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Working Capital Efficiency, Debt Policy, and Firm Value: Earnings Quality as a Moderator in Selected Indonesian Listed Firms

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Abstract

Background: Earlier evidence differs on the association of working capital and financing decisions with firm value; reported earnings quality may condition these relationships.

Objective: To examine associations of working capital efficiency and debt policy with firm value and their interactions with earnings quality in selected Indonesian listed firms.

Methods: The reported two-year panel comprises 220 firms and 440 firm-year observations for 2023–2024. Moderated pooled regression uses Tobin's Q, working capital turnover, liabilities-to-equity, EQ = 1 − |DA| from the reported Modified Jones approach, and liquidity and profitability controls. Available standard errors are White heteroskedasticity-consistent, not firm-clustered.

Results: The submitted estimates show positive working capital and debt coefficients and a positive working capital–earnings quality interaction (reported $p < 0.001$); the debt interaction is inconclusive ($p = 0.2808$). The direct EQ p-value of 0.066 makes a pure-moderator classification tentative. These results have not been re-estimated with clustered inference.

Conclusion: The pattern suggests conditional valuation associations, without establishing causation or investor-certification mechanisms. Interpretation is bounded by the short selected panel, unavailable verification data, measurement overlap, omitted controls, and unresolved within-firm dependence. Sector-group differences and international generalisability remain untested.

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INTRODUCTION

Firm value condenses the market's judgement of how well managers turn resources into future cash flows and how much risk they accept in doing so. Tobin's Q captures this judgement by relating the market value of a firm's claims to the book value of its assets (Tobin, 1969). Evidence from the Indonesia Stock Exchange (Bursa Efek Indonesia, IDX) suggests that these reactions are far from uniform. Capital structure shapes profitability, which in turn drives firm value Alghifari et al. (2022), the cost of individual capital components carries opposite signs for valuation Kurniasih et al. (2022), and liquidity, leverage, and profitability all register in market prices (Jihadi et al., 2021). Investors, however, must infer the quality of these decisions from financial statements whose reliability varies across issuers.

Working capital decisions sit where liquidity meets profitability: funds tied up in

receivables and inventory help only when they turn over quickly, otherwise they become the idle slack that agency theory attributes to managerial discretion (Jensen, 1986; Jensen & Meckling, 1976). The empirical record is divided. Angela et al. (2023) report that working capital management significantly shapes the value of Indonesian food and beverage firms, and Jaworski and Czerwonka (2022) find a negative linear association between the cash conversion cycle and profitability on the Warsaw Stock Exchange. Gupta et al. (2023) observe that a longer net trade cycle raises Tobin's Q among Indian manufacturers, implying that generous customer credit can add value up to an optimum, while Chambers and Cifter (2022) document an inverted U-shaped relationship between working capital and performance that differs across sub-industries. In a setting close to the present one, Angelita and Saputra (2025) find no significant link between working capital management and the value of Indonesian consumer cyclical firms, even though capital intensity is valued positively. The nature of a firm's business also shapes these effects (Sawarni et al., 2021).

Debt policy is equally contested. The trade-off view holds that firms balance the tax advantage of debt against expected distress and agency costs, so that value peaks at an interior level of leverage (Ai et al., 2021; Kraus & Litzenberger, 1973; Myers, 1984). Debt also disciplines managers by committing free cash flow to fixed repayments (Jensen, 1986). Recent evidence reports positive valuation effects of the overall debt ratio in Vietnam Bui et al. (2023) and across five ASEAN markets including Indonesia Tran and Nguyen (2025), but the pattern breaks down elsewhere. Leverage improves performance only up to an optimal point in Malaysia Ayaz et al. (2021), lowers firm value in East Africa Doorasamy (2021), and in Vietnam its effect turns from positive in food and beverages to negative in construction and real estate, disappearing altogether when industries are pooled (Dang & Do, 2021). For Indonesian issuers, Larasati and Betharia (2024) report that leverage has no significant effect on firm value. Investors, it seems, respond not to borrowing as such but to what borrowing is believed to reveal.

This is where earnings quality becomes relevant. Earnings are of high quality when they faithfully reflect a firm's underlying economic performance and are useful for valuation decisions (P. Dechow et al., 2010). Under signaling theory, a signal influences outsiders only when it is costly to imitate and credible to the receiver (Connelly et al., 2025; Spence, 1973). Consistent with this reasoning, earnings quality is positively related to Tobin's Q among Thai property and construction firms, particularly where governance is strong (Intara et al., 2024); executives who curb accrual-based and real earnings management improve firm performance and discretionary earnings smoothing is more strongly associated with both the cost of debt and Tobin's Q when a firm's information environment is weak (Allayannis & Simko, 2022). As a moderator, however, earnings quality works unevenly: it conditions the ownership–value link in the Jakarta Islamic Index Kristanti (2021) but not the value relevance of integrated reporting among Southeast Asian energy firms Darminto et al. (2024), while earnings management erodes the value effect of audit quality in IDX mining firms (Setyawan & Ghozali, 2025).

Two gaps motivate the analysis. Working capital and leverage are often studied separately, while earnings quality may condition their associations with valuation differently. Discretionary accruals arise partly from working capital accounts such as receivables, inventory, and payables (Dechow et al., 1995), and earnings management is associated with working capital management efficiency (Sawarni et al., 2023). This makes accounting credibility a plausible interpretation of a working capital interaction, but also creates potential mechanical overlap between the proxies. Leverage may convey different information because financing obligations are contractually specified, although accruals quality may also be reflected in borrowing costs (Allayannis & Simko, 2022). The present model examines these conditional associations; it does not identify the mechanisms behind them.

Drawing on agency, signaling, and trade-off theories, the study specifies four directional hypotheses: H1, working capital efficiency is positively associated with firm value; H2, debt policy is positively associated with firm value; H3, the association between working capital efficiency and firm value becomes more positive as earnings quality increases; and H4, the association between debt policy and firm value becomes more positive as earnings quality increases. These hypotheses concern associations within the reported specification, rather than causal effects or an estimated optimum for leverage. Figure 1 summarises the research model.

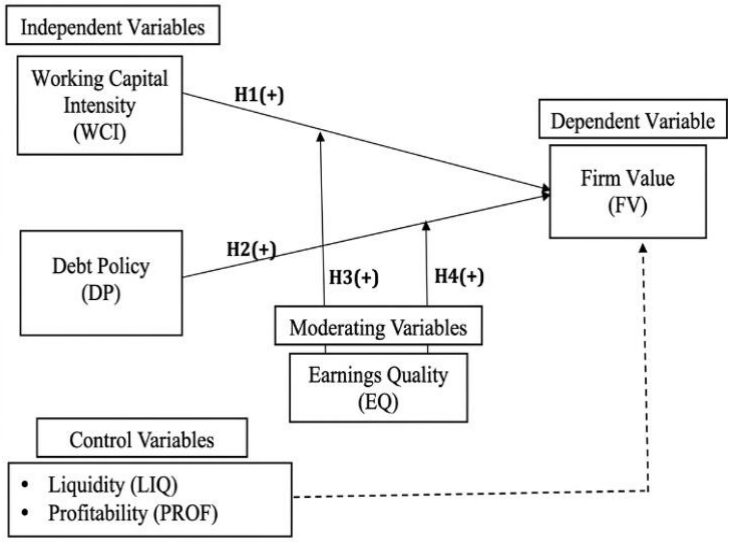

Figure 1. Research Model

The research model illustrates the relationships between working capital efficiency (WCI), debt policy (DP), and firm value (FV), with earnings quality (EQ) as the moderating variable and liquidity (LIQ) and profitability (PROF) as control variables. Working capital efficiency is measured using working capital turnover, defined as net sales divided by average working capital, as specified in Table 1.

The study asks whether working capital efficiency and debt policy are associated with firm value in selected IDX-listed firms and whether earnings quality conditions each association. Its proposed contribution is to compare operating and financing interactions within one pooled specification. Cyclical and non-cyclical labels describe the sample composition; no between-group difference is tested. The potential benefit is a framework for assessing accounting quality alongside operating and financing ratios, with implications limited to the selected firms and observation period.

METHOD

This study employed a quantitative explanatory approach using secondary financial statement data from selected companies listed on the Indonesia Stock Exchange (IDX) during 2023–2024. The reported sampling frame comprised 388 companies across eight IDX-IC sectors, from which 220 companies were selected through purposive sampling, yielding 440 firm-year observations. Financial statements were obtained from the IDX and company websites, while 2022 financial information was collected as baseline data for calculating changes in revenue and receivables. The sampling frame and sector classification followed the information reported in the original research materials. However, the dated issuer roster and firm-level screening records were unavailable for independent verification. Consequently, the sample should be interpreted as a selected group of IDX-listed companies rather than as a verified representation of all listed companies or sectors.

The reported purposive sampling criteria were continuous listing during 2023–2024, complete annual financial statements, no delisting or suspension, availability of all variables, and positive equity for interpreting the liabilities-to-equity ratio. Table 2 presents the recorded exclusions but does not separately identify the positive-equity restriction or the treatment of non-positive and near-zero working capital. A positive minimum turnover value does not establish which firms were excluded or whether negative denominators occurred. Table 1 retains the reported formulas; however, the firm-level selection log and denominator checks are required to verify their application.

Table 1
Operational Definitions and Measurement of Variables

Variable	Definition	Measurement
Firm value (FV)	Market valuation of the firm relative to the book value of its assets	Tobin's Q = (market value of equity + total debt) / book value of total assets
Working capital efficiency (WCI)	Efficiency with which working capital is used to generate sales	Working capital turnover = net sales / average working capital
Debt policy (DP)	Balance-sheet liabilities relative to equity; not restricted to interest-bearing borrowing	Debt-to-equity ratio = total liabilities / total equity
Earnings quality (EQ)	Extent to which reported earnings are free from discretionary accruals	EQ = 1 − |DA|, with DA estimated by the Modified Jones model
Liquidity (LIQ), control	Ability to meet short-term obligations	Current ratio = current assets / current liabilities
Profitability (PROF), control	Ability to generate earnings from assets	Return on assets = net income / total assets

Source: Author's compilation based on Tobin (1969) and Dechow et al. (1995)

The manuscript reported an accrual-based earnings quality proxy following the Modified Jones framework (Dechow et al., 1995). Total accruals were calculated using changes in balance sheet accounts, and the reported non-discretionary accrual equation and residual definition are reproduced below. These equations describe the recorded measurement approach; however, the supplied documents did not contain the estimation script or industry-year regressions required to reproduce the proxy:

$$TA_{it} = (\Delta CA_{it} - \Delta Cash_{it} - \Delta CL_{it} + \Delta STD_{it} - Dep_{it}) / A_{it-1}$$
$$NDA_{it} = \alpha_1(1/A_{it-1}) + \alpha_2[(\Delta REV_{it} - \Delta REC_{it})/A_{it-1}] + \alpha_3(PPE_{it}/A_{it-1})$$
$$DA_{it} = TA_{it} - NDA_{it}$$

Here, ΔCA, ΔCash, ΔCL, and ΔSTD denote changes in current assets, cash, current liabilities, and short-term debt included in current liabilities, respectively; Dep denotes depreciation and amortization; ΔREV and ΔREC denote changes in revenue and receivables, respectively; PPE denotes gross property, plant, and equipment; and A_{it-1} denotes lagged total assets. EQ = 1 − |DA|; therefore, a larger EQ value indicates smaller absolute discretionary accruals rather than the reciprocal of |DA|. The documents did not specify the estimation groups or their respective observation counts. Under the original Modified Jones procedure, coefficients are estimated using revenue changes before the receivables adjustment is applied when calculating NDA. However, the supplied records did not establish whether this sequence was followed. Accordingly, the reported EQ values remain subject to script-level verification.

The reported moderated regression model used mean-centered continuous regressors and interaction terms. Mean-centering makes each main-effect coefficient conditional on the moderator being at its sample mean; however, it does not eliminate endogeneity or guarantee low multicollinearity (Aiken & West, 1991). The recorded model was specified as follows:

$$FV_{it} = \alpha + \beta_1 WCI_{it} + \beta_2 DP_{it} + \beta_3 EQ_{it} + \beta_4 (WCI \times EQ)_{it} + \beta_5 (DP \times EQ)_{it} + \beta_6 LIQ_{it} + \beta_7 PROF_{it} + \varepsilon_{it}$$

The indices i and t denote firm and year, respectively. The interaction coefficients β_4 and β_5 represent conditional associations. The recorded specification included liquidity and profitability as control variables but did not include firm size, sales growth, or year effects. Panel selection and diagnostic results were retained as originally reported. The available statistical inference relied on White heteroskedasticity-consistent standard errors White (1980), which do not account for within-firm dependence. Firm-clustered inference, firm fixed effects, and an expanded control specification could not be reconstructed from the aggregate tables.

Consequently, the reported statistical significance decisions at the 5% level should be considered provisional. The analysis was reported to have been conducted using EViews 13 and publicly available corporate financial statements. No human or animal participants were involved in the study.

RESULTS AND DISCUSSION

Result

Sample Characteristics and Study Context

Table 2 reproduces the reported selection arithmetic: a 388-firm frame less 168 exclusions yields 220 firms and 440 firm-year observations over 2023–2024. The exclusion categories sum correctly, but the issuer list, dated frame, and firm-level screening record are absent from the supplied materials. These counts cannot independently verify population coverage, non-overlapping exclusions, or the application of all stated eligibility criteria.

Table 2
Sample Selection Procedure

No.	Selection criterion	Number
1	Cyclical and non-cyclical firms listed on the IDX, 2023–2024	388
2	Firms delisted or suspended during the observation period	(31)
3	Firms without complete annual financial statements in consecutive years	(74)
4	Firms with incomplete data for the research variables	(63)
	Sample firms	220
	Observation years	2
	Total firm-year observations (220 × 2)	440

Source: Data processed by the author (2026)

Table 3 reports 173 firms (78.6 percent) in the cyclical group and 47 (21.4 percent) in the non-cyclical group. Energy, Basic Materials, Industrials, Properties & Real Estate, and Transportation & Logistics are grouped with Consumer Cyclicals because their activities can be exposed to demand, investment, commodity-price, and freight-cycle fluctuations. Consumer Non-Cyclicals and Healthcare form the other group. This is an analytical grouping of selected IDX-IC sectors, rather than evidence that every firm responds identically to cycles. Infrastructure and Technology do not appear in the reported frame, and their omission is not explained by the supplied selection record; the findings therefore concern the eight included sectors only.

Table 3
Distribution of Sample Firms by Sector

No.	Sector group and IDX-IC sector	Firms
	Cyclical group	
1	Consumer Cyclicals	40
2	Properties & Real Estate	38
3	Basic Materials	35
4	Industrials	27
5	Energy	22
6	Transportation & Logistics	11
	Non-cyclical group	
7	Consumer Non-Cyclicals	34
8	Healthcare	13
	Total	220

Source: Data processed by the author (2026).

Descriptive Statistics and Correlation Analysis

Table 4 reproduces the descriptive statistics for the reported 440 observations. Mean Tobin's Q is 1.680, working capital turnover is 2.780, the liabilities-to-equity ratio is 0.864,

liquidity is 2.162, and return on assets is 0.072. Mean EQ is 0.932 with a standard deviation of 0.023, corresponding to mean absolute discretionary accruals of approximately 0.068 of lagged assets. Its reported range implies |DA| between 0.015 and 0.143. The manuscript also reports non-rejection of normality for the level variables, although the associated statistics are not displayed here. These unusually regular distributions require checking against the original dataset; they do not establish data validity, absence of outliers, or regression-error normality.

Table 4
Descriptive statistics

Variable	Mean	Median	Maximum	Minimum	Std. Dev.
FV	1.680	1.696	3.275	0.450	0.481
WCI	2.780	2.817	5.135	0.469	0.802
DP	0.864	0.857	1.774	0.120	0.342
EQ	0.932	0.932	0.985	0.857	0.023
LIQ	2.162	2.158	3.874	0.700	0.579
PROF	0.072	0.071	0.169	−0.025	0.034

Source: EViews 13 output processed by the author (2026). N = 440. FV = Tobin's Q; WCI = working capital turnover; DP = debt-to-equity ratio; EQ = 1 − |DA|; LIQ = current ratio; PROF = return on assets

The reported Pearson correlations in Table 5 are positive between firm value and debt policy (r = 0.343), profitability (r = 0.274), and working capital efficiency (r = 0.170), and weaker for earnings quality (r = 0.074) and liquidity (r = 0.039). The largest absolute correlation among the listed regressors is 0.118. These low pairwise correlations describe the submitted summary matrix, but do not independently verify the data or exclude specification and interaction-related problems.

Table 5
Pearson correlation matrix

	FV	WCI	DP	EQ	LIQ	PROF
FV	1.000					
WCI	0.170	1.000				
DP	0.343	−0.002	1.000			
EQ	0.074	−0.026	−0.005	1.000		
LIQ	0.039	0.008	−0.078	−0.036	1.000	
PROF	0.274	−0.060	0.033	0.118	0.021	1.000

Source: EViews 13 output processed by the author (2026)

The manuscript reports means close to zero after centring and correlations of −0.006 between working capital efficiency and its interaction term and −0.052 between debt policy and its interaction term. The interactions are reported as leptokurtic. Normality of regressors is not an OLS requirement, and these distributional results cannot establish reliable inference under dependence or misspecification. The reported correlations of firm value with WCI × EQ (0.256) and DP × EQ (−0.082) are descriptive; they neither test moderation nor establish an investor-certification mechanism.

Panel Model Selection and Diagnostic Tests

Table 6 presents the reported panel model selection results. The cross-section F test does not reject the pooled common effect model (p = 0.764), whereas the corresponding cross-section chi-square test indicates a statistically significant difference between the pooled and fixed-effects specifications (p = 0.001). The Hausman test reports a p-value of 0.924, while the Breusch–Pagan Lagrange Multiplier test reports a p-value of 0.543. These findings provide mixed evidence regarding the appropriate panel estimator. Accordingly, the Common Effect Model (CEM) is retained as the reported baseline specification rather than a definitively preferred estimator. The conflicting fixed-effects test outcomes and the limited two-year observation period require

cautious interpretation. Re-estimation using firm fixed effects and firm-clustered standard errors would be necessary to evaluate the robustness of the reported coefficients and statistical inference.

Table 6
Panel model selection tests

Test	Comparison	Statistic	Prob.	Decision
Chow (cross-section *F*)	CEM vs FEM	0.907 (219, 213)	0.764	CEM
Chow (cross-section χ^2)	CEM vs FEM	289.813 (219)	0.001	FEM
Hausman (χ^2)	FEM vs REM	2.542 (7)	0.924	REM[a]
Breusch–Pagan LM	CEM vs REM	0.371	0.543	CEM
Conclusion				CEM

Source: EViews 13 output processed by the author (2026). [a] The estimated variance of the cross-section random component is zero, so the REM reduces to the CEM

Table 7 presents the reported regression diagnostic results. The Jarque–Bera test does not reject residual normality (p = 0.518), while the centred variance inflation factors (VIFs), ranging from 1.004 to 1.044, indicate low collinearity among the included regressors. However, the heteroskedasticity tests produce different results. The Breusch–Pagan–Godfrey and Glejser tests do not reject homoskedasticity, whereas the White test indicates heteroskedasticity (p = 0.032). Furthermore, the Breusch–Godfrey test reports a p-value of 0.002, suggesting residual dependence under the reported testing procedure. Because the panel contains only two annual observations per company, the interpretation of serial dependence requires verification of the test implementation and observation ordering. Although White heteroskedasticity-consistent standard errors were employed, these do not necessarily account for within-firm error dependence. Consequently, the statistical significance of the reported regression coefficients should be interpreted cautiously until firm-clustered inference can be evaluated.

Table 7
Classical assumption tests

Test	Statistic	Prob.	Conclusion
Jarque–Bera normality	1.317	0.518	Normal residuals
Centred VIF (range)	1.004–1.044	–	No multicollinearity
Breusch–Pagan–Godfrey	Obs*R^2 = 7.237	0.405	Homoskedastic
Glejser	Obs*R^2 = 7.823	0.349	Homoskedastic
White	Obs*R^2 = 25.320	0.032	Heteroskedastic
Breusch–Godfrey LM (order 1)	Obs*R^2 = 9.519	0.002	Serial correlation indicated
Durbin–Watson (main model)	2.073	–	Close to 2

Source: EViews 13 output processed by the author (2026)

Moderated Regression Estimates and Hypothesis Testing

Table 8 retains the original pooled estimates and White standard errors. The reported R^2 is 0.2867 and adjusted R^2 is 0.2751. The conventional model F statistic is 24.8096 (reported p < 0.001); a firm-clustered joint test is unavailable. WCI (β = 0.1124) and DP (β = 0.4783) have positive reported coefficients, and WCI × EQ is positive (β = 6.2605), each with reported p < 0.001. DP × EQ is negative with p = 0.2808. Profitability is positive with reported p < 0.001, while liquidity has p = 0.1412. These are the submitted baseline results, not re-estimated findings; the significance statements remain conditional on the unverified covariance specification and source data.

Table 8
Moderated regression estimates (CEM with white robust standard errors)

Variable	Coefficient	Std. Error	*t*-Statistic	Prob.
Constant	1.6831	0.0195	85.9134	0.0000
WCI_c	0.1124	0.0263	4.2724	0.0000***
DP_c	0.4783	0.0573	8.3371	0.0000***
EQ_c	1.6163	0.8769	1.8432	0.0660
$WCI_c \times EQ_c$	6.2605	1.0532	5.9441	0.0000***
$DP_c \times EQ_c$	−3.0767	2.8490	−1.0799	0.2808
LIQ_c	0.0505	0.0343	1.4739	0.1412
$PROF_c$	3.3522	0.6087	5.5072	0.0000***
R^2	0.2867		*F*-statistic	24.8096
Adjusted R^2	0.2751		Prob(*F*)	0.0000

*Source: EViews 13 output processed by the author (2026). Dependent variable: FV (Tobin's Q); N = 440. Subscript c denotes a mean-centred variable. *** significant at 1 percent*

Table 9 summarises the hypothesis testing results based on the reported pooled regression estimates and White heteroskedasticity-consistent standard errors. Under this specification, H1, H2, and H3 are provisionally supported, as their estimated coefficients are positive and statistically significant at the 5 percent level. In contrast, H4 is not supported because the debt policy–earnings quality interaction is not statistically significant (p = 0.2808) and its estimated coefficient is negative. These decisions describe associations within the reported model and should not be interpreted as evidence of causal effects. Furthermore, the absence of firm-clustered inference, fixed-effects robustness checks, and additional potentially relevant controls limits the strength of the hypothesis-testing conclusions. The nonsignificant H4 result does not establish the absence of a moderating relationship, nor does it demonstrate a statistically significant difference between the working capital and debt policy interaction effects.

Table 9
Summary of hypothesis testing

Hyp.	Path	Predicted	Coefficient	Prob.	Decision
H1	WCI → FV	+	0.1124	0.0000	Supported
H2	DP → FV	+	0.4783	0.0000	Supported
H3	WCI × EQ → FV	+	6.2605	0.0000	Supported
H4	DP × EQ → FV	+	−3.0767	0.2808	Not supported

Source: EViews 13 output processed by the author (2026)

For descriptive scale comparison at mean earnings quality, the recorded coefficients imply changes in fitted Tobin's Q of about 0.090 for one standard deviation of working capital turnover, 0.164 for one standard deviation of the liabilities-to-equity ratio, and 0.115 for one standard deviation of profitability, holding the other regressors fixed. These equal approximately 5.4, 9.7, and 6.8 percent of mean Tobin's Q, respectively. They are conditional fitted associations, not causal contributions or evidence that debt is the most important determinant of valuation.

At EQ one standard deviation above and below its mean, the fitted WCI slopes are $0.1124 + 6.2605(0.023) \approx 0.2564$ and $0.1124 - 6.2605(0.023) \approx -0.0316$. These are point estimates only. Simple-slope standard errors require $\text{Var}(\beta 1) + z^2\text{Var}(\beta 4) + 2z\text{Cov}(\beta 1, \beta 4)$, where z is centred EQ; the full coefficient covariance matrix is unavailable. Neither slope significance nor a Johnson–Neyman region can therefore be reported. The direct EQ coefficient has p = 0.066, so a pure-moderator label at 5 percent is tentative and threshold-sensitive, particularly before clustered inference. The debt interaction supplies no conclusive evidence of moderation under the reported specification; no homologizer status is established.

Discussion

Working Capital Efficiency and Firm Value

The positive baseline association indicates that higher working capital turnover coincides with higher firm value after adjustment for the included controls. Turnover measures sales relative to average working capital; it does not by itself establish faster collection or inventory conversion, because sales changes and small denominators can also raise the ratio. Agency and signaling perspectives provide possible interpretations of the association Connelly et al. (2025), Jensen (1986), and Jensen and Meckling (1976), but the present design does not test managerial discipline, cash release, or the credibility of operating signals directly.

The positive association is consistent with the working capital–valuation evidence discussed by Angela et al. (2023), while other settings yield different patterns (Angelita & Saputra, 2025; Gupta et al., 2023). Jaworski and Czerwonka (2022) examine working capital and profitability, which is related to but distinct from firm value. Variation in proxies, sectors, periods, and model specifications may contribute to these differences (Sawarni et al., 2021). The present interaction is one possible explanation to investigate; it does not demonstrate that omitted earnings credibility explains earlier insignificant findings.

Debt Policy and Firm Value

The positive debt-policy coefficient represents an association between the reported liabilities-to-equity ratio and firm value within this sample. Trade-off and agency theories offer possible interpretations involving financing benefits and monitoring (Ai et al., 2021; Jensen, 1986; Kraus & Litzenberger, 1973). However, total liabilities include obligations beyond interest-bearing borrowing, and the model does not identify tax shields, lender screening, or an optimal capital structure. Reverse causality is possible if firms with higher valuations obtain financing more readily.

The positive association resembles evidence from Vietnam and ASEAN markets Bui et al. (2023) and Tran and Nguyen (2025), while negative or insignificant findings elsewhere emphasise contextual variation (Doorasamy, 2021; Larasati & Betharia, 2024). Nonlinear evidence from Malaysia Ayaz et al. (2021) motivates testing an optimum, but the present linear model does not establish that these firms occupy a value-increasing portion of a trade-off curve. The mean ratio alone cannot justify recommending additional borrowing. Macroeconomic conditions and omitted firm characteristics may also shape the observed association.

Earnings Quality as a Certifier of Working Capital Signals

The positive WCI × EQ coefficient is consistent with a stronger working capital–valuation association at higher reported earnings quality. Accounting credibility is one interpretation, given the role of receivables, inventory, and payables in accrual measurement (Dechow et al., 1995; Sawarni et al., 2023). However, working capital turnover and balance-sheet total accruals share current-asset and current-liability components. Their interaction may partly reflect mechanical measurement overlap, rather than investor certification. A cash-flow-based earnings quality proxy or real earnings management measure would help assess this concern; no such alternative estimates are available in the supplied record. The conditional slopes alone cannot establish that one subgroup is rewarded and another ignored.

The direct EQ coefficient is not significant at 5 percent but has $p = 0.066$, so it should not be interpreted as evidence that earnings quality lacks a direct valuation association. The pure-moderator classification is provisional and sensitive to the chosen threshold and covariance estimator. Relative to studies examining a direct relationship Intara et al. (2024), the present model proposes a conditional association that may be compatible with signaling arguments (Connelly et al., 2025). It does not establish a refinement of theory or identify the reliability of the reporting channel independently of the proxy overlap.

Interpreting the Inconclusive Debt–Earnings Quality Interaction

The DP × EQ coefficient is negative but not statistically significant in the reported baseline; its sign cannot establish an offsetting mechanism. Three post hoc conjectures merit future testing: investors may use contractual information to evaluate financing obligations; accruals quality may

already be reflected in borrowing costs, as suggested by prior evidence Allayannis and Simko (2022) and fixed obligations may make solvency considerations especially salient. The present model contains no borrowing-cost, covenant, default-risk, or investor-perception measure, so none of these explanations has been tested.

The result can be compared with other contexts in which earnings quality does not uniformly condition valuation relationships (Darminto et al., 2024; Saleh et al., 2026). Such comparisons motivate hypotheses rather than validate a common mechanism. The positive operating interaction and inconclusive financing interaction suggest a possible difference to investigate, but a direct comparison of their coefficients, alternative proxies, and improved inference are required before concluding that accounting quality certifies accrual-based decisions but not contractual decisions.

Profitability, Liquidity, and the Sectoral Setting

Profitability has a positive reported association with firm value, consistent with the Indonesian evidence discussed by (Alghifari et al., 2022; Jihadi et al., 2021). Liquidity is not significant at 5 percent after adjustment for the included regressors. This does not show that liquidity is irrelevant or that investors necessarily favour turnover over reserves. Differences in working capital requirements, omitted firm characteristics, and uncertainty in the reported standard errors remain alternative explanations.

Cyclical firms account for most of the reported sample, but the pooled model does not test whether business-cycle sensitivity changes either interaction. Industry differences documented elsewhere Dang and Do (2021) support treating this as an open question. Separate sector-group estimates or group-by-regressor interactions are needed to assess heterogeneity. The current evidence should not be described as a demonstrated contrast between cyclical and non-cyclical firms.

Theoretical and Practical Implications

The study brings agency, signaling, and trade-off arguments into one model of conditional valuation associations. The pattern motivates a hypothesis that the information conveyed by operating ratios may depend on accounting quality differently from financing ratios. This proposition remains subject to mechanical proxy overlap, omitted variables, endogeneity, and unverified clustered inference. The evidence is therefore an application of these perspectives to selected Indonesian firms, rather than a general theoretical refinement for emerging markets.

For managers and analysts, the results suggest examining working capital turnover together with its denominator, accrual estimates, and financing obligations. They do not establish that improving turnover raises market value or that transparent earnings offset borrowing risk. Investors may use profitability and coverage information alongside these ratios. For regulators and auditors, attention to receivable and inventory measurement remains a relevant implication of the accounting framework; the study does not test whether any particular oversight intervention changes valuation.

International Relevance and Limitations

The Indonesian setting offers a basis for cross-market hypotheses, rather than direct international generalisation. Prior evidence on accounting information and valuation and on industry-specific financing relationships provides comparative context (Allayannis & Simko, 2022; Dang & Do, 2021). Whether the operating and financing interactions differ across institutional environments remains untested. Replication with verified samples, consistent definitions, and stronger inference is necessary before extending the conclusions beyond the included sectors and period.

The analysis is bounded by a two-year selected sample, unverified issuer coverage and screening, and unavailable firm-level data and scripts. The narrow EQ distribution, unusually low regressor correlations, and reported level-variable normality require source-data checks. Average working capital requires verified 2022 opening balances, while non-positive denominators, Modified Jones estimation groups, and the debt definition in Tobin's Q remain undocumented. Mechanical proxy overlap, reverse causality, and omitted firm size, growth, and year effects

restrict interpretation. White errors do not address within-firm dependence; clustered, fixed-effects, expanded-control, alternative-proxy, and simple-slope tests remain unavailable. The findings are provisional associations, with no tested sector-group or international generalisability.

CONCLUSION

The reported pooled model for 220 selected Indonesian listed firms in 2023–2024 shows positive associations of working capital efficiency and debt policy with firm value. The working capital–earnings quality interaction is positive under the submitted White-error specification, whereas the debt–earnings quality interaction is inconclusive. This pattern motivates further study of channel-specific associations; it does not establish investor certification, a causal valuation effect, a statistically tested difference between the two interactions, or the absence of a debt interaction. The pure-moderator interpretation is tentative because the direct EQ coefficient has $p = 0.066$.

Generalisability is limited by the two-year single-country selected sample, incomplete verification materials, unresolved measurement details, mechanical proxy overlap, omitted controls, and possible reverse causality. Firm-clustered inference, fixed-effects robustness, size and sales-growth controls, year effects, and simple-slope tests are required before firm hypothesis conclusions can be drawn. Future work should publish a verified issuer roster, reproducible variable construction, and estimation scripts, extend the panel, and test alternative earnings quality measures and sector-group differences. No supplementary dataset or additional regression result is claimed in this revision.

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AUTHOR CONTRIBUTION STATEMENT

Adithya Setio Putro, Etty Murwaningsari and Sistya Rachmawati are identified as the authors of this manuscript. The study encompasses research conceptualization, methodological development, analysis and interpretation of financial data, and manuscript preparation and revision. The allocation of these responsibilities to individual authors should reflect their actual contributions and be confirmed by both authors before publication. All listed authors should review and approve the final manuscript and accept accountability for their respective contributions.

REFERENCES

Ai, H., Frank, M. Z., & Sanati, A. (2021). The trade-off theory of corporate capital structure. In *Oxford Research Encyclopedia of Economics and Finance*. Oxford University Press. https://doi.org/10.1093/acrefore/9780190625979.013.602

Aiken, L. S., & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions*. Sage Publications.

Alghifari, E. S., Solikin, I., Nugraha, N., Waspada, I., Sari, M., & Puspitawati, L. (2022). Capital structure, profitability, hedging policy, firm size, and firm value: Mediation and moderation analysis. *Journal of Eastern European and Central Asian Research*, *9*(5), 789–801. https://doi.org/10.15549/jeecar.v9i5.1063

Allayannis, G., & Simko, P. J. (2022). Discretionary earnings smoothing, credit quality, and firm value. *Journal of Banking & Finance*, *140*, 106514. https://doi.org/10.1016/j.jbankfin.2022.106514

Angela, A., Hidayat, V. S., & Eunike, E. (2023). Working capital management, free cash flow, profitability and firm value. *Jurnal Proaksi*, *10*(2), 172–181. https://doi.org/10.32534/jpk.v10i2.3980

Angelita, R., & Saputra, D. (2025). How integrated reporting amplifies capital intensity to drive firm value growth? *E-Jurnal Akuntansi*, *35*(1). https://doi.org/10.24843/eja.2025.v35.i01.p12

Ayaz, M., Mohamed Zabri, S., & Ahmad, K. (2021). An empirical investigation on the impact of capital structure on firm performance: Evidence from Malaysia. *Managerial Finance*, *47*(8), 1107–1127. https://doi.org/10.1108/MF-11-2019-0586

Bui, T. N. T., Nguyen, X. H., & Pham, K. T. (2023). The effect of capital structure on firm value: A study of companies listed on the Vietnamese stock market. *International Journal of Financial Studies*, *11*(3), 100. https://doi.org/10.3390/ijfs11030100

Chambers, N., & Cifter, A. (2022). Working capital management and firm performance in the hospitality and tourism industry. *International Journal of Hospitality Management*, *102*, 103144. https://doi.org/10.1016/j.ijhm.2022.103144

Connelly, B. L., Certo, S. T., Reutzel, C. R., DesJardine, M. R., & Zhou, Y. S. (2025). Signaling theory: State of the theory and its future. *Journal of Management*, *51*(1), 24–61. https://doi.org/10.1177/01492063241268459

Dang, T. D., & Do, T. V. T. (2021). Does capital structure affect firm value in Vietnam? *Investment Management and Financial Innovations*, *18*(1), 33–41. https://doi.org/10.21511/imfi.18(1).2021.03

Darminto, D. P., Lysandra, S., Mulyadi, H. D., & Ahmar, N. (2024). Impact of integrated reporting on firm value and earnings quality as a moderator in Southeast Asia. *Investment Management and Financial Innovations*, *21*(2), 191–204. https://doi.org/10.21511/imfi.21(2).2024.15

Dechow, P., Ge, W., & Schrand, C. (2010). Understanding earnings quality: A review of the proxies, their determinants and their consequences. *Journal of Accounting and Economics*, *50*(2–3), 344–401. https://doi.org/10.1016/j.jacceco.2010.09.001

Dechow, P. M., Sloan, R. G., & Sweeney, A. P. (1995). Detecting earnings management. *The Accounting Review*, *70*(2), 193–225.

Doorasamy, M. (2021). Capital structure, firm value and managerial ownership: Evidence from East African countries. *Investment Management and Financial Innovations*, *18*(1), 346–356. https://doi.org/10.21511/imfi.18(1).2021.28

Gupta, R., Jatav, S., & Prakash, G. (2023). Does management of working capital enhance firm value? Empirical analysis of manufacturing enterprises in India. *Investment Management and Financial Innovations*, *20*(3), 224–238. https://doi.org/10.21511/imfi.20(3).2023.19

Intara, P., Sangwichitr, K., & Sattayarak, O. (2024). Earnings quality and firm value: Does corporate governance matter? *Cogent Business & Management*, *11*(1), 2386158. https://doi.org/10.1080/23311975.2024.2386158

Jaworski, J., & Czerwonka, L. (2022). Profitability and working capital management: Evidence from the Warsaw Stock Exchange. *Journal of Business Economics and Management*, *23*(1), 180–198. https://doi.org/10.3846/jbem.2022.15087

Jensen, M. C. (1986). Agency costs of free cash flow, corporate finance, and takeovers. *American Economic Review*, *76*(2), 323–329.

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.

Jihadi, M., Vilantika, E., Hashemi, S. M., Arifin, Z., Bachtiar, Y., & Sholichah, F. (2021). The effect of liquidity, leverage, and profitability on firm value: Empirical evidence from Indonesia. *Journal of Asian Finance, Economics and Business*, *8*(3), 423–431. https://doi.org/10.13106/jafeb.2021.vol8.no3.0423

Kraus, A., & Litzenberger, R. H. (1973). A state-preference model of optimal financial leverage. *The Journal of Finance*, *28*(4), 911–922.

Kristanti, I. N. (2021). Analysis of corporate governance mechanisms, financial performance on firm value with earnings quality as moderating variable. *Jurnal Akuntansi Keuangan Dan Bisnis*, *14*(2), 181–190. https://doi.org/10.35143/jakb.v14i2.4684

Kurniasih, A., Rustam, M., Heliantono, & Endri, E. (2022). Cost of capital and firm value: Evidence from Indonesia. *Investment Management and Financial Innovations*, *19*(4), 14–22. https://doi.org/10.21511/imfi.19(4).2022.02

Larasati, S. D., & Betharia, C. (2024). Firm value in profitability, leverage, capital structure, and firm growth. *Jurnal Akuntansi*, *16*(1), 168–182. https://doi.org/10.28932/jam.v16i1.8537

Myers, S. C. (1984). The capital structure puzzle. *The Journal of Finance*, *39*(3), 575–592. https://doi.org/10.1111/j.1540-6261.1984.tb03646.x

Saleh, R., Aryati, T., & Halim, H. A. (2026). Corporate governance, growth, and earnings quality: The moderating role of capital structure in Indonesian cyclical and non-cyclical firms. *Jurnal Akuntansi, Keuangan, Pajak Dan Informasi (JAKPI)*, *6*(1), 276–288. https://doi.org/10.32509/jakpi.v6i1.7478

Sawarni, K. S., Narayanasamy, S., & Ayyalusamy, K. (2021). Working capital management, firm performance and nature of business. *International Journal of Productivity and Performance Management*, *70*(1), 179–200. https://doi.org/10.1108/IJPPM-10-2019-0468

Sawarni, K. S., Narayanasamy, S., & Padhan, P. C. (2023). Impact of earnings management on working capital management efficiency. *Finance Research Letters*, *54*. https://doi.org/10.1016/j.frl.2023.103778

Setyawan, D., & Ghozali, I. (2025). Audit quality, firm value and earnings management. *E-Jurnal Akuntansi*, *35*(7). https://doi.org/10.24843/eja.2025.v35.i07.p16

Spence, M. (1973). Job market signaling. *The Quarterly Journal of Economics*, *87*(3), 355–374. https://doi.org/10.2307/1882010

Tobin, J. (1969). A general equilibrium approach to monetary theory. *Journal of Money, Credit and Banking*, *1*(1), 15–29. https://doi.org/10.2307/1991374

Tran, D. L., & Nguyen, Q. K. (2025). The moderating effect of monetary policy and ESG practices on the relationship between leverage and firm value in ASEAN-5 emerging countries. *Applied Economics*, *58*(8), 1563–1578. https://doi.org/10.1080/00036846.2025.2467289

White, H. (1980). A heteroskedasticity-consistent covariance matrix estimator and a direct test for heteroskedasticity. *Econometrica*, *48*(4), 817–838. https://doi.org/10.2307/1912934