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DIGITAL TRANSFORMATION AND STATE-OWNED BANK'S PERFORMANCE: THE MODERATING EFFECT OF RISK PREFERENCE

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Abstract

This study examines the impact of digital transformation on the financial performance of Indonesian state-owned banks, using risk preference as a moderating variable. The study utilizes data from the annual financial reports of Indonesian state-owned banks from 2019 to 2023. Digital transformation is measured through text mining of annual reports, bank performance is primarily indicated by Net Interest Margin (NIM), and risk preference is assessed using the Z-score. Given the presence of autocorrelation in the fixed effects model, the Generalized Method of Moments (GMM) is employed. The results reveal that digital transformation does not directly affect bank performance. However, this relationship is significantly moderated by the banks' risk preferences. Banks with higher risk preference tend to leverage digital transformation more effectively, resulting in increased profitability and higher risks. Conversely, banks with lower risk preferences adopt digital technologies more cautiously, achieving steadier but potentially lower gains. These findings offer valuable insights for policymakers and bank managers in the Indonesian banking sector, emphasizing balancing technological advancements with risk management to maintain financial stability. This study highlights the crucial role of digital transformation in enhancing bank performance when aligned with risk management strategies and contributes to the understanding of the complex relationship between digital transformation, risk preference, and bank performance in emerging economies, particularly in the context of state-owned banks.

Keywords: *Digital Tranformation, Bank Performance, Risk Preference*

JEL Classification: G21; O33; L25; C58; M15

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INTRODUCTION

The banking sector is considered an important part of a country's economic system. Through the process of financial intermediation, the financial industry can accelerate capital mobilization for high-yield projects and ensure effective distribution of financial resources between borrowers and lenders. In this case, banks play an important role in the long-term economic growth of a country and are considered the main driving factor in the current economic system (Babar et al., 2019). Furthermore, the banking sector acts as the provider of operational capital and investment in all sectors of the economy, therefore any banking sector disruption will affect all economic sectors in the country.

Banking companies in Indonesia include national foreign exchange private commercial banks, national non-foreign exchange private commercial banks, regional development banks, mixed banks, and foreign banks. The banks studied in this study are state-owned banks. We are interested to analyze state-owned bank because state-owned banks have a higher level of customer trust compared with private banks. State-owned banks are also banks that manage state assets. This can be seen from the share ownership, which shows that the number of shares owned by the state is greater than that owned by the public. In addition, state-owned, including Bank Mandiri, Bank Negara Indonesia, Bank Tabungan Negara, and Bank Rakyat Indonesia, have a considerable total as third-party party funds and loans. Given the importance of the role of banking in Indonesia, banks need to improve their performance to create healthy and efficient banking, in addition to state-owned companies having a dominant influence in the Indonesian economy, especially state-owned banks. People prefer state-owned banks as a place to store or invest the funds they have because they are considered more trusted and safer. These banks are owned by the state and managed directly by the government. Seeing the large role of state-owned banks in the Indonesian economy, it is expected that banks will be able to increase or maintain bank stability to the maximum. The Financial Services Authority recorded that the value of state-owned bank assets in 2017 was 2,428 trillion rupiahs; the total assets beat the nominal assets of banks in other groups, therefore as a bank that dominates Indonesian banking and has influence in the Indonesian economy, this bank is required to continue to maintain its financial stability. (www.databoks.co.id).

Various factors that differ from one sector to another cause many challenges that still hinder the application of digital technology. The effectiveness of digital transformation depends on the performance of

the company because it requires the right resources, skills, commitment, and understanding of digital opportunities, which makes the adoption of new technologies easier for large companies (Giotopoulos et al., 2017). According to several studies, digital transformation offers new opportunities; However, it remains unclear how businesses can experience the real benefits of digital transformation. Institutions in various countries have researched digital transformation, financial performance, and preference risk, but the focus of this research is limited to Indonesia. Therefore, this research is motivated to be carried out in Indonesia. The focus of this research is to find out how digital transformation affects financial performance. In addition, this study will analyze how moderation of risk preference affects this relationship with data obtained from the annual reports of Indonesian state-owned commercial bank companies from 2019 to 2022.

In addition, the main concern arising from digital transformation is its impact on banking performance. Rapid innovation and competition from fintechs can create market volatility and increase systemic risk. Based on research by Ozili (2018) stated that although digital transformation can accelerate financial inclusion, there are risks associated with digital finance. For example, ease of access to credit will contribute to an increase in non-performing loans, and increased excessive use of digital technology will increase digital risks, including data theft and payment system disruptions. In addition, Ketler (2017) states that emerging systemic risks can be exacerbated by the absence of rapid and strict regulatory procedures, especially in developing countries.

Digital transformation is not just about the application of new technologies. However, it is a total redefinition of the way banks operate and interact with their customers. Analyzing these dynamics requires a deep understanding of how digital technologies are adopted and integrated into day-to-day banking operations, as well as strategies implemented to increase bank profitability.

This research focuses on state-owned banks in Indonesia, which have unique characteristics compared to other commercial banks. As entities largely owned by the government, state-owned banks often have additional missions to support national economic policies in addition to pursuing profitability. Digital transformation in state-owned banks in Indonesia is important given the high competition and demands for better operational efficiency. According to the literature, the implementation of digital technology in Indonesia's banking sector has shown various results, with some banks successfully improving efficiency and service. In contrast, others still face challenges in terms of

technology adoption and risk management. Research by Ozili (2018) confirms that digital transformation in state-owned banks can play a significant role in increasing financial inclusion and operational efficiency, which in turn can improve their financial performance.

TEORITICAL BASIS

Banking Performance

Setiawan and Shabrina (2018) stated that managerial roles and functions strongly influence the performance of a bank in managing assets and resources. The success of the bank in generating profits reflects the performance of management in managing assets. Aprianingsih (2016) added that a bank's financial performance is an indicator of the extent to which a bank is successful in its operations during a certain period. The financial performance of the bank becomes the main and very important factor in assessing the overall performance of the bank. The results of the bank's financial performance can be seen in the published financial statements. Based on these financial statements, investors can obtain information about the financial performance of a bank to assess whether the bank's financial performance is good or not. Information about past financial position and financial performance is often used as a basis for predicting future financial position and performance, as well as other matters of interest to users of financial statements, such as dividend payments, wages, security price movements, and the bank's ability to meet its obligations.

Dess and Robinson (1984) define organizational performance based on asset returns and sales growth. Raymond, Paré, and Bergeron (1995) measure performance from the perspective of human resources and formal structure. Brynjolfsson and Hitt (2000) measure business performance by productivity ratio compared to industry averages and firm market value. Croteau & Bergeron (2001) found that ICT investments directly contribute to organizational performance defined by revenue growth, profitability, increased market share, and financial cash flow as factors to consider.

Existing empirical research on banking shows that bank profitability is very important in measuring performance (Ahamed & Mallick, 2019). For example, studies of bank profitability show that net interest margin (NIM) is an appropriate indicator for assessing profitability in the banking sector (Demirgüç-Kunt & Huizinga, 1999; Robin et al., 2018). This indicator is in line with the classic definition of a bank, where the bank acts as an intermediary between the borrower and the lender. Net interest is earned from the difference between the interest paid by the borrower and the interest the bank gives to the depositor. Therefore, NIM measures the difference between the benefits of using funds by banks

and the cost of procuring those funds. NIM is calculated as the difference between a bank's interest income and interest expense divided by its total assets.

Digital Transformation

According to (Benjamin and Eliot, 1993), Digital transformation is a sociocultural process in adapting companies to new organizational forms and skills needed to remain viable and relevant in the digital landscape. It goes beyond previous conceptions, such as changes made possible through information technology (IT).

The year 1989 was the starting point of globalization; where in the early 1990s, the internet began to emerge and was created as a complement to human life. In 1967, the first ATM was installed by Barclays in North London, and by 1995, the financial services company Wells Fargo in the United States had introduced the advantages of online transactions to its customers. Even recently, it has been observed that the banking and financial services industry around the world is undergoing significant changes in service delivery due to technological advancements, thus encouraging its customers to adopt digital platforms for the use of their various services. In 1986, Davis began to introduce a concept called TAM (Technology Acceptance Model), which was adapted from TRA (Theory of Reasoned Action) to explain or predict the acceptance and use of new technology. The Technology Acceptance Model (TAM) is a model that states that actual usage is determined by two perceptions, namely, perception of benefit (PU) and perception of convenience (PEOU) (Listiana et al. l, 2023).

The shift from traditional services to bank digitalization has several benefits for both banks and customers. For banks, digitalization can reduce operational costs, including costs for human resources and physical facilities, transaction processing costs, payment efficiency, service quality, and, ultimately, profitability. As for customers, digitalization offers various kinds of transactions that can be accessed only through the Internet network. In addition, digitalization allows customers to design better time management and interaction with diminishing employees supported by self-service technology. Digitalization is a banking service that focuses on how a financial institution can transfer all the services it has into various platforms. Banks must understand how their customers will integrate the bank's accepted digitization services into their day-to-day value-creation process. Customers will usually appreciate the value of convenience formed with new technology in the banking system that does not recognize the limitations of operating hours and long queues (Barnes, 2003).

Digital transformation in the banking sector involves the use of digital technology to improve operational efficiency, customer experience, and product innovation. The implementation of technologies such as blockchain, big data, and artificial intelligence has brought significant changes in the way banks operate.

Digital transformation is expected to have a positive influence on bank performance. With the implementation of digital technology, banks can improve operational efficiency, reduce costs, and improve customer service. Previous research has shown that adoption of digital technology can improve banks' NIM by reducing operational costs and increasing efficiency (Heffernan, 2005; Wang et al., 2023). Therefore, the first hypothesis proposed is:

> **H1: Digital transformation has a positive effect on bank performance as measured by NIM**.

Risk Preference

A bank's risk preference refers to the extent to which banks are willing to take risks in their operational and investment activities. It is measured by various metrics, one of which is the Z-score, which indicates the level of stability of the bank by calculating the distance between revenue and anticipated losses, normalized with earnings volatility. A higher Z-score indicates a greater degree of stability and a lower risk of bankruptcy.

The level of risk a bank faces can affect its financial performance. Banks with higher levels of risk tend to have higher NIM because they may charge higher interest rates on loans to compensate for additional risk (Laeven & Levine, 2009). Therefore, the second hypothesis proposed is:

> **H2: Risk preference has a positive effect on bank performance**.

Risk preference is expected to moderate the relationship between digital transformation and bank performance. Banks with a higher risk preference may be more aggressive in adopting digital technologies to achieve higher returns but also face greater risk. Conversely, banks with lower risk preferences may be more cautious about adopting new technologies. Research by Laeven and Levine (2009) and Altunbas et al. (2010) suggests that risk preferences can influence a bank's financial performance through its influence on risk management strategies. Therefore, the second hypothesis is:

> **H3: Risk preference moderates the relationship between digital transformation and bank performance.**

RESEARCH METHOD

Types of Research

This study used a quantitative approach. According to Sugiyono (2019), quantitative research is a research method based on the philosophy of positivism, used to examine certain populations or samples. Data collection using research instruments data analysis is quantitative or statistical, with the aim of testing hypotheses that have been set.

According to Sugiyono (2019), the reason for using a quantitative approach in research is that the quantitative approach allows the use of statistical analysis to test hypotheses and find patterns in the data, thus research results are more reliable and generalizable.

Data, Instrument, and Data Collection Techniques

With the objectives and description of the variables in the model, data collection will be carried out on the financial statements and annual reports of Indonesian state-owned commercial banks from 2019 to 2023. Digital transformation data is collected by analyzing the text (Analysis text) of the bank's annual report. Words and phrases related to digital transformation adopted from research by Guo and Shen (2016) will be calculated and aggregated as they appear in the report to calculate the rate of adoption and implementation of digital technology by banks. All other variables are collected based on financial statements from the Indonesia Stock Exchange. The collected data will be encrypted and entered STATA Statistical Version 17 software for calculation and analysis.

Data Analysis Techniques

We use panel data as a comparison for bank issuer examinations in 2015-2021. One of three models can be used for panel data. It depends on the characteristics of the research field. The first model is the Pooled OLS. It is the simplest model if it does not consider differences between banks. However, it is rarely used for this common study; the second model is Fixed Effect Model (FEM). It is a further development of Pooled OLS to consider differences between banks and there is correlation between the rest of the model and independent variable; the third model is Random Effect Model (REM) where there is no relationship between the rest of the model and independent variable. It is comparable to the FEM in terms of bank differences from each other. The Hausman test decides a research model based on fixed effect and random effect models. Suppose the model is satisfied and does not suffer from any of the above three defects. Thus, it can be concluded that the research model is reliable in estimating the impact of digital transformation on bank performance. Conversely, model violations need to be addressed when the model experiences one of

two violations: autocorrelation and heteroscedasticity. In the presence of endogeneity, we have made corrections to the Generalized Method of Moments (GMM).

RESULT AND DISCUSSION

Descriptive Analysis

The collected data is then processed into Stata Version 17 software to be analyzed. First, to obtain initial information about the variable, a descriptive analysis is carried out. The results of the descriptive analysis show that the average NIM achieved by the bank of 5,031 indicates a relatively stable bank profitability. A standard deviation of 1.166 indicates that there is a variation in profitability between banks, with a minimum NIM of 3.06 and a maximum of 6.98.

The digital transformation (DT) rate, as measured by calculating the proportion of digital transformation-related keywords in a bank's annual report, has an average of 0.009 and a standard deviation of 0.002, with a range of values between 0.007 and 0.014. A low average DT value and a small standard deviation indicate that overall, the rate of digital transformation among the banks in the sample is still relatively low and does not vary too much.

The risk level measured by the z-score has an average of 1.516 and a standard deviation of 0.163, with a minimum value of 1.279 and a maximum of 1.813. This indicates that state-owned banks have relatively moderate risk profiles, with some variation in the level of interbank risk. A higher z-score indicates a relatively low risk of bankruptcy. A standard deviation of 0.163 indicates that although there are some differences in risk levels between banks, most banks have relatively similar risk levels.

Table 1. Descriptive Statistic

Variable	Obs	Mean	Std. Dev.	Min	Max
NIM	20	5.031	1.166	3.06	6.98
DT	20	0	.002	-.002	.005
Risk	20	0	.163	-.236	.297
Loan_Growth	20	.088	.075	-.059	.207
Leverage	20	.124	.038	.055	.174
NPL	20	3.02	.89	1.02	4.78
Inflation	20	3.06	1.425	1.68	5.51
GDP	20	3.4	2.865	-2.07	5.31

Source: Data processed by author (2024)

Overall, this descriptive analysis provides an early overview of profitability, the extent of digital transformation, and risk in the banking industry. These results show that although the profitability of the industry is relatively stable, fintech adoption rates are still

low, and there are variations in the level of risk between banks.

Regression Analysis

The results of the regression analysis were carried out on the independent variable, namely digital transformation, namely DT, against the dependent variable, namely NIM, with Zscore as a moderation variable by considering several control variables, namely Loan Growth, Leverage, NPL, inflation, and GDP. The results of the Hausman test show that the FEM model is more suitable than the FEM model. However, the classical assumption test shows that there is an autocorrelation problem. Therefore, this study made corrections through the *Generalized Method of Moments* (GMM) model with *a one-step system* to overcome the problem of autocorrelation. The variables AR(1) and AR(2) yielded p-values of 0.242 and 0.104 r, respectively, indicating that there is no evidence of significant first-order and second-order autocorrelation. In addition, the Hansen test results show a p-value of 1,000, which indicates that the instrument used in the GMM model is considered valid.

The results of GMM analysis show that digital transformation (DT) has no significant effect on NIM, with a coefficient of -249.3. This rejects the first hypothesis (H1), which states that digital transformation has a positive effect on NIM. These results are confirming Ozili's (2018) research, which found that while digital transformation can accelerate financial inclusion and operational efficiency, its financial benefits, especially in the context of state-owned banks in Indonesia, may not be immediately apparent in the short term (2019-2023). Digital transformation requires large initial investments in technology and training, which can depress profitability in the short term (Shanti et al., 2023). In addition, the unique characteristics of state-owned banks, such as a focus on social missions and bureaucracy that may be more rigid, can slow down the process of adoption and implementation of digital technologies, thereby delaying the realization of their financial benefits.

On the other hand, risk preference showed a significant positive impact on NIM (5,517). These results support the second hypothesis (H2) that risk preference positively affects bank performance. State-owned banks with higher levels of risk tend to have higher NIM, possibly because they charge higher interest rates on loans to compensate for the higher risk. This is consistent with Laeven and Levine's (2009) research, which suggests that banks with higher levels of risk tend to have higher NIM because they may charge higher interest rates on loans to compensate for additional risk. In the context of state-owned banks in Indonesia, these findings may indicate

that these banks have greater flexibility in pricing their products and services, allowing them to take on higher risks and earn greater returns.

In addition, the interaction between digital transformation and risk preference (DT*Risk) also has a significant positive impact on NIM, with a coefficient of 1326. These results support the third hypothesis (H3) that risk preference moderates the relationship between digital transformation and bank performance. This means that the impact of digital transformation on NIM depends on the bank's level of risk preference. At higher levels of risk preference, digital transformation can improve NIM, perhaps because digital technology helps banks better manage risk, as shown by Deng et al. (2021). In the context of state-owned banks in Indonesia, this could indicate that these banks can leverage digital technology to mitigate the risks associated with their riskier loan portfolios, thereby increasing their profitability.

Variable control leverage also had a significant positive impact on NIM (46.22), consistent with the theory that higher leverage can increase profitability. However, it should be noted that high leverage also increases a bank's financial risk. This increased risk can be explained by increased interest expenses and potential financial hardship if the bank is unable to meet its debt repayment obligations (Vazquez & Federico, 2015). Therefore, banks need to balance the use of leverage with effective risk management.

Meanwhile, control variables such as *loan growth*, inflation, and GDP did not have a significant impact on NIM. This may be due to several factors, such as a relatively short observation period or the presence of other factors that were not included in the model, such as the level of competition or regulation.

Table2. Regression Test Result

VARIABLES	(1) POOLED OLS	(2) FEM	(3) REM	(4) GMM
	NIM	NIM	NIM	NIM
DT	-249.3	39.97	147.9*	-249.3
	(377.1)	(48.06)	(75.66)	(377.1)
Risk	5.517**	-2.286	3.813**	5.517**
	(2.222)	(1.893)	(1.481)	(2.222)
DT*Risk	1,326**	627.9*	991.9*	1,326**
	(539.5)	(272.8)	(573.2)	(539.5)
Loan_Growth	10.45	-0.0592	6.058**	10.45
	(8.632)	(1.652)	(2.725)	(8.632)
Leverage	46.22***	7.002	35.17***	46.22***
	(4.930)	(5.658)	(5.831)	(4.930)
NPL	0.456	-0.0776	0.0856	0.456
	(0.389)	(0.0938)	(0.202)	(0.389)
Inflation	0.0130	-0.0415	-0.0206	0.0130
	(0.163)	(0.0516)	(0.124)	(0.163)
GDP	-0.183	0.0976*	-0.0938	-0.183
	(0.248)	(0.0518)	(0.0786)	(0.248)
Constant	-2.412	4.193***	0.262	-2.412
	(1.694)	(0.761)	(1.159)	(1.694)
Observations	20	20	20	20
Number of ids	4	4	4	4
R-squared	0.794	0.856		
Hausman test		0.000		
Autocorrelation test		0.007		
Heteroskedasticity test		8.07		
AR(1)				0.242
AR(2)				0.104
Hansen test				1.000

Robust standard errors in parentheses
p<0.01, **p<0.05, *p<0.1
Source: Data processed by author (2024)

Discussion

The results of this study provide empirical evidence that digital transformation (DT) has no significant effect on the financial performance of state-owned banks in Indonesia, as measured by Net Interest Margin (NIM), during the period 2019-2023. This finding indicates that in the short term, the implementation of digital technology has not had a significant direct impact on the profitability of state-owned banks. This is in line with Ozili's (2018) research, which found that although digital transformation can accelerate financial inclusion and operational efficiency, its financial benefits, especially in the context of state-owned banks in Indonesia, may not be immediately visible in the short term.

The unsuccess of digital transformation in significantly improving NIM can be attributed to several factors. First, large initial investments in technology and training can depress profitability in the short term (Shanti et al., 2023). Second, the unique characteristics of state-owned banks, such as a focus on social missions and bureaucracy that may be more rigid, can slow down the process of adoption and implementation of digital technologies, thus delaying the realization of their financial benefits. Third, state-owned banks may face challenges in integrating new technology systems with existing business processes, which may disrupt operations and reduce profitability in the short term (Nguyen-Thi-Huong et al., 2023).

However, the results of this study also show that the impact of digital transformation on NIM can vary depending on the level of risk preference of banks. Specifically, the interaction between digital transformation and risk preference (DT*Risk) has a significant positive impact on NIM. This means that at higher levels of risk preference, digital transformation can increase NIM. Several factors can explain this. First, digital technology can help state-owned banks better manage risk, as shown by Deng et al. (2021). For example, artificial intelligence (AI) and machine learning technologies can be used to analyze customer credit data more accurately and efficiently, thus helping banks make better credit decisions and reduce the risk of bad loans. Second, digital transformation can help state-owned banks identify new business opportunities and improve customer service quality, which in turn can increase profitability in the long run (Chanias et al., 2019). For example, digital banking platforms can extend the reach of bank services to previously untapped market segments, while chatbot-based customer service can improve efficiency and customer satisfaction.

In addition, the results of this study also underscore the importance of leverage in the profitability of state-owned banks in

Indonesia. Higher leverage can increase NIM but also increase bank financial risk. Therefore, state-owned banks need to balance the use of leverage with effective risk management, especially given their important role in the stability of Indonesia's financial system. In this context, digital transformation can play an important role in improving the risk management of state-owned banks. Technologies such as big data analytics and blockchain can help state-owned banks identify and mitigate risks more effectively, allowing them to make better use of leverage.

The study also found that control variables such as loan growth, inflation, and GDP did not have a significant impact on the NIM of state-owned banks in Indonesia during the 2019-2023 period. This may be due to several factors, such as significant macroeconomic fluctuations during the period, including the COVID-19 pandemic, which may obscure the impact of these variables on NIM. In addition, the focus of this study on state-owned banks may also influence these results, as these banks may have different characteristics and business strategies compared to other commercial banks.

Overall, this research provides new insights into the dynamics between digital transformation, risk preference, leverage, and financial performance of state-owned banks in Indonesia. The results of this study suggest that digital transformation can be a double-edged sword for state-owned banks, with potential long-term benefits but also short-term risks. Therefore, state-owned banks need to understand this complexity and develop appropriate strategies to maximize the benefits of digital transformation while effectively managing their risks, considering their unique characteristics as state-owned financial institutions.

CONCLUSIONS AND ADVICE

Conclusion

From the results of regression testing and discussion, this research can conclude that digital transformation (DT) does not have a significant impact on the financial performance of state-owned banks in Indonesia, as measured by Net Interest Margin (NIM), during the 2019-2023 period. This shows that in the short term, the implementation of digital technology has not had a significant direct impact on the profitability of state-owned banks. However, the study also found that the impact of digital transformation on NIM can vary depending on the level of risk preference of banks. Specifically, at higher levels risk preference, digital transformation can increase NIM. In addition, the study also underscores the importance of leverage in the profitability of state-owned banks in Indonesia, where higher leverage can increase NIM but also increase banks' financial risk

Suggestion

Based on the results of this study, several suggestions can be recommended. First, state-owned banks in Indonesia need to carefully consider the costs and benefits of investing in digital transformation. Investment in digital technologies should be directed towards improving operational efficiency, developing new products and services, and improving risk management. Second, state-owned banks need to manage risk levels and leverage effectively to maximize the positive impact of digital transformation on financial performance. Third, governments and regulators need to create an environment conducive to technological innovation in the banking sector while maintaining financial system stability.

Implications and Limitations

This finding has important implications for state-owned bank management and policymakers in Indonesia. State-owned banks need to carefully consider their digital transformation strategies, focusing on initiatives that can deliver long-term benefits and mitigate short-term risks. Policymakers need to ensure that regulation supports technological innovation in the banking sector while maintaining financial system stability and protecting customer interests.

The study had some limitations. First, the measurement of the level of digital transformation (DT) using indices obtained through text mining may not fully capture the complexity of the digital transformation process. Second, the sample used is relatively small (20 observations), therefore the results of this study may not be fully representating of the entire state-owned banking industry in Indonesia. Third, the study did not consider other factors that might influence the relationship between digital transformation and bank performance, such as bank size, market structure, and regulation.

Future studies may use more comprehensive DT measurements involving larger samples and longer periods and considering other relevant factors. In addition, future research can focus on the long-term impact of digital transformation on the performance of state-owned banks in Indonesia, as negative impacts in the short term may be offset by increased efficiency and innovation in the long term. Further research can also explore how state-owned banks can optimally manage risk and leverage in the era of digital transformation, as well as how regulation can support sustainable and inclusive digital transformation in the state-owned banking sector.

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