

Directions for Improving the Risk Management Mechanism in Commercial Banks

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Abstract: This paper examines the key directions for improving the risk management mechanism in commercial banks. Effective risk management plays a crucial role in ensuring financial stability, profitability, and sustainable development of the banking sector. The study analyzes major types of banking risks, including credit, liquidity, market, and operational risks, and evaluates existing risk management practices in commercial banks. Based on international experience and modern regulatory requirements, the paper proposes measures to enhance risk identification, assessment, monitoring, and control processes. The implementation of advanced risk management tools, digital technologies, and internal control systems is emphasized as a key factor in strengthening banks' resilience to financial shocks. The findings of the study may be useful for banking professionals, policymakers, and researchers in improving risk management frameworks in commercial banks.

Key words: commercial banks, risk management, banking risks, credit risk, liquidity risk, financial stability, internal control, regulatory requirements.



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Introduction.

In the context of globalization and increasing financial uncertainty, effective risk management has become one of the most critical aspects of commercial banking activities¹. Commercial banks operate in a highly competitive and volatile environment, where various types of risks can significantly affect their financial performance and stability². The global financial crises and recent economic shocks have highlighted the importance of strengthening risk management mechanisms to ensure the sustainability of the banking sector.

Commercial banks are exposed to a wide range of risks, including credit risk, liquidity risk, market risk, and operational risk³. Inadequate management of these risks may lead to financial losses, reduced confidence of depositors and investors, and systemic instability. Therefore,

¹ Basel Committee on Banking Supervision (BCBS).

² *The Economics of Money, Banking and Financial Markets*.

³ Saunders, A., & Cornett, M. M. (2020).

improving risk management mechanisms in commercial banks is essential not only for individual institutions but also for the overall stability of the financial system⁴.

This study aims to analyze existing risk management practices in commercial banks and to identify key directions for their improvement. Special attention is paid to the application of international standards, regulatory requirements, and modern risk assessment tools⁵. The research also emphasizes the role of digital technologies and internal control systems in enhancing the effectiveness of risk management. The results of this study are expected to contribute to the development of more resilient and efficient risk management frameworks in commercial banks.

Literature analysis.

The issue of risk management in commercial banks has been widely studied by international organizations, researchers, and practitioners. According to the Basel Committee on Banking Supervision (BCBS), effective risk management is a fundamental element of a stable banking system, as it ensures the identification, measurement, monitoring, and control of various types of risks⁶. The Basel II and Basel III frameworks emphasize the importance of capital adequacy, risk-based supervision, and internal risk control mechanisms in commercial banks⁷.

A number of scholars have focused on the classification and measurement of banking risks. Saunders and Cornett (2020) provide a comprehensive analysis of major banking risks, including credit, liquidity, market, and operational risks, and highlight the role of integrated risk management systems in minimizing potential losses⁸. Mishkin (2019) also emphasizes that ineffective risk management practices can amplify financial instability and negatively affect banks' performance⁹.

Several empirical studies examine the relationship between risk management practices and financial stability. Research conducted by the International Monetary Fund (IMF) indicates that weaknesses in risk management frameworks were among the key factors contributing to the global financial crisis¹⁰. Similarly, studies by the World Bank stress that strengthening regulatory oversight and improving internal risk governance are essential for enhancing the resilience of commercial banks.

Recent literature highlights the growing role of digital technologies in risk management. Authors such as Deloitte (2021) and PwC (2022) argue that the use of big data, artificial intelligence, and advanced analytics improves risk assessment accuracy and supports proactive decision-making in commercial banks¹¹. Furthermore, the integration of digital risk management tools with internal control systems is considered a critical direction for improving overall risk management efficiency.

Overall, the reviewed literature demonstrates that continuous improvement of risk management mechanisms, alignment with international standards, and adoption of modern technologies are key directions for strengthening the stability and competitiveness of commercial banks.

⁴ *Banking Sector Stability and Risk Management*.

⁵ Basel III Framework (BCBS).

⁶ BCBS (2011). *Principles for the Sound Management of Operational Risk*.

⁷ BCBS (2017). *Basel III: Finalising post-crisis reforms*.

⁸ Saunders, A., & Cornett, M. M. (2020) *Financial Institutions Management: A Risk Management Approach*.

⁹ Mishkin, F. S. (2019). *The Economics of Money, Banking and Financial Markets*.

¹⁰ International Monetary Fund (2009). *Global Financial Stability Report*.

¹¹ PwC (2022). *Risk Management and Digital Innovation in Banking*.

Research methodology.

This study uses a mixed-method approach based on qualitative and quantitative analysis. Secondary data from the World Bank, FAO, IFAD, OECD, and national statistical sources are analyzed using descriptive and comparative methods. Literature review and analytical techniques are applied to identify key problems and draw conclusions on agricultural financing by commercial banks.

Analysis and results.

The analysis of risk management practices in commercial banks indicates that credit risk remains the most significant source of potential losses. In many banks, high levels of non-performing loans negatively affect profitability and capital adequacy. The results show that insufficient borrower assessment and weak monitoring mechanisms are among the main factors contributing to increased credit risk.

The study also reveals that liquidity risk management has improved in recent years due to the implementation of regulatory requirements and liquidity ratios. However, stress testing practices are not fully developed in some commercial banks, which limits their ability to respond effectively to unexpected financial shocks. The findings suggest that strengthening liquidity risk monitoring and scenario analysis is essential for maintaining short-term and long-term financial stability.

Market risk analysis demonstrates that fluctuations in interest rates and exchange rates continue to pose challenges for commercial banks. The results indicate that banks with diversified asset portfolios and advanced risk measurement models, such as Value at Risk (VaR), are better positioned to manage market risk. Nevertheless, the lack of qualified risk management specialists reduces the effectiveness of these models in practice.

Operational risk analysis highlights issues related to internal processes, information systems, and human factors. The results show that banks with strong internal control systems and digital risk management tools experience fewer operational losses. The integration of automated monitoring systems significantly enhances risk detection and reporting efficiency.

Overall, the findings confirm that improving risk management mechanisms in commercial banks requires a comprehensive approach. The implementation of international standards, development of human capital, and adoption of modern digital technologies contribute positively to reducing risks and enhancing the stability and performance of commercial banks.

Table 1. Table 1. Major Risk Types in Commercial Banks¹²

Risk Type	Main Source
Credit Risk	Non-performing loans
Liquidity Risk	Funding mismatch
Market Risk	Interest & FX volatility
Operational Risk	Internal process failures

This table summarizes the main types of risks faced by commercial banks and their primary sources. Credit risk is mainly associated with non-performing loans, while liquidity risk arises from mismatches between assets and liabilities. Market risk is driven by interest rate and foreign exchange volatility, and operational risk results from failures in internal processes, systems, or

¹² Basel Committee on Banking Supervision (2011). *Principles for the Sound Management of Operational Risk*; Saunders, A., & Cornett, M. M. (2020). *Financial Institutions Management: A Risk Management Approach*; Mishkin, F. S. (2019). *The Economics of Money, Banking and Financial Markets*; International Monetary Fund (IMF). *Global Financial Stability Report*.

human factors. Understanding these risk types is essential for improving risk management mechanisms and ensuring financial stability in commercial banks.

Table 2 Risk Management Tools Used in Commercial Banks¹³

Risk Management Tool	Main Advantage
Traditional methods	Simple implementation
Stress testing	Early shock detection
Digital tools	High accuracy
Integrated systems	Comprehensive control

Commercial banks operate in an environment characterized by high levels of uncertainty and financial risk. As a result, effective risk management is a crucial component of ensuring financial stability and sustainable development. This article examines the main risk management tools applied in commercial banks and highlights their key advantages.

Traditional risk management methods remain widely used in banking practice due to their simplicity and practicality. These methods include credit analysis, risk diversification, the establishment of exposure limits, and the use of collateral and guarantees. Such tools allow banks to identify and control risks at an early stage without requiring complex technological infrastructure. However, while traditional approaches are effective for routine risk assessment, they may be insufficient for identifying complex and systemic risks in rapidly changing financial markets.

Stress testing has become an essential risk management instrument, particularly in the context of financial crises and regulatory requirements. Through stress testing, banks assess their resilience to extreme but plausible adverse scenarios, such as economic downturns, sharp interest rate fluctuations, or currency depreciation. This tool enables banks to identify potential vulnerabilities in advance, strengthen capital adequacy, and improve contingency planning. Consequently, stress testing enhances banks' preparedness for unexpected financial shocks.

In recent years, digital risk management tools have gained increasing importance. The application of automated systems, big data analytics, and artificial intelligence has significantly improved the accuracy and timeliness of risk assessment. Digital tools enable real-time monitoring of risk exposures, reduce human error, and support data-driven decision-making. As a result, banks can respond more quickly and effectively to emerging risks.

Integrated risk management systems, commonly referred to as Enterprise Risk Management (ERM), provide a comprehensive framework for managing different types of risks within a single structure. These systems cover credit, market, liquidity, operational, legal, and reputational risks, allowing banks to identify interconnections among risk categories. Integrated approaches enhance overall control, align risk management with strategic objectives, and contribute to long-term financial stability.

In conclusion, the effective combination of traditional methods, stress testing, digital tools, and integrated risk management systems significantly enhances the efficiency of risk management mechanisms in commercial banks. By adopting a balanced and comprehensive approach, banks can strengthen their resilience, improve risk control, and maintain sustainable performance in an increasingly complex financial environment.

¹³ Basel Committee on Banking Supervision (2017). *Basel III: Finalising post-crisis reforms*; Committee of Sponsoring Organizations of the Treadway Commission (COSO) (2017). *Enterprise Risk Management – Integrating with Strategy and Performance*; Deloitte (2021). *Digital Transformation in Banking Risk Management*; International Monetary Fund (IMF). *Global Financial Stability Report*.

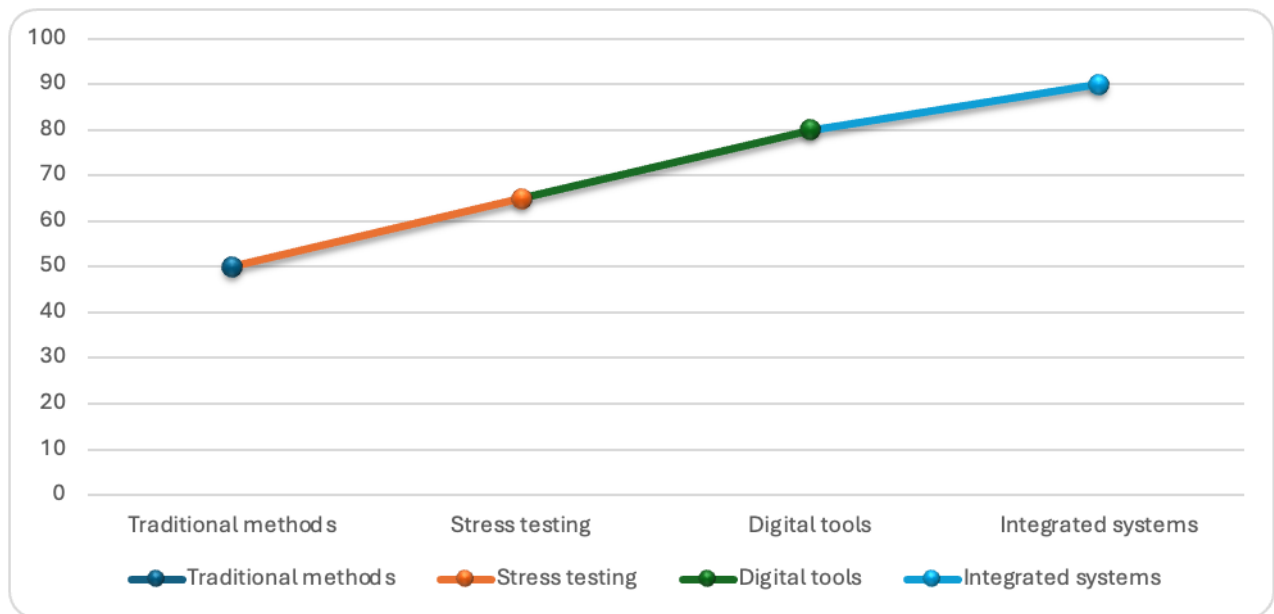


Figure 1. Effectiveness of Risk Management Tools in Commercial Banks¹⁴

The figure illustrates the comparative effectiveness of different risk management tools used in commercial banks. Traditional risk management methods demonstrate relatively lower effectiveness due to their limited analytical capacity. Stress testing improves early detection of potential financial shocks, while digital tools significantly enhance the accuracy and timeliness of risk assessment. Integrated risk management systems show the highest level of effectiveness, as they provide comprehensive control and coordination across all risk categories. The results highlight the importance of adopting advanced and integrated approaches to improve risk management mechanisms in commercial banks.

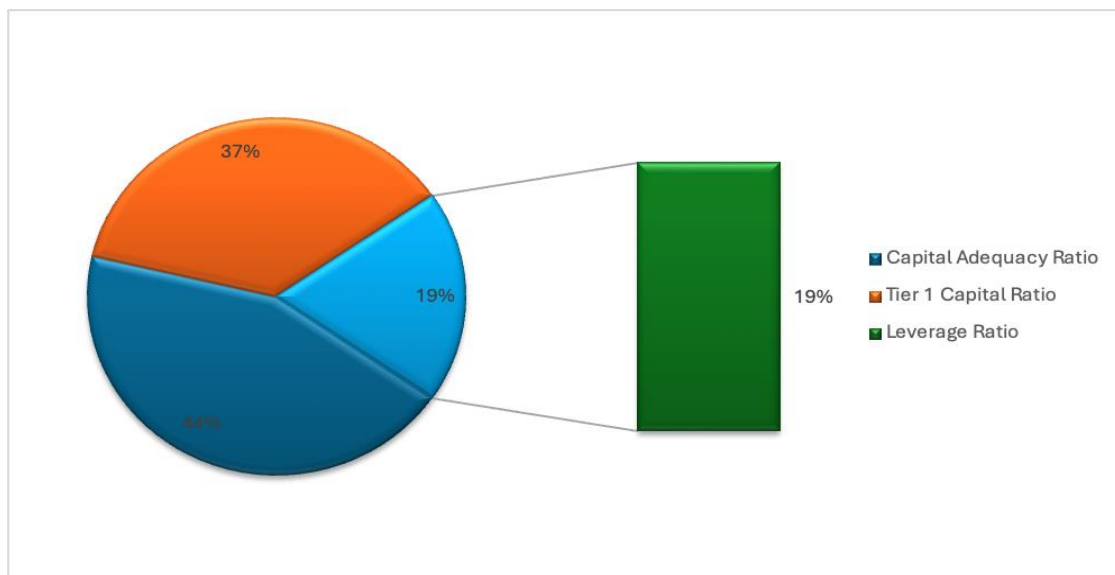


Figure 2. Structure of Capital Adequacy Indicators in Commercial Banks¹⁵

¹⁴ Basel Committee on Banking Supervision (2017). *Basel III: Finalising post-crisis reforms*; Committee of Sponsoring Organizations of the Treadway Commission (COSO) (2017). *Enterprise Risk Management – Integrating with Strategy and Performance*; Deloitte (2021). *Digital Transformation in Banking Risk Management*; PwC (2022). *Risk Management and Digital Innovation in Banking*.

The figure illustrates the structure of key capital adequacy indicators used to assess the financial stability of commercial banks. The Capital Adequacy Ratio accounts for the largest share, indicating the overall capacity of banks to absorb potential losses. The Tier 1 Capital Ratio represents the core capital strength, reflecting banks' ability to withstand financial stress. The Leverage Ratio, although smaller in proportion, plays a crucial role in limiting excessive leverage and ensuring long-term financial sustainability. The structure demonstrates the importance of maintaining balanced capital indicators in line with international regulatory standards.

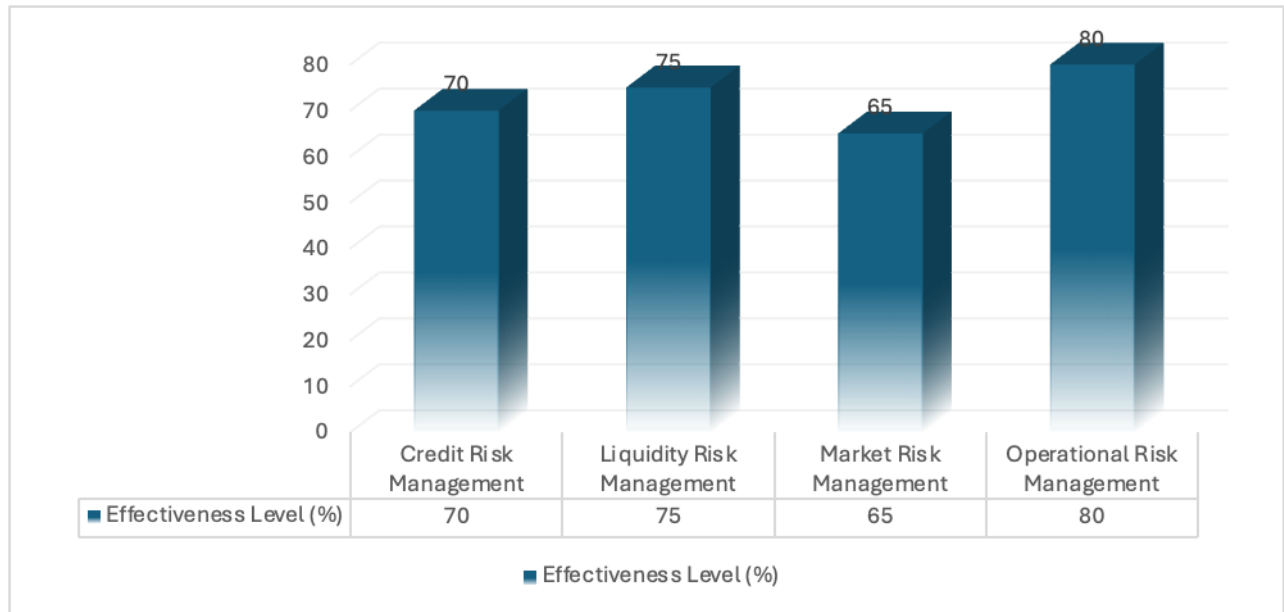


Figure 4. Effectiveness Level of Risk Management by Risk Type in Commercial Banks¹⁶

The figure presents a comparative assessment of the effectiveness of risk management across major risk categories in commercial banks. Operational risk management demonstrates the highest effectiveness level, reflecting the positive impact of improved internal controls and automation. Liquidity risk management also shows a relatively high level of effectiveness due to the application of regulatory liquidity standards and monitoring tools. Credit risk management remains moderately effective, indicating the need for stronger borrower assessment and monitoring mechanisms. Market risk management exhibits the lowest effectiveness level, suggesting that banks face ongoing challenges in managing interest rate and foreign exchange volatility. Overall, the results highlight the necessity of further improving risk management practices, particularly in the area of market risk.

Conclusions and suggestions.

This study examined the key directions for improving the risk management mechanism in commercial banks. The findings indicate that credit risk remains the most significant risk, largely driven by the high level of non-performing loans. Liquidity and market risks also pose substantial challenges, particularly under conditions of financial instability and market volatility. Operational risk management demonstrates relatively higher effectiveness due to improvements in internal control systems and digitalization processes.

¹⁵ Basel Committee on Banking Supervision (2017). *Basel III: Finalising post-crisis reforms*; Basel Committee on Banking Supervision (2018). *Global Liquidity Regulation*; International Monetary Fund (IMF). *Global Financial Stability Report*.

¹⁶ Basel Committee on Banking Supervision (2017). *Basel III: Finalising post-crisis reforms*; Saunders, A., & Cornett, M. M. (2020). *Financial Institutions Management: A Risk Management Approach*; International Monetary Fund (IMF). *Global Financial Stability Report*.

The results confirm that banks applying modern risk management tools, including stress testing, digital technologies, and integrated risk management systems, achieve higher effectiveness in risk identification, assessment, and control. In contrast, reliance on traditional risk management methods limits banks' ability to respond promptly to emerging financial risks. Overall, the study highlights the importance of aligning risk management practices with international regulatory standards and adopting advanced analytical tools.

Based on the results of the study, the following recommendations are proposed to improve risk management mechanisms in commercial banks:

1. Strengthening credit risk management by enhancing borrower creditworthiness assessment, improving loan monitoring systems, and reducing the share of non-performing loans.
2. Developing liquidity risk management frameworks through the wider use of stress testing and scenario analysis in accordance with Basel III requirements.
3. Improving market risk management by adopting advanced risk measurement models and enhancing the professional skills of risk management specialists.
4. Expanding the use of digital technologies such as big data analytics and automated monitoring systems to increase the accuracy and timeliness of risk assessment.
5. Implementing integrated risk management systems to ensure comprehensive control and coordination of all risk types within commercial banks.

The implementation of these measures will contribute to strengthening the financial stability, resilience, and competitiveness of commercial banks in a rapidly changing financial environment.

SOURCE AND USED LITERATURE LIST:

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