

Research Article

The Role of Risk Management in Shaping Investment Patterns in Commercial Banks

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Abstract: This paper examines the significance of risk management in determining the investment behavior of commercial banks, specifically in credit risk management, market risk management, and liquidity risk management. Using a quantitative research design with an explanatory approach, this study used a structured questionnaire for data collection from 320 banking professionals. These participants were chosen from commercial banks and were actively involved in risk management and investment functions. To establish the validity of the study, the data were tested for reliability, correlations, and multiple regressions. Findings from this study reveal that risk management activities play an important role in determining investment behavior in commercial banks. All dimensions of risk management were found to be positively correlated with investment patterns, thus establishing the fact that risk management approaches play an increasingly significant role in investment decision-making in the current scenario. Liquidity risk management played an important part in this study, thus indicating the significant influence of regulatory requirements in determining investment behavior.

Keywords: Risk Management, Investment Patterns, Commercial Banks, Credit Risk, Financial Stability, Banking Performance.

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INTRODUCTION

Commercial banks are crucial in the economy of countries and the world at large in that they mobilize capital and investments. Through these activities, commercial banks are involved in activities that promote production and investments of savings in the economy. Nevertheless, it can be noted that investments in commercial banks are characterized by uncertainty in that they are dependent on various factors that affect investments in the field of commercial banks. In recent years, academic evidence has pointed out that poor risk management practices can affect investments in commercial banks in that they can be prone to risks in the economy (Musa & Ahmed, 2024). Recent studies make it evident that modern risk management techniques now permeate beyond the realm of compliance and are now a critical part of the overall process of investment portfolio design and asset allocation in commercial banking institutions. For instance, overall risk governance helps banking institutions assess exposure, project future risks, and modify investment approaches in reaction to pressures coming from inside and outside the institution (Mermer, 2024). Modern risk functions now make use of highly complex models of risk assessment and predictive algorithms and stress-testing models in order to assess risk exposure and optimize investment behavior in uncertain market conditions (Rofi'i, 2023; McKinsey & Company, 2025), thereby indicating that proactive risk management is no longer just a determinant of risk perceptions in commercial banking institutions, as it now affects the design of investment portfolios in order to strike a balance between risk-adjusted returns and capital requirements. Within this background, it is important to understand the dynamics between risk management tools and investment trends for the promotion of financial sustainability and resilience. The study, therefore, aims to examine the influence of organized risk management approaches on investment choices in commercial banks and the effect thereof on portfolio management.

LITERATURE REVIEW

Risk management in commercial banks has been one of the most researched topics in banking literature, as risk management exerts a substantial impact on the stability of finances and investment practices. Current literature has also highlighted the fact that risk management systems in commercial banks are not merely institutional mechanisms, but strategic enablers as well, influencing investment practices and portfolio structures (Chen, 2023).

2.1 Risk Management in Commercial Banks: A Strategic Perspective

Risk management was transformed from a conventional control process to a strategic activity that directly impacts the decision-making process of commercial banks. The current banking literature suggests that risk management frameworks are now intricately integrated with the process of planning investment portfolios, allocation of capital, and investment strategy design (Rastogi et al., 2022; Chen, 2023). Instead of just safeguarding the bank against losses, the conventional risk management process helps design the asset allocation of the bank. Research after the pandemic and after Basel III reveals that increased uncertainty, interest rate variability, and stricter regulations have increased the relationship between risk governance and investment activities (Jadwani et al., 2024). There is a growing use of holistic risk management systems, stress tests, and risk limits in guiding investments for banks. It is clear that risk management is no longer on the periphery but at the forefront of influencing investment trends for commercial banks.

2.2 Risk Management Practices and Investment Patterns

Investment trends in commercial banks would depend on the allocation of financial resources in terms of investment in loans, stocks, and liquidity. Recent empirical studies have shown that the investment trend of banks is largely driven by their internal risk management capacity (Musa & Ahmed, 2024). This is because banks that have better risk management frameworks would tend to have more risk averse, diverse, and liquidity-focused investment strategies. Rastogi et al. (2022) highlight how risk requirements for regulation and risk monitoring systems influence banks' asset structure, resulting in changes in their investment portfolios. Likewise, Chen (2023) shows how banks with more developed risk management systems demonstrate reduced asset concentration as well as a stable investment portfolio. The above arguments establish a theoretical foundation for testing risk management as a factor for investment decisions.

2.3 Credit Risk Management and Loan Portfolio Allocation

Credit risk is the most prominent risk for commercial banks and has a direct impact on loan and investment decisions. Managing credit risk includes credit screening and appraisal of the credit of the borrowers. It has been observed in recent studies that effective credit management practices have a direct impact on the loan portfolio and sectoral credit exposure (Liu, 2023; Musa & Ahmed, 2024). Evidence shows that effective credit risk management helps banks decrease high-risk lending, improve collateral standards, and strike a balance between lending to low-risk debtors or exploring other investment avenues such as government securities (Chen, 2023). According to Liu (2023), effective credit risk management results in enhanced diversification of the lending portfolio and minimized risk concentration. The results verify the role of credit risk management as the fundamental factor that shapes the lending behavior of banks.

2.4 Market Risk Management and Securities Investment Decisions

Market risk is caused by changes in interest rates, foreign exchange rates, and stock prices. In recent years, there has been a growing need to manage market risk in banking operations as a result of growing monetary policy and financial volatility in the global market. Market risk management techniques, such as duration management, Value-at-Risk models, and stress testing, are essential in influencing securities investment decisions (Rastogi et al., 2022). Recent research shows that banks which effectively monitor their market risk manage their bond investments by actively making changes in their bond portfolios, cutting their exposure to volatile bonds, and focusing on risk-adjusted returns (Fang, 2025).

2.5 Liquidity Risk Management and Preference for Liquid Assets

Liquidity risk management has recently received increasing attention since the Basel III period as a result of more stringent liquidity coverage ratios and funding stability requirements. Recent studies show that best practices have a significant impact on banks' investment choices, especially their affinity for short-term and highly liquid instruments (Chen, 2023; Jadwani et al., 2024). Musa and Ahmed (2024) revealed that liquidity pressures cause banks to allocate their investments from long-term or risky instruments to safer and more liquid instruments. Likewise, Chen (2023) noted that effective liquidity risk management is related to higher treasuries and lower maturity mismatches. The above studies verify that liquidity risk management is a vital factor in determining the investments made by banks.

2.6 Synthesis of Literature and Research Gap

The literature reviewed confirms that risk management techniques have been shown to affect banking stability, profitability, and regulatory requirements. Nonetheless, the existing literature mainly concentrates on the role of risk management on the financial performance of institutions without placing emphasis on the role of the various dimensions of risk on investment behavior including loan distribution, security investment, and liquidity management. This is because the various dimensions of risk are considered individually without incorporating credit risk management, market risk

management, and liquidity risk management into a single framework of investment behavior. Thus, despite the significant body of research undertaken in the area of banking risks, there is a lack of empirical research in this area which systematically examines the influence of fundamental risk management functions on investment behavior in commercial banks. This serves as a strong rationale for the current research study.

2.7 Research Objectives

- To examine the impact of risk management practices on investment patterns in commercial banks.
- To analyze the influence of credit risk management, market risk management, and liquidity risk management on banks’ portfolio allocation decisions.
- To develop a focused conceptual framework linking risk management practices to investment patterns in commercial banks.
- To provide empirical evidence on the role of risk-driven decision-making in shaping commercial banks’ investment behavior.

CONCEPTUAL FRAMEWORK

Based on the literature reviewed, the study presents a conceptual framework where risk management techniques serve as the main explanatory variables that affect investment behaviors in commercial banks.

Study Variables and Supporting Literature

Type of Variable	Variable	Description in Context of the Study	Key Supporting Studies (APA in-text)
Independent Variable	Credit Risk Management	Practices related to borrower evaluation, credit monitoring, default control, and non-performing asset management that influence banks’ lending and investment decisions.	Rastogi et al., 2022; Musa & Ahmed, 2024; Ramu & Rakesh, 2024
Independent Variable	Market Risk Management	Systems used to assess and manage exposure to interest rate risk, price volatility, securities risk, and macro-financial fluctuations affecting investment portfolios.	Rastogi et al., 2022; Jadwani et al., 2024; Al-Sari, 2025
Independent Variable	Liquidity Risk Management	Mechanisms to ensure adequate liquidity, asset–liability alignment, regulatory compliance, and short-term solvency that guide investment structure.	Jadwani et al., 2024; Haq et al., 2025; Gambere & Mwikamba, 2025
Dependent Variable	Investment Patterns in Commercial Banks	Portfolio allocation behavior reflected in lending structure, securities investments, diversification strategy, and preference for liquid and low-risk assets.	Musa & Ahmed, 2024; Rastogi et al., 2022; Ramu & Rakesh, 2024

The framework believes that best practices of risk management have an influence on the investment behavior of banks because of their ability to shape the risk exposure of the bank by complying with the regulations of the authorities or by optimizing the structure of their portfolios. The framework suggests direct links between the three dimensions of risk management and the investment behavior of commercial banks.

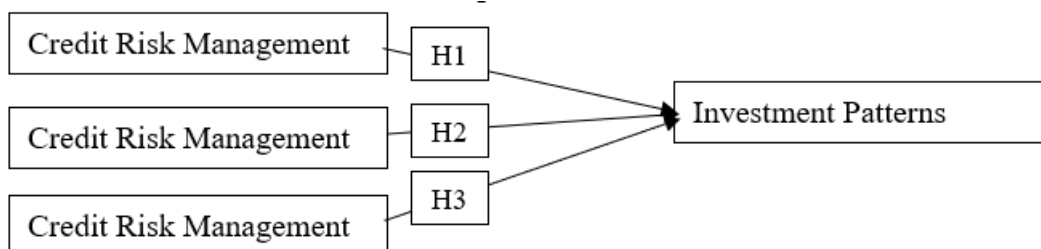


Figure 1: Conceptual Framework

RESEARCH METHODOLOGY

3.1 Research Design

For this study, the research design adopted is quantitative and explanatory. This design is particularly suited for this study since the study aims to test the hypotheses developed on the basis of the theories by establishing the cause-effect relationships between the variables of credit risk management, market risk management, liquidity risk management, and investment behavior. The study employs a cross-sectional research design that facilitates the study of perceptions at a single instance in time among the respondents regarding the existing practices within the commercial banks.

3.2 Population and Sample size

The population for this study consists of workers in commercial banks who directly or indirectly participate in risk and investment-related decision-making, including those in credit and risk management departments, treasury, and branch managers. A stratified random sampling approach is used for this study, which helps in appropriately representing different functional groups of respondents. According to methodology for conducting multivariate analysis, a sample size 320 can be appropriate for arriving at a generalizable and statistically valid conclusion.

3.3 Data Sources and Data Collection

Both primary and secondary sources of data are used in this study. Primary sources of data are obtained from a structured questionnaire administered among banking professionals. Secondary sources of data are obtained from annual reports of banks, official reports by regulatory bodies, industry reports, as well as peer-reviewed literature. These sources help in developing the conceptual framework for this study. Variables for this study are also chosen based on these sources.

3.4 Measurement of Variables

All the variables in the study are measured using multi-item scales in a five-point Likert scale from strongly disagree to strongly agree. Credit risk management is measured by items related to credit appraisal processes, monitoring, internal control, and non-performing asset management. Market risk management is measured by statements related to the evaluation of interest rate risk, market risk exposure, stress testing, and securities portfolio management. Liquidity risk management is measured by items related to asset and liability management, cash flow, liquidity, and solvency risk control. Investment behavior is measured by items related to portfolio diversification, lending, asset allocation, and preference for investments in liquidity and low risk.

3.5 Instrument Development & Pilot Study

The development of the questionnaire was informed by an in-depth review of existing studies on the management of risks in the banking sector and investments. This was done to ensure that the questionnaire was appropriate for the context in which it was being used in commercial banks. To ensure that the questions are clear and consistent, a pilot test was conducted among the respondents. The collected information is then encoded and processed with the help of statistical packages such as SPSS and SmartPLS or AMOS. The constructs' reliabilities are estimated using Cronbach's alpha and composite reliability. Convergent validity, discriminant validity, as well as validity tests of factor loadings and Average Variance Extracted, are employed to test validity. The research is carried out following the highest ethical standards. Voluntary participation in the research is encouraged, and the respondents are clearly informed of the objectives of the research. Anonymity of the answers is guaranteed, and the data collected is solely for academic use. Informed consent is sought before data is collected, and the respondents are free to withdraw at any point in the research.

RESULTS AND DISCUSSION

This section provides the results of the study and a discussion of the impact of risk management practices on investment in commercial banks. The study was carried out by employing descriptive statistics, reliability analysis, correlation analysis, and multiple regression analysis to test the hypotheses.

4.1 Descriptive Analysis of Study Variables

Descriptive statistics were used to analyze the trends in risk management practices and investments made by commercial banks. The findings indicate that there is a high mean in all three aspects of risk management, suggesting that commercial banks have embraced risk management practices as part of their operations and strategic processes. Liquidity risk management has the highest mean, followed by credit risk management, indicating the focus placed on solvency, liquidity, and asset quality by regulators after the crisis. Investment trends also registered a high mean, indicating that commercial banks take into consideration risk management practices in their investments. The low standard deviation in all constructs suggests consistency in the results, indicating that risk-driven investments are deeply embedded in the institutions sampled.

Table 1: Descriptive Statistics

Variable	Mean	Standard Deviation
Credit Risk Management	4.01	0.61

Market Risk Management	3.87	0.65
Liquidity Risk Management	4.10	0.58
Investment Patterns	3.94	0.63

4.2 Reliability and Measurement Adequacy

For the instrument to be reliable, the result from the Cronbach alpha formula was calculated. It was found that all the constructs surpassed the recommended 0.70, which validates the internal consistency. This indicates that the items have been able to measure their constructs. This high value indicates that the respondents perceived the items in the questionnaire as an accurate depiction of credit risk, market risk, liquidity risk, as well as investment behaviors. This validates the results for further analysis.

Table 2: Reliability Statistics

Construct	Cronbach's Alpha
Credit Risk Management	0.86
Market Risk Management	0.83
Liquidity Risk Management	0.88
Investment Patterns	0.85

4.3 Correlation Analysis

On performing correlation analysis, the following observations were made regarding the correlation between the variables of risk management and the patterns of investment: The results indicate that all three variables of risk management are significantly correlated with patterns of investment. The correlation is highest for liquidity risk management, followed by credit risk management and market risk management. This implies that banks with more developed liquidity planning processes, stringent credit evaluation procedures, and proper market risk management processes are likely to display more disciplined, diversified, as well as stability-focused patterns of investment. The high inter-correlations among the risk management factors also reflect the integrated character of bank risk architecture, in which credit risk, market risk, and liquidity risk management do not occur in a separate and distinct manner.

Table 3: Correlation Matrix

Variable	CRM	MRM	LRM	IP
Credit Risk Management (CRM)	1.00			
Market Risk Management (MRM)	0.54**	1.00		
Liquidity Risk Management (LRM)	0.58**	0.49**	1.00	
Investment Patterns (IP)	0.62**	0.55**	0.67**	1.00

4.4 Regression Results & Hypothesis Testing

The hypotheses and assess the predictive validity of risk management practices in terms of investment behavior, a multiple regression test was carried out. The overall equation was significant, and it accounted for a large amount of variance in investment behavior. This suggests that risk management practices, in total, form a strong framework of explanation for banking investment behavior. Liquidity risk management was identified as the most influential factor affecting investment behavior, underscoring the fact that investment portfolios of banks are inherently circumscribed by liquidity requirements, liquidity ratios, and short-term solvency ratios. Credit risk management was also identified as a significant positive factor, validating the fact that loan evaluation processes, monitoring processes, and non-performing asset management influence the allocation of banking funds across various sectors and types of borrowers. Market risk management was another significant factor affecting investment behavior.

Table 4 Regression Analysis Results

Predictor	β	t-value	p-value
Credit Risk Management	0.31	4.12	0.000
Market Risk Management	0.24	3.45	0.001
Liquidity Risk Management	0.38	5.26	0.000

The empirical results firmly validate the hypothesis that risk management is more than a compliance issue; it is a key driver of investment activity in commercial banks. The fact that credit risk management is a significant determinant of bank investments confirms that bank investment activity is centered on borrower evaluation, internal ratings, and default probability analysis. This is consistent with contemporary portfolio theory, which contends that investments are primarily influenced by expected returns on risks, not just returns. The major impact of market risk management practices demonstrates how banks are increasingly applying interest rate sensitivity analysis and stress tests in making investment decisions in securities. In a volatile financial system, banks are forced to adjust their investment portfolios and reduce any potential overemphasis on high-risk instruments. The results support that frameworks of market risk are pivotal in ensuring

investment stability. The management of liquidity risk had the strongest impact, emphasizing the structural fact that banks' investments are, in the end, constrained by their liquidity risks. The current regulatory environment, in the aftermath of the crisis, has placed greater emphasis on liquidity, requiring banks to prioritize the maintenance of high-quality liquidity assets and very conservative maturity transformation approaches. As such, investment choices have been swayed in favor of more liquid, low-risk, and regulatory-friendly investments. Thus, in general, the outcome of this research reveals that commercial banks structure investment portfolios under a risk management architecture in which capital protection, regulatory compliance, and financial sustainability play a paramount role in decision-making. This research thus empirically confirms the assertion that risk management structures fundamentally alter investment structures, portfolio diversification, and asset allocation in modern commercial banking.

CONCLUSION AND IMPLICATIONS

This research work focuses on the importance of risk management in the investment behavior of commercial banks and gives special attention to credit risk management, market risk management, and liquidity risk management. Based on the results of the research work, the importance of risk management in the investment behavior of commercial banks is proved because the results show that the investment behavior of commercial banks has shifted from the use of intuition in investment decisions to analytical and scientifically aligned investment decisions. Out of the three aspects of risk management studied in the research work, the most important aspect is liquidity risk management because the results of the research work show that the investment behavior of commercial banks is dependent on liquidity because of the solvency requirements of the banks and the uncertainties in the financial markets.

Theoretical and practical implications of the research outcomes are significant. From the theoretical standpoint, this research contributes to the banking and finance literature by confirming the role of risk management as a fundamental factor affecting investment activity. On the other hand, the research confirms the applicability of risk-management-portfolio theory and enterprise risk management models to the study of investment activity of commercial banks. From the perspective of bank managers, the research confirms the importance of increasing the role of risk units within the strategic planning process of the bank. This will improve investment efficiency by enhancing the efficiency of real-time risk analysis systems. From the perspective of policymakers, the research confirms the importance of improving the efficiency of prudential ratios by making them consistent with the bank's profitability goals.

6.0 Limitations and Future Research Directions

Despite of this contribution there are some limitations too. First, the cross-sectional study design hampers the ability of the study to observe the dynamic processes of risk management techniques and investment actions over time. Second, the study is dependent on perceptual information gathered through the use of questionnaires, and this perceptual information could be vulnerable to respondent bias and may not accurately represent the true investment actions at the portfolio level. Third, the study is focused on some dimensions of risk management and does not include any other variable that could have a potential influence on the study, such as technological risk, geopolitical risk, quality of governance, and macroeconomic shocks. Future research could tackle these issues by using longitudinal research designs in which the effects of changing risk regulatory structures and economic cycles on risk-informed investment patterns can be explored. Secondary financial information can also be used in conjunction with survey research for more objective risk-informed models. Adding new risks such as cyber risks, climate risks, and risks associated with fintech can also enhance knowledge about current investment patterns in banking organizations. Comparative research can also provide valuable insights into how risk management patterns influence investment patterns in the context of countries, government, or digital banks.

REFERENCES

1. Abdelrhman Musa, A. B. A., & Ahmed, A. A. K. (2024). The effect of financial risks on financing decisions of Saudi commercial banks: A field study on commercial banks operating in Arar City. *American Journal of Financial Technology and Innovation*, 2(1), 33–43. <https://doi.org/10.54536/ajfti.v2i1.3193>
2. Chikutuma, C. N. (2025). The role of bank size in liquidity management: Insights from emerging markets. *Risk Governance & Control: Financial Markets & Institutions*, 15(3), 214–225. <https://doi.org/10.22495/rgcv15i3sip4>
3. Jadwani, B., Parkhi, S., & Mitra, P. K. (2024). Operational risk management in banks: A bibliometric analysis and opportunities for future research. *Journal of Risk and Financial Management*, 17(3), 95. <https://doi.org/10.3390/jrfm17030095>
4. Gambere, O. J., & Mwikamba, T. (2025). Liquidity risk management and financial performance of commercial banks listed in Nairobi Securities Exchange. *The Strategic Journal of Business & Change Management*, 12(1), 362–375. <http://dx.doi.org/10.61426/sjbcm.v12i1.3191>
5. Rastogi, S., Sharma, A., & Pinto, G. (2022). A literature review of risk, regulation, and profitability of banks: Scientometric study. *Future Business Journal*, 8, Article 28. <https://doi.org/10.1186/s43093-022-00146-4>
6. Ramu, M., & Rakesh, R. (2024). Risk management practices in the Indian banking sector: Analysis of challenges, strategies, and effectiveness. *International Journal of Foreign Trade and International Business*, 6(2), 214–219. <https://doi.org/10.33545/26633140.2024.v6.i2c.136>

7. Haq, M., Srivastava, N., & Wang, Z. (2025). Bank capital and liquidity risk: Influence of crisis and regulatory intervention. *Review of Quantitative Finance and Accounting*. <https://doi.org/10.1007/s11156-025-01433-1>
8. Al-Sari, A. (2025). The collapse of Silicon Valley Bank: A critical analysis of regulatory shortcomings and risk management under Basel III. *Journal of Banking Regulation*, 26, 661–677. <https://doi.org/10.1057/s41261-025-00281-2>
9. Haq, M., Srivastava, N., & Wang, Z. (2025). Bank capital and liquidity risk: Influence of crisis and regulatory intervention. *Review of Quantitative Finance and Accounting*. <https://doi.org/10.1007/s11156-025-01433-1>
10. Krüger, U., Røling, C., Silbermann, L., et al. (2025). Bank's strategic interaction, adverse price dynamics and systemic liquidity risk. *Journal of Banking Regulation*, 26, 1–24. <https://doi.org/10.1057/s41261-024-00240-3>
11. Sunaryo, D. (2022). The effect of credit risk management, market risk, liquidity risk on financial performance of banks. *Brilliant International Journal of Management and Tourism*, 2(2), 143–154. <https://doi.org/10.55606/bijmt.v2i2.435>
12. Peykani, P. (2025). Investigating the relationship between liquidity risk and bank solvency. *Economies*, 13(5), 139. MDPI. <https://doi.org/10.3390/economies13050139>
13. Financial regulation and liquidity risk of small and medium-sized banks. (2025). *Finance Research Letters*, 81, 107461. <https://doi.org/10.1016/j.frl.2025.107461>
14. Climate risks, financial performance and lending growth: Evidence from the banking industry. (2024). *Technological Forecasting and Social Change*, 209, 123757. <https://doi.org/10.1016/j.techfore.2024.123757>