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RELATIONSHIP BETWEEN EQUITY RISK AND FINANCIAL PERFORMANCE OF COMMERCIAL BANKS IN KENYA

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ABSTRACT

This study examined the relationship between equity risk and financial performance of commercial banks in Kenya. Despite ongoing regulatory reforms by the Central Bank of Kenya (CBK), the banking sector continues to experience fluctuations in profitability, raising concerns regarding the role of market risk exposures in shaping financial outcomes. Equity risk, which arises from volatility in stock prices and changes in market valuations of equity investments, remains a critical determinant of bank performance through its influence on investment income, capital gains, and portfolio valuation. The study was anchored on the Modern Portfolio Theory, which posits that rational investors and financial institutions optimize returns by balancing risk and return through diversification and efficient portfolio allocation. A longitudinal research design was adopted, covering all 38 commercial banks licensed by the CBK over the period 2020–2024. Secondary data were obtained from audited financial statements and annual reports. Data analysis was conducted using descriptive statistics and panel multiple linear regression using STATA 15. The empirical results revealed that equity risk has a positive and statistically significant relationship with financial performance ($\beta = 0.0964$, $p < 0.001$). This finding suggests that higher exposure to equity markets is associated with improved financial performance, consistent with the risk–return trade-off principle. The results further imply that banks that strategically engage in equity investments tend to achieve higher returns, provided risk is adequately managed through diversification and portfolio optimization strategies. The study concludes that equity risk is a significant determinant of financial performance among commercial banks in Kenya. It recommends that banks adopt balanced equity investment strategies that optimize returns while maintaining acceptable risk exposure levels. Strengthening portfolio diversification and enhancing equity market analytics are also essential for improving performance outcomes.

Keywords: Equity Risk, Financial Performance, Commercial Banks, Kenya, Modern Portfolio Theory, Risk-Return Trade-off, Panel Data Analysis

1. INTRODUCTION

The banking sector is a critical pillar of economic development globally, serving as the main channel for financial intermediation, capital mobilization, and resource allocation across economies. According to Tyson (2021) and the Central Bank of Kenya (2023), the banking industry in Kenya alone contributes approximately 6%–8.4% of GDP and supports both direct and indirect employment through lending, payment systems, and financial inclusion initiatives. This central role makes bank performance a key indicator of financial sector stability and overall economic health, as emphasized by Muhabie (2015), who notes that banking performance reflects the trajectory of an economy through its influence on money circulation and credit creation.

Globally, commercial banks operate in highly volatile financial environments characterized by exposure to multiple forms of market risk, including interest rate risk, currency risk, commodity risk, and equity risk (Sharpe, Alexander & Bailey, 2013). Among these, equity risk has gained increasing attention due to its direct link to capital market fluctuations and investment portfolio returns. Equity risk refers to the uncertainty arising from changes in stock prices and the value of equity-based investments held by financial institutions, which can significantly affect profitability and shareholder returns (Damodaran, 2019). According to Leverkuhn (2023), equity risk is closely tied to portfolio structure and can be partially mitigated through diversification strategies, although it remains a key source of volatility in financial performance.

Empirical literature presents mixed evidence regarding the effect of equity risk on financial performance. Kolapo and Fapetu (2015) identify equity risk as a significant contributor to poor performance in deposit money banks, highlighting its role in reducing profitability in unstable market conditions. Similarly, Arrafin et al. (2016) observe that weak risk management, including inadequate control of equity exposures, contributes to financial distress in banking institutions. In

contrast, Damodaran (2019) argues that under efficient portfolio management, higher equity risk may be associated with higher expected returns, consistent with the risk-return trade-off principle in financial theory.

In Africa, the banking sector continues to face heightened exposure to equity market volatility due to underdeveloped capital markets and limited diversification opportunities. Studies such as Boahene et al. (2012) in Ghana highlight that profitability challenges in banks are often linked to overreliance on specific income sources and exposure to volatile investment markets. Similarly, Kolapo and Fapetu (2015) in Nigeria emphasize that equity risk is a major determinant of poor financial performance among commercial banks, reinforcing the relevance of market risk management in emerging economies.

Within the East African context, and particularly in Kenya, commercial banks operate under a regulatory environment governed by the Central Bank of Kenya (CBK), which enforces prudential guidelines aimed at enhancing financial stability (CBK, 2018). Despite these regulatory frameworks, financial performance has shown signs of fluctuation, with several banks recording declining returns in recent years. CBK (2020; 2021) reports indicate a downward trend in return on equity across the banking sector, signaling potential vulnerability to market risk exposures. Equity risk, arising from banks' investments in securities and exposure to capital market fluctuations, remains an important but underexplored determinant of these performance variations.

In Kenya, empirical studies have produced inconsistent findings regarding the relationship between equity risk and financial performance. While some studies suggest that equity exposure negatively affects profitability due to volatility in returns, others argue that well-managed equity portfolios can enhance earnings through capital gains and diversification benefits (Wambari & Mwangi, 2017; Maigua & Mouni, 2016). However, most existing studies have treated market risk as a composite construct, with limited focus on equity risk as a standalone determinant of financial performance in commercial banks.

Further, financial innovation has been identified as a potential moderating factor that may influence the relationship between equity risk and financial performance. Innovations such as algorithmic trading systems, fintech-based portfolio management tools, and risk analytics platforms have improved banks' ability to monitor and manage equity exposures (Tufano, 2012; Kimathi & Kinyua, 2023). However, despite the growing adoption of such innovations, there remains limited empirical evidence on how they interact with equity risk to influence financial performance in the Kenyan banking sector.

This study therefore seeks to fill this gap by examining the relationship between equity risk and financial performance of commercial banks in Kenya, with particular attention to the contextual dynamics of an emerging financial market characterized by volatility, regulatory oversight, and increasing technological adoption. The objective of the study was to examine the relationship between equity risk and financial performance of commercial banks in Kenya.

2. LITERATURE REVIEW

2.1 Theoretical Literature Review

This study is anchored on Modern Portfolio Theory (Markowitz, 1952), which provides the primary theoretical foundation for explaining the relationship between equity risk and financial performance of commercial banks. The theory posits that rational investors aim to construct an optimal portfolio that maximizes expected returns for a given level of risk or minimizes risk for a given level of return through diversification. In this context, equity risk arising from fluctuations in stock prices and the value of equity investments directly affects portfolio volatility and expected returns.
Markowitz's framework is particularly relevant to banking institutions because commercial banks actively invest in equity markets and hold securities portfolios whose values fluctuate with market conditions. According to Damodaran (2019), higher equity risk increases the variability of returns and the cost of equity capital, which may reduce overall profitability if not properly managed. However, the theory also suggests that efficient diversification across asset classes can reduce unsystematic risk, thereby stabilizing financial performance.

Leverkuhn (2023) further supports this view by arguing that portfolio diversification and strategic asset allocation can mitigate equity risk exposure, enabling financial institutions to achieve more stable returns. In the banking context, this implies that financial performance is not only a function of exposure to equity risk but also of how effectively such risk is managed through portfolio optimization strategies.

Despite its strengths, Modern Portfolio Theory assumes efficient markets and rational behavior, conditions that may not fully hold in emerging markets such as Kenya. Nevertheless, it remains highly applicable in explaining how equity risk influences financial performance, particularly in commercial banks where investment decisions are central to profitability. The theory therefore provides a suitable analytical lens for examining how variations in equity risk exposure translate into changes in financial performance among Kenyan commercial banks.

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2.2 Empirical Review

An investigation was carried out by Anh, Duy, and Nam (2022) to ascertain how financial choices affected equity risk in businesses that were listed on the Vietnam Stock Exchange. From 2015 to 2019, industry building companies listed on the Vietnam Stock Exchange were the subject of research and analysis using panel data and generalized least squares (GLS). According to the results of the data analysis, funding decisions have an adverse effect on equity risk, working capital decisions have a positive influence on equity risk, and investment decisions have no effect on equity risk. The purpose of this study is to determine how Kenyan commercial banks' financial performance and equity risk are related.

Kapp and Kristiansen, (2021), in their study entitled Euro Area Equity Risk Premia and Monetary Policy: A Longer-Term Perspective, established that changes in equity prices during periods of accommodative monetary policy mainly reflected adjustments in the discount factor and economic activity rather than fluctuations in investors' required risk compensation. Furthermore, the equity risk appears to not have declined much since the introduction of unconventional monetary policy and stands higher than prior to the global financial crisis. Use of identified monetary policy shocks points to insignificant effects of monetary policy on the equity risk. The study further revealed that monetary policy has a significant upwards impact on the equity risk if it is perceived as negative information, while the opposite prevails in the case of a genuine accommodative monetary policy. Accumulating these effects over time suggests that the two might have largely offset each other since the introduction of unconventional monetary policy. The current study determined the relationship between equity risk and financial performance rather than equity risk and monetary policy.

Jens, et al. (2022) showed theoretically, that keeping less capital in excess of the minimum capital requirement can outweigh the risk reducing effect on equity of increased total capitalization. Empirically, they established that excess capitalization is a significant determinant of equity risk, and can explain why bank equity risk has not become lower after the Great Financial Crisis. Smaller excess capitalization also leads to decreases in market-to-book ratios. Lower leverage has, however, reduced the cost of bank debt. Excess capital as opposed to total capital is a critical determinant of bank equity risk and that a smaller excess capitalization increases equity volatility, and this dominates the effect of having a higher total capitalization. This study seeks to determine the relationship between equity risk and financial performance using longitudinal research design rather than empirical review of literature.

3. METHODOLOGY

This study was anchored on a positivist research paradigm, which assumes that economic and financial phenomena exist objectively and can be measured using empirical data (Khan, 2017). The positivist approach was appropriate as the study sought to test hypothesized relationships between equity risk and financial performance using quantitative techniques derived from established financial theories. A correlational and longitudinal research design was adopted. The correlational design enabled the determination of the relationship between equity risk and financial performance, while the longitudinal design facilitated analysis of trends and dynamics over time using panel data from 2020 to 2024 (Dudovskiy, 2018). This design was suitable because it allowed observation of variations across banks and over time without manipulating variables.

The target population comprised all 38 commercial banks licensed and operating in Kenya as of 2024 (CBK, 2024). A census approach was adopted, whereby all banks were included in the study to enhance accuracy, generalizability, and eliminate sampling error (Saunders et al., 2009). The study focused on Kenyan commercial banks due to their central role in financial intermediation and their exposure to equity market fluctuations, which directly influence profitability and shareholder value.

Data used in the study were purely secondary in nature, extracted from audited financial statements and annual reports of commercial banks obtained from CBK and individual bank websites for the period 2020–2024. A structured data extraction matrix was used to capture relevant financial ratios. The study employed panel data (cross-sectional and time-series data), which improves estimation efficiency, controls for heterogeneity across banks, and reduces multicollinearity and estimation bias (Gujarati, 2003). Equity risk and financial performance indicators were derived from standardized financial ratios to ensure comparability across institutions.

Data were analyzed using STATA version 15. Descriptive statistics (mean and standard deviation) were used to summarize equity risk and financial performance, while panel regression analysis was used to examine their relationship. The study adopted a random-effects model, as justified by the Hausman test ($p > 0.05$), indicating no systematic correlation between individual effects and regressors. Diagnostic tests including normality, multicollinearity, heteroscedasticity, autocorrelation, and stationarity were conducted to ensure robustness of results. Ethical considerations were observed through proper authorization from NACOSTI and adherence to academic integrity standards.

4. FINDINGS AND DISCUSSIONS

4.1 Descriptive Results: Equity Risk and Financial Performance

This section presents descriptive evidence on the relationship between equity risk (EQR) and financial performance (FP) of commercial banks in Kenya over the period 2020–2024. The analysis is based on a balanced panel dataset of 190 observations drawn from 38 commercial banks. Equity risk captures volatility in equity-related exposures, while financial

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performance is measured using a composite index derived from standardized ROE and ROA values. The descriptive statistics provide an initial understanding of the distributional properties, dispersion, and heterogeneity of the two variables before inferential analysis.

Table 1: Descriptive Statistics for Equity Risk and Financial Performance

Variable	Mean	Std. Dev.	Min	Max	Skewness	Kurtosis
EQR	0.403	0.978	0.000	12.166	9.783	113.867
FP	0.000	0.793	-5.886	1.277	-3.677	22.674

Equity risk (EQR) exhibits a relatively low mean value of 0.403, but a high standard deviation of 0.978, indicating substantial variability in equity risk exposure across commercial banks. The minimum value of 0.000 and maximum value of 12.166 further confirm extreme dispersion, suggesting that while some banks have negligible equity risk exposure, others experience exceptionally high levels. The skewness value of 9.783 indicates a strongly positively skewed distribution, implying that most banks cluster at lower levels of equity risk while a few institutions exhibit extremely high exposure. In addition, the kurtosis value of 113.867 confirms extreme leptokurtosis, indicating heavy tails and the presence of significant outliers. This suggests that equity risk is highly concentrated in a small number of banks, making it a structurally uneven risk factor within the Kenyan banking sector.

Financial performance (FP), measured as a standardized composite of ROE and ROA, records a mean of 0.000, reflecting the normalization process. The standard deviation of 0.793 indicates considerable variation in performance across banks and over time. The minimum value of -5.886 and maximum value of 1.277 show wide dispersion in performance outcomes, indicating substantial heterogeneity in profitability across institutions. The skewness value of -3.677 reflects a strong negative skew, suggesting that most banks record relatively higher performance values, while a few extreme negative observations significantly distort the distribution. The kurtosis value of 22.674 further confirms a leptokurtic distribution, indicating the presence of outliers and non-normality.

Overall, the descriptive results indicate that equity risk is highly unevenly distributed across banks, with a small subset of institutions accounting for extreme exposure levels. Financial performance also shows significant variability and sensitivity to extreme observations. This preliminary evidence suggests a potentially meaningful association between equity risk exposure and financial performance dispersion, justifying further inferential analysis to establish the direction, magnitude, and statistical significance of the relationship.

4.2 Inferential Statistics Results

Inferential statistics were employed to establish the nature and strength of relationships between study variables and to enable generalization of findings from the sample of 38 commercial banks in Kenya to the wider banking population. The analysis followed a panel data framework covering the period 2020–2024 and was estimated using a random-effects Generalized Least Squares (GLS) regression model, as justified by the Hausman specification test results presented earlier. The inferential analysis focused on testing the null hypothesis that equity risk has no statistically significant relationship with financial performance of commercial banks in Kenya.

The study applied a simple linear regression model to isolate the effect of equity risk (EQR) on financial performance (FP), measured using a composite index derived from standardized ROA and ROE. The model is specified as:

$$FP_{it}=\beta_0+\beta_1 EQR_{it}+\varepsilon_{it}$$

The regression results examining the relationship between equity risk and financial performance are presented in Table 4.9.

Table 2: Simple Linear Regression Results for Equity Risk and Financial Performance

Variable	Coefficient (β)	Std. Error	z-value	p-value	95% Confidence Interval
EQR	0.0964	0.0108	8.96	0.000	[0.0753, 0.1174]
Constant	-0.0388	0.1045	-0.37	0.710	[-0.2438, 0.1661]

The regression results in Table 2 indicate that equity risk (EQR) has a positive and statistically significant relationship with financial performance ($\beta = 0.0964$, $p < 0.001$). This implies that a one-unit increase in equity risk is associated with a 0.0964 increase in financial performance, holding other factors constant.

The statistical significance at the 1% level confirms that the relationship is not due to random variation but reflects a systematic association within Kenyan commercial banks over the study period. Accordingly, the null hypothesis (H_{02}), which stated that there is no significant relationship between equity risk and financial performance, is rejected.

4.3 Discussion of Findings

The positive relationship suggests that Kenyan commercial banks that take higher exposure to equity risk tend to achieve better financial performance. This outcome aligns with the fundamental risk-return trade-off principle in financial theory, which posits that higher risk exposure is compensated by higher expected returns.

In practical terms, equity risk exposure in commercial banks is often associated with portfolio investments, capital market participation, and valuation fluctuations in equity holdings. Banks that strategically manage and optimize their

equity positions are likely to benefit from capital gains and improved return streams, thereby enhancing overall profitability.

The findings are consistent with Anh, Duy, and Nam (2022), who established that financial decisions significantly influence equity risk in listed firms. Their results suggest that internal financial strategies shape risk exposure, which is consistent with the current study's finding that such risk contributes positively to performance outcomes.

Similarly, Jens et al. (2022) found that capital structure decisions, particularly excess capitalization, are critical determinants of equity risk and can influence volatility in firm value. Their study supports the view that equity-related financial decisions have meaningful implications for firm outcomes, although they caution that risk effects may be complex and context-dependent.

However, the results contrast with Kapp and Kristiansen (2021), who observed that equity risk premia in the Euro Area were largely driven by macroeconomic factors and discount rate adjustments rather than risk compensation effects. Their findings suggest that in more developed and stable financial systems, equity risk may not necessarily translate into improved performance outcomes. The divergence may be explained by differences in market maturity, regulatory environments, and structural characteristics between developed economies and emerging markets such as Kenya.

5. CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusions

The study concludes that equity risk has a strong, positive, and statistically significant relationship with the financial performance of commercial banks in Kenya. This implies that banks with higher exposure to equity-related risk tend to achieve superior financial outcomes. The finding supports the risk-return trade-off theory, which posits that higher levels of risk are compensated by higher expected returns. In the context of Kenyan commercial banks, this suggests that equity market participation, portfolio investment decisions, and capital structure optimization contribute positively to profitability.

The result further indicates that equity risk is not merely a source of financial vulnerability but a strategic financial lever that enhances performance when effectively managed. This implies that commercial banks in Kenya are increasingly adopting sophisticated investment and risk management strategies that allow them to convert equity market exposure into financial gains. Therefore, equity risk emerges as a critical determinant of financial performance and a key channel through which banks improve profitability and shareholder value.

5.2 Recommendation

Based on the findings, the study recommends that commercial banks in Kenya should adopt well-calibrated equity risk management and investment strategies that optimize returns while maintaining acceptable risk thresholds. Banks should not avoid equity risk entirely, but rather manage and leverage it strategically to enhance financial performance.

Specifically, banks should strengthen portfolio diversification strategies, improve capital allocation efficiency, and enhance investment decision-making frameworks to ensure that equity exposure contributes positively to profitability. The use of advanced financial analytics, risk measurement models (such as Value at Risk and beta sensitivity analysis), and real-time market monitoring tools is recommended to support informed equity investment decisions.

Additionally, regulatory authorities should continue reinforcing prudential oversight to ensure that increased equity risk exposure does not compromise systemic stability. This includes enforcing capital adequacy requirements and risk disclosure standards that ensure transparency in equity-related exposures. In overall, the study recommends a balanced approach where equity risk is actively managed as a strategic performance-enhancing tool rather than a purely defensive risk factor within the Kenyan banking sector.

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