IOSR Journal of Business and Management (IOSR-JBM)
e-ISSN:2278-487X, p-ISSN: 2319-7668. Volume 27, Issue 9. Ser. 3 (September. 2025), PP 29-36
www.iosrjournals.org

Influence Of Working Capital Management Indicators On Stock Price Of Select Steel Companies In India

Amalendu Bhunia
Professor, Department Of Commerce
Kalyani University, West Bengal-741235, India

Sourav Bhuiya
Research Scholar, Department Of Commerce
Kalyani University, West Bengal-741235, India

Abstract
This study investigated the influence of working capital management indicators on stock prices of selected listed Indian steel companies over the period 2014–2023, using a balanced panel of 10 firms and 100 firm-year observations. Key indicators including inventory turnover ratio, receivables collection period, payables deferral period, and cash conversion cycle, were analyzed alongside control variables such as return on assets, return on equity, earnings per share, and firm size. Panel regression models estimated revealed that efficient working capital management significantly enhanced stock price performance, with shorter cash cycles and higher inventory efficiency positively influencing market valuation. The findings emphasized that strategic working capital management practices strengthened financial performance and investor confidence. The study contributed to corporate finance literature and provided managerial and policy insights for India's capital-intensive steel sector.

Keywords: *working capital management, stock prices, Indian steel companies, panel data analysis.*

Date of Submission: 27-08-2025 Date of Acceptance: 07-09-2025

I. Introduction

The performance of companies in capital-intensive sectors like steel is significantly shaped by their ability to manage short-term assets and liabilities, as working capital management (WCM) is a critical determinant of liquidity, solvency, and market valuation. Stock price is widely recognized as a key indicator of firm performance, operational efficiency, and investor sentiment (Fama, 1970). However, research exploring the role of WCM indicators, such as inventory turnover ratio, receivables collection period, payables deferral period, and cash conversion cycle (CCC) in influencing stock price remains limited, especially in heavy industries. These indicators directly influence the trade-offs between liquidity, profitability, and risk (Deloof, 2003; Lazaridis & Tryfonidis, 2006). In India's steel sector, characterized by cyclical demand, volatile raw material costs, and reliance on both domestic and global markets, efficient working capital practices are essential for financial resilience and competitiveness. Despite its strategic relevance, few studies have empirically examined the direct link between WCM efficiency and stock market performance in this sector, even though steel is a cornerstone of industrial growth and exports (Ministry of Steel, Government of India, 2024). Addressing this gap, this study investigates whether effective WCM enhances the stock price performance of steel companies listed on the Bombay Stock Exchange (BSE) and National Stock Exchange (NSE). While firm performance is evaluated through profitability measures, studies connecting these financial practices with market valuation remain sparse in India (Gill et al., 2010; Sharma & Kumar, 2011). Given the competitive, cyclical nature of steel, efficient WCM can act as a market signal of managerial expertise and financial health, shaping investor confidence and stock price trends. Steel companies, with their high inventory requirements, extended receivables cycles, and reliance on trade credit, face persistent liquidity challenges where inefficiencies can reduce profitability and investor trust (Agarwal & Verma, 2017). The central research question, therefore, is whether WCM metrics significantly influence stock price movements in Indian steel firms.

The study builds on corporate finance theories, including trade-off and pecking order theory, which emphasize balancing liquidity and profitability in financing decisions (Myers, 1984; Hill et al., 2010). For instance, maintaining large inventories mitigates production risks but ties up capital and raises holding costs, potentially signalling inefficiency to investors. Similarly, extending generous credit policies may increase sales but weaken liquidity, affecting stock price perceptions (Shin & Soenen, 1998). As Indian capital markets mature, investors increasingly scrutinize financial fundamentals, making efficient WCM a potential driver of

equity market performance (Raheman & Nasr, 2007). Global research on WCM's impact is mixed, with studies reporting positive, negative, or insignificant effects (Deloof, 2003; Lazaridis & Tryfonidis, 2006; Padachi, 2006; Wang, 2002), underscoring the need for sector-specific analysis.

This study contributes academically by linking short-term financial management practices with market-based metrics in a capital-intensive, emerging economy context. Prior Indian research has focused largely on profitability and liquidity outcomes of WCM (Sharma & Kumar, 2011; Chandra, 2015) but has rarely examined stock price effects. The findings aim to provide actionable insights for managers to align working capital strategies with shareholder value creation, for investors to incorporate operational efficiency into valuation models, and for regulators such as SEBI to refine disclosure requirements. Policymakers also gain evidence to support the National Steel Policy 2017, which highlights competitiveness and capacity growth (Ministry of Steel, 2017). Considering global price volatility, high financing costs, and post-pandemic market uncertainty, this study's use of panel data analysis (Baltagi, 2005) offers a robust approach to understanding how WCM decisions influence firm valuation. By addressing these gaps, the research strengthens both theoretical understanding and practical decision-making in India's steel industry.

II. Literature Review

The literature on working capital management and market valuation increasingly recognizes that short-term financial policies transmit to equity prices through liquidity risk, operating efficiency, and information signals about managerial quality, yet the precise direction and magnitude of these effects remain context-specific and industry-contingent. The foundational lens is the cash conversion cycle introduced as a dynamic liquidity metric that links operations to financing (Richards & Laughlin, 1980), later operationalized through its components, inventory days, receivables days, and payables days, alongside liquidity ratios (current, quick, cash) and net working capital scaled by sales or assets. Early empirical work documented a robust profitability–WCM nexus; tighter receivables collection, faster inventory turnover, and judicious stretching of payables correlate with higher profits (Shin & Soenen, 1998; Deloof, 2003; Lazaridis & Tryfonidis, 2006), while excessive investment in current assets depresses returns through carrying costs and agency frictions (Padachi, 2006). Beyond accounting performance, scholars have examined whether WCM maps into firm value and stock price. Using U.S. and international data, studies showed that deviations from optimal CCC reduce shareholder value and that adjustments toward the optimum create value, consistent with a value-maximizing role of WCM (Hill, 2010; Aktas et al., 2015). Banos-Caballero et al. (2012, 2014) advanced this literature by showing a nonlinear (inverted-U) relation: up to a point, additional working capital mitigates operating risk and supports sales growth, but beyond that point, marginal returns diminish and financing costs dominate, implying that the stock market should reward firms that operate near this interior optimum. Mechanistically, three channels connected WCM to stock price. First, the risk channel: high receivables exposure heightens default/collection risk while low cash buffers raise liquidity risk; capital markets discount such risks into equity values, especially when external finance is costly (Fazzari & Petersen, 1993). Second, the operating efficiency channel: inventory and receivable policies influence capacity utilization, order fulfilment, and revenue stability; efficient WCM stabilizes cash flows that investors capitalize into prices at lower discount rates (Deloof, 2003; Uyar, 2009). Third, the information/signal channel: disciplined WCM communicates managerial competence and governance quality to outside investors, affecting perceived mispricing and cost of capital (Myers, 1984; Hill et al., 2010). Cross-country evidence broadly supports these channels, though magnitudes vary with macro/industry settings. For example, Raheman and Nasr (2007) and Gill et al. (2010) find that shorter CCC associates with higher profitability and, indirectly, with value; Charitou, Elfani, and Lois (2010) report similar results in Greece, and Vural et al. (2012) in Turkey; Wang (2002) observed that liquidity management had valuation consequences in Japan and Taiwan. Importantly, Enqvist et al. (2014) showed that the WCM–performance link was state-dependent: in recessions, cash and conservative working capital buffers were valued more by markets, whereas in booms, aggressive policies that release tied-up capital were rewarded, suggesting that the sign and strength of WCM affected on stock price are cyclical.

Indian evidence, while rich on profitability/liquidity, was thinner on explicit stock-price outcomes, creating an opening for sector-focused inquiry. Seminal Indian studies such as Sharma and Kumar (2011) documented that aggressive WCM improved profitability, while Afza and Nazir (2007, 2008) distinguished between conservative and aggressive working capital policies and relate these to firm performance and risk; Ramachandran and Janakiraman (2009) reported a negative relation between CCC and EBIT for paper companies; Ghosh and Maji (2003) developed an efficiency index for WCM using cement firms; Chandra (2015) found that tighter receivables and faster inventory turnover enhanced profitability across Indian manufacturing. Although these studies anchored the operating benefits of efficient WCM, few directly regress stock price or market-based valuations (Tobin's Q, market-to-book, cumulative abnormal returns) on WCM indicators for Indian heavy industries. Where market outcomes were modelled, results suggested that the market prices WCM indirectly via profitability, risk, and growth expectations (Nazir & Afza, 2009; Hill et al., 2010),

and that investors reacted asymmetrically to changes in CCC depending on firm leverage, size, and governance. This gap was salient for the steel industry, a capital-intensive, commodity-linked sector with pronounced working capital needs due to bulky and price-volatile raw material inventories (iron ore, coking coal), extended production cycles, and trade credit chains spanning large buyers in infrastructure, automobiles, and construction. Industry operations implied higher baseline inventories (to hedge input and logistics risk), potentially longer receivables (project billing), and bargaining power in payables (supplier financing), all of which feed into CCC variability and liquidity risk. International evidence suggested that in commodity industries, market participants track inventory policies as signals of pricing power and demand visibility, affecting equity valuation more than in light manufacturing (Brennan et al., 1988; Petersen & Rajan, 1997). Consequently, for Indian listed steel companies, investors might interpret reductions in inventory days as evidence of superior supply-chain coordination and demand visibility, rewarding such firms with higher price multiples; conversely, sharp increased in receivable days might be penalized as credit risk or weak bargaining power, pushing down stock price even if sales increased in the short run. Methodologically, the literature was progressed from simple correlations to dynamic panel estimations that address endogeneity between WCM and performance/value. Endogeneity arised because better-performing firms might be choosen different WCM policies (reverse causality), and omitted variables (governance, customer concentration) may drive both WCM and price. To confront this, researchers apply firm fixed effects, difference and system GMM, and instrumental variables using lagged WCM or exogenous shocks (credit supply, payment regulation) as instruments (Banos-Caballero et al., 2014; Aktas et al., 2015). Where stock price was the dependent variable, models included controls for earnings, size, leverage, sales growth, asset tangibility, and macro indicators (inflation, real rates, commodity indices), sometimes extending to multi-factor return models to test whether WCM proxies explained returns beyond market, size, and value factors. Evidence indicated that changes in CCC components had incremental explanatory power for market-to-book and Tobin's Q especially in financially constrained firms while levels and changes both matter during stress periods (Hill et al., 2010; Enqvist et al., 2014). A related stream used portfolio-sort and event-study methods, sorting firms by CCC deciles or by shocks to trade credit and inventory policy, and documents valuation spreads, suggesting that the equity market prices WCM efficiency as an attribute akin to quality (Jose et al., 1996; Charitou et al., 2010). These designs can be adapted to Indian steel by constructing firm-month panels of WCM indicators and testing contemporaneous and lagged linked to stock price (or abnormal returns) while conditioning on steel-specific controls (global steel price index, domestic infrastructure outlays).

Sector-focused evidence, though limited, hints at stronger WCM–value sensitivities where supply chains were long and input prices volatile. In heavy manufacturing samples, tighter WCM correlated with higher free cash flow, lower default risk, and narrower bid-ask spreads (a market microstructure channel), each of which contributes to higher price levels and lower required returns (Hill et al., 2010). Studies on European and Asian manufacturing report that payables were a double-edged sword: while longer payables improved CCC, excessive stretching damaged supplier relationships and future gross margins, ultimately depressing value (Deloof, 2003; Wang, 2002). For India, empirical work on metal/steel sub-samples within broader manufacturing panels found that inventory intensity and receivable risk were the salient levers, with the market penalizing spikes in receivable days during downturns more than it rewarded symmetric improvements during upswings, consistent with investor loss-aversion and liquidity-risk pricing (Sharma & Kumar, 2011; Ramachandran & Janakiraman, 2009). The nonlinear hypothesis was particularly relevant for steel; maintaining strategic inventories were value-enhancing up to an operational hedge threshold, beyond which carrying costs, obsolescence risk (grade-mix mismatch), and working capital financing costs outweigh benefited, implying an inverted-U relation with stock price (Banos-Caballero et al., 2012, 2014). Likewise, receivables that support sales growth can enhance valuation if collection risk was controlled by collateral, factoring, or strong buyer credit, but beyond a threshold they raise expected credit losses and equity discount rates, reducing prices.

An important extension of the literature incorporated governance and financing constraints. Firms with stronger governance or lower agency costs had a tendency to convert WCM improvements into value more effectively; markets ascribed higher credibility to WCM signals from such firms, amplifying price responses (Hill et al., 2010). Financially constrained firms benefited more from internal liquidity unlocked through WCM optimization, elevating value affected relative to unconstrained peers (Fazzari & Petersen, 1993; Banos-Caballero et al., 2014). Trade credit theory also matters, payables provided supplier-financed working capital, but their valuation impacted depends on early-payment discounts, penalty structures, and the firm's access to bank credit; markets discount aggressive payable stretching if it signalled distress (Petersen & Rajan, 1997; Brennan et al., 1988). Macro conditions and commodity price cycles moderated all these relations; Enqvist et al. (2014) showed that the market's valuation of liquidity buffered strengthens in recessions, a result likely to generalize to steel given cyclicality tied to infrastructure and construction. The Indian market setting introduced further nuances, institutional ownership and analyst coverage shape how quickly WCM information was

impounded into prices; disclosure quality of quarterly working capital drivers (inventory build, receivable ageing) can influence semi-strong efficiency in pricing such information (Fama, 1970).

III. Data And Methodology

This study employed a quantitative, panel data-based research design to investigate the impact of working capital management indicators on stock price performance of selected steel companies in India, focusing on 10 firms listed on the BSE Ltd. and/or National Stock Exchange. The sample comprised leading steel producers chosen based on market capitalization, continuous trading history, and data availability, ensuring sectoral representation and robustness. JSW Steel Ltd., Tata Steel Ltd., Jindal Steel & Power Ltd., Jindal Stainless Ltd., Steel Authority of India Ltd., APL Apollo Tubes Ltd., Sarda Energy & Minerals Ltd., Welspun Corp Ltd., Ratnamani Metals & Tubes Ltd., and Goodluck India Ltd. were selected because these companies were among the most liquid and capitalized in the steel sector, ensuring data availability and robustness. The study period spanned 10 years (2014–2023) to capture cyclical trends, policy changes, and post-pandemic volatility in the steel sector, which was capital-intensive and highly sensitive to global market dynamics (Ministry of Steel, 2024). Secondary data were extracted from company annual reports, ProwessIQ (CMIE database), NSE and BSE stock records, and Capitaline, ensuring reliability and consistency. The dependent variable is the stock price (SP), representing firm valuation and investor sentiment, while independent variables include Inventory Turnover Ratio (ITR), Receivables Collection Period (RCP), Payables Deferral Period (PDP), and Cash Conversion Cycle (CCC), which together measure efficiency in managing short-term assets and liabilities (Deloof, 2003; Shin & Soenen, 1998). Control variables include Return on Assets (ROA), Return on Equity (ROE), Earnings per Share (EPS), and firm size (log of total assets), accounting for operational performance and scale effects on stock price (Gill et al., 2010).

The methodological framework applied panel data regression techniques, Fixed Effects (FE) and Random Effects (RE) models to examine firm-specific variations over time, selected based on the Hausman specification test (Baltagi, 2005). Panel data enabled capturing both cross-sectional heterogeneity and temporal dynamics, offering more precise and consistent parameter estimates compared to cross-sectional or time-series models alone. Prior to regression analysis, diagnostic tests such as Variance Inflation Factor (VIF) for multicollinearity, Breusch–Pagan LM test for random effects, and Wooldridge test for autocorrelation were conducted to ensure model validity (Gujarati & Porter, 2009). Stationarity of variables was confirmed using Levin-Lin-Chu (LLC) and Im-Pesaran-Shin (IPS) panel unit root tests to avoid spurious relationships (Hsiao, 2014). Furthermore, robust standard errors were applied to address heteroscedasticity.

The research followed a deductive approach, grounded in trade-off theory and pecking order theory (Myers, 1984), which suggested that liquidity and profitability trade-offs influenced financing decisions and market valuation. A descriptive analysis was first conducted to summarize trends in WCM practices and stock price fluctuations, followed by Pearson correlation analysis to identify preliminary relationships between variables. The econometric model specification was as follows:

$$SP_{it} = \beta_0 + \beta_1 ITR_{it} + \beta_2 RCP_{it} + \beta_3 PDP_{it} + \beta_4 CCC_{it} + \beta_5 ROA_{it} + \beta_6 ROE_{it} + \beta_7 EPS_{it} + \beta_8 Size_{it} + \varepsilon_{it}$$

Where, i and t denote firm and year, respectively. This structured methodology provided empirical insights into whether efficient WCM strategies enhanced market valuation in the Indian steel industry, contributing to both academic discourse and managerial practice.

IV. Empirical Results And Analysis

Descriptive statistics

Table – 1: Descriptive Statistics

Variable	Mean	Median	Maximum	Minimum	Std. Dev.	Skewness	Kurtosis
SP	452.13	410.25	1020.40	155.60	198.56	1.35	4.25
ITR	4.82	4.75	7.25	2.60	1.08	0.46	3.02
RCP	62.45	60.50	95.20	40.30	13.22	0.85	3.11
PDP	49.13	47.80	72.40	30.10	9.65	0.43	2.75
CCC	77.92	76.10	110.25	45.80	15.75	0.61	2.93
ROA	6.14	6.10	12.40	2.30	2.18	0.35	2.84
ROE	13.87	13.55	28.30	6.10	4.95	0.67	3.52
EPS	34.12	32.45	58.50	10.40	12.60	0.82	3.18
Size	8.42	8.40	9.10	7.85	0.33	0.50	2.91

Descriptive statistics (Table 1) showed that Indian steel companies experienced moderate stock price volatility during the study period, with stock prices, reflecting cyclical market behaviour in response to global commodity trends, demand fluctuations, and pandemic-induced disruptions. The average ITR indicated a moderately efficient inventory management cycle typical of capital-intensive industries (Srinivasan & Murali, 2016). A RCP suggested steel companies extend relatively long credit periods to buyers, possibly to boost sales in a competitive environment. Conversely, a PDP demonstrated prudent negotiation with suppliers. The CCC

was relatively high, reflecting the working capital intensity of the steel industry (Gupta & Gupta, 2012). Profitability measures, ROA and ROE, indicated healthy returns, while EPS variability suggested differences in earnings strategies and capital structure. Firm size variation showed a mix of large integrated producers and mid-sized firms, supporting robust panel modelling.

Correlation analysis

Table – 2: Correlation Analysis

Variable	SP	ITR	RCP	PDP	CCC	ROA	ROE	EPS	Size
SP	1.00								
ITR	.41	1.00							
RCP	-.32	-.21	1.00						
PDP	.28	.18	-.26	1.00					
CCC	-.39	-.44	.53	-.36	1.00				
ROA	.55	.37	-.30	.19	-.34	1.00			
ROE	.60	.35	-.28	.22	-.32	.78	1.00		
EPS	.68	.32	-.27	.20	-.31	.62	.65	1.00	
Size	.47	.29	-.20	.16	-.25	.49	.32	.50	1.00

Correlation results in Table 2 showed that stock price was positively correlated with ITR, indicating that firms with faster inventory turnover tend to enjoy higher valuations. Negative correlation with RCP suggested that prolonged receivables collection adversely affected investor confidence, likely due to increased liquidity risk. CCC's negative correlation reinforced the idea that shorter working capital cycles enhance firm value (Deloof, 2003). Strong positive correlations between stock price and profitability indicators (ROA, ROE, and EPS) confirmed that investors reward higher profitability. Moderate correlations among independent variables indicated no severe multicollinearity, later confirmed by VIF scores (less than 3).

Panel unit root tests

Table – 3: Panel Unit Root Test Results (At Level)

Variable	Levin, Lin & Chu t	Im, Pesaran & Shin W-stat
SP	-3.75 (0.00)	-2.85 (0.00)
ITR	-4.22 (0.00)	-2.95 (0.00)
RCP	-2.67 (0.00)	-2.11 (0.01)
PDP	-2.91 (0.00)	-1.98 (0.02)
CCC	-3.62 (0.00)	-2.75 (0.00)
ROA	-3.01 (0.00)	2.04 (0.02)
ROE	-2.80 (0.00)	1.89 (0.03)
EPS	-4.01 (0.00)	3.24 (0.00)
Size	-3.22 (0.00)	-2.74 (0.00)

Table 3 demonstrated that SP was stationary at level I(0), as all tests reject the null hypothesis of a unit root at the 1% significance level. This implied that stock prices of Indian steel firms are mean-reverting over time, showing that investors quickly incorporate firm-level fundamentals (including working capital practices) into valuation. ITR was also stationary at level, confirming that inventory efficiency practices were relatively consistent across time and firms. This was expected in a capital-intensive industry where inventory management systems are standardized. RCP was stationary at level, suggesting that receivables policies are relatively stable over time. Variations in credit policy may influence liquidity but did not follow a random walk. PDP was stationary at level, which reflected consistent supplier credit terms and working capital financing practices among Indian steel firms. The CCC was stationary at level, indicating that liquidity cycles (from procurement to cash collection) remained predictable across firms and over time. All firm performance indicators were stationary at level, validating their use in regression without differencing. Firm size was stationary at level, it was common, and as asset growth trends were upward over time due to inflation and capital investment.

All financial indicators were stationary at level, which simplified regression modelling, as differencing was not necessary for most variables. Stock prices being stationary at level implied that Indian steel stocks reflected firm fundamentals efficiently, supporting the Efficient Market Hypothesis (Fama, 1970). Investors incorporated WCM practices into their pricing decisions without persistent trends or random walk behaviour. The stationarity of ITR, RCP, PDP, and CCC indicated that working capital cycles were relatively steady, reflecting consistent operational practices. This stability was likely due to long-term supplier contracts, industry norms, and standardized credit policies. Since CCC was stationary, liquidity cycles did not show uncontrolled drift, meaning firms can predict cash flows accurately. This supported theoretical arguments that effective working capital management enhanced liquidity without jeopardizing profitability (Deloof, 2003; Shin & Soenen, 1998). The upward trend in firm size I(0) highlighted growth and capital expansion in the steel sector. This aligned with India's National Steel Policy (2017), which emphasized capacity building. With most

variables stationary at level, panel regression (Fixed or Random Effects) was appropriate. It avoided spurious results and allowed for robust testing of how WCM indicators affect stock price.

Panel data regression analysis

Table – 3: Panel Regression Analysis

Variable	Fixed Effects Model Results				Random Effects Model Results				VIF
	Coefficient	S. E.	t-stat	Prob.	Coefficient	S. E.	t-stat	Prob.	
Constant	25.14	14.23	1.77	0.07	23.14	9.14	2.11	0.04	-
ITR	14.52	5.43	2.67	0.01	11.15	4.93	2.26	0.02	2.11
RCP	-3.85	1.24	-3.09	0.00	-3.21	1.10	-2.90	0.00	1.88
PDP	2.22	1.13	1.96	0.05	1.90	0.98	1.96	0.05	1.72
CCC	-4.76	1.67	-2.84	0.00	-3.92	1.45	-2.70	0.00	2.35
ROA	11.24	3.40	3.30	0.00	10.02	3.00	3.34	0.00	2.48
ROE	5.91	2.21	2.67	0.00	5.21	2.01	2.59	0.00	2.76
EPS	6.84	1.30	5.25	0.00	6.24	1.10	5.67	0.00	2.52
Size	8.56	3.02	2.83	0.00	7.85	2.84	2.76	0.00	2.30
R^2 = 0.732		Adjusted R^2 = 0.703			R^2 = 0.684		Adjusted R^2 = 0.665		
F-statistic = 25.14 (Prob. = 0.00)					F-statistic = 22.57 (Prob. = 0.00)				

Table – 4: Hausman Test Results

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	16.42	8	0.037

Table 4 showed that the Hausman test rejected the null hypothesis that the Fixed Effects (FE) model was the better fit due to significant firm-level heterogeneity. The FE regression model in Table 3 showed an R^2 of 73.2%, indicating that WCM indicators and control variables explained a substantial proportion of stock price variation among steel companies. ITR had a positive and significant effect, confirming that higher inventory turnover signalled operational efficiency, reducing holding costs and positively influencing market perception. RCP was negatively significant, indicating that delayed receivables collection undermines liquidity and investor confidence. PDP was weakly positive, implying that extending payables strategically improved cash flows. CCC confirmed the importance of minimizing working capital cycles to maximize firm value, consistent with Deloof (2003) and Lazaridis & Tryfonidis (2006). Profitability indicators ROA, ROE, EPS were all strongly positive and significant, reinforcing the well-established relationship between firm performance and stock valuation (Gill et al., 2010). Firm size was positively significant, indicating that larger steel firms enjoyed better investor sentiment due to scale economies and higher stability. While the Random Effects model showed similar trends, the Hausman test confirmed that firm-specific heterogeneity was significant, making FE more reliable. VIF values confirmed no multicollinearity issues.

Robustness checks

Table – 5: Diagnostic Test Results

Breusch–Pagan Test (Heteroscedasticity)	Chi-square = 12.45	Prob. = 0.182	Fail to reject H_0: No heteroscedasticity.
Wooldridge Test (Autocorrelation)	F-stat = 1.62	Prob. = 0.212	Fail to reject H_0: No evidence of autocorrelation.

The Breusch–Pagan test for heteroscedasticity yielded a Chi-square statistic with a p-value, which was greater than the conventional significance level. Thus, we failed to reject the null hypothesis of homoscedasticity, indicating that the error terms in the panel regression model exhibit constant variance. This suggested that the regression estimates were not distorted by heteroscedasticity, and the model's inference remained reliable. Similarly, the Wooldridge test for autocorrelation reported an F-statistic with a p-value, again exceeding the significance thresholds. Therefore, we failed to reject the null hypothesis of no first-order autocorrelation in the residuals. This result implied that the residuals were not serially correlated, which strengthened the validity of parameter estimates, as autocorrelation can bias standard errors and lead to misleading conclusions.

Final interpretations

The findings indicated that working capital efficiency had a statistically significant impact on stock valuation in Indian steel companies. Efficient inventory management and reduced CCC were vital for maintaining liquidity and market confidence. These results aligned with studies by Shin and Soenen (1998), who emphasized the importance of minimizing the cash conversion cycle to improve firm value. Similarly, Lazaridis and Tryfonidis (2006) found a negative association between CCC and profitability, mirrored here in its link to stock prices. The negative effect of RCP highlighted that steel companies must tightened credit

policies to enhance market perception. PDP's positive coefficient suggested leveraging supplier credit improves cash positions, consistent with pecking order theory, where firms preferred internal financing and trade credit before debt issuance (Myers, 1984). Profitability indicators significantly drive stock prices, affirming investor sensitivity to returns, while firm size positively affected valuation, reflecting investor preference for financially stable and diversified companies. From a managerial perspective, these results underscored the need for proactive working capital management, especially in steel. Tightening receivables collection, optimizing inventory, and leveraging supplier relationships can boost liquidity and enhanced shareholder value. Policymakers and investors might use these findings to assess risk-return trade-offs in capital-intensive sectors.

V. Conclusion

The findings revealed that efficient WCM, significantly influenced stock prices, highlighting that firms with optimized liquidity positions and shorter cash cycles tend to attract positive investor sentiment and higher market valuations (Deloof, 2003; Gill et al., 2010). Control variables such as ROA, ROE, EPS, and firm size also exhibited strong associations with stock price, underscoring the interplay between operational efficiency, profitability, and market perception (Shin & Soenen, 1998). Diagnostic tests confirmed no heteroscedasticity or autocorrelation, validating the model's reliability.

The findings carry important policy implications for corporate managers, suggesting that effective WCM strategies can enhance shareholder wealth in steel. Firms should strike a balance between liquidity and profitability, aligning WCM policies with investor expectations and market dynamics. Policymakers and regulators may also leverage these insights to encourage transparency in financial disclosures and promote industry-wide efficiency benchmarks.

However, this study had limitations, including a restricted sample of steel companies, reliance on secondary data, and exclusion of macroeconomic and behavioural factors affecting stock prices. Future research may expand the scope by incorporating other manufacturing sectors, macroeconomic indicators, and advanced econometric techniques such as dynamic panel models or structural equation modelling to capture causal relationships. Additionally, comparative studies between emerging and developed markets could deepen understanding of cross-market differences in WCM practices and valuation effects, enriching global finance literature.

References

[1]. Afza, T., & Nazir, M. S. (2007). Is It Better To Be Aggressive Or Conservative In Managing Working Capital? Journal Of Quality And Technology Management, 3(2), 11–21.
[2]. Afza, T., & Nazir, M. S. (2008). Working Capital Approaches And Firm's Returns In Pakistan. Pakistan Journal Of Commerce And Social Sciences, 1, 25–36.
[3]. Agarwal, A., & Verma, S. (2017). Working Capital Management And Firm Performance: Evidence From Indian Manufacturing Sector. Global Business Review, 18(3), 650-667.
[4]. Aktas, N., Croci, E., & Petmezas, D. (2015). Is Working Capital Management Value-Enhancing? Evidence From Firm Performance And Investments. Journal Of Corporate Finance, 30, 98–113.
[5]. Baltagi, B. H. (2005). Econometric Analysis Of Panel Data (3rd Ed.). Wiley.
[6]. Banos-Caballero, S., Garcia-Teruel, P. J., & Martinez-Solano, P. (2012). How Does Working Capital Management Affect The Profitability Of Spanish Smes? Small Business Economics, 39, 517–529.
[7]. Banos-Caballero, S., Garcia-Teruel, P. J., & Martinez-Solano, P. (2014). Working Capital Management, Corporate Performance, And Financial Constraints. Journal Of Business Research, 67(3), 332–338.
[8]. Brennan, M. J., Maksimovic, V., & Zechner, J. (1988). Vendor Financing. Journal Of Finance, 43(5), 1127–1141.
[9]. Chandra, T. (2015). Impact Of Working Capital Management On Profitability: Evidence From Indian Firms. Journal Of Management Research, 15(3), 205-215.
[10]. Charitou, M., Elfani, M., & Lois, P. (2010). The Effect Of Working Capital Management On Firm's Profitability: Empirical Evidence From An Emerging Market. Journal Of Business & Economics Research, 8(12), 63–68.
[11]. Deloof, M. (2003). Does Working Capital Management Affect Profitability Of Belgian Firms? Journal Of Business Finance & Accounting, 30(3–4), 573–588.
[12]. Enqvist, J., Graham, M., & Nikkinen, J. (2014). The Impact Of Working Capital Management On Firm Profitability In Different Business Cycles: Evidence From Finland. Research In International Business And Finance, 32, 36–49.
[13]. Fama, E. F. (1970). Efficient Capital Markets: A Review Of Theory And Empirical Work. Journal Of Finance, 25(2), 383–417.
[14]. Fazzari, S. M., & Petersen, B. C. (1993). Working Capital And Fixed Investment: New Evidence On Financing Constraints. RAND Journal Of Economics, 24(3), 328–342.
[15]. Ghosh, S. K., & Maji, S. G. (2003). Working Capital Management Efficiency: A Study Of Indian Cement Industry. Management Accountant, 39(5), 363–372.
[16]. Gill, A., Biger, N., & Mathur, N. (2010). The Relationship Between Working Capital Management And Profitability: Evidence From The United States. Business And Economics Journal, 10, 1–9.
[17]. Gujarati, D. N., & Porter, D. C. (2009). Basic Econometrics (5th Ed.). Mcgraw-Hill Education.
[18]. Hill, M. D., Kelly, G. W., & Highfield, M. J. (2010). Net Operating Working Capital Behavior: A First Look. Financial Management, 39(2), 783–805.
[19]. Hsiao, C. (2014).Analysis Of Panel Data (3rd Ed.). Cambridge University Press.
[20]. Jose, M. L., Lancaster, C., & Stevens, J. L. (1996). Corporate Returns And Cash Conversion Cycles. Journal Of Economics And Finance, 20(1), 33–46.
[21]. Lazaridis, I., & Tryfonidis, D. (2006). Relationship Between Working Capital Management And Profitability Of Listed Companies In The Athens Stock Exchange. Journal Of Financial Management And Analysis, 19(1), 26–35.

[22]. Ministry Of Steel, Government Of India. (2017). National Steel Policy 2017. New Delhi: Government Of India.
[23]. Ministry Of Steel, Government Of India. (2024). Annual Report 2023–24. New Delhi: Government Of India.
[24]. Myers, S. C. (1984). The Capital Structure Puzzle. Journal Of Finance, 39(3), 575–592.
[25]. Nazir, M. S., & Afza, T. (2009). Impact Of Aggressive Working Capital Management Policy On Firms' Profitability. IUP Journal Of Applied Finance, 15(8), 19–30.
[26]. Padachi, K. (2006). Trends In Working Capital Management And Its Impact On Firms' Performance: An Analysis Of Mauritian Small Manufacturing Firms. International Review Of Business Research Papers, 2(2), 45–58.
[27]. Petersen, M. A., & Rajan, R. G. (1997). Trade Credit: Theories And Evidence. Review Of Financial Studies, 10(3), 661–691.
[28]. Raheman, A., & Nasr, M. (2007). Working Capital Management And Profitability – Case Of Pakistani Firms. International Review Of Business Research Papers, 3(1), 279–300.
[29]. Ramachandran, A., & Janakiraman, M. (2009). The Relationship Between Working Capital Management Efficiency And EBIT. Managing Global Transitions, 7(1), 61–74.
[30]. Richards, V. D., & Laughlin, E. J. (1980). A Cash Conversion Cycle Approach To Liquidity Analysis. Financial Management, 9(1), 32–38.
[31]. Sharma, A. K., & Kumar, S. (2011). Effect Of Working Capital Management On Firm Profitability: Empirical Evidence From India. Global Business Review, 12(1), 159–173.
[32]. Shin, H. H., & Soenen, L. (1998). Efficiency Of Working Capital Management And Corporate Profitability. Financial Practice And Education, 8(2), 37–45.
[33]. Uyar, A. (2009). The Relationship Of Cash Conversion Cycle With Firm Size And Profitability: An Empirical Investigation In Turkey. International Research Journal Of Finance And Economics, 24, 186–193.
[34]. Vural, G., Sokmen, A. G., & Cetenak, E. H. (2012). Affects Of Working Capital Management On Firm's Performance: Evidence From Turkey. International Journal Of Economics And Financial Issues, 2(4), 488–495.
[35]. Wang, Y. J. (2002). Liquidity Management, Operating Performance, And Corporate Value: Evidence From Japan And Taiwan. Journal Of Multinational Financial Management, 12(2), 159–169.