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THE EFFECT OF PROFITABILITY AND LIQUIDITY ON COMPANY VALUE WITH CAPITAL STRUCTURE AS A MODERATING VARIABLE IN FOOD AND BEVERAGE SUB-SECTOR COMPANIES LISTED ON THE INDONESIA STOCK EXCHANGE IN THE 2023-2024 PERIOD

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Abstract
This study examines the effects of profitability and liquidity on firm value and evaluates capital structure as a moderating variable in food and beverage subsector companies listed on the Indonesia Stock Exchange (IDX) during 2023–2024. The study uses secondary data obtained from annual reports, financial statements, the IDX website, and corporate websites. Purposive sampling produced 70 companies and 140 firm-year observations. Profitability is measured by return on assets (ROA), liquidity by the current ratio (CR), firm value by price-to-book value (PBV), and capital structure by the debt-to-equity ratio (DER). Panel-data regression and moderated regression analysis were performed using EViews 12. Chow and Hausman tests selected the fixed-effect model. The findings show that profitability has a positive and significant effect on firm value (coefficient = 3.590589; t = 2.020704; p = 0.0473), whereas liquidity has a negative but insignificant effect (coefficient = −0.018815; t = −0.326707; p = 0.7449). The interaction between profitability and capital structure is insignificant (t = 0.382184; p = 0.7036), as is the interaction between liquidity and capital structure (t = 0.989083; p = 0.3263). Thus, DER does not moderate either relationship. The results support signaling theory for profitability but show that liquidity and financing composition do not automatically translate into market valuation. The short two-year window, substantial firm heterogeneity, and possible fixed-effect inflation of explanatory power require cautious interpretation. Managers should emphasize asset productivity and sustainable earnings, while maintaining liquidity and leverage at operationally appropriate levels rather than assuming that higher liquidity or debt will be rewarded by investors.

Keywords: firm value; profitability; liquidity; capital structure; panel data; food and beverage companies

BACKGROUND

Firm value represents the market's assessment of a company's current performance, risk, and future prospects. For publicly listed companies, a high valuation can reduce the cost of capital, strengthen bargaining power, facilitate corporate actions, and increase shareholder wealth. Price-to-book value (PBV) is frequently used to compare the market price of equity with its recorded book value. A PBV above one indicates that investors value the company above the accounting value of its net assets, whereas a low PBV can signal weak growth expectations, profitability concerns, elevated risk, or limited confidence in management's ability to create value.

The food and beverage subsector provides an important setting for examining firm value because it combines relatively resilient consumer demand with substantial differences in scale, asset intensity, distribution reach, working-capital requirements, pricing power, and exposure to input-cost volatility. Although food and beverages are essential consumer products, firms in this subsector do not experience identical market outcomes. Some companies possess established brands, broad retail networks, and high asset productivity; others face narrow margins, volatile commodity prices, excess capacity, or limited access to financing. These structural differences can produce wide variation in profitability, liquidity, leverage, and market valuation.

Profitability is a central indicator of a company's capacity to generate earnings from resources entrusted by investors and creditors. Return on assets (ROA) captures the efficiency with which total assets are converted into net income. A higher ROA may communicate effective asset utilization, cost control, product-market strength, and managerial competence. Under signaling theory, profitable firms transmit favorable information about future cash flows and business sustainability. Investors may respond by increasing demand for the firm's shares, thereby raising market price and PBV (Ross, 1977; Brigham & Houston, 2019).

Liquidity reflects the company's ability to settle short-term obligations using current assets. The current ratio (CR) is commonly interpreted as a measure of short-term financial resilience. Adequate liquidity can reduce default risk, prevent operational disruption, and provide flexibility in purchasing inventory or responding to unexpected needs. However, very high liquidity is not necessarily value-enhancing. Excess cash, receivables, or inventory can indicate inefficient working-capital management and foregone investment opportunities. Consequently, the relationship between liquidity and firm value may be positive, negative, or insignificant depending on whether the market views current assets as productive buffers or idle resources.

Capital structure describes the mix of debt and equity used to finance assets. Debt can create a tax shield and discipline management, but it also introduces interest commitments, refinancing risk, covenant constraints, and financial-distress costs. Trade-off theory proposes an optimal debt level at which the marginal benefits of debt are balanced against expected distress costs (Modigliani & Miller, 1963). Pecking-order theory instead emphasizes financing preferences arising from information asymmetry: firms generally use internal funds first, debt second, and external equity last (Myers & Majluf, 1984). Both perspectives suggest that leverage may alter how profitability and liquidity are interpreted by investors.

A profitable company financed partly with debt may generate a higher return to shareholders when operating returns exceed financing costs. Conversely, leverage may weaken the valuation benefit of profitability when interest burdens or financial risk absorb earnings. Similarly, debt may change the market relevance of liquidity. A liquid company with high leverage may be perceived differently from a liquid company financed primarily with equity, because current assets may be needed to support debt service rather than expansion. These competing mechanisms justify testing DER as a moderator rather than only as a direct determinant of PBV.

Prior empirical evidence remains inconsistent. Profitability frequently shows a positive association with firm value, including in manufacturing and food-and-beverage settings (Rahayu et al., 2020; Qumariah et al., 2024; Anggareksa et al., 2024). Other studies find insignificant effects, suggesting that earnings may already be anticipated by the market or outweighed by other firm characteristics. Liquidity results are even more heterogeneous: some studies find that it supports valuation, while others find that it is irrelevant or negative because investors focus more heavily on earnings, growth, and risk (Simangunsong & Khoiri, 2022; Artamevia & Ekaningtias, 2022; Harlina et al., 2024).

Evidence on capital structure as a moderator is similarly mixed. Several studies conclude that leverage strengthens or weakens the influence of profitability or liquidity on firm value, while others find no interaction effect (Indira et al., 2021; Arsyada et al., 2022; Prasetia et al., 2024). Differences in industrial characteristics, observation periods, estimation methods, and macroeconomic conditions may explain these inconsistencies. The present study narrows the analysis to food and beverage companies during 2023–2024 and applies panel-data regression with firm fixed effects, followed by moderated regression analysis.

This study has four objectives: to test the effect of ROA on PBV; to test the effect of CR on PBV; to assess whether DER moderates the ROA–PBV relationship; and to assess whether DER moderates the CR–PBV relationship. Its contribution lies in integrating profitability, liquidity, and financing decisions within a short-period panel of a broad set of food and beverage firms. The analysis also distinguishes statistically significant direct effects from interaction coefficients that are positive in sign but not reliably different from zero.

THEORETICAL FRAMEWORK

Signaling theory

Signaling theory addresses information asymmetry between corporate insiders and external investors. Managers possess more detailed knowledge about operations, strategy, risk, and expected cash flows, while investors rely on financial reports, disclosures, and observable corporate decisions. High-quality signals must be credible and costly for weaker firms to imitate. Profitability is a particularly visible signal because sustained earnings require productive assets, effective operations, market acceptance, and managerial capability. A rising ROA can therefore convey stronger prospects and reduce uncertainty about future returns.

Liquidity can also serve as a signal of short-term solvency, but its interpretation is ambiguous. A sufficient current-asset buffer may indicate prudent risk management, while an excessive buffer may indicate idle cash, slow receivables, obsolete inventory, or lack of profitable investment opportunities. Investors may therefore place limited weight on CR unless liquidity is accompanied by evidence of efficient working-capital turnover and sustainable profitability. This ambiguity provides a theoretical basis for an insignificant liquidity effect.

Trade-off theory

Trade-off theory predicts that firms balance the tax and disciplinary benefits of debt against bankruptcy risk, agency costs, and loss of financial flexibility. At moderate levels, debt can enhance value through interest tax shields and pressure managers to use cash efficiently. Beyond the optimum, additional debt raises expected distress costs and can reduce value. The moderating effect of DER is therefore not predetermined: leverage may amplify the positive signal from profitability when returns cover financing costs, or weaken it when the market perceives earnings as exposed to debt-service risk.

For liquidity, the trade-off is also contextual. High leverage increases the importance of current assets for meeting near-term obligations, which could make liquidity more valuable. Yet when debt is largely long-term or when firms have stable operating cash flows, the current ratio may not materially change investors' assessment. In heterogeneous samples, positive and negative firm-specific mechanisms can offset one another and produce a statistically insignificant average interaction.

Pecking-order theory

Pecking-order theory argues that firms prefer internal financing because it avoids issuance costs and adverse-selection problems. Profitable firms accumulate retained earnings and consequently may require less external debt. If highly profitable food and beverage firms rely on internal funds, cross-sectional variation in DER may not meaningfully change the profitability signal. This financing pattern can explain why profitability directly affects PBV while the ROA×DER interaction remains insignificant.

Liquidity also interacts with financing hierarchy. Internally generated cash and liquid assets may reduce the need for debt, while firms facing a financing deficit may draw down liquid resources or borrow. Because CR and DER can be jointly shaped by investment cycles and financing choices, a simple contemporaneous interaction may not capture the dynamic relationship. This issue is especially relevant in a two-year study in which major capital expenditure or working-capital shocks can dominate stable long-run policies.

HYPOTHESIS DEVELOPMENT

Profitability and firm value

ROA measures the net income generated by each unit of assets. Higher ROA indicates that management extracts more earnings from the asset base, which can support dividends, retained earnings, expansion, and resilience. From a signaling perspective, higher profitability reduces uncertainty about the company's capacity to create future benefits. Empirical work frequently reports a positive effect of profitability on valuation, including Rahayu et al. (2020), Qumariah et al. (2024), and Harlina et al. (2024). Accordingly, H1 states that profitability has a positive and significant effect on firm value.

Liquidity and firm value

A higher current ratio can reduce short-term payment risk and support continuity of operations. Nevertheless, excessive current assets can reduce efficiency if funds remain in cash, slow receivables, or inventory instead of being deployed in productive projects. Because the direction is theoretically contested, the hypothesis follows the conventional expectation that stronger liquidity improves market confidence. H2 states that liquidity has a positive and significant effect on firm value.

Capital structure as a moderator of profitability

Debt can enhance the valuation benefit of profitability through tax shields and financial discipline, but it can also expose earnings to fixed financing costs. If leverage is near an optimal range, profitable firms may use debt efficiently and create additional shareholder value. H3 therefore states that capital structure moderates the effect of profitability on firm value.

Capital structure as a moderator of liquidity

When leverage is high, liquidity may become more relevant because current assets protect the company against debt-service pressure. Alternatively, a high current ratio may lose value relevance if debt risk dominates or if current assets are inefficiently managed. H4 states that capital structure moderates the effect of liquidity on firm value.

Code	Research hypothesis
H1	Profitability (ROA) has a positive and significant effect on firm value (PBV).
H2	Liquidity (CR) has a positive and significant effect on firm value (PBV).
H3	Capital structure (DER) moderates the effect of profitability on firm value.
H4	Capital structure (DER) moderates the effect of liquidity on firm value.

METHOD

Research design, population, and sample

The study adopts a quantitative explanatory design using balanced panel data. The unit of analysis is a listed company in the food and beverage subsector. The population consists of companies classified in the subsector and listed on the IDX during 2023–2024. Purposive sampling was applied based on continued listing, availability of annual and financial reports, and completeness of the variables needed to calculate ROA, CR, PBV, and DER. Seventy companies met the criteria. With two annual observations per company, the final dataset contains 140 firm-year observations.

Secondary data were obtained from audited financial statements, annual reports, the IDX website, and official corporate websites. The short window was selected to represent recent firm conditions while maintaining comparable financial-report availability. However, a two-year period restricts the analysis of long-term adjustment in financing, profitability, and valuation, and this limitation is considered when interpreting results.

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Variable measurement

Variable	Role	Proxy and formula	Interpretation
Firm value	Dependent	PBV = market price per share ÷ book value per share	Market valuation relative to accounting equity.
Profitability	Independent	ROA = net income ÷ total assets	Efficiency of assets in generating net income.
Liquidity	Independent	CR = current assets ÷ current liabilities	Capacity of current assets to cover short-term obligations.
Capital structure	Moderator	DER = total liabilities ÷ total equity	Relative reliance on debt versus shareholders' equity.
ROA×DER	Interaction	ROA multiplied by DER	Change in the ROA–PBV slope associated with DER.
CR×DER	Interaction	CR multiplied by DER	Change in the CR–PBV slope associated with DER.

Panel-data estimation and model selection

Panel-data analysis combines cross-sectional and time-series information. Three candidate estimators were considered: the common-effect model, which assumes a shared intercept; the fixed-effect model, which allows each firm to have a distinct time-invariant intercept; and the random-effect model, which treats unobserved firm heterogeneity as a random component. The Chow test compared common and fixed effects, while the Hausman test compared fixed and random effects. A 5% significance threshold was used.

The direct-effect model is expressed as $PBV_{it} = \alpha + \beta_1 ROA_{it} + \beta_2 CR_{it} + \beta_3 DER_{it} + \mu_i + \varepsilon_{it}$. The moderated model adds $\beta_4(ROA \times DER)_{it}$ and $\beta_5(CR \times DER)_{it}$. Firm fixed effects ($\mu_i$) control for time-invariant company characteristics such as brand position, business model, governance traditions, and structural asset composition. EViews 12 was used for estimation, diagnostics, and hypothesis testing.

Diagnostic tests and decision rules

Residual normality was evaluated using the reported probability value; a probability above 0.05 was treated as evidence that normality could not be rejected. Multicollinearity was assessed through correlations among explanatory variables, using 0.80 as the threshold. Heteroskedasticity was assessed from variable probability values, with values above 0.05 interpreted as no evidence of heteroskedasticity. Partial hypotheses were evaluated using t-statistics and p-values, while overall model significance was assessed using the F-test. Interaction hypotheses required the interaction coefficient to be statistically significant; a positive coefficient alone was not treated as evidence of moderation.

RESULTS

Descriptive profile of the panel

The dataset contains 140 observations from 70 companies. Table 2 summarizes the distribution of the four core measures. The mean ROA is 0.06, indicating average net income of approximately six percent of total assets. The mean CR is 2.55, but the standard deviation of 2.21 and maximum of 13.40 reveal considerable dispersion. PBV averages 1.79 with a standard deviation of 1.34. DER averages 0.89, meaning that total liabilities are slightly below equity on average, although the maximum of 4.93 indicates that some observations are heavily leveraged.

Table 2. Descriptive statistics

Variable	N	Minimum	Maximum	Mean	Std. deviation
ROA	140	0.00	0.22	0.06	0.05
CR	140	0.19	13.40	2.55	2.21
PBV	140	0.24	7.75	1.79	1.34
DER	140	0.05	4.93	0.89	0.86

Profitability distribution

ROA ranges from 0.00 to 0.22. Triputra Agro Persada Tbk records the maximum, while Gozco Plantations Tbk, Sekar Bumi Tbk, and Era Mandiri Cemerlang Tbk are identified at the minimum. The distribution is concentrated at low to moderate profitability: 47 observations (34%) fall between 0.00 and 0.03, 35 observations (25%) between 0.04 and 0.07, and 31 observations (22%) between 0.08 and 0.11. Thus, 81% of observations have ROA no higher than 0.11. Only two observations are in the 0.20–0.23 interval, and none exceed 0.23.

This concentration matters for interpretation. The positive coefficient is estimated primarily from differences within a relatively low ROA range rather than from many highly profitable firms. A one-unit increase in ROA is not economically realistic because ROA is expressed as a ratio; a 0.01 increase is more meaningful. Using the estimated coefficient of 3.590589, a one-percentage-point increase in ROA corresponds, ceteris paribus, to an approximate PBV increase of 0.0359 units. This scaling provides a more practical reading of the result.

Table 3. Distribution of ROA

ROA interval	Frequency	Share
0.00–0.03	47	34%
0.04–0.07	35	25%
0.08–0.11	31	22%
0.12–0.15	15	11%
0.16–0.19	10	7%
0.20–0.23	2	1%
0.24–0.31	0	0%

Liquidity distribution

CR ranges from 0.19 to 13.40. BISI International Tbk records the highest ratio, whereas Prasidha Aneka Niaga Tbk records the lowest. Eighty observations (57%) fall between 0.19 and 1.84, meaning that more than half of the panel operates below the commonly referenced level of two. At the other extreme, six observations have CR above 8.48. This right-skewed pattern explains why the mean is materially above the median and why the standard deviation is high.

The wide dispersion suggests that a linear CR coefficient averages across very different working-capital positions. For firms below one, an increase in CR may reduce near-term payment risk. For firms already holding abundant current assets, a further increase may signal inefficiency. These opposing marginal effects can cancel out in a linear specification, helping explain the insignificant average coefficient. The result should therefore not be interpreted as evidence that liquidity management is unimportant; it means that contemporaneous CR variation does not systematically explain PBV after firm effects and other variables are controlled.

Table 4. Distribution of CR

CR interval	Frequency	Share
0.19–1.84	80	57%
1.85–3.50	26	19%
3.51–5.16	19	14%
5.17–6.82	6	4%
6.83–8.48	4	3%
8.49–10.14	3	2%
10.15–13.46	2	2%

Firm-value distribution

PBV ranges from 0.24 to 7.75. Sumber Alfaria Trijaya Tbk records the maximum, indicating strong market valuation relative to book equity, while Salim Ivomas Pratama Tbk records the minimum. Fifty-eight observations (41%) have PBV between 0.24 and 1.18, and 34 observations (24%) between 1.19 and 2.13. Only ten observations exceed 4.98. The distribution therefore contains a large cluster around book value and a small upper tail of firms receiving substantial market premiums.

The cross-company variation in PBV is consistent with the need for firm fixed effects. Brand strength, growth options, retail presence, corporate group affiliation, governance, and investor visibility can create persistent valuation differences not captured by ROA, CR, or DER. Fixed effects absorb these time-invariant characteristics, allowing coefficients to reflect changes within firms across 2023 and 2024. The trade-off is that only two observations per firm provide limited within-firm variation, making estimates sensitive to year-specific movements.

Table 5. Distribution of PBV

PBV interval	Frequency	Share
0.24–1.18	58	41%

PBV interval	Frequency	Share
1.19–2.13	34	24%
2.14–3.08	30	21%
3.09–4.03	9	6%
4.04–4.98	5	4%
4.99–5.93	2	1%
5.94–7.83	2	2%

Capital-structure distribution

DER ranges from 0.05 to 4.93. Indo Pureco Pratama Tbk records the lowest ratio, implying limited debt relative to equity, while Sawit Sumbemas Sarana Tbk records the highest. Sixty-eight observations (49%) fall between 0.05 and 0.66, and 46 (33%) between 0.67 and 1.28. Hence, 82% of observations have DER no higher than 1.28, while a small number are highly leveraged. The mean of 0.89 and standard deviation of 0.86 confirm meaningful heterogeneity.

The concentration of DER at relatively low levels may limit the ability to detect moderation. Interaction effects require sufficient joint variation in the predictor and moderator. When most firms cluster within a restricted leverage band and only a few occupy the upper tail, the moderation estimate can be imprecise and heavily influenced by extreme observations. This issue is particularly relevant for ROA×DER because high-leverage firms are not necessarily the same firms that experience large changes in ROA.

Table 6. Distribution of DER

DER interval	Frequency	Share
0.05–0.66	68	49%
0.67–1.28	46	33%
1.29–1.90	13	9%
1.91–2.52	5	4%
2.53–3.14	3	2%
3.15–3.76	2	1%
3.77–5.00	3	2%

Panel-model selection

The Chow test reports a cross-section chi-square probability of 0.0000, rejecting the common-effect model in favor of fixed effects. The Hausman test reports a probability of 0.0425, rejecting the random-effect specification at the 5% level and supporting fixed effects. Because both tests select FEM, the Lagrange Multiplier test is unnecessary. The outcome implies that unobserved firm-specific characteristics correlate with the explanatory variables and should not be treated as random.

Table 7. Panel-model selection

Test	Models compared	Probability	Decision
Chow test	Common effect vs. fixed effect	0.0000	Fixed-effect model
Hausman test	Fixed effect vs. random effect	0.0425	Fixed-effect model

Diagnostic tests

The reported normality probability is 0.127, above 0.05, so residual normality is not rejected. Pairwise correlations among explanatory variables are below 0.80, indicating no severe multicollinearity under the study's criterion. Heteroskedasticity probabilities are 0.16881 for ROA, 0.1585 for CR, and 0.0881 for DER; all exceed 0.05. Collectively, these tests support proceeding with the reported FEM estimates.

The diagnostics should nevertheless be interpreted in light of the panel structure. Classical residual tests do not fully address cross-sectional dependence, serial correlation, or small-T behavior. With 70 firms and two years, heteroskedasticity-robust or cluster-robust standard errors could provide an additional sensitivity check. The article preserves the thesis results but identifies this as a methodological opportunity for future research.

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Table 8. Summary of diagnostic results

Diagnostic	Reported result	Criterion	Conclusion
Residual normality	p = 0.127	p > 0.05	Normality not rejected
Multicollinearity	All correlations < 0.80	Correlation < 0.80	No severe multicollinearity
Heteroskedasticity	ROA 0.16881; CR 0.1585; DER 0.0881	p > 0.05	No heteroskedasticity detected

Fixed-effect regression results

The selected direct-effect equation is PBV = 1.080109 + 3.590589ROA − 0.018815CR + 0.535506DER + firm fixed effects + error. ROA has a positive coefficient and is significant at the 5% level. CR has a small negative coefficient and is insignificant. DER is included as a direct control, while the principal hypotheses concern ROA, CR, and the interaction terms.

Table 9. Direct-effect hypothesis results

Relationship	Coefficient	t-statistic	p-value	Decision
ROA → PBV	3.590589	2.020704	0.0473	Positive and significant; H1 supported
CR → PBV	−0.018815	−0.326707	0.7449	Not significant; H2 not supported

The overall F-test probability is 0.000000, indicating that the model is jointly significant. R^2 is reported as 0.967872, or 96.78%. This very high value largely reflects the inclusion of 70 firm fixed effects, which absorb persistent cross-company differences. It should not be described solely as the proportion explained by ROA and CR. A more precise interpretation is that the full FEM—including the financial variables and firm-specific intercepts—accounts for 96.78% of the sample variation in PBV. This distinction is important because attributing the entire R^2 to two ratios would overstate their explanatory contribution.

Moderated regression results

The simultaneous moderated equation is PBV = 0.985590 + 2.970380ROA − 0.036851CR + 0.357549DER + 0.887729(ROA×DER) + 0.212769(CR×DER). Both interaction coefficients are positive, but neither is statistically significant. The ROA×DER interaction has t = 0.382184 and p = 0.7036. The CR×DER interaction has t = 0.989083 and p = 0.3263. Therefore, sign and magnitude cannot be treated as reliable evidence that DER changes either slope.

Table 10. Moderation hypothesis results

Interaction	Coefficient	t-statistic	p-value	Decision
ROA×DER → PBV	0.887729	0.382184	0.7036	Not significant; H3 not supported
CR×DER → PBV	0.212769	0.989083	0.3263	Not significant; H4 not supported

The thesis also reports separate partial moderation equations. For profitability, PBV = 1.009399 + 3.357009ROA + 0.549242DER + 0.573690(ROA×DER). For liquidity, PBV = 1.408687 − 0.063829CR + 0.246721DER + 0.208099(CR×DER). These equations confirm positive interaction signs, but the formal hypothesis decisions remain based on the p-values from the moderation tests. Separate equations do not convert insignificant interactions into significant moderation.

Table 11. Summary of research hypotheses

Hypothesis	Expected relationship	Empirical result	Status
H1	ROA positively affects PBV	Positive and significant (p = 0.0473)	Supported
H2	CR positively affects PBV	Negative and insignificant (p = 0.7449)	Not supported
H3	DER moderates ROA–PBV	Interaction insignificant (p = 0.7036)	Not supported
H4	DER moderates CR–PBV	Interaction insignificant (p = 0.3263)	Not supported

DISCUSSION

Profitability has a positive effect on firm value

The significant positive ROA coefficient indicates that the market rewards stronger asset productivity. Within the same company, an improvement in net income relative to total assets is associated with a higher PBV after controlling for CR, DER, and time-invariant firm characteristics. This finding is economically plausible in the food and beverage subsector,

where asset utilization, production efficiency, distribution scale, pricing, and product-mix management determine the conversion of factories, plantations, inventories, outlets, and logistics networks into earnings.

The result supports signaling theory. Financial statements reduce information asymmetry by communicating realized profitability. A higher ROA signals that management can generate returns from the existing asset base rather than relying only on asset expansion. Investors may infer stronger future cash flows, greater dividend capacity, or more internally financed growth. The response is reflected in a higher market price relative to book equity. The evidence aligns with Rahayu et al. (2020), who identify reciprocal relationships among profitability, capital structure, and corporate value, and with Qumariah et al. (2024) in the food and beverage context.

The statistical significance is marginal at $p = 0.0473$, only slightly below 0.05. The finding should therefore be described as supported at the conventional 5% threshold rather than as overwhelmingly strong evidence. Its robustness could be evaluated using alternative profitability measures such as ROE, net profit margin, or operating margin; alternative valuation measures such as Tobin's Q; winsorization of extreme values; and standard errors clustered by firm. The short observation period also means that the coefficient captures near-term association rather than a stable long-run elasticity.

The practical magnitude is clearer when ROA is scaled realistically. A one-percentage-point increase in ROA is associated with an approximate PBV increase of 0.0359. For a firm whose PBV is near the sample mean of 1.79, repeated efficiency gains could therefore have a meaningful valuation effect. Managers should focus on durable drivers of ROA: improving production yield, optimizing capacity utilization, managing procurement and energy costs, reducing waste, strengthening brand margins, and aligning asset investment with demand.

The finding does not imply that firms should maximize short-term earnings at the expense of product quality, innovation, resilience, or stakeholder relationships. Earnings generated through underinvestment or temporary cost cuts may not be sustainable. The relevant signal is persistent profitability supported by operating fundamentals. Investors and analysts should therefore examine the sources of ROA changes, including asset disposals, nonrecurring gains, impairment reversals, and denominator effects, rather than interpreting the ratio mechanically.

Liquidity does not significantly affect firm value

CR has a negative but statistically insignificant coefficient. The result indicates that, after controlling for profitability, leverage, firm fixed effects, and other model components, variation in short-term liquidity does not systematically change PBV. This finding is consistent with Simangunsong and Khoiri (2022) and Alif et al. (2023), who likewise report limited valuation relevance of liquidity in certain samples.

Several mechanisms explain the result. First, the current ratio does not distinguish among the quality of current assets. Cash is immediately available, receivables depend on collection, and inventory depends on turnover and obsolescence. Two firms with identical CR can therefore possess very different liquidity risk. Second, the ratio does not capture operating cash flow, credit facilities, supplier relationships, or debt maturity. Investors may rely on these broader indicators rather than CR alone.

Third, the sample has a highly skewed liquidity distribution. Most observations have CR below 1.84, but a small group has ratios above eight. For low-liquidity firms, improvement may reduce risk; for already liquid firms, additional current assets may suggest underutilized funds. A single linear coefficient averages these heterogeneous responses. Future research could test nonlinear terms, liquidity categories, or interactions with working-capital turnover to identify threshold effects.

Fourth, investors in consumer and food-related companies may prioritize profitability, sales growth, brand strength, distribution, and input-cost management over a static current ratio. If a company reliably generates operating cash and has access to short-term financing, a moderate CR may be sufficient. Conversely, a very high CR cannot compensate for weak earnings or limited growth prospects. This interpretation is consistent with signaling theory: liquidity is observable information, but it may be a weaker signal than profitability.

The insignificant effect should not encourage managers to neglect liquidity. Adequate working capital remains essential for purchasing materials, maintaining inventory, paying employees and suppliers, and avoiding disruption. The implication is narrower: increasing CR beyond an operationally appropriate level is not shown to increase market valuation. Managers should optimize—not maximize—liquidity, focusing on cash conversion, receivable quality, inventory turnover, and alignment between short-term assets and liabilities.

Capital structure does not moderate the profitability–value relationship

The ROA×DER interaction is insignificant. Capital structure therefore does not reliably strengthen or weaken the association between profitability and PBV during the observed period. Profitable firms appear to receive a positive market response regardless of whether their debt-to-equity ratio is relatively high or low. Investors may view earnings capacity as the more direct signal and treat financing composition as a separate risk consideration.

This finding is compatible with pecking-order theory. Profitable firms can use retained earnings to finance operations and investment, reducing dependence on debt. When internal financing dominates, changes in DER may be too limited or too endogenous to alter the market interpretation of ROA. The sample distribution supports this possibility: 82% of observations have DER no higher than 1.28, so most firms are not located at extreme leverage positions where moderation might be pronounced.

Trade-off theory also offers a conditional explanation. Debt enhances value only when firms are below their optimal leverage and can use the tax shield without generating excessive distress risk. Because optimal leverage differs by asset structure, business risk, growth opportunities, and cash-flow stability, a single DER interaction across 70 heterogeneous firms may fail to capture firm-specific optima. Some companies may benefit from additional debt while others may already be near or above their optimal level, causing average effects to offset.

The result agrees with Indira et al. (2021) and Prasetia et al. (2024) in showing that capital structure does not always perform the expected moderating role. It differs from Arsyada et al. (2022) and Fitriani (2023), highlighting the sensitivity of moderation to sector, period, specification, and proxy. Moderation studies should therefore avoid universal claims that debt automatically amplifies profitability's effect on value.

From a managerial perspective, the absence of moderation means that raising debt is not a demonstrated route for converting profitability into a higher PBV. Firms should select financing according to project cash flows, risk tolerance, maturity matching, interest coverage, covenant capacity, and ownership considerations. Profit improvement should be pursued through operations and strategy, while capital structure should be managed for resilience and cost of capital rather than used as a cosmetic valuation lever.

Capital structure does not moderate the liquidity–value relationship

The CR×DER interaction is also insignificant. The market does not appear to interpret liquidity differently in a systematic way across leverage levels. One explanation is that CR and DER measure different horizons: CR focuses on current assets and liabilities, while DER includes total liabilities relative to equity. A firm may have high DER dominated by long-term debt yet face little immediate liquidity pressure, or low DER but substantial short-term obligations. The interaction of these aggregate ratios may therefore be too coarse to represent maturity risk.

Another explanation is that investors assess solvency and liquidity through a portfolio of indicators. Interest coverage, operating cash flow, debt maturity, cash conversion cycle, and access to credit can be more informative than the product of CR and DER. If market participants use richer information, the simple interaction will add little explanatory power. This also explains why the coefficient can be positive without being statistically reliable.

The finding is consistent with the pecking-order argument that firms use internal liquidity before external financing. When liquidity reflects retained operating resources, contemporaneous DER changes may not alter its valuation relevance. It also fits the sample's heterogeneous business models: plantation, manufacturing, distribution, retail, and aquaculture firms have different working-capital cycles and debt structures. A common moderation parameter may obscure segment-specific effects.

Managers should therefore coordinate liquidity and leverage policies without assuming that their interaction will be rewarded by the equity market. Debt maturities should be aligned with cash-generation profiles, revolving facilities should match seasonal working-capital needs, and cash buffers should reflect volatility in commodity prices and demand. These risk-management benefits may protect value during stress even if the average interaction is insignificant in normal-period regression.

Interpreting the high R-squared

The reported R^2 of 0.967872 is unusually high for a firm-value model based on a small set of financial ratios. The fixed-effect specification includes a distinct intercept for each company, which captures persistent differences such as brand equity, governance, scale, ownership, market visibility, and business model. Consequently, the value represents the explanatory power of the complete model, not only ROA and CR. Presenting the 96.78% figure as the contribution of two ratios would be misleading.

The high R^2 also does not guarantee strong predictive performance outside the sample. Fixed effects fit historical differences for the 70 observed firms but do not directly predict a new company with no estimated intercept. Moreover, with only two years per firm, the model uses many firm parameters relative to the time dimension. Out-of-sample validation, adjusted within-R^2 reporting, and longer panels would provide a more balanced assessment of explanatory and predictive quality.

Integrated theoretical implications

Taken together, the results provide selective rather than universal support for financial signaling. Profitability is a value-relevant signal, liquidity is not, and capital structure does not condition either relationship. The market appears to distinguish between information closely connected to earnings generation and information that is more ambiguous in its

economic meaning. ROA directly communicates asset productivity, while CR can reflect either safety or inefficiency and DER can reflect either tax-efficient financing or financial risk.

The findings also qualify trade-off and pecking-order theories. Trade-off theory remains useful for explaining why leverage can have both benefits and costs, but the data do not show a common moderating effect across firms. Pecking-order theory offers a plausible explanation for the independence of profitability's signal from DER: profitable firms can finance with retained earnings, making leverage less central. Neither theory should be treated as invalid; rather, the interaction effects may depend on firm-specific financing positions, dynamic adjustments, and longer horizons.

Practical implications for investors and companies

Investors should prioritize the quality and persistence of profitability while interpreting liquidity and leverage in context. A high ROA supported by operating margins and efficient asset utilization is more informative than a one-period gain. CR should be decomposed into cash, receivables, and inventory, and DER should be evaluated together with debt maturity, interest coverage, and operating cash flow. This integrated analysis can reduce the risk of treating a single ratio as a sufficient investment signal.

Companies should increase value through sustainable asset productivity. Investment decisions should be linked to utilization targets and post-investment review; procurement and production processes should reduce waste; product portfolios should be managed for margin and demand; and distribution assets should be evaluated based on contribution to sales and cash flow. Liquidity should be maintained at a level consistent with the operating cycle, while excess cash should be allocated according to disciplined capital budgeting.

Financing decisions require equal discipline. Debt should be used when expected project returns and cash-flow stability justify fixed obligations. Firms should avoid increasing leverage simply because debt offers a tax shield, just as they should avoid maintaining an excessively conservative structure that prevents value-creating investment. Transparent disclosure of financing purpose, maturity profile, covenant headroom, and risk management can help investors interpret DER more accurately.

CONCLUSION

This study investigates 70 food and beverage subsector companies listed on the IDX during 2023–2024, producing 140 firm-year observations. Fixed-effect panel regression shows that profitability, measured by ROA, has a positive and significant effect on PBV. Liquidity, measured by CR, has no significant effect. Moderated regression analysis shows that DER does not moderate the effect of either ROA or CR on PBV. Accordingly, only H1 is supported.

The evidence indicates that the market rewards asset productivity more consistently than short-term liquidity or the interaction of operating ratios with financing composition. Capital structure remains important for risk and cost-of-capital management, but it is not shown to be a general mechanism that amplifies profitability or liquidity signals in this sample. Managers should therefore emphasize sustainable earnings, efficient working capital, and prudent financing as distinct but coordinated objectives.

LIMITATIONS AND FUTURE RESEARCH

The first limitation is the two-year observation period. Capital structure, profitability, and firm value adjust over longer horizons, while a short period is sensitive to temporary shocks. Future studies should use at least five years and consider dynamic panel models. Second, the analysis relies on one proxy per construct. Alternative measures such as ROE, net profit margin, quick ratio, cash ratio, Tobin's Q, and debt-to-assets ratio can assess robustness.

Third, the high fixed-effect R^2 should not be interpreted as the isolated contribution of ROA and CR. Future studies should report within, between, and overall R^2, adjusted measures, and incremental explanatory power. Fourth, diagnostic extensions should include cross-sectional dependence, serial correlation, robust or clustered standard errors, and influence analysis for extreme CR, DER, and PBV observations. Fifth, potential nonlinearity can be examined through squared liquidity and leverage terms or threshold regression.

Future research may also test firm size, dividend policy, growth opportunities, governance, operating cash flow, and brand intensity as moderators or mediators. Segment-level comparisons between plantation, manufacturing, distribution, and retail firms can clarify whether business models shape the valuation relevance of liquidity and leverage. Finally, combining accounting data with market and macroeconomic variables may produce a more comprehensive explanation of firm value.

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