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Enhancing Bank Performance: Integrating Enterprise Risk Management with Mobile Banking Applications

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ABSTRACT

This study investigates how the implementation of mobile banking and enterprise risk management (ERM) contributes to the success of financial institutions in a rapidly evolving financial environment. To understand the relationship between ERM, mobile banking adoption, and bank performance, we surveyed 250 senior bankers from the 25 largest banks in Indonesia using Partial Least Squares Structural Equation Modeling (PLS-SEM). Our findings indicate that effective ERM implementation positively affects bank performance. Mobile banking enhances customer convenience, streamlines operations, and broadens market reach, increasing customer satisfaction, operational efficiency, and profitability. Additionally, using mobile banking applications mediates the positive indirect impact of ERM on bank performance. This research highlights that ERM's effect on Indonesian banking performance is partly mediated by adopting mobile banking applications. The study contributes to the literature on RBV theory, which suggests that banks can create innovative ERM strategies and leverage its unique resources, such as mobile banking, to remain competitive and sustain their performance. The innovation aligns with the principles of TAM, which highlights the significance of perceived usefulness and ease of use in technology adoption.

ABSTRAK

Penelitian ini menyelidiki bagaimana penerapan perbankan seluler dan manajemen risiko perusahaan (ERM) berkontribusi pada kesuksesan lembaga keuangan dalam lingkungan keuangan yang berkembang pesat. Untuk memahami hubungan antara ERM, adopsi perbankan seluler, dan kinerja bank, kami melakukan survei terhadap 250 banker senior dari 25 bank terbesar di Indonesia dengan menggunakan PLS-SEM. Temuan kami menunjukkan bahwa penerapan ERM yang efektif berdampak positif pada kinerja bank. Perbankan seluler meningkatkan kenyamanan pelanggan, menyederhanakan operasi, dan memperluas jangkauan pasar, yang meningkatkan kepuasan pelanggan, efisiensi operasional, dan profitabilitas. Selain itu, penggunaan aplikasi perbankan seluler memediasi dampak positif tidak langsung dari ERM terhadap kinerja bank. Penelitian ini menyoroti bahwa efek ERM terhadap kinerja perbankan di Indonesia sebagian dimediasi oleh adopsi aplikasi perbankan seluler. Studi ini berkontribusi pada literatur mengenai Teori RBV, yang menyarankan bahwa bank dapat menciptakan strategi ERM yang inovatif dan memanfaatkan sumber daya uniknya, seperti mobile banking, untuk tetap bersaing dan mempertahankan kinerjanya. Inovasi ini sejalan dengan prinsip TAM, yang menyoroti pentingnya manfaat yang dirasakan dan kemudahan penggunaan dalam adopsi teknologi.

1. INTRODUCTION

Enterprise Risk Management (ERM) involves the systematic identification, assessment, and mitigation of potential risks across all areas of an organization's operations. By adopting robust risk management practices, banks aim to protect themselves from unforeseen events, enhance decision-making, and improve overall performance. Effective ERM frameworks enable banks to proactively identify and address risks, thereby reducing the likelihood of negative financial impacts and maintaining stakeholder trust. The interplay between ERM and mobile banking adoption presents a significant relationship that can impact bank performance. The rapid growth of mobile technology has transformed the delivery of banking services. As digital banking solutions become more widespread, banks are increasingly integrating mobile banking applications (MBAs). The rise in mobile banking adoption is driven by factors such as greater smartphone usage, improved internet

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connectivity, and evolving customer preferences (Alalwan et al., 2017; Gupta et al., 2017; Ho et al., 2020; Sarkar et al., 2020; Shaikh et al., 2023). To navigate this evolving banking landscape, it is essential for banks to understand how ERM practices interact with mobile banking and how these interactions affect performance. From an accounting perspective, enhancing ERM frameworks involves addressing financial reporting implications, ensuring regulatory compliance, and refining performance measurement practices. ERM practices can mitigate risks associated with mobile banking, such as data breaches, fraud, and operational disruptions, thereby enhancing the reliability and security of mobile banking platforms. The adoption of mobile banking offers several benefits, including cost savings through reduced infrastructure needs, increased customer engagement, and expanded market reach (Johnson et al., 2018). Integrating ERM frameworks into accounting systems allows banks to manage risks more effectively, maintain compliance, and achieve greater transparency and accuracy in financial reporting. Abu Afifa and Saleh (2021) suggest that implementing ERM supports sophisticated management accounting systems, improving information quality and control.

ERM is a comprehensive concept that involves identifying, assessing, and mitigating risks across all areas of an organization, including financial, operational, strategic, and compliance-related risks. The primary goal of ERM is to develop a holistic approach to risk management that acknowledges the interconnectedness of risks and their potential impact on the organization (Adam et al., 2023; Alawattegama, 2018). The Resource-Based View (RBV) theory effectively explains ERM by examining how managers utilize firm resources and capabilities to create products that outperform competitors' offerings and better meet customer needs (Penrose, 1959). Bank managers use ERM as a strategic resource to serve customers more effectively than their competitors. By applying RBV theory to the banking sector, banks can develop innovative ERM strategies that leverage their unique resources, enabling them to remain competitive and sustain their economic performance (Oyewo, 2022). Research on the relationship between ERM and Management Accounting Systems (MAS) reveals that effective ERM implementation relies on sophisticated MAS information. ERM and MAS are complementary, both essential for decision-making, planning, and control within an organization. This finding underscores the significant role of ERM in enhancing non-financial performance. Evidence suggests that risk management positively influences performance (Adam et al., 2023; Alawattegama, 2017; Al-Nimer et al., 2021; Saeidi et al., 2021; Songling et al., 2018; Zaleha Abdul Rasid et al., 2014). In addition to RBV, the Technology Acceptance Model (TAM) provides insights into how individuals or customers accept information systems. Proposed by Davis (1989), TAM argues that users' willingness to use technology is primarily influenced by their perception of its usefulness and ease of use. Many studies have extended TAM to explore factors affecting the adoption of various digital banking forms. Beyond TAM's core constructs of perceived usefulness and ease of use, factors such as subjective norms, personal innovativeness, trust, and self-efficacy significantly impact customers' intentions to adopt mobile banking (Kumar et al., 2020). Mobile banking enables banks to expand their customer base, engage with customers more effectively, and offer value-added services. This capability ultimately drives revenue growth and enhances financial performance (Alalwan et al., 2017; Ho et al., 2020; Joshi et al., 2019; Kumar et al., 2020; Mbama et al., 2018; Naruetharadhol et al., 2021; Shaikh et al., 2023; Sikdar & Makkad, 2015).

Several studies have examined the factors influencing mobile banking applications and the impact of mobile banking adoption on bank performance, highlighting the significant potential of mobile technology to transform the banking industry. Research has consistently shown a positive correlation between mobile banking adoption and various dimensions of bank performance, including customer satisfaction, efficiency, profitability, and market share (Alalwan et al., 2017; Ho et al., 2020; Joshi et al., 2019; Kumar et al., 2020; Mbama et al., 2018; Naruetharadhol et al., 2021; Shaikh et al., 2023; Sikdar & Makkad, 2015). These studies support the idea that adopting mobile banking leads to enhanced bank performance. By providing mobile banking services, banks can improve operational efficiency, increase customer satisfaction, and boost profitability. Leveraging mobile technology allows banks to better meet customer needs, strengthen their competitive position, and achieve sustainable growth in the digital age. The implementation of ERM has also been extensively studied in relation to various aspects of bank performance, such as financial performance, risk-adjusted returns, and market value (Adam et al., 2023; Alawattegama, 2017; Al-Nimer et al., 2021; Saeidi et al., 2021; Songling et al., 2018; Zaleha Abdul Rasid et al., 2014). These studies provide evidence that effective ERM implementation positively impacts bank performance. Systematic risk management is crucial for banks, as it reduces the likelihood of negative events, enhances decision-making, and leads to improved financial

outcomes. In the digital era, ERM is essential for banks to remain competitive and ensure long-term sustainability (Saputra et al., 2023).

Previous research has examined how ERM influences bank performance and the adoption of mobile banking in the banking sector. However, this study offers a unique contribution by exploring the previously uncharted territory of the indirect effects of ERM on Indonesian bank performance, specifically in relation to the adoption of mobile banking applications (MBAs). While existing studies have investigated the direct effects of ERM on bank performance and mobile banking adoption, there is a notable gap in research addressing how these factors interact and influence bank performance within Indonesia's banking industry. This study aims to fill this gap by exploring the complex relationship between ERM, mobile banking adoption, and bank performance. A distinctive feature of this research is its use of PLS-SEM, a method that is infrequently applied in studies analyzing the interplay between ERM, mobile banking adoption, and bank performance.

According to the RBV theory, organizational differences stem from their unique resources, which lead to distinctive competitive strategies based on their specific resource combinations (Kumar et al., 2020; Tauringana, 2021). The theory suggests that adopting ERM practices can serve as a competitive strategy to address risks associated with mobile banking, such as data breaches, fraud, and operational disruptions, while simultaneously enhancing the security and reliability of mobile banking platforms. Mobile banking offers several benefits to banks, including cost savings from reduced infrastructure needs, increased customer engagement, and a broader market reach (Johnson et al., 2018). The TAM explains that an individual's willingness to adopt a system depends on their perception of its ease of use and practicality (Sulistyowati et al., 2021). Compared to traditional banking methods, mobile banking's time-saving features make it a more attractive option for both banks and customers, offering greater efficiency and speed in managing financial transactions and interactions. The primary objective of this research is to investigate the complex impact of mobile banking adoption on bank performance in Indonesia, with a focus on the mediating role of ERM practices. Additionally, this study aims to provide a comprehensive understanding of how ERM implementation, mobile banking adoption, and bank performance are interconnected within the Indonesian banking industry. This will contribute to a deeper insight into the strategic, operational, and risk management aspects of modern banking practices in Indonesia.

2. THEORETICAL FRAMEWORK AND HYPOTHESES

While there is a growing body of literature on the impact of ERM on bank performance and the effect of Performance Measurement Systems (PMS) on organizational performance, there is a notable lack of studies exploring how integrating ERM and PMS can improve bank performance. The RBV theory posits that organizations can leverage their strategic resources to establish and maintain a competitive advantage. By applying this theory to the banking sector, banks can develop innovative ERM strategies and utilize their unique resources to withstand competition and sustain economic performance (Oyewo, 2022). Research has shown that implementing ERM effectively requires sophisticated MAS information. ERM and MAS are complementary, both playing crucial roles in decision-making, planning, and control within an organization. This evidence highlights the significant role of ERM in enhancing non-financial performance. Risk management has been found to positively impact performance (Adam et al., 2023; Alawattegama, 2017; Al-Nimer et al., 2021; Saeidi et al., 2021; Songling et al., 2018; Zaleha Abdul Rasid et al., 2014). Based on these findings, we propose the following hypothesis:

H1. The implementation of ERM positively affects bank performance in Indonesia.

Studies have shown a positive relationship between mobile banking adoption and bank profitability, indicating that banks that effectively implement mobile banking solutions tend to achieve higher profitability. The acceptance of technology plays a crucial role in the adoption of mobile banking, as it strategically leverages technological advancements to enhance customer satisfaction and usage. Not only do the constructs of the TAM, such as perceived usefulness and ease of use, influence mobile banking adoption, but behavioral factors like subjective norms, personal innovativeness, trust, and self-efficacy also significantly and positively impact customers' intention to adopt mobile banking (Kumar et al., 2020). Mobile banking allows banks to expand their customer base, engage with customers more effectively, and offer value-added services, ultimately driving revenue growth and improving financial performance (Alalwan et al., 2017; Ho et al., 2020; Joshi et al., 2019; Kumar et al., 2020; Mbama et al., 2018; Naruetharadhol et al., 2021; Shaikh et al., 2023; Sikdar & Makkad, 2015). Based on this evidence, the following hypothesis is proposed:

H2. The adoption of MBAs positively affects bank performance in Indonesia.

According to RBV theory, organizations differ in their resources, leading to unique competitive strategies that arise from these distinct resource combinations (Kumar et al., 2020; Tauringana, 2021). This theory suggests that adopting ERM practices can serve as a competitive strategy to mitigate risks associated with mobile banking, such as data breaches, fraud, and operational disruptions, while also enhancing the security and reliability of mobile banking platforms. The adoption of mobile banking offers several advantages for banks, including cost savings through reduced infrastructure needs, increased customer engagement, and expanded market reach (Johnson et al., 2018). The TAM further explains that an individual's interest in adopting a system depends on their perception of its simplicity and practicality (Sulistyowati et al., 2021). Compared to traditional banking methods, the time-saving aspect of mobile banking makes it a more attractive option for both banks and customers. Moreover, effectively implementing an ERM system allows banks to provide a seamless and personalized experience across multiple channels, including mobile applications. ERM facilitates smooth interactions, prompt information retrieval, and efficient service delivery for mobile banking users. The proposed hypotheses suggest that ERM influences the adoption of mobile banking apps and that mobile banking adoption mediates the relationship between ERM implementation and bank performance in Indonesia. Based on these insights, the following hypotheses are developed:

H3. The implementation of ERM positively affects the adoption of mobile banking applications in Indonesia.

H4. The adoption of MBAs positively mediates the effect of ERM implementation on bank performance in Indonesia.

3. RESEARCH METHOD

This study adopts a quantitative approach and employs a cross-sectional research design to collect data at a single point in time. The research aims to examine the impact of ERM and MBAs on bank performance. The ERM framework includes components such as control activities, event identification, information and communication, internal environment, monitoring, objective setting, risk assessment, and risk response. The evaluation of MBAs focuses on factors like customer awareness, perceived ease of use and usefulness, trust in security and privacy, transaction costs, and the features provided by the mobile banking application. To assess bank performance, the study utilizes the balanced scorecard framework, which incorporates indicators from financial, customer, internal business processes, and learning and growth perspectives (Kaplan & Norton, 1992). The balanced scorecard is particularly effective in evaluating bank performance because it measures both financial and non-financial factors (Esther Akinbowale et al., 2022; Kaplan & Norton, 1992; Wanke et al., 2023). In this research, the balanced scorecard is employed to provide a more comprehensive and forward-looking strategy for evaluating bank performance. By considering the roles of ERM and MBAs, this approach ensures a balanced assessment of financial success along with other critical aspects of banking operations.

To ensure the selection of participants with expertise and decision-making authority in risk management and mobile banking, the researchers employed a purposive sampling method. The study targeted 250 senior bankers, including board members, executive vice presidents, vice presidents, and other specialists directly involved in risk management, client management, and digital transformation. Recognizing the significance of the banking sector in Indonesia, the study specifically focused on the top 25 banks, as they hold substantial influence over the country's economy and the banking industry. To gather comprehensive insights, the research sample included senior bankers from these leading institutions, ensuring input from key decision-makers in the industry. These individuals possess extensive knowledge in the strategic, operational, and risk management aspects of banking, making them valuable contributors to the examination of the relationship between ERM, mobile banking, and bank performance.

Primary data was collected through an online questionnaire distributed to the selected participants. The questionnaire consisted of three main sections: one focused on assessing the level of ERM implementation, another on the adoption of MBAs, and a final section measuring bank performance using key performance indicators based on the Balanced Scorecard for banking. Responses in each section were measured using a 5-point Likert scale.

PLS-SEM is an appropriate method for analyzing the collected data, particularly because it can predict complex relationships even in small sample sizes and effectively handle both formative and reflective indicators. The PLS-SEM analysis involves two main stages: the measurement model and the structural model. The measurement model assesses the validity and reliability of the indicators used to measure ERM, MBAs, and bank performance. It evaluates the convergent and discriminant validity of the latent variables to ensure that the constructs are accurately represented. The structural model then examines the relationships between ERM, MBAs, and bank performance, analyzing both direct and indirect effects to provide a comprehensive understanding of how these factors interact.

4. DATA ANALYSIS AND DISCUSSION

The study employed PLS-SEM for its quantitative research, aiming to examine the influence of ERM and MBAs on the performance of the 25 largest banks in Indonesia. The study included 250 respondents from various professional backgrounds within the banking sector. Of these respondents, 68.4% were male, and 31.6% were female. Regarding education, 6.8% held diplomas, 43.6% had bachelor's degrees, 39.2% had master's degrees, and 10.4% had doctoral degrees. The participants held various senior positions: 34.8% were vice presidents, 32.4% were executive vice presidents, 21.2% were board members, and 11.6% were other specialists. The participants also had a wide range of professional experience, with 21.2% having less than 10 years of experience, 32.4% having 11 to 20 years, 36.4% having 21 to 30 years, and 10% having over 30 years of experience. These insights highlight the diverse professional expertise represented in the research. The study yielded the following key findings as presented in Figure 1.

The assessment of construct reliability involves evaluating the consistency and dependability of the items or questions used to measure a construct. It is crucial that the outer loadings of all indicators meet the minimum requirement for statistical significance. For robustness, standardized outer loadings should be 0.708 or higher (Hair et al., 2022). This measure indicates how effectively the items in a scale capture the theoretical concept or construct being studied.

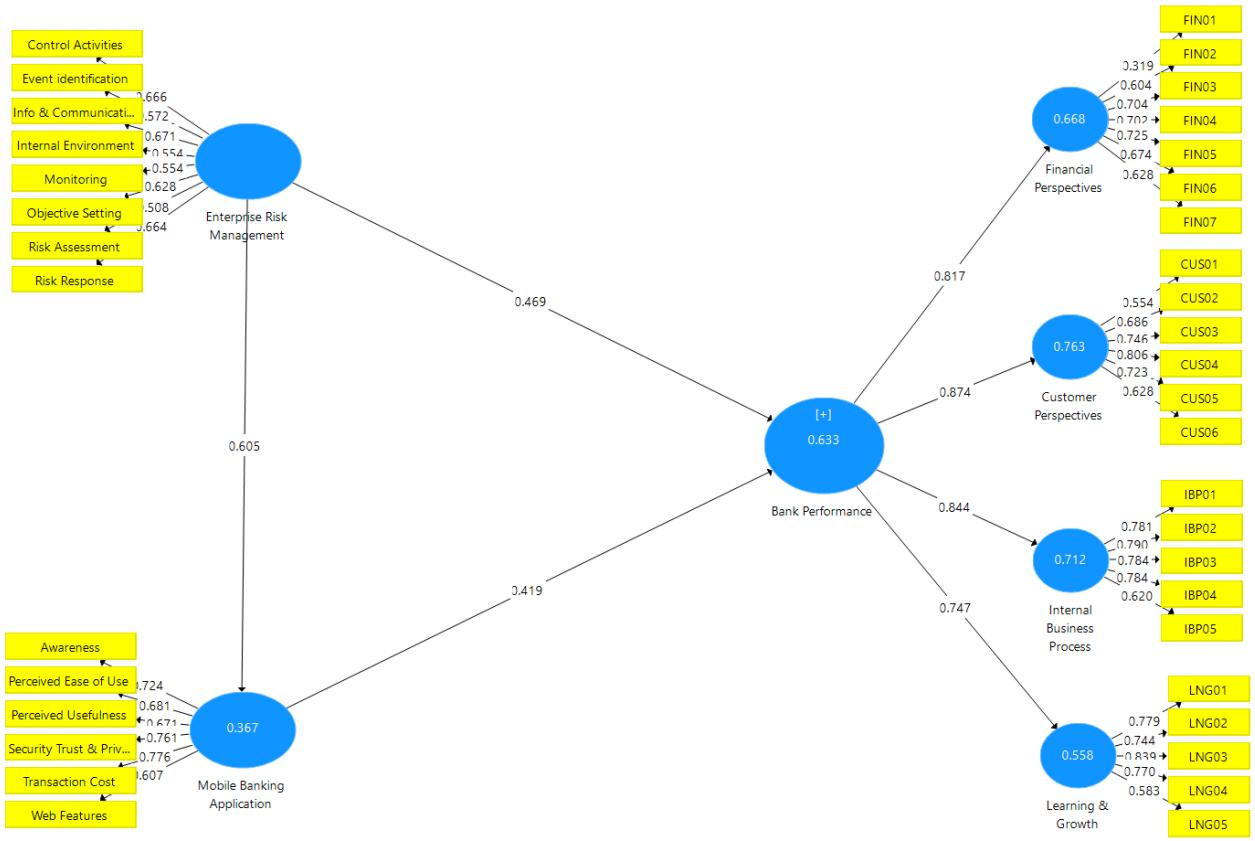

Figure 1. The structural model measurement–algorithm technique

Table 1. Construct reliability & validity

Construct	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
Enterprise Risk Management	0.752	0.760	0.821	0.566
Mobile Banking Applications	0.796	0.797	0.855	0.698
Financial Perspectives	0.741	0.763	0.820	0.604
Customer Perspectives	0.781	0.790	0.847	0.648
Internal Business Process	0.808	0.812	0.868	0.670
Learning & Growth	0.801	0.819	0.863	0.660
Bank Performance	0.906	0.912	0.918	0.633

Table 2. Discriminant validity: HTMT

	1	2	3	4	5	6	7
1. Bank Performance	1						
2. Customer Perspectives	0.836	1					
3. Enterprise Risk Management	0.823	0.833	1				
4. Financial Perspectives	0.812	0.816	0.782	1			
5. Internal Business Process	0.775	0.798	0.657	0.732	1		
6. Learning & Growth	0.822	0.629	0.805	0.518	0.694	1	
7. Mobile Banking Applications	0.824	0.739	0.756	0.673	0.647	0.828	1

Construct reliability can be assessed using Cronbach's Alpha and Composite Reliability values, both of which should exceed 0.7. Construct validity, on the other hand, can be determined by the Average Variance Extracted (AVE) value, which should be above 0.5. As shown in Table 1, all constructs used in the model meet the criteria for both reliability and validity.

Discriminant validity, a specific aspect of construct validity, focuses on ensuring that distinct constructs are adequately differentiated through the measurement scales or instruments used. It assesses the limited correlation between items measuring one construct and those measuring unrelated constructs. Table 2 presents the Heterotrait-Monotrait (HTMT) ratios for each pair of latent variables. All values in the table are below 0.85, satisfying the HTMT criterion. The data indicates that bank performance, customer perspective, ERM, financial perspectives, internal business processes, learning and growth, and MBAs all exhibit strong discriminant validity.

Table 3. Second order confirmatory factor analysis of digital banking adoption

Second Order	Beta	Std. Dev	*t* Statistics	*p*-Values
Bank Performance -> Financial Perspectives	0.817	0.027	30.137	0.000
Bank Performance -> Customer Perspectives	0.874	0.019	46.453	0.000
Bank Performance -> Internal Business Process	0.844	0.018	45.631	0.000
Bank Performance -> Learning & Growth	0.747	0.027	27.184	0.000

Table 4. The results of hypotheses testing

Direct and Indirect Effects	Beta	Std. Dev	*t* Statistics	*p*-Values
ERM → Bank Performance	0.469	0.055	8.573	0.000
MBAs → Bank Performance	0.419	0.056	7.442	0.000
ERM → MBAs	0.605	0.041	14.646	0.000
ERM → MBAs → Bank Performance	0.254	0.038	6.610	0.000

In the measurement theory's second-order factor model, two layers of latent constructs are employed. These models include a second-order latent factor specifically designed to measure Bank Performance. To evaluate the Second Order Confirmatory Factor Analysis, the Bootstrapping Technique is utilized, similar to the approach used for assessing the inner model. Table 3 presents the results of the Second Order Confirmatory Factor Analysis for the Bank Performance construct. The inner model testing involves several key analyses: the significance test of direct effects, the assessment of indirect effects, and the evaluation of the impact of each exogenous variable on the endogenous variables. These tests are crucial for validating the research hypotheses. The results of the model estimation, which serve as a basis for hypothesis testing in this study, are detailed in Table 4.

Table 4 illustrates that the implementation of ERM in the banking sector has a substantial and positive impact on overall bank performance in Indonesia. This is evidenced by an inner loading factor (beta) of 0.469, a t-statistic of 8.573, and a p-value of 0.000. These statistical results confirm Hypothesis 1, indicating that ERM implementation significantly enhances bank performance. Similarly, the adoption of mobile banking applications (MBAs) also positively influences bank performance, as shown by an inner loading factor (beta) of 0.419, a t-statistic of 7.442, and a p-value of 0.000. This supports Hypothesis 2, emphasizing the significant positive effect of MBA adoption on bank performance in Indonesia. Moreover, the study identifies a positive relationship between ERM implementation and the adoption of MBAs, with an inner loading factor (beta) of 0.605, a t-statistic of 14.646, and a p-value of 0.000. This finding substantiates Hypothesis 3, highlighting the significant role of ERM implementation in promoting the adoption of MBAs within the Indonesian banking sector. Furthermore, it is established that the adoption of mobile banking serves as a mediator in the relationship between ERM implementation and bank performance. The mediation effect is supported by an indirect effect of 0.254, a t-statistic of 6.610, and a p-value of 0.000, confirming the significance of this mediation and reinforcing Hypothesis 4. This suggests that mobile banking adoption plays a crucial role in mediating the positive impact of ERM implementation on overall bank performance in Indonesia. Collectively, these findings underscore the complex interplay between ERM, mobile banking adoption, and bank performance, providing valuable insights for strategic decision-making within the Indonesian banking industry.

The analysis revealed a significant positive relationship between the level of ERM implementation and bank performance. Banks that demonstrated higher levels of ERM practices, including effective risk identification, assessment, mitigation, and monitoring mechanisms, showed improved financial performance and stability. These findings underscore the crucial role of ERM in enhancing bank performance. By actively implementing comprehensive ERM practices—such as thorough risk identification, detailed risk assessment, efficient mitigation strategies, and continuous monitoring—banks have positively impacted their financial performance and overall stability. Early identification of potential risks and proactive risk mitigation have enabled these banks to better navigate uncertainties and market fluctuations, thereby reducing the likelihood of significant financial losses. The robust risk management frameworks adopted by these banks have also earned the trust and confidence of stakeholders, including investors, regulators, and customers, which has contributed to an improved market perception and a strengthened reputation within the industry. These findings align with previous research (Adam et al., 2023; Alawattegama, 2017; Al-Nimer et al., 2021; Saeidi et al., 2021; Songling et al., 2018; Zaleha Abdul Rasid et al., 2014).

The study also uncovered a strong positive correlation between the adoption of MBAs and bank performance. Banks that effectively utilized MBAs to provide convenient and user-friendly mobile banking experiences observed significant improvements in customer satisfaction and retention, as well as enhanced financial performance indicators. The research highlights that banks which successfully integrate MBAs into their services benefit from several positive outcomes. By offering seamless and accessible mobile banking options, these banks have seen higher customer satisfaction rates, leading to increased loyalty and retention. The convenience of mobile apps encourages more frequent customer engagement, boosting both customer lifetime value and revenue streams. Additionally, the shift to digital channels has allowed banks to streamline operations and reduce costs associated with traditional branches and teller services, resulting in greater cost-efficiency and profitability. These findings align with previous research (Alalwan et al., 2017; Ho et al., 2020; Joshi et al., 2019; Kumar et al., 2020; Mbama et al., 2018; Naruetharadhol et al., 2021; Shaikh et al., 2023; Sikdar & Makkad, 2015).

The discussion highlights the crucial role of ERM and MBAs in shaping the future of the banking industry. The synergy between ERM and MBAs offers banks a robust framework to excel in the digital age.

By integrating ERM practices into their mobile banking operations, banks can strengthen their resilience against risks while using MBAs to provide effective customer solutions and achieve sustainable growth. As the financial sector evolves, banks that adeptly manage the intersection of ERM and MBAs will pave the way toward a more efficient, secure, and customer-centric banking environment. Embracing innovation, adopting emerging technologies, and staying ahead of industry trends will enable banks to establish themselves as leaders and enhance the services they offer to their customers.

5. CONCLUSION, IMPLICATION, SUGGESTION, AND LIMITATIONS

The research conducted in this study underscores the significant positive impact of integrating ERM practices with MBAs on overall bank performance. Banks that effectively combine risk management with their mobile banking services have reaped substantial benefits, such as increased customer trust, enhanced operational efficiency, and reduced exposure to digital risks. This integration highlights the value of leveraging internal resources and capabilities to boost bank performance. From the RBV perspective, the combination of ERM and MBAs represents a strategic use of internal resources, including expertise in risk management and technological infrastructure, to create sustainable competitive advantages. This approach aligns with the principles of the TAM, which emphasizes the importance of perceived usefulness and ease of use in technology adoption. Integrating ERM practices within MBAs reflects a strategic application of internal resources to improve operational efficiency, manage digital risks, and enhance overall bank performance. Additionally, incorporating risk management into MBAs within the management accounting system improves perceived ease of use, consistent with the TAM framework, and promotes technology acceptance among customers and internal stakeholders in the banking sector.

This study contributes to banking literature by incorporating the RBV and TAM frameworks within the context of management accounting systems. It underscores the importance of leveraging internal resources and fostering technology acceptance to enhance bank performance, operational efficiency, and customer satisfaction. However, the study has certain limitations. Future research should consider longitudinal studies to provide a deeper understanding of the long-term effects of ERM and MBAs on bank performance. Such studies would offer valuable insights into how these variables interact over extended periods. Additionally, future research could explore the impact of emerging technologies, such as artificial intelligence, machine learning, and quantum computing, on ERM and MBAs. Investigating these advancements could provide important perspectives on future risk management strategies and trends in mobile banking.

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