FINANCIAL PERFORMANCE EVALUATION BETWEEN TRADITIONAL BANK AND DIGITAL BANK DURING DIGITAL TRANSFORMATION: EVIDENCE FROM INDONESIA

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Abstract:

Background: The COVID-19 pandemic accelerated the transformation of the financial sector by significantly altering consumer behavior. This shift led to the rise of digital banks as replacements for traditional banks. However, some digital banks have underperformed compared to their initial performance or after undergoing mergers and acquisitions.
Purpose: This study aims to analyze the financial performance of traditional banks before their digital transformation, providing insights to inform alternative strategies for digital banking.
Design/Methodology/Approach: The research examines the financial performance of nine banks (four digital banks and five traditional banks) from 2019 to 2022. The performance metrics include liquidity ratio (Loan-to-Deposit Ratio, LDR), solvency ratio (Equity-to-Asset Ratio, EAR), profitability ratios (Net Interest Margin, NIM, and Return on Assets, ROA), and activity ratio (Total Asset Turnover, TATO). Data were collected online from the Financial Services Authority website, and the analysis was conducted using descriptive statistics, parametric tests (Paired Samples t-Test), and non-parametric tests (Mann-Whitney U Test).
Findings/Results: The study finds that after transitioning to digital banks, there is a significant increase in the solvency ratio (EAR) but a notable decline in profitability (ROA) and activity (TATO). Compared to traditional banks, digital banks exhibit lower LDR and ROA but higher EAR and NIM.
Conclusion: The study highlights key financial performance aspects associated with digital bank transformation. The findings suggest that enhancing financial performance requires improving liquidity, solvency, profitability, and activity ratios. Strategies include engaging with the digital ecosystem, acquiring new customers through innovation, consumer-focused financing, and strengthening core capital.
Originality/Value (State of the Art): This research uniquely applies multiple financial performance parameters to compare digital banks before transformation with traditional banks in Indonesia. It identifies potential strategies to address challenges faced by digital banks, enhancing academic understanding and offering practical solutions to improve their financial performance.

Keywords: digital bank, digital transformation, financial performance, traditional bank

How to Cite:
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INTRODUCTION

Indonesia's corporate environment is currently seeing a substantial shift propelled by digital technologies. According to McKinsey (2019), digital platforms are becoming more crucial in establishing client loyalty and achieving financial success for firms. The banking sector has experienced a noticeable trend in which the rapid progress of information technology has prompted banks to modify their strategies and maintain competitiveness (Indriasari et al. 2019).

Given that banks play a crucial role in facilitating digital financial transactions, the digitalization of banking is essential for the advancement of a digital economy. The digitalization of the Indonesian banking sector is supported by three key elements: digital possibilities, digital behavior, and digital transactions, as stated by the Indonesia Financial Services Authority (FSA)/Otoritas Jasa Keuangan (OJK, 2021a). Currently, customers are conducting larger financial transactions through ATMs, which include cash withdrawals, shopping, and transfers. Customers are also utilizing e-channel services such as SMS, mobile banking, and internet banking. The COVID-19 pandemic has accelerated the process of digitizing the payment system, leading to a significant increase of 157% in the number of transactions, reaching a total of 7.7 billion in 2020–2021 (BI, 2022). Consequently, there has been a rise in competition for key geographical positions and the ability to adapt to new technologies.

Indonesia has witnessed the emergence of multiple digital banks, coinciding with traditional banks' focus on transitioning to digital banking. While a digital bank differs from a traditional bank that solely provides digital services, these banks are actively using digital innovation to enhance efficiency. Regulators, particularly the OJK, provide assistance for this. The OJK has issued POJK 2021b, which serves as a legal framework for the operations of commercial banks. In 2019, the Monetary Authority of Singapore (MAS) implemented regulations for digital banking in Singapore. These regulations include all services and transactions that are handled online or without the requirement of a physical office (MAS, 2019).

Digital banks are a novel type of financial institution that has entered the market with the aim of challenging traditional banks by offering customers innovative online services. Digital banks primarily serve tech-savvy customers who rarely visit physical bank branches, resulting in a limited or non-existent presence of branch offices (Delgado, 2021).

With the rise of digitalization, the occurrence of bank acquisitions and mergers is becoming more prevalent, especially in the establishment of digital banks. After being acquired by multiple entities, including fintech, banking, and other industries, several traditional banks were transformed into digital banks (S&P Capital IQ, 2024). The banks in question include Seabank, which was bought by PT Danadipa Artha Indonesia and PT Koin Investama Nusantara; Bank Neo Commerce, which was acquired by Streetcorner Lending Corp; Bank Jago, which was acquired by PT Metamorfosis Ekosistem Indonesia and Wealth Track Technology Limited; and Blu by BCA Digital, which was acquired by Bank BCA. Several digital bank issuers, initially established or boosted by mergers and acquisitions, are presently less financially resilient than before. Investors are deserting digital bank equities due to a significant downturn in stock values, leading to their downfall (S&P Capital IQ, 2024). According to the financial report for the first quarter of 2023, the average performance of digital banks has decreased (OJK, 2024). Bank Jago, an Indonesian digital bank, experienced an 8% decline in its earnings performance. Bank Aladin incurred a net loss of 46.17 billion IDR. Bank Raya's profits suffered a decrease of 98%. Bank Neo continues to experience financial losses. Based on these problems, it is important to know the strategies carried out by digital banks after the transformation so that they become a consideration for the management team in determining company policies. Therefore, research needs to be conducted to see the condition of the financial performance of digital banks before and after the transformation compared to conventional banks. It is hoped that the research can determine what financial ratios have significant differences after the transformation into a digital bank. Furthermore, analysis and strategy formulation are carried out for digital banks so that they can remain competitive and have sustainable financial performance. A recent study conducted by Banerjee et al. (2022) has revealed that the introduction of neobanking as a method of digital transformation in the United Arab Emirates (UAE) has had a substantial influence on the financial performance of banks, particularly in terms of non-performing loans (NPL), return on equity (ROE), net interest margin (NIM), and cost efficiency. In 2014, Prasetyo stated that the combination has not yet had any effect on profitability, business scale, or

efficiency. The information displayed is obtained from a paired sample t test, which compares the financial performance of the five years prior to the merger with the five years after the merger. In their study, Ahmed et al. (2018) examined mergers and acquisitions in the Pakistani banking industry and found that efforts to enhance market share by partnering with smaller banks did not lead to enhanced financial performance for the involved institutions. The influence of Internet banking on bank profitability in Indonesia is substantial, as evidenced by the return on assets (ROA) indicators (Pertiwi et al. 2023; Sayari, 2024). However, Triska (2022) and Rachmaniyah et al. (2023) have shown that it does not significantly affect the net interest margin (NIM) or loan-to-deposit ratio (LDR). Unlike the findings of Yang et al. (2018), there is conflicting evidence suggesting that the use of digital technology has a minimal effect on NIM. The adoption of digital banking in Indonesia has had a notable impact on bank capital enhancement (Linggadjaya, 2022; Ahdallah, 2022).

Moreover, the bank's financial performance can gauge the success of the transition to a digital bank. The changes will impact the company's performance and financial state. This is also to demonstrate the initial poor financial performance of many digital banks, which can be attributed to several factors. Indeed, digital banks, despite having lesser capitalization compared to traditional banks, employ a business model centered around technology as a digital service. This is achieved through the use of applications that can be accessed without any limitations on time or location.

This study adopts the research approach of Yang et al. (2018) with certain adjustments. The utilized financial ratios have been modified, substituting ROA, ROE, Operating Margin, NIM, and Efficiency Ratio with LDR, EAR, NIM, ROA, and TATO. The supplementary variables LDR, EAR, and TATO were utilized in studies by Shanti et al. (2024), Widyastuti et al. (2014), and Anugerah (2012). Moreover, incorporating a comparison with other conventional banks could enhance the research findings.

The objective of this research's normality test is to ascertain whether the confounding factors, or residuals, in the regression model adhere to a normal distribution. The Paired Sample T-Test is a statistical technique employed to compare the means of two variables within a single group. Should the criteria for parametric testing be unmet, the study hypothesis will be evaluated using the Mann-Whitney U test. As a result of a comparative analysis, two separate tests (the Mann-Whitney U test and the Paired Sample T-test) were utilized instead of the Kolmogorov-Smirnov normality test, which had been previously employed to determine if the data were non-parametric or normally distributed (parametric).

This research seeks to analyze and compare the financial performance (LDR, EAR, NIM, ROA, and TATO) of traditional banks and digital banks within the framework of digital transformation. It will also formulate managerial implications and alternative strategies that digital banks can adopt to enhance continuance intention. Additionally, to determine the most effective method for improving the financial efficiency of digital banks.

The structure of this document is as follows: Following the introduction, Section 2 provides outlines the research methodology and includes the assertions of research hypotheses. Section 3 presents the outcomes of the study. Section 4 provides a thorough examination of the results, while the remainder of 5 explores the potential consequences that might be inferred from the data. Section 6 examines potential areas for further research and addresses the constraints of the study.

METHODS

Secondary data was collected from the website of the Financial Services Authority (OJK, 2024), www.ojk.go.id, which was visited on June 22, 2024. The S&P Capital IQ platform, accessible at www.capitaliq.spglobal.com, offers comprehensive information, news, and analysis on market conditions. Bank websites have annual reports spanning from 2019 to 2022. The time series data was collected quarterly by nine banks between 2012 and 2022.

This study utilized a comparative quantitative technique. As stated by Sugiyono (2014), a comparative research study involves comparing the presence of one or more variables in a sample or at different points in time. Several studies (Banerjee et al. 2022; Shanti et al. 2024; Widyastuti et al. 2014; Hasanuddin, 2023) use financial ratios including LDR, EAR, NIM, ROA, and TATO.

Morrissan (2012) defines population as the complete set of data that can be observed or gathered by researchers. The study's population consisted of banks that were listed on the Indonesian Stock Exchange. The study's sample consisted of nine banks, comprising five traditional banks (Bank Permata, Bank CIMB Niaga, Bank Danamon, Bank Panin, and Bank OCBC NISP) and four digital banks (Bank Jago, Bank Neo Commerce, SeaBank, and Bank Raya). Bank Jago and Bank Neo Commerce are scheduled to undergo a transformation into digital banks by 2019, whereas SeaBank and Bank Raya are expected to make the move by 2020. The selection of the 4 digital banks was based on their market capitalization, duration of operation as a digital bank, and the presence of a robust group ecosystem. Conventional banks were chosen based on their market capitalization value, which was similar to that of the digital bank.

White et al. (2022) divide ratio analysis into four main categories: activity ratio, liquidity ratio, solvency ratio, and profitability ratio. The study focused on the bank's financial performance by considering indicators such as liquidity, solvency, profitability, and activity ratios. Table 1 provides specific information regarding the identification and measurement of research variables.

The normality test's purpose is to determine whether the confounding factors, or residuals, in the regression model follow a normal distribution. Paired Sample T-Test Analysis is a statistical method used to compare the means of two variables within the same group. Additionally, this methodology is employed to examine two samples that are connected or paired. When the residual value does not conform to a normal distribution, the statistical test loses its validity for small sample sizes (Ghozali, 2016). According to Sugiyono (2012), the paired sample t-test is a component of the Independent Samples Test. It is a method used to evaluate the effectiveness of a therapy based on the average of each section. If the probability (Asymp.Sig) is less than $\alpha = 0.05$, it indicates the presence of significant differences. On the other hand, if the probability (Asymp.Sig) is greater than $\alpha = 0.05$, then it indicates that there was no statistically significant difference between the two variable items.

Widiyanto (2013) defines the paired sample t-test as a statistical approach used to evaluate the efficacy of a therapy by measuring the difference between the average values before and after the treatment is administered. If the parametric testing requirements cannot be fulfilled, the research hypothesis test will be conducted using the Mann-Whitney U test. This approach aligns with the explanation provided by Lestari and Yudhanegara (2015), which states that the Mann-Whitney U Test is employed to analyze statistics from two independent samples that are either ordinal or normally distributed, or if the data is not normally distributed.

Table 1. Identification and Measurement of Variables (BI, 2004; OJK, 2017; Widyastuti, 2014; Hasanuddin, 2023)

Variable	Ratio	Measurement
Liquidity Ratios	LDR = Loan / Third Party Funds	The Loan to deposit ratio (LDR) between credit and third party funds expressed in percentage (%) using a ratio scale
Solvency Ratios	EAR = Total Equity / Total Assets	Equity to Asset Ratio (EAR) between equity capital and total asset expressed in percentage (%) using a ratio scale
Profitability Ratios	NIM = Net Interest Income / Average Earning Assets	The Net Interest Margin (NIM) ratio between net interest income to average earning assets is expressed as a percentage (%) by using a ratio scale
Profitability Ratios	ROA = Net profit before tax / Average Total Assets	The Return on Asset (ROA) ratio between net income to average total assets is expressed as a percentage (%) by using a ratio scale
Activity Ratios	TATO = Net Sales / Total Assets	The Total Assets Turn Over (TATO) between Total Interest Income and total asset expressed in percentage (%) using a ratio scale

Due to a comparison analysis, two distinct tests (the Mann-Whitney U test and the Paired Sample T-test) were employed in place of the Kolmogorov-Smirnov normality test, which was previously utilized to ascertain whether the data were non-parametric or regularly distributed (parametric). The Kolmogorov-Smirnov test employed a value of α of 5%. If the value of α is greater than 5%, the data are normally distributed; if it is less than 5%, the data are not. The average value of each data set, the correlation value, and the testing with t-count against t-table or through p-value (Sig.) will all be displayed using the Paired Sample T-Test with SPSS 23.

The discussion over the connection between digital transformation in banks and their performance originates from the "profitability paradox" discovered by Beccalli (2007). Xin and Choudhary (2019) recently reported findings that align with those of Beccalli (2007). In fact, their research shows that higher investment in information technology does not always result in higher revenues. The results may be attributed to the impact of digital transformation on the performance of large-scale organizations (Pramanik et al. 2019). Within this study, we presented the subsequent research hypotheses:

So that obtained results from the testing. In a test of the hypothesis is:

H0: $\mu 1 = \mu 2$ (average pre- and post- digital bank transformation is the same)
H1: $\mu 1 \neq \mu 2$ (average pre- and post- digital bank transformation is different)

The basis for decision making is as follows:

- t count > t table (Sig. <α), then Ho is rejected, or Ha is accepted (there is a significant difference)
- t count <t table (Sig.> α), then Ho is accepted, or Ha is rejected (there is no significant difference) (Kuncoro, 2003).

This study is a quantitative analysis that seeks to investigate the deterioration in the financial performance of digital banks following their transformation. The flowchart on Figure 1 indicates that the researcher used an approach known as descriptive analysis. The descriptive analysis compares both digital banks pre- and post-transformation, as well as with analogous conventional banks. A descriptive analysis method is employed to assess financial performance, including the Liquidity Ratio (LDR), Solvency Ratio (EAR), Profitability Ratios (NIM & ROA), and Activity Ratio (TATO). Based on the aforementioned framework of thought, this refers to the concept and literature review derived from prior research findings. The author endeavors to construct a research framework to address the research objectives, specifically Implications and Alternative Strategies.

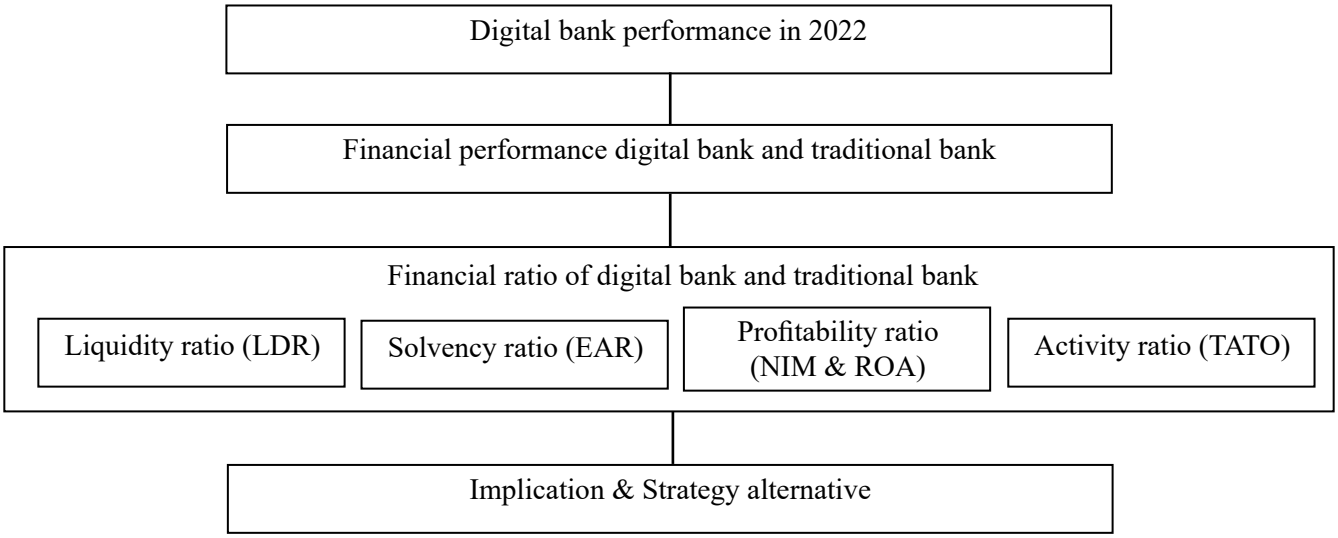

Figure 1. Research framework

RESULTS

Descriptive Analysis

Figure 2 depicted the financial performance of banks before and after the transition to digital and traditional banking from 2012 to 2022. The statistics represented the values for Loan-to-Deposit Ratio (LDR), Equity-to-Asset Ratio (EAR), Net Interest Margin (NIM), Return On Assets (ROA), and Total Asset Turnover (TATO). The graphic demonstrated the volatility of digital banks in relation to traditional banks.

Comparisons were made between the average variables before and after the implementation of digital banking, as well as between digital banking and traditional banking, revealing noticeable changes. The alterations consisted of making adjustments to the mean, median, and standard deviation values of each variable, as well as adjustments to its average value.

From Table 2 it is observed that for two of the four factors analyzed, the conversion to a digital bank resulted in an average rise in profitability (NIM), liquidity (LDR), and solvency ratios (EAR). After the transition to a digital bank, the average values of the activity ratio (TATO) and profitability ratio (ROA) variables declined. Nevertheless, only the liquidity ratios exhibited a level lower than the norm in comparison to conventional banks. Digital banks exhibited a high standard deviation score, which suggests a greater degree of variability in their data.

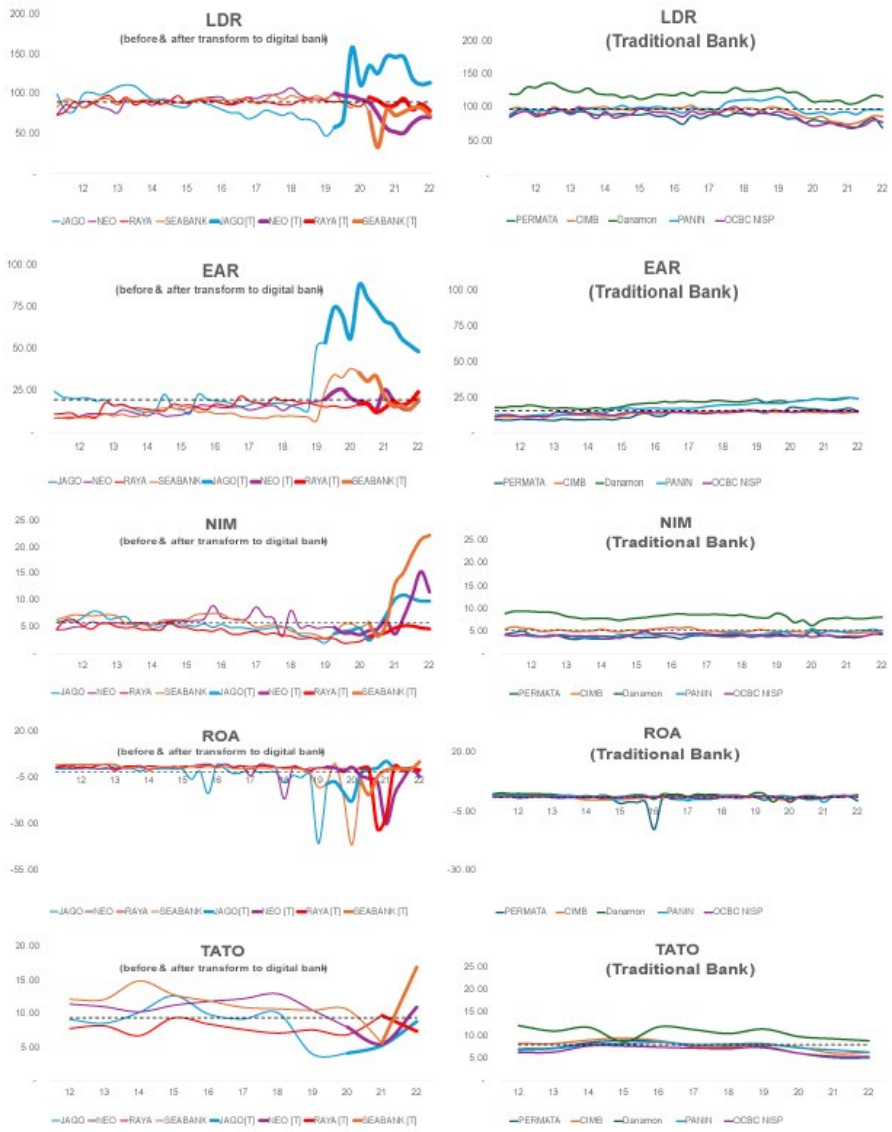

Figure 2. Financial performance of bank in 2013–2023

Table 2. Result: variable's mean, median, and standard deviation values

	Variable	Digital banking transformation		Traditional Bank	Result	
		Before	After		Before and after digital banking transformation	Result for Digital Banks compare traditional banks
LDR	Mean	89.59	90.89	97.62	Increase	Lower
	Median	91.04	85.53	95.76	Decrease	Lower
	Std. Deviation	8.88	28.48	14.27	Increase	Higher
EAR	Mean	15.06	33.72	15.68	Increase	Higher
	Median	14.71	21.3	14.66	Increase	Higher
	Std. Deviation	5.84	22.68	3.99	Increase	Higher
NIM	Mean	5.31	7.59	5.11	Increase	Higher
	Median	5.33	5.09	4.47	Decrease	Higher
	Std. Deviation	1.41	5.09	1.67	Increase	Higher
ROA	Mean	-0.61	-4.73	1.25	Decrease	Lower
	Median	0.61	-0.62	1.38	Decrease	Lower
	Std. Deviation	5.72	8.64	1.19	Increase	Higher
TATO	Mean	6.54	5.33	5.06	Decrease	Higher
	Median	6,4	4,74	4.98	Decrease	Lower
	Std. Deviation	3,08	3,41	2.48	Increase	Higher

Out of all the banks that transitioned into digital banking, only Bank Jago had a significant surge in its liquidity ratios (LDR), especially escalating from 85.38% to 119.86%. Bank Jago exhibited the most substantial increase in its solvency ratio (EAR), surging from 18.57% to 65.60%, while all other banks also observed gains. Seabank had the highest growth in profitability ratios (NIM) among all banks, rising from 5.88% to 13.14%. All banks' activity ratios (TATO) and ROA experienced a relatively similar decline.

Data Normality Test by by Kolmogorov–Smirnov test

The results of the data normality test on four variables liability, solvency, profitability, and activity ratios for the nine-owned banks using the Kolmogorov-Smirnov (KS) parametric and non-parametric statistical tests are described in the following Table 3.

The significance value of the liquidity ratio was 0.2>0.05, indicating that the residual value is normally distributed, based on the normality test findings obtained before and after the digital bank transformation. Assuming that the residual value is not normally distributed, the other ratios must all be less than 0.05. The significance values of the profitability ratio (0.128>0.05), activity ratio (0.2>0.05), and solvency ratio (0.2>0.05) after the conversion of digital banks into traditional banks, as well as the results of the normality test, lead to the conclusion that the residual value is normally distributed. It is possible to deduce that the residual value is not normally distributed, even when the liquidity ratio is 0.025<0.05.

Different Test by Paired Sample T-Test & Mann-Whitney U test

The table presents the outcomes of several tests conducted on four variables liability, solvency, profitability, and activity ratios for the nine banks that are owned. These tests utilized the paired sample t-test and the Mann-Whitney U test (Table 4).

The variables were examined, and there was a notable disparity in the solvency ratio and activity ratio prior to and following the digital bank transition. The discrepancy was assessed using the Mann-Whitney U test with a significance threshold of 95%. The asymptotic significance value is less than 0.05 for both the solvency ratio of 0 and the activity ratio of 0.015. Based on a significant difference, it may be inferred that H0 is rejected and H1 is accepted, as there is an observable effect on both the solvency ratio and activity ratio after transitioning to a digital banking model. Therefore, it can be inferred that the transition to a digital bank has a little effect on the profitability ratio and efficiency ratio (Yang et al. 2018). The impact of

digitalization on liquidity risk is not considerable, given that digital channels make use of banks' lending and deposit activities (Hoque et al. 2024; Rachmaniyah et al. 2023).

The results of the difference test comparing digital banks and traditional banks indicate that the liquidity ratio had a statistically significant value of 0.005, while the solvency ratio and profitability ratio have values of 0. It may be inferred that there is a substantial disparity between digital banks and traditional banks in terms of the three ratios. Therefore, it may be concluded that the null hypothesis (H0) is rejected and the alternative hypothesis (H1) is accepted due to the presence of a statistically significant difference in the liquidity ratio, solvency ratio, and profitability ratio.

Every digital bank's management team in Indonesia had a unique strategy for improving financial performance and achieving digital transformation goals. The scale and rapidity of each bank's digital transformation strategy determined its influence on bank efficiency. According to Hadi et al (2020), digital transformation integrates information technology with banking operations to address emerging business challenges. It was imperative for banks to undergo digital transformation and strive to provide accessible, transparent, and user-friendly services at lower costs compared to traditional services (Marcu, 2021).

In recent years, both digital and traditional banks in Indonesia have implemented digital transformations to maintain competitiveness. Customers were incentivized to utilize digital services only if they were provided with an easily accessible interface and enhanced security measures, wherein the bank assumed a collaborative role as their partner (Filotto, 2020; Jebarajakirthy, 2021).

In 2013, the Association of Southeast Asian Nations (ASEAN) surpassed China as the primary recipient of foreign direct investment. Notwithstanding this achievement, numerous individuals reside in marginalized regions devoid of financial amenities. The increasing capacity and accessibility of the internet provide investors with a chance to provide financial technology, also known as fintech, to fulfill the demand for financial services in the current digital age (Loo, 2019).

Table 3. Test result: Data Normality by Kolmogorov–Smirnov test

Variable	Before and after digital banking transformation:			Digital banks in comparison to traditional banks:		
	Asymp.sig	Significant Level	Residual value conclusion	Asymp.sig	Significant Level	Residual value conclusion
LDR	0.2	0.05	normally distributed	0.025	0.05	-
EAR	0	0.05	-	0.2	0.05	normally distributed
NIM	0	0.05	-	0.128	0.05	normally distributed
ROA	0	0.05	-	0.2	0.05	normally distributed
TATO	0.002	0.05	-	0.2	0.05	normally distributed

Table 4. Different Test Results (Paired Sample T-Test & Mann-Whitney U test)

Variable	Sig	Significant Level	Result	Methods
Before and after digital banking transformation:				
LDR	0.129	0.05	-	Paired Sample T-Test
EAR	0	0.05	significantly differences	Mann-Whitney U test
NIM	0.392	0.05	-	Mann-Whitney U test
ROA	0	0.05	significantly differences	Mann-Whitney U test
TATO	0.015	0.05	significantly differences	Mann-Whitney U test
Following the transition of digital banks in comparison to traditional banks:				
LDR	0.005	0.05	significantly differences	Mann-Whitney U test
EAR	0	0.05	significantly differences	Paired Sample T-Test
NIM	0	0.05	significantly differences	Paired Sample T-Test
ROA	0	0.05	significantly differences	Paired Sample T-Test
TATO	0.153	0.05	-	Paired Sample T-Test

In Section 3 of this study, multiple hypotheses are presented based on the results obtained from the technique. These hypotheses involve rejecting H0 and accepting H1. The initial hypothesis posits that the transition to a digital banking model in Indonesia has a substantial impact on solvency ratios (EAR), return on assets (ROA) and activity ratios (TATO). This suggests that digital banks in Indonesia possess the ability to locate funding for their operations, but they still have difficulties effectively managing their assets. This is seen in the decrease in activity ratios (TATO). The impact of Internet banking on bank profitability in Indonesia is significant, as indicated by the metrics of return on assets (ROA) (Pertiwi et al. 2023; Sayari, 2024). Nevertheless, it has no substantial impact on the net interest margin (NIM) and loan-to-deposit ratio (LDR), as indicated by Triska, 2022 and Rachmaniyah et al. 2023. In contrast to the research conducted by Yang et al. 2018, there are divergent data indicating that the transition to digital technology has less impact on NIM.

After undergoing a digital transformation, Bank Jago achieved the highest average solvency ratio value of 65.60%. Bank Jago possesses a substantial amount of capital that surpasses the statutory requirements, amounting to more than IDR 3 trillion. This is advantageous for the bank's liquidity, especially considering that the bank's loan-to-deposit ratio (LDR) is above 100%. Bank Jago's market capitalization experienced a substantial boost following its transformation into a digital bank, reaching IDR 40 trillion. This represents a huge rise from the prior share price range of around IDR 300 to above IDR 3,000. A high solvency ratio (EAR) offers a safeguard against financial risks and market volatility.Bank Neo Commerce and Bank Raya conducted a capital increase with pre-emptive rights (PMHMETD), also known as a right issue, in order to enhance their core capital. SeaBank has not undergone an initial public offering (IPO), although there has been a rise in core capital following the merger and acquisition. The shareholders now include PT Danadipa Artha Indonesia (85.00%) and PT Koin Investama Nusantara (15.00%). The allocated funds will be utilized to increase operating capital for the purpose of expanding loan distribution and enhancing financial support for emerging market sectors.

The transition to a digital bank in Indonesia has a significant effect on bank capital augmentation (Linggadjaya, 2022; Ahdallah, 2022). Bank Jago In addition to raising additional cash and addressing rights issues, the equity increased by 414%, from IDR 681 billion to IDR 8.1 trillion.

The company's digital bank transformation implementation in Indonesia resulted in a marginal decline in the average activity ratio (TATO). This is mostly attributed to the difficulties faced by digital banks in Indonesia in disbursing loans that are dependent on internet networks. There are still multiple regions experiencing internet connectivity issues. Furthermore, there is difficulty in extending loans beyond the consumer sector to the micro, small, and medium enterprises (MSMEs) sector, which carries a significant risk of defaulting on the debt. Additional hurdles in specific sectors include the expansion into agricultural, fishery, and mining industries, which are traditionally outside the domain of digital banks' commercial expertise in Indonesia.

Multiple digital banks in Indonesia are endeavoring to augment their assets by expanding their loan portfolios. Bank Jago is endeavoring to broaden its credit portfolio. The ownership relationship between Gojek and Bank Jago has made it possible for a much wider digital ecosystem connection, with a stronger digital interconnection ecosystem that goes beyond the scope of a simple business agreement. Credit growth is achieved by partnering with peer-to-peer (P2P) lending firms, multifinance institutions, or other digital ecosystems.

Bank Raya and Bank Neo Commerce are strategically expanding their operations by prioritizing credit quality, forming partnerships with fintech companies and cooperatives, and implementing innovative features. Bank Neo Commerce has introduced Neo Loan, a service that offers direct online credit loans to customers through their application. Bank Raya has introduced Pinang Dana Talangan, a financial support program for banking agents that is overseen by its parent firm, Bank BRI. Seabank increased its loan portfolio by implementing peer-to-peer lending (P2P) financing collaboration, utilizing advanced technological systems, particularly for consumer-focused financing.

The second theory concerns the discrepancies between digital banks and traditional banks in Indonesia. The hypothesis involves rejecting the null hypothesis (H0) and accepting the alternative hypothesis (H1). The null hypothesis (H1) is upheld for three ratios in which statistically significant alterations are detected in three financial measures, namely liquidity ratios (LDR), solvency ratios (EAR), and profitability ratios (NIM & ROA). Moreover, digital banks exhibit poor liquidity (LDR) ratios in addition to their solvency ratios (EAR). Traditional bank such as Bank Danamon is a typical bank with an average loan-to-deposit ratio (LDR) that exceeds 120%. However, their profitability ratios exceed those of traditional banks in Indonesia.

The liquidity ratios (LDR) of Bank Jago are unfavorable, with a value of 119%. The increase in loans is facilitated by ample liquidity reserves resulting from a surplus of capital that exceeds regulatory requirements. The loan distribution strategy will be implemented by partnering with the GoTo ecosystem (parent), and fundraising will involve acquiring new customers from the ecosystem as well. Bank Raya and Bank Neo are implementing a strategy of limited credit expansion and making targeted adjustments to deposits. This is done to ensure equilibrium and uphold the long-distance relationship (LDR) within the ideal threshold of 90%–95%.

SeaBank's liquidity ratios have decreased due to significant growth in deposits and limitations on credit disbursement. The approach to enhancing savings is implemented by introducing digital savings options that incorporate several cutting-edge features, such as accounts with no required minimum balance, daily disbursed interest, and free of charge. Bank savings have experienced exponential growth of 308% in 2021, following the transformation of traditional banks into digital banks, as compared to the previous year. In 2021, savings experienced significant growth, rising from IDR 2 trillion to IDR 8 trillion. In the highest increment, the increase in savings was the primary factor.

When it comes to the profitability ratio (NIM & ROA), digital banks in Indonesia outperform traditional banks in their capacity to handle risks associated with interest rates. Bank Jago, Bank Neo Commerce, Bank Raya, and Seabank are increasing their loan interest revenue by expanding credit, particularly for consumption, through financing agreements inside their ecosystems. Subsequently, there is a rise in the interest rate applied to loans provided, resulting in an augmentation of interest revenue. Bank Jago aims to reduce interest expenses by increasing the proportion of innovative, cost-effective funds, such as pocket features and shared pockets. However, Seabank provides deposit interest rates that exceed the industry average of 7%. This leads to a substantial surge in revenue from credit interest. Bank Raya is currently facing a decline in loan volume, which is also followed by a drop in the burden of deposit interest.

On average, digital banks in Indonesia have a negative return on assets (ROA) ratio, indicating that the company's profitability is in a negative state or experiencing losses. This suggests that the overall invested capital has not been able to generate profits. Kasmir (2012) states that Return on Assets (ROA) is influenced by two factors: net profit margin and total asset turnover. A low ROA is a result of a low profit margin, which in turn is caused by a low net profit margin and a low total asset turnover.

During the execution of the digital transformation, the bank's digital financial performance in Indonesia has undergone substantial fluctuations, encompassing both declines and improvements. Traditional banks in Indonesia have an effective and gradual approach to managing investment costs, which contributes to achieving favorable financial performance. Banks may encounter difficulties if they mistakenly perceive digital transformation as solely focused on procedures and systems, neglecting the need to enhance the customer experience (Indriasari et al. 2019). Over the past few years, companies worldwide have started to enhance their competitive advantages through digital transformation. However, not all companies in Indonesia can fully grasp the business value of this transformation due to the substantial costs and time needed to achieve desired performance targets, particularly in terms of efficiency (McKinsey, 2020). McKinsey conducted a poll where 92% of corporate executives expressed that their business model would not be viable in the era of digitization without undergoing a business transformation.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

Based on the aforementioned data and debate, it can be inferred that digital transformation in Indonesia has the capability to enhance financial performance, both before and after the transformation and in comparison to conventional banks. Moreover, it can be inferred that digital transformation is a key factor in enhancing the solvency ratio (EAR), profitability ratio (ROA) and activity ratio (TATO). Nevertheless, digital banks still faced obstacles in enhancing their liquidity ratio (LDR), profitability ratio (ROA) and activity ratio (TATO). This study corroborated the findings of previous research outlined in the literature review by demonstrating that digitalization enhanced corporate profitability (NIM), despite the liquidity ratio (LDR) remaining unfavorable. The NIM exhibits a similarity with the findings of Shanti et al., 2024; however, the LDR presents a divergent outcome, falling below that of peers, as this research also compares with other traditional banks.

Digital banks in Indonesia must have the capacity to secure finance for their operations; however, they struggle to efficiently manage their assets. Following a digital transformation, Bank Jago attained an impressive average solvency ratio of 65.60%, surpassing the minimum capital requirements by a significant margin. Bank Neo Commerce and Bank Raya implemented capital augmentation using pre-emptive rights (PMHMETD). SeaBank has not conducted an initial public offering (IPO), despite experiencing an increase in core capital as a result of the merger and acquisition. The shift to a digital banking model in Indonesia has a substantial impact on the increase in bank capital, resulting in a 414% growth in Bank Jago's equity. Nevertheless, the average activity ratio (TATO) has decreased as a result of challenges in distributing loans that rely on internet networks and expanding loans beyond the consumer sector to micro, small, and medium companies (MSMEs).

Digital banks sought to increase their assets by diversifying their loan portfolios, establishing collaborations with fintech companies and cooperatives, and incorporating cutting-edge functionalities. The next hypothesis pertained to the disparities between digital banks and traditional banks. Digital banks demonstrated inadequate liquidity ratios, as well as their solvency ratios (EAR). Bank Danamon, a conventional bank, had a loan-to-deposit ratio (LDR) of more than 120%, although its profitability ratios were higher than those of other traditional banks. Digital banks excelled at managing interest rate risks and boosting loan interest earnings. Both digital banks and traditional banks adopted digital transformation strategies to remain competitive, offering consumers a user-friendly interface and improved security protocols.

Recommendations

Digital transformation is intricately linked to the invention of digital technologies. This study has demonstrated that implementing digital transformation can improve banks' overall performance. The analysis conducted in this paper examines the influence of digital transformation on the financial performance of banks. It confirms that digital transformation would enhance bank profitability and solvency ratios, notwithstanding the ongoing decline in bank liquidity.

Financial inclusiveness refers to a state in which reasonably priced financial products and services are accessible to individuals in a responsible and sustainable manner, enabling them to fulfill their financial needs. The technology provides equitable chances for individuals, particularly those who are unbanked and underbanked, to gain improved access to financial services (Nanda & Kaur, 2016). The objective is to offer individuals affordable access to full financial services, encompassing savings or investment services, payments, and credit services. Regulations are in place to protect consumers and promote fair competition in the sectors governing these financial transactions.

According to the World Bank Report, 2018, financial inclusion will lead to a decrease in poverty and an increase in shared prosperity among the Indonesian population. In Indonesia, a country made up of many islands with a growing economy where micro-, small-, and medium-sized enterprises (MSMEs) dominate the business sector, the efficiency of banks will play a crucial role in promoting the activities of MSMEs and improving the financial well-being of people with low incomes. Specifically, banks will provide financial support for the digital transformation of MSMEs and foster inclusive growth (Fauzi et al. 2023). Digital banks are anticipated to promote the digitalization of MSMEs by facilitating their access to funding and enabling them to conduct digital financial transactions.It is necessary

for digital banks to modify their innovation strategy and prioritize enhancing the customer experience. Customer involvement is a crucial component of the banking services transition.

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