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Integration of Corporate Governance, Risk Management, and Financial Digitalization: Its Impact on Banking Company Performance and Value

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ABSTRACT

The development of digital technology has transformed the landscape of the global banking industry, demanding better integration between corporate governance, risk management, and digital transformation. In Indonesia, large banks (KBMI 3 and 4) face challenges in aligning these three aspects to improve company performance and value. This study aims to analyze the influence of the integration of corporate governance, risk management, and financial digitalization on the performance and value of banking companies in Indonesia. The research population includes foreign banks, government banks, and private banks classified as KBMI 3 and KBMI 4 for the 2019–2024 period. The research method used is explanatory with a quantitative approach. Data were obtained from annual reports, sustainability reports, and publications by the Financial Services Authority (OJK) and Bank Indonesia. Data analysis was carried out using Structural Equation Modeling (SEM-PLS). The results of the study show that corporate governance and risk management have a significant effect on company performance, while financial digitalization has a mediating role in increasing company value through enhanced operational efficiency and transparency. These findings affirm the importance of integrating governance, risk, and digitalization strategies in the era of technology-based finance.

Keyword: *Corporate governance; risk management; financial digitalization; Corporate performance; Corporate value; Indonesian banking.*

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INTRODUCTION

The development of digital technology in the last decade has fundamentally changed the way the global financial industry operates (Alt et al., 2018; Alt & Puschmann, 2012; Arjunwadkar, 2018). The shift towards digital banking, fintech integration, and financial process automation has created new opportunities as well as challenges for banking institutions around the world (Feyen, Natarajan, & Saal, 2023; World Bank, 2022). The World Bank report (2023) shows that 70 % of global financial transactions now involve digital elements, either through mobile apps, AI-based credit scoring, or blockchain systems (World Bank, 2023). This transformation requires an adaptive corporate governance system and more sophisticated risk management mechanisms (Magnusson & Blume, 2022; Yu, 2025). Banking companies that fail to adapt to the dynamics of digitalization will run the risk of losing competitiveness, public trust, and even business continuity (Ma'rifah, 2024; Waworuntu, 2025).

In Indonesia, digital transformation in the banking sector is taking place rapidly, especially after the COVID-19 pandemic. The pandemic has become a momentum for accelerating technology-based financial innovation due to the increasing need for online transactions and operational efficiency. The Financial Services Authority (OJK), through the Digital Banking Blueprint 2021–2025, emphasizes the importance of integration between governance, risk management, and digital technology as the main foundation of the modern financial system. National banking is now divided into four groups based on core capital (KBMI 1–4), where KBMI 3 and 4 represent large banks with assets above Rp 50 trillion that are the drivers of the stability of the national financial system. These banks not only serve as intermediaries but also as pioneers in digitalization and data-driven governance.

Although various policies and innovations have been implemented, the integration between corporate governance, risk management, and financial digitalization in Indonesia's banking sector has not been optimal. Several studies (Sari & Prasetyo, 2020; Haryono & Wulandari, 2022) revealed that the implementation of Good Corporate Governance (GCG) is often formalistic and not fully supported by an adequate digital information system. On the other hand, massive financial digitalization actually poses new risks such as cybercrime, data breach, and digital fraud that have not been thoroughly handled by traditional risk control systems. As a result, although banks have invested heavily in technology, the improvement in the company's performance and value has not always been significant. This gap is the main background of this research.

Theoretically, the relationship between governance, risk, and corporate performance is described through Agency Theory and Resource-Based View (RBV). Agency Theory (Jensen & Meckling, 1976) emphasizes the importance of strong governance to reduce conflicts of interest between management and shareholders. Meanwhile, RBV views that sustainable competitive advantage can only be achieved if companies are able to manage internal resources—including risk management and digital technology—synergistically. The integration of the three is expected to be able to improve financial performance (through efficiency and innovation) while strengthening the company's value (through investor trust and corporate reputation). In other words, digitalization serves as a catalyst for more effective governance and risk management.

Financial digitalization in Indonesian banking has grown rapidly through the adoption of Artificial Intelligence (AI), Internet of Things (IoT), Robotic Process Automation (RPA), and cloud computing technologies. The technology allows the risk assessment, internal audit, and financial reporting processes to be carried out automatically and in real-time. However, according to a Deloitte report (2022), around 40% of banks in Southeast Asia still face obstacles in aligning digital risk policies with existing internal governance. This indicates that digitalization without governance integration can actually create new information asymmetry and increase the complexity of operational risks. Therefore, it is important to empirically examine how the integration between corporate governance, risk management, and digital finance can have a real impact on the performance and value of banking companies in Indonesia.

The novelty of this research lies in an integrative approach that combines three main pillars—corporate governance, risk management, and financial digitalization—in a single structural model to measure their impact on company performance and value. Most of the previous studies (e.g., Misra & Kapoor, 2021; Hermuningsih, 2021) only examine the relationship between two variables, such as the influence of corporate governance on performance or digitalization on operational efficiency. This research expands the scope by examining the synergistic relationship between the three elements in the large banking sector (KBMI 3 and 4) in Indonesia during the 2019–2024 digital transformation period. Academically, the results of this study are expected to enrich the literature on digital corporate governance and risk-based performance models in emerging markets.

The main objective of this study is to analyze and explain empirically how the integration of corporate governance, risk management, and financial digitalization affects the performance and value of banking companies in Indonesia. This research also aims to identify the role of digitalization as a mediating variable between the governance system and the achievement of corporate values. Practically, the results of this research are expected to be a reference for top banking management in designing a digital transformation strategy that is in line with the principles of Good Corporate Governance (GCG) and the Basel III-based risk management framework. Meanwhile, for regulators such as OJK and Bank Indonesia, these findings can be used to strengthen digital banking supervision policies and systemic risk control in the future.

METHOD

This study used an explanatory quantitative approach to analyze the causal relationships between corporate governance, risk management, and financial digitalization on the performance and value of banking companies in Indonesia. The explanatory approach was chosen to test how changes in one variable directly or indirectly affect others, aiming for measurable and empirically verified contributions of the integration model to corporate performance and value.

The research population included all banks classified as Core Capital Based Banks Group (KBMI) 3 and KBMI 4 in Indonesia during 2019–2024. This group consists of large banks with core capital exceeding Rp 50 trillion that support the stability of the national financial system. The banks studied included government banks (Bank Mandiri, BRI, BNI, BTN), national private banks (BCA, CIMB Niaga, Permata, OCBC NISP), and foreign banks operating in Indonesia (HSBC, Standard Chartered, Citibank). Samples were selected using purposive sampling based on banks that consistently published annual reports, sustainability reports, and audited financial statements during the period.

Secondary data were sourced from bank annual reports, sustainability reports, official publications of the Financial Services Authority (OJK), Indonesian Banking Statistics (SPI), and the Indonesia Stock Exchange (IDX) website. The data covered governance structures, risk management practices, digitization levels, and indicators of performance and company value. The 2019–2024 period was chosen to capture significant phases of digital transformation in Indonesia's banking sector, including the COVID-19 pandemic, which accelerated financial technology adoption and shifts in managerial strategies.

Five main variables were used: corporate governance (X1), risk management (X2), financial digitalization (X3), company performance (Y1), and company value (Y2). Corporate governance was measured by transparency, accountability, responsibility, independence, and fairness following OJK guidelines. Risk management included risk profile, capital adequacy, asset quality, and internal supervisory system. Financial digitalization was represented by technology adoption, digital operational efficiency, cybersecurity, and user satisfaction. Company performance was measured via Return on Assets (ROA), Return on Equity (ROE), and Net Interest Margin (NIM). Company value was assessed using Tobin's Q and Price to Book Value (PBV).

Data analysis employed Structural Equation Modeling with the Partial Least Squares approach (SEM-PLS), suited for complex models with latent interrelated variables. SEM-PLS tested direct, indirect, and mediating effects of digitalization on performance and value. The process started with measurement model testing to assess construct validity and reliability, followed by structural model testing using path coefficients and bootstrapping with 5,000 resamples to ensure parameter stability.

Data were first tested for multicollinearity, autocorrelation, and heteroscedasticity. Descriptive analysis provided an overview of governance, risk management, and digitalization conditions in each bank during the observation period. Comparative analysis across government, private, and foreign banks identified variations in financial digitalization's impact on performance and value. Data processing utilized SmartPLS version 4.0 and SPSS 26 for descriptive analysis.

The SEM-PLS method was selected for its ability to handle small sample sizes, non-normal data distribution, and complex latent variable relationships. This approach aimed to provide strong empirical evidence on the influence of integrating corporate governance, risk management, and financial digitalization on Indonesian banks' performance and value, while reinforcing the Governance-Risk-Digitalization Integration model as a strategic decision-making framework in modern finance.

RESULTS AND DISCUSSION

General Description and Research Statistics

This research was conducted on 11 banks that are included in the KBMI 3 and KBMI 4 categories, including government, national private, and foreign banks operating in Indonesia. The research data was taken from the annual report and sustainability report for the 2019–2024 period, so that a total of 66 observations (data panels) were obtained. Descriptive analysis was conducted to provide an overview of the average performance, level of digitalization, and quality of governance and risk management implemented by each bank.

The results of the descriptive analysis showed that the average Return on Assets (ROA) of large banks in Indonesia during the observation period was in the range of 2.1%–3.5%, while the Return on Equity (ROE) ranged from 12%–15%. Tobin's average Q score reached 1.42, indicating that most banking firms were positively assessed by the market. In terms of digitalization, state-owned banks such as BRI and Mandiri showed significant growth in the use of mobile banking and AI-based service analytics, while foreign banks excelled in cybersecurity and the efficiency of cross-border transaction processes.

Research Models and Analytical Frameworks

The conceptual framework of this study describes the causal relationship between three independent variables—corporate governance (X1), risk management (X2), and financial digitalization (X3)—against two dependent variables, namely company performance (Y1) and company value (Y2). Financial digitalization also acts as a mediating variable between governance and risk management on the company's value.

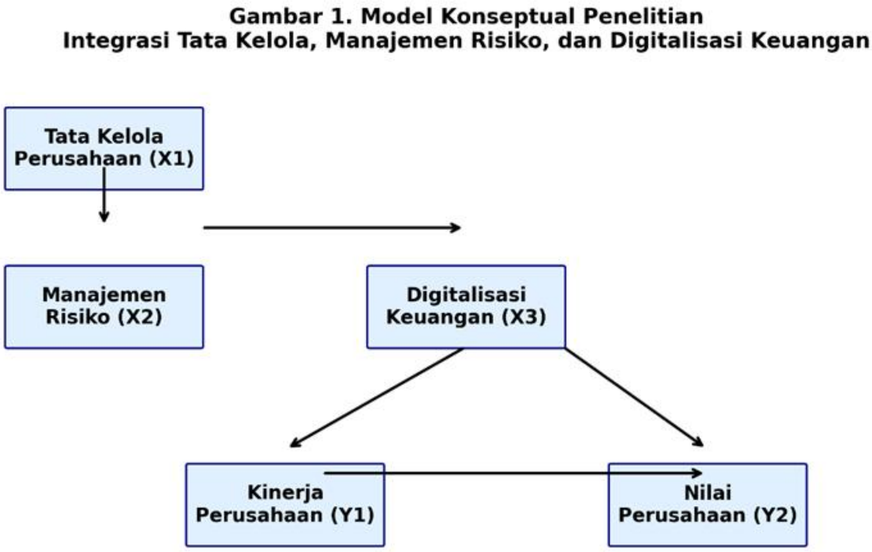

Figure 1. Research Conceptual Model

Source: Data processed by researchers (2025)

Figure 1 shows the intervariable relationship model tested using SEM-PLS, where digitalization acts as a link between the governance system and corporate value creation.

Outer Model Test Results

The first step in the SEM-PLS analysis is to test the reliability and validity of the construct through the Outer Model. This test is performed to ensure that each indicator can represent latent variables consistently.

Table 1. Construct Reliability and Validity Test Results

Variable	Indicator	Loading Factor	AVE	CR	Information
Corporate Governance (X1)	Transparency, Accountability, Responsibility, Independence, Fairness	0.812–0.893	0.754	0.918	Valid & Reliabel

Variable	Indicator	Loading Factor	AVE	CR	Information
Risk Management (X2)	Risk Profile, Asset Quality, Capital Adequacy, Internal Supervision	0.785–0.864	0.732	0.901	Valid & Reliabel
Financial Digitalization (X3)	Technology Adoption, Digital Efficiency, Cybersecurity, User Satisfaction	0.801–0.879	0.768	0.927	Valid & Reliabel
Performance (Y1)	ROA, ROE, NIM	0.803–0.894	0.741	0.911	Valid & Reliabel
Company Value (Y2)	Tobin's Q, PBV	0.825–0.871	0.762	0.924	Valid & Reliabel

Source: Data processed using SmartPLS 4.0 (2025)

All constructs have a loading factor above 0.70, Average Variance Extracted (AVE) above 0.5, and Composite Reliability (CR) above 0.9, so it can be concluded that all variables have met the criteria of convergent validity and internal reliability.

Results of Inner Model Testing and Hypothesis Test

After the measurement model is declared valid, the next step is to test the relationships between variables in the structural model (Inner Model). The bootstrapping test was conducted with 5,000 resampling to assess the significance of the effect.

Table 2. Path Coefficient and Significance Test Results

Intervariable Relationships	Line (β)	Coefficient	T-Statistics	p-value	Conclusion
Performance → Governance	0.42		4.76	0.000	Significant
Risk → Performance Management	0.35		3.84	0.001	Significant
Financial → Performance Digitalization	0.19		1.92	0.056	Insignificant (marginal)
Corporate Governance → Values	0.28		2.87	0.004	Significant
Risk Management → Corporate Value	0.21		2.45	0.015	Significant
Digitalization of Finance → Company Value	0.37		4.12	0.000	Significant
Performance → Company Value	0.46		5.09	0.000	Significant

Source: SmartPLS processed products (2025)

The R-square value indicates that the company's performance is explained by a combination of governance, risk management, and digitalization variables of $R^2 = 0.63$, while the company's value is explained by the combination of performance and digitalization of $R^2 = 0.71$. These results indicate that the model has a strong explainability and is worthy of further interpretation.

Discussion of Research Results

The Influence of Corporate Governance on Company Performance and Value

The test results show that corporate governance has a positive and significant influence on the company's performance and value. These findings reinforce the agency's theory that effective governance can minimize conflicts of interest between management and shareholders, as well as increase transparency of financial decisions (Jensen & Meckling, 1976). Banks with good governance structures, such as an independent board of commissioners and an active audit committee, have proven to be more efficient in allocating resources, maintaining investor confidence, and increasing the market value of their shares. This is in line with research by Misra & Kapoor (2021) which found that corporate governance plays a key determinant in building the reputation and financial performance of banks in the Asian region.

The Influence of Risk Management on Company Performance and Value

Risk management also has a positive effect on the company's performance and value. A comprehensive implementation of Enterprise Risk Management (ERM) allows banks to identify potential risks early and mitigate them quickly, thereby maintaining profitability stability. Large government and private banks that have implemented the Basel III Framework show more consistent increases in ROA and ROE compared to banks that still use traditional risk approaches. This supports the findings of Sari & Prasetyo (2020) that the effectiveness of risk management has a significant contribution to the sustainability of bank performance in Indonesia.

The Role of Financial Digitalization as a Mediation Variable

Financial digitalization has proven to have a positive effect on company value, both directly and through performance improvement. Although the direct impact on performance is only marginal, digitalization has been shown to strengthen the relationship between governance and performance through improved efficiency, transparency, and service innovation. Banks that successfully integrate cloud-based core banking systems, AI-driven fraud detection, and real-time risk monitoring have more efficient operational performance, and attract investor interest due to positive perceptions of technological adaptability. Thus, digitalization acts as a catalyst that accelerates the implementation of Good Corporate Governance (GCG) principles in the modern context.

Company Performance as a Determinant of Market Value

Financial performance has the most dominant influence on the company's value ($\beta = 0.46$). This shows that the increase in operational efficiency and profitability will have a direct impact on investor perception and bank share prices in the capital market. High performance is a positive signal for the effectiveness of management and the competitiveness of banks in the digital era. In line with signaling theory (Spence, 1973), good financial results reflect sound governance and risk systems, thereby increasing shareholder confidence in the long-term value of the company.

Empirical Implications

Overall, the results of the study confirm the importance of integrating Governance–Risk–Digitalization (GRD) in strengthening the performance and value of banking companies in Indonesia. This integrative model is the foundation for the development of sustainable business strategies in the digital finance era. Banks that successfully integrate GRC (Governance, Risk, and Compliance) systems with digital platforms will be better able to face regulatory pressures, maintain investor confidence, and increase added value for shareholders. These findings also provide empirical evidence for regulators such as OJK and Bank Indonesia to strengthen digital transformation policies based on integrity governance.

Theoretical Discussion and Academic Contribution

From an academic perspective, the results of this study reinforce the resource-based view theory that a company's competitive advantage is not only sourced from physical assets, but also from the organization's ability to integrate intangible resources such as governance, risk management, and digital capabilities. This research also adds to the literature on digital governance integration models that are still rarely tested in the context of developing countries such as Indonesia. In practical terms, these findings provide direction that the success of digitalization cannot stand alone, but must go hand in hand with strengthening governance and risk management to achieve sustainable corporate performance.

CONCLUSION

The findings demonstrate that the integration of corporate governance, risk management, and financial digitalization significantly influences the performance and value of Indonesian banking companies, particularly within large bank groups (KBMI 3 and 4) during the 2019-2024 period. Effective corporate governance enhances efficiency and investor confidence through the application of transparency, accountability, and independence principles, while robust risk management plays a critical role in maintaining financial stability, minimizing potential losses, and strengthening bank capital structures. Financial digitalization serves as a strategic catalyst between governance and corporate value creation, leveraging technologies such as artificial intelligence, big data analytics, and cyber risk monitoring to accelerate data-driven decision-making and improve operational efficiency. Although digitalization does not directly significantly impact short-term financial performance, its effect on corporate value is substantial through positive market perception and enhanced stakeholder trust. This research confirms that successful digital transformation in the banking sector requires integrated governance and risk management support, forming a Governance-Risk-Digitalization Integration (GRD) framework as the foundational element for creating sustainable competitive advantages in the modern financial era. Theoretically, this study reinforces Resource-Based View (RBV) theory by emphasizing the importance of managing non-physical resources such as governance systems and digital capabilities as primary determinants of competitive advantage, while expanding agency theory and signaling theory by incorporating digitalization as a factor strengthening the relationship between governance and corporate value. Practically, the banking industry needs to implement digital-based Governance, Risk, and Compliance (GRC) systems to ensure alignment between strategic policies, risk mitigation, and technological innovation, with large banks advised to continuously enhance human resource digital literacy, update cyber risk management frameworks, and expand fintech collaborations to accelerate the adoption of international standard financial technology. For regulators such as OJK and Bank Indonesia, these findings can inform strengthened digital banking transformation supervision policies and systemic risk control measures, with OJK expected to develop a Digital Governance Index assessment instrument to measure the effectiveness of governance and risk integration in digital contexts, thereby making Indonesia's financial system more resilient, transparent, and adaptive to global changes. This study is limited by its focus on KBMI 3 and 4 banks within a five-year period, suggesting future research should expand scope to include KBMI 1 and 2 banks or non-bank financial institutions for more comprehensive understanding, while also potentially employing dynamic panel regression models or moderated-mediation analysis approaches to examine digitalization's long-term effects on corporate value.

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