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ASSET QUALITY AND FINANCIAL PERFORMANCE OF TIER IV COMMERCIAL BANKS IN KENYA

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Abstract:
The main objective of the study was to assess the influence of asset quality on the financial performance of tier IV commercial banks in Kenya. The study was guided by the scientific theory of management, Transaction Cost theory and Contingency theory. This study employed a longitudinal research design. The target population was 13 tier IV commercial banks in Kenya as at 2022 from the Central Bank of Kenya's website. Panel data was analyzed using STATA. Pearson's product-moment correlation coefficient depicted r = -0.4306, a p-value of 0.0000 which is significant for asset quality. The regression coefficient was -0.14, a p-value of 0.013, for asset quality (AQ) and financial performance (ROE) at a 5% level of significance. These results indicate that Asset Quality had a significant influence on financial performance. It was recommended that commercial banks should use their assets efficiently and effectively to yield optimum results.

JEL: G21; G29; G38

Keywords: asset quality, tier IV commercial banks, financial performance

1. Introduction

The banking sector players continue to review and enhance their business models seeking to leverage frameworks that promise efficiency gains, particularly through the adoption

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of innovations. Cognizant of the growing competition in the market, increasing sophistication of customer expectations, as well the dynamism in the regulatory environment, the overarching challenge to the industry is to continue investing resources in remaining at the frontier of both regulatory and customer expectations (CBK, 2020/2021).

Asset quality refers to the measures taken so as to minimize risks associated with particular assets. It compares idle assets in relation to total equity. It analyses the annual expenses for impaired loans with respect to total assets. It analyses the quality of the bank customer portfolio and the quantity of deteriorated and doubtful loans. It helps financial analysts to determine the portfolio of assets that yield the highest returns (CBK, 2021).

In 2020, credit growth remained trapped at single-digit levels unlike the double-digit levels recorded pre-2017. Across the bank sizes, loan growth declined among the tier 4 banks. Slowing economic growth, elevated credit risk-triggered risk aversion among lenders and subdued demand among borrowers are the key reasons underlying the slower credit growth. The capacity of a bank to grow its loan in the year was largely determined by its capital-to-asset ratio position, so banks with higher capital ratios recorded higher loan growths relative to those with lower capital (Kenya Bankers Association, 2021)

Financial Performance refers to the reflection of the way in which resources of a company are used in the form which enables it to achieve its objectives. Financial performance is the employment of financial indicators to measure the extent of objective achievement, contribution to making available financial resources and support of the Bank with investment opportunities. The financial performance of a firm is the measure of the level of the organization's profit or loss within a specified period of time (Githaiga, 2017).

Every bank is striving to make the best use of its resources to improve efficiency, the firms' value and shareholders' wealth. This however is done amidst stiff competition faced by the same banks thus customer satisfaction remains key to growth and sustainability (Deloitte, 2021). The capacity of a bank to grow its loan in the year is largely determined by its asset quality and efficiency. In 2019, most banks in tier IV posted declining profits and in some instances losses. The banking sector registered a decline in performance in 2020 with profit before tax decreasing by 29.5 percent from Ksh.159.1 billion in 2019 to Ksh.112.2 billion in 2020. The tier IV proportion of total pre-tax profit decreased from negative 1.03 percent in 2019 to negative 2.23 percent in 2020 due to a rise in the stock of non-performing loans from Ksh.336.6 billion in 2019 to Ksh.436.1 billion in 2020 (CBK, 2021). The declining performance and increase in credit risk coupled with low asset quality is an indication that more needs to be done to establish the gap that still leads to this.

2. Literature Review

2.1 Theoretical Literature Review

2.1.1 Scientific Theory of Management

This theory was postulated by Taylor (1970). Taylor's theory is based on the proposition of the fact that to achieve the effective organization of the business, it is necessary to create a management system that would produce the maximum growth of labour productivity at the lowest cost. Taylor suggests that industrial relations, and above all, the subordination i.e., behavior and communication of workers and management personnel have a direct impact on productivity growth.

In order to ensure routine behavior in organizations, programs are developed. Programs are routinized activities in response to frequently experienced stimuli. Programs facilitate, yet limit worker understanding. Programs increase understanding, as they evoke meaning in common experiences. However, programs limit understanding, as they focus attention on some events, while ignoring others. Organizations affect individual rationality through programs which influence individual attention and sub-goals along with the division of labor and communication structures (Vaughn, 2016).

This theory was able to assist in explaining how organizations can be able to improve on efficiency by making use of the resources available including; employees, and physical and financial resources in the best way possible to maximize return on investments and shareholders' wealth.

2.1.2 Transaction Cost Theory

This theory was postulated by Ferris (1981) who obtained motivations and influence from non-economic domains. He defined it as the cost of providing some good or service through the market rather than providing it within the firm. The transaction cost theory stresses that individuals typically bring about costs without realizing they are an expense. This theory was important to the study as it enabled the understanding of how managers of commercial banks can have an optimum balance between maximizing the company's profits and maximizing the utility for its owners. It is an essential part of corporate governance related to the organizations' operations. It will assist in understanding the degree of management's responsibility for the consequences of actions taken on the firm's net worth.

2.1.3 Contingency Theory

The Contingency theory was developed by Saxberg (1979). The Contingency theory of working capital management states that the effectiveness of working capital is highest where the structure fits the contingencies, hence only those organizations that align their working capital with the current environment achieve maximum output. The theory further notes that there is no level of working capital and is said to be constantly optimal in any particular industry.

The theory was relevant to the study since assisted in determining the level/approach of working capital management to approach, firms must put into consideration the strategically significant external variables such as include economic conditions, demographic trends, sociocultural trends political/legal factors and industry structure.

2.2 Conceptual Framework

A conceptual framework is a set of broad ideas and principles taken from relevant fields of inquiry and used to structure a subsequent presentation. Figure 1 below shows a diagrammatic representation of the dependent and independent variables.

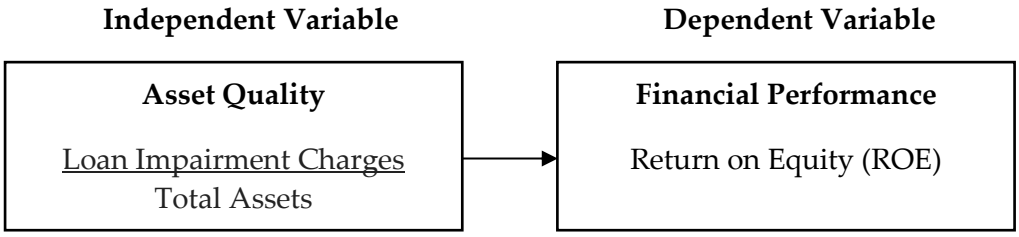

Figure 1: Conceptual Framework

2.3 Empirical Literature Review

Nzoka (2015) carried out a study on the effects of asset quality on the financial performance of commercial Banks in Kenya. The study adopted a descriptive design in its methodology and the researcher chose to study commercial banks due to the availability of needed data and convenience. All 43 commercial banks in Kenya were targeted for this study. Secondary data was obtained from annual Central bank of Kenya Banks supervision reports. SPSS version 20.0 was used for data analysis. The t-test with a 5% level of significance was used in the study and the correlation coefficient (r), coefficient of determination and analysis of variance were calculated. The analysis showed that all the asset quality factors had a fairly statistically significant impact on financial performance.

Wambugu (2018) studied the effects of bank management principles on the financial performance of selected Kenyan commercial banks. This study was a census study and a total of 41 respondents were targeted. A descriptive research design was adopted. Questionnaires were utilized to collect data. Statistical package SPSS was used for data analysis. Pearson correlation analysis was used to relate the various study variables. The study established that liquidity levels management by the banks, capital adequacy levels and loan quality management of commercial banks are mostly responsible for the financial performance of these banks their financial performance.

Anyike and Annele (2015) in a study whose aim was to examine the relationship between asset quality and the profitability of the fifteen (15) quoted commercial banks in Nigeria sourced for secondary data from annual reports of the quoted commercial banks. Multiple regression was used to analyze data. Findings from the regression result proved that percentage of non-performing loans to Total Loans and percentage of nonperforming Loans to Total Customers' Deposit have a positive relationship with Return on

Investment while percentage of Loan Loss Provision to Total Loans and percentage of Loan Loss Provision to Total Asset have a negative relationship with Return on Investment of the commercial banks. The model summary proved that the independent variables can explain 65.5% variation on the dependent variables while the F-statistics of 12.508477 and the probability of 0.000008 proved that the model is significant. The study concludes that there is a significant relationship between asset quality and the profitability of commercial banks.

Giulio, Josanco and Maurizio (2021) using a sample of 63 listed European banks, investigated the relationship between capital and asset quality, in terms of provisioning and coverage policies, with bank risk and performance during the period 2005- 2020. The results point out different relationships between risk-based and non-risk-based measures of capital with bank risk and performance profiles. In particular, the information content of the leverage ratio appears to be merely related to the bank dimensional feature, whereas the total capital ratio shows a positive and statistically significant relationship with bank stability and is also negatively related to insolvency risk, thereby suggesting a crucial role for capital for the overall bank resilience. In addition, more capitalized banks are associated with higher bank performance. Regarding asset quality, hefty coverage and provisioning policies are generally associated with both lower bank resilience and performance.

A study by Abata (2019) examined banks' asset quality and performance in Nigeria. Secondary data was collected from the annual reports of banks listed on the Nigeria Stock Exchange. Various ratios were used to measure bank performance and asset quality. Data was analyzed using SPSS. findings revealed that asset quality had a statistically relationship and influence on bank performance. Based on the findings the study recommends policies that would encourage revenue diversification, minimize credit risk, and encourage banks to minimize their liquidity holdings.

A study by Mnyampanda and Chindengwike (2021) examined the relationship between asset quality and the financial performance of commercial banks before and after shifting capital city located in Dodoma region, Tanzania. A quantitative research design was adopted. The target population was composed of quarterly financial data from 2010-2020. purposive sampling was adopted. The findings show that there is a significant relationship between asset quality and financial performance before and after shifting the capital city from Dar Es Salaam to Dodoma Region.

Gicharu, Evusa and Ariemba (2016) carried did a study to determine the effects of bank-specific factors on the financial performance of commercial banks in Kenya. This study adopted an explanatory approach by using panel data research design to fulfill the objectives. The researcher collected data on published financial statements for five years from 2011 to 2015 that was analyzed to show the effect of bank-specific factors on the financial performance of commercial banks over that period under study. The findings were presented in tables and narratives. They show that there has been a significant decrease in capital adequacy during the five-year period. There was also a finding that asset quality affects profitability and the financial performance of banks. The study concludes that Asset quality of the bank has the highest influence on the ROA of banks.

3. Research Methodology

3.1 Research Philosophy

This study was guided by positivism where the phenomena being observed lead to the construction of dependable data. Research philosophy explains how the world judges reality, knowledge and existence. The understanding of reality affects how we acquire knowledge and perception of reality, thus impacts on the conduct of the research. Positivists are researchers whose quantitative tools and methods entail quantifying and counting. Positivists believe reality is stable and hence can be observed from an objective viewpoint (Leitch, Hill & Harison, 2010).

3.2 Research Design

A research design is a plan of circumstances for the collection, measurement, and analysis of data in a manner that aims to combine relevance to the research purpose with economy and procedure (Kothari & Gaurav, 2014). This study employed a correlational research design that involves looking at variables over a period of time.

3.3 Target Population

The target population was 13 tier IV commercial banks in Kenya as at 2022 from CBK website.

3.4 Sample Population

Census was adopted thus all 13 tier IV commercial banks were used in the study to establish the relationship between financial imperatives and the financial performance of commercial banks for objectivity in generalizing conclusions for the whole country.

3.5 Data Analysis and Presentation

Normality was tested through Shapiro –Wilk. Multicollinearity was tested by use of Variance inflation factors. Heteroscedasticity was tested through Breuch-Pagan test. Autocorrelation was tested through Durbin-Watson statistic. Stationarity was tested using Levin-Lin-Chu test. Wooldridge test was used to ascertain the autocorrelation of error terms. The panel data was analyzed using descriptive and inferential statistics. Descriptive statistics comprised of; mean, standard deviation and variance. Inferential statistics comprised correlation analysis and Hausman test for the fixed and random effect regression model. Data was presented using tables and charts. The model below was used to test the hypothesis.

$$FP_{it} = \beta o + \beta_1 AQ_i t + \varepsilon_{it} \quad (1)$$

Where:
β_0 = Regression constant;
β_1 = Panel regression coefficient;
AQ = Asset quality;

FP = Financial performance;
i = 13 tier IV commercial banks;
t = Time period from 2012-2021;
ε = Error term.

3.6 Ethical Consideration

Permission to collect data was obtained from the Directorate of Graduate Studies of Kaimosi Friends University. Authorization for research information gathering was further sought from National Commission for Science Technology and Innovation. Further, all data and information obtained in the study whether written or digital were encrypted and stored securely in a locked place accessed by the researcher only. The information was used strictly for research purposes.

3.7 Measurement of Variables

The dependent and independent variables were measured as shown in Table 3.1.

Table 3.1: Measurement of Variables

Variable	Nature	Formula
Asset Quality	Independent	Loan Impairment Charges / Total Assets
Financial Performance	Dependent	(ROE) Net Profit / Total Equity

4. Research Findings and Discussion

4.1 Descriptive Statistics

The descriptive statistics including Mean, standard deviation, minimum and maximum were run to understand the distribution of the variables; Asset Quality and Financial performance as measured by ROE. Table 1 shows that the average Return on Equity (ROE) was 22.11% with a standard deviation of 0.10. This is an indication that some banks had high profits and hence high financial performance while others had losses thus negative return on equity.

Asset Quality had a mean of 0.29 with a standard deviation of 0.14. The Asset Quality also recorded a minimum of 0.01 with a maximum of 0.59. This shows wide variability across commercial banks in Kenya in terms of loan impairment charges with others having very high loan impairment charges thus low asset quality with a low probability of collecting all amounts due hence low financial performance. However, other commercial banks had very low impairment charges meaning a high percentage of amounts due to the bank being collected thus high asset quality and high financial performance.

Table 1: Descriptive Statistics

Variable	Obs.	Mean	Std. Dev.	Min	Max
ROE	130	0.2211	0.1048	-0.0664	0.4387
Asset Quality	130	0.2913	0.1390	0.01011	0.5947

4.2 Inferential Statistics

4.2.1 Correlation Analysis

To assess the strength and direction of relationships between the study variables, pairwise Pearson product-moment correlation coefficients were generated for each pair of variables. The correlation coefficients (r) value range between -1 and 1 ($-1 \leq r \leq 1$). The correlation analysis results are presented in Table 2.

Table 2 shows the association between asset quality to the dependent variable is negative with r = -0.4306, a p-value of 0.0000 which is significant. This is a clear indication that asset Quality has a significant negative association with financial performance.

Table 2: Pearson Correlation Coefficients

Variable	ROE	Asset Quality
ROE	1.0000	
Asset Quality	– 0.4306*	1.0000
	(0.0000)	

4.2.2 Stationarity Test

Stationarity refers to a situation where the statistical properties of variables do not change over time. If the variables in the regression model are not stationary and the variables are trending over time, a regression of one on the other could have a high R^2 even if the two are totally unrelated. The standard assumptions for asymptotic analysis will not be valid. In other words, the usual "t-ratios" will not follow a t-distribution, so we cannot validly undertake hypothesis tests about the regression parameters (Breitung & Das, 2015). To test the reliability and validity of the data, Levin-Lin-Chu test was run to establish stationarity. This test was based on the null hypothesis that the variables are not stationary. When the probabilities are less than 0.05 critical value, this hypothesis is rejected. Table 3 reflects that at a critical value of -1.9476, the variables' test statistics were less than the critical value and also the p-values were less than 0.05. Thus, the variables; ROE and Asset Quality met the stationary.

Table 3: Levin-Lin-Chu stationarity Test Results

Variable	Panels	Periods	Test Statistic	P-value
ROE	13	10	-9.7248	0.0000
Asset Quality	13	10	-10.5343	0.0000

4.2.3 Normality Test

In multiple regression, the assumption of a normal distribution is required for residuals. This helps the researcher to decide whether to apply parametric or non-parametric tests. If the variables are normally distributed, then parametric tests are appropriate if not

normally distributed then non-parametric tests will be applied (Khatun, 2021). Shapiro-Wilk test was used to test normality. The null hypothesis for the Shapiro-Wilk test is that the variables were normally distributed. At a 5% level of significance, if the p values are less than 0.05 then we reject the null hypothesis. Table 4 confirms that data for all the variables were normally distributed since their p-value are all greater than 0.05 at a 95% level of confidence. Thus, the study failed to reject the null hypothesis that the variables were normally distributed at a 95% level of confidence. The normality of variables was therefore confirmed.

Table 4: Shapiro Wilk Test Normal Data

Variables	Obs	w	v	Z	Prob>z
Asset Quality	130	0.98372	1.677	1.163	0.12244
ROE	130	0.98450	1.596	1.052	0.14646

4.2.3 Fixed and Random Effects Models

In order to identify the appropriate model between fixed and random effect Models, Hausman test was used. This test is based on the null hypothesis that the random effect model is appropriate while the alternative hypothesis was that the fixed effect model was appropriate. Fixed and random effect panel regressions helped to predict the unitary changes in the dependent variable, ROE given the changes in the independent variables and Asset Quality. Before the interpretation of fixed and random effect results, Hausman test assisted in identifying the appropriate model between fixed effect and random effect. Given the chi-square of 5.07 < the critical chi-squire of 5.991, while the p-value of 0.1671>0.05 thus the study failed to reject the null hypothesis that the random effect model is appropriate.

Table 5: Fixed Effect Model

ROE	Coef.	Std. Error.	t	$p > \|t\|$	Prob>f	R-Squire
Asset Quality	– 0.1216543	0.0569115	– 2.14	0.035	0.0000	0.3781
Constant	0.3721238	0.0230659	16.13	0.000		
Rho	0.39747521					

Table 6: Random Effect Model

ROE	Coef.	Std. Error.	Z	p>z	Prob>f	R-Square
Asset Quality	– 0.1364497	0.054905	– 2.49	0.013	0.000	0.3799
Constant	0.3435461	0.0259687	14.60	0.000		
Rho	0.3435461					

Table 4.1: Hausman Test Results

ROE	**(b)**	**(B)**	**S.E.**	$p > \|Chi^2\|$	**Chi2**
	fe	*re*			
Asset Quality	– 0.1216543	– 0.1364497	0.0149788	0.1671	5.07
$b =$ consistent under null hypothesis; random effect appropriate					
$B =$ inconsistent under alternative hypothesis; fixed effect appropriate					

The regression equation, therefore, is extracted from the random effects model as given below;

ROE = 0. 3791298 – 0.1364497AQ

The regression coefficients – 0.1364497 with a p-value of less than 0.05 showed a significant influence of asset quality (AQ) on financial performance (ROE) at a 5% level of significance

4.3 Discussion

The main objective of the study was to assess the influence of asset quality on the financial performance of commercial banks in Kenya. The objective tested the null hypothesis that asset quality has no significant influence on the financial performance of commercial banks in Kenya.

The random effect model regression coefficient was β= – 0.1364497, p-value 0.013 < 0.05 for asset quality (AQ) which implies that asset quality had a significant negative influence on financial performance (ROE) at a 5% level of significance over the 10-year period. This indicates that if non-performing loans increased by 1 percent, the return on assets will reduce by 13.64 %. The study, therefore, rejected the null hypothesis that asset quality has no significant effect on the financial performance of commercial banks in Kenya. The findings are in line with Giulio Velliscig, Josanco Floreani and Maurizio Polato (2021), Nzoka (2015) and Wambugu (2018) which established a negative and significant relationship between asset quality and financial performance of commercial banks in Kenya.

5. Conclusions

Asset quality had Pearson's correlation coefficient r = - 0.4306, p-value of 0.0000. A regression coefficient of β = – 0.1364497, p-values 0.000< 0.05 which are all significant. It was therefore concluded that an improvement in asset quality i.e., a reduction in non-performing loans significantly improves the financial performance of tier IV commercial banks.

6. Recommendations

Since asset quality has a significant negative influence on the financial performance of commercial banks in Kenya, it was recommended that commercial banks should improve on the acquisition of assets both current and fixed assets. These assets should be used efficiently and effectively to yield optimum results. This is more so because it influences the flow of credit in the economy. Non-performing loan impairment should be controlled to a minim. Efforts should be made to prevent pilferage and misuse of assets as these impact on liquidity and costs of the banks.

Conflict of Interest Statement
We as the authors declare no conflict of interest.

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