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PROFITABILITY, LIQUIDITY, AND CAPITAL STRUCTURE AS DETERMINANTS OF FIRM VALUE: EVIDENCE FROM INDONESIA'S FOOD AND BEVERAGE SUBSECTOR, 2023– 2025

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ABSTRACT

Purpose: This study examines the effects of profitability (return on assets, ROA), liquidity (current ratio, CR), and capital structure (debt-to-equity ratio, DER) on firm value (price-to-book value, PBV) among food and beverage (F&B) firms listed on the Indonesia Stock Exchange (IDX) during 2023–2025. **Method:** Using a quantitative panel-data design and purposive sampling, the study analyzes 25 firms over three years (75 firm-year observations). Model-selection tests (Chow, Hausman, and Lagrange multiplier) favor the random effects model. **Findings:** ROA has a positive and significant effect on PBV, consistent with signaling theory. DER has a negative and significant effect on PBV, consistent with the financial-distress side of trade-off theory, although the result is also compatible with pecking order theory. CR has no significant effect on PBV. Jointly, the three variables significantly affect PBV ($F = 18.42$; $p < 0.001$; adjusted $R^2 = 0.415$). **Originality/value:** The study tests the three determinants simultaneously on F&B panel data covering 2023–2025, a period in which high interest rates gave way to monetary easing. The findings suggest that F&B managers should safeguard earnings quality and manage leverage prudently, and that investors should weigh profitability and leverage when valuing F&B stocks.

Keywords: profitability; liquidity; capital structure; firm value; food and beverage; panel data regression; signaling theory

JEL Classification: G32; L66

1. INTRODUCTION

Firm value is a primary strategic objective in financial management. For publicly listed companies, firm value reflects the market's perception of growth prospects and the sustainability of future cash flows (Brigham & Ehrhardt, 2020). Within the framework of financial theory, high firm value is associated with the maximization of shareholder wealth, easier access to capital markets, and a lower cost of capital.

The food and beverage (F&B) subsector belongs to the consumer staples sector, which is relatively defensive because its products are basic necessities. The 2023–2025 period was marked by complex



macroeconomic dynamics. Bank Indonesia kept the BI-Rate at a high level throughout 2023–2024 (Bisnis.com, 2025) and then cut it five times during 2025, from 6.00% to 4.75% by September 2025 (Kontan, 2025). This shift in the direction of monetary policy changed both the funding costs of F&B issuers and investors' valuations of them within a single period.

Although sales in this subsector are relatively stable, its market valuations vary widely. In the sample of this study, PBV ranges from 0.580 to 5.920 times (Table 3), meaning that some issuers trade below book value while others trade well above it. This gap raises the question of which internal factors most strongly determine firm value.

Three internal factors commonly considered by investors are profitability, liquidity, and capital structure. Profitability reflects a firm's ability to generate earnings from its assets (Subramanyam, 2014). Liquidity describes the ability to meet short-term obligations (Kasmir, 2019). Capital structure describes the balance of financing between debt and equity (Brigham & Houston, 2019).

1.1. Research gap

Prior studies of F&B issuers in Indonesia have yielded inconsistent results. Profitability generally has a positive and significant effect on firm value (Aristia & Laily, 2024; Budiandriani, 2023; Putri & Suprihadi, 2025; Ratnasari & Utityati, 2021). Liquidity is generally insignificant (Aristia & Laily, 2024; Budiandriani, 2023; Putri & Suprihadi, 2025; Ubang et al., 2025). For leverage or capital structure, however, the results vary: a positive and significant effect (Aristia & Laily, 2024; Budiandriani, 2023), no significant effect (Putri & Suprihadi, 2025; Ratnasari & Utityati, 2021), or a significant effect with profitability playing a moderating role (Ubang et al., 2025).

Most of these studies cover periods before or up to 2023, prior to the 2025 BI-Rate easing cycle. The present study fills this gap by testing the three determinants simultaneously on F&B panel data for 2023–2025, a period in which high interest rates transitioned into monetary easing.

1.2. Research problem and objectives

Signaling theory predicts that high earnings serve as a positive signal to the market. During periods of cost pressure, however, the market may doubt the sustainability of earnings. With respect to liquidity, pecking order theory emphasizes the benefits of internal funds as a buffer, whereas agency theory (Jensen, 1986) warns of the agency costs of excess cash. With respect to capital structure, trade-off theory balances the tax benefits of debt against the costs of financial distress. Accordingly, this study aims:

1. to analyze the partial effect of profitability (ROA) on firm value (PBV) among F&B firms listed on the IDX during 2023–2025;
2. to analyze the partial effect of liquidity (CR) on firm value (PBV);
3. to analyze the partial effect of capital structure (DER) on firm value (PBV); and
4. to analyze the simultaneous effect of these three variables on firm value (PBV).

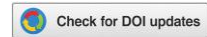
The remainder of this article is organized as follows. Section 2 reviews the theoretical foundations and develops the hypotheses. Section 3 describes the research method. Section 4 presents the results, Section 5 discusses them, and Section 6 concludes and outlines the limitations and directions for future research.

2. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

2.1. Theoretical foundations

Signaling theory

Signaling theory was developed by Spence (1973) and applied to finance by Ross (1977). The theory starts from the information asymmetry between management and investors. Management conveys signals about the firm's prospects through its performance and financial statements. High profitability



is regarded as a positive signal about prospects and cash flows, so investors respond by raising their valuation of the stock and the PBV ratio.

Trade-off theory

This theory was developed from the propositions of Modigliani and Miller (1958, 1963), which incorporate corporate taxes, and has been discussed by, among others, Kraus and Litzenberger (1973) and DeAngelo and Masulis (1980). Firms determine their optimal capital structure by balancing the tax-shield benefits of interest against the costs of financial distress. Below the optimal point, additional debt increases firm value. Above the optimal point, bankruptcy costs and the agency costs of debt (Jensen & Meckling, 1976) reduce firm value.

Pecking order theory

Myers (1984) and Myers and Majluf (1984) argue that information asymmetry leads firms to follow a financing hierarchy: internal funds first, then debt, and new equity issuance as the last resort. The implication is that profitable and liquid firms can finance investment without new debt or equity and therefore tend to have lower debt ratios. Hermuningsih (2012) found that profitability had a negative effect on capital structure among firms listed on the IDX during 2006–2010, which is consistent with this logic.

2.2. Hypothesis development

Profitability and firm value

Based on signaling theory, a high ROA is evidence of efficient asset management and serves as a positive signal to investors. Studies of F&B firms have found a positive and significant effect of profitability on firm value (Aristia & Laily, 2024; Ratnasari & Utayati, 2021), and similar results have been reported for IDX-listed firms more broadly (Adi Putra & Lestari, 2016). Hence:

H1. Profitability (ROA) has a positive and significant effect on firm value (PBV).

Liquidity and firm value

Adequate liquidity lowers default risk and provides assurance to suppliers and creditors, and can therefore increase firm value; Adi Putra and Lestari (2016) reported a positive partial effect. However, agency theory (Jensen, 1986) predicts the opposite direction when excess cash is not allocated productively, and studies of F&B issuers frequently find an insignificant effect (Budiandriani, 2023; Ubang et al., 2025). The hypothesis is formulated on the basis of the liquidity-risk argument, while acknowledging these competing predictions:

H2. Liquidity (CR) has a positive and significant effect on firm value (PBV).

Capital structure and firm value

DER reflects the proportion of debt to equity. In a high-interest-rate period, an increase in DER raises interest expenses and the risk of financial distress, which, according to the bankruptcy-cost side of trade-off theory, investors view negatively. Empirical evidence for the F&B subsector remains inconsistent (see Section 1.1), so the direction of the effect needs to be tested for the present study period:

H3. Capital structure (DER) has a negative and significant effect on firm value (PBV).

Simultaneous effect

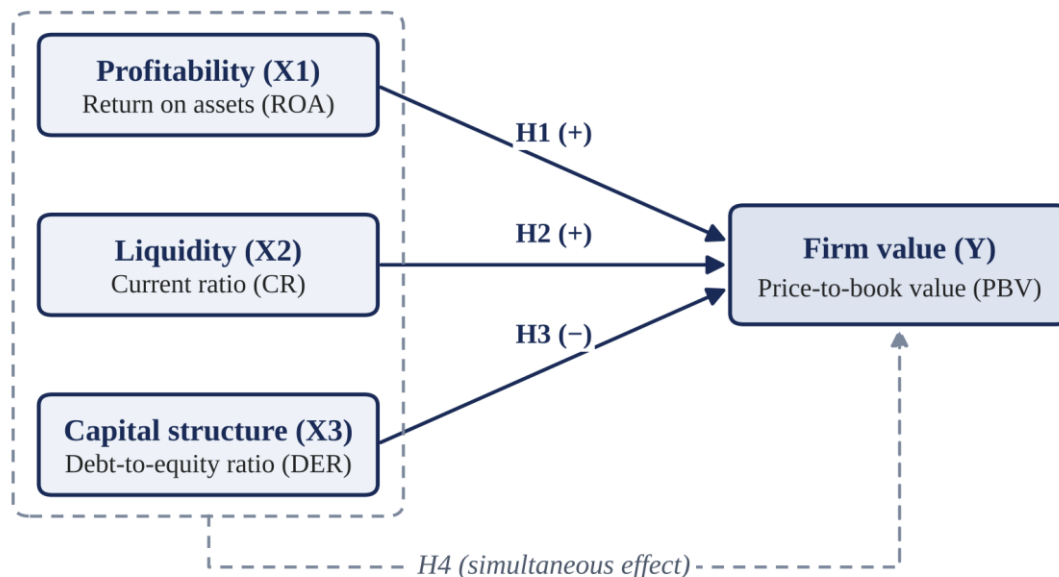
Firm value is shaped by the combination of operating efficiency (profitability), short-term risk (liquidity), and financing risk (capital structure). Together, these three factors form the firm's risk-and-return profile. Hence:

H4. Profitability (ROA), liquidity (CR), and capital structure (DER) simultaneously have a significant effect on firm value (PBV).

2.3. Conceptual framework

Figure 1 summarizes the hypothesized relationships. ROA (H1) and CR (H2) are expected to be positively related to PBV, DER (H3) is expected to be negatively related to PBV, and the three variables are expected to jointly affect PBV (H4).

Figure 1. Proposed conceptual framework



3. RESEARCH METHOD

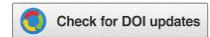
3.1. Research design and context

This study employs an explanatory quantitative approach using panel data, with the firm-year as the unit of observation. The data are secondary data drawn from the audited annual financial statements of F&B firms listed on the IDX during 2023–2025, which were downloaded in 2026 from the official website of the Indonesia Stock Exchange (www.idx.co.id) under the financial and annual reports menu. The year-end closing stock prices used to calculate PBV were obtained from Yahoo Finance (finance.yahoo.com), using the closing price on the last trading day of each year.

3.2. Population, sample, and data collection

The population comprises all F&B firms listed as of the end of 2025, identified according to the IDX Industrial Classification (IDX-IC) as the Food & Beverage subsector of the Consumer Non-Cyclicals sector. Only firms with active listing status at the end of 2025 were included, yielding 36 firms (the stock list was accessed in 2026).

The sample was determined by purposive sampling (Sugiyono, 2019) based on the criteria in Table 1. Firms that recorded consecutive net losses were excluded so that the profitability ratio could be interpreted meaningfully; the consequences of this criterion for possible selection bias are discussed in the limitations section.


Table 1. Sample selection criteria

Sample selection criterion	Number of firms
Food and beverage subsector firms listed on the IDX (2023–2025)	36
Excluded: firms that conducted an IPO after 2023 or were delisted	(4)
Excluded: financial statements not presented in Indonesian rupiah (IDR)	(4)
Excluded: firms with consecutive net losses	(3)
Final sample	25

Note. Data processed by the author.

With 25 firms and three observation years (2023, 2024, and 2025), the study obtains 75 firm-year observations.

3.3. Measures and operational definitions

Table 2 presents the operational definitions of the research variables.

Table 2. Operational definitions of variables

Variable type	Variable name	Formula / indicator	Scale
Dependent (Y)	Firm value (PBV)	$PBV = \text{Market price per share} / \text{Book value per share}$	Ratio
Independent (X1)	Profitability (ROA)	$ROA = (\text{Net income after tax} / \text{Total assets}) \times 100\%$	Ratio (%)
Independent (X2)	Liquidity (CR)	$CR = (\text{Current assets} / \text{Current liabilities}) \times 100\%$	Ratio (%)
Independent (X3)	Capital structure (DER)	$DER = \text{Total liabilities} / \text{Total equity}$	Ratio

Note. Data processed by the author.

3.4. Data analysis

The hypotheses were tested using panel data regression (Baltagi, 2021; Ghazali & Ratmono, 2020) with EViews software. The estimated model is as follows:

$$PBV_{it} = \beta_0 + \beta_1 ROA_{it} + \beta_2 CR_{it} + \beta_3 DER_{it} + \varepsilon_{it} \quad (1)$$

where PBV_{it} is the price-to-book value of firm i in year t , β_0 is the constant, β_1 – β_3 are the regression coefficients, and ε_{it} is the error term. The best model among the common effects model (CEM), the fixed effects model (FEM), and the random effects model (REM) was selected using the Chow test, the Hausman test, and the Lagrange multiplier test. The partial hypotheses were tested using the t-test, and the simultaneous hypothesis was tested using the F-test, at the 5% significance level.

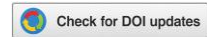
3.5. Research ethics

This study used only publicly available secondary data (audited financial statements and stock prices) and did not involve human participants; therefore, ethical approval and informed consent were not required.

4. RESULTS

4.1. Descriptive statistics

Table 3 summarizes the distribution of the research variables (N = 75).


Table 3. Descriptive statistics

Variable	Mean	Std. deviation	Minimum	Maximum
PBV (times)	2.145	1.280	0.580	5.920
ROA (%)	7.820	4.650	1.120	21.400
CR (%)	185.340	72.150	88.200	395.600
DER (times)	0.985	0.540	0.220	2.650

Note. N = 75 firm-year observations. PBV = price-to-book value; ROA = return on assets; CR = current ratio; DER = debt-to-equity ratio. Data processed by the author.

The mean PBV of 2.145 times indicates that, in general, F&B stocks are priced above their book value, while the range of 0.580–5.920 times signals widely varying valuations across firms. The mean ROA is 7.820%, with a range of 1.120–21.400%. The mean CR of 185.340% indicates that liquidity is generally above 100%, although the minimum value of 88.200% shows that some observations fall below that level. The mean DER of 0.985 times means that the average financing structure is almost evenly balanced between debt and equity.

4.2. Panel data regression model selection

1. Chow test (CEM vs. FEM): F-statistic = 3.842 ($p = 0.002 < 0.05$); thus, FEM is preferred to CEM.
2. Hausman test (FEM vs. REM): chi-square = 4.115 ($p = 0.249 > 0.05$); thus, REM is selected over FEM.
3. Breusch–Pagan Lagrange multiplier test (CEM vs. REM): LM = 12.680 ($p < 0.001$); thus, REM is preferred to CEM.

Based on these three tests, REM is used as the final estimation model.

4.3. Diagnostic tests

Because REM estimation is based on generalized least squares (GLS), not all classical assumption tests are strictly required. Diagnostic checks were nevertheless performed to assess model adequacy:

- Normality: Jarque–Bera = 2.104 ($p = 0.349 > 0.05$); the residuals are normally distributed.
- Multicollinearity: the VIF values are 1.28 for ROA, 1.41 for CR, and 1.35 for DER, all below 10; thus, there is no multicollinearity.
- Heteroskedasticity: the Glejser test yields p-values above 0.05 for all variables.
- Autocorrelation: Durbin–Watson = 1.942, indicating no autocorrelation. Because the panel has only three periods, this result is interpreted with caution.

4.4. Random effects model estimation results

Table 4 presents the estimation results of the random effects model.

Table 4. Random effects model estimation results

Variable	Coefficient (β)	Std. error	t-statistic	p-value	Hypothesis decision
Constant	1.412	0.325	4.345	0.000	–
ROA (X1)	0.148	0.026	5.692	0.000***	H1 supported
CR (X2)	0.001	0.002	0.500	0.618 (ns)	H2 not supported
DER (X3)	–0.465	0.182	–2.555	0.012**	H3 supported

Note. Adjusted $R^2 = 0.415$; F-statistic = 18.420; p-value (F) = 0.000. *** $p < 0.001$; ** $p < 0.05$; ns = not significant. Data processed by the author.



4.5. Hypothesis testing

Profitability (ROA) and firm value (PBV). ROA has a coefficient of 0.148 ($t = 5.692$; $p < 0.001$); thus, H1 is supported. Each one-percentage-point increase in ROA is associated with an increase in PBV of 0.148 times, holding the other variables constant.

Liquidity (CR) and firm value (PBV). CR has a coefficient of 0.001 ($t = 0.500$; $p = 0.618$); thus, H2 is not supported.

Capital structure (DER) and firm value (PBV). DER has a coefficient of -0.465 ($t = -2.555$; $p = 0.012$); thus, H3 is supported. A one-times increase in DER is associated with a decrease in PBV of 0.465 times.

Simultaneous effect and coefficient of determination. The F-test yields 18.420 ($p < 0.001$); thus, H4 is supported: ROA, CR, and DER jointly have a significant effect on PBV. The adjusted R^2 of 0.415 means that 41.5% of the variation in PBV is explained by the three variables.

5. DISCUSSION

5.1. Profitability and firm value

The positive effect of ROA on PBV is consistent with signaling theory (Spence, 1973): in an industry characterized by intense competition and fluctuating raw material costs, consistent earnings can be read by investors as a signal of operational excellence and rewarded with share price appreciation. This result is in line with studies of F&B issuers by Aristia and Laily (2024), Ratnasari and Utiyati (2021), and Budiandriani (2023).

5.2. Liquidity and firm value

The insignificant effect of CR is in line with Budiandriani (2023), Ubang et al. (2025), and Putri and Suprihhadi (2025), who likewise found no significant effect of liquidity. One possible interpretation is that investors view liquidity as a basic operational prerequisite rather than a factor that differentiates valuation, as long as short-term obligations can be met. This interpretation was not tested directly in this study. The free-cash-flow agency argument (Jensen, 1986) would only be relevant if unproductive excess cash could be identified, whereas this study did not measure excess cash; the argument is therefore positioned as an alternative explanation rather than a finding.

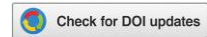
5.3. Capital structure and firm value

The negative effect of DER on PBV is consistent with the financial-distress cost side of trade-off theory, given the high interest burden during most of the observation period.

However, this result should be interpreted with caution. First, a negative linear coefficient does not test for the existence of an optimal capital structure and therefore cannot be said to fully confirm trade-off theory. Second, the same result could also arise under pecking order theory because more profitable firms tend to borrow less (Hermuningsih, 2012; Myers, 1984), so the direction of causality cannot be established. Third, this result differs from Aristia and Laily (2024) and Budiandriani (2023), who reported a significant positive effect in the F&B subsector, and from Ratnasari and Utiyati (2021) and Putri and Suprihhadi (2025), who found no significant effect. Differences in study periods, sample sizes, and leverage proxies may partly account for these differences, which underscores the need for further research.

5.4. Simultaneous effect and explanatory power

While ROA, CR, and DER jointly explain 41.5% of the variation in PBV, the remaining 58.5% is explained by other factors outside the model, such as firm size, dividend policy, macroeconomic conditions, and sustainability factors.



5.5. Theoretical implications

Taken together, the findings support signaling theory as an explanation of the relationship between profitability and firm value in the F&B subsector during 2023–2025. The negative effect of DER is consistent with the financial-distress cost side of trade-off theory; however, because the linear model does not test for an optimal capital structure, this result cannot be distinguished from the pecking order explanation. The insignificant effect of CR indicates that, in this sample, liquidity does not differentiate firm valuations.

5.6. Managerial and policy implications

For financial managers, these results suggest paying attention to improving margins and asset turnover to sustain ROA, as well as managing the proportion of debt prudently—particularly when funding costs are high—so that interest expenses do not erode market valuation. For investors, ROA and DER merit close attention when valuing F&B stocks, whereas CR does not appear to be a valuation differentiator in this sample. These implications are associative and are not intended as evidence of cause-and-effect relationships.

6. CONCLUSION

Based on panel data analysis of 25 F&B firms listed on the IDX during 2023–2025 (75 observations), it is concluded that:

1. Profitability (ROA) has a positive and significant effect on firm value (PBV), consistent with signaling theory.
2. Liquidity (CR) has no significant effect on firm value (PBV).
3. Capital structure (DER) has a negative and significant effect on firm value (PBV), consistent with the financial-distress cost side of trade-off theory but indistinguishable from the pecking order explanation.
4. Simultaneously, ROA, CR, and DER have a significant effect on firm value (PBV), with an adjusted R^2 of 41.5%.

6.1. Limitations and future research

This study has several limitations:

- The observation period covers only three years and the sample comprises 25 firms in a single subsector, which limits generalizability and statistical power.
- The criterion that excludes firms with consecutive losses may introduce selection bias because the worst-performing firms are not covered.
- The model does not include control variables such as firm size and growth, nor does it test for a non-linear DER relationship; consequently, omitted variables and simultaneity (reverse causality) cannot be ruled out.

Future research is encouraged to extend the observation period, broaden the scope to other manufacturing sectors, add control variables (firm size, growth, and dividend policy), test for non-linearity in capital structure, use standard errors that are robust to within-firm correlation, and consider macroeconomic and corporate governance variables.

DECLARATIONS

Author contributions (CRediT): SHS: Conceptualization, Methodology, Data curation, Formal analysis, Investigation, Writing—original draft, Writing—review & editing.

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Informed consent statement: Not applicable.

Data availability statement: The financial statement data are publicly available from the Indonesia Stock Exchange (www.idx.co.id), and the stock price data are publicly available from Yahoo Finance (finance.yahoo.com). The compiled dataset is available from the corresponding author upon reasonable request.

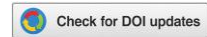
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REFERENCES

- Adi Putra, A. A. N. D., & Lestari, P. V. (2016). Pengaruh kebijakan dividen, likuiditas, profitabilitas dan ukuran perusahaan terhadap nilai perusahaan [The effect of dividend policy, liquidity, profitability, and firm size on firm value]. *E-Jurnal Manajemen*, 5(7).
<https://ojs.unud.ac.id/index.php/manajemen/article/view/20373>
- Aristia, D., & Laily, N. (2024). Pengaruh leverage, profitabilitas dan likuiditas terhadap nilai perusahaan food and beverages yang terdaftar di Bursa Efek Indonesia [The effect of leverage, profitability, and liquidity on the firm value of food and beverage companies listed on the Indonesia Stock Exchange]. *Jurnal Ilmu dan Riset Manajemen*.
<https://jurnalmahasiswa.stiesia.ac.id/index.php/jirm/article/view/5938>
- Baltagi, B. H. (2021). *Econometric analysis of panel data* (6th ed.). Springer.
<https://doi.org/10.1007/978-3-030-53953-5>
- Bisnis.com. (2025, August 20). *BI sudah pangkas BI Rate 75 bps sejak awal 2025, sinyal pelonggaran moneter berlanjut* [BI has cut the BI-Rate by 75 bps since early 2025, signaling continued monetary easing]. <https://finansial.bisnis.com/read/20250820/11/1904086/bi-sudah-pangkas-bi-rate-75-bps-sejak-awal-2025-sinyal-pelonggaran-moneter-berlanjut>
- Brigham, E. F., & Ehrhardt, M. C. (2020). *Financial management: Theory & practice* (16th ed.). Cengage Learning.
- Brigham, E. F., & Houston, J. F. (2019). *Fundamentals of financial management* (15th ed.). Cengage Learning.
- Budiandriani. (2023). How capital structure, liquidity, and profitability affect on company value (intervening variables studies on food and beverage sub-sector manufacturing companies on IDX). *Enrichment: Journal of Management*, 12(6).
<https://garuda.kemdiktisaintek.go.id/documents/detail/3348419>
- DeAngelo, H., & Masulis, R. W. (1980). Optimal capital structure under corporate and personal taxation. *Journal of Financial Economics*, 8(1), 3–29. [https://doi.org/10.1016/0304-405X\(80\)90019-7](https://doi.org/10.1016/0304-405X(80)90019-7)
- Ghozali, I., & Ratmono, D. (2020). *Analisis multivariat dan ekonometrika: Teori, konsep, dan aplikasi dengan EViews 10* [Multivariate analysis and econometrics: Theory, concepts, and applications with EViews 10]. Badan Penerbit Universitas Diponegoro.
- Hermuningsih, S. (2012). Pengaruh profitabilitas, size terhadap nilai perusahaan dengan struktur modal sebagai variabel intervening [The effect of profitability and size on firm value with capital structure as an intervening variable]. *Jurnal Siasat Bisnis*, 16(2), 232–242.
<https://journal.uui.ac.id/JSB/article/view/3304>
- Jensen, M. C. (1986). Agency costs of free cash flow, corporate finance, and takeovers. *American Economic Review*, 76(2), 323–329. <https://www.jstor.org/stable/1818789>



- Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3(4), 305–360.
[https://doi.org/10.1016/0304-405X\(76\)90026-X](https://doi.org/10.1016/0304-405X(76)90026-X)
- Kasmir. (2019). *Analisis laporan keuangan* [Financial statement analysis] (Rev. ed.). PT RajaGrafindo Persada.
- Kontan. (2025, October 22). *BI buka ruang pemangkasan suku bunga acuan sebelum tutup tahun 2025* [BI opens room for a benchmark interest rate cut before the end of 2025].
<https://nasional.kontan.co.id/news/bi-masih-buka-ruang-pemangkasan-suku-bunga-acuan-sebelum-tutup-tahun-2025>
- Kraus, A., & Litzenberger, R. H. (1973). A state-preference model of optimal financial leverage. *The Journal of Finance*, 28(4), 911–922. <https://doi.org/10.1111/j.1540-6261.1973.tb01415.x>
- Modigliani, F., & Miller, M. H. (1958). The cost of capital, corporation finance and the theory of investment. *The American Economic Review*, 48(3), 261–297.
<https://www.jstor.org/stable/1809766>
- Modigliani, F., & Miller, M. H. (1963). Corporate income taxes and the cost of capital: A correction. *The American Economic Review*, 53(3), 433–443. <https://www.jstor.org/stable/1809167>
- Myers, S. C. (1984). The capital structure puzzle. *The Journal of Finance*, 39(3), 574–592.
<https://doi.org/10.1111/j.1540-6261.1984.tb03646.x>
- Myers, S. C., & Majluf, N. S. (1984). Corporate financing and investment decisions when firms have information that outside investors do not have. *Journal of Financial Economics*, 13(2), 187–221. [https://doi.org/10.1016/0304-405X\(84\)90023-0](https://doi.org/10.1016/0304-405X(84)90023-0)
- Putri, N. S. A., & Suprihadi, H. (2025). Pengaruh profitabilitas, likuiditas, dan leverage terhadap nilai perusahaan pada perusahaan food and beverage yang terdaftar di Bursa Efek Indonesia [The effect of profitability, liquidity, and leverage on firm value in food and beverage companies listed on the Indonesia Stock Exchange]. *Jurnal Ilmu dan Riset Manajemen*.
<https://jurnalmahasiswa.stiesia.ac.id/index.php/jirm/article/view/6286>
- Ratnasari, F., & Utiyati, S. (2021). Pengaruh profitabilitas, likuiditas dan leverage terhadap nilai perusahaan pada perusahaan makanan dan minuman yang terdaftar di BEI [The effect of profitability, liquidity, and leverage on firm value in food and beverage companies listed on the IDX]. *Jurnal Ilmu dan Riset Manajemen*.
<https://jurnalmahasiswa.stiesia.ac.id/index.php/jirm/article/view/3912>
- Ross, S. A. (1977). The determination of financial structure: The incentive-signalling approach. *The Bell Journal of Economics*, 8(1), 23–40. <https://www.jstor.org/stable/3003485>
- Spence, M. (1973). Job market signaling. *The Quarterly Journal of Economics*, 87(3), 355–374.
<https://doi.org/10.2307/1882010>
- Subramanyam, K. R. (2014). *Financial statement analysis* (11th ed.). McGraw-Hill Education.
- Sugiyono. (2019). *Metode penelitian kuantitatif, kualitatif, dan R&D* [Quantitative, qualitative, and R&D research methods]. Alfabeta.
- Ubang, R. E., Rinofah, R., & Sari, P. P. (2025). Analysis of the effect of liquidity, leverage, and company size on firm value through moderation of profitability in food and beverage manufacturing companies listed on the IDX 2018–2022. *Global Summit on Sustainable Innovation and Green Technologies (GS-SIGRET) Proceedings*, 1, 87–104.
<https://jurnal.untirta.ac.id/index.php/GS-SIGRET/article/download/31139/14225>