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Interest Rate Risk and Market Value of Firms in Kenya: A Gray Rhino perspective on Commercial Banks Listed at the Nairobi Securities Exchange

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Abstract

The effect of interest rate risk exposure on the market value of commercial banks have become increasingly significant in the modern financial economy due to the interconnected financial systems. Interest rate risk has a positive influence on bank development indicators, but this relationship diminishes at high-interest rate fluctuations. Interest rate risk has impacted on investments and aggregate demand, making the loans become too expensive hence triggering the default risk and liquidity risks locally. The purpose of this study was to identify the impact of interest rate risk on the market value of commercial banks listed at the Nairobi Securities Exchange. A census of all the listed firms was adopted. The study utilized secondary data from published financial statements and market share data from the Nairobi Securities Exchange database. The study adopted the structural equation model for analysis. The measurement model was applied to test the validity and quality criteria for the variables. The structural model was then employed to establish the research objectives of the study. Bootstrapping path analysis results showed that interest rate risk had a significant negative impact on the market value of commercial banks in Kenya. The results suggest that high levels of interest rate risk erodes the market value of banks which has a chain effect on the economy. In addition, bank size was found to partially moderate the relationship between interest rate risk and market value. These results are consistent with the Basel III framework where banks are required to maintain sufficient net assets to cushion against systemic risks. The study recommends that banks should undertake hedging against the interest rate risk and stop solely relying on fixed investments such as government bonds. Instead, they should diversify into investments with floating interest rates.

Keywords: *Interest rate risk, bank size, market value, commercial banks*

1.0 Introduction

The exposure and impact of interest rate risk on bank returns and market value has been a subject of significant interest rate. Commercial banks' are inherently exposed to interest rate risk and this affects their bottom line and net worth (Corelli, 2024). The balance sheet is impacted when increasing interest rates alter the value of liabilities and reduce net assets of the bank. Because of their differing maturities, bank assets and liabilities would be affected differently by interest rate fluctuations (Stevanović, 2025). If assets lose value while the liabilities keep theirs, the net worth of the bank drops. In the end, this drop affects the banks' capital levels. Therefore, volatility in interest rates do affect the financial performance and market value of banks, making it essential to manage the interest rate risk. Preservation of banks' value and stability is significant because of the critical role they play in an economy. They facilitate financial intermediation and economic growth of a country (Hoffmann et al., 2019; Brink and Bank für Internationalen Zahlungsausgleich, 2024).

Interest rate risk refers to fluctuations in the level of interest rates that may lead to the market value of a bond or other interest bearing securities to change (BCBS, 2016; Corelli, 2024). Interest rate risk progresses with time and the longer an investor holds an interest-bearing security the higher the risk (Tsang, 2024; Corelli, 2024). It is predominantly impacted by the maturity transformation between assets and liabilities (Soundariya et al., 2025). As banks perform their intermediary role of receiving short term deposits and lending long-term loans, interest rate risk is inevitable (Fraser et al., 2002). As a result, the intrinsic value of assets and liabilities changes. Interest rate shocks have been found to be more far-reaching for assets than liabilities resulting in a negative duration gap and losses for majority of the banks (Soundariya et al., 2025). In addition, increasing interest rates have a ripple effect on other risks. For example, as interest rates increase, the cost of credit becomes more expensive, and borrowers are more likely to default. This raises the level of non-performing loans, hence the loss of revenues and deteriorates the asset quality of banks. As a result, liquidity risk also increases. Furthermore, the impact of interest rates extends beyond the banking sector and affects other sectors in the economy (Yong & Singh, 2015). Fluctuations in interest rates not only impact investment, spending, and hence the aggregate demand (Brink & Bank für Internationalen Zahlungsausgleich, 2024) but also the fiscal and monetary policy transmissions which consequently affect banks performance and market value (Dell'Ariccia, 2018; Hoffmann et al., 2019).

Globally, interest rate risk played a significant role in the banking crisis of 2023 (Tsang, 2024). As the Federal reserve raised the interest rates to curb inflation, this had direct and indirect effects on the financial system. For the banking system, the values of rate sensitive assets started declining. This was a major blow for banks like Silicon Valley Bank among others which ended up collapsing. The bank specialized in providing banking services to venture-backed startups in the technology and life sciences sectors, its exposure to interest rate risk and the lack of hedging against interest rate risk had played a crucial role both directly and indirectly in the bank's failure

(Tsang, 2024). On the other hand, low and prolonged negative interest rates do freeze the profitability of the banks (Chaudron, 2018). Elevated interest rates do exert an adverse impact on key bank development indicators as they restrict credit growth and hinder financial intermediation (Tuna & Almahadin, 2021). This phenomenon is prevalent in developing countries, yet it remains a concept that has been neglected in policy discussions (Soundariya et al., 2025).

The history of interest rate risk in Kenya dates back in the 1990s after interest rate liberalization. Before 1992, interest rates were regulated by the government after which the controls were liberalized. This resulted in a spike in the interest rate risk inducing the inflation rates at 46%. The high interest rates made the loans become more expensive, averaging 30 to 40%, and consequently the level of non-performing loans increased substantially. As a result, the asset quality was eroded and a banking crisis arose in 1993, leading to the collapse of some banks. This prompted the Central Bank to intervene through a stronger supervision mechanism. In the 2000s the interest rate risk was relatively lower, and banks experienced more stability during this period. Long term government securities were also introduced to offer better duration matching. However, in 2011 the interest rate volatility spiked again resulting in increased inflation, high non-performing loans and reduced credit growth. In response, banks introduced the use of risk-based pricing models in 2014 and in 2016 CBK introduced interest rate capping (Central Bank of Kenya, 2025). Under the interest rate capping law, banks were required to reduce the interest rate spreads by aligning the lending rates and deposit rates within 4 points and 70% of the central bank rate respectively. This suppressed the interest rate risk and reduced credit growth especially among the private sector. Banks' incomes and profits were also reduced. In 2019, the interest rate was lifted and in 2022 CBK had to raise the CBR to 13% from 7% to control inflation and the exchange rate. From this backdrop, interest rates play a significant role in a nation's economy and represent a peril that can bring down an economy if ignored. The interest rate risk events can be compared to a 'gray rhino' where they are highly probable, high impact but still an overlooked threat (Soundariya et al., 2025). CBK has been reactive instead of being proactive in managing these episodic interest rate risk events.

2.1 Literature Review

Commercial banks are vulnerable to interest risk exposure owing to the nature of their activities, assets and liabilities (BCBS, 2016; Entrop et al., 2017). Tuna and Almahadin (2021) highlights that interest rate risk leads to instability in the banking sector. This implies that interest rate volatility affects the banking sector development negatively. Majority of the studies show that interest rate risk interest rate risk has a negative effect on the performance and the market value of commercial banks (Fraser et al., 2002; Yong and Singh, 2015; Muriithi et al., 2016; Orjinta and Ighosewe, 2022; Corelli, 2024). Further, elevated levels of interest rate risk increases the credit and liquidity risks. On the other hand, interest rate risk affects the market value positively or has no significant impact (Odeke et al., 2014; Ebenezer et al., 2019).

Khan and Sattar (2014) analyzed the impact of interest rates on the market performance of commercial banks in Pakistan from 2008 to 2012. The study concluded that interest rates significantly impact the profitability of commercial banks in Pakistan. High interest rates leads to high-interest rate spreads with the lending rate increasing faster than the deposit rate. As a result, there is a positive correlation between interest rate risk and financial performance of commercial banks. Similarly, Ebenezer et al. (2019) examined the impact of interest rate on the performance and market value of commercial banks in Nigeria. The results confirmed a significant and positive relationship between interest rate risk and market value. On the other hand, Muriithi et al. (2016)

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examined the impact of interest rate risk on the performance of commercial banks in Kenya. The results indicated a significant negative relationship. The difference in findings could be attributed to the different measures used in assessing the interest rate risk or the context of the study.

Entrop et al. (2017) examined the magnitude and determinants of interest rate risk exposures of U.S bank holding companies from 1995 to 2012. The study employed a logit model and found out that bank leverage is symmetrical to interest risk exposures which are significant to the economy. Further, larger banks also exhibit higher interest rate risk exposures implying that they do not efficiently utilize their economies of scale and diversification to reduce total risk. Similarly, Tsang (2024) highlighted the remarkable impact of interest rate risk on a nation's economy. Failure to manage interest rate risk led to the financial crisis in 2023 in parts of U.S and Europe. As a result, Silicon Valley Bank among others collapsed causing a ripple effect on the affected economies. Therefore, management of interest rate risk is important for earnings, assets and capital stability (Stevanović, 2025). DeMarzo et al. (2024) advocates for cashflow hedging over value hedging as it permits firms to stabilize earnings through managing risks linked with long-term securities.

Al-Slehat (2022) investigated the effect of interest rate risk on the financial performance of commercial banks in Jordan from 2011 to 2018. The study employed the ratio of equity to total assets as a mediating variable and found out that interest rate risk has a positive effect on financial performance. On the other hand, Talam and Kiemo (2023) analyzed the effect of interest rate fluctuations on bank portfolios from 2001 to 2022 in Kenya. The study employed sensitivity analysis on interest bearing securities, loans and total deposits and utilized the published financial statements of banks. Study findings highlight that interest rate risk changes do affect the market value of bank portfolios and stability negatively. In addition, rising public debt to GDP marginally lowers banking stability with a statistically significant effect. The proportion of government securities as a share of total assets was also found to lower banking value though statistically insignificant.

Odeke et al. (2014) examined the challenges faced by Ugandan banks, which include interest rate exposure, non-performing loans and poor financial controls among others. The results showed a positive relationship between interest rate exposure and bank performance with maturity gaps being the most significant contributor. The study further highlighted the need to effectively manage asset and liabilities maturity mismatch to control interest rate risk. Similarly, Soundariya et al. (2025) recommended the call for interest sensitive assets and liabilities management to control interest rate fluctuations in India. Interest rate risk had a significant and negative effect on the economic value of equity hence posing remarkable threats to the value of the company. The difference in findings could be attributed to the context and methods used. The findings of Soundariya et al. (2025) were in tandem with Orjinta and Ighosewe (2022) and Yong and Singh (2015) who found out that interest rate risk adversely affected the real estate market and returns. Real estate investments trusts with higher levels of debt were found to be more susceptible to interest rate fluctuations. This was expounded by Fraser et al. (2002) who highlighted that higher levels of owners' capital is associated with lower levels of interest rate risk. Returns to shareholders are less susceptible to changes in income that is attributed to interest rate movements or to any other factors (Fraser et al., 2002).

Drawing from the above literature, the impact of interest rate risk on the market performance and value of commercial banks is not conclusive. This paper investigates this puzzle and attempts to find out why the previous findings are inconclusive. The interest rate risk exposure to banks' performance and market value is normal (Entrop et al., 2017) but it has been overlooked in the

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emerging markets context (Soundariya et al., 2025). Therefore, although assessing a famous issue, this study provides a novel analysis through the use of path analysis and contributes to the examination of interest rate risk on commercial banks in an emerging economy context. The study also investigates the moderating impact of bank size on the relationship between interest rate risk and market value of commercial banks.

2.2 Conceptual Framework

The conceptual framework describes the relationship between the dependent and independent variables. For this study, the independent variable was the market value while the independent variable was the interest rate risk. The bank size was used as a moderating variable between the interest rate risk and market value. Market value is represented by MV1 and MV2, which represents Tobin's Q and price earnings ratio.

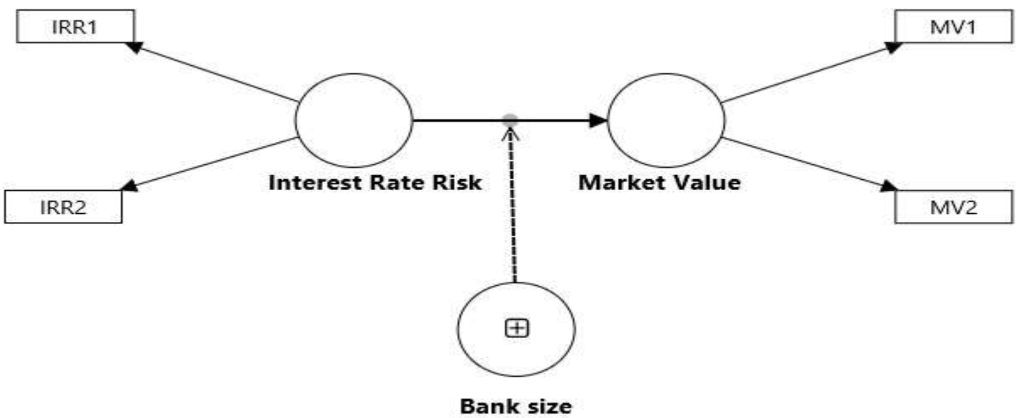

Figure 1: Conceptual Framework

Figure 1 shows the interaction of the independent, moderating and dependent variable. Interest rate risk is represented by IRR1 and IRR2 which represents interest rate gap and net interest margin respectively. The selection of these variables is based on their adoption in previous studies. For example, Stevanović (2025) examined the different models of measuring interest rate risks in banks which include the simulation methods, duration models for assets and liabilities mismatch and gap analysis that compares interest bearing assets and liabilities. Similarly, Al-Slehat (2022) employed the interest rate gaps methods. The ratio of interest sensitive assets to interest sensitive liabilities was utilized to measure the interest rate risk. Further, Entrop et al. (2017) utilized the ratio non-interest income to interest income to measure the interest rate risk while Khan and Sattar (2014) adopted the interest rate spreads. Muriithi et al. (2016) and Orjinta and Ighosewe (2022) utilized the log of net interest margins in measuring the net interest exposure.

3.0 Research Methodology

This section presents a detailed description of the model and the research approach. The section further provides an overview of the latent constructs used in the study and their corresponding proxies. The study utilized interest risk data from the published financial statements of listed commercial banks and market value variables from the Nairobi Securities Exchange. Interest rate risk was measured using the net interest margin and cumulative interest rate gap proxies while the market value proxies were Tobin's Q and price earnings ratio as presented in Table 1.

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Table 1: Variables Description

Latent variables	Observed variables	Symbol	Formulae	References
	Interest rate Gap Ratio	IRR1	Interest Bearing Assets/Interest Bearing Liabilities	(Kahihu et al., 2021; Stevanović, 2025)
Interest Rate Risk	Net Interest margin	IRR2	(Interest Income- Interest expense)/ Interest Bearing Assets	(Muriithi, 2016; Orjinta & Ighosewe, 2022; Jaiwani & Gopalkrishnan, 2023)
Bank Size	Bank size	BS	Log of Total Assets	(Fraser et al., 2002; Muriithi et. al, 2016; Tuna and Almahadin, 2021)
Market value	Tobins'Q ratio	TQ	Market capitalization plus debt divided by total assets	(Abdullah, 2015; Chen et al., 2017; Mkalaf & Hilo, 2023)
	Price earnings ratio	PER	Market price per share divided by earnings per share	

Source: Authors construction (2025) based on reviewed literature

This study adopted a positivistic research philosophy because it is typically deductive, highly structured, involves quantitative methods of analysis and a wide range of data can be analyzed (Bryman, 2016).

The study employed a structural equation model (SEM) to examine the effect of interest rate risk on the market value of commercial banks. SEM was preferred because it is a second generation analysis technique and allows the use multiple independent and dependent variables, and tests for mediation and moderation in a single model (Hair et al., 2021). SEM is divided into a covariance based (CB-SEM) model and partial least squares (PLS-SEM) model. PLS SEM was adopted for this study due to the small nature of the population. PLS SEM works well with smaller samples without yielding biased coefficients (Hair et al., 2019). It works by calculating the structural model and the measurement model relationships separately (Usakli & Rasoolimanesh, 2023). The measurement model assesses the quality and validity of the proxies. Under this model, convergent validity, discriminant validity, indicators weights and multicolinearity of the indicators were assessed. The structural model assesses the relationship between the latent constructs. It was adopted to test the two hypotheses, that is, the statistical significance of the relationship between interest rate risk and market value of commercial banks and the moderating influence of bank size on the relationship between interest rate risk and market value.

Using the panel data regression analysis, the impact of interest rate risk on the market value of commercial banks is shown in the equation below.

Y= f (Interest rate risk, Bank size)

Where Y refers to the dependent variables, that is Tobin's Q and price earnings ratio.

$$Y = \beta_0 + \beta_1 IRR_{it} + (\beta_1 IRR_{it} X\ BS_{it})$$

Where IRR is the interest rate risk and BS is the bank size, a moderating variable.

4.0 Results and Discussion

This section presents the results of the study, including the diagnostics tests for the measurement model and structural model. Further, it provides a discussion of the findings.

4.1 Descriptive Statistics

Table 2 represents the descriptive statistics for the variables to establish the impact of interest rate risk on the market value of commercial banks in Kenya. The dependent variable, market value, was measured using MV1 and MV2 representing Tobin's Q and Price Earnings Ratio respectively. Both measures had acceptable mean and standard deviation. The price earnings ratio had an average of 6.37. Its minimum and maximum values are 29.042 and -5.36320 respectively. The average PER indicates that the growth expectations or undervaluation. A minimum of -5.36320 made losses during the period of study.

Table 2: Descriptive statistics

Name	Mean	Median	Observed min	Observed max	Standard deviation
Ln (TA)	1.173	1.085	0.354	2.630	0.492
IRR1	0.045	0.048	-0.255	0.204	0.061
IRR2	0.069	0.068	0.031	0.127	0.020
MV1	1.023	1.011	0.864	1.432	0.106
MV2	6.370	6.829	-35.632	29.042	5.378

4.2 Latent Variable Correlation Analysis

Latent variable analysis details the strength of the relationship between latent constructs which includes the interactions among interest rate risk, total assets and market value. Table 3 represents the interactions between bank size and interest rate risk which has a coefficient of -0.392 suggesting an inverse relationship. As the bank size increases, the interest rate risk reduces implying that larger banks have lower interest rate risk. Larger banks may have higher levels of equity and more diversified portfolios. This reduces the level of debt and hence lowers the interest rate risk. With higher equity levels, this acts as a cushion against interest rate shocks and bank remain more resilient (Fraser et al., 2002). Interest rate risk has a negative correlation (-0.555) with market value implying an inverse relationship between the two. High interest rate reduces the market value due to fluctuations in assets values, reduced earnings and bank instability (Brink & Bank für Internationalen Zahlungsausgleich, 2024). Finally, bank size has a positive but weak correlation (0.131) with market value. This implies that bank size is not a sole determinant of market value but there are other elements affecting the market value.

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Table 3: Latent variables Correlation Matrix

	Bank size	Interest Rate Risk	Market Value	Bank size x Interest Rate Risk
Bank size	1.000			
Interest Rate Risk	-0.392	1.000		
Market Value	0.136	-0.555	1.000	
Bank size x Interest Rate Risk	0.392	-0.141	0.307	1.000

4.3 Indicators Correlation Analysis

Outer loadings are coefficients that indicate the strength of the association between the proxies and their latent constructs. Interest rate gap (IRR1) and net interest margin (IRR2) were used as proxies for interest rate risk whereas Tobin's Q and price earnings ratio are the proxies for market value. According to Hair et al. (2019), outer loadings should be above 0.7 and have significant p-values. Values with non-significant weights above 0.5 can also be considered if the p-value is significant. Table 4 shows the outer loadings of all the proxies. They all have significant weights, and the p-values are also significant. This means that they are well fitted to represent the respective latent constructs.

Table 4: Outer loadings

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values
IRR1 <- Interest Rate Risk	-0.492	-0.485	0.095	5.168	0.000
IRR2 <- Interest Rate Risk	0.987	0.984	0.013	7.048	0.000
MV1 <- Market value	0.962	0.960	0.013	5.988	0.000
MV2 <- Market value	0.710	0.741	0.102	6.987	0.000

4.4 Convergent Validity

Convergent validity measures how well the indicators correlate with the underlying latent construct. This implies how they effectively represent the same concept.

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Table 5: Construct Reliability and Validity

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values
Interest rate risk	0.608	0.606	0.040	5.127	0.000
Market value	0.715	0.740	0.073	9.751	0.000
Total Assets	1.000	1.000	0.000	n/a	n/a

It measured using Average Variance Expected (AVE) whose values range from 0 to 1. According to Usakli & Rasoolimanesh (2023), the minimum threshold for AVE should be equal or greater than 0.5 implying that 50% of the variance in a construct is explained by its indicators. Table 5 represents convergent reliability for interest rate risk, bank size and market value constructs. They are all above 5 hence indicating that more than 50% of the variance can be explained by their indicators hence high convergent validity. This means that 60.8% of the changes in interest rate risk can be explained by interest rate gap ratio and net interest margin, 74% of the changes in the market value can be explained by price earnings ratio and Tobin's Q while bank size is wholly explained by total assets.

4.5 Discriminant Validity

Discriminant validity assesses whether a construct is distinct from other constructs. This means that it should not overlap too much with different variables in the model. It is measured using Fornell-Larcker Criterion or Heterotrait-Monotrait Ratio. This study adopted the Heterotrait-Monotrait Ratio (HTMT) where the ratios should be below 0.85 hence indicating that the latent variables are not excessively correlated and thus possess discriminant validity. According to Henseler et al. (2015), HTMT is considered to be a superior method of assessing discriminant validity.

Table 6: Heterotrait-Monotrait Ratio

	Interest Rate Risk	Market value	Total Assets	Total Assets x Interest Rate Risk
Interest Rate Risk				
Market value	0.643			
Total Assets	0.422	0.172		
Total Assets x Interest Rate Risk	0.116	0.345	0.433	

Table 6 shows the HTMT values of interest rate risk, market value and total assets. All the ratios are below 0.85 hence indicates that the constructs are conceptually distinct from each other. This means that they do not overlap and supports discriminant validity.

4.6 Multicolinearity

Multicollinearity occurs when two or more independent variables are highly correlated leading to unreliable estimates of the regression coefficients. It was measured using the Variance Inflation Factor (VIF). According to Hair et al. (2019), a VIF greater than 5 indicates presence of critical multicollinearity, possible collinearity issues when VIF is between 3 and 5 and ideal when VIF is below 3.

Table 7 shows the VIF values for the proxies of the latent constructs. They range from 1.000 to 1.3170, which are below the threshold of 5. This indicates that there is no excessive correlation between proxies and hence multicolinearity is not a serios problem in this data set. These results are consistent with Usakli & Rasoolimanesh (2023) who found out that VIF values between 0 and 3.5 are ideal for any dataset and does not yield biased coefficients.

Table 7: Outer Model Collinearity Statistics

	Original sample (O)	Sample mean (M)	2.5%	97.5%
IRR1	1.136	1.147	1.031	1.347
IRR2	1.136	1.147	1.031	1.347
Ln(TA)	1.000	1.000	1.000	1.000
MV1	1.317	1.517	1.115	2.897
MV2	1.317	1.517	1.115	2.897
Total Assets x IRR	1.000	1.000	1.000	1.000

Table 8 shows the inner model collinearity statistics. This represents the VIF values for the latent constructs which fall between 1.153 and 1.410. The values are below 5 hence indicating no multicolinearity in this data set.

Table 8: Inner Model Collinearity Statistics

	Original sample (O)	Sample mean (M)	2.5%	97.5%
IRR -> Market value	1.153	1.177	1.062	1.360
Total Assets -> Market value	1.410	1.436	1.153	1.839
Total Assets x IRR -> Market value	1.241	1.267	1.046	1.605

Results of the measurement and structural model

The measurement model describes the relationship between the proxies and the latent constructs. Table 4 shows the outer loadings of IRR1, IRR2, MV1 and MV2 with significant weights and significant p-values. Therefore, the key criteria for quality and validity between the proxies and their latent constructs was fulfilled.

On the other hand, the structural model described the statistical significance of the hypothesis's tests. Table 9 and figure 2 shows the results of the structural model. The first hypothesis tested the significant relationship between interest rate risk and market value. The path between interest rate risk and market value had a coefficient of -0.598 and a significant p value. This implies that interest rate risk had a significant negative relationship with bank market value. These results are

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consistent with the findings of Corelli (2024) and Tsang (2024) whose results highlighted a significant inverse relationship between interest rate risk and bank market performance and market value. As interest rate increase, the bond values and other fixed income securities decrease, and interest-bearing liabilities increase. This affects the net interest income earnings and the net worth of the bank. With high-interest rate fluctuations implying high interest rate risk banks capital and earnings capacity are adversely affected (Entrop et al., 2017; Soundariya et al., 2025).

Further, interest rate risk has a negative effect on bank sector development indicators (Tuna and Almahadin, 2021). On the other hand, these results are also inconsistent with Musiega (2017) and Al-Slehat (2022) who indicated that interest rate risk has a positive effect on the market value of commercial banks. This results when banks hold interest-bearing investments with a floating rate system as compared to a fixed one. When interest rate fluctuates banks reprice the loans faster than the deposits. This broadens the interest margin, boosting earnings and therefore increasing market value (Fraser et al., 2002). This difference in findings could be attributed to the use of different variables in measuring interest rate risk and market value. Whereas the previous studies adopted market price per share and market capitalization as a measure of market value, this study adopted Tobin's q and price earnings ratio.

Table 9: Structural Path Significance in Bootstrapping

	Original sample (O)	**Sample mean (M)**	**Standard deviation (STDEV)**	**T statistics (|O/STDEV|)**	**P values**
Bank size -> Market Value	0.220	0.225	0.082	2.672	0.008
Bank size x Interest Rate Risk -> Market Value	0.300	0.294	0.082	3.656	0.000
Interest Rate Risk -> Market Value	-0.598	-0.602	0.062	9.679	0.000

The second hypothesis tested the moderating impact of bank size on the relationship between interest rate risk and market value of commercial banks. The moderated path between interest rate risk and market value was significant and had a coefficient of 0.300. This means that bank size strengthens the relationship between interest rate risk and market value of commercial. A positive coefficient implies that larger banks are able to manage interest rate risk better compared to smaller banks. These findings are consistent with BCBS (2016) where large banks are presumed to hold more equity and hence less interest sensitive debt making the interest rate risk impact less. Higher levels of assets and equity reduce the probability of bank failure by providing a cushion against adverse economic shocks, thereby mitigating the risk of panic-driven selloffs of stock in response to excessive interest rate fluctuations. On the other hand, Entrop et al. (2017) and Kariuki (2025) highlighted that larger banks are associated with higher interest rate risk. This implies that they do not efficiently utilize diversification and economies of scale strategies to reduce total risk potentially increasing the interest rate risk.

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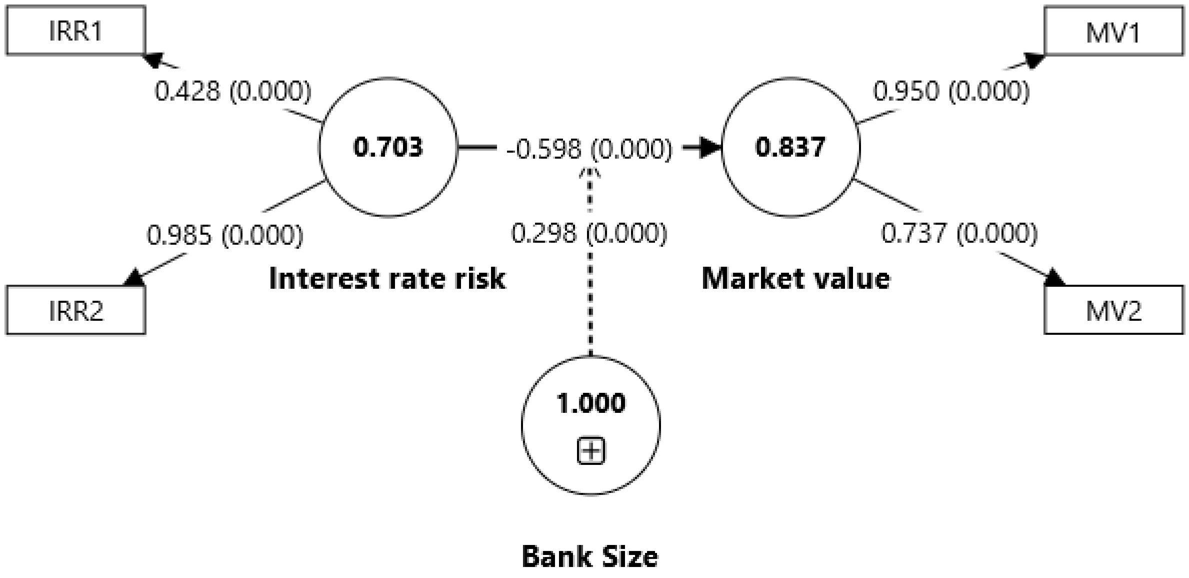

Figure 2: Results of linear bootstrapping path analysis

5.0 Conclusion

Limited empirical studies have examined the relationship between interest rate risk and market value of commercial banks in an emerging market. This study contributes to existing literature by exploring this relationship and utilizing multiple proxies for the interest rate risk and moderating effect of bank size in a single model using path analysis. Table 10 represents a summary of the hypothesis results. These findings extend and confirm the prior findings that interest rate risk has a significant negative impact on the market value of commercial banks in Kenya. High-interest rate risk erodes the earning capacity of banks and their net worth consequently reducing their market value over time. As a result, banks become financially unstable especially those with significant mismatches between rate sensitive assets and liabilities. Bank size also partially moderates the relationship between interest rate risk and market value of commercial banks. Larger banks are better placed to cushion market value from the adverse effects of interest rate risk shocks owing to their asset base, economies of scale and large capital base. In addition, these results mirror the "too-big-to-fail" perspective, where bigger banks are seen to be more resilient and hence more appealing to investors even during fluctuating periods. These results are consistent with Basel III framework which highlights the significance of a healthy banking system supported by a strong nets assets base and risk management practices in preserving the earnings and value of banks from economic shocks.

6.0 Recommendations

Interest rates are a common phenomenon in any economy. All Banks are exposed to interest rate risk adversely. Therefore, they need to be proactive while managing interest rate risk rather than reactive. This will help counter the episodic fluctuations in interest rate risk that does have a chain effect on the bank's performance, market value and other sectors of the economy. In risk management, banks should also consider using derivatives and other hedging strategies.

Banks should also consider having a strong asset base. Higher levels of net assets base minimize a bank's interest rate risk in a technique close to holding non-interest sensitive liabilities. This reduces the likelihood of bank failure because of the increased resilience. In this regard, the regulatory authority should closely monitor capital adequacy levels since they act as a cushion against abnormal increases in interest rates.

Finally, banks need to consider reducing their sole reliance on investments in government bonds and other fixed income securities and opt for investments with floating interest rates. This will cause the earnings and market value of these securities to be more stable since their incomes and value reflects fluctuations in interest rates. This means that banks can quickly reprice the securities with minimal loss in value.

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