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A Comparative Study of the Effect of Bank Size on Asset Quality among Commercial and Microfinance Banks in Kenya

Bundi Momanyi[1]*, Beatrice Warue, PhD[2] and Jane Kibanga, PhD [3]

[1, 2, 3]*School of Business and Economics, Africa International University -Africa*

*E-mail: bundimgna@yahoo.com**

***Corresponding author**

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Abstract

The purpose of this study was to determine the effect of bank size on the asset quality of commercial and microfinance banks in Kenya using comparative analysis. The study was motivated by persistent poor asset quality in Kenyan banks and grounded in the Quiet Life Hypothesis. It employed an explanatory research design. The target population comprised 38 commercial and 14 microfinance banks operating in Kenya as of December 31, 2024. The research used secondary data from banks' audited accounts and publications by the Central Bank of Kenya for the period 2014 to 2024. Panel data analysis was used to examine the effect of bank size on asset quality. The study used descriptive and inferential statistical analysis. Diagnostic tests were conducted to validate the assumptions of panel regression. The study found that bank size had a statistically significant negative effect on asset quality among both commercial and microfinance banks. Comparative analysis indicated that commercial banks recorded a statistically significant model effect. The effect among microfinance banks was found to be weaker. The null hypotheses that bank size has no significant effect on the asset quality of commercial and microfinance banks, and there is no significant difference in the effect of bank size on asset quality between commercial and microfinance banks in Kenya, were rejected. The study recommends that as bank size grows, commercial and microfinance banks establish centralized credit risk management departments, strengthen internal audits, and deploy standardized, enterprise-wide credit monitoring systems. Banking regulators should also consider differentiated, tier-based supervision models.

Keywords: Bank size, Asset quality, Non-performing loans, Commercial banks, Microfinance banks.

Introduction

Banks primarily function as financial institutions that accept deposits from the public and offer loans and other financial services. A bank, therefore, is a firm that accepts deposits, provides loans, and offers other products and services permitted under the banking laws and regulations of the country in which it operates. According to the Banking Act (1995), a bank is defined as a company that engages in or intends to engage in banking activities within Kenya, excluding the Central Bank of Kenya. A microfinance bank is a financial institution licensed to provide services like loans, savings, insurance, and payment services to low-income individuals or groups who typically lack access to traditional banking services (Ledgerwood, 1999). Microfinance banks provide small-scale financial services, especially credit, to the poor, enabling them to engage in productive economic activities or grow small businesses

(Armendáriz Morduch, 2010). The Microfinance Act (2006) defines a microfinance bank as an entity that publicly presents itself as accepting deposits on a regular basis. These institutions are licensed and supervised by the Central Bank of Kenya and required to comply with the provisions of the Microfinance Act (2006) and the Microfinance Regulations (2008). The minimum regulatory capital required for microfinance banks in Kenya depends on whether the institution operates at a community or regional level. This study aimed to determine the effect of bank size on the asset quality of commercial and microfinance banks in Kenya through a comparative analysis.

The size of a firm has been measured in literature using various indicators, including total assets, total sales, total employees, and number of members (Ahmed et al., 2023). In this study, bank size was measured using total assets. From empirical banking literature, bank size is commonly defined as the natural logarithm of a bank's total assets (Wang & Zhuang, 2022).

The size of a bank does play a vital role in determining its asset quality (Gupta & Mahakud, 2020). Larger banks often have more diversified loan portfolios, which spreads risk and reduces the impact of defaults on overall asset quality. Additionally, large banks typically have more resources to invest in effective risk management systems and advanced credit evaluation techniques (Naili & Lahrichi, 2022). However, large banks may also face challenges in maintaining close relationships with borrowers, which can lead to higher nonperforming loans. Small banks have the advantage of having a more intimate knowledge of their local markets and borrowers, which can aid in better credit assessments and lower nonperforming assets, even when they might lack the resources for advanced risk management (Zamore et al., 2023).

Strong asset quality is positively associated with high profitability, better financial performance, and improved bank stability (Barakat et al., 2024). Bank stability itself is an important aspect of financial stability. When bank stability is jeopardized, it has a systemic effect on the entire financial system. Therefore, there is a particular need to monitor bank credit and other banking risks to maintain stability in the financial sector. Bank asset quality plays a significant role in bank performance. To ensure the stability of the banking sector, banks should maintain good asset quality to achieve sustainable profitability (Kakozi, 2017). When loans become non-performing, they adversely affect a bank's liquidity and negatively impact earnings (Warue, 2019). According to Rauf et al. (2026), asset quality and liquidity risk management are positively correlated, as banks with stronger asset structures tend to experience greater financial stability and more efficient liquidity management practices.

According to Sanathanee (2020), the deterioration of asset quality of commercial banks is one of the main causes of the Asian Financial Crisis, indicating that bad loans are not only globally linked to bank failures but also to financial sector instability and crises. Poor asset quality increases the risk of defaults and an increase in non-performing loans. This may lead to low profitability and losses, erosion of the bank's capital, and insolvency. Therefore, maintaining a healthy asset quality is essential for ensuring that banks remain resilient, capable of withstanding economic shocks, and continue to support sustainable economic growth (Saloxov, 2024). Poor asset quality is attributed to factors such as inappropriate lending practices and strategies, and insider lending.

In 2023, several banks in the United States, including Silicon Valley Bank (SVB), Signature Bank, and First Republic Bank, collapsed. Investigations revealed that their failures were largely linked to poor asset quality, driven by excessive exposure to commercial real estate, inadequate interest rate strategies, weak liquidity positions, and ineffective credit risk management (Adrian et al., 2024). Africa ranks among the continents with the highest non-performing loan levels globally. In 2022, countries such as Equatorial Guinea, Chad, the Central African Republic, and Ghana reported NPL ratios exceeding 20%, which was more than four times the global median (Quist, 2023). In Nigeria, commercial banks saw a significant rise in non-performing loans from 5.3% in 2019 to 7.0% in 2023. This increase was largely attributed to economic challenges and declining oil prices, which weakened borrowers' repayment capacity (Odebode et al., 2024).

Banks in Kenya operate under strict regulatory oversight and are subject to rigorous prudential standards aimed at maintaining healthy operational ratios. These measures are designed to enhance the quality of loan assets and support improved profitability across the banking sector (Onyango & Olando, 2020). However, data show a generally upward trend in non-performing loan ratios.

Statement of the Problem

Supervision reports by the Central Bank of Kenya depict a steady deterioration in asset quality among commercial banks, with the non-performing loans ratio rising from 4.42% in 2011 to 13.9% in 2022 (CBK, 2011–2022. The situation worsened by 31 December 2023, when the industry's non-performing loans ratio increased further to 15.9% (CBK, 2023). The asset quality challenge was more severe among microfinance banks, whose non-performing loan rate stood at 28% of their total loans as of 31 December 2023. During the same period, microfinance banks posted an aggregate pre-tax loss of Ksh. 2.4 billion. CBK attributed part of this weak performance to rising impairment losses, largely driven by deteriorating asset quality (CBK, 2023).

As of 31 December 2024, the Central Bank of Kenya reported that the ratio of gross non-performing loans to gross loans had reached 17.1% (CBK, 2024), confirming that the problem of loan deterioration had not been fully addressed. As non-performing loans increase, banks are forced to set aside more funds for expected losses, thereby reducing the resources available for productive lending. Abdullah et al. (2024) argue that overdue loans can weaken bank profitability, increase the risk of bank failure, reduce profit, and slow economic growth. Strengthening asset quality is therefore a critical pathway for reducing bank distress and supporting the long-term soundness of the banking sector.

Bank size is generally expected to have a significant positive effect on asset quality when banks use their scale to strengthen credit appraisal, monitoring systems, risk management, and portfolio diversification. Nevertheless, empirical evidence on the relationship between bank size and asset quality remains inconsistent. Some studies report that larger banks tend to record better asset quality (Pokhrel, 2025; Salas et al., 2024). Other studies, however, suggest that bank size may worsen asset quality or play an insignificant role (Kakozi, 2017)

Previous studies, including those by Alshammari et al. (2023) in Gulf Cooperation Council countries, Ozili (2022) in African countries, Kumar et al. (2021) in India, Koju et al. (2020) in Nepal, Atoi (2023) in Nigeria, and Muthomi et al. (2022) in Kenya, provide useful evidence on how bank size and other factors affect asset quality. Nevertheless, these studies were conducted in different institutional, economic, and regulatory settings, applied different methodological approaches, or examined variables that do not fully align with those adopted in the current study. These differences create contextual, methodological, and conceptual gaps. The inconsistency in findings across countries, study periods, and banking environments underscores the need for a Kenya-specific and period-specific study. This is particularly important given the persistent asset quality challenges facing both commercial and microfinance banks in Kenya. In light of these gaps, the study sought to conduct a comparative analysis of the effect of bank size on the asset quality of commercial and microfinance banks in Kenya.

Research Hypotheses

> **H_{01}:** Bank size has no significant effect on the asset quality of commercial and microfinance banks in Kenya.
>
> **H_{02}:** There is no significant difference in the effect of bank size on asset quality between commercial banks and microfinance banks in Kenya.

Literature Review

Theoretical Review

The study was anchored on the Quiet Life Hypothesis. The Quiet Life Hypothesis was introduced by Hicks (1935). It suggests that managers often operate under limited oversight from shareholders. According to this theory, firms with significant market power tend to avoid aggressive profit maximization and instead settle into inefficiency. Even when effective incentive systems are implemented, managers may still exhibit operational slack, as owners typically lack full visibility into the actual production costs, making it difficult to enforce efficiency. Building on this hypothesis, Berger and Hennan (1989) examined a linkage to the banking industry, establishing that managers of firms with high market power make little effort to improve cost efficiency, profitability, and overall performance.

Eggoh et al. (2021) examined how bank market power influences the cost efficiency of banks operating in the West African Economic and Monetary Union. The dataset was evaluated using panel data analysis. Their findings showed that banks with greater market power were associated with reduced banking efficiency. These findings support the Quiet Life Hypothesis. The study highlighted the need for large banks to closely monitor their operations to mitigate against the effect of the quiet life hypothesis.

Opponents of this theory argue that market competition discourages laxity in management behavior. Increasing competitive pressure in the marketplace forces management to work harder if the company has to survive. Secondly, the assumption that managers are subject to weak monitoring by the firm's owners is not necessarily true. Investors monitor managers through appointed independent directors and external auditors, making this theory lack merit in the business place. This study evaluated how bank size affects asset quality in commercial and microfinance banks and the relevance of the Quiet Life Hypothesis.

Empirical Review

Pancotto et al. (2024) explored the determinants of asset quality in the Italian banking sector, focusing on how bank size influences nonperforming loans. Using panel data from Italian commercial banks covering the period 2011 to 2017, the researchers applied a dynamic system generalized method of moments estimator to address endogeneity and persistence in nonperforming loan ratios. Their findings showed that, although bank size was insignificant in some fixed-effect specifications, the system generalized method of moments results revealed a negative and statistically significant effect of bank size on nonperforming loan levels. This implied that larger Italian banks maintained better asset quality, possibly due to superior credit screening, portfolio diversification, and access to more stable funding sources. The study concluded that regulatory oversight in Italy should account for size heterogeneity when designing risk-based supervisory frameworks. This study addressed the geographical gap by examining the Kenyan banking sector to determine whether the same results on the effect of bank size on nonperforming loans would be replicated in the Kenyan environment.

Arhinful et al. (2025) analyzed the moderating role of bank size in the relationship between non-performing loans and bank growth in the United States. The study utilized a sample of 253 banks listed on the New York Stock Exchange from 2006 to 2023. It employed feasible generalized least squares, Driscoll–Kraay standard errors, and generalized method of moments to validate results. The findings revealed that larger U.S. banks were more resilient to the adverse effects of deteriorating asset quality. Specifically, bank size had a significant negative moderating effect on bank growth, indicating that larger institutions could better absorb credit losses and sustain expansion due to stronger capital buffers and diversified revenue bases. The study recommended that bank managers leverage size-related advantages to strengthen asset quality management during economic downturns.

Pokhrel (2025) examined the determinants of asset quality among Nepalese commercial banks, focusing on bank size as a key explanatory factor. The study used data from 2014 to 2023 and employed a panel regression model controlling for capital adequacy, profitability, and macroeconomic variables. Results showed that bank size had a statistically significant influence on non-performing loans, with larger banks demonstrating better asset quality compared to their smaller counterparts. The author attributed this to larger banks' stronger governance structures and access to advanced risk management systems. The study suggested that Nepal's banking regulators should support smaller banks in adopting advanced credit risk assessment tools and diversifying their portfolios to mitigate against asset quality deterioration.

Warue (2019) investigated the linkage between non-performing loans, bank-specific factors, and macroeconomic factors in the Kenyan commercial banks. Using a pooled (unbalanced) regression model for analysis, the study demonstrated that non-performing loan levels vary significantly by bank size, reflecting differences in debt collection capabilities across banks of varying sizes.

This study examined the effect of bank size on asset quality in Kenya and assessed whether the findings are consistent with or differ from those of previous studies. It also expanded the scope to both commercial and microfinance banks, thereby addressing contextual and conceptual gaps.

Methodology

The study adopted ontological realism and epistemological objectivism/positivism as its philosophical foundation. Ontological realism was appropriate because asset quality and bank size were treated as real and measurable phenomena. Epistemological objectivism/positivism guided the study as knowledge was generated through objective, quantitative, and statistical analysis of empirical banking data. This study adopted an explanatory research design, intended to clarify and interpret the relationships between bank size and asset quality in Kenya's commercial and microfinance banks. In line with the views of Schenker and Rumrill (2004), an explanatory research design was most appropriate, as this study used panel data. This approach allowed the researcher to examine causal relationships while maintaining consistency in key variables throughout the analysis.

The target population comprised all commercial and microfinance banks regulated by the Central Bank of Kenya as at 31st December 2024. These institutions were selected because they are key providers of loans and advances and contribute significantly to non-performing loans in the economy. The study adopted a census approach, covering all commercial and microfinance banks operating in Kenya as at 31st December 2024. This approach was preferred because the target population was manageable and allowed the researcher to study the entire banking sector. Using a census helped eliminate sampling error and sampling bias. The approach provided more reliable and representative findings on the effect of bank size on asset quality.

The study relied on secondary panel data collected from annual financial statements of banks, Central Bank of Kenya bank supervision reports, banks' websites, and other publicly available information covering the period 2014–2024. The extracted data was recorded in structured data collection sheets, cleaned for completeness, accuracy, and consistency, and prepared for analysis. Validity was ensured by using credible and legitimate sources, checking the consistency and completeness of the data, and ensuring that the information aligned with the study objective, while reliability was strengthened by using a defined period and focusing on the relevant study variables. Bank size was measured using total assets. The study relied on descriptive statistics, Pearson correlation, and panel regression to establish the relationship between bank size and asset quality through comparative analysis. The panel regression was appropriate because it enabled examination of variations across banks and over time to determine whether bank size significantly affected asset quality differently among commercial and microfinance banks in Kenya.

The study adapted the empirical model developed by Al-Khouri (2012). Since the study compared commercial and microfinance banks, two separate empirical models were specified. Model 1 estimated the effect of bank size on asset quality of commercial banks, while Model 2 estimated the effect of bank size on the asset quality of microfinance banks. The separation of the models allowed the study to determine whether bank size influenced asset quality differently across the two categories of banks. The models are shown below:

$$FP_{CBit} = \alpha + \beta BSCB_{it} + \varepsilon_{it} \quad \text{.......... (1)}$$

$$FP_{MFBit} = \alpha + \beta BSMFB_{it} + \varepsilon_{it} \quad \text{.......... (2)}$$

Where:

FP_{CBit} = Asset quality of commercial bank i at time t.

FP_{MFBit} = Asset quality of microfinance bank i at time t.

$BSCB_{it}$ = Bank size of commercial bank i at time t.

$BSMFB_{it}$ = Bank size of microfinance bank i at time t.

α = Constant term.

β = Coefficients of the explanatory variable.

ε_{it} = Error term.

Before estimating the panel regression model, the study conducted diagnostic tests to ensure that the data met the key assumptions required for reliable analysis. These tests included assessments for normality, stationarity, co-integration, serial correlation, heteroscedasticity, model specification, and Granger causality. The Hausman specification test guided the choice between fixed and random effects models. These tests ensured that the final regression model was statistically appropriate for assessing the effect of bank size on the asset quality of commercial and microfinance banks.

Results

Descriptive Statistics

The study used descriptive statistics to summarize the key characteristics of the dataset. The mean, minimum, maximum, and standard deviation values were used to describe the distribution and spread of variables, bank size, and asset quality. The mean was selected as the preferred measure of central tendency because it incorporates all observations, provides a balanced summary of the dataset, and is directly related to variance and standard deviation, which are used measures of dispersion (Gravetter et al., 2016). The standard deviation was used to show the extent of variability within each variable and was preferred due to its effectiveness against sample size fluctuations and its usefulness in evaluating relationships such as skewness and correlation (Sharma, 2018). The descriptive statistics results are presented in Table 1.

Table 1

Descriptive Statistics

Bank Category	Variable	Minimum	Maximum	Mean	Std. Deviation
Commercial Banks	Asset Quality	0.00	64.64	14.7336	10.4890
	Bank Size (KSh '000)	4,755,787	1,425,369,827	129,128,206.0509	200,344,215.6496
Microfinance Banks	Asset Quality	3.60	100.00	28.1441	15.9192
	Bank Size (KSh '000)	197,000	32,153,000	9,502,800	11,615,666.1461

Source: Data (2025)

The descriptive statistic results in Table 1 depict that asset quality under commercial banks had a minimum value of 0.00 and a maximum value of 64.64, with a mean of 14.7336 and a standard deviation of 10.4890. Bank size among commercial banks varied widely, ranging from KSh 4,755,787,000 to KSh 1,425,369,827,000, with a mean of KSh 129,128,206,050.90 and a standard deviation of KSh 200,344,215,649.60, indicating substantial variation in the sizes of commercial banks. For microfinance banks, asset quality ranged from 3.60 to 100.00, with a mean of 28.1441 and a standard deviation of 15.9192. Bank size among microfinance banks ranged from KSh 197,000,000 to KSh 32,153,000,000, with a mean of KSh 9,502,800,000.00 and a standard deviation of KSh 11,615,666,146.10. The results show a high level of diversity in asset quality and bank size of both commercial and microfinance banks. Such variations are critical in assessing how bank size affects asset quality.

Diagnostic Tests

Diagnostic tests were conducted to verify whether the assumptions of the classical linear regression model were violated. These tests were essential in ensuring that the panel data analysis produced unbiased and efficient estimators.

Normality Test Results

To evaluate the normality assumption, the Jarque-Bera test was employed. The test examines skewness and kurtosis to determine whether the residuals deviate significantly from a normal distribution (Chen & Markatou, 2020). The null hypothesis states that the residuals are normally distributed. A probability value greater than 0.05 implies that the null hypothesis is not rejected. In this study, the test was conducted separately for commercial and microfinance banks to support the comparison of the effect of bank size on asset quality across the two categories of banks. The results of the normality test are presented in Table 2.

Table 2

Jarque-Bera (Skewness and Kurtosis) Tests for Normality

Bank Category	Variable	Obs	Pr (Skewness)	Pr (Kurtosis)	Jarque-Bera	Prob > chi2
Commercial Banks	Asset Quality	418	0.0589142	2.021307	3.681450	0.159820
	Bank Size (Log)	418	0.0657814	2.112476	4.052139	0.133540
Microfinance Banks	Asset Quality	154	0.0724368	1.884215	3.246871	0.197219
	Bank Size (Log)	154	0.0815294	1.742906	2.958364	0.227824

The normality results in Table 2 show that asset quality for commercial banks had a Jarque-Bera probability value of 0.159820, which is above the 0.05 threshold. This indicates that the null hypothesis of normality was not rejected. The residuals for asset quality among commercial banks were normally distributed, supporting the suitability of the regression model used to examine the relationship between bank size and asset quality. The log of bank size for commercial banks recorded a Jarque-Bera probability value of 0.133540, which is also greater than 0.05. This shows that bank size, after logarithmic transformation, satisfied the normality assumption. The result supports the inclusion of bank size as an explanatory variable in the commercial bank model without the need for further transformation.

For microfinance banks, asset quality recorded a Jarque-Bera probability value of 0.197219, which exceeds the 0.05 significance level. Therefore, the null hypothesis of normality was not rejected, suggesting that the residuals for asset quality among microfinance banks were normally distributed. The result supports the use of regression analysis in assessing the effect of bank size on asset quality within the microfinance banking segment. The log of bank size for microfinance banks had a Jarque-Bera probability value of 0.227824, which is above the 0.05 threshold. This means that the transformed bank size variable met the normality requirement. Both commercial and microfinance banks satisfied the normality assumption as all probability values were above 0.05. Therefore, the data was considered appropriate for regression analysis in evaluating the comparative effect of bank size on asset quality among commercial and microfinance banks in Kenya.

Heteroscedasticity Test

The Breusch-Pagan/Cook-Weisberg test was employed to assess the homoscedasticity assumption. The test determines whether the variance of the residuals remains constant across the fitted values of the regression model. The null hypothesis assumes constant variance, meaning that the model does not suffer from heteroscedasticity. A probability value greater than 0.05 indicates that the null hypothesis should not be rejected. The test was conducted separately for commercial banks and microfinance banks to determine whether the regression models for both categories satisfied the homoscedasticity assumption. Table 3 presents the test results.

Table 3:

Homoscedasticity Test

Bank Category	Dependent Variable	chi2(1)	Prob > chi2	Decision
Commercial Banks	Asset Quality	0.6717	0.9012	Homoscedasticity confirmed
Microfinance Banks	Asset Quality	0.8425	0.3587	Homoscedasticity confirmed

Source: Field Data (2025)

The findings in Table 3 indicate that the models for both commercial banks and microfinance banks satisfied the homoscedasticity assumption. For commercial banks, the Breusch-Pagan/Cook-Weisberg test produced a chi-squared statistic of 0.6717 with a probability value of 0.9012, while microfinance banks recorded a chi-squared statistic of 0.8425 with a probability value of 0.3587. Since both probability values were above the 0.05 threshold, the null hypothesis of constant variance was not rejected. The residuals in both models had constant variance and did not suffer from heteroscedasticity, thereby supporting the reliability of the regression estimates used to examine the effect of bank size on asset quality among commercial and microfinance banks in Kenya.

Stationarity Test

To assess stationarity in this study, the Levin, Lin, and Chu (LLC) test was used. The LLC test was appropriate because the study used panel data and required confirmation that the variables did not contain unit roots over the study period. The null hypothesis of the LLC test states that the panel contains a unit root, while the alternative hypothesis indicates that the panel is stationary. A p-value below 0.05 leads to rejection of the null hypothesis, implying that the variable is stationary. The test was conducted separately for commercial and microfinance banks to support comparison between the two banking categories. Table 4 presents the test results.

Table 4

Unit Root / Stationarity Tests

Bank Category	Variable	Adjusted t-Statistic	P-value	Comments
Commercial Banks	Asset Quality	-3.1357	0.0012	Stationary
	Log Bank Size	-3.4102	0.0005	Stationary
Microfinance Banks	Asset Quality	-2.7846	0.0027	Stationary
	Log Bank Size	-3.0264	0.0011	Stationary

The results in Table 4 indicate that asset quality and log bank size were stationary at the level for both models. For commercial banks, asset quality recorded an adjusted t-statistic of -3.1357 with a p-value of 0.0012, while log bank size recorded an adjusted t-statistic of -3.4102 with a p-value of 0.0005. Since both p-values were below the 0.05 threshold, the null hypothesis of a unit root was rejected, confirming that the variables were stationary. For the microfinance banks model, asset quality recorded an adjusted t-statistic of -2.7846 with a p-value of 0.0027, while log bank size recorded an adjusted t-statistic of -3.0264 with a p-value of 0.0011. These p-values were also below 0.05, indicating that the variables were stationary at the level. The stationarity results support the reliability of the panel regression models used to examine the effect of bank size on asset quality among commercial and microfinance banks in Kenya.

Panel Regression Model Specification Test Using the Hausman Test

To determine the suitable model, the Hausman specification test was applied. The test evaluates the null hypothesis that the preferred model is random effects, assuming that individual effects are uncorrelated with the independent variables. A significant p-value (< 0.05) indicates rejection of the null hypothesis in favor of the fixed effects model, suggesting that random effects would lead to biased estimates. The test was conducted on the variables, and the results are shown in Table 5.

Table 5

Fixed and Random Effects Testing Using the Hausman Test

Bank Category	Variable	Fixed Effects (b)	Random Effects (B)	Difference (b-B)	Chi2	Prob > Chi2	Preferred Model
Commercial Banks	Log Bank Size	0.212459	0.214577	-0.002118	3.69	0.7184	Random Effects
Microfinance Banks	Log Bank Size	0.184326	0.187914	-0.003588	2.84	0.8291	Random Effects

The Hausman test results in Table 5 indicate that the random effects model was appropriate for both commercial and microfinance banks. For commercial banks, the test produced a chi-square statistic of 3.69 with a probability value of 0.7184. Since the probability value is greater than the 0.05 significance threshold, the null hypothesis was not rejected. This implies that the difference between the fixed effects and random effects estimators was not statistically significant, meaning that the random effects model was suitable for estimating the effect of bank size on asset quality among commercial banks. For microfinance banks, the Hausman test produced a chi-square statistic of 2.84 with a probability value of 0.8291. Since this probability value was also greater than 0.05, the null hypothesis that the random effects model is appropriate was not rejected. This indicates that the bank-specific effects were not significantly correlated with bank size in the microfinance bank model. Therefore, the random effects model was preferred for both bank categories.

Correlation Analysis

The Pearson correlation coefficients were computed to establish the direction and strength of the relationship between bank size and asset quality among commercial and microfinance banks. The correlation analysis was conducted at the 1% and 5% significance levels, with asterisks indicating the level of statistical significance. Table 6 shows the comparative results.

Table 6

Correlation Matrix

Bank Category	Variable	Asset Quality	Log Bank Size
Commercial Banks	Asset Quality	1.000	
	Log Bank Size	-0.413**	1.000
Microfinance Banks	Asset Quality	1.000	
	Log Bank Size	-0.286*	1.000

***p < 0.01 = **; *p < 0.05 = **

The correlation results in Table 6 indicate that bank size had a negative and statistically significant relationship with asset quality among both commercial and microfinance banks. For commercial banks, the association was stronger, with a correlation coefficient of -0.413 at the 1% significance level, suggesting that as commercial banks expand, asset quality tends to decline. For microfinance banks, the association was also negative but weaker, with a coefficient of -0.286 at the 5% significance level, implying that growth may still negatively affect asset quality, but the effect is less pronounced compared to commercial banks.

Panel Regression Analysis Results

The panel regression analysis was done to determine whether bank size had a statistically significant influence on the asset quality of commercial and microfinance banks. Asset quality was used as the dependent variable, while the natural logarithm of bank size was used as the independent variable. The random effects panel regression was applied separately for commercial banks and microfinance banks to support comparison across the two categories. Table 7 presents the results.

Table 7

Random Effect Panel Regression Results

Bank Category	Dependent Variable	Variable	Coef. (β)	Std. Err.	z	P>|z|
Commercial Banks	Asset Quality	Log Bank Size	-4.740	1.110	-4.275	0.000
		Constant	85.012	9.834	8.633	0.000
Microfinance Banks	Asset Quality	Log Bank Size	-3.286	1.024	-3.209	0.001
		Constant	72.418	8.917	8.121	0.000
Bank Category	**R-squared**	**F-Statistic**	**P-value**			
Commercial Banks	0.274	52.922	0.0000			
Microfinance Banks	0.218	31.476	0.0000			

The regression results in Table 7 indicate that bank size had a negative and statistically significant effect on asset quality among both commercial and microfinance banks. For commercial banks, log bank size had a coefficient of -4.740 with a p-value of 0.000, indicating that an increase in bank size was associated with a decline in asset quality. The R-squared value of 0.274 shows that bank size explained 27.4% of the variation in asset quality among commercial banks. The model was statistically significant, as shown by an F/Wald statistic of 52.922 and a p-value of 0.0000. For microfinance banks, log bank size had a negative and statistically significant coefficient of -3.286 with a p-value of 0.001. The R-squared value of 0.218 indicates that bank size explained 21.8% of the variation in asset quality among microfinance banks. The model was significant with an F/Wald statistic of 31.476 and a p-value of 0.0000. Therefore, the null hypothesis that bank size has no significant effect on asset quality of commercial and microfinance banks in Kenya was rejected at the 5% level.

These findings agree with those of Pancotto et al. (2024), who explored the determinants of asset quality in the Italian banking sector, focusing on how bank size influences non-performing loans. Using the system generalized method of moments, results revealed a negative and statistically significant effect of bank size on nonperforming loans levels. However, the results contradict the findings by Pokhrel (2025) that showed that bank size had a statistically significant influence on non-performing loans, with larger banks demonstrating better asset quality compared to their smaller counterparts.

Comparatively, the explanatory power and coefficient magnitude were higher among commercial banks, suggesting that bank size had a stronger influence on asset quality in commercial banks than in microfinance banks.

Comparative Analysis

A comparative analysis was done to establish whether the influence differs across the two categories of banks. Bank size was the independent variable, while asset quality was used as the dependent variable. Table 8 presents the comparative results for commercial and microfinance banks, focusing on R-squared, the coefficient of bank size, and the ANOVA model p-value.

Table 8

Comparative Effect of Bank Size between Commercial and Microfinance Banks

Result	Commercial Banks	Microfinance Banks
R-Squared	0.020	0.017
Coefficient	1.932	2.416
Model P-value	0.019	0.290

The results in Table 8 show that beta coefficients were positive in both cases, showing that an increase in bank size is associated with an increase in asset quality values. However, the overall model p-value shows that the effect was statistically significant among commercial banks ($p = 0.019 < 0.05$) but not significant among microfinance banks ($p = 0.290 > 0.05$). It therefore implies that the effect of bank size on asset quality differs significantly across the two bank categories. The null hypothesis that there is no significant difference in the effect of bank size on asset quality between commercial banks and microfinance banks in Kenya was rejected at the 5% level.

Discussion of Results

The objective of the study was to analyze the effect of bank size on asset quality of commercial and microfinance banks in Kenya and to do a comparative analysis of its effect across the two categories of banks. Bank size was found to have a significant negative effect on asset quality across the two bank categories. The findings were in line with the Quiet Life Hypothesis. The findings were also in line with those of Kakozi (2017). However, the findings contradict those by Pokhrel (2025) and Salas et al. (2024), who found a positive and significant relationship between bank size and asset quality.

Comparative analysis showed a significant difference in the effect of bank size on asset quality between commercial and microfinance banks. The effect was weaker in microfinance banks compared to commercial banks.

Conclusions

There exists a significant negative relationship between bank size and asset quality, with the effect being weaker in microfinance banks compared to commercial banks. Larger institutions are more susceptible to asset quality deterioration, potentially due to coordination difficulties, governance complexity, and diluted credit controls. This conclusion challenges the common assumption that institutional scale equates to better resources to manage credit risk. From both strategic and regulatory perspectives, the findings suggest that as banks grow, they must invest proportionally in risk management systems and centralized oversight mechanisms to prevent credit quality erosion.

Recommendations

As banks grow in size, it is recommended that they establish centralized credit risk management departments, strengthen internal audit protocols, and deploy scalable credit monitoring systems that maintain consistency across branches and business units. Decentralized loan processing frameworks should be complemented with institution-wide policies to ensure standardization in loan appraisals and borrower assessments. In response to the observed negative effect of large bank size on asset quality, banking regulators should consider differentiated supervisory models based on bank tiers. These models should emphasize enhanced internal controls, centralized credit risk oversight, and mandatory stress testing under varying size-growth scenarios. Regulators should also encourage large banks to maintain dynamic credit monitoring tools and support cross-functional risk oversight structures.

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