

Comparative Analysis of Liquidity Management Efficiency in Improving Profitability of NTB Syariah Bank vs Aceh Syariah Bank Based on Financial Report Data for the Period 2020-2024

Nabila Rizka Awalia^{a,1*}, Muh. Salahuddin^{b,2}, Umu Rosyidah^{c,3}

¹²³ State Islamic University of Mataram, Indonesia

Email: ^a240404001.mhs@uinmataram.ac.id, ^bsalahuddin@uinmataram.ac.id, ^crosyidah@uinmataram.ac.id

*Corresponding Author

ABSTRACT

The objective of this research was to conduct a comparative analysis of liquidity management efficiency in improving the profitability of NTB Syariah Bank and Aceh Syariah Bank for the period 2020-2024. This research was quantitative research with a comparative-descriptive approach based on secondary data. The sample in this research was 40 second quarter financial reports at both banks. This research used input variable (funding costs and operating costs) and output variable (total of Third Party Funds and profitability). The data collection technique used was documentation study. The analysis techniques used were descriptive statistical analysis, efficiency measurement with Data Envelopment Analysis (DEA) by using software MaxDEA Lite 12, and comparative efficiency analysis used the help of software IBM SPSS version 25. The results of this research showed that: (1) NTB Syariah Bank tended to be more aggressive with a focus on maximizing financing distribution, while Aceh Syariah Bank was more conservative in prioritizing liquidity stability; (2) Aceh Syariah Bank showed resilience and more stable and improving efficiency trends, while NTB Syariah Banks' efficiency was more fluctuating and felt sharply at the peak of the crisis; (3) There was a positive relationship between liquidity management efficiency and increased profitability at both banks, where an increase in efficiency scores achieved through control of funding costs and operating costs was followed by improvements in profitability indicators such as ROA and ROE; and (4) There was no significant difference in the level of liquidity management efficiency at both banks.

Keywords: Efficiency; Liquidity Management; Profitability

INTRODUCTION

4.1. General Background

The development of the Islamic financial industry in Indonesia, particularly Islamic banking, has become a significant economic growth narrative over the past decade. According to the Financial Services Authority (OJK) report, the total assets of Islamic banking in Indonesia reached IDR 980.29 trillion in 2024, growing by 9.88% from the previous year, with market share increasing to 7.72% (OJK, 2025). However, behind this optimistic growth, there is a stability dimension that must be carefully managed,

namely liquidity. Liquidity is the bank's ability to meet its short-term obligations without disrupting business continuity (Vernando et al., 2024). For Islamic banks, liquidity management is more complex because they must comply with Sharia principles (prohibiting *riba*, *maisir*, *gharar*) as well as maintain the Financing to Deposit Ratio (FDR) within the range of 84%-94% as stipulated by Bank Indonesia (Bank Indonesia, 2019).

4.2. Review of Previous Research

Previous research on the efficiency of Islamic banking has shown mixed results. Mauluddi found that liquidity does not have a significant direct effect on profitability but does have an effect through operational efficiency (Mauluddi, 2021). Hakim reported that Bank Aceh Syariah achieved perfect efficiency after conversion, while Bank NTB Syariah experienced a slight decline (F. W. Hakim et al., 2024a). Rusydiana & As-Salafiyah observed efficiency fluctuations in 14 Indonesian Islamic banks with an average of 80% (Rusydiana & As-Salafiyah, 2021). However, studies that specifically compare liquidity management efficiency between two regional Sharia development banks (Bank NTB Syariah and Bank Aceh Syariah) in the post-pandemic period (2020-2024) remain limited.

4.3. Research Gap

The identified gap is the limited number of comparative studies on liquidity management efficiency (not general efficiency) in two regional Sharia development banks with different regional contexts (NTB with a tourism-based economy vs. Aceh with special Sharia autonomy), using the Data Envelopment Analysis (DEA) method during a period covering the COVID-19 crisis and economic recovery. Furthermore, most previous studies used conventional financial ratios (BOPO, FDR) or parametric methods, which are less capable of capturing multi-input and multi-output relationships.

4.4. Research Objectives and Contributions

This study aims to: (a) describe the liquidity management of both banks; (b) analyze the level of liquidity management efficiency using DEA; (c) analyze the impact of efficiency on profitability; and (d) compare the efficiency of Bank NTB Syariah and Bank Aceh Syariah. The contribution of this study is to provide empirical evidence on different liquidity strategies that nevertheless achieve equivalent efficiency levels, as well as policy implications for regulators and bank management.

4.5. Article Organization

This article is organized as follows: Section 2 presents the literature review (theories of liquidity, profitability, efficiency, and intermediation). Section 3 explains the research method. Section 4 presents the results and discussion. Section 5 provides conclusions, implications, and suggestions.

LITERATURE REVIEW

2.1. Concept of Liquidity Management in Islamic Banks

Liquidity in banking is defined as the bank's ability to meet its short-term obligations by managing easily encashable liquid assets (Sultoni & Mardiana, 2021). The main indicator of liquidity in Islamic banks is the Financing to Deposit Ratio (FDR), which is the ratio of financing to third-party funds. According to Bank Indonesia regulations, the ideal FDR range is 84%-94% (Bank Indonesia, 2019). The higher the FDR, the lower the bank's liquidity, and vice versa. Liquidity management in Islamic banks faces constraints such as limited Sharia-compliant liquidity instruments and excess liquidity accumulation (Iskandar, 2023).

2.2. Profitability Theory and the Liquidity-Profitability Trade-Off

Profitability is the company's ability to generate profit (Brigham & Houston, as cited in Gunardi et al., 2022). Commonly used ratios are Return on Assets (ROA) and Return on Equity (ROE). The liquidity-profitability trade-off theory (Bassey & Moses) states that there is a negative relationship between liquidity and profitability: maintaining high liquidity will suppress profits, while pursuing high profits sacrifices liquidity (Ferli et al., 2022). Therefore, an optimal point is needed through efficiency.

2.3. Efficiency Theory (Farrell, 1957) and DEA

Efficiency consists of technical efficiency (maximizing output from a given set of inputs) and allocative efficiency (using the least-cost input combination). Data Envelopment Analysis (DEA) is a non-parametric method that compares the relative performance of decision-making units (DMUs) using multiple inputs and outputs (Banker et al., 1984). This study uses the BCC model (Variable Return to Scale) with input orientation.

2.4. Financial Intermediation Theory

According to Diamond & Dybvig, banks function as intermediary institutions that transform short-term deposits into long-term financing (Diamond & Dybvig, 1983). This process creates liquidity but also carries the risk of a bank run. In the Sharia context, intermediation is carried out with profit-sharing principles (*mudharabah*, *musyarakah*) and justice (Putri et al., 2024).

RESEARCH METHOD

This study employs a quantitative descriptive-comparative approach using secondary data in the form of quarterly financial reports of Bank NTB Syariah and Bank Aceh Syariah for the period 2020-2024. A total sample of 40 reports (20 per bank) was taken using total sampling.

4.1. Variables

- 3.2.1. Inputs : cost of funds and operating costs (excluding cost of funds).
- 3.2.2. Outputs : total third-party funds (DPK), Return on Assets (ROA), Return on Equity (ROE).

4.2. Data Analysis Techniques

- 3.3.1. Descriptive statistics (minimum, maximum, mean, standard deviation) using SPSS IBM 25.
- 3.3.2. Efficiency measurement using DEA with the BCC model (Banker, Charnes, Cooper) - input-oriented, Variable Return to Scale (VRS) assumption, using MaxDEA Lite 12 software.
- 3.3.3. Comparative test using the Mann-Whitney U test ($\alpha = 0.05$) to examine the difference in efficiency between the two banks.
- 3.3.4. Dynamic trend analysis to examine the annual efficiency development.

4.3. Hypothesis

- 3.3.1. H_0 : There is no significant difference in liquidity management efficiency between Bank NTB Syariah and Bank Aceh Syariah.
- 3.3.2. H_1 : There is a significant difference in liquidity management efficiency between Bank NTB Syariah and Bank Aceh Syariah.

RESULT AND DISCUSSION

4.1. Liquidity Management (Based on FDR)

The following presents the empirical analysis results of the Financing to Deposit Ratio (FDR) of Bank NTB Syariah and Bank Aceh Syariah for the 2020-2024 period, based on quarterly financial report data. The analysis of the Financing to Deposit Ratio (FDR) reveals a significant strategic difference between the two banks.

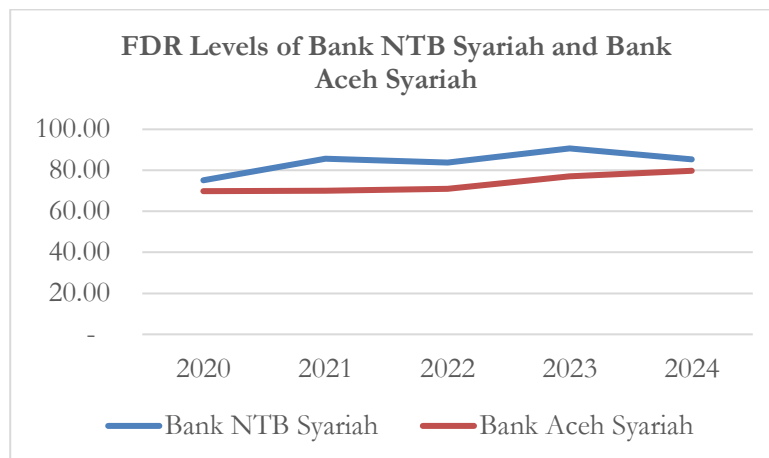
Table 4.1
FDR Levels of Bank NTB Syariah and Bank Aceh Syariah

Year	Quarter	Bank NTB Syariah	Bank Aceh Syariah
		%	%
2020	1	70.27	73.77
2020	2	70.31	70.66
2020	3	73.47	64.1
2020	4	86.53	70.82
2021	5	83.01	71.95
2021	6	83.58	67.24
2021	7	84.81	72.65
2021	8	90.96	68.06
2022	9	79.75	70.48
2022	10	81.32	66.59
2022	11	85.16	71.52
2022	12	89.21	75.44

2023	13	88.02	77.67
2023	14	89.77	76.52
2023	15	90.59	77.53
2023	16	94.35	76.38
2024	17	83.11	80.91
2024	18	83.68	80.13
2024	19	84.15	80.23
2024	20	90.22	77.83

Source: Quarterly Financial Reports of Bank NTB Syariah and Bank Aceh Syariah for the Period 2020-2024

Figure 4.2
Average Annual FDR Levels of Bank NTB Syariah and Bank Aceh Syariah (2020-2024)



Source: Author's calculation based on quarterly financial reports of Bank NTB Syariah and Bank Aceh Syariah using Microsoft Excel

Bank NTB Syariah showed an average FDR of 84.11% during the research period, which falls within the healthy corridor according to Bank Indonesia's provisions (84%-94%) (Bank Indonesia, 2019). This pattern indicates the implementation of an aggressive liabilities liquidity management strategy, where the bank actively maximizes the disbursement of financing from successfully raised third-party funds. In contrast, Bank Aceh Syariah adopted a more conservative approach with an average FDR of 73.52%, often falling below the lower limit of the standard. This strategy reflects asset liquidity management, where the bank prioritizes maintaining strong and safe liquidity reserves.

This strategic difference is closely related to the operational context of each bank. Bank NTB Syariah, operating in a region with a dynamic tourism-based economy and a religious society, seems to find it necessary to adopt a more expansive strategy to capture the potential for regional economic growth (BPS NTB, 2025). Meanwhile, Bank Aceh Syariah, operating in an environment with the special characteristic of Sharia law implementation and supported by abundant natural resources, tends to choose a more prudent approach to maintain its long-term stability and resilience (JDIH Aceh, 2019).

Theoretically, the aggressive strategy of Bank NTB Syariah aligns with the concept of the liquidity-profitability trade-off theory, which explains the reciprocal relationship between liquidity and profitability (Ferli et al., 2022). On the other hand, the conservative approach of Bank Aceh Syariah is consistent with the principle of prudential banking in modern liquidity management theory (L. Hakim, 2021). These findings are reinforced by previous research by Faqih Wildan Hakim et al., which also indicated differences in strategic orientation between the two banks after conversion (F. W. Hakim et al., 2024a).

In terms of implications, this study confirms that there is no single universal formula for liquidity management strategy. Each bank develops its own approach tailored to the specific context of its region. Therefore, supervisory policies of regulators such as the OJK and Bank Indonesia should be contextual and flexible, taking into account the economic, social, and specific risk characteristics of the region where the bank operates.

4.2. Liquidity Management Efficiency Levels of Bank NTB Syariah and Bank Aceh Syariah for the 2020-2024 Period

The efficiency levels of Bank NTB Syariah and Bank Aceh Syariah during the 2020-2024 period, measured using the DEA (Data Envelopment Analysis) method with MaxDEA Lite 12 software, are presented below. Measurements employing the Data Envelopment Analysis (DEA) BCC-VRS model indicate differing efficiency dynamics between the two banks.

Table 4.5
Liquidity Management Efficiency Scores of Bank NTB Syariah and Bank Aceh Syariah (2020-2024)

DMU and Period	Score	Benchmark (lambda)
NTB_2020Q1	1	NTB_2020Q1(1)
Aceh_2020Q1	0.847614	Aceh_2021Q1(0.800222);NTB_2024Q1(0.199778)
NTB_2020Q2	0.52065	NTB_2020Q1(0.838964);NTB_2023Q1(0.161036)
Aceh_2020Q2	0.471212	Aceh_2021Q1(0.907455);NTB_2024Q1(0.092545)
NTB_2020Q3	0.344623	NTB_2020Q1(0.75573);NTB_2022Q1(0.016727);NTB_2023Q1(0.227543)

DMU and Period	Score	Benchmark (lambda)
Aceh_2020Q3	0.388907	Aceh_2022Q1(0.965549);Aceh_2022Q2(0.034451)
NTB_2020Q4	0.246724	NTB_2020Q1(0.781628);NTB_2022Q1(0.05056);NTB_2023Q1(0.167813)
Aceh_2020Q4	0.240576	Aceh_2021Q1(0.906907);Aceh_2022Q1(0.093093)
NTB_2021Q1	0.774385	NTB_2020Q1(1)
Aceh_2021Q1	1	Aceh_2021Q1(1)
NTB_2021Q2	0.43465	NTB_2020Q1(0.817568);NTB_2023Q1(0.182432)
Aceh_2021Q2	0.546447	Aceh_2022Q1(0.925677);Aceh_2022Q2(0.074323)
NTB_2021Q3	0.29183	NTB_2020Q1(0.780704);NTB_2022Q1(0.048676);Aceh_2022Q1(0.001597);NTB_2023Q1(0.169022)
Aceh_2021Q3	0.303381	Aceh_2021Q1(0.578723);Aceh_2022Q1(0.421277)
NTB_2021Q4	0.223081	NTB_2020Q1(0.639328);NTB_2022Q1(0.212002);NTB_2023Q1(0.14867)
Aceh_2021Q4	0.369607	Aceh_2022Q1(0.636834);Aceh_2022Q2(0.344524);Aceh_2024Q4(0.018641)
NTB_2022Q1	1	NTB_2022Q1(1)
Aceh_2022Q1	1	Aceh_2022Q1(1)
NTB_2022Q2	0.512725	NTB_2020Q1(0.552694);NTB_2022Q1(0.293703);Aceh_2022Q1(0.086817);NTB_2023Q1(0.066785)
Aceh_2022Q2	1	Aceh_2022Q2(1)
NTB_2022Q3	0.345795	NTB_2020Q1(0.313739);NTB_2022Q1(0.41635);Aceh_2022Q1(0.058196);NTB_2023Q1(0.211715)
Aceh_2022Q3	0.407938	Aceh_2022Q1(0.77101);Aceh_2022Q2(0.22899)
NTB_2022Q4	0.250752	NTB_2020Q1(0.194094);NTB_2022Q1(0.562709);Aceh_2022Q1(0.024956);NTB_2023Q1(0.218241)
Aceh_2022Q4	0.235587	Aceh_2022Q1(1)
NTB_2023Q1	1	NTB_2023Q1(1)
Aceh_2023Q1	0.839438	Aceh_2021Q1(0.051626);Aceh_2022Q1(0.900427);NTB_2024Q1(0.047947)
NTB_2023Q2	0.490489	NTB_2020Q1(0.186664);Aceh_2022Q1(0.034412);NTB_2023Q1(0.691211);NTB_2024Q1(0.087712)
Aceh_2023Q2	0.475025	Aceh_2021Q1(0.00361);Aceh_2022Q1(0.99639)
NTB_2023Q3	0.335901	NTB_2020Q1(0.15372);Aceh_2022Q1(0.03196);NTB_2023Q1(0.475181);NTB_2024Q1(0.339139)
Aceh_2023Q3	0.346001	Aceh_2022Q1(0.918307);Aceh_2022Q2(0.081693)

DMU and Period	Score	Benchmark (lambda)
NTB_2023Q4	0.24084	NTB_2020Q1(0.196083);Aceh_2022Q1(0.023252);NTB_2023Q1(0.414032);NTB_2024Q1(0.366633)
Aceh_2023Q4	0.452891	Aceh_2022Q1(0.457068);Aceh_2022Q2(0.431244);Aceh_2024Q4(0.111688)
NTB_2024Q1	1	NTB_2024Q1(1)
Aceh_2024Q1	0.99819	Aceh_2022Q1(0.914126);Aceh_2022Q2(0.085874)
NTB_2024Q2	0.558065	Aceh_2021Q1(0.073122);NTB_2023Q1(0.05849);NTB_2024Q1(0.868388)
Aceh_2024Q2	0.701301	Aceh_2022Q1(0.555345);Aceh_2022Q2(0.444655)
NTB_2024Q3	0.388207	Aceh_2021Q1(0.121939);NTB_2024Q1(0.878061)
Aceh_2024Q3	0.579395	Aceh_2022Q1(0.199783);Aceh_2022Q2(0.800217)
NTB_2024Q4	0.256872	Aceh_2021Q1(0.054317);NTB_2024Q1(0.945683)
Aceh_2024Q4	1	Aceh_2024Q4(1)

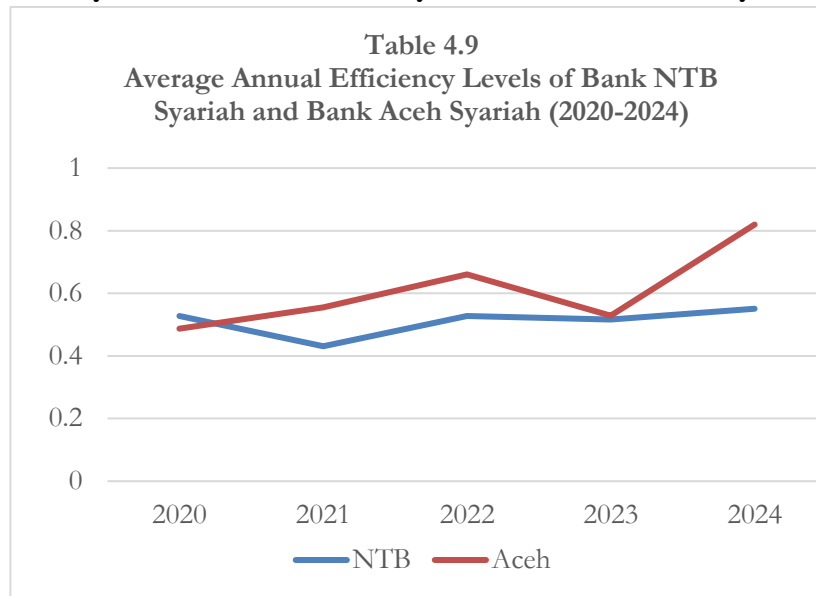
Source: Author's calculation based on financial reports of Bank NTB Syariah using MaxDEA Lite 12

Table 4.9
Average Annual Efficiency Levels of Bank NTB Syariah and Bank Aceh Syariah (2020-2024)

Bank	2020	2021	2022	2023	2024
NTB	0.5279993	0.4309865	0.527318	0.5168075	0.550786
		-18.37%	22.35%	-1.99%	6.57%
Aceh	0.4870773	0.55485875	0.66088125	0.5283388	0.8197215
		13.92%	19.11%	-20.06%	55.15%

Source: Author's calculation based on financial reports of Bank NTB Syariah and Bank Aceh Syariah (2020-2024)

Figure 4.2
Average Efficiency Trend of Bank NTB Syariah and Bank Aceh Syariah (2020-2024)



Source: Author's calculation based on financial reports of Bank NTB Syariah and Bank Aceh Syariah using Microsoft Excel

Bank NTB Syariah achieved perfect efficiency (score of 1.00) in the first quarter of 2020, but its score subsequently declined sharply and fluctuated, with a final average of 0.5108. In contrast, Bank Aceh Syariah demonstrated a more stable improving trend, achieving perfect efficiency in the first quarter of 2021 and a higher final average of 0.6102. Dynamic trend analysis confirms that the efficiency line of Bank Aceh Syariah has been consistently above that of Bank NTB Syariah since 2022, with a significant increase of 55.15% from 2023 to 2024.

Returns to Scale (RTS) analysis provides additional insights. Bank Aceh Syariah exhibited several periods with Decreasing Returns to Scale (DRS), such as in the third quarter of 2020 (RTS = -5.083), indicating that increases in operating costs were not matched by proportional output growth. This reflects efficiency challenges associated with a larger scale of operations. Meanwhile, Bank NTB Syariah showed a greater tendency toward Constant Returns to Scale (CRS), signifying a better balance between changes in inputs and outputs.

These performance fluctuations are closely linked to the impact of the COVID-19 pandemic. The differing responses reveal the resilience of each bank's strategy. Bank Aceh Syariah demonstrated superior adaptive capacity through the control of cost of funds and stable collection of third-party funds (DPK), whereas Bank NTB Syariah, initially highly efficient, proved more vulnerable to external shocks (Sholihah, 2021).

These findings are theoretically grounded in the operational efficiency theory, which emphasizes the importance of minimizing inputs to achieve optimal outputs (Nabhan & Widyaningsih, 2024). The ability of Bank Aceh Syariah to maintain efficiency stability

amidst turbulence demonstrates consistent application of this principle. The results of this study align with the findings of Aam Slamet Rusydiana regarding efficiency fluctuations in Indonesian Islamic banking and further reinforce Sheila Anggraini's report on the improving efficiency of Bank Aceh Syariah (Rusydiana & As-Salafiyah, 2021).

In practical terms, for bank management, these findings underscore the importance of building a robust and adaptive efficiency strategy that does not focus solely on short-term efficiency. For regulators such as the OJK, these results can serve as a consideration for adopting a more differentiated supervisory approach that takes into account the diversity of strategies and adaptive capacities of regional Islamic banks.

4.3. The Impact of Liquidity Management Efficiency on Profitability Improvement of Bank NTB Syariah and Bank Aceh Syariah (2020-2024)

This study reveals a synergistic relationship between increases in DEA efficiency scores and improvements in profitability indicators (ROA and ROE) in both banks. The mechanism of this relationship operates through the optimization of input variables. Efficiency in managing the cost of funds successfully enhances profitability through improved margins between costs incurred and income generated from intermediation activities. On the other hand, optimization of operating costs contributes to overall efficiency gains, thereby increasing net profit.

A positive trend has been clearly observable since 2022. Bank NTB Syariah managed to reverse its previous negative efficiency trend into a momentum of profitability improvement, albeit with minor fluctuations. Meanwhile, Bank Aceh Syariah demonstrated better consistency by maintaining a parallel increase between efficiency and profitability throughout the research period. This pattern indicates that the achieved efficiency is not a temporary accomplishment but rather the result of a fundamental and sustainable strategic transformation.

Theoretically, these findings provide strong empirical confirmation of the liquidity-profitability trade-off theory in the context of Indonesian Islamic banking (Ferli et al., 2022). Both banks succeeded in finding the optimal point between maintaining adequate liquidity and pursuing sustainable profitability without sacrificing prudential principles. These results also align with and reinforce the operational efficiency theory that serves as the conceptual foundation for DEA measurement (Nabhan & Widyaningsih, 2024). From an Islamic perspective, these findings reflect the principle of *al-wasathiyah* (balance), in which both banks create a dynamic equilibrium between short-term liquidity obligations and long-term profitability goals. The positive relationship between efficiency and profitability also gains deeper meaning when linked to the *maqasid al-shariah* paradigm. Improving efficiency through the control of cost of funds and operating costs is not merely a technical financial effort but also a manifestation of *hifzh al-mal* (protection of wealth), namely managing wealth wisely, avoiding waste (*israf*), and

distributing economic value more equitably. Thus, the resulting profitability not only benefits shareholders but also has the potential to contribute to the broader public good (jalb al-masalih), in line with the objectives of Shariah (Awalia et al., 2025).

Support from previous research strengthens the validity of these findings. The study by Cahyani and Tubastuvi concluded that operational efficiency is a dominant factor in determining the profitability of Islamic banking, especially when combined with selective financing policies (I. A. Cahyani & Tubastuvi, 2024). The findings of Al Arif et al. are also relevant, revealing that conversion to Islamic banking improves liquidity efficiency and ultimately contributes positively to long-term profitability through increased public trust (Al Arif et al., 2024).

The practical contribution of these findings is significant. For bank management, investing in improving liquidity management efficiency is a fundamental strategy for building sustainable competitive advantage. For regulators such as the OJK, these findings provide empirical justification for encouraging prudential banking practices that focus not only on regulatory compliance but also on optimizing operational performance as the main driver of bank health.

4.4. Comparison of Liquidity Management Efficiency between Bank NTB Syariah and Bank Aceh Syariah (2020-2024)

Table 4.11
Comparative Analysis of Liquidity Management Efficiency of Bank NTB Syariah and Bank Aceh Syariah (2020-2024)

	Efficiency Score
Mann-Whitney U	157.000
Wilcoxon W	367.000
Z	-1.168
Asymp. Sig. (2-tailed)	.243
Exact Sig. [2*(1-tailed Sig.)]	.253 ^b

a. Grouping Variable: Bank

b. Not corrected for ties.

Source: Author's calculation based on financial reports of Bank NTB Syariah and Bank Aceh Syariah (2020-2024) using Mann-Whitney U test with IBM SPSS 25

The Mann-Whitney U test yielded interesting findings. Although Bank Aceh Syariah had a higher mean rank (22.65) compared to Bank NTB Syariah (18.35), the Asymp. Sig. (2-tailed) value of 0.243 (> 0.05) indicates that this difference is not statistically

significant. Thus, the null hypothesis (H_0) is accepted, meaning there is insufficient evidence to state that there is a significant difference in efficiency between the two banks.

This finding leads to an important synthesis: despite the two banks implementing different liquidity management strategies (one aggressive and one conservative), they were able to achieve relatively equivalent efficiency levels in the long term. This equivalence is strongly presumed to be driven by the same regulatory framework and Sharia principles, which unify their operational practices (Aziz et al., 2023). As regional Islamic banks, both operate under the same regulatory umbrella of Bank Indonesia and the OJK, particularly regarding liquidity management and prudential principles (Bank Indonesia, 2019).

This phenomenon indicates that within the regional Islamic banking ecosystem, there are multiple pathways toward optimal efficiency. Each bank can develop a strategy appropriate to its specific social, economic, and risk context without having to sacrifice overall efficiency levels. This finding also refutes the simplistic assumption that a bank with a more aggressive strategy or larger assets will necessarily be more efficient.

Theoretically, these findings reinforce several theories. First, operational efficiency theory is confirmed, as both banks operating under similar resource management systems show close levels of efficiency (Nabhan & Widyaningsih, 2024). Second, the liquidity-profitability trade-off theory receives empirical support through the ability of both banks to balance the dilemma between liquidity and profitability, albeit with different approaches (Ferli et al., 2022). Third, financial intermediation theory is supported by the finding that both banks successfully perform their intermediation function efficiently (Diamond & Dybvig, 1983).

Support from previous research strengthens the reliability of these findings. The study by Lukmanul Hakim Aziz et al. found that despite strategic variations, Islamic banks tend to show efficiency levels concentrated within a certain range (Aziz et al., 2023). The findings of Faqih Wildan Hakim et al. are also relevant, revealing that both banks have different efficiency development patterns yet remain within the same corridor post-conversion (F. W. Hakim et al., 2024).

In practical terms, for regulators such as the OJK, these results provide empirical justification for implementing a more flexible and contextual supervisory approach. For bank management, these findings offer insight that there is no single best strategy for achieving efficiency; each bank needs to develop a model that aligns with its regional strengths and specific opportunities.

CONCLUSION

Based on the analysis, this study concludes four main points. First, liquidity management strategies differ between Bank NTB Syariah (aggressive, FDR near the upper limit) and Bank Aceh Syariah (conservative, low FDR), influenced by regional characteristics. Second, the efficiency of both banks was affected by the pandemic; Bank Aceh Syariah showed resilience and a more stable improving trend, while Bank NTB Syariah's efficiency was more volatile. Third, there is a positive relationship between liquidity management efficiency and profitability (ROA and ROE), indicating that liquidity efficiency drives financial performance. Fourth, there is no statistically significant difference in efficiency levels between the two banks. These findings reveal that within the same regulatory and Sharia framework, multiple valid strategic paths lead to optimal efficiency, where the key factor is the alignment of strategy with local context rather than the type of strategy itself.

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