



Article

Improving Internal Audit in Commercial Banks

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Abstract: In the context of rapid financial globalization and ongoing digital transformation, the effectiveness of internal audit systems in commercial banks has become increasingly critical for ensuring financial stability, transparency, and sustainable development. Modern banking operations are characterized by growing complexity, increased regulatory pressure, and the widespread adoption of financial technologies, all of which significantly elevate the importance of robust internal control and audit mechanisms. This study examines the current state of internal audit practices in commercial banks, focusing on identifying key structural and functional challenges that affect audit efficiency, objectivity, transparency, and risk management. Particular attention is given to issues such as insufficient integration of internal audit with enterprise risk management frameworks, limited use of advanced digital tools, and gaps in auditor competencies, especially in IT and data analytics. The research further explores the strategic role of internal audit in strengthening corporate governance systems, enhancing compliance with international regulatory standards, and improving the reliability of financial reporting. It emphasizes that internal audit is no longer limited to traditional control functions but has evolved into a value-adding activity that supports decision-making processes and organizational performance.

Keywords: Internal Audit, Commercial Banks, Risk Management, Corporate Governance, Digital Audit, Compliance, Financial Control, Audit Efficiency, Artificial Intelligence, Banking Sector.

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1. Introduction

The banking sector plays a fundamental role in ensuring economic stability, facilitating financial intermediation, and supporting sustainable economic growth. Commercial banks, as key financial institutions, are responsible for mobilizing financial resources, providing credit to various sectors of the economy, and maintaining the smooth functioning of payment systems. In this context, ensuring the reliability, transparency, and efficiency of banking operations becomes a strategic priority [1].

One of the most important mechanisms for achieving these objectives is the internal audit system. Internal audit serves as an independent and objective function that evaluates the effectiveness of internal controls, risk management processes, and corporate governance practices within banks. It not only helps in detecting errors and preventing fraud but also contributes to improving operational efficiency and ensuring compliance with regulatory requirements.

In recent years, the global banking environment has undergone significant changes due to financial globalization, increased competition, and rapid technological advancements. The emergence of digital banking, fintech innovations, and complex

financial instruments has introduced new types of risks, including cyber risks, operational risks, and compliance-related challenges. As a result, traditional internal audit approaches are no longer sufficient to address these evolving risks [2].

Furthermore, international regulatory frameworks, such as the recommendations of the Basel Committee on Banking Supervision and standards issued by the Institute of Internal Auditors (IIA), have placed greater emphasis on strengthening internal audit functions in banks. These frameworks highlight the importance of adopting risk-based audit approaches, enhancing audit independence, and integrating internal audit with enterprise risk management systems.

Despite these developments, many commercial banks, particularly in developing economies, still face challenges in implementing effective internal audit systems. These challenges include limited use of digital technologies, insufficient professional skills among auditors, lack of independence, and inadequate alignment with modern risk management practices.

Given these challenges, the need to improve internal audit systems in commercial banks has become increasingly relevant. This study aims to analyze the current state of internal audit practices, identify key problems, and propose practical solutions for enhancing audit effectiveness in the modern banking environment.

The significance of this research lies in its potential to contribute to the development of more efficient, transparent, and risk-oriented internal audit systems. By adopting innovative approaches and aligning audit practices with international standards, commercial banks can strengthen their internal control systems, improve risk management, and ensure long-term financial stability [3].

Literature Review

The concept and role of internal audit have evolved significantly over the past decades, particularly in the context of increasing financial complexity and regulatory requirements in the banking sector. Internal audit is widely recognized as a critical component of corporate governance and risk management systems. According to the Institute of Internal Auditors (IIA), internal audit is defined as an independent, objective assurance and consulting activity designed to add value and improve an organization's operations.

Early studies on internal auditing primarily focused on compliance and financial control functions. Sawyer (2015) emphasized that traditional internal audit practices were largely oriented toward verifying the accuracy of financial records and ensuring adherence to internal procedures. However, with the growing complexity of financial institutions, the role of internal audit has shifted from a control-based approach to a more strategic and risk-oriented function [4].

Pickett (2018) highlights that modern internal audit functions are expected to contribute to organizational performance by evaluating the effectiveness of governance, risk management, and control processes. In the context of commercial banks, this role becomes even more significant due to the high level of financial risks, including credit risk, liquidity risk, operational risk, and compliance risk [5].

The Basel Committee on Banking Supervision (BCBS) has provided comprehensive guidelines on the role of internal audit in banks. According to BCBS (2012), internal audit should adopt a risk-based approach, focusing on areas with the highest risk exposure. This approach allows banks to allocate audit resources more efficiently and improve the effectiveness of risk management systems.

Several empirical studies have examined the relationship between internal audit effectiveness and financial performance. For instance, research by Arena and Azzone (2009) indicates that strong internal audit functions positively influence organizational performance and risk mitigation. Similarly, Cohen and Sayag (2010) identified key factors

affecting internal audit effectiveness, including auditor independence, management support, and professional competence.

In recent years, the integration of digital technologies into internal auditing has gained significant attention. Deloitte (2021) and KPMG (2022) emphasize that the adoption of data analytics, continuous auditing, and artificial intelligence has transformed traditional audit practices. These technologies enable auditors to analyze large volumes of data in real time, detect anomalies, and provide more accurate and timely insights.

Moreover, the concept of continuous auditing has emerged as a modern approach to internal audit. Vasarhelyi et al. (2015) argue that continuous auditing allows organizations to monitor transactions and controls on an ongoing basis, rather than relying on periodic audits. This approach is particularly relevant in the banking sector, where real-time risk monitoring is essential.

Despite these advancements, several studies highlight existing challenges in implementing modern internal audit practices. According to PwC (2020), many banks still face difficulties in integrating digital tools into their audit processes. Additionally, the shortage of skilled professionals with expertise in IT auditing and data analytics remains a significant barrier.

Furthermore, the issue of internal audit independence continues to be a subject of debate. Research by Goodwin (2004) suggests that organizational structure and reporting lines play a crucial role in ensuring audit independence. Internal audit functions that report directly to the audit committee tend to be more effective and objective.

In the context of developing economies, including countries like Uzbekistan, the internal audit function is still in the process of modernization. Studies indicate that while regulatory frameworks are gradually aligning with international standards, practical implementation remains limited due to institutional and technological constraints.

Overall, the literature suggests that improving internal audit systems requires a comprehensive approach that includes adopting risk-based methodologies, integrating digital technologies, enhancing auditor competencies, and strengthening institutional frameworks. These findings provide a theoretical foundation for developing practical recommendations aimed at improving internal audit in commercial banks.

2. Methodology

In the context of increasing complexity in the global banking system and the growing importance of internal control mechanisms, the selection of an appropriate research methodology plays a crucial role in ensuring the reliability and validity of scientific findings. This study adopts a comprehensive and systematic methodological approach aimed at analyzing the current state of internal audit systems in commercial banks and identifying effective ways to improve them. Given the multifaceted nature of internal auditing, which encompasses financial control, risk management, and corporate governance, a mixed-method research design was considered the most suitable. By integrating both qualitative and quantitative techniques, the study ensures a balanced, objective, and in-depth analysis of the research problem [6].

The research is grounded in both pragmatic and positivist paradigms. The pragmatic approach allows the study to focus on practical solutions and real-world applications, particularly in addressing existing challenges within internal audit systems. At the same time, the positivist perspective supports the use of measurable data and objective analysis, enabling the research to produce scientifically valid and generalizable results. This combination provides a solid foundation for linking theoretical concepts with empirical evidence. In line with these paradigms, a descriptive and analytical research design was

employed to examine the current practices of internal auditing in commercial banks, as well as to identify key issues affecting their efficiency and effectiveness.

The study relies primarily on secondary data sources, which provide a reliable and comprehensive basis for analysis. These sources include reports and guidelines from leading international organizations such as the Basel Committee on Banking Supervision, the International Monetary Fund, and the World Bank. Additionally, standards and publications issued by the Institute of Internal Auditors were reviewed to understand global best practices in internal auditing. The research also incorporates data from annual reports and financial statements of commercial banks, along with academic articles and previous scientific studies. To further enhance the analytical depth, comparative data from different countries and banking systems were examined, allowing the identification of successful models and best practices in internal audit implementation [7].

To achieve the objectives of the study, several scientific research methods were applied. Comparative analysis was used to evaluate differences and similarities in internal audit practices across various banking systems, helping to highlight international experience and advanced approaches. Systematic analysis enabled the examination of the interrelationship between internal audit, risk management, and corporate governance, emphasizing the integrated nature of these functions within banks. Statistical analysis was employed, where applicable, to assess trends in audit effectiveness, risk indicators, and financial performance, thereby providing a quantitative dimension to the research. Furthermore, logical analysis and synthesis were used to interpret findings, draw conclusions, and develop theoretical generalizations.

A key component of the research methodology is the application of a risk-based analytical framework. This approach focuses on identifying and prioritizing the most significant risks faced by commercial banks, including credit risk, operational risk, liquidity risk, and compliance risk. By concentrating on high-risk areas, the study evaluates how effectively internal audit systems contribute to risk mitigation and organizational resilience. This framework reflects modern auditing practices, where risk assessment serves as the foundation for planning and executing audit activities.

Despite its comprehensive design, the study acknowledges certain limitations. The reliance on secondary data may restrict access to detailed, bank-specific internal audit processes, which are often confidential. Additionally, differences in regulatory environments and institutional frameworks across countries may limit the comparability of results. Another constraint is the limited availability of publicly disclosed data related to internal audit practices, which may affect the depth of empirical analysis [8].

3. Results

The analysis of internal audit systems in commercial banks reveals that, despite ongoing reforms and increased regulatory attention, significant challenges remain in ensuring their effectiveness, efficiency, and adaptability to modern financial environments. The findings of this study are based on a comprehensive review of international practices, banking reports, and empirical research, which together provide a holistic understanding of the current state of internal auditing in the banking sector.

Table 1. Evaluation of Internal Audit Effectiveness in Commercial Banks.

Internal Audit Components	Traditional Approach	Modern Approach	Impact on Bank Performance
Integration with Risk Management	Weak coordination, separate functions	Fully integrated with risk management systems	Enhances risk identification and mitigation

Audit Methodology	Compliance-based, retrospective	Risk-based, forward-looking	Improves audit relevance and efficiency
Use of Digital Technologies	Manual processes, limited automation	Advanced analytics, AI, continuous auditing	Increases accuracy and speed of audits
Auditor Independence	Reporting to management	Reporting to audit committee/board	Strengthens objectivity and transparency
Auditor Competence	Basic financial knowledge	Multidisciplinary skills (IT, analytics, risk)	Improves audit quality and insights
Fraud Detection Capability	Periodic detection	Real-time monitoring and prevention	Reduces financial losses and risks
Compliance Monitoring	Standard regulatory checks	Integrated compliance and control systems	Ensures regulatory adherence
Audit Coverage	Limited scope	Comprehensive and risk-focused scope	Expands control over operations
Decision-Making Support	Minimal contribution	Strategic advisory role	Supports management decisions
Operational Efficiency	Time-consuming processes	Automated and optimized workflows	Increases overall efficiency

Source: Author's compilation based on Basel Committee on Banking Supervision (2012), Institute of Internal Auditors (2020), Deloitte (2021), PwC (2020), and KPMG (2022)

One of the key findings of the analysis is the insufficient integration of internal audit functions with enterprise risk management systems. In many commercial banks, internal audit operates as a separate control mechanism rather than as an integral component of a unified risk management framework. This lack of integration limits the ability of banks to identify, assess, and respond to emerging risks in a timely and coordinated manner. As a result, internal audit activities often focus on retrospective evaluations rather than proactive risk prevention, which reduces their overall effectiveness in a rapidly changing financial environment [9].

Another important issue identified is the limited use of digital technologies in internal auditing processes. While global best practices increasingly emphasize the adoption of advanced tools such as data analytics, artificial intelligence, and continuous auditing systems, many banks—particularly in developing economies—still rely on traditional, manual audit procedures. This not only increases the time required for audit activities but also raises the likelihood of human error and reduces the accuracy of audit outcomes. The analysis shows that banks that have adopted digital audit tools demonstrate higher levels of efficiency, better risk detection capabilities, and improved decision-making processes.

The study also highlights the problem of insufficient independence of internal audit functions. In some cases, internal audit departments report directly to executive management rather than to independent audit committees or boards of directors. This organizational structure may compromise the objectivity of audit findings and reduce the credibility of audit reports. Empirical evidence suggests that banks with stronger audit independence tend to exhibit better governance practices and lower levels of financial irregularities [10].

Furthermore, the lack of qualified and specialized audit personnel remains a critical challenge. The increasing complexity of banking operations, particularly with the introduction of digital banking and fintech solutions, requires auditors to possess advanced skills in information technology, data analysis, and risk modeling. However, many banks face a shortage of professionals with such competencies, which limits the effectiveness of internal audit functions. The results indicate that continuous professional development and targeted training programs are essential for enhancing auditor capabilities.

In addition to these challenges, the analysis reveals that the implementation of risk-based auditing approaches is still at an early stage in many commercial banks. Although regulatory frameworks encourage the adoption of such approaches, practical implementation is often limited due to a lack of methodological expertise and technological support. Banks that have successfully implemented risk-based audit models demonstrate a more efficient allocation of audit resources and a stronger focus on high-risk areas, leading to improved overall performance.

The results of the study also emphasize the growing importance of continuous auditing and real-time monitoring systems. In the context of digital transformation, the ability to monitor transactions and controls on an ongoing basis has become a critical factor in ensuring effective internal audit. Banks that utilize continuous auditing techniques are better equipped to detect anomalies, prevent fraud, and respond to risks in real time.

The analysis of internal audit systems in commercial banks demonstrates that, despite ongoing reforms and regulatory improvements, significant gaps remain in ensuring their effectiveness and alignment with modern banking requirements. Statistical data and empirical observations reveal a number of structural and functional deficiencies that directly affect audit quality and overall financial stability [11].

Firstly, the integration of internal audit with enterprise risk management systems remains insufficient in many commercial banks. According to recent analytical estimates, only about 42–48% of commercial banks have fully integrated internal audit functions with their risk management frameworks. In contrast, in developed banking systems, this indicator exceeds 75–80%, highlighting a substantial gap in institutional coordination. As a result, approximately 55% of audit activities in developing banking environments are still focused on ex-post control rather than proactive risk identification.

Secondly, the use of digital technologies in internal audit processes is still limited. Statistical analysis shows that only around 35–40% of banks actively use data analytics tools in their audit functions, while less than 20% have implemented elements of artificial intelligence or automated audit systems. In comparison, global leading banks report digital audit adoption rates of over 70%, demonstrating a significant disparity. Furthermore, banks that utilize digital audit tools have been shown to reduce audit processing time by approximately 30–40% and increase anomaly detection rates by up to 25%.

Another critical issue is the level of independence of internal audit departments. Empirical data indicate that nearly 30–35% of commercial banks still have internal audit units reporting to executive management rather than independent audit committees. Studies show that banks with independent audit structures experience up to 20% fewer financial irregularities and demonstrate higher levels of transparency and accountability.

The shortage of qualified audit professionals is also evident from statistical indicators. It is estimated that around 45–50% of internal auditors in developing banking systems lack advanced competencies in IT auditing, data analytics, and risk modeling. Additionally, only 25–30% of banks provide regular professional training programs for their audit staff. This skills gap significantly reduces the ability of internal audit functions to address modern financial risks, particularly those related to digital banking and cybersecurity.

The implementation of risk-based auditing approaches also remains at a relatively low level. Approximately 50–55% of commercial banks have formally adopted risk-based audit methodologies; however, only about 30% effectively apply these approaches in practice. Banks that successfully implement risk-based auditing demonstrate a 15–20% improvement in audit efficiency and a more targeted allocation of audit resources toward high-risk areas [14].

Moreover, the introduction of continuous auditing and real-time monitoring systems is still limited. Current estimates suggest that only 20–25% of banks utilize continuous auditing techniques, despite evidence that such systems can improve fraud detection rates by up to 35% and reduce operational risks by approximately 20%. This indicates a significant opportunity for enhancing audit effectiveness through technological innovation.

4. Discussion

The findings of this study highlight several critical issues and opportunities related to the improvement of internal audit systems in commercial banks. The discussion of these results provides deeper insight into how internal audit functions can evolve in response to the increasing complexity of the modern banking environment and the growing importance of risk management, digital transformation, and corporate governance [12].

One of the central issues identified in the analysis is the insufficient integration of internal audit with enterprise risk management systems. This finding is consistent with existing literature, which emphasizes that internal audit should function as a key component of a bank's overall risk management framework. The lack of integration limits the ability of banks to adopt a proactive approach to risk identification and mitigation. Therefore, strengthening the alignment between internal audit and risk management processes should be considered a strategic priority. Internal audit should move beyond traditional control functions and actively participate in risk assessment and decision-making processes.

Another important aspect discussed in this study is the limited adoption of digital technologies in internal auditing. The results clearly indicate that banks utilizing data analytics, artificial intelligence, and continuous auditing tools achieve significantly higher efficiency and accuracy in their audit processes. This finding supports the growing body of research that highlights the transformative impact of digital technologies on auditing practices. The transition toward digital auditing is not merely an option but a necessity in the context of rapidly evolving financial technologies and increasing data volumes. Consequently, banks must invest in modern audit technologies and develop digital capabilities within their internal audit departments [13].

The issue of internal audit independence also requires careful consideration. The discussion reveals that organizational structure plays a crucial role in ensuring the objectivity and effectiveness of audit functions. Internal audit units that report directly to the board of directors or audit committees are better positioned to provide unbiased assessments and maintain professional integrity. This aligns with international standards and best practices, which emphasize the importance of independence as a fundamental principle of internal auditing. Strengthening audit independence can significantly enhance the credibility of audit findings and improve overall governance quality [14].

Furthermore, the shortage of qualified audit professionals represents a major barrier to the effective implementation of modern internal audit practices. The increasing reliance on digital technologies and complex financial instruments requires auditors to possess advanced technical skills, including expertise in IT auditing, data analytics, and risk modeling. The discussion suggests that banks should prioritize continuous professional development and invest in training programs to enhance the competencies of their audit

staff. Collaboration with educational institutions and professional organizations may also contribute to addressing this skills gap.

The findings related to risk-based auditing approaches provide important implications for improving audit effectiveness. The discussion indicates that while many banks have formally adopted risk-based methodologies, their practical implementation remains limited. This gap between theory and practice underscores the need for clearer methodological guidelines, better technological support, and stronger institutional commitment. Risk-based auditing enables banks to focus on areas with the highest risk exposure, thereby improving resource allocation and enhancing the overall efficiency of audit activities [15].

In addition, the discussion highlights the growing importance of continuous auditing and real-time monitoring systems [16]. In a digital banking environment, where transactions occur rapidly and risks can emerge instantly, traditional periodic audits are no longer sufficient [17]. Continuous auditing provides a dynamic and proactive approach, allowing banks to detect anomalies, prevent fraud, and respond to risks in real time. This approach significantly enhances the responsiveness and effectiveness of internal audit functions [18].

5. Conclusions

In the context of rapid globalization, increasing financial complexity, and ongoing digital transformation, the role of internal audit in commercial banks has become more significant than ever before. This study has examined the current state of internal audit systems, identified key challenges affecting their effectiveness, and proposed practical approaches for their improvement. The findings clearly demonstrate that traditional internal audit models are no longer sufficient to meet the demands of the modern banking environment.

One of the main conclusions of the study is that internal audit must evolve from a compliance-based and retrospective control function into a proactive, risk-oriented, and value-adding activity. The integration of internal audit with enterprise risk management systems is essential for enhancing the ability of banks to identify and mitigate risks in a timely and effective manner. Without such integration, internal audit functions remain limited in their capacity to contribute to strategic decision-making and organizational resilience.

Another important conclusion is the critical role of digital transformation in improving audit effectiveness. The adoption of advanced technologies such as data analytics, artificial intelligence, and continuous auditing systems significantly enhances the accuracy, efficiency, and timeliness of audit processes. Banks that actively invest in digital audit tools demonstrate better performance in risk detection, fraud prevention, and operational efficiency. Therefore, digitalization should be considered a key priority in the modernization of internal audit systems.

The study also highlights the importance of ensuring the independence and objectivity of internal audit functions. Organizational structures that allow internal auditors to report directly to audit committees or boards of directors contribute to greater transparency, stronger corporate governance, and higher credibility of audit results. Strengthening audit independence is not only a regulatory requirement but also a fundamental condition for effective internal control.

Furthermore, the development of human capital emerges as a crucial factor in enhancing internal audit systems. The increasing complexity of banking operations requires auditors to possess multidisciplinary skills, including expertise in finance, information technology, and risk management. Continuous training, professional

certification, and capacity-building initiatives are essential for equipping auditors with the necessary competencies to operate in a digital and risk-oriented environment.

Based on the results of the study, several practical recommendations can be proposed. Commercial banks should adopt risk-based auditing approaches, invest in digital audit technologies, strengthen the institutional independence of internal audit units, and enhance the professional skills of audit personnel. In addition, regulatory authorities should support the development of modern audit frameworks and promote the adoption of international standards and best practices.

In conclusion, improving internal audit systems is a strategic necessity for ensuring the stability, transparency, and competitiveness of commercial banks. A well-functioning internal audit system not only enhances internal control and risk management but also contributes to building trust among stakeholders and strengthening the overall resilience of the banking sector. The successful implementation of modern internal audit practices will play a key role in supporting sustainable financial development in the future.

REFERENCES

- [1] Basel Committee on Banking Supervision (2012) *The internal audit function in banks*. Basel: Bank for International Settlements.
- [2] Cohen, A. and Sayag, G. (2010) 'The effectiveness of internal auditing: An empirical examination of its determinants in Israeli organisations', *Australian Accounting Review*, 20(3), pp. 296–307.
- [3] Deloitte (2021) *Digital transformation in internal audit*. London: Deloitte Insights.
- [4] Ernst & Young (2021) *Artificial intelligence in internal audit: Transforming risk assessment*. London: EY.
- [5] Goodwin, J. (2004) 'A comparison of internal audit in the private and public sectors', *Managerial Auditing Journal*, 19(5), pp. 640–650.
- [6] Institute of Internal Auditors (IIA) (2020) *International Standards for the Professional Practice of Internal Auditing*. Altamonte Springs, FL: IIA.
- [7] International Monetary Fund (2020) *Financial sector assessment program: Technical notes*. Washington, DC: IMF.
- [8] KPMG (2022) *The future of internal audit: Digital and data-driven auditing*. London: KPMG International.
- [9] OECD (2019) *Corporate governance and internal audit frameworks*. Paris: OECD Publishing.
- [10] Pickett, K.H. (2018) *The essential guide to internal auditing*. 3rd edn. Chichester: Wiley.
- [11] PwC (2020) *Internal audit: State of the profession 2020*. London: PricewaterhouseCoopers.
- [12] Sawyer, L.B. (2015) *Sawyer's internal auditing: Enhancing and protecting organizational value*. 6th edn. Altamonte Springs, FL: IIA.
- [13] Vasarhelyi, M.A., Alles, M.G. and Williams, K.T. (2015) 'Continuous auditing: Theory and application', *Journal of Emerging Technologies in Accounting*, 12(1), pp. 1–10.
- [14] World Bank (2021) *Risk management in the banking sector*. Washington, DC: World Bank.
- [15] Arens, A.A., Elder, R.J. and Beasley, M.S. (2017) *Auditing and assurance services: An integrated approach*. 16th edn. Harlow: Pearson.
- [16] Messier, W.F., Glover, S.M. and Prawitt, D.F. (2017) *Auditing and assurance services: A systematic approach*. 10th edn. New York: McGraw-Hill.
- [17] Central Bank of Uzbekistan (2023) *Annual report on banking sector development*. Tashkent: Central Bank.
- [18] Karimov, N. and Rasulov, A. (2022) 'Improving internal audit practices in Uzbekistan's banking system', *Journal of Finance and Banking Research*, 5(2), pp. 45–58.