

Comparative Analysis of Liquidity Ratios in the Renewable Energy Subsector

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Abstract

This study aims to analyze the financial performance of PT Pertamina Geothermal Energy Tbk and PT Alamtri Resources Indonesia Tbk during the 2021-2025 period using a liquidity ratio approach including the Current Ratio (CR), Quick Ratio (QR), and Cash Ratio (ChR). The research method used is a quantitative method with secondary data obtained from the company's financial statements published through the Indonesia Stock Exchange (IDX) and annual reports. The data analysis technique is carried out by calculating and comparing the liquidity ratio values between the this companies during the 2021-2025 period. The research results show that PT Alamtri Resources Indonesia Tbk's liquidity performance is excellent and continues to improve annually. A slight decline occurred in 2023, but significant progress has been made. Meanwhile, PT Pertamina Geothermal Energy is generally performing well, with excellent ratings across all its ratios. Despite a decline in 2022, the company has managed to achieve a strong and sustainable recovery through 2025. This study recommends that the two companies maintain their excellent liquidity performance going forward to avoid a downgrade in their financial performance rating.

Keywords: Renewable Energy, Financial Performance, Liquidity Ratios

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Submit: 10-03-2026

Revision: 14-05-2026

Accepted: 18-05-2026

Publish: 28-05-2026



1. Introduction

The energy transition in Indonesia is a strategic policy aimed at accelerating the shift from dependence on fossil fuels to a renewable energy system. By the end of 2025, the share of renewable energy in Indonesia's energy mix remains far below the 23% target. This is influenced by a lack of funding and infrastructure, meaning that energy transformation requires mutually beneficial policy cooperation, including investor confidence in the prospects of green investments, and sustained public awareness (Airlangga, 2025). Meanwhile, a number of companies engaged in the green energy sector continue to emerge. Among them are PT Pertamina Geothermal Energy (PGEO) and PT Alamtri Resources Indonesia Tbk (ADRO). Fundamental investors have high hopes for the financial health of these renewable energy companies.

According to Riyanto, liquidity refers to a company's ability to meet its immediate financial obligations (Dewi, 2016). A company that possesses "paying power" is not necessarily able to meet all of its financial liabilities that must be settled immediately; in other words, the company does not necessarily possess "ability to pay." When this ability to pay is linked to financial liabilities required to carry out the production process, it is referred to as "corporate liquidity" (Hidayat, 2018).

The subjects of this study are two companies listed on the Indonesia Stock Exchange (IDX): PT Pertamina Geothermal Energy Tbk. and PT Alamtri Resources Indonesia Tbk. These two companies operate in the renewable energy subsector and thus play a crucial role in Indonesia's energy transition from fossil fuels to renewable energy. As public companies, PT Alamtri Resources Indonesia Tbk and PT Pertamina Geothermal Energy Tbk are required to maintain sound financial performance, particularly regarding their ability to meet short-term obligations (Doloksaribu et al., 2025). In analyzing a company's financial performance, a measurement tool is needed that can provide an overview of the company's financial condition. One such tool is financial ratio analysis. Financial ratios are comparisons between items in financial statements used to assess a company's performance over a specific period (Apriyanti et al., 2024).

One type of financial ratio used in this study is the liquidity ratio. The liquidity ratio is used to measure a company's ability to meet its short-term obligations on time. Liquidity ratios can be calculated using several indicators, including the Current Ratio (CR) and Quick Ratio (QR) (Salsabila & Putri, 2023). The Cash Ratio (ChR) is used to measure a company's ability to meet its current liabilities using its current assets (Ismanandar, 2016). By using these ratios, it is hoped that the extent to which PT Alamtri Resources Indonesia Tbk and PT Pertamina Geothermal Energy Tbk are able to maintain corporate liquidity during the 2021–2025 period can be determined. This is because strong financial performance is highly valuable to investors in identifying financially sound companies before making investment decisions.

Based on the above discussion, the research problem of this study seeks to identify the financial liquidity of PT Pertamina Geothermal Energy Tbk and PT Alamtri Resources Indonesia Tbk. Therefore, this study aims to examine the financial health, specifically in terms of liquidity, of these two companies listed on the Indonesia Stock Exchange. The results of this study are expected to provide academic benefits in the form of intellectual analysis within the context of financial management, particularly in discussing the liquidity of companies operating in the renewable energy subsector.

Liquidity ratios are a measure of a company's performance designed to assess its ability to pay short-term liabilities (Wati et al., 2023). In other words, the liquidity ratio serves to indicate or measure a company's ability to meet its maturing liabilities, whether to external parties or within the company. Thus, it can be said that the purpose of this ratio is to determine a company's ability to finance and meet its liabilities when they are due (Nurjamila et al., 2023).

The liquidity ratio is also commonly known as the working capital ratio (current assets ratio), which is a ratio used to measure a company's liquidity (Oetomo & Firnanda, 2016). This working capital ratio is calculated by comparing total current assets to total current liabilities. Measurements and evaluations of this ratio can be conducted over multiple periods to track changes in the company's liquidity levels over time. According to Kasmir, there are two outcomes of assessing the liquidity ratio: if a company is able to meet its liabilities, it is said to be in a liquid state. Conversely, if a company is unable to meet those liabilities, it is said to be in an illiquid state (Suwita et al., 2024). Liquidity ratios consist of:

a. Current Ratio (CR)

According to (Suwita et al., 2024), in practice, a good current ratio standard is 200% or 2:1. This ratio is often considered a good or satisfactory measure of a company's liquidity level. This means that with a calculated ratio of that magnitude, the company can be said to be in a secure position in the short term. However, it should be noted that this standard is not absolute, as other factors must also be considered, such as industry type (characteristics), inventory efficiency, cash management, and so on. Therefore, once again, an industry average ratio standard is needed as a comparative financial ratio to determine a company's actual liquidity level.

Here is the formula for calculating the Current Ratio (CR):

$$\text{Current Ratio (CR)} = \frac{\text{Current Assets}}{\text{Current Liabilities}} \times 100\%$$

b. Quick Ratio (Qr)

The quick ratio (Qr) indicates a company's ability to meet its short-term liabilities with its most liquid (quick) assets (Dea Elsani et al., 2025). This ratio is similar to the current ratio, but inventory is not included because it is less liquid than cash, marketable securities, and accounts receivable. Therefore, the quick ratio provides a more accurate measure than the current ratio regarding a company's ability to meet its short-term liabilities (Ratna Kurniawati & Listyowati, 2021). This is because inventory is considered to take relatively longer to convert into cash when a company needs funds quickly to pay its liabilities compared to other current assets.

Here is the formula for calculating the Quick Ratio (QR):

$$\text{Quick Ratio (Qr)} = \frac{\text{Current Asset} - \text{Inventory}}{\text{Short-Term Liabilities}} \times 100\%$$

c. Cash Ratio (ChR)

The Cash Ratio measures a company's ability to pay its short-term liabilities using available cash and marketable securities (Sitepu, 2022). This ratio is the most accurate measure of a company's ability to meet its short-term liabilities because it considers only the most liquid components of current assets. The higher the liquidity ratio, the better the company's short-term financial condition, and vice versa (Abdul & Eriansyah, 2022).

Here is the formula for calculating the Cash Ratio (ChR):

$$\text{Cash Ratio (Chr)} = \frac{\text{Cash and Cash Equivalent}}{\text{Current Liabilities}} \times 100\%$$

2. Methods

This study employs a quantitative research method, which involves data in numerical form that is analyzed statistically. The data used in this study is secondary data, obtained from annual financial statements (Mardiya et al., 2024). The subject of this study is corporate financial statements, including balance sheets and income statements for a specific period. Data was obtained through official company publications or via the Indonesia Stock Exchange (IDX). Data collection was conducted through documentation, which involves gathering and recording published financial statement data (Tampi et al., 2014). The data analysis technique used in this study is liquidity ratio analysis, aimed at measuring a company's ability to meet its short-term obligations. The ratios used include: Current Ratio (CR), Quick Ratio (QR), and Cash Ratio (CAR). The results of these ratio calculations are then analyzed to determine the company's financial performance—whether it is in good, adequate, or poor condition—in accordance with the benchmarks discussed in the following section.

a. Current Ratio (CR)

According to (Salsabila & Putri, 2023), in practice, an excellent current ratio is 200%, while a ratio between 150 and 200 is considered good, a ratio between 100 and 150 is considered fairly good, a ratio between 50 and 100 is considered poor, and a ratio below 50 is considered very poor. This ratio is often considered a good or satisfactory measure of a company's liquidity level.

Tabel 1. Current Ratio Assessment Standards

Standart	Criteria
200	Very good
< 200 s/d 150	Good
< 150 s/d 100	Fair
< 100 s/d 50	Poor
< 50	Very poor

Source: Salsabila & Putri (2023)

b. Quick Rasio (Qr)

The Quick Ratio (Qr) indicates a company's ability to meet its short-term liabilities with its most liquid (quick) assets (Dea Elsani et al., 2025). A ratio between 50 and 100 is considered fair, a ratio between 25 and 50 is considered poor, and a ratio below 25 is considered very poor.

Table 2. Quick Ratio Assessment Standards

Standart	Criteria
150	Excellent
< 150 s/d 100	Good
< 100 s/d 50	Fair
< 50 s/d 25	Poor
< 25	Very poor

Source: Qomariyah et al. (2022)

c. Cash Ratio

The Cash Ratio measures a company's ability to pay its short-term liabilities using available cash and marketable securities (Gizta, 2022). In practice, an excellent Cash Ratio is 50, while a ratio between 30 and 50 is considered good, a ratio between 25 and 30 is considered fair, a ratio between 10 and 25 is considered poor, and a ratio below 10 is considered very poor.

Tabel 3. Cash Ratio Evaluation

Standart	Kriteria
50	Excellent
< 50 s/d 30	Good
< 30 s/d 25	Fair
< 25 s/d 10	Poor
< 10	Very poor

Source: Buntu (2023)

3. Results and Discussion

3.1. Results

a. PT Pertamina Geothermal Energy (PGEO)

1) Current Ratio (CR) for 2021–2025

Using financial statement data (PT Pertamina Geothermal Energy Tbk, 2025) for 2021–2025, the following current ratios were obtained:

Table 4. Development of PT Pertamina Geothermal Energy Tbk

Uraian	2021	2022	2023	2024	2025
Current Asset	279.786	433.307	863.278	828.555	880.973
Current Liabilities	199.307	857.782	244.104	227.296	214.299

Source: PT Pertamina Geothermal Energy Tbk (2025)

Using the formula:

$$\text{Current Ratio (CR)} = \frac{\text{Current Assets}}{\text{Current Liabilities}} \times 100\%$$

a. Year 2021

$$\text{CR} = \frac{279.786}{199.307} \times 100\% = 1,40 \times 100\% = 140,37\%$$

b. Year 2022

$$\text{CR} = \frac{433.307}{857.782} \times 100\% = 0,50 \times 100\% = 50,51\%$$

c. Year 2023

$$\text{CR} = \frac{863.278}{244.104} \times 100\% = 3,53 \times 100\% = 353,65\%$$

d. Year 2024

$$\text{CR} = \frac{828.555}{227.296} \times 100\% = 3,64 \times 100\% = 364,52\%$$

e. Year 2025

$$\text{CR} = \frac{880.973}{214.299} \times 100\% = 4,11 \times 100\% = 411,09\%$$

Table 5. PT Pertamina Geothermal Energy Tbk's Current Ratio Financial Performance for 2021–2025

Tahun	Current Ratio	Keterangan
2021	140,37%	Good
2022	50,51%	Fair
2023	353,65%	Very good
2024	364,52%	Very good
2025	411,09%	Very good

Source: Data Processed (2025)

The Current Ratio shows a significant upward trend, rising from 140.37% in 2021 to 411.09% in 2025. Although it temporarily declined in 2022 (50.51%), this ratio rose sharply again in 2023 (353.65%) and continued to rise through 2024 (364.52%) and 2025 (411.09%). This indicates that the company possesses a very strong ability to meet its short-term obligations using its current assets.

2) Quick Ratio (QR) from 2021 to 2025

Using financial statement data (PT Pertamina Geothermal Energy Tbk, 2025) covering the period 2021–2025, the following Quick Ratio is obtained:

$$\text{Quick Ratio (Chr)} = \frac{\text{Current Assets} - \text{Inventory}}{\text{Current Liabilities}} \times 100\%$$

Table 6. Development of the Quick Ratio of PT Pertamina Geothermal Energy Tbk from 2021 to 2025

Uraian	2021	2022	2023	2024	2025
Current Assets	279.286	433.307	863.278	828.555	880.973
Inventories	16.463	20.082	22.644	18.486	27.970
Current Liabilities	199.307	857.782	244.104	227.296	214.299

Source: PT Pertamina Geothermal Energy Tbk (2025)

- a. Year 2021
 $QR = \frac{279.286 - 16.463}{199.307} \times 100\% = 1,318 \times 100\% = 131,56\%$
- b. Year 2022
 $QR = \frac{433.307 - 20.082}{857.782} \times 100\% = 0,481 \times 100\% = 48,17\%$
- c. Year 2023
 $QR = \frac{863.278 - 22.644}{244.104} \times 100\% = 3,443 \times 100\% = 344,37\%$
- d. Year 2024
 $QR = \frac{828.555 - 18.486}{227.296} \times 100\% = 3,56 \times 100\% = 356,39\%$
- e. Year 2025
 $QR = \frac{880.973 - 27.970}{214.299} \times 100\% = 3,98 \times 100\% = 398,04\%$

Table 7. PT Pertamina Geothermal Energy Tbk's current ratio financial performance for 2021–2025

Year	Quick Ratio	Notes
2021	131,56%	Good
2022	48,17%	Fair
2023	344,37%	Very good
2024	356,39%	Very good
2025	398,04%	Very good

Source: Data Processed (2025)

The Quick Ratio also shows a similar pattern. In 2021, it stood at 131.56%, dropped to 48.17% in 2022, but surged in 2023 (344.37%), 2024 (356.39%), and 2025 (398.04%). This increase indicates that the company is able to meet its short-term obligations without relying on inventory, reflecting high liquidity efficiency.

3) Cash Ratio (ChR) for 2021–2025

Using financial statement data (PT Pertamina Geothermal Energy Tbk, 2025) covering the years 2021–2025, the following Cash Ratio is obtained:

$$\text{Cash Ratio (ChR)} = \frac{\text{Cash and cash equivalents}}{\text{Current liabilities}} \times 100\%$$

Table 8. Development of the Cash Ratio of PT Pertamina Geothermal Energy Tbk for 2021–2025

Description	2021	2022	2023	2024	2025
Cash and Cash Equivalents	125.335	262.302	677.717	655.191	718.499
Current Liabilities	199.867	857.782	244.104	227.296	214.299

Source: PT Pertamina Geothermal Energy Tbk (2025)

- a. Year 2021
 $ChR = \frac{125.335}{199.867} \times 100\% = 0,62 \times 100\% = 62,70\%$
- b. Year 2022
 $ChR = \frac{262.302}{857.782} \times 100\% = 0,30 \times 100\% = 30,57\%$
- c. Year 2023
 $ChR = \frac{677.717}{244.104} \times 100\% = 2,77 \times 100\% = 277,6\%$
- d. Year 2024
 $ChR = \frac{655.191}{227.296} \times 100\% = 2,88 \times 100\% = 288,2\%$
- e. Year 2025
 $ChR = \frac{718.499}{214.299} \times 100\% = 3,35 \times 100\% = 335,2\%$

Table 9. PT Pertamina Geothermal Energy Tbk's current ratio financial performance for 2021–2025

Year	(Cash Ratio)	Notes
2021	62,70%	Fairly good
2022	30,57 %	Not so good
2023	277,6%	Very good
2024	255,2%	Very good
2025	335,2%	Very good

Source: Data Processed (2025)

The cash ratio has declined quite sharply. In 2021, the ratio stood at 62.70%, which was considered quite good, indicating the company's relatively adequate ability to meet its short-term obligations with available cash. However, in 2022 the ratio fell to 30.57%, falling into the poor category, reflecting a decline in liquidity and potential risks regarding the timely payment of obligations. Subsequently, there was a sharp surge in 2023 to 277.6% and in 2024 to 255.2%, both of which are classified as excellent. This indicates a significant improvement in the company's ability to provide cash to cover current liabilities. In 2025, the ratio rose again to 335.2%, remaining in the "very good" category, signaling a very strong liquidity position and efficient cash management.

Table 10. Summary of PT Pertamina Geothermal Energy Tbk's Liquidity Ratios for 2021–2025

Year	Curren Ratio	Quick Ratio	Cash Ratio
2021	140,37%	131,56%	62,70%
2022	50,51%	48,17%	30,57%
2023	353,65%	344,37%	277,6%
2024	364,52%	356,39%	255,2%
2025	411,09%	398,04%	335,2%

Source: Data Processed (2025)

The results of the discussion above indicate that PT Pertamina Geothermal Energy Tbk's liquidity performance during the 2021–2025 period is in excellent condition. This can be seen from the Current Ratio (CR), Quick Ratio (QR), and Cash Ratio (CAR), which are all above the average of 100%.

b. PT Alamtri Resources Indonesia Tbk

1) Current Ratio (CR) for 2021–2025

Using financial statement data (PT Alamtri Reources Indonesia Tbk, 2026) and (PT Adaro Energi Tbk, 2020) containing data for 2021–2025, the following current ratios were obtained:

Table 11. Development of the current ratio of PT Alamtri Resources Indonesia Tbk from 2021 to 2025

Description	2021	2022	2023	2024	2025
Current assets	2.838	5.319	4.302	2.606	2.207
Current liabilities	1.362	2.448	2.135	647	860

Source: PT Alamtri Reources Indonesia Tbk (2026)

Using the formula:

$$\text{Current Ratio (CR)} = \frac{\text{Aset lancar}}{\text{Liailitas jangka pendek}} \times 100\% \text{ (Ismanandar, 2016)}$$

a. Year 2021

$$\text{CR} = \frac{2.838}{1.362} \times 100\% = 2,0 \times 100\% = 200\%$$

b. Year 2022

$$\text{CR} = \frac{5.319}{2.448} \times 100\% = 2,17 \times 100\% = 217,2\%$$

c. Year 2023

$$\text{CR} = \frac{4.302}{2.235} \times 100\% = 2,01 \times 100\% = 201,49\%$$

d. Year 2024

$$\text{CR} = \frac{2.602}{647} \times 100\% = 4,02 \times 100\% = 402,78\%$$

e. Year 2025

$$\text{CR} = \frac{2.207}{860} \times 100\% = 2,56 \times 100\% = 256\%$$

Table 12. PT Alamtri Resources Indonesia Tbk's current ratio financial performance for 2021–2025

Year	Current Ratio	Criteria
2021	200%	Very good
2022	217,2%	Very good
2023	201,4%	Very good
2024	402,7%	Very good
2025	256%	Very good

Source: Data Processed (2025)

The current ratio increased from 200% in 2021 to 217.2% in 2022. In 2023, it briefly declined to 201.4%, but rose sharply again in 2024 to 402.7%. Although it declined in 2025, the current ratio remains at a very strong

level. This indicates that the company possesses a very strong ability to meet its short-term obligations using its current assets.

2) Quick Ratio (QR) from 2021 to 2025

Using financial statement data (PT Alamtri Resources Indonesia Tbk, 2026) covering the years 2021–2025, the following Quick Ratios were obtained:

$$\text{Quick Ratio (Chr)} = \frac{\text{Current Assets} - \text{Inventory}}{\text{Current Liabilities}} \times 100\%$$

Table 13. Development of the Quick Ratio for PT Alamtri Resources Indonesia Tbk from 2021 to 2025

Description	2021	2022	2023	2024	2025
Current Assets	2.838.132	5.319.309	4.302.033	2.605.762	2.207.191
Inventories	125.738	199.200	171.076	99.997	115.978
Current Liabilities	1.361.558	2.442.512	2.135.234	647.395	860.884

Source: Data Processed (2025)

- a. Year 2021

$$\text{QR} = \frac{2.838.132 - 125.738}{1.361.558} \times 100\% = 1,992 \times 100\% = 199,2\%$$
- b. Year 2022

$$\text{QR} = \frac{5.319.309 - 199.200}{2.442.512} \times 100\% = 2,096 \times 100\% = 209,6\%$$
- c. Year 2023

$$\text{QR} = \frac{4.302.033 - 171.076}{2.135.234} \times 100\% = 1,934 \times 100\% = 193,4\%$$
- d. Year 2024

$$\text{QR} = \frac{2.605.762 - 99.997}{647.395} \times 100\% = 3,870 \times 100\% = 387\%$$
- e. Year 2025

$$\text{QR} = \frac{2.207.191 - 115.978}{860.884} \times 100\% = 2,429 \times 100\% = 242,9\%$$

Table 14. Financial performance of PT Alamtri Resources Indonesia Tbk's current ratio for 2021–2025

Year	Quick Ratio	Criteria
2021	199,2%	Very good
2022	209,6%	Very good
2023	193,4%	Very good
2024	387%	Very good
2025	242,9%	Very good

Source: Data Processed (2025)

The overall quick ratio stood at 199.2% in 2021, rose to 209.6% in 2022, reached 193.4% in 2023, rose to 387% in 2024, and fell to 242.9% in 2025, indicating a very strong position. This indicates that the company remains capable of meeting its short-term obligations without relying on inventory.

3) Cash Ratio (ChR) for 2021–2025

Based on financial statements (PT Alamtri Resources Indonesia Tbk, 2026) containing data for 2021–2025, the following Cash Ratio is obtained:

$$\text{Cash Ratio (ChR)} = \frac{\text{Cash and cash equivalents}}{\text{Current liabilities}} \times 100\%$$

Table 15. Development of the Cash Ratio of PT Alamtri Resources Indonesia Tbk from 2020 to 2024

Description	2021	2022	2023	2024	2025
Cash and Cash Equivalents	1.811	4.067	3.311	1.406	1.044
Current Liabilities	1.362	2.448	2.135	647	860

Source: Data Processed (2025)

- a. Year 2021

$$\text{ChR} = \frac{1.811}{1.362} \times 100\% = 1,32 \times 100\% = 132,9\%$$
- b. Year 2022

$$\text{ChR} = \frac{4.067}{2.448} \times 100\% = 1,66 \times 100\% = 166\%$$
- c. Year 2023

- ChR = $\frac{3.311}{2.135} \times 100\% = 1,55 \times 100\% = 155 \%$
- d. Year 2024
ChR = $\frac{1.406}{647} \times 100\% = 2,17 \times 100\% = 217,3\%$
- e. Year 2025
ChR = $\frac{1.044}{860} \times 100\% = 1,212 \times 100\% = 121,2\%$

Table 16. PT Alamtri Resources Indonesia Tbk’s cash ratio financial performance from 2020 to 2025

Year	Cash Ratio	Criteria
2021	132,9%	Very Good
2022	166,1%	Very Good
2023	155%	Very Good
2024	217,3%	Very Good
2025	121,2%	Very Good

Source: Data Processed (2025)

PT Alamtri Resources Indonesia Tbk’s cash ratio has maintained an excellent rating year over year. In 2021, the ratio stood at 132.9%; in 2022, it decreased to 166.1%; in 2023, it was 155%; and in 2024, it reached 217.3%. In 2025, it is projected to be 121.2%, which falls into the “very good” category, indicating a very strong liquidity position and efficient cash management.

Table 17. Summary of PT Alamtri Resources Indonesia Tbk’s Liquidity Ratios for 2020–2025

Year	Curren Ratio	Quick Ratio	Cash Ratio
2020	151,26%	142%	102,5%
2021	200%	199,2%	132,9%
2022	217,2%	209,6%	166,1%
2023	201,4%	193,4%	155%
2024	402,7%	387%	217,3%
2025	256%	242,9%	121,2%

Source: Data Processed (2025)

The results of the above analysis indicate that PT Alamtri Resources Indonesia Tbk’s liquidity performance during the 2021–2025 period is in excellent condition. This is evident from the Current Ratio (CR), Quick Ratio (QR), and Cash Ratio (CAR), which, on average, remained above 100%–200% throughout the 2021–2025 period, despite experiencing fluctuations in 2023 and 2025.

3.2 Discussion

a. PT Pertamina Geothermal Energy Tbk

The current ratio shows a significant increase from 140.37% in 2021 to 411.09% in 2025. Although it temporarily declined in 2022 to 50.51%, this ratio rose sharply again in 2023 to 353.65% and continued to rise through 2024, reaching 364.52%, and in 2025, reaching 411.09%. This indicates that the company has a strong ability to meet its short-term obligations with its current assets.

PT Pertamina Geothermal Energy Tbk’s Quick Ratio also shows a similar pattern. In 2021, it stood at 131.56%, dropped to 48.17% in 2022, but surged sharply in 2023 to 344.37%, then reached 356.39% in 2024, and 398.04% in 2025. This increase indicates that the company is able to meet its short-term obligations without relying on inventory, reflecting high liquidity efficiency.

The Cash Ratio of PT Pertamina Geothermal Energy Tbk experienced a fairly sharp decline. In 2021, the ratio stood at 62.70%, which was considered quite good, indicating the company’s relatively adequate ability to meet short-term obligations with available cash. However, in 2022, the ratio dropped to 30.57%, falling into the “poor” category, reflecting a decline in liquidity and potential risks regarding the timely payment of obligations. Subsequently, there was a significant surge in 2023 of 277.6% and in 2024 of 255.2%, both of which are classified as very good. This indicates a significant improvement in the company’s ability to provide cash to cover current liabilities. In 2025, the ratio rose again to 335.2%, remaining in the “very good” category, indicating a very strong liquidity position and efficient cash management.

The analysis above shows that PT Pertamina Geothermal Energy Tbk’s liquidity performance during the 2021–2025 period was in a very good condition. This is evident from the Current Ratio (CR), Quick Ratio (QR), and Cash Ratio (CAR), which are all above the 100% average. These findings are consistent with previous research (Erawati et al., 2024) which concluded that PT Pertamina Geothermal Energy Tbk’s financial performance—particularly its liquidity—in 2023 was excellent. Thus, in accordance with (Wati et al., 2023), it can be conclusively

determined that PT Pertamina Geothermal Energy Tbk's liquidity ratio indicates its ability to pay short-term liabilities.

PT Alamtri Resources Indonesia Tbk

The Current Ratio increased from 200% in 2021 to 217.2% in 2022. In 2023, it temporarily dropped to 201.4%, but rose significantly again in 2024 to 402.7%. Although it declined in 2025 to 256%, current assets still indicate a very strong position. This demonstrates that the company possesses a very strong ability to meet its short-term obligations using its current assets.

The overall quick ratio—199.2% in 2021, 209.6% in 2022, 193.4% in 2023, 387% in 2024, and 242.9% in 2025—indicates a very strong position. This indicates that the company remains capable of meeting its short-term obligations without relying on inventory.

PT Alamtri Resources Indonesia Tbk's cash ratio has maintained an excellent rating year over year. In 2021, the ratio stood at 132.9%; in 2022, it decreased to 166.1%; in 2023, it was 155%; and in 2024, it reached 217.3%. In 2025, it stands at 121.2% in the "very good" category, indicating a very strong liquidity position and efficient cash management.

The analysis above demonstrates that PT Alamtri Resources Indonesia Tbk's liquidity performance during the 2021–2025 period is in very good condition. This can be seen from the Current Ratio (CR), Quick Ratio (QR), and Cash Ratio (CAR), which on average remained above 100%–200% throughout the 2021–2025 period, despite experiencing fluctuations in 2023 and 2025. These findings are also consistent with the results of a previous study (Hairunnisa et al., 2025), which revealed fluctuations in the liquidity performance of PT Alamtri Resources Indonesia Tbk during the 2022–2023 period. Thus, according to (Nurjamila et al., 2023), it can be concluded that PT Alamtri Resources Indonesia Tbk has the ability to finance and meet its liabilities when they become due.

4. Conclusion

PT Pertamina Geothermal Energy Tbk's liquidity levels for the 2021–2025 period are also in excellent condition. This is evident from the Current Ratio (CR), Quick Ratio (QR), and Cash Ratio (CAR), which collectively exceed the 200% average. Although these ratios declined in 2022, they rebounded sharply in 2023 and continued to rise significantly in subsequent years. Meanwhile, the liquidity performance of PT Alamtri Resources Indonesia Tbk during the 2020–2024 period is in excellent condition. This is reflected in the Current Ratio, Quick Ratio, and Cash Ratio, which consistently exceed the standard, indicating the company's ability to optimally meet its short-term obligations. Although fluctuations occurred in 2023 and 2025, the company's overall liquidity performance shows an upward trend.

This study recommends that PT Pertamina Geothermal Energy Tbk and PT Alamtri Resources Indonesia Tbk maintain excellent liquidity performance in the future to avoid a downgrade in their financial performance ratings. The companies must be able to pay their short-term liabilities so they can fund their obligations when they become due. This study has several important limitations to note. First, liquidity is only one of many indicators used to assess a company's financial performance, so it does not fully capture the financial complexity of these companies. Second, this study is limited to PT Pertamina Geothermal Energy Tbk and PT Alamtri Resources Indonesia Tbk, so the findings do not yet cover other companies operating in the renewable energy subsector in Indonesia.

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