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CASH CONVERSION CYCLE AS AN INDICATOR OF LIQUIDITY EXPOSURE: EVIDENCE FROM SELECTED INDIAN FMCG COMPANIES

Commerce

Samim Sultana Bora Department Of Commerce, Digboi College, Assam, India

ABSTRACT

The cash conversion cycle (CCC) shows how long funds stay tied up between paying for operating inputs and collecting cash from sales. This paper examines CCC in five listed Indian FMCG companies—Hindustan Unilever (HUL), ITC, Dabur India, Britannia Industries and Godrej Consumer Products (GCPL)—from 2020–21 to 2024–25, using secondary data from published ratio series. Descriptive comparison is supported by one-way ANOVA, the Kruskal–Wallis test, Tukey's post-hoc comparisons and year-effect tests. CCC differed significantly across companies ($F = 136.55$, $p < 0.001$; $H = 20.75$, $p < 0.001$), and company identity explained about 96% of the variance. HUL's cycle was consistently negative and ITC's long and positive, while Dabur, Britannia and GCPL were statistically indistinguishable. No significant change over time was found. Liquidity exposure cannot be inferred from the sector label alone.

KEYWORDS

Cash Conversion Cycle, Liquidity Risk, Working Capital, Fmcg, India

INTRODUCTION

Working capital decisions influence whether a company can meet routine obligations without disrupting sales or distribution. FMCG businesses combine frequent transactions, wide distribution networks, inventory requirements and supplier relationships. Even a profitable company may face cash pressure if funds remain tied up in stock or receivables; a short or negative CCC may reduce that pressure.

The CCC, introduced as a liquidity measure by Richards and Laughlin (1980), equals inventory days plus receivable days minus payable days. It is not a complete liquidity test, however: it ignores cash balances, liability maturities, seasonal peaks and the sustainability of supplier credit. This paper compares CCC patterns in five large listed Indian FMCG-related businesses and tests whether the differences are statistically meaningful.

Review of Literature

Richards and Laughlin (1980) argued that static ratios take a liquidation view of liquidity, whereas the CCC reflects the going-concern interval between cash outflow and cash recovery. Deloof (2003), studying 1,009 Belgian non-financial firms, found that shorter inventory and receivable periods were associated with higher profitability, while less profitable firms tended to pay bills later. Though not Indian and profitability-focused, the work showed the value of examining individual components.

Indian evidence on FMCG is similar. Bagchi, Chakrabarti, and Basu Roy (2012) studied Indian FMCG firms over 2000–01 to 2009–10 using CCC and its components alongside profitability measures, and reported a negative association between working-capital measures and profitability. Patta (2017), examining selected Indian FMCG companies over a longer historical period, also reported meaningful relationships among liquidity indicators and noted that shorter CCCs were associated with higher profitability.

More recent sector studies continue to use CCC, inventory days, debtor days and creditor days to explain profitability differences (Das, 2023). These studies show CCC is relevant to FMCG performance, but profitability and liquidity risk are not interchangeable outcomes. A short cycle can reduce financing needs, yet it does not guarantee that current liabilities are manageable or that supplier terms are sustainable.

Research Gap

The reviewed studies share three features. First, they mostly treat profitability as the outcome (Deloof, 2003; Bagchi et al., 2012; Patta, 2017; Das, 2023), so CCC is rarely examined as an indicator of liquidity exposure, the use proposed by Richards and Laughlin (1980). Second, Bagchi et al.'s sample ends in 2009–10, leaving company-level cycles after the 2020 disruption less documented in the studies reviewed. Third, comparisons rely largely on pooled relationships, which can conceal large differences among firms, and formal tests of whether FMCG companies differ in CCC are not reported in the studies reviewed here. This study addresses these gaps by comparing CCC as a liquidity-exposure indicator across five FMCG companies for 2020–21 to 2024–25 and testing differences between companies and over time.

Objectives of the Study

1. To compare CCC patterns in selected Indian FMCG companies during 2020–21 to 2024–25.
2. To identify differences in the duration and direction of companies' operating cash cycles.
3. To discuss how CCC patterns may inform, but cannot independently determine, an assessment of short-term liquidity risk.
4. To test statistically whether CCC differs across companies and over time.

Research Methodology

The study uses a descriptive design based entirely on secondary data. The sample comprises HUL, ITC, Dabur, Britannia and GCPL over five financial years, 2020–21 to 2024–25 (25 company-year observations). Annual CCC figures were taken from the historical ratio series on Screener.in (n.d.) and used as reported. CCC (days) = inventory days + receivable days − payable days. A positive CCC means the cycle needs net cash financing; a negative CCC means supplier credit and timing effects exceed the time funds stay in inventory and receivables. The analysis uses yearly comparison, five-year means and standard deviations (SD), and these tests: Shapiro–Wilk (Shapiro & Wilk, 1965) on residuals for normality; median-centred Levene's test for equal variances; one-way ANOVA for company differences, with eta-squared (η^2) as effect size; Kruskal–Wallis (Kruskal & Wallis, 1952) as a rank-based check; Tukey's HSD (Tukey, 1949) for pairwise comparisons; two-way ANOVA without replication and Friedman's (1937) test for year effects; and Spearman correlation with year for company trends. Significance is judged at 5%. With only five observations per firm, power is limited, so results are indicative. No primary survey or causal model is used.

Analysis

Table 1 reports CCC for the five companies. HUL's cycle was negative in every year; ITC's stayed positive and long; Dabur turned negative in 2023–24; Britannia stayed near zero; and GCPL's moderate cycle shortened after 2021–22.

Table 1. Cash conversion cycle (days), selected companies, 2020–21 to 2024–25.

Company	2020–21	2021–22	2022–23	2023–24	2024–25
Hindustan Unilever Ltd.	−83	−64	−50	−70	−72
ITC Ltd.	129	104	105	148	146
Dabur India Ltd.	3	12	14	−10	−14
Britannia Industries Ltd.	−4	10	−2	−9	−9
Godrej Consumer Products Ltd.	11	31	19	16	7

Source: Company ratio series on Screener.in; values are shown as reported.

Table 2 gives five-year means and SDs. ITC's mean (126.4 days) is the longest and HUL's (−67.8) the shortest, while Dabur, Britannia and GCPL cluster near zero. ITC was the most variable (SD 21.3) and Britannia the most stable (SD 7.8).

Table 2. Descriptive statistics of CCC.

Company	Mean (days)	SD (days)
HUL	−67.8	12.1
ITC	126.4	21.3
Dabur	1.0	12.6
Britannia	−2.8	7.8
GCPL	16.8	9.2

Source: calculations from Table 1.

Sector-mean CCC (11.2, 18.6, 17.2, 15.0 and 11.6 days) looks stable only because extreme positive and negative cycles offset each other.

Residuals were normally distributed (Shapiro–Wilk $W = 0.970$, $p = 0.653$) and variances were homogeneous (Levene $p = 0.137$), so the ANOVA assumptions were met. Table 3 summarises the tests.

Table 3. Statistical test results (n = 25).

Test	Statistic	p-value	Result
Shapiro–Wilk (residuals)	$W = 0.970$	0.653	Normal
Levene (variances)	1.98	0.137	Equal
One-way ANOVA (company)	$F(4, 20) = 136.55$	< 0.001	Significant
Kruskal–Wallis (company)	$H(4) = 20.75$	< 0.001	Significant
Two-way ANOVA (year)	$F(4, 16) = 0.25$	0.902	Not significant
Friedman (year)	$\chi^2(4) = 6.51$	0.164	Not significant

Source: calculations from Table 1.

Tukey's HSD showed that HUL and ITC each differed significantly from every other company (all $p < 0.001$), whereas Dabur, Britannia and GCPL did not differ from one another ($p = 0.185$ to 0.991). Eta-squared was 0.965: company identity explained about 96.5% of total CCC variation. Company-wise Spearman trend tests ($n = 5$) found no significant monotonic trend (all $p > 0.21$).

Findings of the Study

(i) CCC differs significantly across companies (ANOVA $p < 0.001$; Kruskal–Wallis $p < 0.001$), and company identity explains 96.5% of variation.

(ii) HUL's cycle was negative throughout (mean −67.8 days), meaning supplier credit and timing exceeded inventory and receivable periods. This alone does not prove strong liquidity.

(iii) ITC had the longest cycle (mean 126.4 days), rising from 129 to 146 days after a dip to 104–105 days in 2021–23. This implies the largest net funding need among the five, though its diversified operations limit comparability.

(iv) Dabur, Britannia and GCPL did not differ significantly from one another (Tukey $p \geq 0.185$). Dabur's fall from 14 to −14 days and GCPL's fall from 31 to 7 days are notable, but no company shows a statistically significant trend.

(v) There is no significant year effect (two-way ANOVA $p = 0.902$; Friedman $p = 0.164$), so the sector-wide cycle did not change systematically.

(vi) CCC signals operating-cycle exposure but cannot, alone, rate a company's liquidity.

DISCUSSION AND IMPLICATIONS

Three practical points follow. First, inventory and payment arrangements shape operating-cycle exposure: a longer CCC can raise financing needs, and a negative CCC can reduce them. Second, a negative cycle does not automatically prove strong liquidity; if it depends on stretched supplier payments, changed credit terms could create pressure. Third, CCC should be read with current and quick ratios, operating cash flow, cash balances, short-term borrowings and receivables/payables ageing. Managers should monitor inventory ageing, collection periods and supplier terms rather than adopt one CCC target for all FMCG firms; investors and lenders should consider product mix and business structure before comparing companies.

Limitations

The study covers five companies and five years, with only five observations per firm, so tests have limited power and results are indicative rather than generalisable. Future work could enlarge the sample size and combine CCC with current ratios and cash-flow measures.

CONCLUSION

CCC differed markedly and significantly across the selected FMCG companies between 2020–21 and 2024–25, but not systematically over time. HUL maintained a consistently negative cycle, ITC a long positive one, and Dabur, Britannia and GCPL shorter cycles that were statistically indistinguishable. Company-specific factors, rather than the sector label, therefore appear to drive operating-cycle exposure. CCC is best treated as an early-warning indicator, not a stand-alone verdict on liquidity; sound assessment combines it with cash flow, liquid assets, liability maturities and the sustainability of supplier credit.

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