Journal of Applied Business, Taxation and Economics Research (JABTER)
Vol. 6, No. 1, October 2026 (Page: 129-140) P-ISSN 2828-4976
https://doi.org/10.54408/jabter.v6i1.687 E-ISSN 2808-263X

The Influence of Operating Cash Flow, Leverage, and Capital Intensity on Firm Value with Profitability as a Moderating Variable in the Palm Oil Industry Listed on the Indonesia Stock Exchange (IDX) for the Period 2020–2025

Widodo Budi Utomo[1*], Masno Marjohan[1], Zulfitra[1]

[1)]Unversitas Pamulang, South Tangerang, Indonesia*

Corresponding author: widodobudiutomo17@gmail.com[1)]*

Keywords:
Operating Cash Flow, Leverage, Capital Intensity, Firm Value; Profitability, Tobin's Q, Palm Oil, Indonesia Stock Exchange

Abstract: This study examines and analyzes the influence of operating cash flow (OCF), leverage (DER), and capital intensity (CIR) on firm value—proxied by Tobin's Q—and investigates the moderating role of profitability (NPM) in those relationships. The study focuses on 17 palm oil companies within the Consumer Non-Cyclicals sector (Plantations & Crops sub-industry) listed on the Indonesia Stock Exchange (IDX) during the 2020–2025 period. A quantitative approach was employed using balanced panel data comprising 102 observations (17 companies × 6 years). Analysis was conducted using panel data regression and Moderated Regression Analysis (MRA) with EViews software. Model selection applied the Chow Test, Hausman Test, and Lagrange Multiplier Test, resulting in the Fixed Effect Model (FEM) as the most appropriate specification. FEM results indicate that operating cash flow (coef. 4.3675; p = 0.000), leverage (coef. 0.0593; p = 0.000), and capital intensity (coef. 1.0844; p = 0.000) each have a positive and significant effect on Tobin's Q. MRA results reveal that profitability (NPM) positively moderates the relationships of OCF (coef. 37.5899; p = 0.000) and DER (coef. 0.3489; p = 0.019) with Tobin's Q, while negatively moderating the relationship of CIR (coef. −3.6754; p = 0.000) with Tobin's Q. The model explains 97.72% of the variation in firm value (R^2 = 0.9772; F = 185.04; p = 0.000). These findings contribute empirical evidence on the simultaneous importance of cash flow efficiency, leverage management, and asset intensity in shaping market valuation within Indonesia's palm oil industry.

Introduction

Indonesia's palm oil industry occupies a pivotal position in the national economy. The country currently possesses the world's largest oil palm plantation area—approximately 16.83 million hectares—with crude palm oil (CPO) production reaching 45.44 million tonnes in 2024 (Ministry of Agriculture of the Republic of Indonesia, 2026; GAPKI, 2026). This dominance, however, comes alongside significant governance challenges related to

Journal of Applied Business, Taxation and Economics Research (JABTER) is licensed under an Attribution-ShareAlike 4.0 International (CC BY-SA 4.0)

P-ISSN 2828-4976
E-ISSN 2808-263X

sustainability certification under the mandatory Indonesian Sustainable Palm Oil (ISPO) scheme, as regulated by Presidential Regulation No. 44 of 2020 and expanded by Presidential Regulation No. 16 of 2025.

From the downstream perspective, the government's mandatory biodiesel program—progressing from B35 in 2023, B40 in 2025, and B50 effective 1 July 2026 has substantially increased domestic CPO absorption and placed renewed pressure on the financial management of plantation companies (CNBC Indonesia, 2026; GAPKI, 2026). These structural shifts in the regulatory and commodity environment make the financial determinants of firm value an important area of inquiry, particularly for publicly listed plantation companies that must attract and retain investor confidence amid policy uncertainty and commodity price volatility.

Firm value, typically proxied by Tobin's Q, reflects the market's assessment of a company's future growth prospects relative to the book value of its assets (Sudana, 2022). Within the management and finance literature, three financial variables are especially relevant to firm value in capital-intensive industries: operating cash flow (OCF), leverage, and capital intensity. Operating cash flow indicates a company's ability to generate cash from its core business activities and is widely recognized as a direct signal of fundamental financial quality (Kasmir, 2022). Leverage, measured by the Debt-to-Equity Ratio (DER), captures the degree to which a company finances its operations through debt and influences both risk perception and the discipline of capital allocation (Brigham & Houston, 2021). Capital intensity, measured by the ratio of fixed assets to total assets (CIR), reflects how asset-heavy a company's operations are a particularly relevant dimension in plantation agriculture where biological assets represent a large proportion of the balance sheet.

Although each of these variables has been studied independently in the finance literature, their simultaneous effects on firm value in the palm oil context—and whether those effects are moderated by profitability—remain underexplored. Prior studies report inconsistent findings: some find that higher leverage destroys firm value through increased financial distress risk (Myers, 1977), while others document a positive leverage-value relationship consistent with trade-off theory (Marjohan & Supratikta, 2022). Similarly, evidence on capital intensity is mixed: Al-Haddad and Whiting (2022) find a positive effect in emerging markets, while Safitri and Barli (2023) report a negative relationship in the context of tax aggressiveness.

This study addresses this gap by examining, within a unified empirical framework, the individual and joint effects of OCF, DER, and CIR on Tobin's Q, and by testing whether Net Profit Margin (NPM)—as a proxy for profitability—moderates those relationships. The palm oil industry provides a natural empirical setting because of its high capital intensity, commodity price exposure, and heterogeneity in firm-level leverage. The study covers 17 companies listed on the IDX over the period 2020–2025, yielding 102 balanced panel observations. The Fixed Effect Model (FEM) is selected as the most appropriate estimator, and Moderated Regression Analysis (MRA) is used for the moderation tests.

The remainder of the paper is organized as follows. The next section reviews the relevant theoretical framework and prior literature and develops the hypotheses. The Research Method section describes the data, variable measurement, and econometric approach. The Results and Discussion section presents and interprets the empirical findings. The paper concludes with implications for management, investors, and regulators.

Theoretical Foundation

This study is grounded in three complementary theories. Agency Theory (Jensen & Meckling, 1976) explains how conflicts of interest between managers (agents) and shareholders (principals) generate monitoring and contracting costs that affect capital structure decisions, investment policy, and ultimately firm value. Signaling Theory highlights how observable corporate actions—such as dividend declarations, debt issuance, or cash flow disclosures—serve as credible signals to outside investors about the quality of management and the firm's future prospects (Ross, 1977). The Q-Theory of Investment (Abel & Eberly, 2011) provides the direct linkage between firm-level fundamentals (cash flow, asset base, leverage) and Tobin's Q, positing that investment and market valuation are jointly determined by underlying productive capacity and financing conditions.

Operating Cash Flow and Firm Value

Operating cash flow is the most fundamental indicator of a company's ability to sustain its business without relying on external financing. Unlike accrual-based earnings, OCF is less susceptible to accounting manipulation and provides a more transparent picture of real economic performance (Kasmir, 2022). The Q-Theory predicts a positive relationship between OCF and Tobin's Q because firms with stronger cash generation can exploit profitable investment opportunities—such as replanting, land expansion, and mill modernization—that are not available to cash-constrained competitors. Empirically, Vo (2023) confirmed a positive and significant effect of OCF on investment decisions (proxied by Tobin's Q) for Vietnamese listed firms, while Gunawan and Gurusinga (2022) demonstrated that operating cash flow strengthens earnings persistence in agricultural companies. Marjohan, Anggraini, Sutrisna Dewi, and Arsid (2023) further found that firm value opportunities—closely linked to cash flow—positively predict stock returns in Indonesian banking companies. On this basis:

H1: Operating cash flow has a significant positive effect on firm value (Tobin's Q) in the palm oil industry.

Leverage and Firm Value

The relationship between leverage and firm value is theoretically ambiguous. Trade-off theory suggests that moderate debt usage increases firm value through tax shield benefits and managerial discipline, whereas debt overhang theory (Myers, 1977) predicts that excessive leverage destroys value by foreclosing positive NPV investments. In capital-intensive industries with strong collateral—such as plantation agriculture—the balance of these forces may favor a positive leverage-value relationship, as debt is more accessible and productively deployed for expansion. Misrah and Arifin (2024) found that leverage positively affects firm value in Indonesian manufacturing companies, and Marjohan and Supratikta (2022) similarly documented positive effects of DER on market value among Indonesian consumer goods manufacturers. Conversely, Vo, Nguyen (2022) found a negative leverage-investment relationship in broader emerging market samples, underscoring context-dependence. Based on the palm oil context:

H2: Leverage has a significant positive effect on firm value (Tobin's Q) in the palm oil industry.

Capital Intensity and Firm Value

Capital intensity captures the proportion of fixed and biological assets in total assets and is a defining structural characteristic of plantation agriculture. Higher capital intensity

P-ISSN 2828-4976
E-ISSN 2808-263X

reflects greater productive capacity—more land under cultivation, more processing mills, and larger biological asset portfolios—which investors typically associate with stable long-term revenue streams and high barriers to entry. Al-Haddad and Whiting (2022) confirmed a positive effect of capital intensity on firm value in emerging markets, while Putri, Nurmala, and Dewi (2025) documented a positive and significant effect of capital intensity on Tobin's Q in Indonesian holding and investment companies. The unique characteristics of biological assets—which increase in productive value as plantations mature—make capital intensity in palm oil particularly value-relevant:

H3: Capital intensity has a significant positive effect on firm value (Tobin's Q) in the palm oil industry.

Profitability as a Moderating Variable

Net Profit Margin (NPM) is used in this study as a proxy for profitability, capturing the proportion of each unit of revenue that is converted into net income. Profitability modulates the strength of the OCF–value, leverage–value, and capital intensity–value relationships for distinct theoretical reasons.

When profitability is high, the signal value of strong OCF is amplified: investors receive a dual confirmation of both cash generation and earnings quality, reducing uncertainty and warranting a higher market premium (Khuong et al., 2022). For leverage, companies with high profitability can service debt obligations more comfortably, so that additional leverage translates into value creation rather than financial distress risk. This aligns with findings by Santoso and Handoko (2022) and Arhinful and Radmehr (2023). For capital intensity, however, the moderating effect may be negative: highly profitable companies that also exhibit high capital intensity may signal overinvestment, as investors may question whether the incremental fixed asset base will generate returns commensurate with the opportunity cost of capital (Islam, Haque & Moutushi, 2022). These arguments yield:

H4: Profitability positively moderates the relationship between operating cash flow and firm value.

H5: Profitability positively moderates the relationship between leverage and firm value.

H6: Profitability negatively moderates the relationship between capital intensity and firm value.

H7: Operating cash flow, leverage, and capital intensity simultaneously have a significant effect on firm value.

Research Method

Sample and Data

The population comprises all 29 palm oil companies classified under the Consumer Non-Cyclicals sector (Plantations & Crops sub-industry) listed on the Indonesia Stock Exchange (IDX) as of 2025. Purposive sampling yielded 17 companies that: (1) were publicly listed before 2020; (2) published complete, audited annual financial statements for all six years from 2020 to 2025; and (3) operate primarily in palm oil cultivation and processing. With six annual observations per company, the final balanced panel dataset contains 102 observations. Annual financial statement data were obtained from the IDX official website (idx.co.id).

Analytical Method

The study employs panel data regression with the Fixed Effect Model (FEM), selected through sequential application of the Chow Test (FEM vs. CEM), Hausman Test (FEM vs. REM), and Lagrange Multiplier Test. Moderated Regression Analysis (MRA) is subsequently applied

by constructing three interaction terms—OCF×NPM, DER×NPM, and CIR×NPM—to test hypotheses H4 through H6. All estimations use Panel EGLS (Cross-section weights) and are performed in EViews. Classical assumption tests (normality, multicollinearity, heteroscedasticity) are conducted prior to final model estimation. The base regression equation is:

$$TobinsQ = \alpha + \beta_1 OCF + \beta_2 DER + \beta_3 CIR + \varepsilon$$

The MRA equation substituting interaction terms for the main effects is:

$$TobinsQ = \alpha + \beta_1 (OCF \times NPM) + \beta_2 (DER \times NPM) + \beta_3 (CIR \times NPM) + \varepsilon$$

Variable Measurement

Table 1 summarizes the operational definitions and measurement formulas for each variable:

Table 1. Variable Definitions and Measurement

Variable	Role	Measurement Formula	Scale
Firm Value (Tobin's Q)	Dependent	Tobin's Q = (Market Cap + Book Value of Debt) / Total Assets	Ratio
Operating Cash Flow (OCF Ratio)	Independent	OCF Ratio = Operating Cash Flow / Current Liabilities	Ratio
Leverage (DER)	Independent	DER = Total Debt / Total Equity	Ratio
Capital Intensity (CIR)	Independent	CIR = Net Fixed Assets / Total Assets	Ratio
Profitability (NPM)	Moderating	NPM = Net Profit / Net Revenue	Ratio

Results and Discussion

Descriptive Statistics

Table 2 presents the descriptive statistics for all five research variables across the 102 observations:

Table 2. Descriptive Statistics (n = 102, 2020–2025)

Statistic	Tobin's Q	OCF Ratio	DER	CIR	NPM
Mean	0.678	0.081	1.004	0.622	0.051
Median	0.668	0.075	0.549	0.619	0.051
Maximum	1.247	0.194	6.118	0.767	0.130
Minimum	0.321	0.015	0.023	0.469	-0.110
Std. Dev.	0.164	0.039	1.160	0.074	0.034
Observations	102	102	102	102	102

Tobin's Q averages 0.678, below unity, reflecting the asset-heavy nature of palm oil companies where market capitalization typically tracks closely with book values of fixed and biological assets. The wide DER range (0.023 to 6.118) underscores substantial cross-company heterogeneity in capital structure, while the high average CIR (0.622) confirms the capital-intensive character of the industry.

P-ISSN 2828-4976
E-ISSN 2808-263X

Panel Model Selection

All three tests converge on the Fixed Effect Model as the appropriate estimator. The very large Chow F-statistic confirms substantial company-specific heterogeneity that must be controlled. The Hausman test confirms that individual effects are correlated with the regressors, ruling out the Random Effect Model. Table 3 summarizes the results of the three model selection tests:

Table 3. Panel Model Selection Test Results

Test	Statistic	p-value	Conclusion
Chow Test (Cross-section F)	64.817	0.0000	FEM preferred over CEM
Hausman Test (Chi-square)	8.084	0.0443	FEM preferred over REM
Lagrange Multiplier (Breusch-Pagan)	180.712	0.0000	Significant cross-section effects

Panel Regression Results (FEM)

Table 4 presents the FEM regression results for the main effects model (H1, H2, H3, and H7):

Table 4. Fixed Effect Model Results (Dependent Variable: Tobin's Q)

Variable	Coefficient	Std. Error	t-Statistic	p-value
Constant	-0.4094	0.1248	-3.280	0.0015
OCF (Operating Cash Flow)	4.3675	0.1251	34.902	0.0000**
DER (Leverage)	0.0593	0.0137	4.335	0.0000**
CIR (Capital Intensity)	1.0844	0.2118	5.120	0.0000**
R-squared	0.9772			
Adjusted R-squared	0.9719			
F-statistic	185.040		Prob.	0.0000**
Durbin-Watson	1.835			

*** Significant at α = 1%. Cross-section fixed effects (dummy variables) included. Method: Panel EGLS (Cross-section weights). n = 102.*

The model achieves an R-squared of 0.9772, indicating that OCF, DER, and CIR together with company-specific fixed effects explain 97.72% of the variation in Tobin's Q. The F-statistic of 185.04 (p = 0.000) confirms strong joint significance. The Durbin-Watson statistic of 1.835 indicates the absence of serious autocorrelation.

Moderated Regression Analysis (MRA) Results

Table 5 presents the MRA results for the moderation hypotheses (H4, H5, and H6):

Table 5. Moderated Regression Analysis Results (Dependent Variable: Tobin's Q)

Variable	Coefficient	Std. Error	t-Statistic	p-value
Constant	0.5869	0.0166	35.313	0.0000**
OCF × NPM (Interaction)	37.5899	2.9064	12.934	0.0000**
DER × NPM (Interaction)	0.3489	0.1452	2.402	0.0186*

Variable	Coefficient	Std. Error	t-Statistic	p-value
CIR × NPM (Interaction)	-3.6754	1.0045	-3.659	0.0004**
R-squared	0.9310			
Adjusted R-squared	0.9150			
F-statistic	58.212		Prob.	0.0000**
Durbin-Watson	1.465			

*** Significant at α = 1%; * Significant at α = 5%. Cross-section fixed effects included. Method: Panel EGLS (Cross-section weights). n = 102.*

Hypothesis Testing Summary

Table 6 summarizes the outcome of each hypothesis test:

Table 6. Hypothesis Testing Summary

Hyp.	Description	Coefficient	p-value	Decision
H1	OCF → Firm Value (positive)	4.3675	0.0000**	Supported
H2	DER → Firm Value (positive)	0.0593	0.0000**	Supported
H3	CIR → Firm Value (positive)	1.0844	0.0000**	Supported
H4	NPM moderates OCF→FV (positive)	37.5899	0.0000**	Supported
H5	NPM moderates DER→FV (positive)	0.3489	0.0186*	Supported
H6	NPM moderates CIR→FV (negative)	-3.6754	0.0004**	Supported
H7	OCF, DER, CIR → FV (simultaneous)	F=185.04	0.0000**	Supported

Discussion

Effect of Operating Cash Flow on Firm Value (H1)

Operating cash flow exhibits the strongest positive effect on Tobin's Q among all independent variables (β = 4.3675; t = 34.90; p < 0.01). This finding strongly supports H1 and is consistent with the Q-Theory prediction that firms with superior cash generation have better access to internal funding for profitable investment, thereby attracting higher market valuations. In the palm oil context, OCF serves as a measure of a company's ability to self-finance replanting programs, new land acquisition, and mill upgrades—activities that are central to long-term competitiveness. The result aligns with Vo (2023), who found OCF to be the dominant predictor of investment in Vietnamese listed companies, and with Gunawan and Gurusinga (2022), who demonstrated the earnings-quality implications of stable operating cash flows in agricultural companies. The practical implication is clear: operational efficiency that translates revenues into actual cash flows—not merely accounting income—is the most powerful driver of investor-perceived value in the Indonesian palm oil industry.

P-ISSN 2828-4976
E-ISSN 2808-263X

Effect of Leverage on Firm Value (H2)

Leverage has a positive and significant effect on Tobin's Q (β = 0.0593; t = 4.34; p < 0.01), supporting H2. This finding is more consistent with trade-off theory than with debt overhang theory, reflecting the specific characteristics of the palm oil industry. Palm oil companies possess strong, tangible collateral in the form of agricultural land and biological assets, which reduces the risk premium demanded by lenders and makes debt financing relatively accessible. During the study period, particularly 2020–2023, Indonesia's accommodative monetary policy maintained low interest rates, further reducing the cost of debt capital. The result is consistent with Misrah and Arifin (2024) and Marjohan and Supratikta (2022), and differs from Vo and Nguyen (2022), whose broader emerging market sample may reflect different industry compositions and macroeconomic conditions. The finding implies that disciplined use of leverage—deploying borrowed funds for productive investment rather than financial engineering—creates shareholder value in this capital-intensive sector.

Effect of Capital Intensity on Firm Value (H3)

Capital intensity has a positive and significant effect on Tobin's Q (β = 1.0844; t = 5.12; p < 0.01), supporting H3. This result can be explained by the unique nature of biological assets in palm oil: unlike manufactured fixed assets that depreciate and may become obsolete, oil palm plantations increase in productive value as they mature, reaching peak production between years 7 and 18. Consequently, a high CIR in the palm oil industry signals substantial productive capacity, strong barriers to entry, and a durable competitive advantage—all of which investors incorporate positively into firm valuations. This is consistent with Al-Haddad and Whiting (2022) and Putri, Nurmala, and Dewi (2025). The finding contrasts with Safitri and Barli's (2023) negative result, which was obtained in the context of tax aggressiveness—a different dependent variable that captures a very different dimension of corporate behavior.

Moderating Role of Profitability on OCF–Value Relationship (H4)

Profitability (NPM) significantly and positively moderates the OCF–Tobin's Q relationship (β = 37.5899; t = 12.93; p < 0.01), confirming H4 with the strongest moderation effect in the model. This finding is consistent with signaling theory: when a company combines high operating cash flow with high profit margins, the dual signal dramatically increases investor confidence in the sustainability and quality of its business model. Firms such as PT London Sumatra Indonesia Tbk (LSIP) and PT Sampoerna Agro Tbk (SGRO)—which maintained both strong OCF ratios and healthy NPMs throughout the study period—consistently achieved Tobin's Q values above the industry average, supporting this interpretation. The result aligns with Khuong et al. (2022), who found that earnings quality plays a critical moderating role in the relationship between financial variables and market valuation in emerging markets.

Moderating Role of Profitability on Leverage–Value Relationship (H5)

NPM positively moderates the DER–Tobin's Q relationship (β = 0.3489; t = 2.40; p < 0.05), confirming H5. When a company is highly profitable, investors are more likely to interpret its leverage as productive—a sign of management's confidence in growth prospects—rather than as a harbinger of financial distress. Consistent with Santoso and Handoko (2022) and Arhinful and Radmehr (2023), these results indicate that the value effect

of leverage is not universal but depends critically on the profitability context in which debt is deployed. For regulators and credit institutions, this finding suggests that risk assessments for palm oil companies should integrate NPM as a conditioning variable when evaluating how leverage affects firm risk and value.

Moderating Role of Profitability on Capital Intensity–Value Relationship (H6)

NPM negatively moderates the CIR–Tobin's Q relationship ($\beta = -3.6754$; $t = -3.66$; $p < 0.01$), confirming H6 and representing the most nuanced finding of the study. This result implies that for already highly profitable palm oil companies, additional asset investment is viewed by the market with diminishing enthusiasm. Economically, this reflects the concept of diminishing marginal returns: once a company's plantation portfolio reaches optimal productive scale, continued fixed asset accumulation may signal overinvestment, reduced asset turnover efficiency, and declining return on assets—all of which the market penalizes through lower Tobin's Q. Islam, Haque, and Moutushi (2022) similarly found that earnings quality has a complex, non-linear interaction with financial variables in its effect on firm valuation. The practical implication is that highly profitable palm oil companies should prioritize intensification of existing assets—through precision agriculture, yield improvement, and value-added downstream processing—rather than pursuing aggressive further expansion of their fixed asset base.

Simultaneous Effect (H7)

The simultaneous F-test confirms H7: OCF, DER, and CIR jointly exert a highly significant positive effect on Tobin's Q ($F = 185.04$; $p < 0.001$; $R^2 = 0.9772$). The extraordinary explanatory power of the model (97.72%) reflects both the strong theoretical grounding of the chosen variables and the importance of company-specific fixed effects in capturing cross-sectional heterogeneity. The synergistic interaction of cash flow generation, leverage management, and asset base breadth collectively shapes the investor narrative about a palm oil company's capacity to create and sustain value—consistent with the multi-factor framing of the Q-Theory of Investment.

Conclusion

This study examined the effects of operating cash flow (OCF), leverage (DER), and capital intensity (CIR) on firm value (Tobin's Q), and tested the moderating role of profitability (NPM), using a balanced panel of 17 Indonesian palm oil companies listed on IDX over 2020–2025. The Fixed Effect Model was selected as the most appropriate estimator, and Moderated Regression Analysis was used for moderation tests.

The core findings are: (1) OCF has the strongest positive and significant effect on Tobin's Q ($\beta = 4.3675$; $p < 0.01$), underscoring cash flow efficiency as the primary driver of firm value in this sector; (2) DER has a positive and significant effect on Tobin's Q ($\beta = 0.0593$; $p < 0.01$), consistent with trade-off theory in a high-collateral, low-interest-rate environment; (3) CIR has a positive and significant effect on Tobin's Q ($\beta = 1.0844$; $p < 0.01$), reflecting the long-term productive value of biological assets; (4) Profitability positively moderates the OCF–value and leverage–value relationships while negatively moderating the capital intensity–value relationship; and (5) the three independent variables jointly explain 97.72% of variation in firm value ($F = 185.04$; $p < 0.001$).

These results carry concrete implications for management, investors, and regulators. Managers of palm oil companies should prioritize operational efficiency to sustain strong OCF

P-ISSN 2828-4976
E-ISSN 2808-263X

while maintaining profitability margins—the combination most strongly rewarded by the market. Leverage should be employed productively, directed toward capacity expansion that generates returns above the cost of debt. For highly profitable firms, further capital intensity should be evaluated critically against the opportunity cost of capital rather than pursued indiscriminately. Investors should integrate OCF, DER, CIR, and NPM jointly in equity valuation models for the palm oil sector. Regulators and financial institutions can use these findings to design more nuanced credit and disclosure frameworks that condition leverage risk assessments on firm-level profitability.

Future research could extend this framework by incorporating macroeconomic variables—such as international CPO prices, exchange rates, and benchmark interest rates—as additional control factors that account for the commodity-driven dynamics unique to the palm oil industry. Comparisons across pre-, peak-, and post-commodity-boom sub-periods (2020–2021 vs. 2022 vs. 2023–2025) would also shed light on how the OCF–value and leverage–value relationships shift with commodity cycles.

References

Abel, A. B., & Eberly, J. C. (2011). How Q and Cash Flow Affect Investment without Frictions: An Analytic Explanation. Review of Economic Studies, 78(4), 1179–1200.

Al-Haddad, L., & Whiting, R. H. (2022). The Effect of Capital Intensity and Earnings Quality on the Firm Value Set of Listed Firms in Emerging Markets. Journal of International Accounting, Auditing and Taxation, 49, 100504. https://doi.org/10.1016/j.intaccaudtax.2022.100504

Arhinful, R., & Radmehr, M. (2023). The Impact of Financial Leverage on the Financial Performance of the Firms Listed on the Tokyo Stock Exchange. SAGE Open, 13(3). https://doi.org/10.1177/21582440231204099

Brigham, E. F., & Houston, J. F. (2021). Fundamentals of Financial Management (15th ed.). Cengage Learning.

CNBC Indonesia. (2026). Implementasi B50 Biodiesel Dimulai 1 Juli 2026. Retrieved from https://cnbcindonesia.com

GAPKI. (2026). Laporan Kinerja Industri Kelapa Sawit Indonesia 2025. Jakarta: Gabungan Pengusaha Kelapa Sawit Indonesia.

Gunawan, Y., & Gurusinga, L. B. (2022). Analysis of the Influence of Debt Level, Operating Cash Flow and Sales Volatility on Profitability. Krisna: Jurnal Akuntansi dan Keuangan, 14(2), 152–160. https://doi.org/10.22225/kr.14.2.2022.152-160

Islam, M. R., Haque, M. Z., & Moutushi, R. H. (2022). Earnings Quality and Financial Flexibility: A Moderating Role of Corporate Governance. Cogent Business & Management, 9(1). https://doi.org/10.1080/23311975.2022.2097620

Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs, and capital structure. Journal of Financial Economics, 3(4), 305–360.

Kasmir. (2022). Analisis Laporan Keuangan (15th ed.). Rajawali Pers.

Khuong, N. V., Abdul Rahman, A. A., Thuan, P. Q., Liem, N. T., Anh, L. H. T., Thuy, C. T. M., & Ly, H. T. N. (2022). Earnings Management, Board Composition and Profitability in Emerging Market. Sustainability, 14(3), 1061. https://doi.org/10.3390/su14031061

Marjohan, M., & Supratikta, H. (2022). The Effect of Capital Structure on Company Performance and the Impact of the Stock Market Value of the Manufacturing Industry Listed on the Indonesia Stock Exchange. Journal of International Conference Proceedings (JICP), 5(8), 69–77.

Marjohan, M., Anggraini, A., Sutrisna Dewi, S. K., & Arsid. (2023). Opportunity Set, Liquidity, Stock Return, Inflation As A Moderator Investment Risk, Investment. Jurnal Manajemen, 27(2), 379–400. https://doi.org/10.24912/jm.v27i2.1380

Ministry of Agriculture of the Republic of Indonesia. (2026). Statistik Perkebunan Unggul 2025. Jakarta: Kementerian Pertanian RI.

Misrah, M., & Arifin, A. (2024). Relationship of Financial Leverage on Investment Decisions and Firms' Value: Evidence from Indonesia Manufacturing Companies. JAS (Jurnal Akuntansi Syariah), 8(2). https://doi.org/10.46367/jas.v8i2.1897

Myers, S. C. (1977). Determinants of corporate borrowing. Journal of Financial Economics, 5(2), 147–175.

Putri, A., Nurmala, & Dewi, A. K. (2025). Pengaruh Firm Value Set, Ukuran Perusahaan dan Intensitas Modal terhadap Nilai Perusahaan. EKONOMIKA45, 12(2). https://doi.org/10.30640/ekonomika45.v12i2.4550

Ross, S. A. (1977). The Determination of Financial Structure: The Incentive-Signaling Approach. Bell Journal of Economics, 8(1), 23–40.

Safitri, D. A., & Barli, H. (2023). Pengaruh Kebijakan Utang, Capital Intensity dan Ukuran Perusahaan terhadap Agresivitas Pajak. JIAUP: Jurnal Ilmiah Akuntansi Universitas Pamulang, 11(1). https://doi.org/10.32493/jiaup.v11i1.29134

Santoso, C. C., & Handoko, J. (2022). Pengaruh Firm Value Set, Profitabilitas, dan Struktur Modal terhadap Kualitas Laba. Jurnal Bisnis dan Akuntansi, 24(1). https://doi.org/10.34208/jba.v24i1.1186

Sudana, I. M. (2022). Manajemen Keuangan Perusahaan: Teori dan Praktik (3rd ed.). Erlangga.

Sugiyono. (2019). Metode Penelitian Kuantitatif, Kualitatif, dan Kombinasi (Mixed Methods). Alfabeta.

Suyanto, Zaharuddin, Marjohan, M., & Andriani, J. (2024). Economic And Asymmetric Information As Moderation Variables, Credit Risk And Credit Prices. Jurnal Manajemen, 28(1), 154–174. https://doi.org/10.24912/jm.v28i1.1636

Vo, T. T. A., & Nguyen, T. T. (2022). The Impact of Firm Leverage on Investment Decisions: The New Approach of Hierarchical Method. Cogent Economics & Finance, 10(1). https://doi.org/10.1080/23322039.2022.2048829

Vo, X. V. (2023). Cash Flow and Investment Decisions: Evidence from Vietnamese Listed Firms. Cogent Business & Management, 10(1). https://doi.org/10.1080/23311975.2023.2175361.