents

	No of respondents	% valid	Cumulative %
Returned	53	85.48	85.48
Not returned	9	14.52	100
Total	62	100	

The target number of respondents for this study was 62. Of the questionnaires distributed, 53 were returned. This represented a response rate of 85.48%, which is considered sufficient for the study. A high response rate is helpful to ensure that the results are representative of the target population. [Mugenda and Mugenda \(2004\)](#) assert that a response rate of more than 50% is adequate for analysis.

5.2 Descriptive statistics

The variables growth in loan portfolio, asset quality, liquidity management and capital adequacy were used in this study as independent variables while financial performance was used as the dependent variable. The respondents were asked to indicate the extent to which they agreed or disagreed with specific statements on each aspect of financial performance of commercial banks. The data obtained was analyzed using mean scores and standard deviations.

Relationship between Growth in Commercial Banks Loans Portfolio and Financial Performance of Commercial Banks in Kenya

To determine the effect of growth in commercial bank loan portfolios on financial performance, the respondents were asked to indicate whether they agreed or disagreed with some statements. The results obtained are shown in Table 2 below.

Table 2: Respondent's opinions on the Relationship between Commercial Banks Loan Portfolio Growth and Financial Performance

Statement	N	Std.	
		Mean	Deviation
Growth in a bank's loan portfolio adversely affects the banks financial performance in subsequent years	53	3.5	0.7
Growth in bank's loan portfolio results in increase in nonperforming loans in subsequent years	53	3.5	0.7
Loan portfolio diversification helps reduce the problem of bad loans as the bank's loan portfolio grows	53	2.3	1.2
Commercial banks lower their lending rate in order to grow their loan book	53	2.9	1.0
Commercial banks lend more cautiously following periods of heavy losses occasioned by bad loans	53	3.4	0.5

Key: 0 ⇔ 1.5 disagree 1.6 ⇔ 2.5 not sure 2.6 ⇔ 3.5 agreed and 3.6 ⇔ 4.0 strongly agree

Table 2 shows that the respondents agree that growth in a bank's loan portfolio adversely affects the financial performance of commercial banks in subsequent years (3.5). Also, the respondents agree that growth in the bank's loan portfolio results in an increase in nonperforming loans in the subsequent years (3.5). The respondent was not sure whether loan portfolio diversification helps reduce the problem of bad loans as the loan portfolio grows (2.3). The respondents agreed that commercial banks lower their lending rates in order to grow their loan book (2.9); they also agreed that commercial banks lend more cautiously following periods of heavy losses occasioned by bad loans.

Respondents Opinion on the Relationship between Commercial Banks Asset Quality and Financial Performance of Commercial Banks in Kenya

Results on whether the respondents agreed or disagreed to various statements relating to the effect of asset quality on financial performance of commercial banks are presented in table 3 below.

Table 3: Respondent's Opinions on the Relationship between Commercial Banks Asset Quality and Financial Performance

Statement	N	Std.	
		Mean	Deviation
The quality of a banks' loan portfolio positively affect financial performance of commercial banks	53	3.8	0.5
Loan portfolio diversification determines the quality of assets held by a bank	53	2.8	1.7
The quality of a banks' loan portfolio deteriorates following periods of rapid lending	53	3.1	0.9
Increase in nonperforming loans affects financial performance of commercial banks adversely	53	4.3	1.6
In periods of economic expansion banks do not pay much attention to borrowers' credit history	53	3.4	0.8

Key: 0 ⇔ 1.5 disagree 1.6 ⇔ 2.5 not sure 2.6 ⇔ 3.5 agreed and 3.6 ⇔ 4.0 strongly agree

Table 3 shows that the respondents strongly agreed that the quality of banks loan portfolio positively affects the financial performance of commercial banks (3.8). The respondents agree that loan portfolio diversification determines the quality of assets held by banks (2.8). They also agree that the quality of banks loan portfolio deteriorates following periods of rapid lending (3.1). The respondents strongly agreed that increase in nonperforming loans affects the financial performance of banks adversely with a Likert mean of 4.3. Respondents also agreed that in period of economic expansion banks do not pay much attention to borrowers' credit history (3.4).

Respondents Opinion on the Relationship between Liquidity Management and Financial Performance of Commercial Banks in Kenya

To determine the effect of liquidity management on financial performance, the respondents were asked to indicate whether they agreed or disagreed with some statements. The results obtained are shown on table 4 below.

Table 4: Respondents opinion on the relationship between liquidity management and financial performance of commercial banks

Statement	N	Std.	
		Mean	Deviation
Banks that hold a high level of liquid assets tend to perform poorly financially	53	3.4	0.5
Poor liquidity management is a cause of poor financial performance among commercial banks	53	3.2	0.6
An increase in the statutory liquidity requirement would result in better financial performance for commercial banks and overall stability of the banking sector	53	2.2	1.1
Better supervision over banking sector liquidity by the Central Bank of Kenya would enhance financial performance of commercial banks	53	4.0	5.2
Loan growth reduces the liquidity level of commercial banks	53	3.2	0.7

Key: 0⇔1.5 disagree 1.6⇔2.5 not sure 2.6⇔3.5 agreed and 3.6⇔4.0 strongly agree.

The result in table 4 indicates that the respondents agree that banks that hold a high level of liquid assets tend to perform poor financially (3.4). They also agree that poor liquidity management is a cause of poor financial performance among commercial banks (3.2). The respondents were not sure whether increase in the statutory liquidity requirement would result in better financial performance for commercial banks and overall stability of the banking sector (2.2). The respondents strongly agreed that better supervision over banking sector liquidity by the Central Bank of Kenya would enhance financial performance of commercial banks (4.0). Further they agreed that loan growth reduces the level of liquidity of commercial banks (3.2).

Respondents Opinion on the Relationship between Capital Adequacy and Financial Performance of Commercial Banks in Kenya

To determine the effect of capital adequacy on financial performance, the respondents were asked to indicate whether they agreed or disagreed with some statements. The results obtained are shown on table 5.

Table 5: Respondents opinion on the relationship between capital adequacy and financial performance of commercial banks

Statement	N	Mean	Std.
			Deviation
High level of core capital relative to the total risk weighted capital affects the financial performance of commercial banks	53	3.6	0.5
Banks with high level of core capital to customers deposit perform better financially	53	3.3	0.9
Increase in the amount of statutory capital would positively affect the financial performance of commercial banks	53	2.7	1.1
Increasing a bank's capital level enhances growth in a banks' lending capacity thus promoting loan portfolio growth	53	3.3	0.7

Key: 0⇔1.5 disagree 1.6⇔2.5 not sure 2.6⇔3.5 agreed and 3.6⇔4.0 strongly agree

The results in table 5 indicate that the respondents strongly agree that High level of core capital relative to the total risk weighted capital affects the financial performance of commercial banks (3.6). They also agreed that banks with high level of core capital to customers deposit perform better financially (3.3). They also agreed that increase in the amount of statutory capital would positively affect the financial performance of commercial banks (2.7). Further the respondents agree that increasing a bank's capital level enhances growth in a banks' lending capacity thus promoting loan portfolio growth (3.3).

5.3 Regression Analysis

To evaluate the effect of growth in loan portfolio, asset quality, liquidity management and capital adequacy on the financial performance of commercial banks, the respondents' response to these variables were regressed on a five-year average return on assets for the commercial banks. The results of this regression are presented below.

Table 6: Regression Coefficients

	Unstandardized Coefficients		Standardized Coefficients		Sig.
	Beta	Std. Error	Beta	t	
Constant	1.184	3.157		0.375	0.709
Loan growth	-0.066	0.468	0.009	-1.140	0.018
Asset quality	0.607	0.061	0.149	0.010	0.031
Liquidity	-0.787	0.184	0.184	-4.282	0.126
Capital adequacy	0.836	0.159	0.194	5.266	0.021

Return on asset was regressed on loan portfolio growth, asset quality, liquidity management and capital adequacy. Table 6 reported the regression coefficients. The resulting regression model was of the form:

$$ROA = 1.184 - 0.066LPG + 0.607ASSQ - 0.787LIQ + 0.836CAR$$

The following sections test the respective hypotheses on the effect of each independent variable on financial performance. The hypotheses were tested using a student t-test at a 5% level of significance. Overall, loan growth, asset quality, and capital adequacy were found to have a significant effect on financial performance, while liquidity had an insignificant influence.

5.4 Discussion of Findings

The overall objective of this study was to examine the effect of loan portfolio growth on the financial performance of commercial banks in Kenya. The specific objectives of the study were to examine the effect of growth in loan portfolios on the financial performance of commercial banks in Kenya, to examine the effect of asset quality on the financial performance of commercial banks in Kenya, to examine the effect of liquidity management on the financial performance of commercial banks in Kenya, and to examine the effect of capital adequacy on the financial performance of commercial banks in Kenya.

Growth in commercial banks' loan portfolios and financial performance

Loan portfolio growth refers to the overall increase in the number of loans advanced by a bank. Loans are the major assets held by banks. Growth in loan portfolios increases the assets under management by a bank and is a key performance measure among banks. This study found that growth in a bank's loan portfolio adversely affects the bank's financial performance in subsequent years. It also found that growth in banks' loan portfolios results in an increase in nonperforming loans in subsequent years. These findings support the findings by Foos et al. (2010) that current loan growth leads to increases in loan losses in subsequent years. Diversification is seen as a technique for minimizing exposure to loss. However, the findings of this study failed to support the idea that loan portfolio diversification reduces the problem of bad loans as banks grow their loan portfolios. Interest rates provide a pricing mechanism for loans in financial markets. As generally indicated by the law of demand, lower prices (interest rates in the case of loans) would help attract more demand. This study found that commercial banks lower their lending rates so as to attract more borrowers and grow their loan book. The study also found that commercial banks lend more cautiously following periods of heavy loan losses occasioned by bad loans, which seems to lend support to the institutional memory hypothesis (Berger & Udell, 2004). The result of the regression analysis showed that loan portfolio growth had a negative effect on return on assets. The effect was statistically significant. This means that growth in bank loans reduced the profitability of commercials in Kenya.

Asset quality and financial performance of commercial banks in Kenya

The quality of assets for a bank depends largely on the quality of its loan portfolio, as loans are the major asset of commercial banks from which they generate income. Therefore, the quality of bank loans determines the profitability of banks. This study found that the quality of a bank's loan portfolio positively affects the financial performance of commercial banks. This is consistent with the finding by Ongore and Kasu (2013) that nonperforming loans (implying poor asset quality) had a negative effect on financial performance. The study also concurs with the findings of Onuonga (2014) that loan portfolio diversification determines the quality of assets held by banks. Similar to Ongore and Kasu (2013), the study noted that an increase in nonperforming loans affects the financial performance of banks adversely. Further consistent with the institutional memory hypothesis of Berger and Udell (2004), the study found that in periods of economic expansion, banks do not pay much attention to borrowers' credit histories. This means that commercial banks in Kenya that maintain high-quality assets perform better financially.

Liquidity management and financial performance of commercial banks in Kenya

Commercial banks play a crucial role in liquidity transformation by transforming short-term deposits into long-term, illiquid loans. Holding a high level of liquid assets generates opportunity costs for the bank in lost interest on investments. However, a shortage of liquidity in banks can be disastrous and often credit the failure of banks. This study found that high levels of liquidity result in poor financial performance for commercial banks. Liquidity was found to have a negative effect on the return on assets. However, similar to the findings by [Ongore and Kasu \(2013\)](#), the effect was not significant. The study failed to establish whether an increase in the statutory liquidity requirement would result in better financial performance for commercial banks and overall stability of the banking sector; however, it established that better supervision over banking sector liquidity by the Central Bank of Kenya would enhance the financial performance of commercial banks. Further loan growth was found to reduce the level of liquidity in commercial banks. This stems from the fact that commercial banks transform short-term deposits into long-term illiquid investments in the form of loans. The implication of this finding is that commercial banks in Kenya that maintain a high level of liquid assets perform poorer financially. Kenyan commercial banks can improve their financial performance by identifying and maintaining their liquidity levels within an optimal range.

Capital adequacy on the financial performance of commercial banks in Kenya

Capital adequacy provides a measure of financial flexibility and the ability of commercial banks to do additional business. The study found that the amount of capital in a bank has a positive and significant effect on the financial performance of commercial banks. Capital adequacy was found to positively affect the financial performance of commercial banks. These findings concur with those of [Ongore and Kasu \(2013\)](#), [Labonne & Lame \(2014\)](#), and [Onuonga \(2014\)](#), who found that capital strength significantly influences the financial performance of commercial banks. This argument is further supported by the finding that an increase in statutory capital would positively affect the financial performance of commercial banks. Similar to [Labonne and Lane \(2014\)](#), the study supports the idea that bank capital level enhances growth in banks' lending capacity, thus promoting credit growth. This means that commercial banks in Kenya with a high level of capital perform better financially relative to those with lower levels of capital.

6. Conclusion and Recommendations

This study sought to examine the effect of growth in a bank's loan portfolio on the financial performance of commercial banks in Kenya. The study concluded that growth in a bank's loan portfolio had a negative effect on the financial performance of commercial

banks. Further, the study concluded that growth in loan portfolios increases the amount of nonperforming loans in subsequent years, commercial banks tend to lower their lending rates in order to grow their loan book, and commercial banks exercise caution in lending following periods of heavy losses occasioned by bad loans. No conclusion was reached on whether loan portfolio diversification helps reduce the problem of bad loans.

Secondly, the study sought to examine the effect of asset quality on the financial performance of commercials in Kenya. In this respect, the study reached the following conclusions: the quality of bank assets had a positive effect on return on assets, and the effect was significant. The quality of a bank's loan portfolio positively affected its financial performance. Loan portfolio diversification was an important determinant of the quality of assets held by banks. The quality of bank assets deteriorates after periods of rapid lending, and banks do not pay much attention to borrowers' credit histories during periods of economic expansion.

The third objective sought to examine the effect of liquidity management on the financial performance of commercial banks in Kenya. The study concluded that levels of liquidity for commercial banks had a significant negative effect on return on assets. Further, the study reached the following conclusions: holding a high level of liquid assets results in poor financial performance. Poor liquidity management is a cause of poor financial performance among commercial banks. An increase in the statutory liquidity requirement would not result in better financial performance for commercial banks. Better supervision of the liquidity of commercial banks would improve the financial performance of banks. Loan growth reduces the liquidity of commercial banks.

Finally, the study sought to examine the effect of capital adequacy on the financial performance of commercial banks. The study concluded that capital adequacy had a positive and significant effect on the financial performance of commercial banks. The study also concluded the following: the financial performance of commercial banks is affected by the level of core capital relative to the total risk-weighted capital; banks with a high amount of core capital relative to customer deposits perform better financially; an increase in the amount of statutory capital would have a positive effect on the financial performance of commercial banks; and increasing the amount of bank capital would enhance growth in bank lending.

Based on the first objective, the study recommended that to improve financial performance, commercial banks should grow their loan portfolios. However, such growth should be strategically executed so as to minimize the problem of nonperforming loans in subsequent years. Also, banks should exercise caution in lending at all times to avoid reacting to loan losses occasioned by bad loans. Also, the study recommends that managers

should re-evaluate the importance of loan portfolio diversification in reducing the problem of bad loans.

From the findings on the second objective, the study recommended that banks should maintain assets of high quality, as this has a positive effect on financial performance. Banks should diversify their loan portfolio, as this was found to be an important determinant of loan portfolio quality. Also, banks should pay attention to borrowers' credit histories during periods of economic expansion. The third objective sought to examine the effect of liquidity management on the financial performance of commercial banks in Kenya. The study recommended that banks should identify the optimal level of liquidity so as to minimize the negative effects on financial performance associated with holding a high level of liquid assets. Also, banks should develop policies to improve the management of their liquid assets. The Central Bank should tighten its supervision of the liquidity of commercial banks. Regarding the effect of capital adequacy on the financial performance of commercial banks, the study recommended banks increase the amount of core capital since measures of capital adequacy showed that banks with high capital adequacy ratios perform better financially. Also, the amount of statutory capital for banks should be increased. Further, in order to enhance lending, banks should consider increasing their capital base.

References

- Afandi, W. (2017). Strategic Responses by Microfinance Banks to the Dynamism of the Economic Environment: Capping of Interest Rates by Central Bank of Kenya (Doctoral dissertation, University of Nairobi).
- Amri, P. D., Prabha, A. P., & Wihlborg, C. (2012). What makes High Credit Growth harmful? Evidence from banking crises. *Evidence from Banking Crises* (December 5, 2012).
- Barajas, A. Giovanni, D. A & Levchenko (2007). Credit booms: The good, the bad, and the ugly. International Monetary Fund, Working Paper Series.
- Berger A.N. and Udell G.F. (2004). The institutional memory hypothesis and the procyclicality of bank lending behavior. *Journal of Financial Intermediation*, 13, 458–495.
- Bernanke, B. S. & Gertler, M., (1989). Agency costs, net worth, and business fluctuations. *American Economic Review*, 79 (1), 14-31.
- Bernanke, B., Gertler, M. & Gilchrist, S. (2009). The financial accelerator in a quantitative business cycle framework. *Handbook of Macroeconomics*, (1) 1341–1393.

- Boissay, F. (2011). Credit rationing, output gap, and business cycles. ECB Working Paper, (87), 1-38.
- Brooks, C. (2008). *Introductory Econometrics for Finance*. Second Edition, Cambridge University Press, New York.
- Central Bank of Kenya.(2015). Banking supervision annual report.Retrieved from <http://www.centralbank.go.ke>. Accessed on 20/10/2016
- Egert, B., Backe, P. & Zumer, T. (2006). Credit growth in Central and Eastern Europe new (over)shooting stars? European Central Bank, Working Paper Series No. 687. <http://www.ecb.int>. 15/05/2016
- Foos D., Norden L., & Weber M. (2010). Loan growth and riskiness of banks. *Journal of Banking and Finance*, 34, 2929–2940.
- Hardy D. C. & Pazarbasioglu C (1998). Leading indicators of banking crises: was Asia different? IMF Work. Paper, No. 91
- Islam, M. S., & Rajan, R. S. (2009). The bank lending channel of monetary policy transmission: India and the global financial crisis.
- Keeton, W. (2009). Does faster loan growth lead to higher loan losses? Federal Reserve Bank of Kansas City. *Economic Review*, 2, 57-75.
- Mugenda, M. O. & Mugenda A. G. (2004). *Research Methods: Quantitative and Qualitative Approaches*. Nairobi: ACTS Press.
- Muthee, J. G. (2010). The relationship between credit risk management and profitability: A study of commercial banks in Kenya. *International Journal of Business and Management Review*, 1(3), 14-25.
- Mutiso, A., & Kamau, C. (2013). Factors influencing complexity in financial report preparation- evidence from the banking sector in Kenya. *Journal of Economics and business Research*, 19(1), 219-236.
- Okoye, V., & Onyekachi, E. R. (2013), Effect of bank lending rate on the performance of Nigerian deposit money banks. *International Journal of Business and Management Review*, 1(1), 34-43.
- Ongore, V & Kusa G. (2013). Determinants of Financial Performance of Commercial Banks in Kenya. *International Journal of Economics and Financial issues*,13(1), 237-252.

-
- Onuonga, S. M (2014). The analysis of profitability of Kenya`s top six commercial banks: Internal factor analysis. *American International Journal of Social Science*, 3(5).
- Orodi, S. (2022). The Effects of Fiscal Policy on the Performance of Commercial Banks in Kenya. *African Journal of Commercial Studies*, 1(1), 18–27.
- Rajan, R. (2004). Taking stock of ASEAN economic integration. *Business Times (Singapore)*, 6.
- Salas V. & Saurina J. (2012).Credit risk in two institutional regimes: Spanish commercial and savings banks. *Journal of Financial Services Research*, 22(3), 203–224.
- Tornell, A. & Westermann, F. (2006).*Boom-Bust Cycles and Financial Liberalization*. The MIT Press: Cambridge.