

# **Moderating Effect Of Market Power On The Relationship Between Bank-Specific Characteristics And Profitability Of Commercial Banks In Kenya**

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## **Abstract**

*Commercial banks are essential for the Kenyan economy since they make significant contributions to its growth and development. 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 the bank-specific factors being in line with regulatory expectations hence, the effect of such factors on bank-profitability remains an issue for further investigation. Accordingly, the purpose of the study was to determine the moderating effect of market power on the relationship between bank-specific characteristics and profitability of commercial banks in Kenya. The study was anchored on the Profit Maximization Theory. A Census Design was adopted, which involved 39 banks licensed and regulated by Central Bank of Kenya for the period covering 2013 through 2023. Given the outcome of panel regression analysis, the study established that the interaction between bank-specific characteristics (bank size, capital adequacy, liquidity, and asset quality) and market power was negative and statistically significant in prediction of profitability ( $\beta = -.026, p = .000$ ). Accordingly, the study recommends that commercial banks should focus on customer service and innovative financial solutions that have the potential to promote organic growth as opposed to their overreliance on market size as the main driver of performance.*

**Keywords:** *Bank Size, Capital Adequacy, Liquidity, And Asset Quality*

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## **I. Introduction And Background Of The Study**

Commercial banks are essential actors in any economy since they furnish capital to both individuals and businesses, which promotes economic growth and facilitate economic activities (Olaleye et al., 2021). They are vital establishments that make a substantial contribution to the progress of the economy and their effectiveness is critical for both domestic advancement and global economic competition (Alhaddad & Kurşunel, 2021). Furthermore, commercial banks ensure the provision of financing beyond the confines of corporate and household deposits, and in so doing stimulate entrepreneurship and foster economic expansion (Morina & Özen, 2020). Empirical studies stress the importance of examining profitability of commercial banks to ensure that they remain profitable given the crucial role they play in the economy (Abate & Mesfin, 2019). Banks will not effectively perform their lending and loaning roles if their levels of profitability are compromised, and they are not performing at optimum (Akims, 2020).

Existing literature has provided many bank-specific characteristics (BSCs) that influence the profitability of commercial banks (Fariska et al., 2021; Suppia & Che Arshad, 2019). Yahaya et al. (2022) aver that size of the commercial banks in SAA region has a direct link to their profitability by affecting it negatively among financial institutions. In addition, large-sized banks in most times, among other factors, benefit from economies of scale that seemingly support their overall profitability (Kassem & Sakr, 2018). As an internal attribute, high capital adequacy ratios indicate that commercial banks have stronger buffer to absorb losses, which can increase investors' confidence and reduce the cost of capital, ultimately leading to higher profitability (Putri & Gunanto, 2022). However, there are studies, which have shown that maintaining high capital levels can be costly since it limits the ability of banks to take advantage of their assets to generate returns (Olusola & Kelechi, 2022).

In the banking sector, both in the credit and funding market, market power has an impact on financial stability and credit provision. It shapes the supply of credit, influences monetary policy transmission, and influences the risk behavior of banks (Carlson et al., 2022). Banks with moderate levels of market power can effectively cushion the adverse effects of monetary policy changes on their lending activities and credit risk (Brissimis et al., 2014). Elsewhere, it has been shown that there are losses in cost efficiency among commercial banks with higher market power; however, they are able to strengthen their levels of efficiency in profitability (Ariss, 2010). There is more stability among banks that enjoy more market power. Commercial banks with

superior market power have better market share and control over their rivals, majorly smaller banks (Etale et al., 2022).

### ***Ia Statement of the Problem***

The consolidated annual bank supervision reports from CBK for the timeframe 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). Nonetheless, the banking industry in Kenya experienced a slump in growth in 2015 as there was a decline in profit before tax by 5% (CBK, 2015). In fact, in the year 2015, Imperial Bank and Dubai Bank were placed under statutory management and receivership respectively (CBK, 2015) whereas, in 2016, Chase Bank was subjected to receivership by the regulator. In 2016, the year-on-year growth in PBT was 10%, followed by a 10% decline in 2017 (CBK, 2017). Despite the dwindling profit witnessed in 2017, the sector recorded a 14% year on year growth in profit before tax in 2018 (CBK, 2018). However, this improvement is lower than the average profit growth before tax observed at the beginning of the decade. According to the CBK annual reports for the period 2019 to 2022, there was fluctuation in profitability, particularly after the start of the COVID-19 pandemic in 2020, which affected the sector as Profit Before Tax (PBT) declined 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.

Empirically driven studies undertaken in Kenya have delved into bank size and bank earnings volatility (Kung'u et al., 2023), financial distress and profitability of tier three commercial banks (Kimathi & Mungai, 2018), risk management and financial performance of insurance firms (Kiptoo et al., 2021), and regulatory capital, credit exposure, bank funding, corporate governance, and financial stability (Kiemo et al., 2022). Other empirical studies carried out within the context of profitability have mainly delved into commercial banks listed in the Nairobi Securities Exchange (NSE) (Mule et al., 2015) while others probed non-financial firms listed at NSE (Shikumo, 2022). Studies examining the profitability of commercial banks listed in the NSE are limited in scope since they considered fewer banking institutions while others investigated firms outside the banking industry, thus limiting generalizability of results. Empirical studies undertaken internationally within the context of profitability focused on FMCG companies in India (Joseph, 2022) and manufacturing firms in South Africa (Kasozzi, 2017). This study sought to fill the contextual gap of international and Kenyan empirical studies that have not delved into the effect of market power on the relationship between bank-specific characteristics and profitability of commercial banks in Kenya. The objective of this study is to determine the moderating effect of market power on the relationship between bank-specific characteristics and profitability of commercial banks in Kenya.

### ***Ib. Objective of the Study***

The objective of this study was to determine the moderating effect of market power on the relationship between bank-specific characteristics and profitability of commercial banks in Kenya.

### ***Ic. Research Hypothesis***

**H<sub>0</sub>:** Market power has no significant moderating effect on the relationship between bank-specific characteristics and profitability of commercial banks in Kenya.

## **II. Literature Review**

### ***Iia. Theoretical Review***

The classical profit maximization theory, as one of the theories of the firm, has its origins in the writing of Adam Smith, *The Wealth of Nations* (1776), who posited that firms act in self-interest to maximize profits, which creates cumulative value for society (Lynch, 2000). It assumes that banks behave rationally in making decisions that optimize their financial outcomes, which entail identifying and pursuing the most resourceful methods of product development and service delivery to maximize profitability (Jiao et al., 2018). According to the framework, sustainability and performance of firms originate from higher profits, which imply better utilization of resources, market competitiveness, and managerial efficiency. In addition, banks utilize cost minimization to sustain their profitability in the banking sector (Salman & Nawaz, 2018). They achieve this through economies of scale and technological innovations. Digital banking platforms, for instance, reduce costs associated with physical branches and personnel. Choudhry (2018) observes that commercial banks maximize their profits through creation of a balance between the pursuit of high profits and acceptable levels of risk.

### ***Iib. Empirical Review***

Aziz et al. (2024) investigated the relationship between market power, market share, and profitability to strengthen the Early Warning System (EWS) and maintain the stability of the Indonesian Banking System,

particularly among Regional Development Banks (BPD). Using the Structure-Conduct-Performance (SCP) framework and Efficiency-Structure Hypothesis (ESH), the study analyzed quarterly financial reports from 24 banks over ten years (2012–2022). Static panel data regression revealed that market power positively impacted ROA, while market share had a negative effect. However, the interaction between market power and market shares positively influenced ROA. Control variables such as technical efficiency, fee-based income, and liquidity ratio positively affected ROA, whereas interest rate spread, capital adequacy ratio, bank overheads, and non-performing loans had a negative impact. The study's focus on banks in Indonesia limits its generalizability, meaning that a study of this nature should be carried out within Kenya's banking sector to either corroborate or refute its results.

Torre Olmo et al. (2021) sought to examine the effect of market power, efficiency, and sustainable banking on profitability and risk of banks. Two-step system-GMM was used in the analysis of data for the period between 2015 and 2019 and was obtained from 48 countries consisting of unbalanced panel of 1236 financial institutions. The research outcome revealed that adopting sustainable banking practices enhanced profitability. Market power emerged as a significant factor influencing profitability in conventional banks, but did not show the same impact in sustainable banks. Both sustainable and conventional banks experienced increased profitability with higher levels of cost scale efficiency. However, the study did not find a significant association between sustainable banking practices and insolvency risk. Considering longer timeframes could have increased the statistical power of the study and helped to control for unobserved heterogeneity.

Widarjono et al. (2023) examined market power and bank-specific variables as determinants of bank margins among Islamic banks in Indonesia. The study examined a sample of 31 banks, utilizing quarterly data spanning from the first quarter of 2015 to the fourth quarter of 2020. Panel regression techniques were applied to analyze the data, considering its unbalanced nature. The results from the research indicated that Islamic banks with greater market power had higher profit margins, whereas those focusing on risk-sharing financing exhibited lower margins. Bank-specific characteristics such as income diversification and financing practices, played significant roles in determining bank margins. This study considered a longer period of 10 years as opposed to the 6 years utilized in the study, meaning led to improved control of unobserved heterogeneity.

Githaiga (2020) explored the moderating role of market power in the relationship between income diversification and bank performance. Using 310 yearly observations from 31 Kenyan commercial banks over the period 2008–2017, the study employed panel data analysis to investigate this nexus. The findings revealed that market power significantly mediated the relationship between income diversification and performance, which means that income diversification has a greater impact on performance for banks with high market power compared to those with low market power. This study incorporated most recent, up to 2023, from Kenyan's commercial banking industry.

### **III. Research Methodology**

A causal research design was adopted in this study work since it explicitly investigated cause-and-effect relationship between bank-specific characteristics 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 31<sup>st</sup> December 2023 (CBK, 2023). The study adopted Fairchild and MacKinnon (2009) as a single generalized model to test the effect of the moderating variable, on the relationship between the predictor and response variables of the study. The following equation provides the moderating effect model, which includes both the direct effects and additional effects moderated by the interaction of bank-specific characteristics with market power.

$$P_{it} = \beta_0 + \beta_1 BSC_{it} + \beta_2 MP_{it} + \beta_3 (BSC_{it} * MP_{it}) + e_{it}$$

Where;

P = Profitability

$\beta_0$  = Constant

$\beta_1, \beta_2, \beta_3$  = Beta coefficients

BSC = Bank-Specific Characteristics (bank size, capital adequacy, liquidity, asset quality)

MP = Market Power

$BSC_{it} * MP_{it}$  = Interaction between Bank-Specific Characteristics and Market Power

$i$  = observations

$t$  = 2013-2023

$\epsilon$  = Error term

#### IV. Research Findings And Discussion

The rationale of this investigation was to examine the moderating effect of power on the relationship between bank-specific characteristics and profitability of commercial banks in Kenya.

##### Iva. Panel Regression Analysis

Data for the respective explanatory and outcome variables were fitted into the panel regression model involving 39 commercial banks for an 11-year period. A single generalized model based on Fairchild and MacKinnon (2009) alongside the fixed effects were adopted in the moderating effect model. Table 4.1 summarizes the fixed effects panel regression findings of the study.

**Table 4.11**  
*Fixed Effects Panel Regression for Moderation with Robust Standard Errors*

Fixed Effects Panel Regression for Moderation with Robust Standard Errors							
Profitability	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	
BSCs Composite	.065	.019	3.48	.001	.027	.103	
Market Power	.067	.017	3.89	.000	.032	.102	
BSCs# MP	-.026	.006	-4.24	.000	-.039	-.014	
Constant	-.142	.046	-3.07	.004	-.236	-.049	
Mean dependent var		0.013		SD dependent var		0.039	
R-squared		0.2803		Number of obs		395	
F-test		9.574		Prob > F		0.000	
Akaike crit. (AIC)		-1843.566		Bayesian crit. (BIC)		-1831.629	
BSCs Composite=Composite of BSCs; MP=Market Power							

**Source: Research Data (2025)**

The results of this research outlined in Table 4.1 were summarized using a panel regression model derived from ROA, which constituted the metric for measuring profitability. In this regard, the panel regression direct effect model below indicates the moderating effect of market power on the relationship between bank-specific characteristics (bank size, capital adequacy, liquidity, and asset quality) and profitability:

$$P_{it} = -.142 + .065BSC_{it} + .067MP_{it} - .026(BSC_{it} * MP_{it}) + \epsilon_{it}$$

Where;

P = Profitability

$\beta_0$  = Constant

$\beta_1, \beta_2, \beta_3$  = Beta coefficients

BSC=Bank-Specific Characteristics (bank size, capital adequacy, liquidity, asset quality)

MP = Market Power

$BSC_{it} * MP_{it}$  = Interaction between Bank-Specific Characteristics and Market Power

$i$  = observations

$t$  = 2013-2023

$\epsilon$  = Error term

The outcome of this research captured in Table 4.1 showed that the overall r-square of the fixed-effect panel regression was 0.2803, implying that about 28.03% of the variation in profitability among banks was accounted for by the combined influence of the predictor variables (bank-specific characteristics) and their interactions with the moderator (market power). Before moderation, the study findings revealed that bank-specific characteristics exhibited significant associations with profitability as revealed by regression coefficient and the corresponding probability value ( $\beta = .065$ ;  $p = .001$ ,  $p < .05$ ). Moreover, market power, as a moderator, had a positive and significant effect on profitability ( $\beta = .067$ ;  $p = .000$ ,  $p < .01$ ). After moderation, the interaction between bank-specific characteristics and market power was negative and significant ( $\beta = -.026$ ,  $p = .000$ ,  $p < .01$ ). It follows that the study established that there was a negative and significant moderating effect of market power on the relationship between the BSCs and profitability.

##### IVb. Hypothesis Testing and Discussion

**H<sub>0</sub>:** Market power has no significant moderating effect on the relationship between bank-specific characteristics and profitability of commercial banks in Kenya.

The study examined the moderating effect of market power on the relationship between bank-specific characteristics and profitability of commercial banks in Kenya. The reported findings of the study revealed that

market power had a negative significant moderating effect on the relationship between bank-specific characteristics (bank size, capital adequacy, liquidity, and asset quality) and profitability of commercial banks ( $\beta = -.026, p = .000, p < .01$ ) as revealed by the calculated t-value of -4.24 being greater than the critical value of 1.96 or the p-value being less than .05. Accordingly, market power had a significant moderating effect on the relationship between bank-specific characteristics and profitability of commercial banks in Kenya.

Existing empirical evidence on the linkage among bank-specific characteristics, market power, and profitability of commercial banks seem to align as well as diverge with the outcome of the current study. For instance, Torre Olmo et al. (2021) showed that market power significantly influenced profitability in conventional banks with the study concluding that ability to exert pricing control might have helped to improve earnings of banks. On the other hand, Akinkunmi (2017), focusing on Nigerian banks, established that market concentration, as a measure of market power, affected the performance of commercial banks in a positively, particularly in the short term. In addition, a study by Widarjono et al. (2023) revealed that Islamic banks with greater market power exhibited higher profit margins, a result interpreted to suggest that market dominance can be leveraged for improved financial outcomes. Although the study by Githaiga (2020) focused on bank-specific characteristics not considered in this research work, its outcome established that market power significantly moderated the relationship between income diversification and performance in the Kenyan banking sector.

## **V. Conclusion And Policy Recommendations**

Based on the outcome of hypothesis testing, the study concluded that market power had a negative and significant moderating effect on the relationship between bank-specific characteristics (bank size, capital adequacy, liquidity, and asset quality) and profitability of commercial banks. As a result, overreliance on market size as the main drive of performance should be relooked by commercial banks where the management should emphasize on, for instance, customer service and innovative financial solutions, which have the potential to promote organic growth.

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