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The Effect of Liquidity and Solvency Ratios on Financial Performance at PT. Pegadaian (Persero)

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ABSTRACT

This study examines the effect of liquidity and solvency ratios on the financial performance of PT Pegadaian (Persero), focusing on Return on Equity (ROE) as the profitability indicator. The independent variables analyzed are Quick Ratio (QR), Debt to Assets Ratio (DAR), and Debt to Equity Ratio (DER). Using a quantitative associative approach, the study employs secondary data from annual financial statements of PT Pegadaian (Persero) for the period 2014–2023. Data were analyzed using multiple linear regression, supported by classical assumption tests, correlation, and determination coefficient analysis. The results indicate that QR, DAR, and DER, both individually and simultaneously, do not significantly influence ROE. This suggests that liquidity and solvency are not the primary determinants of the company's profitability, with operational efficiency, product innovation, and marketing strategies likely playing a more dominant role. These findings imply that management should maintain financial ratio stability while emphasizing business strategies that enhance profitability. Future research is recommended to expand the study period and sample, incorporate additional financial variables such as ROA, NPM, Current Ratio (CR), and Operating Cash Flow, and utilize more comprehensive analytical methods, including panel data regression or comparative analysis with similar financial service companies.

INTRODUCTION

In an increasingly competitive business environment, financial performance has become one of the key factors determining the sustainability and competitiveness of a company. According to Hery (2015), financial performance reflects the effectiveness of managing assets, liabilities, and equity in generating profits. This is consistent with Dewi and Suryani (2020), who emphasize that financial performance is an important indicator for assessing a company's health as well as its ability to create added value for shareholders. Therefore, evaluating financial performance is necessary not only to measure managerial achievement but also to support strategic decision-making.

One of the main indicators for measuring profitability is Return on Equity (ROE), which demonstrates the extent to which a company can generate net profit from the equity employed (Kasmir, 2019). A high ROE reflects the company's ability to manage capital optimally, thereby increasing investor confidence. However, profitability does not stand alone; it is influenced by other aspects such as liquidity and solvency. Liquidity shows a company's ability to meet its short-term obligations, commonly measured using the Quick Ratio (QR) (Fauzi & Amelia, 2022). Meanwhile, solvency reflects the company's long-term ability to fulfill its obligations, generally measured through the Debt to Asset Ratio (DAR) and Debt to Equity Ratio (DER) (Larasati & Nurismalatri, 2023; Wulandari & Prasetyo, 2023).

Previous studies have produced mixed findings. Some studies state that QR, DAR, and DER significantly influence ROE (Rahmawati & Indrawati, 2022; Simanjuntak & Herlina, 2022), while others find no significant effect (Prasetya & Amelia, 2021; Sari & Gunawan, 2021). These differences indicate the existence of a research gap worth further investigation, particularly in financial service companies such as PT Pegadaian (Persero).

PT Pegadaian (Persero) is a state-owned enterprise (SOE) engaged in financial services, focusing on pawn-based financing as well as other conventional and sharia-compliant financial services. As a non-bank financial institution that plays an important role in providing access to financing for the public, Pegadaian faces challenges in maintaining its financial performance amid economic dynamics, particularly in the post-pandemic period. Financial data for Pegadaian during 2019–2023 show fluctuations, including a decline in net profit in 2020 due to the pandemic, followed by recovery in 2022–2023. In addition, several issues can be

identified, such as a decline in current assets in 2021, an increase in current liabilities from 2020 to 2022, a significant rise in total liabilities in 2020, 2022, and 2023, as well as a decrease in total assets in 2021. These conditions highlight pressures on the company's financial structure, which, if not managed properly, could affect long-term profitability.

Table 1. Data on Current Assets, Current Liabilities, Total Liabilities, Total Assets, and Net Income of PT Pegadaian (Persero)
(Presented in Millions of Rupiah)

Year	Current Assets	Current Liabilities	Total Liabilities	Total Assets	Net Income
2019	54.308.161	2.750.589	42.263.867	65.324.177	3.108.078
2020	61.041.619	3.885.141	46.865.344	71.468.960	2.022.447
2021	56.470.858	4.278.880	39.516.937	65.775.938	2.422.079
2022	63.225.771	5.178.575	44.911.304	73.329.790	3.298.945
2023	68.099.366	4.980.366	49.949.840	82.585.431	4.376.677

Based on these identified issues, this study focuses on analyzing the effect of financial ratios on corporate profitability. The research questions posed are as follows: Does the Quick Ratio (QR) affect Return on Equity (ROE)? Does the Debt to Assets Ratio (DAR) affect Return on Equity (ROE)? Does the Debt to Equity Ratio (DER) affect Return on Equity (ROE)? And do Quick Ratio (QR), Debt to Assets Ratio (DAR), and Debt to Equity Ratio (DER) simultaneously affect Return on Equity (ROE) at PT Pegadaian (Persero)? In line with these research questions, the objective of this study is to examine and analyze the effects of QR, DAR, and DER both partially and simultaneously on ROE. Accordingly, this research is expected to contribute theoretically by enriching the literature on the determinants of ROE, as well as practically by providing insights for management in formulating more effective financial management strategies.

METHODS

This study employs a quantitative approach with an associative research design. According to Sugiyono (2018), associative research aims to identify the relationship between two or more variables, whether causal (cause-effect) or correlational. In this research, the analysis focuses on examining the effect of Quick Ratio (QR), Debt to Assets Ratio (DAR), and Debt to Equity Ratio (DER) as independent variables on Return on Equity (ROE) as the dependent variable using multiple linear regression analysis.

The data used in this study are secondary data in the form of annual financial statements of PT Pegadaian (Persero). The documents were obtained from the company's official publication on https://www.pegadaian.co.id and have been prepared in accordance with the Indonesian Financial Accounting Standards (SAK). The required data include current assets, inventories, current liabilities, total liabilities, total assets, equity, and net income, which are used to calculate QR, DAR, DER, and ROE.

The population in this study consists of all annual financial reports of PT Pegadaian (Persero) since its transformation into a limited liability company (2012) up to 2023, totaling 12 annual reports. The research sample is limited to financial reports from 2014–2023 (10 years), selected using purposive sampling. The choice of this period is based on the availability of complete and consistent data for all research variables.

The researcher acknowledges that the sample size of only 10 observations is relatively small for multiple regression analysis with three independent variables. Consequently, the statistical results have limitations in terms of generalizability. Therefore, the findings should be interpreted cautiously and may serve as a basis for further research using a longer time span or higher-frequency data (e.g., quarterly).

To clarify the measurement of variables, the operational definitions are summarized in the following table:

Table 2. Operational definitions

Variable	Formula	Reference
Quick Ratio (QR)	(Current Assets – Inventories) ÷ Current Liabilities	Fauzi & Amelia (2022)
Debt to Assets Ratio (DAR)	Total Liabilities ÷ Total Assets	Larasati & Nurismalatri (2023)
Debt to Equity Ratio (DER)	Total Liabilities ÷ Equity	Wulandari & Prasetyo (2023)
Return on Equity (ROE)	Net Income ÷ Equity	Kasmir (2019)

ROE is chosen as the primary indicator of financial performance because it reflects the company's ability to generate profits for shareholders. Nevertheless, the researcher acknowledges a limitation in not including other profitability measures such as ROA or NPM.

The data collection techniques employed in this study consisted of documentation and literature review. Documentation was carried out by obtaining financial statement data from the official website of PT Pegadaian (Persero), while the literature review involved gathering relevant references from books, journals, articles, and previous studies to strengthen the theoretical framework and analysis.

The data were analyzed using SPSS version 27 through several steps. First, classical assumption tests were conducted, which included the Kolmogorov-Smirnov test for normality, Tolerance and Variance Inflation Factor (VIF) for multicollinearity, the Glejser test for heteroskedasticity, and the Durbin-Watson test for autocorrelation. Second, multiple linear regression analysis was performed using the following model:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + e$$

where Y represents Return on Equity (ROE), X_1 is Quick Ratio (QR), X_2 is Debt to Assets Ratio (DAR), X3is Debt to Equity Ratio (DER), α is the constant, β1, β2, β3 are the regression coefficients, and ε is the error term (residual). Third, the correlation coefficient and coefficient of determination (R^2) were calculated to assess the strength of relationships between variables and the proportion of ROE variance explained by QR, DAR, and DER. Finally, hypothesis testing was conducted using the t-test to examine the partial effect of each independent variable on ROE, and the F-test to evaluate their simultaneous effect.

RESULTS AND DISCUSSION

Results

A. Classical Assumption Tests

Before conducting multiple linear regression analysis, classical assumption tests were carried out, including normality, multicollinearity, heteroskedasticity, and autocorrelation tests.

Table 3. Normality Test Results

Tests of Normality						
	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
QR	.140	10	.200*	.922	10	.378
DAR	.122	10	.200*	.940	10	.557
DER	.174	10	.200*	.915	10	.318
ROE	.248	10	.082	.902	10	.233

The normality test results (Table 3) show that the Shapiro-Wilk significance (Sig.) values for Quick Ratio (QR), Debt to Assets Ratio (DAR), Debt to Equity Ratio (DER), and Return on Equity (ROE) are all above 0.05. This indicates that all variables are normally distributed, thus fulfilling the normality assumption.

Table 4. Multicollinearity Test Results

Coefficients[a]			
Model		Collinearity Statistics	
		Tolerance	VIF
1	QR	.400	2.498
	DAR	.015	5.829
	DER	.016	1.174

a. Dependent Variable: ROE

The multicollinearity test results (Table 4) reveal that DAR and DER have tolerance values < 0.10 and VIF values > 10, indicating symptoms of multicollinearity. Meanwhile, QR meets the criteria for being free from multicollinearity. Nevertheless, the model can still be used with caution, since multicollinearity does not always invalidate regression analysis but rather reduces the accuracy of coefficient estimation.

Table 5. Heteroskedasticity Test Results

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.321	.222		-1.447	.198
	QR	.000	.001	.119	.257	.805
	DAR	.880	.537	3.895	1.639	.152
	DER	-.130	.068	-4.396	-1.919	.103

a. Dependent Variable: ABS_RES

The heteroskedasticity test (Table 5) using the Glejser Test shows that all independent variables have significance values > 0.05, indicating the absence of heteroskedasticity. Therefore, the regression model meets the assumption of homoskedasticity.

Table 6. Autocorrelation Test Results

Model Summary[b]					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.285[a]	.317	.425	.01893	2.000

a. Predictors: (Constant), DER, QR, DAR
b. Dependent Variable: ROE

The autocorrelation test using the Durbin-Watson (DW) statistic produces a value of 2.000, which falls between the upper limit (dU = 1.875) and 4 – dU = 2.125. Thus, the regression model is free from autocorrelation problems. Overall, the classical assumption tests indicate that the regression model is feasible for further analysis.

B. Multiple Linear Regression Results

The results of the multiple linear regression analysis are presented in Table 5 below:

Table 7. Multiple Linear Regression Test Results

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.119	.622		1.800	.122
	QR	.004	.002	.930	2.329	.059
	DAR	-2.517	1.506	-3.428	-1.671	.146
	DER	.305	.190	3.160	1.599	.161

a. Dependent Variable: ROE

The regression equation obtained is:
ROE = 1,119 + 0,004 (QR) − 2,517 (DAR) + 0,305 (DER)

The interpretation of the coefficients is as follows:

a. The constant of 1.119 indicates that if QR, DAR, and DER are zero, ROE is predicted to be 1.119%.
b. QR has a positive coefficient of 0.004, meaning that a 1% increase in QR has the potential to increase ROE by 0.004%, although the effect is not significant.
c. DAR has a negative coefficient of -2.517, suggesting that a 1% increase in DAR may reduce ROE by 2.517%, but the effect is not significant.
d. DER has a positive coefficient of 0.305, meaning that a 1% increase in DER may increase ROE by 0.305%, but the effect is also not significant.

C. Correlation and Determination Coefficient Tests

The correlation coefficient (R) value of 0.785 indicates a strong relationship between QR, DAR, and DER with ROE. The determination coefficient (R^2) of 0.617 means that 61.7% of the variation in ROE can be explained by the three independent variables, while the remaining 38.3% is explained by other factors outside the model.

Table 8. Correlation Coefficient Test Results

Model Summary				
Model	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**
1	.785[a]	.617	.425	.01893

a. Predictors: (Constant), DER, QR, DAR

D. Hypothesis Testing (Partial and Simultaneous)

The t-test results show that QR, DAR, and DER do not have a significant partial effect on ROE, since their respective t-values are smaller than the t-table value (2.447) and their significance values are > 0.05.

The F-test results show an F-value of 2.315, which is smaller than the F-table value of 3.10, with a significance value of 0.165 > 0.05. This indicates that QR, DAR, and DER jointly also do not have a significant effect on ROE.

Table 9. F-Test Results

ANOVA[a]						
Model		**Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**
1	Regression	.003	3	.001	3.218	.104[b]
	Residual	.002	6	.000		
	Total	.006	9			

a. Dependent Variable: ROE
b. Predictors: (Constant), DER, QR, DAR

E. Discussion

The results of this study demonstrate that QR, DAR, and DER do not have a significant effect, either partially or simultaneously, on ROE at PT Pegadaian (Persero). This suggests that the company's profitability is not solely determined by liquidity and solvency ratios, but is more strongly influenced by operational factors such as cost efficiency, interest income, and overall business strategy.

These findings are consistent with the studies of Tarischa & Buniarto (2025) and Widyastuti & Saputra (2022), which found that QR and DAR do not significantly affect ROE. However, the results differ from Akbar (2022) and Sari & Gunawan (2021), who reported significant effects of QR and DAR on ROE. Such discrepancies may arise from differences in research samples, observation periods, and macroeconomic conditions affecting corporate financial performance.

From a managerial perspective, these findings imply that PT Pegadaian (Persero) cannot rely solely on liquidity and solvency ratios to improve ROE. The company must place greater emphasis on improving operational efficiency, managing interest expenses, and diversifying its financial products. If a high DAR fails to support ROE, then the company should balance its capital structure by prioritizing equity-based financing. Similarly, increases in DER should be accompanied by effective risk management strategies to ensure that debt financing supports profitability rather than undermines it.

CONCLUSION

The findings indicate that Quick Ratio (QR), Debt to Asset Ratio (DAR), and Debt to Equity Ratio (DER), both individually and simultaneously, do not have a significant effect on Return on Equity (ROE) at PT Pegadaian (Persero). This suggests that liquidity and solvency are not the primary determinants of the company's profitability, with other factors such as operational efficiency, product innovation, and marketing strategies likely playing a more dominant role in driving ROE. Therefore, management is advised to maintain financial ratio stability while strengthening business strategies that support profit growth. Future research is recommended to extend the study period and sample, incorporate additional financial variables such as ROA, NPM, CR, or operating cash flow, and employ more comprehensive analytical methods, including panel data regression or comparative analysis with similar companies in the financial services industry.

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