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WORKING CAPITAL EFFICIENCY, INFLATION, AND FIRM VALUE: EVIDENCE FROM EMERGING MARKETS

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Abstract:

Background: Efficient financial management is fundamental to sustaining firm value, particularly through effective working capital management. In emerging markets, firm value is highly sensitive to macroeconomic volatility, including inflationary pressures that distort cash flow cycles, increase operating costs, and alter liquidity dynamics. Despite extensive research on working capital management, evidence on how inflation moderates the relationship between working capital efficiency and firm value remains limited, especially within the consumer non-cyclical sector.
Purpose: This study investigates the effect of Days Sales Outstanding (DSO), Days Inventory Outstanding (DIO), and Days Payable Outstanding (DPO) on firm value, as well as the moderating role of inflation.
Design/methodology/approach: This study employs a quantitative approach using panel data from consumer non-cyclical companies listed on the Indonesia Stock Exchange during 2015–2024. Firm-level financial data were obtained from audited annual reports, while inflation data were sourced from Bank Indonesia. The analysis uses a fixed-effects panel regression model estimated in Stata 17. Firm value is proxied by Tobin's Q, and control variables include firm size, profitability, leverage, and firm age.
Findings/Result: DSO shows no significant effect before or after moderation (H1, H4 rejected), reflecting that receivable efficiency is not a market valuation driver in stable, demand-driven sectors. DIO significantly and negatively affects firm value ($\beta = -0.003$; $p = 0.010$), consistent with CCC theory, yet becomes insignificant under inflation (H5 rejected), suggesting that rising input costs prompt firms to adopt strategic inventory buffering rather than efficiency-driven reduction. DPO positively and significantly influences firm value ($\beta = 0.010$; $p < 0.01$), and inflation amplifies this effect ($\beta = 0.428$; $p = 0.005$; H6 supported), aligning with Signaling Theory, as extended payables under inflationary conditions signal financial resilience to investors.
Conclusion: Inflation asymmetrically moderates the working capital firm value nexus strengthening DPO's positive effect while leaving DSO and DIO unaffected confirming that adaptive payables management is the dominant strategic lever for sustaining firm value under macroeconomic stress.
Originality/value: This study provides new empirical evidence on how inflation interacts with working capital components to influence firm value, highlighting the relevance of macro-financial integration in corporate decision-making.

Keywords: working capital, inflation, firm value, operating costs, emerging markets

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INTRODUCTION

Effective financial management is a key determinant of firm sustainability and long-term value creation, particularly in environments characterized by economic volatility and macroeconomic uncertainty. Financial management comprises an integrated framework of planning, control, and strategic decision-making to allocate financial resources and achieve corporate objectives efficiently (Sitinjak et al. 2023). Rather than functioning as an isolated administrative activity, financial management links operational actions with financial outcomes such as liquidity, profitability, and stability (Samborska et al. 2023). The quality of financial decisions, especially those related to investment, financing, and working capital, directly affects firm value, as market valuation reflects how effectively resources are utilized (Mwambuli & Anselim, 2024). Thus, financial management acts as a critical mechanism connecting internal managerial policies with external market perceptions and investor confidence.

Working capital management is a critical component of financial management because it determines a firm's ability to sustain operations while maintaining liquidity. Its efficiency is commonly assessed using Days Sales Outstanding (DSO), Days Inventory Outstanding (DIO), and Days Payable Outstanding (DPO), which reflect the management of receivables, inventories, and payables. A higher DSO signals weaker collection efficiency and greater credit risk, whereas a lower DSO improves cash flow and operational flexibility (Aldubhani et al. 2022). Similarly, a longer DIO indicates inefficient inventory control that raises holding costs, while faster turnover enhances operational efficiency (Gołaś, 2020; Huynh et al. 2025). On the financing side, extending DPO can preserve liquidity, although excessive delays may weaken supplier relationships and threaten operational sustainability (Pham et al. 2020).

Efficient working capital management is closely associated with improved profitability, reflecting a firm's ability to generate earnings from its operational resources. However, profitability represents only an intermediate stage in the value-creation process, as investors' expectations of future performance ultimately shape firm value. Firms with strong profitability are perceived as operationally efficient and effective in utilizing assets, thereby conveying positive signals to the capital market (Hidayat et al. 2025). These signals attract investor interest, increase stock demand, and contribute to higher market valuation (Bon & Hartoko, 2022). Consequently, profitability serves not only as an internal performance measure but also as a signaling mechanism linking operational efficiency to firm value in financial markets (Cempaka & Simatupang, 2025).

Firm value in emerging markets is highly sensitive to macroeconomic conditions, as reflected in Indonesia's capital market over the past decade. As shown in Figure 1, the market capitalization of the Indonesia Stock Exchange exhibits long-term growth accompanied by substantial volatility driven by global and domestic economic shocks. According to the China Economic Information Center (2025), market capitalization rose from approximately USD 350–400 billion in 2015–2016 to around USD 520 billion in 2018, before declining sharply during the COVID-19 crisis in 2020. The market later rebounded strongly, reaching a record level in 2024, but declined again in early 2025 amid global inflation and monetary tightening. These fluctuations indicate that firm value in Indonesia remains highly responsive to macroeconomic conditions, highlighting the importance of internal financial efficiency in maintaining stability under uncertainty.

Prior studies have yielded mixed and inconclusive evidence on the effects of working capital management components on firm performance, suggesting no clear empirical consensus. Empirical findings on DSO vary substantially, with some studies reporting positive effects related to sales growth and operational flexibility (Amponsah-Kwatiah & Asiamah, 2021; Gołaś, 2020; Pham et al. 2020), while others document negative or insignificant relationships due to delayed cash inflows, higher credit risk, and liquidity constraints (Aldubhani et al. 2022; Basyith et al. 2021; Huynh et al. 2025; Kiymaz et al. 2024; Nguyen et al. 2020; Yousaf et al. 2021). Similar inconsistencies are observed for DPO and DIO, with empirical results alternating between positive, negative, and non-significant effects across different institutional and economic settings. These divergent findings suggest that the relationship between working capital efficiency and firm outcomes is highly context-dependent and influenced by structural and macroeconomic conditions. Moreover, prior research predominantly focuses on manufacturing firms or cross-country samples, leaving limited empirical evidence for Indonesia's consumer non-cyclical sector, despite its strategic importance for economic stability and its exposure to inflationary pressures and market volatility.

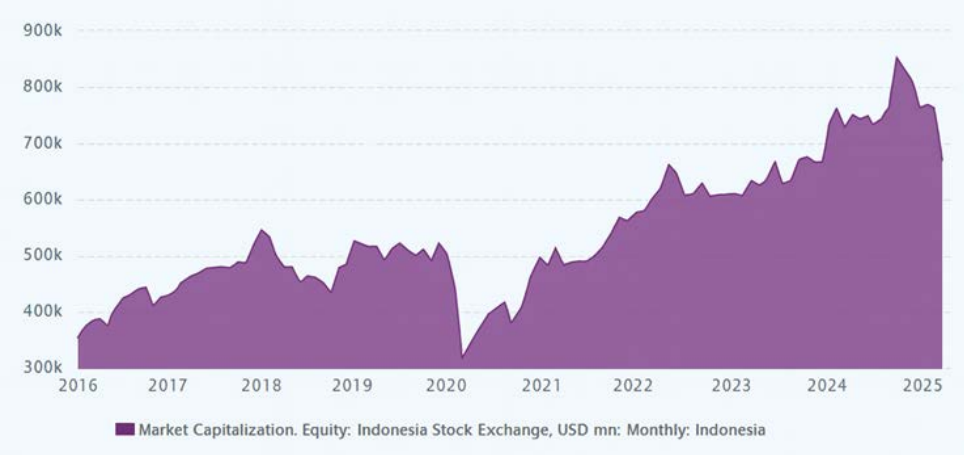

Figure 1. Market Capitalization of Indonesia Stock Exchange (2015–2025) (CEIC Data, 2025)

This study addresses the identified research gap by proposing an integrative framework that links firm-level working capital efficiency with macroeconomic dynamics to explain variations in firm value. Unlike prior research that mainly emphasizes profitability-based outcomes, this study adopts Tobin's Q as a market-oriented proxy for firm value. It incorporates inflation as a moderating variable that may strengthen or weaken the effects of DSO, DIO, and DPO on firm value (Ginoga et al. 2025). The extended observation period from 2015 to 2024 allows for an examination of firm behavior across multiple economic cycles, including periods of crisis and recovery (Kusuma & Mawardi, 2025). Furthermore, by focusing on Indonesia's consumer non-cyclical sector, this study expands the sectoral scope beyond manufacturing and provides new empirical evidence from an emerging market context with high relevance for economic Resilience (Karim et al. 2024; Kouaib & Bu Haya, 2024). Methodologically, the shift from profitability-based measures to a market-based valuation perspective enhances this study's contribution to the literature on working capital management and firm value.

METHODS

To address the identified research gaps, this study adopts a quantitative approach using panel data analysis of consumer non-cyclical firms listed on the Indonesia Stock Exchange. Working capital efficiency is measured through DSO, DIO, and DPO, while firm value is proxied by Tobin's Q to capture market-based valuation (Kiymaz et al. 2024). Inflation is introduced as a moderating variable to assess whether macroeconomic conditions alter the strength or direction of the relationship between working capital efficiency and firm value. By integrating firm-level financial indicators with macroeconomic variables, the analytical framework enables a more nuanced understanding of how internal efficiency and external conditions jointly shape firm value.

This study adopts a quantitative research approach using secondary data from firm-level and macroeconomic sources. Firm-level data comprise annual financial statements of consumer non-cyclical companies listed on the Indonesia Stock Exchange (IDX) for the 2015–2024 period, obtained from the official IDX and company websites. Macroeconomic data, specifically annual inflation rates, were sourced from Bank Indonesia (BI). The dataset includes indicators of working capital management, firm value, control variables, and macroeconomic factors relevant to the research framework.

The research sample was selected using a purposive sampling technique to ensure that the observations met specific analytical requirements. The initial population consisted of 131 consumer non-cyclical companies listed on the IDX. Firms were subsequently filtered based on several criteria, including having conducted an initial public offering (IPO) before 2016 and having consistently published audited financial statements throughout the 2015–2024 period. The detailed sample selection process and resulting observations are presented in Table 1, which is explicitly referenced to ensure clarity and transparency. Based on these criteria, the final dataset comprises 50 firms, yielding 500 firm-year observations for the empirical analysis. This sampling approach ensures data completeness and enhances the robustness of the panel data analysis.

This study applies panel data regression using STATA 17 to examine the effect of working capital efficiency measured by DSO, DIO, and DPO on firm value, with inflation as a moderating variable. Two models are estimated: one tests the direct effects of DSO, DIO, and DPO, while the other incorporates interaction terms with inflation. Model selection is conducted using the Chow, Hausman, and Lagrange Multiplier tests to determine the most appropriate specification. Multicollinearity is assessed using the Variance Inflation Factor (VIF); values below 10 are considered acceptable. Firm size, profitability (ROA), solvency (DER), and firm age are included as control variables to account for firm-specific characteristics affecting firm value (Bui et al. 2023; Danso et al. 2024). Definition and measurement of firm value, working capital efficiency, inflation, and control variables in Table 2.

The two regression models estimated in this study are formally specified as follows:
Model 1 (Direct Effects):

$$FV = \beta_0 + \beta_1 DSO + \beta_2 DIO + \beta_3 DPO + \beta_4 SZ + \beta_5 ROA + \beta_6 DER + \beta_7 AGE + \varepsilon$$

Model 2 (Moderation Effects):

$$FV = \beta_0 + \beta_1 DSO + \beta_2 DIO + \beta_3 DPO + \beta_4 INF + \beta_5 (DSO \times INF) + \beta_6 (DIO \times INF) + \beta_7 (DPO \times INF) + \beta_8 SZ + \beta_9 ROA + \beta_{10} DER + \beta_{11} AGE + \varepsilon$$

where FV denotes firm value (Tobin's Q); DSO, DIO, and DPO represent working capital efficiency components; INF is the annual inflation rate; SZ, ROA, DER, and AGE are control variables for firm size, profitability, solvency, and firm age, respectively; β_0 is the intercept; β_1–β_{11} are regression coefficients; and ε is the error term.

Table 1. Sample selection criteria for consumer non-cyclical firms listed on the indonesia stock exchange (2015–2024)

Criteria	Total
Consumer non-cyclical companies listed on the IDX	131
Companies that went public (IPO) before 2016	61
Firms with audited financial report (2015–2024)	50
Final firm-year observations used in analysis (2015–2024)	500

Table 2. Definition and measurement of firm value, working capital efficiency, inflation, and control variables

Variables	Formula
Dependent Variable	
Firm Value (FV)	(Market Value of Equity + Total Debt) / Total Assets
Independent Variables	
DSO	(Accounts Receivable / Sales) × 365
DIO	(Inventory / Cost of Goods Sold) × 365
DPO	(Accounts Payable / Cost of Goods Sold) × 365
Moderating Variable	
Inflation (INF)	Year-on-year inflation (%)
Control Variables	
Firm Size (SZ)	Ln(Total Assets)
Profitability (ROA)	Net Income / Total Assets
Solvency (DER)	Total Debt / Total Equity
Firm Age (AGE)	Ln(Current Year − IPO Year)

The Cash Conversion Cycle (CCC) theory and Signaling Theory jointly underpin this study by explaining how internal financial efficiency and external information transmission shape firm value. The CCC theory posits that efficient working capital management enhances liquidity and operational sustainability by reducing the time required to convert cash outflows into inflows from sales. It comprises DIO, DSO, and DPO, which jointly indicate cash efficiency (Brigham & Houston, 2022; Huynh et al. 2025). As a complement, Signaling Theory suggests that managerial decisions convey credible information about firm quality to investors amid information asymmetry. Effective financial management signals discipline and competence, fostering market confidence and improving firm valuation (Brigham & Houston, 2022; Scott & O'Brien, 2020).

A shorter DSO indicates greater efficiency in receivables management and improves firm liquidity. When DSO increases, more capital becomes tied up in accounts receivable, raising financing costs and reducing profitability (Nguyen et al. 2020). Conversely, faster collection enhances operational cash flow, lowers reliance on external funding, and boosts profitability (Aldubhani et al. 2022). Firms that shorten their receivable cycles can reinvest cash more effectively and take advantage of payment discounts, thereby improving performance (Basyith et al. 2021; Huynh et al. 2025). Efficient receivable management therefore supports liquidity and profitability, which in turn enhance firm value.
H_1: DSO hurts firm value.

Efficient inventory management is vital for enhancing both operational performance and investor perception. A shorter DIO reflects faster turnover and effective inventory utilization, signaling managerial competence in maintaining liquidity and operational balance (Brigham & Houston, 2022). Firms with lower DIO can generate revenue more quickly, improve product quality, and attract new business opportunities while minimizing storage and preservation costs (Nguyen et al. 2020). Conversely, longer inventory cycles tie up capital, increase carrying costs, and reduce returns on operating assets (Gołaś, 2020). Excessive inventory may also signal inefficiency or weak demand, undermining investor confidence (Huynh et al. 2025). Therefore, reducing inventory days enhances profitability, operational efficiency, and firm value.
H_2: DIO hurts firm value.

Effective management of accounts payable enhances liquidity and operational efficiency. Extending DPO within optimal limits allows firms to retain cash for longer investment or operational use, thereby improving profitability and reducing dependence on external funding (Amponsah-Kwatiah & Asiamah, 2021). Longer payment periods also provide a low-cost source of internal financing when managed responsibly (Pham et al. 2020). Efficient payables management positively affects returns by supporting working capital flexibility (Gołaś, 2020). From a Signaling Theory perspective, an optimal DPO demonstrates managerial prudence and financial discipline, which investors interpret as a sign of stability and credibility (Aldubhani et al. 2022). However, excessively delayed payments may indicate financial distress; therefore, maintaining a balance in DPO strengthens both performance and firm value.
H_3: DPO has a positive effect on firm value.

Inflation plays a crucial moderating role in the relationship between working capital efficiency and firm value, as it directly influences input prices (Weber & Wasner, 2023), consumer purchasing power (Stantcheva, 2024), and financing costs (Martell, 2024). Rising inflation increases operational expenses and reduces profit margins (Yılmaz & Bulut, 2025), weakening firms' ability to sustain liquidity and efficiency (Thilagavathi et al. 2022). It also heightens credit risk, as customers face greater difficulty meeting payment obligations (Asfuroglu, 2024), which can prolong DSO and further reduce cash inflows (Horobet et al. 2021). Consequently, inflation is expected to amplify the negative effect of DSO on firm value.
H_4: Inflation strengthens the negative effect of DSO on firm value.

Inflation also raises the cost of raw materials (Tsukioka & Kagawa, 2025), inventory holding, and storage (Pathak et al. 2024), creating additional financial pressure for firms. Companies that fail to adapt their inventory strategies to inflationary conditions may experience reduced efficiency and profitability (Memon et al. 2022). The rise in costs increases the burden of maintaining large inventories (Siriwardena et al. 2024), making longer DIO more detrimental to firm value.
H_5: Inflation strengthens the negative effect of DIO on firm value.

Conversely, inflation may enhance the positive relationship between DPO and firm value. By extending payment periods during inflationary periods, firms can preserve cash longer (Das et al. 2024), delay outflows (Dorrah & McCabe, 2023), and partially offset rising input costs (Lavoie, 2024). This strategy demonstrates managerial adaptability and financial prudence (Kutasi, 2024), serving as a positive signal of Resilience to investors (Mohd & Siddiqui, 2020). Firms that can balance delayed payments with supplier trust can sustain liquidity and strengthen valuation amid inflationary pressures.

H_6: Inflation strengthens the positive effect of DPO on firm value.

This study's framework explains how working capital efficiency measured by DSO, DIO, and DPO affects firm value. Inflation acts as a moderating variable, potentially strengthening or weakening these relationships by influencing liquidity, operating costs, and cash flow timing. Firm size, profitability (ROA), solvency (DER), and firm age are included as control variables to capture firm-specific characteristics. Efficient working capital management is expected to enhance firm value, while inflation alters the magnitude of this effect. Thus, the research framework diagram is shown in Figure 2.

RESULTS

Prior to the main regression analysis, diagnostic tests were conducted to ensure model validity. Multicollinearity was assessed using the Variance Inflation Factor (VIF), with all values ranging from 1.02 to 3.69, well below the threshold of 10, indicating no multicollinearity among the explanatory variables. Model specification was determined using the Chow and Hausman tests, both of which returned p-values < 0.001, confirming the Fixed Effects Model (FEM) as the most appropriate estimator for both the baseline and moderation models. Accordingly, FEM was applied consistently across all estimations.

Table 3 presents the descriptive statistics for all variables across 500 firm-year observations. Firm value (Tobin's Q) averages 1.80, with a wide range from 0.42 to 23.34, indicating substantial heterogeneity in market valuation across sample firms. Among the working capital components, DIO exhibits the highest mean (84.12 days) and greatest variability (std. dev. = 82.08), suggesting considerable dispersion in inventory management practices. DSO and DPO average 41.51 and 44.19 days, respectively, both with moderate variability. Inflation shows a narrow range (4.52–4.73%), reflecting relatively stable macroeconomic conditions during portions of the observation period. Firm size (SZ) ranges from 24.04 to 33.94 in natural log terms, while ROA averages 0.052, with some firms recording negative returns (min = −0.689), indicating performance variation within the sector. Firm age (AGE) averages 2.93 in log terms, reflecting a generally mature sample.

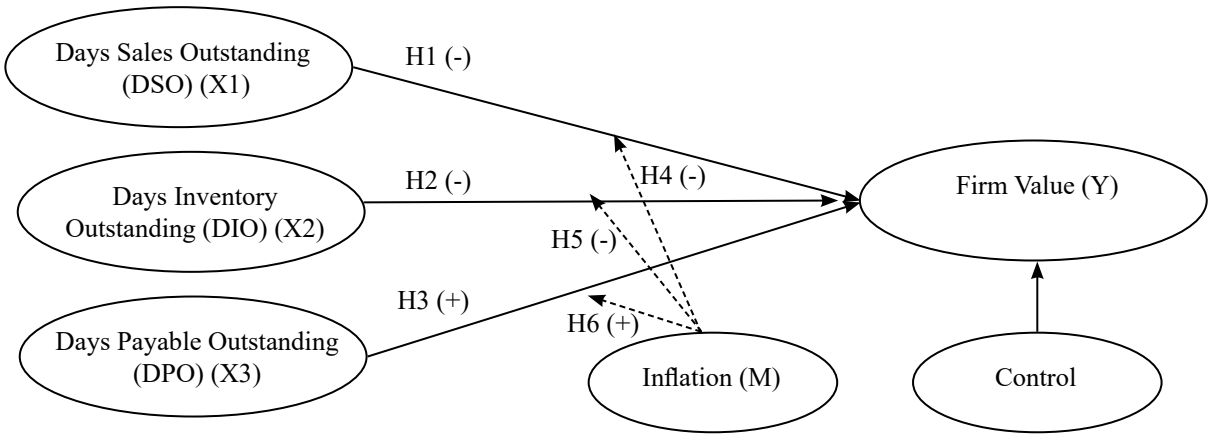

Figure 2. Conceptual model of the relationship between working capital efficiency and firm value with inflation as a moderator

Table 3. Descriptive Statistics of All Variables

Variable	Mean	Std. Dev.	Min	Max
FV (Tobin's Q)	1.7997	2.2435	0.4206	23.3428
DSO (days)	41.5105	42.2209	0.0235	256.1862
DIO (days)	84.1208	82.0828	1.9580	724.0642
DPO (days)	44.1933	31.7336	0.2240	345.1876
INF (%)	4.6313	0.0605	4.5208	4.7326
SZ (Ln Total Assets)	28.7742	1.9946	24.0396	33.9413
ROA	0.0520	0.1282	-0.6890	0.9436
DER	1.7702	4.7969	-30,6385	54.9798
AGE (Ln years)	2.9256	0.5882	0	3.7842

DSO exhibits a negative yet statistically insignificant effect on firm value ($\beta = -0.00093$; $p = 0.669$) (Table 4), thereby rejecting H_1. In stable, demand-driven industries, receivable collection efficiency carries limited informational value for market participants. Credit cycles in non-cyclical sectors tend to be structurally predictable customers in this segment maintain relatively consistent purchasing behavior regardless of collection timelines, which reduces the extent to which DSO fluctuations translate into meaningful valuation signals. From a CCC perspective, while shorter collection periods theoretically enhance liquidity (Brigham & Houston, 2022; Huynh et al. 2025), the sector's inherent demand stability buffers against the liquidity stress that DSO would otherwise trigger. Similarly, from a Signaling Theory standpoint, DSO may no longer function as a credible indicator of managerial discipline or financial strength in this context (Scott & O'Brien, 2020). The sector-specific nature of this finding helps explain why the broader literature's predominantly negative DSO effects documented across manufacturing and cross-industry samples (Aldubhani et al. 2022; Basyith et al. 2021; Huynh et al. 2025; Nguyen et al. 2020) do not generalize to Indonesia's consumer non-cyclical sector, where Akpadaka & Edeh (2024) and Kiymaz et al. (2024) similarly observe that optimized credit structures diminish DSO's valuation relevance.

DIO exhibits a negative and statistically significant effect on firm value ($\beta = -0.00274$; $p = 0.010$) (Table 4), confirming H_2. Prolonged inventory cycles impose direct costs on firm valuation: capital locked in unsold stock reduces liquidity, increases holding and insurance expenses, and elevates the risk of obsolescence all of which compress profitability and dampen investor confidence. Within the CCC framework, faster inventory conversion directly improves cash flow availability and strengthens operational sustainability (Brigham & Houston, 2022; Huynh et al. 2025). From a Signaling Theory perspective, a shorter DIO communicates managerial precision and operational efficiency to the market, reinforcing positive valuation expectations (Scott & O'Brien, 2020). These mechanisms are well-supported empirically: Nguyen et al. (2020) demonstrated that reducing storage time increases both efficiency and revenue generation; Gołaś (2020) and Huynh et al. (2025) showed that prolonged inventory cycles reduce asset productivity; and Yousaf et al. (2021) and Rey-Ares et al. (2021) confirmed that excess inventory holding generates avoidable costs that erode firm performance. Mandipa & Sibindi (2022) further established that efficient stock management simultaneously enhances profitability and market valuation. Taken together, these findings affirm that inventory management is a critical operational lever through which firms signal competence and generate sustainable value.

DPO exhibits a positive and statistically significant effect on firm value ($\beta = 0.00977$; $p = 0.000$) (Table 4), supporting H_3. Strategically extending payment terms allows firms to retain cash within their operations for longer, effectively converting trade credit into a low-cost internal financing mechanism that enhances liquidity without requiring external debt. This is particularly advantageous in capital-intensive operating cycles, where the timing of outflows critically shapes financial flexibility. Within the CCC framework, optimized payables management improves liquidity by deferring cash outflows without compromising supplier relationships (Brigham & Houston, 2022). From a Signaling Theory standpoint, responsibly managed DPO reflects financial discipline and negotiating capability — characteristics that investors interpret as indicators of managerial competence and operational

stability (Scott & O'Brien, 2020). These findings are reinforced by Amponsah-Kwatiah & Asiamah (2021) and Pham et al. (2020), who demonstrated that strategic payment extensions enhance profitability; Gołaś (2020) and Aldubhani et al. (2022), who found that deferred payments improve liquidity and returns; and Otekunrin et al. (2021), who observed that higher DPO strengthens short-term financial flexibility and supports firm growth. The robustness of this result across both the baseline and moderation models confirms that the efficient use of trade credit is a reliable and stable driver of firm value.

The inflation–DSO interaction yields a negative but insignificant coefficient (β = −0.12092; p = 0.437) (Table 4), leading to the rejection of H_4. The structural characteristics of the consumer non-cyclical sector appear to insulate the DSO–firm value relationship from inflationary pressures. Firms in this segment serve customers with relatively inelastic demand, and their credit arrangements tend to be governed by established contractual frameworks rather than macroeconomic fluctuations. As a result, even when inflation erodes purchasing power (Stantcheva, 2024), raises financing costs (Martell, 2024), and increases credit risk (Asfuroglu, 2024; Horobet et al. 2021), the sector's stable credit structures prevent these pressures from meaningfully altering collection dynamics or their valuation consequences. This finding extends the baseline result: DSO's irrelevance to firm value is not a condition-specific artifact but a persistent feature of this sector's operating environment, robust across both normal and inflationary macroeconomic states.

The inflation–DIO interaction is negative but statistically insignificant (β = −0.11667; p = 0.157) (Table 4), leading to the rejection of H_5. This finding is theoretically significant because it reveals that inflation does not amplify DIO's negative valuation impact contrary to what the CCC framework would predict based on rising raw material costs (Tsukioka & Kagawa, 2025), higher holding and storage expenses (Pathak et al. 2024), and the escalating burden of excess stock (Siriwardena et al. 2024). The key explanatory mechanism lies in the adaptive inventory behavior of non-cyclical firms under inflationary conditions. Rather than reducing inventory to improve efficiency, firms in this sector strategically accumulate stock buffers in anticipation of further input cost increases, effectively transforming what would otherwise signal operational inefficiency into a deliberate supply chain resilience strategy. Under such conditions, investors may reinterpret prolonged DIO not as a symptom of managerial weakness but as evidence of adaptive procurement capability, thereby diminishing its negative valuation impact. This reasoning, anchored in both the CCC framework and Signaling Theory, explains why inflation neutralizes rather than amplifies the inventory–firm value relationship: the macroeconomic context fundamentally reframes the signal that inventory holding sends to the market. A conceptually similar pattern was observed by Basyith et al. (2021), who found that DIO's profitability impact was negative but insignificant, suggesting that inventory dynamics operate through gross margin channels that do not always cascade into overall firm valuation.

Table 4. Panel regression results of working capital efficiency on firm value before and after inflation moderation

Variables	Before Moderation (Coef.)	After Moderation (Coef.)
DSO	-0.00093	0.00253
DIO	-0.00274***	0.00091
DPO	0.00977***	-0.00255
INF		-2.59298*
DSO*INF		-0.12092
DIO*INF		-0.11667
DPO*INF		0.42828***
SZ	0.90149***	0.90369***
ROA	4.50855***	4.43142***
DER	-0.87960***	-0.87710***
AGE	0.39789***	0.49657***
Adjusted R^2	0.4935	0.5054

Notes: *p<0.10. **p<0.05. ***p<0.01

Inflation significantly amplifies the positive relationship between DPO and firm value (β = 0.42828; p = 0.005) (Table 4), confirming H_6. This result reveals a strategically important interaction: under inflationary conditions, the liquidity advantage of extended payables becomes substantially more valuable. As input costs rise, firms that successfully defer outflows create a natural hedge against cost pressures, preserving working capital that can be reallocated toward productive investments or operational continuity. This dynamic is especially pronounced in the consumer non-cyclical sector, where steady demand provides firms with the negotiating leverage to extend payment terms without disrupting supplier relationships. From a CCC perspective, inflation magnifies the efficiency gains from deferred payments by widening the gap between cash inflows and outflows (Das et al. 2024; Dorrah & McCabe, 2023). From a Signaling Theory standpoint, firms that maintain disciplined payables management under macroeconomic stress send strong credibility signals to investors demonstrating financial adaptability and Resilience in an environment where many peers face liquidity constraints (Kutasi, 2024; Mohd & Siddiqui, 2020). The amplified significance of DPO under inflation, therefore, reflects not merely a statistical interaction but a fundamental shift in the strategic value of trade credit as a financial instrument during periods of macroeconomic volatility.

Beyond the primary variables of interest, all four control variables firm size (SZ), profitability (ROA), solvency (DER), and firm age (AGE) are statistically significant across both models, a finding that warrants brief interpretive attention. The positive and significant coefficient of SZ is consistent with the view that larger firms benefit from economies of scale, greater access to capital markets, and enhanced reputational capital, all of which translate into higher market valuations. ROA's strong positive effect confirms the central role of operational profitability as a market signal: investors reward firms that demonstrate efficient asset utilization with higher valuations. The negative coefficient of DER reflects the well-established risk premium associated with financial leverage — higher debt relative to equity raises default risk and reduces investor confidence. Finally, AGE positively affects firm value, suggesting that more established firms accumulate reputational capital and institutional legitimacy over time, which the market rewards. The directional consistency of these controls across both pre- and post-moderation models reinforces the robustness of the empirical framework. It affirms that firm value is shaped by multiple, layered financial characteristics operating simultaneously.

The inclusion of INF as a moderating variable produces a marginal improvement in explanatory power, with adjusted R^2 rising from 0.4935 to 0.5054 — an increase of approximately one percentage point. This modest gain should not be interpreted as evidence that macroeconomic moderation broadly enhances the model's explanatory structure. A more precise reading is that INF's contribution is concentrated in a single channel: the DPO interaction. With DSO×INF and DIO×INF both statistically insignificant, inflation operates selectively rather than uniformly across working capital components. The improvement in adjusted R^2 is therefore attributable primarily to the DPO×INF interaction, confirming that trade payables management is the dominant mechanism through which macroeconomic conditions interact with internal financial efficiency to shape firm value.

Managerial Implications

The insignificance of DSO, both before and after inflation, implies that accelerating receivable collection alone does not improve firm value, suggesting that customer relationship quality and credit policy consistency are more critical. Conversely, DIO's negative effect highlights the need for tighter inventory control, while its reduced significance under inflation indicates that supply chain agility can mitigate cost pressures. DPO emerges as the most strategically influential variable its consistent significance and amplified positive effect under inflation underscore the role of payables as a cost-effective liquidity instrument. Managers should therefore maintain balanced payment terms, foster supplier trust, and align working capital strategies with macroeconomic trends to sustain firm value amid inflationary fluctuations.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

This study aimed to examine the effects of DSO, DIO, and DPO on firm value in Indonesia's consumer non-cyclical sector, with inflation as a moderating variable. The findings demonstrate that working capital efficiency determines firm value in a component-specific and macroeconomic-contingent manner. DSO

does not significantly influence firm value under any condition, diverging from Nguyen et al. (2020) and Aldubhani et al. (2022), yet consistent with Akpadaka & Edeh (2024) and Kiymaz et al. (2024), who find that stable credit structures attenuate DSO's valuation relevance. DIO negatively and significantly affects firm value under normal conditions, consistent with Gołaś (2020) and Mandipa & Sibindi (2022), but this effect is neutralized under inflation as firms strategically accumulate inventory buffers reframing excess inventory as adaptive Resilience rather than inefficiency. DPO consistently and positively determines firm value, corroborating Amponsah-Kwatiah & Asiamah (2021) and Pham et al. (2020). Inflation further amplifies this effect by enhancing the liquidity advantage of deferred payments, consistent with Das et al. (2024) and Kutasi (2024). Inflation, therefore, moderates the working capital–firm value nexus asymmetrically selectively strengthening only the DPO channel challenging the assumption of uniform macroeconomic moderation prevalent in prior literature. Theoretically, these findings extend CCC theory by demonstrating that its predictive power is context-dependent and component-specific when macro-financial dynamics are incorporated, and reinforce Signaling Theory by showing that identical working capital signals carry different informational content across macroeconomic states. The robustness of all control variables SZ, ROA, DER, and AGE across both models further affirms the multi-layered nature of firm value determination.

Recommendations

Managers should prioritize adaptive payables strategies that extend DPO deliberately during inflationary periods to preserve liquidity while maintaining supplier trust. Inventory buffering under inflation is a value-neutral strategy and need not be avoided. Investment in receivable acceleration yields limited valuation returns in this sector. For investors, DPO-focused analysis during inflationary periods offers a more reliable signal of firm Resilience than aggregate working capital metrics.

Future research should address four limitations identified in this study: (1) potential endogeneity between working capital and firm value, addressable through GMM or instrumental variable approaches; (2) reliance on annual data, which obscures intra-year inflationary volatility; (3) the single-moderator design, which should be extended to incorporate interest rates, exchange rates, and credit conditions; and (4) the sector-specific scope, which limits generalizability to cyclical and capital-intensive industries.

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