REVIEWED JOURNAL of INTERNATIONAL Financial Management
[ISSN 2663-127X]
Vol. 7, Iss. 1 (2026), pp. 95 - 107, June 15, 2026. www.reviewedjournals.com, ©Reviewed Journals

MARKET RISK PREMIA AND STOCK RETURNS OF COMMERCIAL BANKS LISTED AT THE NAIROBI SECURITIES EXCHANGE, KENYA

[1] Samuel Wasiche, [2] E. M. Kimani & [3] David Kimani Nduruhu

[1] Msc Finance Student, School of Business and Entrepreneurship, Jomo Kenyatta University of Agriculture and Technology, Kenya
[2] Lecturer, Jomo Kenyatta University of Agriculture and Technology, Kenya
[3] CIA, Jomo Kenyatta University of Agriculture and Technology, Kenya

Accepted: June 4, 2026

ABSTRACT

Stock returns play a central role in capital allocation and investment decision-making by serving as a market-based indicator of the cost of equity capital for firms and investment projects. In an efficiently functioning stock market, return generation enables investors to assess risk accurately and translate it into expected compensation, thereby facilitating informed portfolio and financing decisions. However, in the Kenyan capital market, stock returns of commercial banks listed at the NSE have remained relatively volatile and, at times, subdued due to fluctuations in systematic market risk and changing macroeconomic conditions. These fluctuations have exposed investors to substantial valuation losses, especially during periods of foreign capital outflows, when international investors reallocate funds to perceived safer markets in developed economies. This study examined the effect of market risk premia on the stock returns of commercial banks listed at the NSE, Kenya. The study was supported by the capital asset pricing model (CAPM). The population of the study was drawn from the 11 commercial banks listed at the NSE in Kenya as of December 2025, and the study was conducted through a census approach. The study adopted a descriptive research design and utilized secondary panel data drawn from the NSE, CBK reports, and published financial statements of the listed commercial banks over ten years, from 2016 to 2025. Data was analyzed using a panel regression model, supported by descriptive statistics and diagnostic tests to ensure the validity and reliability of the estimated models. The findings revealed that the model had strong explanatory power with an R-squared of 0.6124, indicating that approximately 61.24% of the variation in stock returns is explained by the selected risk premia. The regression results showed that market risk premium ($\beta = 0.4218$, $p < 0.01$) was found to have a strong positive and significant effect on stock returns. The study concludes that market risk premia significantly influence stock returns of commercial banks listed at the NSE and that multi-factor asset pricing models provide a more comprehensive explanation of stock return behavior in the Kenyan context. The study recommends that investors are encouraged to adopt multi-factor investment strategies that consider market conditions, while bank management should focus on efficiency-driven growth to enhance shareholder value.

Key Words: *Market Risk Premia; Stock Returns of Commercial Banks Listed at the Nairobi Securities Exchange, Kenya.*

CITATION: Wasiche, S., Kimani E. M., & Nduruhu,D. K. (2026). Market risk premia and stock returns of commercial banks listed at the Nairobi Securities Exchange, Kenya. *Reviewed Journal International of Financial Management*, 7 (1), 95 – 107.

BACKGROUND OF THE STUDY

Stock market returns are a fundamental element of any financial system because they mirror the performance of investments and serve as a key indicator of economic health. Financial markets facilitate the mobilization and allocation of resources by transferring funds from surplus units, such as households and investors, to deficit units, such as firms and governments, thus promoting productive investment and economic development (Aduda & Muturi, 2021). Stock returns, derived from capital gains and dividend income, are essential indicators of investment performance and play a vital role in guiding portfolio diversification and risk assessment decisions (Ngugi, 2022). In efficient markets, stock prices are expected to reflect all available information, and returns are therefore influenced by both systematic and unsystematic risk factors (Ali, 2023).

According to Brealey, Myers, Allen, and Mohanty (2020), stock returns represent the reward investors earn for bearing the risk of providing capital to firms, making them a fundamental measure in investment decision-making and asset pricing. Shibanda, Olweny, and Tabitha (2024) define stock returns as the outcome of market efficiency, where prices reflect available information and returns are determined by both systematic and idiosyncratic factors.From a theoretical perspective, asset pricing models are explicitly designed to explain expected total returns, not accounting-based performance measures or price changes in isolation (Sharpe, 1964; Fama & French, 2015). Risk premia are priced into securities through expected excess returns, which are best captured using total returns.

In asset pricing theory, risk premia represent the link between risk and return and explain why different assets earn different expected returns in equilibrium. Traditional models emphasize the market risk premium in capturing distinct dimensions of systematic risk (Fama & French, 2015; Hou, Xue, & Zhang, 2015).Market risk premia represent the excess return of the market portfolio over the risk-free rate and capture the compensation investors require for bearing systematic market-wide risk (Shibanda, Olweny, & Tabitha, 2024).Although the market risk premium itself is common across all firms, its impact differs across firms due to differences in systematic risk exposure (beta). Firms with higher betas are more sensitive to market movements and therefore experience larger fluctuations in excess returns when the market risk premium changes (Sharpe, 1964).

Commercial banks listed at the NSE, Kenya, constitute a core segment of Kenya's capital market and are among the most visible corporates for domestic and foreign investors (NSE 2023). Because listed banks are large and frequently traded, their stock returns both reflect and transmit economy-wide shocks, making them ideal subjects for asset-pricing analysis (Muinde, 2018).This gap provides an opportunity to evaluate the relevance of market risk premia of commercial banks listed at the NSE, Kenya, and to establish whether global asset pricing insights hold in a frontier market setting like Kenya. Addressing this gap not only advances academic knowledge but also provides practical tools for market participants and policymakers. By offering empirical evidence on how market risk premia influence stock returns, the study enhances investors' ability to make informed portfolio allocation and risk management decisions.

Statement of the Problem

Commercial banks listed on the NSE are central to Kenya's financial intermediation, making stable stock returns crucial for investor confidence and economic stability (Malalu, 2025). However, evidence from CBK, NSE, and bank financial statements shows persistent return fluctuations, repeatedly causing investor panic and raising concerns about the stability of these institutions. To be considered acceptable, commercial bank stock returns must generally outperform low-risk alternatives such as the T-bill yield, which is approximately 8.14% to 10%, and top money market funds offer between 11% and 13.5% (CBK 2024). This has not been the case, as notable fluctuations and a decline below this threshold persist. For instance, CBK (2016) reveals that the total returns of listed commercial banks increased from 8.43% in 2017 from 7.67% in 2016. In 2018, a sharp rise of 13.4% was noted, followed by a significant drop of 7.97% in 2019 and 7.55% in 2020 (CBK 2021).In 2021, there was a slight rebound to 11.50%, followed by a subsequent decline to 7.13% in 2022(CBK 2023).

Returns improved slightly to 7.50% in 2023 before falling sharply again to 6.96% in 2024 and 5.74% in 2025(CBK 2025). Persistent returns that fall below suggest that investors are not being adequately compensated for bearing the higher systematic risks associated with bank stocks. This situation raises critical concerns about whether market risk premia mechanisms at the NSE correctly incorporate risk premia into bank stock valuations. Yet, evidence on the drivers of these fluctuations remains limited and inconclusive, with studies reporting mixed outcomes. For example, Muinde (2017) found a significant effect of risk premia on stock returns at the NSE, whereas Shibanda, Olweny, and Nasieku (2023) reported no significant relationship, contradicting Fama–French model expectations. Similarly, Ali and Muriithi (2023) found that market risk premia were statistically significant but negatively associated with stock returns, while Wamicwe and Olweny (2021) showed that market risk premia significantly influenced stock returns. These inconsistencies highlight the lack of agreement on how risk premia influence returns at the NSE, reinforcing the need to investigate their role in explaining the volatility of total stock returns among listed commercial banks. Globally, market risk premia are widely recognized as key drivers of stock return fluctuations. Numerous global studies have explored these effects, including Zhou, Tang, and Wu (2022) in China, Basiewicz and Auret (2020) in Australia, Mohamed and Khairy (2024) in Malaysia, and Hearn and Piesse (2023) in the UK, but little has been explored in the Kenyan context. This gap highlighted the need to establish whether internationally validated market risk premia can explain the total stock returns of NSE-listed commercial banks, given their central role in Kenya's financial market and strong influence on investor confidence.

Objectives of the Study

The objective was to assess the effect of market risk premia on stock returns of commercial banks listed at the Nairobi Securities Exchange, Kenya.

LITERATURE REVIEW

Theoretical Review

This section provided the theory that was applied to anchor the study.

Capital Asset Pricing Model (CAPM)

The Capital Asset Pricing Model (CAPM) was developed by Sharpe in 1964, Lintner in 1965, and Mossin in 1966.CAPM posits that the expected return on a risky asset is determined by its sensitivity to movements in the overall market portfolio, measured by the beta coefficient (β) (Sharpe, 1964). The model asserts that investors are only compensated for bearing systematic (non-diversifiable) risk, since idiosyncratic risk can be eliminated through diversification (Lintner, 1965; Merton, 1973). The market risk premium, defined as the excess return of the market portfolio over the risk-free rate, represents the compensation investors require for exposure to aggregate market risk. Assets with higher betas are therefore expected to generate higher average returns, reflecting greater exposure to macroeconomic fluctuations such as business cycles, inflation, and interest rate shocks (Bodie et al., 2021).

CAPM is built on several simplifying assumptions that facilitate analytical tractability. It assumes that investors are rational and risk-averse, making decisions solely based on expected returns and variance of returns (Sharpe, 1964). It further assumes homogeneous expectations, meaning all investors have identical information and form the same expectations about asset returns and risk (Lintner, 1965). Markets are assumed to be perfect and frictionless, with no taxes, transaction costs, or restrictions on short selling, and investors can borrow or lend unlimited amounts at the same risk-free rate (Bodie et al., 2021). Additionally, the model assumes a single-period investment horizon, implying that investors plan over the same time frame and rebalance portfolios simultaneously (Merton, 1973).

CAPM has been widely criticized for its restrictive and often unrealistic assumptions. Roll (1977) questioned the empirical testability of CAPM, arguing that the true market portfolio is unobservable, making

definitive validation difficult. Empirical studies have also demonstrated that beta alone fails to fully explain cross-sectional differences in stock returns, leading to the identification of anomalies such as size, value, and momentum effects (Fama & French, 2015). In emerging and frontier markets, CAPM's limitations are further amplified by market inefficiencies, low liquidity, information asymmetry, and structural frictions that violate the model's core assumptions (Ali & Muriithi, 2023). As a result, CAPM often underestimates risk in such markets and provides incomplete explanations of observed return behavior.

Notwithstanding these criticisms, CAPM remains extensively applied in both academic and practical settings. It is widely used in estimating the cost of equity, evaluating investment projects, portfolio performance measurement, and regulatory capital assessments (Damodaran, 2024).CAPM provides the core theoretical foundation for assessing the effect of market risk premium on stock returns. By focusing on systematic market risk, the model offers a benchmark framework for examining how broad economic and market-wide factors influence the stock returns of listed commercial banks at the NSE. The model, therefore, enables this study to assess the extent to which exposure to overall market movements explains variations in stock returns, while also serving as a reference point for evaluating the incremental explanatory power of additional risk premia.

Empirical Review

Hearn and Piesse (2023) examined how the market risk premium influences stock return behavior in developed equity markets in the United Kingdom. The study employed a comparative research design, assessing variations in return dynamics across firms and different market conditions. It focused on companies listed on the London Stock Exchange (LSE) and covered ten years from 2011 to 2022. Secondary data were obtained from LSE databases and firms' financial records, including stock price and market index data. Using the CAPM together with multi-factor asset pricing models, the study found that the market risk premium plays a significant role in explaining stock returns, although its magnitude varies across firms and market phases.

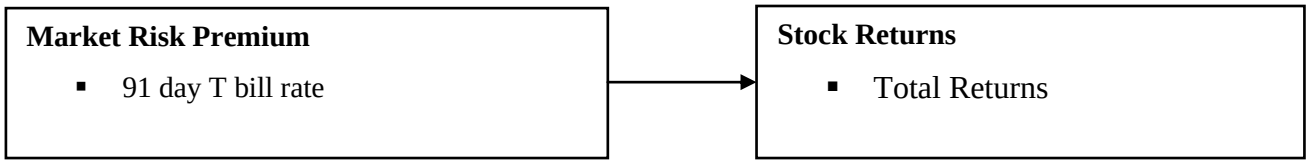
Basiewicz and Auret (2020) examined the effect of market risk premium and stock returns in South Africa. The study employed an explanatory research design and analyzed companies listed on the Johannesburg Stock Exchange (JSE) over ten years (2009–2018). Secondary data were sourced from JSE databases and firms' published financial statements. The analysis was conducted using the Fama–French three-factor and five-factor asset pricing models, estimated through panel regression techniques. The results showed that the market risk premium exerted a positive and statistically significant effect on stock returns, although the impacts of size and value premia were found to differ across sectors and over time.

Wamicwe and Olweny (2021) conducted a study in Kenya focusing on the determinants of stock returns at the NSE. The study used firm-level data and an explanatory research design. Over a period of eight years (2011–2018), the scope focused on listed companies at the Nairobi Securities Exchange. Publicly available financial statements and NSE databases were the sources of the data. The study employed a multi-factor regression model, incorporating the market risk premium, firm size, and value factors, with estimation conducted using panel data regression techniques. The findings revealed that the market risk premium had a statistically significant positive effect on stock returns, while the effects of other firm-specific factors were mixed.

Muinde (2017) conducted a study to examine the effect of market risk premium and stock market returns of firms listed at the NSE, Kenya. The study was conducted for a period of 10 years between 2006 and 2015. Employing a descriptive-correlational research design and secondary data sourced from NSE and Capital Markets Authority reports, the study applied the Capital Asset Pricing Model estimated through ordinary least squares regression. The findings revealed a positive and statistically significant relationship between market risk premium and stock returns, indicating that investors at the NSE are compensated for bearing systematic risk.

Conceptual Framework

The conceptual framework illustrates the relationship between market risk premia and stock returns of commercial banks listed on the NSE.



Independent Variable **Dependent Variable**

Figure 1: Conceptual Framework

METHODOLOGY

This section outlines the methodological framework adopted to examine the effect of market risk premia on stock returns of commercial banks listed on the NSE, Kenya.

Research Design

The descriptive research design was adopted. The descriptive aspect enables the study to summarize and present patterns, trends, and characteristics of market risk premia and stock returns among commercial banks listed at the NSE.

Population of the Study

The target population comprised 11 commercial banks listed at the NSE over the period 2016–2025. The choice of listed commercial banks is justified on grounds that commercial banks play a central role in Kenya's financial system and dominate the NSE's financial sector in terms of market capitalization, trading activity, and investor interest (CBK, 2024).

Census Study

A census approach was adopted by including all commercial banks listed on the NSE.

Data Collecting Instruments

A secondary data collection sheet was used as the primary data collection instrument. A secondary data collection sheet is a structured template designed to extract and record quantitative data from existing sources in a standardized manner (Cooper & Schindler, 2014). The instrument captured annual data on stock prices, dividends, total assets, book values, market capitalization, and other financial indicators required to compute stock returns and asset pricing risk premia for commercial banks listed at the NSE.

Data Collection Procedure

Secondary data was collected through a structured and sequential process to ensure consistency and validity of the information used in the analysis. An introduction letter was obtained from the Jomo Kenyatta University of Science and Technology before the data collection exercise commenced. The study collected secondary data utilizing a data collection sheet, which was used to compile information from reports released by the CBK, NSE, and respective commercial banks' reports.

Data Processing and Analysis

The collected secondary panel data were first edited, coded, and cleaned to ensure completeness, consistency, and accuracy. Editing involved checking for missing values, outliers, and inconsistencies in the data extracted from NSE, CBK, and banks' financial statements. The data was then coded and entered into statistical software for analysis. The analysis was conducted using a panel regression model, which is suitable for data that combine cross-sectional (banks) and time-series (years) dimensions (Baltagi, 2021). Descriptive statistics, including means, standard deviations, minimums, and maximums, were computed to summarize the characteristics and distribution of stock returns and asset pricing risk. Inferential analysis included correlation

and panel regression analysis. Statistical significance will be tested at the 5% level. The econometric model took the following form:

$$Y_{it} = \beta 0 + \beta_1 X_{1it} + \varepsilon_{it} \quad \text{Equation 1}$$

Where,

Y is the stock returns of listed commercial banks in Kenya

β_0 represents the constant or coefficient of intercept

β_1 represent the coefficients of independent variable

X_1 represents the market risk premium

it represents indices for individuals and time

ε_{it} represents the error term

FINDINGS AND DISCUSSION

This section presents the empirical findings of the study and provides an analytical discussion of the results.

Descriptive Statistics Results

Descriptive statistics provide a preliminary overview of the distributional characteristics of the study variables before inferential analysis is conducted. The descriptive statistics are presented in Table 1.

Table 1: Descriptive Statistics Results

Statistics	N	Min	Max	Mean	SD	Skewness	Kurtosis
Stock Return	110	–0.1543	0.2387	0.0876	0.0642	0.4625	2.7814
Market Risk Premium	110	-0.2136	0.3015	0.0953	0.0826	0.1534	2.9456

The results in Table 1 show that the minimum value of -0.1543, which suggests that some banks experienced negative returns of up to 15.43%, implying significant downside risk during certain periods. The maximum value of 0.2387 shows that returns reached as high as 23.87%, implying that favourable economic conditions and bank-specific performance improvements led to substantial gains in some years. The mean return of 0.0876 (8.76%) implies moderate average performance. However, this average is slightly below the upper threshold of risk-free alternatives such as Treasury Bills (approximately 8–10%), suggesting that bank stocks may not consistently provide adequate risk compensation. The standard deviation of 0.0642 indicates moderate volatility, implying that returns fluctuate considerably across banks and time. The skewness value of 0.4625 falls within the acceptable threshold of ±1 for approximate normality (Hair et al., 2019). The kurtosis value of 2.7814 lies within the commonly accepted range of 2 to 4 for financial panel data (Gujarati & Porter, 2020). Similar moderate mean returns have been reported by Wamicwe and Olweny (2021) in Kenya, Hearn and Piesse (2023) in the UK banking sector, Basiewicz and Auret (2020) in Australia, and Mohamed and Khairy (2024) in Malaysia. In contrast, Shibanda, Olweny, and Nasieku (2023) found weak and statistically insignificant excess returns at the NSE.

The results of the market risk premium revealed a minimum value of -0.2136, suggesting that during severe downturns, the market return fell substantially below the risk-free rate. The maximum of 0.3015 indicates strong bullish market conditions, implying that during peak economic or financial expansion periods, the overall market return exceeded the risk-free rate by as much as 30.15%, providing substantial compensation for systematic risk exposure. The mean of 0.0953 (9.53%) implies substantial compensation for systematic risk, supporting CAPM predictions. The magnitude of 9.53% suggests that market-wide conditions play a dominant role in explaining return variations compared to firm-specific characteristics alone. This reinforces

the relevance of CAPM as a benchmark model within the Kenyan context, implying that aggregate risk factors significantly influence valuation and investor expectations. The standard deviation of 0.0826 is the highest among the variables, implying that systematic market risk is the most volatile factor affecting bank stock returns. The skewness (0.1534) lies within ±1, indicating near symmetry. The kurtosis (2.9456) is very close to 3, confirming mesokurtic distribution and acceptable normality. Similar findings were reported by Hearn and Piesse (2023). However, Ali and Muriithi (2023) reported negative associations between some risk premia and returns, contradicting CAPM expectations.

Trend Analysis

Trend analysis examines the movement and direction of a variable over time in order to identify patterns, fluctuations, and long-term tendencies. Trend analysis was conducted to examine the patterns and direction of change in stock market returns and market risk premium of commercial banks listed at the NSE, Kenya, over the 10-year period.

Trend Analysis for Sock Returns

The study conducted the trend analysis for stock returns to establish the pattern and direction of changes in the ability of commercial banks listed at the NSE. The results are shown in Figure 1.

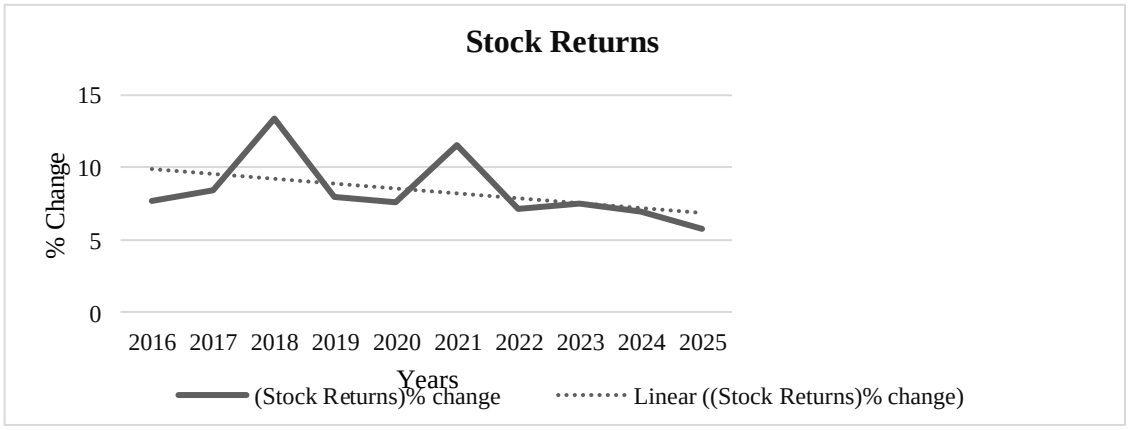


Figure 2: Trend Analysis for Stock Returns

According to the results in Figure 2, stock returns increased slightly from approximately 8% in 2016 to about 9% in 2017 and sharply in 2018, peaking at approximately 13%. This indicates strong bullish market conditions and increased investor confidence, possibly driven by improved earnings performance and expansion in banking activity. A significant decline occurred in 2019 and 2020, with returns falling back to 8% and further to 7%. A strong rebound was observed in 2021, with returns rising to approximately 12%. This recovery likely reflects post-pandemic reopening, improved loan restructuring outcomes, and renewed investor confidence. Returns declined again in 2022 to about 7%, and stabilized around 7–8% in 2023, indicating a temporary equilibrium but no sustained recovery. A gradual downward movement is observed in 2024, and by 2025, returns declined further to approximately 6%, marking the lowest level within the study period and reinforcing the downward trajectory.

The linear trend line clearly shows an overall downward movement across the 2016–2025 period, despite intermittent spikes in 2018 and 2021. This indicates that while short-term improvements occurred, the long-run direction of stock returns is declining. This pattern strongly aligns with the statement of the problem, which highlighted persistent fluctuations and an overall decline in stock returns of listed commercial banks. The graphical evidence confirms that investor compensation has not been stable and appears to weaken over time. Such a declining trend raises concerns regarding whether asset pricing mechanisms adequately compensate investors for bearing systematic and sector-specific risks within the Kenyan banking sector.

The observed cyclical volatility and overall declining tendency are consistent with findings by Wamicwe and Olweny (2021), who reported unstable and fluctuating returns among NSE-listed firms. Similarly, Shibanda, Olweny, and Nasieku (2023) found inconsistent risk–return relationships within the Kenyan market, suggesting weak persistence of excess returns. However, the declining long-term trajectory contradicts findings by Fama and French (2015), who documented relatively stable factor-driven returns in developed markets, and Hou, Xue, and Zhang (2015), who reported stronger persistence of risk premia internationally. These contrasting findings suggest that structural differences, market inefficiencies, and macroeconomic volatility in frontier markets such as Kenya may weaken the stability of expected returns.

Trend Analysis for Market Risk Premium

Trend analysis of the Market Risk Premium examines the movement of systematic market-related risk compensation over time. The results are indicated in Figure 3.

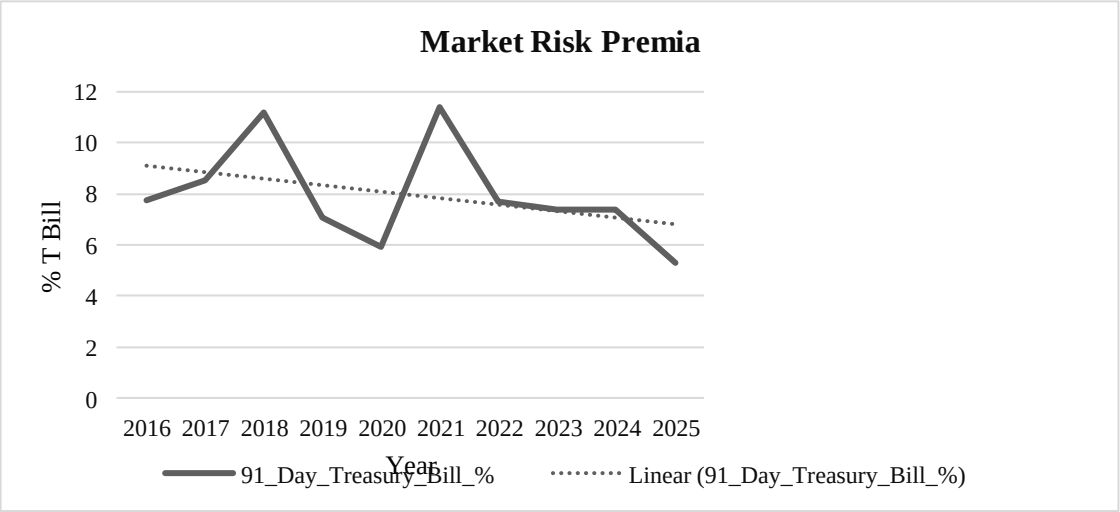


Figure 3: Trend Analysis for Market Risk Premium

The trend results for the market risk premium show a moderate increase from 8% in 2016 to about 8.5% in 2017 and a sharp rise in 2018, peaking at 12%. This indicates strong compensation for market-wide risk and possibly heightened macroeconomic uncertainty or increased demand for risk-adjusted returns. The premium declined significantly in 2019 to around 7% and further declined in 2020, reaching 6%, reflecting accommodative monetary policy during the COVID-19 pandemic, when interest rates were lowered to stimulate economic activity. The premium surged again in 2021 to 12%, indicating tightening monetary conditions and increased compensation for systematic risk amid economic recovery. A sharp decline followed in 2022, dropping to 7%, suggesting stabilization of monetary conditions and reduced market-wide volatility.

In 2023, market risk premium remained relatively stable around 7%, indicating steady macroeconomic conditions, but declined further in 2024 and 2025 to 7% and 5%, respectively, marking the lowest level during the period. The linear trend line shows a gradual downward movement over the 2016–2025 period despite intermittent spikes in 2018 and 2021. This indicates that while market-wide risk compensation fluctuated significantly, the long-run direction reflects a declining systematic risk premium. The cyclical spikes observed in 2018 and 2021 are consistent with Rahmadani (2024), who argued that market risk premia fluctuate with macroeconomic conditions. Similarly, Damodaran (2024) notes that risk premia tend to increase during periods of economic uncertainty and tighten during stabilization phases. However, the declining long-run trend contrasts with Fan (2022), who found relatively stable long-term market premia in developed economies. It also differs from Sonenshine · 2025), who documented stronger persistence of systematic risk pricing in Austria.

Inferential Statistics

Inferential statistics were employed to examine the relationship between market risk premia and stock returns of commercial banks listed at the NSE, Kenya.

Correlation Analysis

Correlation analysis was conducted to examine the strength and direction of the linear relationship between stock returns and market risk premia.Table 2 presents the results of the correlation analysis

Table 2: Correlation Analysis

Variable		Stock Returns	Market Risk Premium
Stock Returns	Pearson Correlation	1.0000	
Market Risk Premium	Pearson Correlation	0.4516**	
	Sig.(2-tailed)	(0.0000)	1.0000
N	110	110	110

p-values are in parentheses*** $p \leq 0.01$, ** $p \leq 0.05$, * $p \leq 0.10$

The correlation results indicate that market risk premium has a positive and statistically significant relationship with stock returns ($r = 0.4516$, $p = 0.0000$), implying that increases in systematic market risk are associated with higher stock returns. This suggests that market-wide factors play a dominant role in influencing the performance of commercial banks, consistent with asset pricing theory. The findings of this study are consistent with those of Muinde (2017) and Nyambura (2017), who found that market risk premia are positively associated with stock returns at the NSE.

Model Summary

The model summary presents the overall goodness-of-fit of the panel regression model and indicates how well the independent variable explain variations in stock returns of commercial banks listed at the NSE, Kenya. The results are presented in Table 3.

Table 3: Model Summary

Statistic	Multiple R	R-squared (R^2)	Adjusted R-Squared	F-statistic	Prob (F-statistic)
Model	0.7826	0.6124	0.5871	24.3865	0.0000

The Multiple R value of 0.7826 indicates a strong positive correlation between the observed stock returns and the values predicted by the regression model. This suggests that the independent variable have a strong linear relationship with stock returns. The R-squared value of 0.6124 implies that approximately 61.24% of the variation in stock returns is explained by market risk premium. The finding supports the theoretical foundation of multi-factor asset pricing models, which argue that returns are not random but are influenced by identifiable risk premia (Fama & French, 1993; Hou, Xue, & Zhang, 2015).

However, the remaining 38.76% of the variation is not explained by the model, indicating that other factors also play a role in determining stock returns. These may include firm-specific characteristics such as management efficiency, corporate governance, liquidity conditions, macroeconomic shocks, regulatory changes, and behavioral factors among investors. This suggests that while the model is strong, it is not exhaustive. The adjusted R-squared of 0.5871 shows that after accounting for the number of predictors, about 58.71% of the variation in stock returns remains explained. The small difference between R^2 and adjusted R^2 suggests that the model is well specified and free from unnecessary variables. The F-statistic of 24.3865 with a p-value of 0.0000 indicates that the overall regression model is statistically significant at the 5% level. Since $p \leq 0.05$, the null hypothesis that all coefficients are jointly equal to zero is rejected.

Analysis of Variance (ANOVA)

The Analysis of Variance (ANOVA) test was conducted to examine the overall significance of the regression model in explaining variations in stock returns of commercial banks listed at the NSE. The results are presented in Table .

Table 4: ANOVA Results

Source of Variation	Sum of Squares (SS)	df	F-statistic	p-value
Regression	0.2548	4	0.0637	0.0000
Residual	0.1614	105	0.0015	
Total	0.4162	109		

The ANOVA results show that the regression model is statistically significant. The F-statistic is 24.3865 with a corresponding p-value of 0.0000, which is less than the 0.05 significance level. Therefore, the null hypothesis that all regression coefficients are jointly equal to zero is rejected. The model provides a better fit compared to a model with no predictors. The relatively high F-statistic further indicates that the variation explained by the regression model is significantly greater than the unexplained variation (residual), confirming the overall usefulness of the model in explaining stock return behavior.

Regression Coefficient Results

The regression results were estimated using a Fixed Effects panel model with heteroscedasticity-robust standard errors to correct for the presence of heteroscedasticity and ensure reliable statistical inference. The results are presented in Table 5.

Table 5: Fixed Effects Regression Coefficients (with Robust Standard Errors)

Variable	Coefficient (β	Std. Error	t-Statistic	p-value	95% Confidence Interval
Constant	0.0214	0.0098	2.1837	0.0315	0.0021 - 0.0407
Market Risk Premium	0.4218	0.0895	4.7126	0.0000	0.2464 - 0.5972

The output generated in Table 4.5 is summarized in the equation.

$$\mathbf{Y = 0.0214+0.4218X_{3it}}$$

Hypotheses Test Results.

The results reveal that Market Risk Premium has a positive and highly significant effect on stock returns ($\beta = 0.4218$, $p = 0.0000$). The coefficient ($\beta = 0.4218$) indicates that a one-unit increase in the market risk premium will lead to an increase in stock returns by 0.4218 units, holding other factors constant. This highlights the strong influence of systematic risk on the stock return behaviour's p-value, which is less than 0.05 and is therefore rejected. This implies that market-wide risk is the most dominant determinant of stock returns, indicating that changes in macroeconomic conditions and overall market performance significantly influence bank stock returns. This finding strongly supports the Capital Asset Pricing Model (CAPM), which posits that expected returns are determined by exposure to systematic risk. The result is consistent with Nyambura (2017) and Hearn and Piesse (2023), who found that market risk significantly influences stock returns. However, it contradicts Shibanda, Olweny, and Nasieku (2023), who found that market risk was not consistently significant in explaining stock returns at the NSE, suggesting possible inefficiencies in risk pricing.

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

The study found that market risk premium has a positive and highly significant effect on stock returns, making it the most dominant factor among the variables analyzed. This implies that stock returns of commercial banks are largely driven by systematic risk factors such as economic growth, inflation, interest rates, and overall

market performance. The relatively large coefficient indicates that changes in market conditions have a substantial impact on stock returns. Trend analysis also showed that fluctuations in market risk premiums closely mirrored movements in stock returns, reinforcing the importance of macroeconomic conditions in determining equity performance. This finding underscores the central role of systematic risk in asset pricing within the Kenyan financial market.

The study concludes that market risk premium has a positive and highly significant effect on stock returns and is the most dominant determinant among the variables examined. This implies that stock returns of commercial banks are primarily driven by systematic risk factors such as macroeconomic conditions, interest rate movements, inflation, and overall market performance. The strong influence of market risk indicates that bank stock returns are highly sensitive to changes in the economic environment, reinforcing the importance of macroeconomic stability in sustaining investor returns. This finding confirms that exposure to market-wide risk is a critical factor in determining stock performance and underscores the central role of systematic risk in asset pricing within the Kenyan financial market.

The study recommends that investors should closely monitor macroeconomic indicators such as interest rates, inflation, and overall market performance when making investment decisions. Portfolio diversification across sectors and asset classes is also recommended to reduce exposure to systematic risk. The study recommends the implementation of policies aimed at enhancing macroeconomic stability, improving market efficiency, and strengthening investor protection. Stable economic conditions and transparent financial markets will help ensure that stock prices accurately reflect underlying risks and fundamentals. For bank management, it is essential to adopt proactive risk management strategies to mitigate exposure to market-wide shocks. This may include diversifying income sources, improving asset-liability management, and strengthening capital adequacy to withstand economic fluctuations.

Recommendations for Further Research

First, future studies may extend the scope beyond commercial banks to include other sectors such as insurance, manufacturing, or investment firms to determine whether the observed relationships are consistent across different industries. Second, further research may incorporate additional asset pricing factors such as liquidity risk, momentum, profitability, firm governance, or macroeconomic variables to improve the explanatory power of the model.Third, comparative studies between Kenya and other emerging or frontier markets may be conducted to examine whether the behavior of market risk premia differs across countries with varying levels of market development.Finally, future research may explore the role of behavioral factors such as investor sentiment, herding behavior, and market psychology in influencing stock returns. These factors may explain part of the variation in stock returns not captured by traditional risk premia, given that the current model explains 61.24% ($R^2 = 0.6124$) of the variation in stock returns, leaving approximately 38.76% unexplained. Overall, these suggested areas provide opportunities for enhancing model completeness, improving explanatory power, and deepening understanding of stock return dynamics in the Kenyan context and beyond.

REFERENCES

Acaravci, K.S., & Karaomer, Y. (2017). Fama-French Five Factor Model: Evidence from Turkey. *International Journal of Economics and Financial Issues*, *7*(6): 130-137.

Afego, P. N., & Biktimirov, E. N. (2024). Market Reactions of African and Non-African Firms to Changes in the S&P Africa 40 index. *Journal of Asset Management. Advance online Publication. 10*(2), 87–94.

Adjasi, C. K. D., Harvey, S. K., & Agyapong, D. (2020). Market Risk and Stock Returns: Evidence from the Ghana Stock Exhange. *Journal of African Business, 21*(3), 347–365.

Ali, S., & Muriithi, J. G. (2023). Market Efficiency and Asset Pricing Anomalies in Frontier Markets: Evidence from Kenya. *African Journal of Economic and Management Studies, 14*(1), 1–18.

Arabi, K. A. M. (2018). Macroeconomic Variables and Stock Returns in Khartoum Stock Exchange. *International Journal of Business and Social Science*, 5(7), 27–42.

Berk, J. B., & Van, J. H. (2016). Assessing Asset Pricing Models using Revealed Preference. *Journal of Financial Economics, 44* (2)1-23.

Bildirici, M. (2022). Asset Pricing Anomalies and Market Efficiency. *Physica A: Statistical Mechanics and Its Applications, 585* (12) 64-91.

Cochrane, J. H. (1991). Production-based Asset Pricing and the Link between Stock Returns and Economic Fluctuations. *Journal of Finance, 46*(1), 209–237.

Fama, E. F., & French, K. R. (2015). A Five-Factor Asset Pricing Model. *Journal of Financial Economics, 116*(1), 1–22.

François, G. G & Théoret, R.R. (2016). The q-factor and the Fama and French Asset Pricing Models: Hedge Fund Evidence. *Journal of Managerial Finance, 42*(12), 1-32.

Gökgöz, F., & Seyhan, C. (2024). Benchmarking Asset Pricing Models in Emerging Markets: Evidence from Borsa Istanbul. *Journal of Economic Studies, 51*(8), 1694–1713.

Hearn, B., & Piesse, J. (2023). Market Risk and Equity Returns in Developed Markets. *International Review of Financial Analysis, 87* (10), 25-56.

Hou, K., Xue, C., & Zhang, L. (2015). Digesting Anomalies: An Investment Approach. *Review of Financial Studies, 28*(3), 650–705.

Jarque, C. M., & Bera, A. K. (1987). A Test for Normality of Observations. *International Statistical Review, 55*(2), 163–172.

Jensen, M. C. (1986). Agency Costs of Free Cash Flow. *American Economic Review, 76*(2), 323–329.

Karp, A., & Vuuren, G. (2017). The Capital Asset Pricing Model and Fama-French Three Factor Model in an Emerging Market Environment. *International Business and Economics Research Journal, 16*(3), 231-256.

Kothari, C. R. (2014). *Research methodology: Methods and techniques* (2nd ed.). New Age International.

Kubota, K., & Takehara, H. (2018). Does the Fama and French Five-Factor Model work Well in Japan*? International Review of Finance, 18,* (10), 137–146.

Lee, H. C. (2024). An extension analysis of Amihud's illiquidity premium: Evidence from Taiwan. Journal / Elsevier article.

Lintner, J. (1965). The valuation of risk assets and the selection of risky investments. *Review of Economics and Statistics, 47*(1), 13–37.

Liu, J., Stambaugh, R.F. & Yuan, Y. (2019). Size and value in China. Journal of Financial Economics, 134 (1), 48-69.

Lo, A. W. (2019). Adaptive markets hypothesis. *Journal of Portfolio Management, 45*(3), 15–29.

Machado & Faff (2017). Book-to-Market ratio, Return on Equity and Brazilian Stock Returns. *Journal of Economic and Financial Sciences, 2*(13), 11–72.

Mardy, C., Angel, Z., & Song, L. (2016). A Better Model? An Empirical Investigation of the Fama-French Five-Factor Model in Australia. *International Review of Finance, 16*(4), 595–638.

Merton, R. C. (1973). An Intertemporal Capital Asset Pricing Model. *Econometrica, 41*(5), 867–887.

Moodley, F., Ferreira-Schenk, S., & Matlhaku, K. (2025). Determinants of South African Asset Market Co-Movement: Evidence from Investor Sentiment and Changing Market Conditions. *Journal of African Financial Markets, 13*(1), 14- 27.

Mosoeu, S., & Kodongo, O. (2017). Testing the Fama-French Five-Factor Model in Selected Emerging and Developed Markets. *Emerging Markets Review, 18*(1), 133-155.

Mugenda, A. (2023). Frontier Markets and Investment Opportunities: A case of Sub-Saharan Africa. *Journal of African Financial Markets, 14*(2), 55–70.

Muinde, J. M. (2017). Market Risk Premium and Stock Returns at the NSE. *International Journal of Economics and Finance, 12*(8), 84–116

Muir, T. (2017). Financial Crises and Risk Premia. *The Quarterly Journal of Economics, 132*(2), 765-809.

Mwaurah, I., Muturi, W., & Waititu, A. (2017). The Influence of Financial Risk on Stock Returns. *International Journal of Scientific and Research Publications, 7*(5), 418-430.

Mwiwa, J. (2025). Asset Pricing Anomalies and Stock Return Behavior in African Frontier Markets. *African Journal of Finance and Economics, 12*(1), 45–63.

Ngene, G. (2022). Market Risk and Stock Return Predictability in the Nairobi Securities Exchange. *Journal of African Financial Studies, 9*(2), 77–93.

Nguyen, N., Ulku, N., & Zhang, J. (2015). The Fama-French Five Factor Model: Evidence from Vietnam. *New Zealand Finance Colloquium, 12*(1), 1-29.

Nyangara, D., Nyangara, M., & Moyo, C. (2020). Asset Pricing Models and Stock Return Predictability in Frontier Markets: Evidence From Zimbabwe. *African Finance Journal, 22*(1), 67–89.

Ochenge, L., & Muiru, M. (2017). Global Portfolio Diversification in Emerging and Frontier Markets. *International Journal of Economics and Finance, 9*(3), 120–134.

Okech, T. C., & Mugambi, M. (2016). Effect of Macroeconomic Variables on Stock Returns of Listed Commercial Banks in Kenya. *Journal of Finance and Economics, 4*(2), 35–47.

Omondi, M. M., & Waweru, N. M. (2024). Investment Anomalies in Frontier Markets. *Journal of Accounting in Emerging Economies, 14*(1), 1–20.

Opuodho, G.O., Olweny, T., & Nasieku, T. (2018). Effect of Market Liquidity and Three Factor Asset Pricing Model on Excess Returns at the Nairobi Securities Exchange. *Journal of Finance and Investment Analysis, 7*(4), 19-33.

Ramsey, J. B. (1969). Tests for Specification Errors in Classical Linear Least-Squares Regression Analysis. *Journal of the Royal Statistical Society: Series B, 31*(2), 350–371.

Sharpe, W. F. (1964). Capital asset prices: A Theory of Market Equilibrium. *Journal of Finance, 19*(3), 425–442.