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EARNINGS PER SHARE AND FIRM VALUE OF COMMERCIAL BANKS LISTED AT NAIROBI SECURITIES EXCHANGE, KENYA

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ABSTRACT

This study examined the relationship between earnings per share (EPS) and firm value among commercial banks listed on the Nairobi Securities Exchange (NSE), Kenya. The study adopted a descriptive research design and covered 11 banks from 2019 to 2025, yielding 77 bank-year observations. Secondary data were obtained from published annual reports, audited financial statements, and other relevant publications. Firm value was measured using Tobin's Q. Data were analyzed using descriptive statistics, trend analysis, Pearson correlation, and bank fixed-effects regression in Stata 18. The pooled Pearson correlation showed a positive association between EPS and Tobin's Q ($r = .527$). The fixed-effects regression also showed a positive and statistically significant association within banks ($B = 0.3152$, $p = .0013$). The model accounted for 14.72% of the within-bank variation in Tobin's Q (within $R^2 = .1472$). The study concluded that higher EPS was associated with higher firm value within the same bank over time after accounting for time-invariant differences between banks. Bank managers should focus on sustaining earnings through prudent lending, credit risk management, and control of operating costs. Investors should assess EPS alongside earnings persistence and asset quality when evaluating listed banks.

Keywords: Earnings per share, firm value, Tobin's Q, commercial banks, Nairobi Securities Exchange.

1. INTRODUCTION

Firm value reflects the economic worth that investors assign to a company. Equity valuation links a company's market value to current and expected earnings, book value, and dividends (Ohlson, 1995). Empirical studies have used Tobin's Q as a measure of firm value when examining the relationship between financial performance and valuation (Marsha & Murtaqi, 2017; Rodríguez Valencia, 2025). In banking, the CAMEL framework assesses financial condition through capital adequacy, asset quality, management quality, earnings, and liquidity. Denje and Olando (2021) applied the framework to examine the financial performance of Islamic banks in Kenya. The earnings component is relevant to valuation because it captures a bank's capacity to generate profits, while earnings per share (EPS) expresses those profits on a per-share basis. Said and Kaplelach (2019) found a positive relationship between EPS and market value among companies

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listed on the Nairobi Securities Exchange. Their study covered listed companies across industries. The present study focuses on commercial banks and examines whether changes in EPS within the same bank were associated with changes in firm value, measured using Tobin's Q, from 2019 to 2025.

2. STATEMENTS OF THE PROBLEM

Commercial banks listed on the Nairobi Securities Exchange (NSE) continued to trade below their historical valuation multiples even as the wider equity market recovered. The Central Bank of Kenya (2025) reported that total NSE market capitalization rose by 34.8% between December 2023 and December 2024. In its review of the first half of 2025, Cytonn Investments (2025) reported that listed banks traded at an average price-to-book ratio of 0.9, compared with a historical average of 1.5. This discount indicates that investors assigned a lower market value to each shilling of reported book equity than they had historically.

The valuation discount coincided with heightened credit risk in Kenya's banking sector. The sector-wide ratio of non-performing loans increased from 15.6% in December 2023 to 17.1% in December 2024 (Central Bank of Kenya, 2025). As credit risk rises, investors may place less weight on current earnings if they expect future loan losses to weaken profitability. These conditions make it important to examine whether higher reported earnings per share (EPS) are associated with higher firm value among listed banks.

Sector-wide credit indicators and market valuation averages provide context for the problem, but they do not show how EPS and firm value are related at the bank level. Evidence on earnings quality also addresses a different question because it examines the reliability and persistence of reported earnings (Dang et al., 2020). This study therefore examined the association between EPS and firm value, measured using Tobin's Q, among commercial banks listed on the NSE from 2019 to 2025.

3. RESEARCH OBJECTIVE

To examine the relationship between earnings per share (EPS) and firm value, measured using Tobin's Q, among commercial banks listed on the Nairobi Securities Exchange from 2019 to 2025.

4. RESEARCH HYPOTHESIS

H_{01}: Earnings per share has no statistically significant relationship with Tobin's Q within commercial banks listed on the Nairobi Securities Exchange from 2019 to 2025.

5. LITERATURE REVIEW

5.1 Theoretical Review-Agency Theory

Jensen and Meckling (1976) developed agency theory to explain conflicts that arise when shareholders delegate decision-making authority to managers. Managers have greater access to internal information and may have incentives to present earnings favorably, particularly when compensation or job security depends on reported performance. Shareholders incur agency costs when they monitor managers and design incentives to align managerial decisions with their interests. Board oversight, internal controls, and external audits can help shareholders assess whether reported earnings faithfully reflect the firm's financial performance (Eisenhardt, 1989).

Agency theory helps explain why the relationship between earnings per share (EPS) and firm value may depend on how investors assess the credibility and sustainability of reported earnings. For commercial banks, estimates such as loan-loss provisions affect reported earnings and can be

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difficult for outside investors to evaluate. Investors may assign a higher valuation to a bank when they view its EPS as a credible indicator of sustainable profitability. In this study, agency theory provides a basis for examining the association between EPS and firm value, measured using Tobin's Q, among commercial banks listed on the Nairobi Securities Exchange. The theory informs the interpretation of the association, while the study measures EPS and firm value directly.

5.2 Empirical Review

Dang et al. (2020) applied generalised least squares regression to 3,910 observations from listed firms in Vietnam between 2010 and 2018 and found a positive association between earnings quality and firm value. Intara et al. (2024) reported a similar relationship among listed firms in Thailand, although their analysis covered multiple industries. In Nigeria, Agofure and Okolie (2025) examined how fair value accounting relates to earnings quality in commercial banks. Jameel et al. (2024) found that audit committee independence and size were associated with earnings management among banks operating in Dubai. In Kenya, Wanjagi et al. (2024) reported a positive relationship between earnings quality and operational efficiency in commercial banks. Together, these studies provide evidence on earnings quality, reporting practices, and operational efficiency, leaving open the question of how reported earnings per share (EPS) relate to the market valuation of listed Kenyan banks. The present study addresses this gap by examining the association between EPS and firm value, measured using Tobin's Q, among commercial banks listed on the Nairobi Securities Exchange from 2019 to 2025.

5.3 Conceptual Framework

A conceptual framework visually illustrates the relationships between earnings per share and firm value of commercial banks listed at NSE, Kenya.

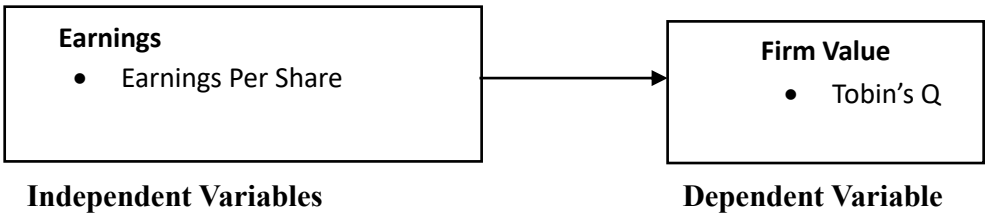


Figure 1 Conceptual Framework

6. RESEARCH METHODOLOGY

The study adopted a descriptive research design to examine the association between earnings per share (EPS) and firm value among commercial banks listed on the Nairobi Securities Exchange (NSE) from 2019 to 2025. A census covered all 11 banks in the study population, yielding 77 bank-year observations. The bank-year was the unit of analysis. A structured secondary data collection sheet was used to record annual EPS and Tobin's Q for each bank. EPS represented earnings attributable to each ordinary share, while Tobin's Q was used as the measure of firm value. Data were obtained from published annual reports, audited financial statements, and other published sources. The data were checked for completeness and consistency before analysis.

The analysis used means, standard deviations, minimum values, and maximum values to summarize EPS and Tobin's Q. Annual averages were plotted to show how both measures changed over the study period. A pooled Pearson correlation coefficient was used to describe the direction and strength of the linear association between EPS and Tobin's Q across the 77 bank-year observations. The coefficient reflects both differences between banks and changes within banks over time.

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7. FINDINGS AND DISCUSSION

7.1 Descriptive Statistics

Table 1 summarizes earnings per share (EPS) and firm value, measured using Tobin's Q, for 77 bank-year observations from 2019 to 2025.

Table 1: Descriptive Statistics for EPS and Tobin's Q

Variable	N	Min	Max	Mean	SD	Skewness	Kurtosis
Earnings per share	77	−0.0520	0.6480	0.3360	0.1085	1.3008	1.5216
Tobin's Q	77	0.8100	1.2700	0.9480	0.0795	1.2279	3.4279

EPS ranged from −0.0520 to 0.6480, with a mean of 0.3360 and a standard deviation of 0.1085. The positive skewness of 1.3008 indicates that the distribution had a longer tail towards higher values.

Tobin's Q ranged from 0.8100 to 1.2700, with a mean of 0.9480 and a standard deviation of 0.0795. The mean was slightly below 1, and the range included observations on both sides of that benchmark. Tobin's Q also had a right-skewed distribution, with a skewness of 1.2279.

7.2 Trend Analysis

The annual averages of earnings per share (EPS) and Tobin's Q were plotted to show how profitability per share and firm value changed among commercial banks listed on the Nairobi Securities Exchange (NSE) from 2019 to 2025.

7.2.1 Trend Analysis for Earnings per Share

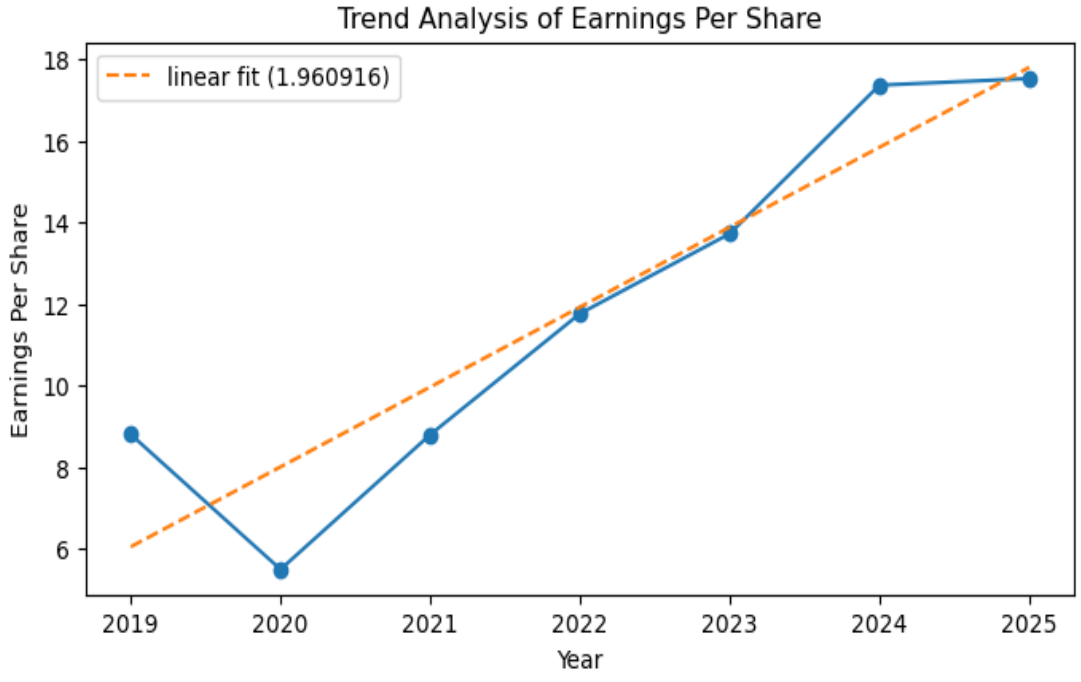


Figure 2 Annual Average Earnings per Share, 2019–2025

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Figure 2 shows that average EPS declined from approximately 8.8 in 2019 to 5.5 in 2020, the lowest point in the series. It then increased each year, reaching approximately 17.5 in 2025. The fitted trend line indicates an overall rise in average earnings per ordinary share over the study period.

7.2.2 Trend Analysis for Tobin's Q

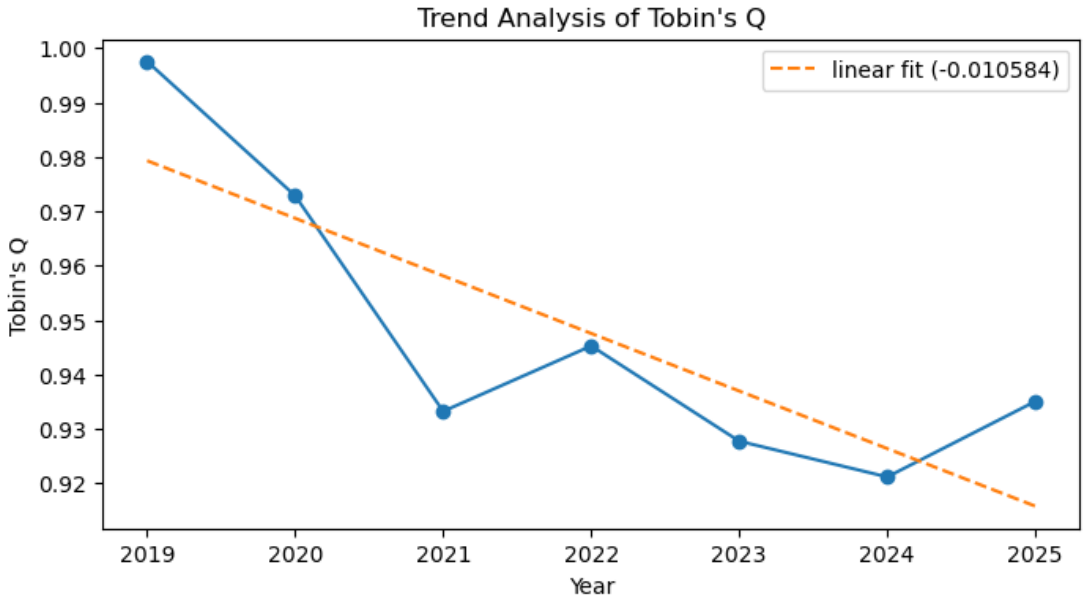


Figure 3: Annual Average Tobin's Q, 2019–2025

Figure 3 shows that average Tobin's Q declined from just below 1.00 in 2019 to approximately 0.93 in 2021. It rose to about 0.95 in 2022, fell to approximately 0.92 in 2024, and recovered to about 0.94 in 2025. The fitted trend line slopes downward over the study period. Taken together, the figures show that average EPS rose over the period while average Tobin's Q declined.

7.3 Inferential Statistics

7.3.1 Correlation Analysis

Pearson correlation analysis was used to examine the linear association between earnings per share (EPS) and firm value, measured using Tobin's Q, among commercial banks listed on the Nairobi Securities Exchange. Table 2 presents the result for the 77 bank-year observations.

Table 2: Pearson Correlation Between Earnings per Share and Firm Value

Variables	Pearson's *r*	Bank-year observations
Earnings per share and Tobin's Q	0.527	77

The results show a moderate positive correlation between EPS and Tobin's Q (r = .527). Across the pooled observations, banks reporting higher EPS tended to have higher Tobin's Q. This finding is consistent with the positive direction reported by Munene (2018) and Mwangangi et al. (2025) in their studies of profitability and shareholder value. Issackow et al. (2021) also reported a positive relationship between earnings ability and firm value among listed Kenyan commercial banks, although their estimate was statistically insignificant.

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7.3.2: Model Summary

A bank fixed-effects regression was estimated to examine the relationship between earnings per share (EPS) and firm value, measured using Tobin's Q, among commercial banks listed on the Nairobi Securities Exchange (NSE). The analysis covered 77 bank-year observations from 11 banks between 2019 and 2025.

Table 3: Model Summary for Earnings per Share

Model	Within *R*	Within R^2	Overall R^2	Root MSE	N	Banks
Bank fixed effects	.3837	.1472	.2777	0.0640	77	11

The within R^2 of .1472 indicates that EPS accounted for 14.72% of the variation in Tobin's Q around each bank's mean. The overall R^2 was .2777, and the Root MSE was 0.0640 in Tobin's Q units.

7.3.3 Analysis of Variance

The fixed-effects model test assessed whether EPS was associated with within-bank variation in Tobin's Q. Table 4 presents the within-bank sums of squares and the model test.

Table 4: Analysis of Variance for the Fixed-Effects Model

Source	Sum of squares	df	Mean square	*F*	*p*
Model (within)	0.0460	1	0.0460	11.22	.0013
Residual	0.2665	65	0.0041		
Total (within)	0.3125	66			

The model test was statistically significant at the 5% level, F (1, 65) = 11.22, p = .0013. This result indicates that EPS contributed to explaining within-bank variation in Tobin's Q.

7.3.4 Regression Coefficient Results

Table 5 presents the coefficient estimates from the bank fixed-effects regression.

Table 5: Fixed-Effects Regression Coefficients for Earnings per Share

Variable	Coefficient (*B*)	Standard error	*t*	*p*	95% confidence interval
Earnings per share	0.3152	0.0941	3.3496	.0013	[0.1273, 0.5031]
Constant	0.8421	0.2160	3.8986	.0002	[0.4108, 1.2734]

The estimated model is expressed as:

$$\text{Tobin's Q}_{it} = 0.8421 + 0.3152\,\text{EPS}_{it} + \alpha_i + \varepsilon_{it};$$

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Where α_idenotes the bank fixed effect and ε_it denotes the error term for bank iin year t.

On the scale used in the regression, a one-unit increase in EPS within a bank was associated with a 0.3152-unit increase in Tobin's Q after accounting for time-invariant differences between banks.

7.3.5 Hypothesis Test Results

The null hypothesis (H_{01}) stated that earnings per share had no linear association with firm value within banks. The EPS coefficient was positive and statistically significant (B = 0.3152, p = .0013). The study therefore rejected H_{01} at the 5% significance level and concluded that higher EPS was associated with higher Tobin's Q within NSE-listed commercial banks over the study period. This finding is consistent with the agency theory argument that investors use reported earnings to assess managerial performance and a bank's prospects. The positive direction is consistent with Munene (2018) and Said and Kaplelach (2019). Issackow et al. (2021) also reported a positive association among listed Kenyan commercial banks, although their estimate was statistically insignificant.

8. SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

8.1 Summary of the Study Findings

The study examined the relationship between earnings per share (EPS) and firm value, measured using Tobin's Q, among 11 commercial banks listed on the Nairobi Securities Exchange from 2019 to 2025. The bank fixed-effects regression showed a positive and statistically significant association between EPS and Tobin's Q (B = 0.3152, p = .0013). The model accounted for 14.72% of the within-bank variation in Tobin's Q. The study therefore rejected the null hypothesis (H_{01}) at the 5% significance level.

8.2 Conclusion

The study concluded that higher EPS was associated with higher firm value within the same bank over time, after accounting for time-invariant differences between banks. EPS therefore provides information about firm value, although the modest within-bank R^2 indicates that much of the variation in Tobin's Q remained unexplained by the model.

8.3 Recommendations

Bank managers should focus on sustaining earnings through prudent lending, effective credit risk management, and control of operating costs. Investors should assess EPS alongside earnings persistence and asset quality when evaluating listed banks. These measures can help investors judge whether reported earnings are likely to be sustained.

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