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FINANCIAL PERFORMANCE OF PT PERTAMINA GEOTHERMAL ENERGY TBK BEFORE AND AFTER THE DISCLOSURE OF THE FUEL ADULTERATION CASE: A COMPARATIVE ANALYSIS

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Abstract

This study aims to analyze the differences in the financial performance of PT Pertamina Geothermal Energy Tbk before and after the disclosure of the fuel adulteration case involving its parent company. This research employs a quantitative comparative approach using quarterly financial statement data from 2024–2025. The analysis was conducted using descriptive statistics and the Wilcoxon Signed Rank Test. The results show that descriptively, most financial ratios experienced a decline, particularly in profitability and activity ratios, along with a decrease in liquidity and a slight increase in solvency. However, the Wilcoxon test results indicate that these changes are not statistically significant. These findings suggest that despite reputational pressure from the parent company's crisis, the company's financial performance remains relatively stable. The limited sample size is also considered a factor influencing the results.

Keywords: ***Financial Performance, Financial Ratios, Parent Company, Reputational Crisis, Wilcoxon Signed Rank Test.***

1. INTRODUCTION

Financial performance is an important indicator used to evaluate the level of health, stability and sustainability of a company (Munawir 2014). Financial performance shows how well management manages the company's assets, liabilities and capital effectively and efficiently to achieve the company's goals (Harahap 2018). Financial performance analysis is increasingly important for public businesses because they are under public scrutiny and must present transparent, credible, and relevant financial information to investors, shareholders, and regulators (Francis Hutabarat 2020). Financial ratio analysis is a widely used approach to measure a company's fiscal performance (Fahmi 2018). Financial ratios provide insight into a company's liquidity, solvency, operational efficiency, and revenue performance (Kasmir 2019). In addition to evaluating internal conditions, financial ratios are also used to identify changes in a company's performance over time (Munawir 2014)

In the contemporary business environment, a company's financial performance is not solely determined by internal factors, such as operational efficiency and capital structure, but is also influenced by external factors, including macroeconomic policy dynamics, reputational issues, and corporate governance practices (Susanto 2013). Empirical studies show that negative events involving a company or business group, such as corruption

scandals and ethical violations, can trigger market events and affect investor perceptions and the company's financial performance (Fransiskus E. Dorames dkk 2023). Negative information is often disclosed to the public and influences investor expectations regarding business prospects (Hartono 2018).

PT Pertamina Geothermal Energy Tbk (PGEO) is a subsidiary of PT Pertamina (Persero) operating in the geothermal energy sector and has registered as a public company. As a strategic entity in the development of new and renewable energy, PGEO plays a crucial role in supporting the national energy transition agenda and achieving Indonesia's net-zero emissions target by 2060. This strategic position makes PGEO highly dependent on public and investor trust to maintain its business sustainability and financial performance.

However, in February 2025, the Indonesian Attorney General's Office uncovered a corruption scandal involving the counterfeiting of Pertamax fuel with an RON rating of 92. This case was carried out by several individuals within PT Pertamina Patra Niaga, where they mixed Pertamax with fuel with a lower octane rating, such as Pertalite with an RON of 90. The goal was clearly to reduce production costs. This case caused enormous state losses and triggered a reputational crisis for Pertamina as the parent company (Ramatulloh et al. 2025). Although PT Pertamina Geothermal Energy Tbk was not directly involved in the case, as part of the Pertamina Group, PGEO still has the potential to be impacted by negative media exposure and public perception of the parent company.

In a corporate group structure, the parent company's reputation serves as a shield of legitimacy for its subsidiaries. Consequently, both a positive and negative reputation of the parent company can influence investors' views of subsidiaries, particularly those with greater operational transparency (Ni Made Dwi, Widanaputra anak agung 2018). Governance failures at the parent company level are often seen as indicators of future risk for all business units within the group, which can negatively impact the financial performance of subsidiaries.

Legitimacy theory argues that companies must maintain alignment between organizational values and societal expectations to survive (Itang Navira Hatuwe 2025). If a parent company experiences reputational issues or scandals, pressure from stakeholders can increase and impact the financial results of subsidiaries. Furthermore, market responses, such as changes in stock prices and trading volume, will reflect important public information, consistent with signaling theory (Hartono 2018).

The impact of a reputational crisis, such as fuel adulteration, can cause stock price volatility and reduce investor interest, which in turn can potentially affect the financial performance of subsidiaries (Abdussalam dan Animah 2024). Consequently, changes in a company's financial performance before and after the incident can be linked to market reactions, reflected in price movements and trading volume of PGEO shares. Investors require accurate and transparent financial information because it can influence market sentiment and the company's stock valuation (Ningtias Safitri dkk 2021). Investors can speculate whether a company still has a strong foundation and a positive outlook for the future by comparing financial results before and after the incident (Purwanto 2025).

Global research shows that scandals experienced by an entity within a corporate group often create a negative spillover effect. The reputational spillover phenomenon occurs when unethical behavior from one unit within a business group spreads to other units. This contagion is stronger in companies that share the same brand name as their parent, which automatically associates a negative stigma with the subsidiary in the public's view. Investors tend to categorize the subsidiary as risky even though the subsidiary is not directly involved in the financial or ethical misconduct of its parent (Paruchuri, Srikanth; Misangyi 2015).

Various previous studies have shown that negative events such as scandals and reputational crises can impact a company's financial performance (Bella dan Sari 2021). However, most of these studies still focus on companies directly involved in the case and use annual financial report data. Studies exploring the indirect effects of a parent company's reputational crisis on the financial performance of its subsidiaries, particularly those relying on quarterly financial report data, are still relatively limited. Therefore, this study aims to address this gap by examining the differences in the financial performance of PT Pertamina Geothermal Energy Tbk before and after the fuel mixing case involving its parent company was revealed. With this explanation, the researcher aims to examine the extent of the differences in PT Pertamina Geothermal Energi Tbk's financial performance before and after the fuel mixing case was revealed.

2. RESEARCH METHODS

This research employs a quantitative methodological approach, combining descriptive and comparative analysis. The choice of a quantitative approach for this research was driven by the goal of objectively assessing and comparing companies' financial performance, using financial ratios derived from numerical data contained in financial statements. The comparative approach chronicles financial performance before and after the publication of the fuel adulteration case involving the parent company, PT Pertamina (Persero), while the descriptive approach describes the condition and trends of the companies' financial performance.

Financial performance in this study is proxied through several financial ratios calculated using the following formula:

1. Profitability Ratio
   a. Profitability Ratio Return on Assets (ROA): Measures the ability of assets to generate profits.

$$\text{ROA} = \frac{\text{LabaBersih}}{Total\ Aset} \text{ x } 100\%$$

   b. Return on Equity (ROE): Measures the contribution of equity in generating profit.

$$\text{ROE} = \frac{\text{LabaBersih}}{Total\ Ekuitas} \text{ x } 100\%$$

   c. Net Profit Margin (NPM): Measures the percentage of net profit from net sales.

$$\text{NPM} = \frac{\text{Laba Bersih}}{\text{Penjualan Bersih}} \text{ x } 100\%$$

2. Liquidity Ratio

   Current Ratio (CR): Measures the ability of current assets to cover current liabilities.

$$CR = \frac{\text{Aktiva Lancar}}{\text{Utang Lancar}} \text{x}100\%$$

3. Rasio Solvabilitas

Debt to Equity Ratio (DER): Describes the proportion of debt to shareholder equity.

$$\text{DER} = \frac{Total\ Debt}{\text{Total Equity}} \text{ x } 100\%$$

4. Rasio Aktivitas

Total Asset Turnover (TATO): Measures the efficiency of asset use to generate sales.

$$\text{TATO} = \frac{\text{Penjualan Bersih}}{\text{Total Aset}} \text{x}100\%$$

The data analysis technique in this study was carried out through several systematic stages, beginning with the calculation of financial ratios, including the Current Ratio (CR), Debt to Equity Ratio (DER), Total Asset Turnover (TATO), Return on Assets (ROA), and Net Profit Margin (NPM) for the periods before and after the event. The next step was to conduct descriptive statistical analysis to describe the characteristics of the data through the calculation of the average (mean), median, and standard deviation values, so that the company's financial performance trends in both periods could be clearly identified. After the data characteristics were understood, a comparative analysis was conducted by comparing the ratios between the 2024 and 2025 periods to map the direction of performance changes, whether in the form of increases, decreases, or stability. To test the significance of these differences, this study used the Wilcoxon Signed Rank Test, a non-parametric statistical method used to test differences between two paired samples at a significance level of 5% ($\alpha = 0.05$). The selection of this test was based on the relatively small number of observations in the study.

3. RESULTS AND DISCUSSION

3.1 Results

Descriptive Statistics

Tabel 2.Descriptive Statistics

Variable	Period	N	Mean	Median	Std.Deviation
ROA	Before	4	3,70%	3,93%	0,016363
	After	4	3,04%	2,89%	0,018416
ROE	Before	4	5,54%	5,85%	0,024827
	After	4	4,57%	4,38%	0,027231
NPM	Before	4	44,14%	44,88%	0,034215
	After	4	36,23%	35,80%	0,023745
CR	Before	4	3,975	3,935	0,179722
	After	4	3,7325	3,98	0,718998
DER	Before	4	0,4925	0,49	0,012583
	After	4	0,505	0,485	0,043589
TATO	Before	4	0,08625	0,087	0,043515
	After	4	0,082	0,0805	0,044967

Source: Processed data, 2026

Based on Table 2, the results of the descriptive statistical tests can be seen as follows:

a. Profitability Analysis (ROA, ROE, and NPM) The most striking decline in performance is seen in the company's profitability ratios. The average Return on Assets (ROA) decreased from 3.70% to 3.04%, indicating that the company has become less efficient in managing its assets to generate net profit. This is in line with the decline in Return on Equity (ROE) from 5.54% to 4.57%, as well as a sharp decline in Net Profit Margin (NPM), which fell from 44.14% to 36.23%. Collectively, these data indicate that the company's profit margins are under significant pressure, likely due to increased operating costs or decreased sales volume in the subsequent period.
b. Liquidity Analysis (Current Ratio) In terms of liquidity, the Current Ratio (CR) shows a slight downward trend in its average value, from 3.975 to 3.7325. Although the average value remains at a relatively safe level to meet short-term obligations, there is a drastic spike in the standard deviation from 0.1797 to 0.7189. This increase in volatility indicates that liquidity conditions between samples in the following period have become unstable or highly variable, where some samples may have very strong cash positions while others experience tighter liquidity.
c. Solvency Analysis (Debt to Equity Ratio) The company's capital structure, as reflected in the Debt to Equity Ratio (DER), indicates a slight increase in financial risk. The average DER rose from 0.4925 to 0.505, indicating a slightly higher proportion of debt to equity in the subsequent period. While this increase is moderate, the increase in standard deviation indicates greater variation in funding policies across the data sample. This suggests that companies are becoming more reliant on external borrowing to finance their operations compared to the previous period.
d. Activity Analysis (Total Asset Turnover) Operational efficiency in the use of all resources, as reflected in Total Asset Turnover (TATO), also experienced a slight slowdown. The average asset turnover decreased from 0.08625 to 0.082 times. This decrease indicates that each unit of currency invested in assets generated lower income in the subsequent period compared to the previous period. Overall, the combination of declining profitability, unstable liquidity, and slowing asset turnover indicates a significant economic challenge for the company in maintaining its financial performance.

Table 3. Comparison of Average Financial Ratios

Ratio	Average Before	Average After	Change
ROA	3,70%	3,04%	Decrease
ROE	5,54%	4,57%	Decrease
NPM	44,14%	36,23%	Decrease
CR	3,975	3,7325	Decrease
DER	0,4925	0,505	Increase
TATO	0,08625	0,082	Decrease

Source: Processed data, 2026

Findings from the descriptive analysis indicate that the majority of the company's financial ratios decreased after the case was disclosed, with the exception of the solvency ratio, which actually increased. However, the changes in each of these financial ratios are still only descriptive. Therefore, further statistical testing is required to assess whether the differences in financial performance before and after the case disclosure are statistically significant. Based on this, the next stage of analysis used the Wilcoxon Signed Rank Test.

Wilcoxon Signed Rank Test

Tabel 4. Hasil Uji Wilcoxon Signed Rank Test Kinerja Keuangan

Ratio	n	z	Sig.(p-value)	Decision
ROA	4	-1,604	,109	Not Significant
ROE	4	-1,826	,068	Not Significant
NPM	4	-1,826	,068	Not Significant
CR	4	-730	,465	Not Significant
DER	4	-535	,593	Not Significant
TATO	4	-1,604	,109	Not Significant

Source: *Data Processed, 2026*

3.2 Discussion

Hypothesis testing to compare financial performance before and after the case disclosure was conducted using the Wilcoxon Signed Rank Test. This method was chosen as a non-parametric alternative due to the relatively small number of observations (N=4). The benchmark or decision-making criteria in this test are based on the significance value (p-value) with an error rate of 5% or 0.05. If the p-value is <0.05, then there is a significant difference; however, if the p-value is >0.05, then the difference is considered statistically insignificant.

Based on the results of the Wilcoxon Signed Rank Test on the company's financial performance, all tested ratios showed a significance value (p-value) greater than 0.05. This indicates that there was no significant difference between the periods before and after the event studied.

a. The profitability ratios, consisting of ROA, ROE, and NPM, each had p-values of 0.109, 0.068, and 0.068, respectively. These values indicate that although there was a change in the ratio values, the change was not statistically strong enough to be declared significant.
b. The liquidity ratio proxied by the Current Ratio (CR) has a p-value of 0.465, which means there is no significant difference in the company's ability to meet its short-term obligations between the two periods.
c. The solvency ratio measured using the Debt to Equity Ratio (DER) obtained a p-value of 0.593, which also indicates that there is no significant difference in the company's capital structure.
d. The activity ratio proxied by Total Asset Turnover (TATO) has a p-value of 0.109, which indicates that there is no significant change in the efficiency of the company's asset usage.

Thus, it can be concluded that the company's overall financial performance before and after the event studied did not experience any significant changes. This indicates that the event did not have a significant impact on the company's financial performance based on the ratio indicators used.

Although descriptively, the average financial ratio tends to decline, the failure of the Wilcoxon test to demonstrate significance can be explained by several technical and theoretical factors. Statistically, the very limited sample size (N=4 in each period) results in low statistical power, making it difficult for the model to detect significant differences even though the trend appears to be decreasing. Theoretically, this proves that despite pressure from the parent company's reputation, in accordance with signaling theory, the company's financial fundamentals remain stable and prevent them from falling to extreme levels, in line with the company's efforts to maintain its operational legitimacy in the eyes of stakeholders.

However, the results of this statistical test need to be linked to a comparative descriptive analysis, which shows a trend in changes in each financial ratio. For profitability ratios, ROA, ROE, and NPM all experienced a decrease in their average values, indicating a decline in the company's ability to generate profits. For liquidity ratios, the Current Ratio (CR) also decreased, accompanied by an increase in the standard deviation, indicating fluctuations or instability in liquidity in the period following the incident. Meanwhile, the Debt to Equity Ratio (DER) experienced a slight increase, reflecting a slight increase in debt use in the company's capital structure. For activity ratios, Total Asset Turnover (TATO) also decreased, indicating a decrease in asset utilization efficiency.

The difference between the descriptive and statistical test results indicates that although there are trend changes (decreases and increases), these changes are not strong enough to be declared statistically significant. One factor influencing these results is the relatively small sample size, with only four data points from each period. A limited sample size can result in low statistical power, making the Wilcoxon test incapable of detecting actual differences.

4. CONCLUSION

Based on the research results, descriptive analysis shows a decrease in most financial ratios, especially profitability and activity, as well as a decrease in liquidity and a slight increase in solvency after the case disclosure. However, the results of the Wilcoxon Signed Rank Test indicate that these changes are not statistically significant, so there is no significant difference in financial performance between the periods before and after the case. This finding is in line with the signaling theory, where negative information from the parent company has an impact on market perception which is reflected in a decline in descriptive performance. Meanwhile, the legitimacy theory explains that the company is still able to maintain stable performance to maintain stakeholder trust, so the impact is not statistically significant. In addition, the limited number of samples also affects the results of the statistical test, so the changes that occur cannot be proven significant.

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