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(RESEARCH ARTICLE)

Risk management practices and profitability of listed firms at Nairobi security exchange- Kenya

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Abstract

Banks like any other firms are exposed to a variety of risks including credit risk, liquidity risk, foreign exchange risk, market risk and interest rate risk. An efficient risk management is needed in time to control these risks. Managing risk is one of the basic tasks to be done, once it is identified and known. The risk and return are directly related to each other, which means that increasing one will subsequently increase the other and vice versa. Financial risks have a great impact on firms' performance. The purpose of the study was to establish the effects of financial risks on profitability of listed banks in Nairobi securities exchange. The study was guided by the following theories: financial risk by portfolio theory. This study covered a period of five years (2020 to 2024). A longitudinal and descriptive design was used. The target population was only 11 listed banks in Nairobi exchange security in Kenya for that period of five years. Using inclusion and exclusion approach, purposive sampling technique was used to arrive at 9 listed banks which have complete records between 2020 to 2025 as the sample size. Secondary data collection form was employed to collect information from published financial statement from the year 2020 to 2024 from Nairobi security exchange. Descriptive statistics including mean and standard deviation was used to analyse the collected data. The inferential statistics was also used through correlations and regression analysis to establish the relationship between variables. Data was presented by use of tables and figures. The study concluded that Liquidity risk had a strong positive and significant relationship with profitability. Credit risk had weak negative and insignificant relationship with profitability. IRR had a moderate positive and significant relationship with profitability. Interest rate risk had a significant effect on profitability of listed banks. Capital management risk had a significant effect of profitability of listed banks. The study recommended that banks with high SD (volatility) should align their asset-liability management framework to prevent sharp swings in liquidity levels. Banks with high liquidity levels should review their investment strategies without compromising safety. Also CBK should improve on their supervisory focus on banks with less than 20% statutory requirement.

Keywords: Financial risk; Profitability; Risk commercial banks and financial performance

1. Introduction

Profitability is a measure of financial performance which is the ability to operate efficiently, profitably, survives, grow and react to the environmental opportunities and threats). Performance is measured by how efficient the enterprise is in use of resources in achieving its objectives. Commercial banks earn financial revenue from loans and other financial services in the form of interest fees, penalties, and commissions. Financial revenue also includes income from other financial assets, such as investment income. A commercial bank's financial activities also generate various expenses, from general operating expenses and the cost of borrowing to provisioning for the potential loss from defaulted loans (Zeng, 2005). Profitable commercial banks therefore earn a positive net income (i.e., operating income exceeds total expenses).

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In addition, capital also represents a source of funds along with deposits and borrowings which is regulated by the capital adequacy requirements. Capital structure is assumed to affect the profitability of firm via its effect on leverage and hence on risk. Relating to the bank concept, to this extent, the assets of the commercial banks can either be capital or debt financed. However, debt financing can be riskier compared to capital financing in view of the credit risk and liquidity risk faced by the commercial banks (Wang, 2010).

(Onuko, 2015) included Egyptian commercial banks in a regional study titled "The Impact of Regulations and Supervision on the African Banking Profitability and Risk Profile." The research used dynamic panel data modeling over a 10-year period (2009–2019), drawing from an unbalanced panel of banks across nine African countries. ROA and ROE served as the key profitability metrics, while cointegration and error correction models were employed to analyze the impact of regulatory intensity on both profitability and risk exposure within the Egyptian banking context.

A prominent study in Kenya, by (Mwangi, 2012) titled "Determinants of Profitability of Commercial Banks in Kenya" employed panel data analysis techniques to examine how firm-specific and macroeconomic variables affect profitability. The financial risk can be interpreted with other concept of market risk imperfections based on market, liquidity, credit, and risk of operations and other legal risk. The risk-return trade-off in financial markets implies that low levels of risks are associated with low returns and that high levels of risk imply high returns (Elgayar, 2025).

Assuming the investors are risk averse, they will require a compensation for bearing risk. This risk compensation takes the form of a risk premium, which is defined as the expected return less the risk-free rate. Financial risk for a firm is commonly associated with a form of financing. The greater the amount of debt a firm uses to finance its operation, the higher the financial risk (Grilli *et al*. 2018). The financial risk is basically generated in the process of financial activities, accumulation and amplification. This can eventually lead to financial crisis of a company. Financial risk is the principle of corporate risk and the cyclical manifesting of which is an objective law undecided by will of people (Osoro, 2014) As a way to evaluate and manage current possibility of financial risk at a firm, financial risk managers identify the risk, evaluate, come up with remedies, and then implement the steps necessary to alleviate the risk (Yakup&Asli, 2020).

The different prudential requirements of Central Banks in several countries include Kenya, and how these have put efforts in financial risk. The financial risk affects performance; therefore, it is important to be taken it into consideration to guarantee competitive firms both locally and global market (Okello, 2015).

The increase in credit risk of loan borrowed can results to increase in return on assets and equity. Therefore, risk management process is that approach of making steps that protect lenders form credit risk in lending. The performance of firms is influenced by credit risk cumulatively affecting performance. The management of credit risk is important to ensure how firms are competitive in expansion of markets both locally and globally as profits remains (Di-Bella 2011).

Liquidity risk is that risk which influenced by lack of cash to meet obligations Japan. Firms are facing liquidity risk when due to many reasons which are not self-enhanced. Cash received from sale in the cost of production increases efficiency, (Nasra, 2010). The impact of liquidity is the insolvency of the company profits in Pakistan. The solvency ratio in companies listed in Pakistan had decline in profits because of debt to equity ratio variations in terms of increase or decrease (Arslan, 2024) Firms with liquidity problems experiences challenges to meet current obligations. However, liquidity risk can be mitigated through sufficient cash reserves while raising deposit base (Mwangi 2024).

Interest rate risks management can be traced to late Middle Ages in Mexico. The concept of risk management started after WW II. The use of derivatives intensified in 1980s as more companies started to use it mainly to cushion against financial risks (Grace, 2012). Unexpected profit and abnormal stock return are based on solvency risks assessed, growth and solvency risk with negative effect on the relationship between earnings and abnormal stock returns (Cheng and Nasir 2020). In Kenya, the relationship between interest rate risk influences profitability of firms. The decline in profitability of firms is computed for GDP growth rate, and fund size factors (Hasran, 2023).

Capital management is determined by its cost of capital which in turn leads to the improved financial risk management. The low cost of capital increases the overall profitability. Capital risk management affects the financial controls on capital structure. These explain the use of capital management risk in relations to profitability of listed firms between cost of capital and profitability. The financial managers use capital structure of a firm to make decision. Corporate managers' managements have no doubt in employing debt to finance a firm. The study implied that there is no relationship between corporate size and the debt of a firm (Leland, 2022). Also, the government policies like high debt burden, increase in inflation, increased in minimum capital requirement of the Bank of Ghana (BoG) and intense competition in the banking industry are indications of the need to undertake a study into working capital management

of banks in Ghana. The Kenyan Government has focused on capital management policies with the decrease in profitability (Hatane, 2023).

The Banking industry in Kenya is governed by the Companies Act, the Banking Act, the Central Bank of Kenya Act and the various prudential guidelines issued by the Central Bank of Kenya (CBK, 2019). The banking sector was liberalised in 1995 and exchange controls lifted. The CBK, which falls under the Minister for Finance docket, is responsible for formulating and implementing monetary policy and fostering the liquidity, solvency and proper functioning of the financial system. There are 44 licensed commercial banks in Kenya. Of the 44 licensed commercial banks, 31 are locally owned and 13 are foreign owned. The growth has been mainly underpinned by, the industry's wide branch network expansion strategy both in Kenya and in the East African community region, and automation of a large number of services and a move 8 towards emphasis on the complex customer needs rather than traditional 'off-the-shelf' banking products. Players in this sector have experienced increased competition over the last few years resulting from increased innovations among the players and new entrants into the market (Price Water House Coopers (PWC) 2018). As per the central bank of Kenya, bank supervision annual report (2020), at the end of December 2020, the banking sector comprised of 45 institutions, 41 of which were commercial banks, two mortgage finance companies, one non-bank financial institution and one building society. Despite their number being high their total assets account for only 48.2% of the sectors total assets.

1.1. Statement of the Problem

With good risk management practices, profitability is assured. For the achievement of this objective various factors facilitates ease of attain it, size of the business being one of the main factors. Banks as well as other business aim at making profit despite their key role that they play in pushing forward the economic growth rates, through the mobilization of national savings and using them to finance productive economic sectors they also plays a major role as an engine and a key supporter to the country economy.

The reports of PWC 2023 indicated that financial Risks in Kenya are still high (52%) which is above the African average of 50% and to a large extent higher than the global standard of 37% given that the firms in Kenya have embraced with Enterprise Risk Management. Despite this, financial risk is high (PWC, 2024). This is shown by increasing cases of financial misappropriation, accounting fraud, bribery and corruption, procurement fraud and cybercrime which are worrying and therefore increasing cost of resources which affect profitability (PWC, 2024). PWC (2022) points out that majority (90 %) of CEOs felt that risks facing their firms were increasing; evolving and new ones were emerging. The Kenyan corporate history companies have gone into insolvency but only a few of the companies have managed to mitigate risk for sound financial health (Sitati & Odipo, 2011). It is on this background that this research was carried out to assess the role of financial flexibility in the relationship between financial risk and profitability of banks in Nairobi Stock Exchange in Kenya.

1.2. Objectives of the study

1.2.1. General Objective

The main aim of this study was to assess the effects of risk management practices on profitability of listed firms in Nairobi Stock Exchange- Kenya,

1.2.2. Theoretical Literature Review

This portfolio theory was originated by Schumpeter in 1939 which stated that an enterprise survival is that ability of adopting financial innovation among businesses. This is the process of adopting the change in economic condition not just a portfolio decision between investors competition. The evolutions of the theory focused on prosperity and recession under entrepreneurial risk takers draws similar financial risks through financial positions and it is a portfolio when it maximizes equilibrium points (Mwangi 2023).

This theory assumes that a price fluctuation in terms of cyclical process is influenced by economic condition. This showed that any intermediaries' have a role to manage or control investments and savings in portfolio through a process called credit creation in bank financing results to profitability growth. It also results to more revenues and expenditure between and lenders. The certainties are typically given in difference variations in recession and boom by business cycles. The financial risk is said to happen at high profitability or expansion in real markets than decline resulting to high interest rate (Kamau, 2010).

The credit facilities can be expanded to further growth in other firms resulting to an increased financial income from interest rates. The respective firms increase profits and rise asset price which can underestimate risk exposure. Credit standard reduces portfolio for prediction of future incomes while firms remain indebtedness concurrently (Chung, 2014).

The application of Portfolio Theory to financial risk management practice and profitability has garnered attention across various global markets, albeit with varying degrees of integration and emphasis. In the United Kingdom, Afgani (2024) investigated the relationship between working capital levels and profitability among SMEs, revealing a concave association that suggests the existence of an optimal working capital level maximizing profitability. While not explicitly framed within Portfolio Theory, the study's emphasis on balancing risk and return aligns with the theory's principles. Similarly, in France and Denmark, research has predominantly focused on traditional financial risk management practice metrics, with limited direct application of Portfolio Theory to financial risk decisions.

The theory is relevant to this study as it explains financial risk which indicates how banks react by decrease in lending especially low capital buffers over minimum requirement, hence improving profitability. The general fallacy between financial risk and profitability is purely explained by risk exposures without ignorance to portfolio side of the business. Thus, in common business change with situations, savings, interest rate, and demand markets. Its relationship to the study focuses on liquidity, credit, interest rate and capital management risk as normal financial risk occurrences in changing profitability of firms. It ignores the arguments that credit risk is influenced by interest rates variations in market conditions, hence financial risk will change always according to portfolio business. Hence the portfolio theory forms the main theory of this study.

2. Research Design

Research design is the procedures for collection and analysis of data in a manner that aims to combine relevance of the purpose with economy during research process (Waweru 2011). The study will adopt a longitudinal and descriptive research design. Descriptive research design enabled the researcher to describe distribution of mean and standard deviation by use of descriptive statistics (Mugenda & Mugenda 2003).This was appropriate since it offer the researcher dual opportunities of observing and analysing the historical data without manipulation (Kothari 2008).

3. Data analysis, presentation and discussions

The sample size consists of 9 banks listed in Nairobi Securities Exchanges in Kenya from 2020 to the end of 2024. The data was collected from published financial statements of annual reports from Nairobi Securities Exchanges record. The study used panel data with 9 firms with a period 5 years. The collected data was put into excel packages and then transferred to SPSS version 21 for analysis.

A correlation analysis was done to establish the linear relationship between the independent variables with the dependent variables; which is the indicators of financial risk and profitability of listed firms at the Nairobi security exchange. The correlation helps to determine the nature of the linear relationship in model where the variable explained between financial risk and profitability. The correlation analysis was summarized in the correlation matrix in table 1.

Table 1 Correlations

		LQ	**CR**	**IRR**	**CPR**	**FF**
LQR	Pearson Correlation	1				
	Sig. (2-tailed)					
	N	45				
CR	Pearson Correlation	0.145	1			
	Sig. (2-tailed)	0.054				
	N	45	45			
IRR	Pearson Correlation	0.138	0.675**	1		
	Sig. (2-tailed)	0.067	0.000			

	N	45	45	45		
CMR	Pearson Correlation	0.494**	-0.047	0.069		
	Sig. (2-tailed)	0.000	0.534	0.363		
	N	45	45	45		
FP	Pearson Correlation	0.550**	-0.073	0.023	0.528**	1
	Sig. (2-tailed)	0.000	0.290	0.763	0.000	
	N	45	45	45	45	45
Source: field data (2025) **. Correlation is significant at the 0.01 level (2-tailed).						
**. Correlation is significant at the 0.01 level (2-tailed).						

The study revealed that liquidity, had a moderate positive and significant relationship with profitability (r=.55:p<.05) credit risk had weak negative and insignificant relationship with profitability (r=-.073:p>.05) IRR had weak positive and insignificant relationship with profitability (r=.023:p>.05) capital management risk had a moderate positive and significant relationship with profitability (r=.569:p<.05) and financial flexibility had positive moderate relationship with profitability (r=.528:p<.05).

The research study sought to investigate the relationship between financial risk and profitability of listed firms at the NSE in relation to various variables. The variables investigated were; Liquidity Risk, Credit risk, Interest rate risk, and Capital management risk. The regression model was; $Y= \beta_0 +\beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$, whereas the Y represents profitability measured by return on assets, X_1- Liquidity risk, X_2- Credit risk, X_3 -Interest rate risk, and X_4 - Capital management risk, ε is the regression model's error of estimate from the calculated results. β_1, β_2 β_3 and β_4 represent regression coefficients.

Table 2 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.804[a]	0.647	0.611	0.360

Source: field data (2025); a. Predictors: (Constant), CAPITALMRISK, CREDITRISK, LIQUITITY RISK, IRR

Table 2 shows that there is good linear relationship between the independent and dependent variables employed in the study. R =.804 indicated a strong statistical relationship between the independent variables (Liquidity Risk, Credit risk, Interest rate risk, Capital management risk) and dependent variables (profitability. The coefficient of determination measured by R Square presents with a value of R^2 .647. This implies that financial risk accounts for 64.7% of the variations in profitability of listed banks at the Nairobi securities exchange, while the residual percentage can be influenced by other variables.

Analysis of Variance statistics consists of calculations that provide information about variability in the regression model and test of significance levels. The finding shows that the significance value is 0.000 < 5%, hence the model is statistically significant in predicting how financial risk affects profitability of listed banks in Nairobi security exchange.

Table 3 ANOVAa

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	9.500	4	2.375	18.299	0.000[b]
	Residual	5.192	40	0.130		
	Total	14.692	44			

Source: field data (2025); a. Dependent Variable: ROA

b. Predictors: (Constant), CAPITALMRISK, CREDITRISK, LIQUITITY RISK, IRR

The F critical value at significance level p<.05 and F is 18.299 less than the critical F this indicates that overall model is significant. From the Analysis of Variance statistics shows that the population parameters had a significance level of 5% which indicates that the data collected is perfect to make conclusion on the p-value 0.000 less than 0.05. This implies that the overall model is statistically significant and that Liquidity Risk, Credit risk, Interest rate risk, and Capital management risk to predict profitability of listed firms at Nairobi security exchange in Kenya.

Table 4 Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	0.524	0.393		1.333	0.190
	LIQUITITY RISK	0.364	0.142	0.354	2.556	0.014
	CAPITALMRI	0.527	0.138	0.514	3.813	0.000
	IRR	0.329	0.159	0.369	2.074	0.045
	CREDITRISK	-0.351	0.190	-0.357	-1.853	0.071

Source: field data (2025); a. Dependent Variable: ROA

Table 4 shows the established regression equation as $Y= .524+ .364X_1 + .527X_2 +.329X_3 -.351X_4$ where X_1- Liquidity risk, X_2- Capital management risk, X_3 -Interest rate risk, and X_4 - Credit risk From the equation it is indicated that unit increase in Liquidity risk would result to an increase to profitability of listed firms hence the null hypothesis was rejected, unit increase in credit risk would results to decrease in profitability of listed firms hence the null hypothesis was supported, unit increase in interest rate risk would result to increase in profitability of firms listed hence the null hypothesis was rejected. A unit increase in capital management risk would result to an increase in return on asset of listed firms hence the stated null hypothesis was rejected.

The findings indicated that there is a positive relationship between liquidity risk, Interest rate risk, and Capital management risk and profitability of listed firms at Nairobi security exchange. The study further revealed that there is a negative relationship between Credit risk, and profitability of listed firms at Nairobi security exchange in Kenya.

4. Conclusions

The study sought to establish the effect of Liquidity risk on profitability of listed firms in Nairobi Stock exchange. It was concluded that Liquidity risk had a strong positive and significant relationship with profitability. Liquidity risk had a significant effect on profitability of listed banks in NSE. Credit risk had weak negative and insignificant relationship with profitability. Credit risk has a insignificant effect on profitability of listed banks. IRR had a moderate positive and significant relationship with profitability. Interest rate risk had a significant effect on profitability of listed banks. Listed banks employed capital management risk practices. Capital management risk had a significant effect of profitability of listed banks

Recommendations

The study sought to establish the effect of Liquidity risk on profitability of listed firms in Nairobi Stock exchange. The study recommended that: Banks with high SD (volatility) should align their asset-liability management framework to prevent sharp swings in liquidity levels. Banks with high liquidity levels should review their investment strategies in use of idle cash in medium term government securities etc without compromising safety. Also CBK should improve on their supervisory focus on banks with less than 20% statutory requirement. These banks should be motivated to be more aggressive in deposit mobilization strategies to boost their liquid asset buffers.

Compliance with ethical standards

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No conflict of interest to be disclosed.

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