Effect Of Asset Quality On Profitability Of Commercial Banks In Kenya

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Abstract

Empirical data from the Central Bank of Kenya shows that the commercial banking industry has experienced fluctuations in profitability for the period covering 2013 through 2023 despite banks keeping their non-performing loans to loans ratio within the acceptable level thus, the effect of loan performance on profitability remains an issue subject to further inquiry. In this regard, the rationale of this research was to establish the effect of asset quality on profitability of commercial banks in Kenya. Credit risk theory provided the theoretical anchorage of the study. A Census Design was adopted, which involved 39 banks licensed and regulated by Central Bank of Kenya for the period covering 2013 through 2023. Based on the results of the fixed effects panel regression analysis, the study established that asset quality exhibited a negative and highly significant relationship with profitability (β =-0.11, p=.01, p<.01). Consequently, this study recommends that commercial banks intensify credit risk management practices, particularly through better screening, monitoring, and recovery processes. These practices should involve implementation of stricter loan origination standards as well as leveraging of modern data analytics in the prediction and containing of high non-performing loans.

Keywords: Asset Quality, Profitability, Non-performing Loans, Total loans

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I. Introduction And Background Of The Study

Commercial banks are considered as the principal engines of the economy as they play an essential function as mediators between surpluses and deficits (Alhaddad & Kurşunel, 2021). As financial intermediaries, they are middlemen between lender-savers and the borrower-spenders helping to transfer funds from one sector of the economy to the other as well as improving investments and the entire business climate (Bata et al., 2022). The banking industry is a critical pillar for the stability and development of an economy's financial system, through efficient allocation of the national savings to drive various investments and growth rates (Suppia & Che Arshad, 2019). Globally, the profitability of banks has been on a downward trend as witnessed in the overall declining trends in profitability (Shrestha, 2023). Statistics indicate that commercial banks' net incomes and assets showed an upward trend for the year 2017 all through 2019 before declining in 2020 (Duong et al., 2020). Profitability in the commercial banking sector has remained on a relatively downward trend since 2008 financial crisis where smaller banks make losses or record lower profits as compared to larger ones (Le & Ngo, 2020). The raising interest rates, demand for loans, and increasing non-interest income has overseen the recovery of the United States banking industry since the great recession (Lessambo, 2020).

Existing research evidence addressing banks' internal determinants have employed variables that that fall under the CAMELS model (Suppia & Che Arshad, 2019; Mwangi & Njoka, 2020) such as capital adequacy, liquidity, and asset quality. High asset quality, characterized by low levels of non-performing loans, points to effective management of credit risk, which can translate into higher profitability as the bank experiences fewer losses from bad loans (Amirul et al., 2022). Anggreni and Rahyuda (2021) note that banks with greater capital adequacy are often better positioned to absorb losses from poor asset quality, which can mitigate the negative impact on profitability. Poor asset quality can further be managed with high liquidity, which can cover short-term obligations without needing to sell assets at a loss.

Asset quality, as a bank-specific characteristic, offers important insights into the risk level and condition of the resources possessed by banks, more especially investments and loans (Martiningtiyas & Nitinegeri, 2020). Assets are said to be of high quality if many of them are more likely to be repaid without significant losses (Al Zyood, 2022). Accordingly, asset quality is a crucial aspect that determines condition of banks when taking into consideration the available guidelines for administering loans to customers and the banks' loan portfolios. The assets of the bank constitute mostly of loans, suggesting that the risk of capital invested is more associated with loan portfolio, thus non-performing assets within this portfolio negatively influence profitability of commercial banks (Kakozi, 2017). Banks with quality assets helps them to remain competitive and profitable as these assets

yield the required returns necessary for their survival. On the other hand, poor asset quality, such as larger portion of non-performing loans, is correlated with greater risk, requires banks to have higher capital to cover losses, and do not generate income, leading to reduced profitability (Psaila et al., 2019). This study measured asset quality using total non-performing loans to total loans ratio as the metric for asset quality as previously used by Mercan et al. (2022).

Ia Statement of the Problem

Favourable profitability in the banking system promotes financial stability of commercial banks through strong profit margins that make it possible for them to absorb losses as well as lend to individuals and businesses (Shafai et al., 2022). Evidence from the consolidated annual bank supervision reports from CBK covering the period 2010-2014 indicate that Kenya's banking sector showed stable performance, with profit before tax (PBT) increasing at an average annual rate of 18% up to 2014 (CBK, 2014). However, the sector experienced a slump in growth in 2015 as profitability declined by 5% (CBK, 2015). In 2016, the year-on-year growth in PBT was 10%, followed by a 10% decline in 2017 (CBK, 2017). The sector recorded a 14% year on year growth in profit before tax in 2018 (CBK, 2018). However, this improvement was lower than the average profit growth before tax observed at the start of the decade. Kenyan's banking industry has been experiencing profitability decline for the period 2019 to 2022, with the sector's aggregate profitability declining significantly at the start of the COVID-19 pandemic in 2020 due to higher loan loss provisions and reduced economic activity (CBK, 2021). Decline in profitability means that commercial banks have less retained earnings to strengthen capital reserves necessary for absorption of losses in times of financial stress.

Conceptually, research evidence demonstrates that studies have focused on fundamental risk factors and profitability (Malgit, 2020), bank financial ratios characteristics and profitability (Murtiningsih & Tohirin, 2021), technological innovations and financial performance (Nyanyuki et al., 2022), banking sectoral factors and profitability (Olweny & Kenyatta, 2011), financial risk and financial performance (Siare, 2022), pricing strategies and profitability (Chepkemoi, 2020), and cost of capital and financial performance (Onkware et al., 2023). These studies, though relevant and scholarly grounded, failed to consider asset quality and its relationship with profitability of commercial banks, a conceptual gap that the present research work aimed to bridge.

Even though empirical evidence shows that studies have been carried out within the context of profitability, they have exhibited methodological gaps wherein some studies utilized selected measures of the variables (Kusmayadi, 2018; Murtiningsih & Tohirin, 2021) while others applied research approaches and analysis procedures, which affect their external validity (Amararathne & Wanigasuriya, 2022; Amirul et al., 2022; Hariatih & Aziz, 2022). Whilst these studies (Maina, 2022; Murtiningsih & Tohirin, 2021; Nyabanga & Wepukhulu, 2020; Yua, 2022) had profitability as the response variable, their explanatory variable differed with that of this study. The methodological gaps identified in this research work were filled by examining asset quality as an independent variable and profitability as the response variable. Hence, in view of the gaps documented as aforementioned, the study's broad purpose was to evaluate the effect of asset quality on profitability of commercial banks in Kenya.

Ib. Objective of the Study

The objective of this study was to determine the effect of asset quality on profitability of commercial banks in Kenya.

Ic. Research Hypothesis

H₀: Asset quality has no significant effect on the profitability of commercial banks in Kenya.

II. Literature Review

IIa. Theoretical Review

The credit risk theory provided the theoretical anchorage for this study. Propounded by Robert Merton in 1974, the theoretical framework stemmed from the structural model of credit risk, which focused on the relationship between asset values, borrower default, and liabilities (Jumbe & Gor, 2022). The credit risk theory provides a basis for understanding how the level of non-performing loans, as a proxy for asset quality, influences the profitability of banks. According to the framework, banks accrue financial returns by assuming credit risk, yet exposure negatively affects stability and profitability. The theory considers default as an event that occurs when the value of assets from borrowers are less than the outstanding obligations, thus banks' asset quality have a direct linkage with borrower performance (Naili & Lahrichi, 2022).

Deteriorating loan portfolios, occasioned by high non-performing loans, are symptomatic of increased credit risk and lead to provisioning that affects profitability. The framework stresses on the role of capital adequacy as a buffer against unforeseen losses in credit. High asset quality, characterized by low levels of non-performing loans, points to effective management of credit risk, which can translate into higher profitability as

banks experience fewer losses from bad loans (Amirul et al., 2022). Banks with greater capital adequacy are often better positioned to absorb losses from poor asset quality, which can mitigate the negative impact on profitability(Anggreni & Rahyuda, 2021). The theory shows that poor asset quality culminates in reduced returns, high provisioning costs, and lower interest income, suggesting that effective credit risk management plays a pivotal role in safeguarding profitability in the commercial banking sector.

IIb. Empirical Review

Al Zyood (2022) examined the non-performing loans in the Saudi banking industry from 2009 to 2017 to identify factors contributing to them and effect on the profitability of banks. Bank profitability was measured using both ROE and ROA while non-performing loans adopted non-performing loans ratio (NPLR) as its proxy measure. Data used in the analysis was data extracted from annual reports of the banking institutions in questions where correlation, regression, and analysis of variance (ANOVA) were carried out. The empirical findings indicate that non-performing loans had a negative impact on profitability.

Psaila et al. (2019) investigated how non-performing loans (NPLs) affected ROA of 35 publicly listed commercial banks. The research was carried out in the Euro-Mediterranean area. The study sought to find out how changes in the amount of loans that were not being paid back NPLs affected ROA of publicly traded commercial banks. The study employed a purposive research strategy, using panel data from 2013 to 2017. The data was sourced from the annual reports of the 35 commercial banks listed in the Euro-Mediterranean region. The study employed descriptive statistics and four regression models, specifically the Pooled OLS regression model, random effects, the Arellano-Bond (AB) and the fixed effects. The study's findings revealed a negative effect of non-performing loans on return on assets, demonstrating that bad loans have a negative influence on the profitability of commercial banks listed in the Euro-Mediterranean region.

Gitonga et al. (2024) examined the influence of asset quality on the financial performance of insurance companies in Kenya. The study utilized a descriptive research design and analysed secondary data from insurance firms for a period of 15 years. Financial performance was measured using ROE, while asset quality was assessed through non-performing assets and investment portfolio quality. Panel regression analysis was utilized in the determination of the interplay between asset quality and financial performance. Based on the findings, poor asset quality, characterized by high levels of non-performing assets, had a significant negative impact on financial performance. The study was based on insurance firms; thus, it was not possible to generalize the results to the commercial banking sector, an industry of focus in the present study.

Roselyne et al. (2022) investigated the influence of asset quality on the financial performance of Tier IV commercial banks in Kenya. The study adopted a longitudinal research design, which targeted all 13 Tier IV commercial banks operating in Kenya as of 2022. The correlation results indicated a statistically significant negative relationship between asset quality and financial performance. Regression results further confirmed similar finding where a negative regression coefficient suggested that poor asset quality adversely affected return on equity of commercial banks in Kenya.

III. Research Methodology

The study utilized a causal research design since it explicitly investigated cause-and-effect relationship between asset quality and profitability of commercial banks in Kenya. A census was carried out on all the 39 commercial banks operational and licensed by the Central Bank of Kenya for the period covering 2013 through 31st December 2023 (CBK, 2023). The research used panel regression to analyse the dynamic relationship between explanatory and response variables. Panel regression is a type of inferential statical method used to analyse data by combining time-series and cross-sectional dimensions (Hsiao, 2022). This study utilized a model derived from ROA, which constitutes the metric for measuring profitability in the commercial banking sector. The panel regression direct effect model was as follows:

 $P_{it} = \bar{p}_0 + \beta_1 A \bar{Q}_{it} + \epsilon_{it}$ Where; P = Profitability $B_0 = \text{constant term}$ $\beta_1 = \text{coefficient of independent variable}$ AQ = Asset Quality i = observations t = 2013-2023 $\epsilon = \text{Error term}$

IV. Research Findings And Discussion

The purpose of this research was to examine the effect of asset quality on profitability of commercial banks in Kenya. Given that the study relied on data from 39 banking institutions covering the period 2013 through 2023, it adopted panel regression estimation method.

Iva. Panel Regression Analysis

Data for non-performing loans to total loans, a proxy measure for asset quality, and profitability, measured using return on assets, were fitted into the panel regression model. Table 4.1 captures the fixed effects panel regression results with asset quality as predictor.

 Table 4.1

 Fixed-Effects Panel Regression with Asset Quality as Predictor

ROA	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	
Asset Quality	114	.016	-7.30	.000	145	084	
Constant	.028	.003	10.29	.000	.023	.033	
Mean dependent var		0.011	SD	dependent va	r	0.047	
R-squared		0.2894	Number of obs			400	
F-test		53.257	Prob > F			0.000	
Akaike crit. (AIC)		-1735.475	Bayesian crit. (BIC)		C)	-1727.492	
		Source: 1	Research Data	a (2025)			

The outcome of this study indicated in Table 4.1 was summarized using a panel regression model derived from return on assets, which encompassed the measurement for profitability in the commercial banking sector. The panel regression model equation below shows the effect of asset quality on profitability:

 P_{it} =.028-.114 AQ_{it} + ϵ_{it}

Where;

P = Profitability

B₀= constant term

 β_1 = coefficient of independent variable

AQ =Asset Quality

i = observations

t = 2013-2023

 $\varepsilon = \text{Error term}$

The result of this inquiry shown in Table 4.1 indicated that the overall r-square of the fixed effects panel regression was 0.2894, signifying that approximately 28.94% of the differences in bank profitability was accounted by variations in asset quality. The result appears to imply that greater portion of ROA was influenced by other factors (71.06%) not captured in the study. Asset quality, as a predictor, exhibited a negative and highly significant relationship with profitability as represented by the regression coefficient of -0.114 and a p-value of .000. The linkage between non-performing loans to loans and profitability depicted a highly inverse relationship (p<.01). Accordingly, controlling for all other factors, a one-unit increase in the ratio of non-performing loans to total loans was associated with a 0.114 decrease in profitability.

IVb. Hypothesis Testing and Discussion

H₀: Asset quality has no significant effect on the profitability of commercial banks in Kenya.

The study assessed the effect of asset quality on profitability of commercial banks in Kenya. The ratio of total non-performing loans to total loans was utilized as the measurement for the commercial banking sector's asset quality. Based on the outcome of the panel regression model, asset quality revealed a negative and statistically significant relationship with profitability of commercial banks. The p-value of the t-statistic (-7.30) for the estimated regression coefficient of asset quality was less than .05 (p=.000, p<.05), meaning that the null hypothesis of this research was rejected. On this basis, it was concluded that asset quality has a significant effect, albeit negative, on the profitability of commercial banks in Kenya.

These results herein are in tandem with the existing body of literature on the nexus between asset quality and profitability of commercial banks. In a study of 35 listed Euro-Mediterranean commercial banks, the findings in study undertaken by Psaila et al. (2019) revealed that increased non-performing loan ratio was significantly associated with declines in return on assets under the fixed effects and Arellano-Bond models. Similarly, Kingu and Macha (2018) determined that increased non-performing loans had a statistically significant adverse effect on ROA across multiple model specifications among Tanzanian commercial banks. A scholarly inquiry into Bangladeshi Commercial Banks by Karim et al. (2022) revealed a significant negative association between NPL

ratio and ROA, while an analysis into 35 Cambodian banks between 2017 and 2022, Ma'aji et al. (2023) demonstrated that the NPL ratio was a strong negative determinant of profitability. On the contrary, Lucky and Nwosi (2015) established a positive relationship between the NPL-to-loans ratio and return on investment among 15 Nigerian commercial banks for the period covering the year 1980 through 2013.

Conclusion And Policy Recommendations V.

According to the hypothesis testing results, this research concluded that asset quality had a negative and statistically significant relationship with profitability of commercial banks in Kenya. On this basis, commercial banks should intensify credit risk management practices, particularly through better screening, monitoring, and recovery processes. These practices should involve implementation of stricter loan origination standards as well as leveraging of modern data analytics in the prediction and containing of high non-performing loans.

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