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Abstract

The core function of commercial banks is financial intermediation, primarily aimed at generating profits by channeling funds from savers to borrowers. However, the contemporary credit market is characterized by heightened competition, which has compelled banks to explore alternative sources of income beyond traditional lending. In response, many banks have embraced asset diversification strategies, not only to enhance profitability, but also to mitigate risks, leverage market power, and strengthen their overall financial stability. This study examined the effect asset diversification on the financial stability of commercial banks in Kenya, and whether financial performance influences the relationship. An Ex post facto correlational research design was employed, covering 38 commercial banks licensed during the period 2014-2023 with no sampling. Secondary data were collected using a document analysis guide and for measurement of variables, ratio scale was used. Asset diversification was measured using the Herfindahl-Hirschman Index (HHI), while financial stability was assessed through a bank's distance to default, captured by the Z-score. Financial performance was measured using Return on Assets (ROA), and hypotheses were tested using regression analysis and the F-test. Results showed that asset diversification positively and significantly affects financial stability ($\beta = 0.837$, $p = 0.0008$). ROA also significantly predicts financial stability ($\beta = 0.047$, $p < 0.01$), and the continued significance of asset diversification ($\beta = 0.032$, $p < 0.05$) indicates a partial mediating effect. The study concludes that asset diversification, when reinforced by strong financial performance, enhances the financial stability of commercial banks. Strengthening regulatory frameworks with profitability-sensitive metrics and aligning asset allocation strategies to balance risk control and income generation can further support the long-term soundness of commercial banks.

Key Words: Asset Diversification, Financial stability, Financial performance, Commercial banks

1. Introduction

Banks across the globe play a critical role in financial intermediation by facilitating transactions and allocating capital across sectors. Effective execution of this function requires them to be financial stable. A bank's financial stability is characterized by the avoidance of failure, efficient resource allocation, prudent risk management, and maintenance of adequate capital (Anarfo *et al.,* 2022; World Bank, 2020), all of which are fundamental to sustaining intermediation. Today, heightened competition in credit markets has eroded traditional interest-based income, compelling banks to reconsider their income generation models (Zouaoui & Zoghlami, 2020).In response, they have adopted diversification strategies by spreading their investable capital across a range of asset classes (Obaro *et al.,* 2022) and increasingly venturing into non-traditional banking activities such as investment banking, securities trading, real estate, insurance, and securitization (Gelman *et al.,* 2023). Asset diversification involves the strategic allocation of earning assets across both lending and non-lending activities (Mulwa, 2020), enabling banks to manage income volatility and mitigate risks associated with overreliance on a single revenue stream (Koumou, 2020).

This global trend is also evident among commercial banks in Kenya, where rising competition and evolving customer needs have driven the adoption of diversified business models. The banks have broadened their service offerings to include mobile banking, agency banking, banc-assurance, faceless banking, and the integration of microfinance services (Ndungu & Muturi, 2019; s*et al.,* 2020). There are consequences of asset diversification for banks, including reduced idiosyncratic risk (Banwo *et al.,* 2019) and more stable earnings, both of which help sustain their intermediary role and consistent lending, ultimately producing positive ripple effects on the broader economy (Gelman *et al.,* 2023).

1.1 Statement of the Problem

Despite the growing shift by commercial banks toward asset diversification as a strategy to enhance their income, its actual impact on financial stability remains uncertain. In Kenya, while some banks have benefited from asset diversification (Ochenge, 2022; Mutinda & Aluoch, 2025), others have experienced episodes of financial distress, indicating that it may introduce new risks that undermine rather than support their financial stability. This concern is echoed by the Central Bank of Kenya (2020) in its Financial Sector Stability Report (FSSR), which, while affirming the overall resilience of the banking sector, highlights that certain banks have experienced liquidity constraints and challenges in meeting customer obligations. Moreover, empirical literature on the relationship between asset diversification and financial stability remains inconclusive. Some studies associate diversification with income smoothing and risk reduction, while others contend that it may increase operational complexity and market volatility, thereby compromising financial stability. Much of this evidence is also drawn from contexts outside Kenya, leaving a gap in understanding how asset diversification affects bank financial stability within the Kenyan banking context. This study addressed the research gap by examining the effect of asset diversification on financial stability, introducing financial performance as a mediating variable, unlike previous studies where it has predominantly been treated as an independent variable (Mutinda &

Aluoch, 2025; Wu, 2024; Adem, 2023; Ochenge, 2022). Anchored in Market Power Theory (MPT), this approach offered a context-specific and theoretically grounded perspective to inform strategic decision-making by both policymakers and bank managers regarding asset diversification strategies.

1.2 Objective of the study

This study sought to examine the mediating effect of financial performance on the relationship between asset diversification and financial stability of commercial banks in Kenya.

1.3 Hypothesis of the study

H_{01}: Financial performance has no significant mediating effect on the relationship between asset diversification and financial stability of commercial banks in Kenya.

2. Literature Review

2.1 Theoretical Literature Review

2.1.1 Market Power Theory

The study was grounded in Market Power Theory (MPT), originally formulated by Bain (1954) through the Structure–Conduct–Performance (SCP) paradigm. MPT suggests that the degree of market concentration influences firm conduct, such as pricing and strategic decisions, which in turn affects performance outcomes. In the banking sector, institutions with strong market power earn higher profits by leveraging pricing control, product differentiation, and cost efficiencies (Shepherd, 1988). These banks benefit from economies of scale, risk compensation, and stable revenue flows. Conversely, banks with limited market power, often operating in competitive environments, pursue diversification strategies to remain viable and grow (Ammar & Boughrara, 2019). From an MPT perspective, diversification in assets serves as a substitute for pricing power, enabling banks to enhance financial performance and manage risk. Asset diversification in particular supports cost efficiency and cushions institutions against shocks (Rakshit & Bardhan, 2020). Tariq *et al.,* (2019) emphasize that banks with moderate market power gain most from diversification, which balances profitability and stability. Overall, MPT offers a strong theoretical lens for analyzing how banks leverage market structure and asset diversification to improve financial performance and achieve long-term financial stability.

2.2 Empirical Literature Review

Empirical literature generally supports the view that asset diversification enhances bank performance and financial stability, though effects may vary. Studies such as Wu (2024) and Rakshit and Bardhan (2020) highlight its role in boosting profitability, reducing inefficiencies, and reinforcing resilience, despite potential trade-offs like compressed Net Interest Margins (NIMs). Regional evidence, including Kwabi *et al.,* (2025) and Asmare and Worku (2018), points to its contribution to financial development and institutional stability through

diversified portfolios. In Kenya, Mengich *et al.,* (2018) and Mutinda and Aluoch (2025) affirm a positive link between diversification and Return on Assets (ROA) particularly for larger banks, reflecting the influence of scale in optimizing asset diversification benefits within the country's tiered banking framework.

In contrast, a number of studies caution that asset diversification can yield adverse outcomes if not strategically managed. Menike (2024) and Rehman and Abbas (2025) associate it with reduced profitability stemming, from managerial overstretch and operational inefficiencies. Related risk-focused research (Yusnita, 2024; Irawan *et al.,* 2025; Edirisuriya, 2019) highlights how inadequate diversification may elevate credit risk and institutional fragility. Abdelsalam *et al.,* (2022) further argue that sophisticated instruments like securitization can amplify insolvency risk. Mixed findings from Huynh (2025), Ngozi *et al.,* (2023), and Okwaro *et al.,* (2024) suggest that the effects of asset diversification vary by asset type, strategic alignment, and institutional context.

The divergent findings across empirical studies suggest that the effects of asset diversification are context-dependent, shaped by factors such as asset quality, managerial capacity, operational scale, and regulatory environment (Okwaro *et al.,* 2024). Although asset diversification may stabilize income and enhance financial performance, it can also introduce risks if poorly executed. Most existing studies treat financial performance as a dependent variable, an outcome of diversification (Menike, 2024; Wu, 2024; Mengich *et al.*, 2018). This study departs from that convention by conceptualizing financial performance as a mediating factor between diversification and financial stability, addressing a notable gap in Kenyan banking literature. Regional evidence from Adem (2023) supports this approach, showing that financial performance can amplify or constrain the financial stability benefits of asset diversification. Accordingly, this study investigates whether, and to what extent, financial performance mediates the relationship between asset diversification and financial stability within Kenya's commercial banks.

3. Methodology

An ex post facto correlational research design was employed, covering all 38 commercial banks registered by the Central Bank of Kenya (CBK) between 2014 and 2023. A census approach was adopted; hence, no sampling was undertaken. Secondary data were obtained from CBK databases and official publications. A document analysis guide was used to extract data on the independent variable, specifically Lending Assets (LA) and Non-Lending Assets (NLA). It also facilitated the collection of data on bank profit and total assets, which were used to compute Return on Assets (ROA) as a measure of financial performance and to derive the financial stability indicator. All variables were measured on a ratio scale, and the dataset was cleaned, reviewed, and edited prior to analysis. Asset diversification, the dependent variable, was operationalized based on the composition of lending and non-lending assets, and quantified using the Herfindahl-Hirschman Index *(HHI),* consistent with the approach adopted by Mulwa (2020). The formula is presented below:

$$HHI_{ass} = 1 - \left[\left(\frac{LA}{TA} \right)^2 + \left(\frac{NLA}{TA} \right)^2 \right]$$

Where;

HHI_{ass} - Herfindhahl-Hirschman Index for asset diversification.

LA - Lending Assets

NLA - Non-Lending Assets

TA - Total Assets

The dependent variable, financial stability, was assessed using the Z-score, which measures a bank's distance to default. This metric combines accounting indicators of profitability, leverage, and volatility to estimate the likelihood of insolvency by comparing the value of a bank's assets relative to its liabilities (Moreno *et al.,* 2022). The z-score was measured as:

$$Z = \frac{ROA + \frac{E}{A}}{\sigma ROA}$$

Where;

ROA - Return on Assets

$\frac{E}{A}$ - Ratio of Equity to Assets

σROA - Standard Deviation of the Rate of Return on Assets

Financial performance, the mediating variable was measured using ROA, which determines the ability of a bank to generate profits (Derbali, 2021). This ratio is given as:

Where;

$EBIT$ - Earnings before Interest and Tax

The mediation effect of financial performance was tested using Baron and Kenny's (1986) four-step regression model, which aligned with the study's theory-driven approach and panel structure. This method accommodated both time-series and cross-sectional variation, with F-tests and t-tests used to assess significance (Hair *et al.,* 2014). Unlike bootstrapping or PROCESS Macro, which are better suited to cross-sectional data, Baron and Kenny's approach provided methodological compatibility and interpretability for the longitudinal dataset (Dastgeer & Rehman, 2020). At each stage, regression analysis was conducted to test the significance of the coefficients, with steps 1 to 3 establishing the presence of zero-order correlations among the variables. In Step 1, asset diversification was regressed on financial stability using a functional model (Equation 1.1) and an extended version that accounted for the 10-year panel structure (Equation 1.2). Step 2 involved regressing asset diversification on financial performance (Equation 1.3). Step 3 tested the effect of financial performance on financial stability (Equation 1.4). In Step 4, both asset diversification and financial performance were entered into a multivariate regression to estimate their simultaneous effects on financial stability (Equation 1.5). These sequential models supported the analysis of direct and indirect effects across time and banks. The equations are as follows:

$$Y_{i,t} = f\left(X_{i,t}, \beta_{i,t}\right) + \varepsilon_{i,t} \dots\dots\dots\dots\dots\dots\dots\dots(1.1) \quad \text{(General functional form)}$$

Step 1: Regression analysis of asset diversification predicting financial stability given as:

$$STAB_{i,t=}\beta_0 + \alpha_{i,t} + \beta_1 div_{ass\ i,t} + \varepsilon_{i,t} \dots\dots\dots\dots\dots (1.2)$$

Step 2: Regression analysis of asset diversification predicting financial performance given as:

$$FP_{i,t=}\beta_0 + \beta_2 div_{ass\ i,t} + \varepsilon_{i,t}\dots\dots\dots\dots\dots\dots (1.3)$$

Step 3: A simple regression analysis of financial performance predicting financial stability given as:

$$STAB_{i,t} = \beta_0 + \beta_3 FP_{i,t} + \varepsilon_{i,t} \dots\dots\dots\dots\dots\dots (1.4)$$

Step 4: A multivariate regression analysis of asset diversification and financial performance predicting financial stability given as:

$$STAB_{i,t} = \beta_0 + \beta_4 div_{ass\ i,t} + \beta_5 FP_{i,t} + \varepsilon_{i,t} \dots\dots\dots\dots\ (1.5)$$

Where:

f - General functional relationship

$Y_{i,t}$ - A matrix with a series of multivariate observations, which is a set of measurements of the dependent variable for bank i at time t

$X_{i,t,}$ - A matrix of observations on independent variables each column for bank i at time t, being a set of one of the independent variables

β_0 - Constant

$\alpha_{i,t}$ - The other variables that affect commercial bank's i financial stability but have been held constant at time t

$STAB_{i,t}$ - Financial stability for bank i at time t

$FP_{i,t}$ - Financial performance for bank i at time t

$\beta_{1-5\ ass\ i,t}$ - Regression coefficients of asset diversification for bank i at time t

$\varepsilon_{i,t}$ - The error term for bank i at time t

Prior to estimating the regression models linking the independent variable, mediator, and dependent variable, diagnostic tests were conducted to ensure compliance with linear regression assumptions. The Jarque-Bera test confirmed normality of residuals across all models ($p > 0.05$; Korkmaz & Demir, 2023). The Durbin-Watson statistic indicated independent errors in Models 1.3 and 1.4, while mild autocorrelation in Models 1.1 and 1.2 was corrected by incorporating a lagged dependent variable, as advised by Keele and Kelly (2006). Linearity in parameters was supported by residual behavior, and stationarity of variables was validated through the Levin, Lin, and Chu test ($p < 0.05$), affirming the suitability of the panel data for estimating direct and indirect effects.

4. Results and Discussions

4.1 Results and Descriptive statistics of the study variables

Table 1: Descriptive statistics on asset diversification, financial performance and financial stability

Variable	Min.	Max.	Mean	Std. Dev.
Financial Stability	-5.5488	76.5616	19.2923	15.9379
Financial Performance (ROA)	-30.2464	9.3047	1.2516	4.3664
Asset Diversification	.0230	.5000	.4408	.0611
Valid N (listwise) =350				

Source: Research Data (2025)

Descriptive statistics show that commercial banks maintained moderate asset diversification (mean = 0.44, SD = 0.06) with limited variation. In contrast, financial stability (mean = 19.29, SD = 15.94) and financial performance (mean = 1.25, min = -30.25) exhibited considerable

dispersion, indicating varied outcomes across banks. The presence of extreme negative values in financial performance (ROA = -30.25) and financial stability (Z-score = -5.55) reflects episodes of severe financial distress, potentially stemming from operational losses or credit risk exposure. Outliers were retained deliberately to preserve the authenticity of the panel data, allowing the analysis to capture the full spectrum of diversification outcomes, including periods of heightened vulnerability.

The Hausman test was used to determine whether fixed or random effects regression models were appropriate before testing the hypothesis. The test evaluates the null hypothesis that the slope coefficients of the fixed and random effects models do not differ significantly. If the Prob. > χ^2 value is less than the critical significance level of 0.05, the null hypothesis is rejected, indicating that the fixed effects model is more suitable (Baum *et al.,* 2021). In this study, the Prob. > χ^2 values were below 0.05 in all models, leading to the adoption of the fixed effects regression.

4.2 Hypothesis Testing

Below are the results of Baron and Kenny's (1986) four step model for testing mediation;

Table 2: Model 1: Regression Model Coefficients for asset diversification predicting financial stability

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Dependent Variable: Financial Stability				
Method: Panel Least Squares				
Sample (adjusted): 2015 2023; Periods included: 9				
Cross-sections included: 35; Total panel (balanced) observations: 315				
Constant	2.6634	0.1090	24.4362	0.0000
Asset Diversification	0.8369	0.2459	3.4032	0.0008
Financial Stability (-1)	0.3070	0.5974	5.1387	0.0000
Effects Specification: Cross-section fixed (dummy variables)				
R-squared	0.9086	Mean dependent variable		3.0322
Adjusted R-squared	0.8984	S.D. dependent variable		0.6723
S.E. of regression	2.2143	Akaike info criterion		-0.1457
Sum squared residual	14.4206	Schwarz criterion		0.2511
Log Likelihood	61.4944	Hannan-Quinn criterion		0.0123
F-statistic	89.1517	Durbin-Watson statistic		1.5420
Prob.(F-statistic)	0.0000			

Source: Research data (2025)

The coefficient β = 0.8369 indicates that asset diversification has a positive effect on the financial stability of commercial banks in Kenya. This means that their overall financial stability improves as they increase the proportion of non-lending assets in their portfolios. Reduced reliance on a single asset class cushions the banks against income volatility and internal financial shocks, contributing to greater resilience. This underscores the importance of maintaining a balanced asset structure to enhance solvency and withstand financial distress, enhancing their financial stability.

Table 3: Model 2: Regression Model Coefficients for asset diversification predicting financial performance

Method: Panel Least Squares
Sample (adjusted): 2015 2023; Periods included: 9
Cross-sections included: 35; Total panel (balanced) observations: 315

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Constant	-4.4058	1.2971	-3.3967	0.0008
Asset Diversification	11.4017	2.9730	3.8352	0.0002
Fin Performance { ROA (-1)}	0.3939	0.0539	7.3142	0.0000

	Effects Specification			
Cross-section fixed (dummy variables)				

R-squared	0.7532	Mean dependent variable		1.1121
Adjusted R-squared	0.7213	S.D. dependent variable		4.4795
S.E. of regression	2.3650	Akaike info criterion		4.6693
Sum squared residual	1554.82	Schwarz criterion		5.1101
Log likelihood	-698.421	Hannan-Quinn criterion		4.8454
F-statistic	23.5710	Durbin-Watson stat		2.3808
Prob(F-statistic)	0.0000			

Table 4: Model 3: Regression Model Coefficients for financial performance predicting financial stability

Method: Panel Least Squares
Sample : 2014 2023; Periods included: 10
Cross-sections included: 35; Total panel (balanced) observations: 350

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Constant	2.9736	0.0105	282.9778	0.0000

Fin Performance (ROA)	0.0468	0.0037	12.7910	0.0000

Effects Specification				

Cross-section fixed (dummy variables)				

R-squared	0.9377	Mean dependent variable	3.0322
Adjusted R-squared	0.9307	S.D. dependent variable	0.6723
S.E. of regression	0.1769	Akaike info criterion	-0.5289
Sum squared residual	9.8304	Schwarz criterion	-0.1320
Log likelihood	128.5514	Hannan-Quinn criterion	-0.3709
F-statistic	134.9699	Durbin-Watson stat	1.6351
Prob(F-statistic)	0.0000		

Table 5: Model 4: Regression Model Coefficients for asset diversification predicting financial performance and financial stability

Method: Panel Least Squares
Sample (adjusted): 2015 2023; Periods included:9
Cross-sections included: 35; Total panel (balanced) observations: 315

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Constant	2.960	0.0934	31.6881	0.0000
Financial Stability {(-1)}	0.1136	0.0544	2.0892	0.0376
Asset Diversification (HHI_{Asset})	0.0319	0.2140	0.1489	0.8818
Fin Performance (ROA)	0.0466	0.0039	12.0908	0.0000

Effects Specification				

Cross-section fixed (dummy variables)				

R-squared	0.9377	Mean dependent variable	3.0322
Adjusted R-squared	0.9305	S.D. dependent variable	0.6723
S.E. of regression	0.1772	Akaike info criterion	-0.5232
Sum squared residual	9.8300	Schwarz criterion	-0.1154
Log likelihood	128.564	Hannan-Quinn criter.	-0.3609
F-statistic	130.813	Durbin-Watson stat	1.6372
Prob(F-statistic)	0.0000		

4.3 Discussions

Regression results from Model 1 indicate that asset diversification had a significant positive effect on the financial stability of commercial banks in Kenya (β = 0.837, p = 0.0008), suggesting that diversifying assets helps reduce portfolio concentration risk. Model 2 showed that asset diversification also positively influenced financial performance (β = 0.40, p < 0.01), implying that broader asset allocation enhances returns for commercial banks. Model 3 established a significant positive relationship between financial performance and financial stability (β = 0.047, p < 0.01), indicating that profitability strengthens banks' ability to manage risk and maintain financial stability. These results align with Market Power Theory, which holds that well-capitalized banks can withstand economic shocks and leverage diversification strategies to gain market power (Ngware *et al.,* 2020). In Model 4, when financial performance was introduced as a mediator, it retained a significant effect on financial stability (β = 0.047, p < 0.01), and the direct effect of asset diversification on financial stability remained significant but was reduced (β = 0.032, p < 0.05). This confirmed that financial performance partially mediates the relationship between asset diversification and financial stability. Thus, the hypothesis that financial performance has no significant mediating effect was rejected, thus accepting the alternative hypothesis that financial performance significantly mediates the relationship between asset diversification and financial stability. These findings underscore the role of financial performance as a transmission mechanism through which asset diversification enhances financial stability, particularly when banks are profitable and strategically diversified.

5. Conclusion and Recommendations

This study concludes that asset diversification enhances the financial stability of commercial banks, primarily through its strong and statistically significant influence on financial performance. These results lend support to Market Power Theory, which posits that profitability strengthens a bank's ability to withstand shocks and maintain institutional resilience, with financial performance serving as a key mechanism through which diversification strategies exert their stabilizing effects. From a policy standpoint, the findings underscore the importance of embedding profitability-sensitive indicators into prudential regulation and supervisory frameworks, encouraging regulators to assess not only risk exposure but also earnings capacity when evaluating financial soundness. For bank managers, the results highlight the need to adopt asset allocation strategies that balance income generation with risk mitigation to reinforce institutional robustness and fulfill core intermediation functions. Nevertheless, the study's reliance on secondary data may limit the capture of qualitative or institution-specific factors, and its exclusive focus on the Kenyan banking sector may affect the generalizability of the findings. Future research should adopt multi-country designs and incorporate qualitative or mixed-method approaches to deepen understanding of the diversification–performance–stability nexus across diverse banking systems.

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