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The Effect Of Capital Structure And Liquidity On Company Value With Profitability As A Moderating Variable

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Abstract: *This study examines the effect of capital structure and liquidity on firm value, with profitability (ROA) as a moderating variable, using manufacturing companies listed on the Indonesia Stock Exchange during 2020–2024. The research employs a quantitative panel-data design with fixed-effects regression applied to 85 companies (425 firm-year observations). Key independent variables are debt-to-equity ratio (DER) and current ratio (CR), with price-to-book value (PBV) used as a proxy for firm value and ROA as both an explanatory and moderating factor. Model diagnostics including Chow, Hausman, and Lagrange Multiplier tests guided model selection, and robustness checks were conducted to validate results. Findings indicate that profitability (ROA) has a positive and statistically significant effect on firm value, while capital structure (DER) and liquidity (CR) do not exhibit significant direct effects within the tested model. The overall model explains a substantial portion of variation in firm value (adjusted $R^2 \approx 0.955$), and joint significance tests confirm the collective relevance of the predictors. Implications suggest that, in the post-pandemic recovery period, market valuation for Indonesian manufacturing firms is driven more strongly by earnings performance than by leverage or short-term liquidity positions. For practitioners, prioritizing operational efficiency and profit enhancement may yield greater value creation than opportunistic adjustments to leverage or cash buffers. The study recommends further research incorporating external macroeconomic variables and alternative value measures to broaden inference. Future studies should also explore industry heterogeneity, temporal shocks, and nonlinear interactions between financial policy variables and firm performance to strengthen external validity and policy relevance systematically.*
Keywords: *Capital Structure, Liquidity, Firm Value, Profitability, Manufacturing Companies.*

INTRODUCTION

In order to survive and provide sustainable added value, businesses must adapt to digitization and global competition as a result of globalization and the emergence of Industry 4.0 (Schwab, 2023). A company's primary goal is to increase its value, which is a gauge of how well it maximizes shareholder wealth (Damodaran, 2024). Because it reflects investors' opinions about the company's performance and prospects for the future, the stock price typically reflects the worth of the business (Brigham & Ehrhardt, 2024).

A company's value can be affected by a variety of factors, both outside and within the organization. Capital structure, liquidity levels, profitability, and operational efficiency are classified as internal factors, while macroeconomic conditions and government policies fall under external

factors (Myers, 2023; Brealey et al., 2023). The capital structure is vital as it represents the equilibrium between debt and equity financing, affecting both the cost of capital and financial risk (Baker & Martin, 2023). Meanwhile, liquidity shows a company's capacity to fulfill short-term obligations and mirrors its financial health status (Subramanyam, 2024).

The connection between capital structure, liquidity, and firm value remains characterized by mixed findings. Due to tax benefits, optimal debt use can enhance firm value, but excessive debt can raise the risk of bankruptcy (Graham et al., 2024). In the same way, sufficient liquidity indicates good financial health, while an overabundance of liquidity may suggest inefficiencies in asset use (Kieschnick et al., 2024).

As the largest employer and a significant contributor to Gross Domestic Product (GDP), the manufacturing sector in Indonesia plays a vital role in the national economy (BPS, 2024). Due to the sector's unique features, including its substantial fixed assets and elevated working capital needs, choices concerning capital structure and liquidity management are of great strategic significance (Sartono, 2024). The period from 2020 to 2024 is noteworthy for examination as it encompasses the COVID-19 pandemic and the subsequent economic recovery phase, both of which have direct implications for funding and firm value (OJK, 2024).

Many earlier studies have demonstrated inconsistent findings. While certain studies identified a positive correlation between capital structure, liquidity, and firm value (Putri & Wijaya, 2023; Pratama & Sari, 2024), others reported a negative or negligible correlation (Maharani & Sulistyowati, 2023; Permatasari, 2024). The varying outcomes suggest that additional factors are at play, including profitability, which serves as a moderating variable that may enhance or diminish the connection between these variables (Hanafi & Halim, 2024). Profitability reflects how well a company generates profits and manages the financial burdens that come from its capital structure (Wulandari & Nugroho, 2023).

The urgency of this research stems from its use of the latest data from 2020–2024, the inclusion of profitability as a moderating factor to clarify discrepancies in past research findings, and its practical implications for management and investors in identifying optimal financial strategies (Hanafi & Halim, 2024)

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METHOD

This study adopts a quantitative research method with a causal–comparative and explanatory approach to examine the effect of capital structure and liquidity on firm value, with profitability as a moderating variable. Quantitative methods are suitable for identifying financial relationships and testing causality through statistical modeling (Gujarati & Porter, 2020). The population consists of all manufacturing companies listed on the Indonesia Stock Exchange (IDX) from 2020 to 2024. A purposive sampling technique was applied based on the following criteria: (1) firms continuously listed on the IDX during the study period, (2) publishing audited annual financial reports, (3) presenting financial data in Indonesian Rupiah, and (4) providing complete data related to DER, CR, ROA, and PBV. Based on these criteria, 85 companies were selected, generating 425 firm-year observations. Panel data are widely used in financial research because they provide more variability and efficiency in estimation (Baltagi, 2021).

Secondary data were collected through annual reports, financial statements, and IDX publications. The analysis employed panel data regression using the Fixed Effects Model (FEM). The model selection process followed standard econometric procedures. First, the Chow test was conducted to compare the Common Effect Model and FEM. Next, the Hausman test was used to determine whether FEM or REM was more appropriate, consistent with recommendations by Hsiao (2022). The Breusch–Pagan Lagrange Multiplier (LM) test was also applied to validate model suitability. After model selection, hypothesis testing consisted of partial t-tests, simultaneous F-tests, and coefficient of determination (R^2) analysis. This approach ensures that the explanatory power and significance of variables are statistically reliable (Wooldridge, 2020).

Data estimation was performed using EViews 12 software. The use of established econometric techniques and structured panel testing enhances the internal validity, reliability, and replicability of the findings, making this methodology appropriate for analyzing corporate financial performance in the manufacturing sector (Hair et al., 2022).

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RESULT AND DISCUSSION

Analysis Descriptive

	DER	CR	PBV	ROA
Mean	1.557435	2.770353	4.720071	0.130873
Median	1.370000	2.810000	4.600000	0.150000
Maximum	3.270000	5.690000	9.380000	0.365000
Minimum	0.170000	0.500000	0.560000	-0.058000
Std. Dev.	0.914326	1.421931	2.139653	0.121610

Table 1. *Analysis Descriptive*

A value of 1.557 indicates that manufacturing firms maintain a debt level roughly 1.5 times their equity, suggesting a relatively balanced capital structure. The maximum value of 3.27 and minimum of 0.17 A value of 1.557 indicates that manufacturing firms maintain a debt level roughly 1.5 times their equity, suggesting a relatively balanced capital structure. The maximum value of 3.27 and minimum of 0.17 reflect variations in financing policies across companies, with moderate dispersion (standard deviation of 0.914). Furthermore, the average Current Ratio (CR) of 2.770 signifies a healthy liquidity position, as current assets are nearly three times greater than short-term obligations. Meanwhile, the mean Price to Book Value (PBV) of 4.720 implies that the market places a high valuation on manufacturing firms, though there remains considerable variation among them (standard deviation of 2.140). In addition, the average Return on Assets (ROA) of 0.131, or around 13.1%, demonstrates satisfactory profitability, even though certain firms reported losses. Overall, the financial condition of the manufacturing sector during 2020–2024 can be considered stable and sound, with noticeable performance disparities across companies.moderate dispersion (standard deviation of 0.914). Furthermore, the average Current Ratio (CR) of 2.770 signifies a healthy liquidity position, as current assets are nearly three times greater than short-term obligations. Meanwhile, the mean Price to Book Value (PBV) of 4.720 implies that the market places a high valuation on manufacturing firms, though there remains considerable variation among them (standard deviation of 2.140). In addition, the average Return on Assets (ROA) of 0.131, or around 13.1%, demonstrates satisfactory profitability, even though certain firms reported losses. Overall, the financial condition of the manufacturing sector during

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2020–2024 can be considered stable and sound, with noticeable performance disparities across companies.

Chouw Test

Effects Test	Statistic	d.f.	Prob.
Cross-section F	99.310475	(84,337)	0.0000
Cross-section Chi-square	1380.649843	84	0.0000

Table 2. *Chouw Test*

H_0 is rejected due to the probability value (p-value < 0.05), indicating that the Fixed Effect Model is more suitable than the Common Effect Model.

Hausman Test

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	46.743788	3	0.0000

Table 3. *Hausman Test*

Since the p-value is less than 0.05, H_0 is rejected, indicating that the Fixed Effect Model (FEM) is more suitable than the Random Effect Model (REM).

Lagrange Multiplayer Test

	Test Hypothesis		
	Cross-section	Time	Both
Breusch-Pagan	742.7708	6.913894	749.6847
	(0.0000)	(0.0086)	(0.0000)
Honda	27.25382	2.629428	21.13065
	(0.0000)	(0.0043)	(0.0000)

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King-Wu	27.25382 (0.0000)	2.629428 (0.0043)	8.379508 (0.0000)
Standardized Honda	27.87093 (0.0000)	3.261306 (0.0006)	16.54538 (0.0000)
Standardized King-Wu	27.87093 (0.0000)	3.261306 (0.0006)	6.291583 (0.0000)

Table 4. *Lagrange Multiplayer Test*

The outcomes of the Lagrange Multiplier (LM) test indicate that all probability values (p-values) in the Breusch-Pagan, Honda, and King-Wu tests for cross-section, time, and both effects are below 0.05. This indicates that H_0 is rejected, making the Random Effects Model (REM) the appropriate model to use.

Multiple regression analysis test

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	3.206751	0.739604	4.335768	0.0000
DER	0.175517	0.319507	0.549335	0.5831
CR	-0.068826	0.184177	-0.373694	0.7089
ROA	10.93149	1.483646	7.367993	0.0000

Table 5: *Test of multiple regression analysis*

The regression test results indicate that the ROA variable significantly and positively affects firm value (p-value = 0.0000 < 0.05). In contrast, the DER and CR variables do not significantly affect firm value, as their probability values are 0.5831 and 0.7089, respectively, both exceeding 0.05. This indicates that the main factor affecting firm value is profitability (ROA), whereas

capital structure (DER) and liquidity (CR) do not significantly impact it.

Test t (Partial)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	3.206751	0.739604	4.335768	0.0000
DER	0.175517	0.319507	0.549335	0.5831
CR	-0.068826	0.184177	-0.373694	0.7089
ROA	10.93149	1.483646	7.367993	0.0000

***Table 6**. Test t (Partial)*

Since the p-values for DER and CR are 0.5831 and 0.7089 > 0.05, respectively, the t-test findings indicate that only ROA has a positive and significant effect on company value (p-value 0.0000 < 0.05).

Test f (Simultan)

R-squared	0.964306	Mean dependent var	4.720071
Adjusted R-squared	0.955091	S.D. dependent var	2.139653
S.E. of regression	0.453429	Akaike info criterion	1.438156
Sum squared resid	69.28654	Schwarz criterion	2.277177
Log likelihood	-217.6082	Hannan-Quinn criter.	1.769617
F-statistic	104.6475	Durbin-Watson stat	1.311504
Prob(F-statistic)	0.000000		

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Table 7. *Test f (Simultan)*

According to the F-test results, the Prob(F-statistic) value is less than 0.05, at 0.000000. This suggests that the firm value is significantly impacted simultaneously by the DER, CR, and ROA variables. According to its R2 value of 0.964, the model explains about 96.4% of the variation in company value; the remaining portion is attributable to other factors that are not part of the model.

Coefficient Of Determination Test (R^2)

R-squared	0.964306	Mean dependent var	4.720071
Adjusted R-squared	0.955091	S.D. dependent var	2.139653
S.E. of regression	0.453429	Akaike info criterion	1.438156
Sum squared resid	69.28654	Schwarz criterion	2.277177
Log likelihood	-217.6082	Hannan-Quinn criter.	1.769617
F-statistic	104.6475	Durbin-Watson stat	1.311504
Prob(F-statistic)	0.000000		

Tabel 6. *Coefficient of determination Test (R^2)*

With an R-squared value of 0.964, it can be inferred that the DER, CR, and ROA variables account for 96.4% of the variation in company value, leaving 3.6% to be affected by other factors not included in the research model.

Discussion

The findings of this study provide important insights into how capital structure, liquidity, and profitability influence firm value in Indonesian manufacturing companies during the 2020–2024 period. Based on the regression analysis, profitability (ROA) emerged as the only variable with a significant positive effect on firm value, while capital structure (DER) and liquidity (CR) showed no significant direct effects. These results reflect the tendency of investors in emerging markets to prioritize earnings performance as a key indicator of long-term value creation, especially in times of economic uncertainty. Profitability serves as a strong signal of operational efficiency and managerial

effectiveness, thereby strengthening investor confidence (Hanafi & Halim, 2024).

The insignificance of DER in determining firm value aligns with several prior studies showing that leverage does not always enhance valuation in markets characterized by volatility and financing constraints. According to the trade-off theory, moderate debt can provide tax benefits, but excessive leverage increases financial risk, which may reduce investor confidence (Myers, 1984). During the 2020–2024 period, manufacturing firms faced pressures from the pandemic-induced economic slowdown, supply chain disruptions, and cost fluctuations, which likely contributed to cautious investor responses toward firms with higher debt levels. Similar evidence was reported by Maharani and Sulistyowati (2023), who found that capital structure did not significantly influence firm value in Indonesian companies during periods of economic shock.

Liquidity (CR) also demonstrated no significant effect on firm value, suggesting that high liquidity does not automatically translate to higher market valuation. Investors may interpret excessive liquidity as inefficiency in asset utilization, consistent with agency theory, which argues that managers tend to retain idle cash rather than allocate it effectively (Kieschnick et al., 2024). Furthermore, many manufacturing firms may hold large working capital balances due to sector-specific requirements rather than strategic policy decisions, making CR a less informative indicator of firm value. This finding aligns with research by Pratama and Sari (2024), who reported that liquidity metrics contributed minimally to firm valuation in capital-intensive industries.

Profitability, on the other hand, demonstrated a strong and statistically significant relationship with firm value. ROA reflects a firm's ability to generate profit from its assets, making it a reliable indicator of managerial effectiveness and operational resilience (Wulandari & Nugroho, 2023). The strong positive coefficient of ROA aligns with signaling theory, which states that high profitability signals strong future prospects to investors, thereby increasing valuation (Ross, 1977). Moreover, during the post-pandemic recovery period, investors were more attentive to earnings stability and future growth potential, making profitability the most influential financial metric.

These results are further supported by Setiyono and Amanah (2022), who found that profitability consistently enhances firm value across different industry sectors in Indonesia. Profitability moderates the effects of financial policy by reflecting the firm's capacity to absorb risks associated with funding decisions (Brealey et al., 2023). Therefore, even when capital structure and liquidity policies fluctuate due to external pressures, profitability remains a reliable predictor of

market performance.

From a managerial standpoint, these findings highlight the importance of prioritizing profit-generating strategies over adjustments in leverage or liquidity positions. Manufacturing firms are encouraged to enhance operational efficiency, strengthen product value, reduce unnecessary costs, and optimize asset utilization to improve profitability and, consequently, firm value. Firms should also adopt balanced financing policies that avoid excessive debt accumulation while ensuring adequate liquidity to support operational needs.

For investors, the results imply that evaluating profitability metrics may be more informative than focusing solely on leverage or liquidity when assessing firm valuation in manufacturing industries. Meanwhile, policymakers should consider supporting profitability-enhancing initiatives—such as tax incentives for technology adoption or production efficiency improvements—to strengthen industrial performance.

Future research is recommended to include macroeconomic variables such as interest rates, inflation, and exchange rates to capture broader influences on firm value. Moreover, considering sectoral differences or nonlinear financial relationships could provide deeper insights into the dynamics between financial policies and market valuation.

CONCLUSION

The research indicated that the profitability (ROA) of manufacturing firms from 2020 to 2024 had a significant positive impact on their value, whereas capital structure (DER) and liquidity level (CR) did not have a significant effect according to the tested model. This finding corroborates that the ability to generate profit is a more significant factor in determining market valuation than the makeup of short-term funding within the sample and timeframe analyzed.

Theoretically, these results are consistent with the notion that performance signals (profitability) are viewed as important by investors and suggest that the tax benefits of debt or liquidity reserves do not necessarily translate directly into increased market value if not accompanied by strong earnings performance. Therefore, optimal financing policies must consider the company's profitability to avoid increasing risk without clear benefits to stock value.

For managerial practice, this study recommends that manufacturing management prioritize efforts to increase profitability—through operational efficiency and cost management—as a primary strategy for increasing firm value. Future research is recommended to incorporate external variables

and alternative measures of firm value, as well as expand the sector sample to test the generalizability of the findings.

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