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ANALYSIS OF WORKING CAPITAL MANAGEMENT AT TATA MOTORS

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ABSTRACT

Working capital management sits at the intersection of liquidity and profitability, and its adequacy often determines whether an otherwise viable enterprise survives short-term financial pressure. This article examines the working capital position of Tata Motors Limited over a five-year period, 2016–17 to 2020–21, using secondary data drawn from the company's published financial statements. Employing ratio analysis, trend analysis, and year-on-year comparison, the study finds that the company operated with persistently negative net working capital and with current and quick ratios that remained below conventional benchmarks throughout the period. The deficit widened continuously between 2016–17 and 2019–20 before easing in 2020–21. The article situates these findings within the broader literature on working capital management and concludes with practical recommendations for strengthening short-term financial discipline.

Keywords: working capital management, liquidity, current ratio, quick ratio, net working capital, Tata Motors

1. Introduction

Every company depends on cash the way a body depends on blood flow: once that flow weakens, the organization struggles to run its daily operations, invest in growth, and meet its financial obligations. For anyone assessing the financial health of a business, working capital — the resource pool a firm draws upon for everyday activity such as purchasing stock, meeting payroll, and extending credit to customers — is one of the most revealing indicators available.

Defined simply, working capital is the difference between current assets and current liabilities. A positive figure signals that a firm can comfortably cover its short-term obligations; a negative figure indicates that cash, receivables, and inventory fall short of what is needed to meet near-term liabilities. Left unaddressed, a persistent shortfall can manifest as breached overdraft limits, delayed supplier payments, and forfeited early-payment discounts — trouble that can push even a paper-profitable business toward insolvency. At the same time, holding excessive working capital is not free of cost either, since idle funds depress the return earned on capital employed. The central task of financial management, then, is to strike a workable balance between these two extremes.

This article reports on a study of working capital management at Tata Motors Limited, India's largest automobile manufacturer by revenue, covering the five financial years from 2016–17 to 2020–21 — a period that spans both a general industry slowdown and the onset of the COVID-19 pandemic.

2. Review of Literature

Research on working capital management spans several decades and geographies, converging on a broadly consistent conclusion: how a firm manages its short-term assets and liabilities has a measurable bearing on its profitability and survival, even though the strength and direction of that relationship vary by sector and context.

An early institutional critique came from **Bhatt (1972)**, who argued that commercial banks' lending to large manufacturers relied too heavily on collateral and repayment capacity, and too little on how efficiently a borrower was actually operated, calling for deeper appraisal of firm-level operations before extending working capital finance. **Deloof (2003)**, examining over a thousand Belgian non-financial firms between 1992 and 1996, established an inverse relationship between capital tied up in working capital and profitability, showing that firms which collected receivables and cleared inventory faster recorded higher gross operating income — a finding since treated as foundational to cash-conversion-cycle research. **Filbeck and Krueger (2015)** demonstrated that working capital efficiency is not a fixed industry trait but shifts considerably year to year, while cautioning that survivorship bias in commonly cited industry rankings can distort what counts as a "benchmark."

Several country- and sector-specific studies illustrate the consequences of mismanagement. **Zaman (2018)** traced the decline of Bangladesh's state-owned jute sector partly to poor working capital policy, while **Hossain and Rahman (2017)** showed that the Bangladesh Textile Mills Corporation's aggressive reliance on short-term borrowing,

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disconnected from genuine operational need, eroded its net working capital into negative territory. **Mallick and Sur (1998)**, studying a tea producer in Assam over a decade, found no stable relationship between working capital ratios and return on investment, attributing the volatility to the seasonal nature of agricultural production. **Singh (2012)** compared India's IT and telecom sectors and found telecom operating at roughly forty percent of the working capital efficiency observed in manufacturing.

Other studies emphasize methodology and sector nuance. **Haq, Sohail, Zaman and Alam (2011)**, applying multiple regression to fourteen Pakistani cement firms, found a moderate but consistent link between working capital practice and performance. **Kaddumi and Ramadan (2012)**, using panel data from forty-nine Jordanian industrial firms, confirmed the relationship held under both fixed-effects and ordinary least squares specifications. **Ahmadi, Saie and Garajafary (2012)**, studying Tehran's food industry, linked a shorter cash conversion cycle directly to improved operating profit. **Bagchi and Khamrul (2012)** found that high debt combined with a slow cash conversion cycle dragged down profitability in India's fast-moving consumer goods sector, while **Chandra, Chouhan and Goswami (2012)** found that, for nearly all Indian IT firms studied, greater investment in working capital was associated with higher profitability as the firms grew. **Ramadu and Parasuraman (2012)**, by contrast, found in the Indian pharmaceutical industry that rising sales did not translate proportionally into rising profits, cautioning against using revenue growth alone as a proxy for financial health.

A further strand of the literature addresses forecasting and access to finance. **Ahmed and Matarneh (2019)** advocated statistical regression over judgement-based estimation when forecasting working capital needs. **Matarneh (2012)**, studying small-scale industries in Rajasthan, identified a structural financing constraint: firms with few fixed assets to pledge as collateral struggle to fund their current assets, a market failure he argued calls for targeted institutional support. **Sunday (2018)** highlighted the vulnerability of Nigerian SMEs that operate without formal credit policies and rely on delaying payments to creditors simply to remain solvent. **Singaravel (2019)** placed liquidity above working capital adequacy and both above profitability in his suggested hierarchy of financial priorities, cautioning against funding short-term needs from long-term sources. **Garg (2016)**, examining public sector undertakings in Haryana, argued that working capital cannot be planned in isolation from production, labor, and sales forecasting. **Rahman (2017)** found a straightforward positive relationship between disciplined working capital management and profitability in the textile industry, and **Hossain (2016)** proposed benchmarking a firm's liquidity ratios against industry standards as a practical early-warning device.

Taken together, this body of work suggests that working capital management is neither a purely mechanical accounting exercise nor a one-size-fits-all discipline; its effect on profitability is real but is shaped by sector characteristics, financing structure, and the quality of receivables and inventory control.

3. Objectives and Methodology

The study was guided by six objectives: to examine Tata Motors' existing working capital management framework; to assess its liquidity position based on current assets and current liabilities; to evaluate the practicality and effectiveness of its approach to working capital; to understand how the company finances its working capital needs; to assess financial performance in relation to working capital management; and to offer recommendations based on the findings.

The study draws on both secondary and primary sources. Secondary data was compiled from the company's published annual reports for the five years from 2016–17 to 2020–21. Primary data was gathered through discussions with the Vice-President and Finance Manager and other members of the finance department, supplementing and contextualizing the published figures. The data was analyzed using ratio analysis, graphical analysis, and year-on-year comparison. Three limitations bear noting: the demanding schedules of company executives constrained the primary data collection; the recommendations offered reflect the researcher's interpretation and should not be read as definitive prescriptions; and the limited time available for the research precluded a more exhaustive examination.

4. Data Analysis and Findings

1. Current Assets, Current Liabilities and Net Working Capital

Table 1 presents the year-wise movement in current assets and current liabilities, along with the resulting net

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working capital (current assets minus current liabilities) for the five years under study.

Year	Current Assets	Growth (%)	Current Liabilities	Growth (%)	Net Working Capital
2016-17	936.78	Base	1,824.74	Base	(887.96)
2017-18	1,013.49	8.19	2,052.82	12.50	(1,039.33)
2018-19	2,882.58	184.42	4,831.41	135.35	(1,948.83)
2019-20	1,504.57	(47.80)	6,144.75	27.18	(4,640.18)
2020-21	1,951.69	29.72	4,610.73	(24.96)	(2,659.04)

Table 1: Current Assets, Current Liabilities and Net Working Capital, 2016-17 to 2020-21 (Rs. in Crores)

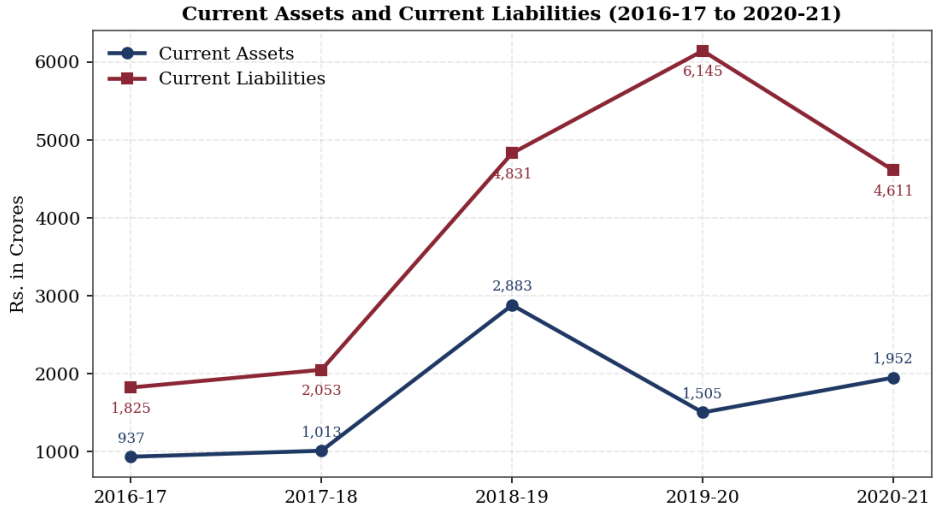


Figure 1: Trend in Current Assets and Current Liabilities

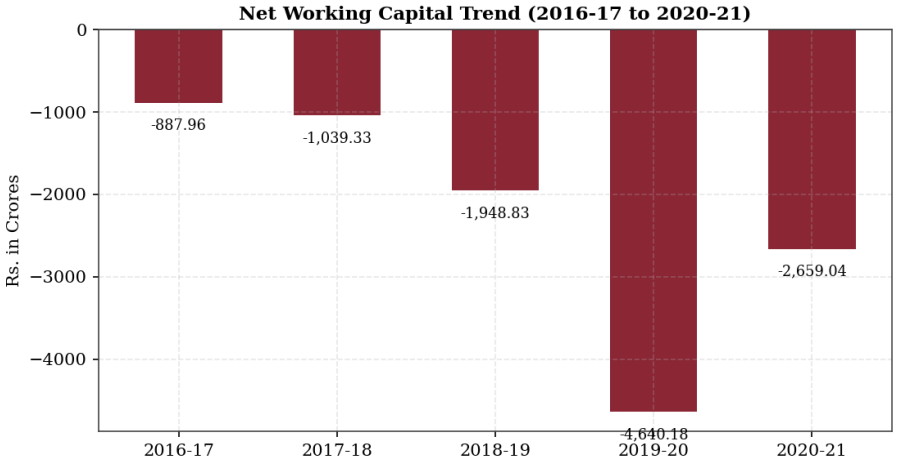


Figure 2: Net Working Capital Trend

Current liabilities outpaced current assets in every year of the study period, so net working capital remained negative throughout 2016-17 to 2020-21. The gap widened sharply in 2019-20, when current liabilities grew by 27.18 per cent while current assets contracted by 47.80 per cent, pushing the working capital deficit to its highest level of Rs. 4,640.18 Crores. In 2020-21 the position improved: current liabilities fell by 24.96 per cent against a modest 29.72 per cent rise in current assets, narrowing the deficit to Rs. 2,659.04 Crores. Even so, at no point during the period did the company hold a positive net working capital, indicating a persistent reliance on current liabilities to fund operations.

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2. Working Capital Turnover Ratio

The working capital turnover ratio measures how efficiently a firm uses its working capital to generate sales, and is computed as Net Sales divided by Net Working Capital. Because net working capital was negative in every year of this study, the ratio is computed against its absolute value to indicate the intensity with which the company's (negative) working capital base supported its sales turnover.

Year	Sales	Net Working Capital	Ratio (times)
2016-17	10,331.80	887.96	11.64
2017-18	12,319.12	1,039.33	11.85
2018-19	15,758.18	1,948.83	8.09
2019-20	19,245.03	4,640.18	4.15
2020-21	23,586.80	2,659.04	8.87

Table 2: Working Capital Turnover Ratio, 2016-17 to 2020-21 (Rs. in Crores)

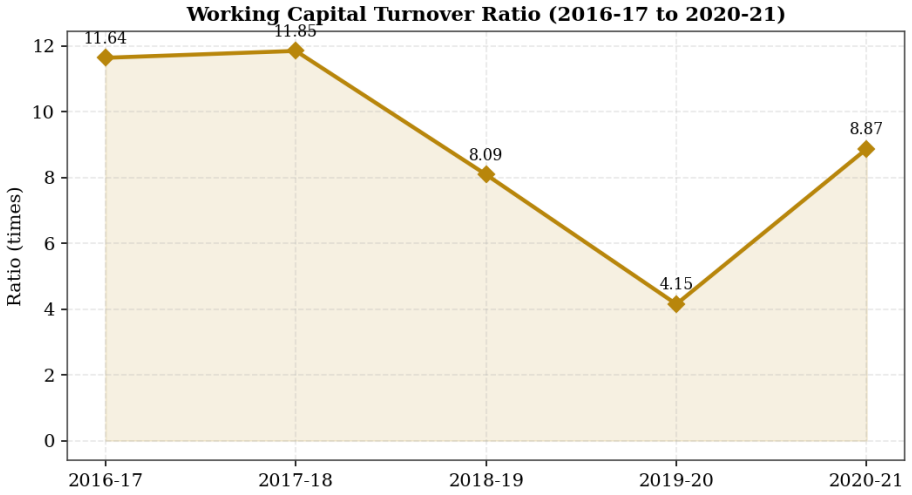


Figure 3: Working Capital Turnover Ratio Trend

The ratio declined steadily from 11.64 times in 2016-17 to 4.15 times in 2019-20, showing that sales grew at a slower pace than the widening working capital deficit over these four years. The recovery to 8.87 times in 2020-21 was driven mainly by the sharp reduction in the deficit rather than by an equivalent jump in sales, since sales grew by a comparatively steady 22.6 per cent that year. A consistently high ratio built on a negative working capital base is not, by itself, a sign of efficiency; it instead points to sales being sustained on borrowed short-term funds, which carries liquidity risk if creditors call in obligations sooner than receivables and inventory can be converted to cash.

3. Debtors Turnover Ratio

The debtor's turnover ratio expresses the relationship between net credit sales and average trade debtors, and indicates how quickly the company converts its credit sales into cash. A higher ratio, or a shorter average collection period, generally signals a tighter and more effective credit control policy.

Year	Net Credit Sales	Average Debtors	Ratio (times)	Avg. Collection Period (days)
2016-17	10,331.80	297.44	34.74	10.5
2017-18	12,319.12	149.94	82.16	4.4
2018-19	15,758.18	108.39	145.38	2.5
2019-20	19,245.03	130.59	147.37	2.5
2020-21	23,586.80	272.31	86.62	4.2

Table 3: Debtors Turnover Ratio, 2016-17 to 2020-21 (Rs. in Crores)

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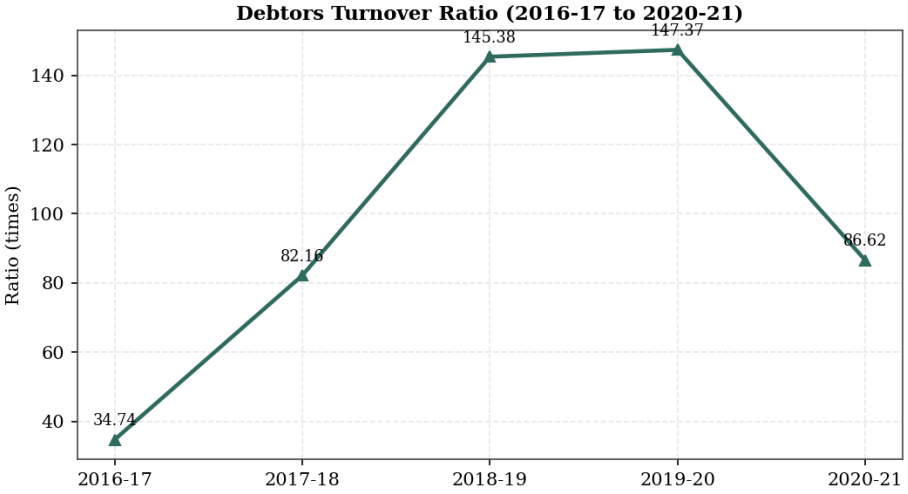


Figure 4: Debtors Turnover Ratio Trend

The debtor's turnover ratio rose from 34.74 times in 2016-17 to a peak of 147.37 times in 2019-20, with the average collection period contracting from roughly ten and a half days to about two and a half days over the same span. This reflects a steady reduction in the average trade debtors balance carried by the company relative to sales, rather than a proportional slowdown in sales themselves. The ratio eased to 86.62 times in 2020-21 as the average debtor's balance rose again to Rs. 272.31 Crores. Ratios in this range are considerably higher than the industry norms typically cited for manufacturing firms, which may reflect Tata Motors' reliance on receivables factoring, dealer-financing arrangements, or bill discounting that keep book debtor's low relative to turnover, rather than credit sales forming a small part of total sales.

4. Current Ratio

The current ratio measures a firm's ability to meet its short-term obligations from its short-term assets, and is computed as Current Assets divided by Current Liabilities. A ratio of 2:1 is conventionally regarded as a satisfactory benchmark.

Year	Current Assets	Current Liabilities	Current Ratio
2016-17	936.78	1,824.74	0.51
2017-18	1,013.49	2,052.82	0.49
2018-19	2,882.58	4,831.41	0.60
2019-20	1,504.57	6,144.75	0.24
2020-21	1,951.69	4,610.73	0.42

Table 4: Current Ratio, 2016-17 to 2020-21 (Rs. in Crores)

The current ratio remained well below the conventional norm of 2:1 in every year of the study, ranging from a high of 0.60:1 in 2018-19 to a low of 0.24:1 in 2019-20. This indicates that current liabilities consistently and substantially exceeded current assets, which is consistent with the negative net working capital reported in Table 1. Although the ratio recovered from 0.24:1 to 0.42:1 in 2020-21, it remained far short of the benchmark, so the company's short-term liquidity position, viewed through this measure alone, must be regarded as weak rather than satisfactory across the period.

5. Quick Ratio

The quick ratio, also called the acid-test ratio, refines the current ratio by excluding inventory and other assets that cannot be readily converted to cash. Quick assets typically comprise cash and bank balances, short-term investments and receivables. It is computed as Quick Assets divided by Current Liabilities, with 1:1 regarded as the standard benchmark.

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Year	Quick Assets	Current Liabilities	Quick Ratio
2016-17	625.90	1,824.74	0.34
2017-18	872.20	2,052.82	0.42
2018-19	2,782.07	4,831.41	0.58
2019-20	1,379.93	6,144.75	0.22
2020-21	1,276.12	4,610.73	0.28

Table 5: Quick Ratio, 2016-17 to 2020-21 (Rs. in Crores)

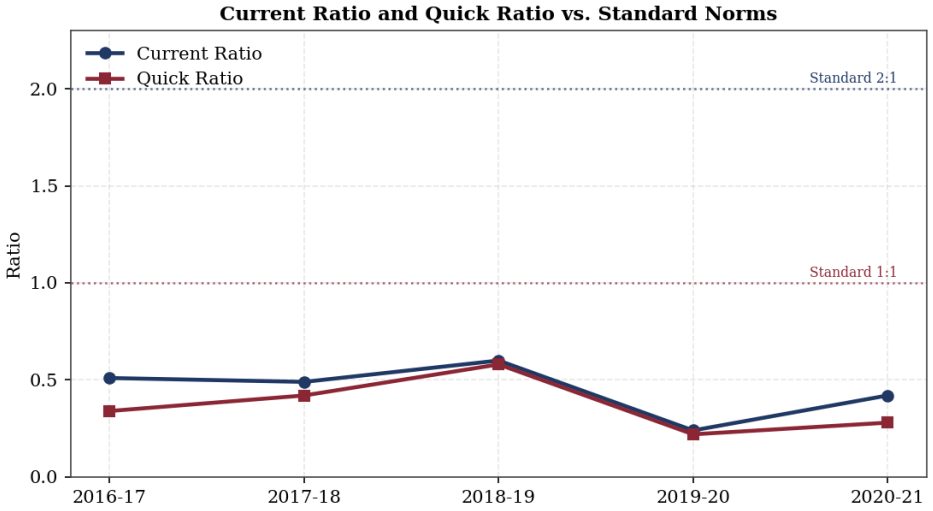


Figure 5: Current Ratio and Quick Ratio against Standard Norms

The quick ratio followed the same broad pattern as the current ratio, improving from 0.34:1 in 2016-17 to 0.58:1 in 2018-19 on the strength of an unusually large cash and bank balance of Rs. 1,907.21 Crores that year, before falling to 0.22:1 in 2019-20 and recovering only partially to 0.28:1 in 2020-21. The ratio stayed below the standard norm of 1:1 throughout the period, reinforcing the picture of a stretched liquidity position in which even the most readily realizable assets fell well short of covering current liabilities.

6. Composition of Current Assets

Table 6 breaks down current assets into their principal components for each year, together with the five-year average, to identify which items drove the movements observed above.

Particulars	2016-17	2017-18	2018-19	2019-20	2020-21	Average
Inventory	317.10	326.83	436.40	524.93	675.57	456.17
Sundry Debtors	297.44	149.94	108.39	130.59	272.31	191.73
Cash and Bank Balances	131.09	219.57	1,907.21	71.52	56.10	477.10
Loans and Advances	185.46	311.26	405.76	728.66	926.99	511.63
Other Current Assets	5.69	5.89	24.82	48.87	20.72	21.20
Total Current Assets	936.78	1,013.49	2,882.58	1,504.57	1,951.69	1,657.82

Table 6: Composition of Current Assets, 2016-17 to 2020-21 (Rs. in Crores)

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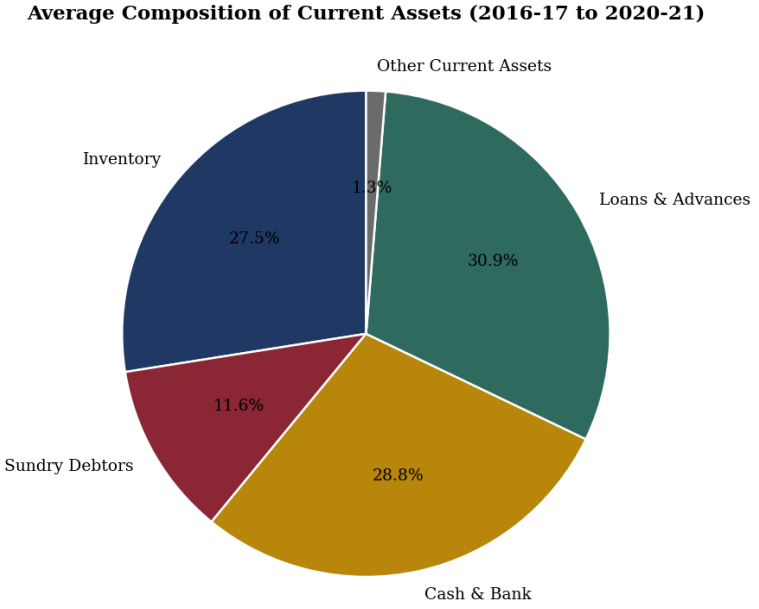


Figure 6: Average Composition of Current Assets

Loans and advances (Rs. 511.63 Crores, about 31 per cent of the five-year average) and cash and bank balances (Rs. 477.10 Crores, about 29 per cent) together accounted for roughly three-fifths of average current assets, with inventory contributing a further 28 per cent. The cash and bank component were heavily skewed by the single year 2018-19, when it briefly touched Rs. 1,907.21 Crores; excluding that year, cash balances were modest and fell consistently under Rs. 220 Crores. Sundry debtors formed the smallest recurring component after other current assets, consistent with the very short average collection periods observed in Table 3.

7. Statement of Changes in Net Working Capital

The comparative statement of changes in working capital tracks how each year's net working capital position moved relative to the preceding year, and helps isolate the years in which the liquidity position deteriorated most sharply and the year in which it recovered.

Year	Total Current Assets	Total Current Liabilities	Net Working Capital	Increase / (Decrease) over Prior Year
2016-17	936.78	1,824.74	(887.96)	—
2017-18	1,013.49	2,052.82	(1,039.33)	(151.37)
2018-19	2,882.58	4,831.41	(1,948.83)	(909.50)
2019-20	1,504.57	6,144.75	(4,640.18)	(2,691.35)
2020-21	1,951.69	4,610.73	(2,659.04)	1,981.14

Table 7: Statement of Changes in Net Working Capital, 2016-17 to 2020-21 (Rs. in Crores)

The working capital deficit widened in each of the first four years of the study, by Rs. 151.37 Crores in 2017-18, by a further Rs. 909.50 Crores in 2018-19, and most sharply by Rs. 2,691.35 Crores in 2019-20 as current liabilities continued to climb while current assets fell. The year 2020-21 was the only year of improvement, with the deficit narrowing by Rs. 1,981.14 Crores on the back of a substantial reduction in current liabilities. Taken together, the five-year trend suggests that while 2020-21 marked a genuine easing of short-term financial pressure, it followed four consecutive years of deteriorating working capital adequacy and left the company's liquidity position still considerably weaker than at the start of the period.

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5. Discussion

The consistently negative net working capital observed at Tata Motors is not, in itself, disqualifying — firms such as Amazon and McDonald's operate profitably with negative working capital because they collect from customers almost immediately while negotiating extended payment terms with suppliers, effectively securing interest-free financing. For a capital-intensive manufacturing firm, however, negative working capital more typically signals underlying financial strain rather than operational efficiency, particularly when it is accompanied — as it is here — by current and quick ratios well below standard benchmarks and by a widening deficit driven primarily by liability growth rather than deliberate treasury strategy.

The Reserve Bank of India's Tandon Committee, whose recommendations shaped Indian bank lending practice from the 1970s onward, offers a useful historical benchmark: its "Second Method of Lending" required firms to fund at least twenty-five per cent of current assets from long-term sources, implying a minimum current ratio of 1.33:1. Measured against that yardstick, Tata Motors' ratios across the study period fall well short, reinforcing the picture of a company financing a substantial share of its operations through current liabilities rather than long-term capital.

6. Findings

- Net working capital remained negative throughout 2016–17 to 2020–21, widening steadily until 2019–20 before a partial recovery in 2020–21.
- The current ratio stayed below the 2:1 norm in every year, peaking in 2018–19 and falling to its lowest point in 2019–20.
- The quick ratio similarly remained below the 1:1 norm throughout, following the same broad pattern as the current ratio.
- The debtor's turnover ratio stayed high across the period, pointing to a consistently short average collection period.
- Loans and advances, and cash and bank balances, were the two largest recurring components of current assets.
- Return on investment was not satisfactory over the period, suggesting that available funds were not deployed as productively as they might have been.

7. Recommendations

Based on these findings, several measures could help strengthen the company's working capital position: improving the productive utilization of available funds; stepping up marketing efforts to support sales growth; introducing cost-reduction measures across operations; adopting improved production techniques and newer distribution and power-management technology; ensuring efficient use of assets and avoiding idle capacity; paying closer attention to debtor payment schedules, given the year-on-year increase in outstanding trade debts; and instituting quarterly physical verification of stores, spare parts, and components, with proper records maintained throughout.

8. Conclusion

Over the five years examined, Tata Motors Limited operated with a persistently negative net working capital and with liquidity ratios that remained below conventional benchmarks throughout. The deficit deepened continuously from 2016–17 through 2019–20, driven primarily by rapid growth in current liabilities rather than a matching decline in current assets, before easing in 2020–21 as current liabilities were brought down. Profitability indicators moved in a broadly similar direction: the net profit ratio turned negative in 2016–17 and the return on total assets turned negative the following year, against a backdrop of rising input costs and an operating ratio that climbed steadily through 2018–19. The overall picture is of a company that grew its sales base steadily while operating on a thin, and for most of the period worsening, short-term liquidity cushion — a pattern that calls for continued monitoring of current liability growth relative to current assets, alongside the operational measures outlined above, in the years ahead.

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