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The Effect Of Liquidity, Activity And Leverage Ratios On Profitability With Company Size As A Moderating Variable

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Abstract: *The technology sector is a key driver of economic growth in today's digital era. However, during the 2021-2023 period, this sector experienced a decline in profitability, as reflected in the companies' financial reports. This issue is the background for this research, which aims to examine the influence of liquidity, activity, and leverage on profitability, as well as the potential mediating effect of firm size in technology sector companies listed on the Indonesia Stock Exchange for the 2021-2023 period. The sample selection was carried out by purposive sampling to select company samples that met the criteria for this quantitative research, which uses the Partial Least Square-Structural Equation Modeling (PLS-SEM) method. The research findings indicate that while activity and leverage each have a positive but significant impact on profitability, liquidity has a negative but negligible impact. It also shows that firm size does not mediate the impact of activity, liquidity, and leverage on profitability; these findings support the Trade-off Theory regarding the importance of balance in the use of debt, but also indicate limitations in the application of Signaling Theory in the technology sector. This study concludes that high current assets reflect inefficient use of funds. Activity has a positive but insignificant influence, indicating that increased activity has not been accompanied by efficiency in asset management. Leverage also has a positive but insignificant influence, signaling that the use of debt has not been managed optimally. Furthermore, the relationship between liquidity, activity, and leverage on profitability cannot be mediated by organizational size.*
Keywords: *Liquidity, Activity, Leverage, Profitability, Company Size*

INTRODUCTION

The rapid development of digital technology in Indonesia has spurred the emergence of various technology companies that play a crucial role in national economic growth. Along with the increasing number of technology companies listed on the Indonesia Stock Exchange (IDX), analysis of their financial performance, particularly profitability, has become important due to this sector's distinct characteristics compared to conventional sectors. Profitability is influenced by internal factors such as liquidity, activity, and leverage, which are explained through financial theories like Agency Theory, Resource-Based View, and Trade-Off Theory. In accordance with Signaling Theory (Spence, 1973), these internal factors serve as signals for investors to evaluate a company's prospects through its financial reports. Previous research findings have been varied:

some found a significant influence between liquidity and profitability (Rahmat et al., 2024; Setiawan & Suwaidi, 2022), while other studies found differing results, such as Dahuna (2016) and Nainggolan et al. (2022), which indicated no influence or even a negative influence of leverage on profitability.

The growing presence of technology companies in Indonesia is marked by an increasing number of them listing on the Indonesia Stock Exchange (IDX). As a key component of the contemporary economy, the capital market allows companies to raise long-term funds from the public by issuing financial instruments such as stocks and bonds (Dewi & Vijaya, 2018). Furthermore, it provides investors with opportunities to invest and receive returns that align with their risk tolerance and financial goals (Handini & Astawinetu, 2020).

This phenomenon reflects strong market and investor confidence in the technology sector's prospects. However, technology companies have distinct characteristics compared to conventional sectors like manufacturing or mining. They typically feature high-cost structures, dominant intangible assets, and sharp revenue fluctuations, especially during growth phases. Therefore, a more thorough analysis of their financial performance, particularly regarding profitability, is essential.

Previous research findings indicate that the impact of financial ratios on profitability is often inconsistent due to differences in industries and company conditions. Leverage, liquidity, and activity can have either a positive or negative effect depending on how they are managed. This inconsistency highlights the potential need for a moderating variable, such as firm size. Larger companies generally possess greater market confidence, resources, and efficiency than smaller businesses, which can influence the relationship between financial ratios and profitability

METHOD

This research type employs a quantitative research method with a correlational research design. Quantitative research is a method used to analyze the relationships between variables based on numerical data and statistical testing. It is a systematic investigation of a phenomenon by collecting quantifiable information using computer, mathematical, or statistical techniques. The purpose of correlational research is to determine how two or more variables are interrelated without

manipulating those variables, focusing on the degree or strength of the relationship or correlation between the studied variables.

RESULTS AND DISCUSSION

Analysis Descriptive

This study uses panel data from 17 technology-related companies listed on the Indonesia Stock Exchange (IDX) between 2021 and 2023, resulting in 69 observations. Data analysis was performed using SmartPLS 3.29 software for PLS-SEM modeling.

Variabel	Minimum	Maksimum	Mean	Std. Deviation
CR (X1)	2.00	527.00	113.3	131.3
TATO (X2)	1.00	10.27	5.6	137.1
DAR (X3)	1.00	33.5	3.9	65.6
ROA (Y)	4.00	41.5	5.3	545.3
Firm Size (Z)	41.00	65.6	63.2	256.91

Table 1. *Descriptive Statistical Analysis*

For the CR variable, the mean value of 113.3 is lower than the industry average, specifically 200, indicating that collectively, companies tend to have less cash/asset reserves to cover their short-term liabilities. A standard deviation of 131.3 shows considerable variation among the companies. For the TATO variable, the mean of 5.6 indicates that, in general, companies are able to efficiently generate revenue from their assets. However, the high standard deviation of 137.1 reflects a significant disparity in effectiveness across companies. For the DAR variable, the mean of 33.5 suggests that companies use debt cautiously, while the high standard deviation of 65.6 indicates substantial variation. For the ROA variable, the mean of 5.3 shows that companies are reasonably efficient in utilizing their assets, with a standard deviation of 545.3. Finally, for the Firm Size variable, the mean of 63.2 indicates that the companies have average assets of 1.8 trillion, with a high standard deviation of 256.91.

R Square Test

The R-Square test measures the extent to which the independent variables can explain the variation in the dependent variable within the model.

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Variabel	R-Square	R-Square Adjusted
Firm Size (Z)	0.270	0.236
ROA (Y)	0.050	-0.010

Table 2. *R Square Test*

An R^2 value of 0.270 for Firm Size indicates that 27% of the variation in firm size can be explained by liquidity, activity, and leverage, while the remaining 63% is influenced by other factors outside the model. For ROA, an R^2 value of 0.050 shows that liquidity, activity, and leverage can explain 5% of the variation in profitability. Although this value is relatively low, it is still acceptable in financial research because liquidity, activity, leverage, and profitability are influenced by numerous external factors.

F Square Test

The test for the level of significant influence of independent variables on the dependent variable is measured by the Effect Size (f^2).

Variabel	R-Square
X1→Y	0.020
X1→Z	0.043
X2→Y	0,027
X2→Z	0,050
X3→Y	0,000
X3→Z	0,253
Z→Y	0.026

Table 3. *F Square Test*

An f^2 value of 0.020 for the path X1→Y indicates a small effect size, yet it is still meaningful as it meets the 0.02 threshold. For the path X1→Z, a value of 0.043 indicates a small but meaningful effect size. Meanwhile, for the path X2→Y, a value of 0.027 indicates a small yet still meaningful effect size. Furthermore, for the path X2→Z, an f^2 value of 0.050 indicates a small but meaningful effect size. For the path X3→Y, a value of 0.000 indicates no meaningful effect, while for the path X3→Z, a value of 0.253 is considered medium, even approaching large, indicating that firm size is significantly influenced by its liquidity. For the path Z→Y, an f^2 value of 0.026 indicates a small effect size, yet it remains relevant. Overall, leverage has the most substantial influence on firm size, aligning with the theory that a high level of debt reflects a company's scale.

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Path Coefficient Test

Path Coefficient is used to test the strength, direction, and significance of the direct relationships between variables.

Path	Original Sample (O)	T Statistics	P Values
X1→Y	-0.149	1.236	0.217
X2→Y	0.173	1.375	0.170
X3→Y	0.015	0.097	0.923

Table 4. *Path Coefficient Test*

The path coefficient X1→Y of -0.149 has a p-value of 0.217 > 0.05, indicating a negative and negligible impact of liquidity on profitability. With a p-value of 0.170, the path coefficient X2→Z of 0.173 shows that activity has a positive but negligible impact on profitability. With a p-value of 0.923, the path coefficient X3→Y of 0.015 indicates a positive but negligible impact of leverage on profitability. This suggests that while performance analysis shows increased liquidity decreases profitability (though not significantly), a better activity level increases profitability (though not significantly), and a higher leverage level increases profitability (though not significantly).

Specific Indirect Effect Test

The Specific Indirect Effect test is used to examine the indirect impact of capital structure on profitability and firm value

Path	Original Sample (O)	T Statistics	P Values
X1→Z→Y	0.035	0.892	0.373
X2→Z→Y	-0.081	1.458	0.146
X3→Z→Y	-0.037	1.074	0.283

Table 5. *Spesific Indirect Effect*

For the path X1→Z→Y, a value of 0.0373 (p-value) indicates that since it is above 0.05, firm size cannot mediate the relationship, with a coefficient value of 0.035. For the path X2→Z→Y, a value of 0.146 (p-value) indicates that since it is above 0.05, firm size cannot mediate the relationship, with a coefficient value of 0.035. For the path X3→Z→Y, a value of 0.0283 (p-value) indicates that since it is above 0.05, firm size cannot mediate the relationship, with a coefficient value of 0.035. This leads to the conclusion that firm size cannot mediate the relationship between liquidity, activity, and leverage on profitability.

CONCLUSION

Based on the research findings and discussion aligned with the hypothesis objectives using PLS-SEM analysis, liquidity has a negative yet negligible impact on the profitability of technology sector companies from 2021 to 2023. This indicates that high liquidity does not necessarily enhance profitability, as excess current assets may reflect an inefficient use of funds. This finding aligns with agency theory, suggesting that management tends not to optimize surplus funds for productive activities, thereby preventing optimal profit growth in technology companies. Activity has a positive but small effect on profitability during the 2021-2023 period. This implies that increased activity is not matched by optimal asset utilization, thus failing to generate a substantial impact on profitability. Leverage has a positive, yet limited, influence on the profitability of technology sector companies from 2021 to 2023. This suggests that while the use of debt can boost profitability through tax savings, suboptimal debt management has rendered its effect insignificant, indicating that companies have not yet achieved an ideal balance in their capital structure.Finally, firm size does not mediate the relationship between profitability and activity, liquidity, and leverage

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