A Study On Impact Of Working Capital Management On Profitability (A Case Study Of Crompton Greaves Ltd)

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Abstract:
Our aim in this research is to investigate how working capital management effects on profitability. We examine the various aspects of working capital management that have an impact on an organization's bottom line. For this study, we therefore take into account the independent variable (Cash, Inventory & Receivable) and dependent variable (Profit). The mean, standard deviation, and tests of the significance of the relationship between the topic's independent and dependent variables are other study tools for this area. To test the variables, correlation was used. The hypothesis is validated by the "t" test, the results of which are used to assess the analysis. Using analysis, statistics, and many performance measuring ratios from 2018–19 to 2022–23, the study shows how a subset of enterprises favorably influenced the organization's profitability.

Key Words: Profitability, Working Capital Components etc.

Introduction:
A financial indicator of a company's operational liquidity is working capital. The two main goals of any working capital management strategy are profitability and liquidity. Any working capital management company is organized around three main functions: accounts receivable, inventory, and cash management.
Only if the profitability rises will the shareholders get the maximum return on their investment. The profits will be diluted if the liquidity is high. "Management of working capital" offers the way to prevent this dilution. It speaks about the quantity of Current Assets (i.e. CA - CL) that surpasses Current Liabilities.

Crompton Greaves Consumer Electricals Limited
Located in Mumbai, India, Crompton Greaves Consumer Electricals Limited is an Indian manufacturer of electrical equipment that was founded in 1937. The company specializes in LED lighting, fans, pumps, air coolers, water heaters, air conditioners, and kitchen appliances, among other electrical consumer durables.

Literature Review:
Suman Talreja (2023): With an emphasis on the effect of the cash conversion cycle (CCC) on profitability, this systematic research investigates the relationship between working capital management (WCM) and profitability. Only the 53 independent studies that employed CCC as a WCM metric were chosen for examination. The analysis concluded that profitability is significantly impacted by effective WCM, more especially by the ideal amount of CCC. Revision of the receivables and payable policy is necessary for businesses to preserve market value, protect shareholder money, and reduce bankruptcy risk.
N. Sumathi (2021): investigated the profitability of a chosen group of Indian steel companies in relation to their working capital sufficiency; secondary data from the country's five listed steel manufacturing companies was gathered for the study, which ran from 2006 to 2015. as a component of a research project aimed at examining working capital management and profitability from financial reports. The focus of this comparative analysis was mostly on JSW Steel Ltd. and Tata Steel Ltd. The Bombay Stock Exchange is where the corporations are listed. Financial reports from firms are analyzed using ratio analysis.
Anwar (2018): investigated how the length of the operating cycle and the turnover of inventory and receivables affected Indonesian listed companies' profitability index. The article's conclusion was that lower inventory and receivable turnover shortens the operating cycle and boosts profitability for businesses.
Singh et al. (2017): established the relationship between working capital management and profitability, suggesting that aggressive financing and working capital investment strategies lead to increased profitability. By examining the relationship between changes in working capital management and firm profitability, the article looked at differences in working capital management and profitability. The working capital literature has been examined from various angles and in various contexts by researchers.

Objectives of the study:
- To study about the components of the working capital management.

- To study about the working capital management affected the selected organization profitability.
- To study about the organization credit policy and cash conversion cycle.

Hypotheses of the study:
H01: There is no significant relationship between Average collection period and operating profit of selected organization.
H02: There is no significant relationship between Inventory holding period and operating profit of selected organization.
H03: There is no significant relationship between Cash conversion cycle Period and operating profit of selected organization.
H04: There is no significant relationship between Average payment period and operating profit of selected organization.
H05: There is no significant relationship between working capital and operating profit of selected organization.

Research Methodology:
Research design: Descriptive research design in nature.
Data collection method: secondary data are used for this study which are collected from selected organization website (annual published report)
Study period: 5-years annual published data which are from 2018-19 to 2022-23.

Limitations of the study:
- Time and Cost are constraints
- Only Crompton Greaves consumers electrical ltd. was taken for this study.
- Other consumers electrical organizations were not taken for the study.
- Study period only 5 years annual published data.

Contribution to the society:
We serve society by managing working capital in a way that ensures the seamless operation of business-related day-to-day operations, as well as the fulfillment of short-term responsibilities and growth prospects. Financial bottleneck risk is reduced by maintaining a healthy cash flow through effective working capital management.

Data Analysis & Interpretations
I. Current Ratio
= Current Assets/ Current Liabilities

Table 1

Year	Current Assets	Current Liabilities	Ratio
2018-19	1719.87	1205.76	1.43
2019-20	1741.67	1084.65	1.61
2020-21	2606.66	1365.64	1.91
2021-22	3100.05	3015.50	1.03
2022-23	2258.29	1736.93	1.30

Statistical Analysis:

Mean	2285.31	1681.7	1.456
Growth Rate	31.31	44.05	

Interpretations: An essential ratio for the company is the current ratio. A high current ratio indicates sufficient cash on hand. The greater the ratio, the better your ability is to settle your debts. A low current ratio indicates that you may struggle to make your immediate debt and liability payments. Table 1 presents data from 2018–19 to 2022–23. The current ratio for the research period is 1.43, 1.61, 1.91, 1.03, and 1.30, all of which are below the organization's optimum limit of 2:1. Therefore, it is not good for the organization that the ratio decreased during the study time.

II. Liquid Ratio
= Liquid Assets /Current Liabilities

Table 2

Year	Liquid Assets	Current Liabilities	Ratio
2018-19	1250.24	1205.76	1.04
2019-20	1052.40	1084.65	0.97
2020-21	1864.86	1365.64	1.37
2021-22	2155.68	3015.50	0.71
2022-23	1328.53	1736.93	0.76

Statistical Analysis:

Mean	1530.34	1681.70	0.97

Growth Rate	6.26	44.05	

Interpretations: Generally speaking, anything above 1 or 1:1 is an excellent quick ratio. The corporation would have the same amount of liquid assets as current liabilities if the ratio was 1:1. A greater ratio suggests that the business has multiple ways to pay down its present creditors. Table 2 shows the years 2018–19 through 2022–23. With the exception of 2021, 2022, and 2023, the research period's Quick Ratios of 1.04, 0.97, 1.37, 0.71, and 0.76 roughly cover the optimum ratio (1:1). Therefore, it is beneficial for the business because during all of these research years, the ratio increased in 2021 and decreased in 2022 and 2023.

III. Inventory Turnover Ratio

= Cost of Goods Sold/ Average Inventory

Table 3

Year	Cost of Goods Sold	Average Inventory	Ratio
2018-19	4680.35	743.85	6.29
2019-20	3701.78	721.04	5.13
2020-21	3267.24	518.64	6.30
2021-22	3070.33	463.61	6.62
2022-23	3091.82	352.38	8.77

Statistical Analysis:

Mean	3562.30	559.90	6.62
Growth Rate	-33.94	-52.63	

Interpretations: The number of times an organization has sold and restocked its inventory over a predetermined period of time is known as the inventory turnover ratio. Table 3 shows the years 2018–19 through 2022–23. Throughout the study period, the inventory turnover ratios were 6.29, 5.13, 6.30, 6.62, and 8.77. Both the cost of goods sold and inventories had negative growth rates (-33.94) and -52.63, respectively. It is encouraging for the company. The ideal inventory turnover ratio is five to ten times, and this ratio should be maintained by the company.

IV. Inventory Holding Period (IHP)

= **(Average Inventory /Cost of Goods Sold) *365**

Table 4

Year	Average Inventory	Cost of Goods Sold	Ratio (Days)
2018-19	743.85	4680.35	58.01
2019-20	721.04	3701.78	71.10
2020-21	518.64	3267.24	57.94
2021-22	463.61	3070.33	55.11
2022-23	352.38	3091.82	41.60

Statistical Analysis:

Mean	559.90	3562.30	56.75
Growth Rate	-52.63	-33.94	

Interpretations: Table 4 shows the years 2018–19 through 2022–23. The study's inventory is held for 58.01, 71.10, 57.94, 55.11, and 41.60 days. With the exception of 2020, the inventory holding period is decreasing year, which is encouraging for the organization and lowers the carrying costs of the business. Days in inventory can be used to determine how efficiently a business is running. Effectively, inventory can be converted to sales through the application of organizational efficiency.

V. Working Capital Turnover Ratio= Net Sales/ Working Capital

Table 5

Year	Net Sales	Working Capital	Ratio
2018-19	6832.55	514.11	13.29
2019-20	5374.06	657.02	8.18
2020-21	4792.19	1241.02	3.86
2021-22	4505.47	84.55	53.29
2022-23	4463.88	521.36	8.56

Statistical Analysis:

Mean	5193.63	603.61	17.44
Growth Rate	-34.67	1.41	

Interpretations: A company's ability to generate revenues for each dollar of working capital used is measured by its working capital turnover. Better, as it shows that a business can produce more sales, is a greater working capital turnover ratio. On the other hand, an excessive increase in working capital turnover may indicate that a business needs to obtain more money in order to finance future expansion. Table 5 shows the years 2018–19 through 2022–23. The research's working capital turnover ratios are 13.29, 8.18, 3.86, 53.29, and 8.56. With the exception of 2022, the working capital turnover ratio declines annually. Hence, it is not encouraging for the company, but in 2022, the ratio was 53.29. so an organization needs to raise additional capital to support for growth of the organization in future.

VI. Trade Receivable Turnover Ratio

= Net Credit Sales/ Average Trade Receivable

Table 6

Year	Net Credit Sales	Average Trade Receivable	Ratio
2018-19	6832.55	670.56	10.19
2019-20	5374.06	615.43	8.73
2020-21	4792.19	491.18	9.76
2021-22	4505.47	463.46	9.72
2022-23	4463.88	565.98	7.89

Statistical Analysis:

Mean	5193.63	561.32	9.26
Growth Rate	-34.67	-15.60	

Interpretations:

The trade receivables turnover ratio is a financial metric that's used to evaluate how well a company collects credit sales payments from its customers. The trade receivables turnover ratio is used to determine how effective a company's credit and collection procedures are. Generally speaking, a high AR turnover percentage is preferable, but not if credit regulations are very onerous and have a detrimental effect on sales. Lenders won't be impressed by a low AR turnover percentage, but it doesn't automatically mean that the clients are dangerous. In certain situations, the owner of the business might give terms that are over all favorable or might be at the mercy of businesses who demand a payment cycle longer than thirty days. Table 6 shows the years 2018–19 through 2022–23. The Trade receivable Turnover Ratio of the study is 10.19,8.73,9.76,9.72 & 7.89. The Trade receivable Turnover Ratio decrease year by year except 2021, So it is a good sign for the organization. But this decrement is not the less-than-ideal limit (7.8 times).

VII. Trade Receivable (Avg.) Collection Period (ACP)Ratio

= (Average Trade Receivable/ Net Credit Sales) *365

Table 7

Year	Average Trade Receivable	Net Credit Sales	Ratio
2018-19	670.56	6832.55	35.82
2019-20	615.43	5374.06	41.80
2020-21	491.18	4792.19	37.41
2021-22	463.46	4505.47	37.55
2022-23	565.98	4463.88	46.28

Statistical Analysis:

Mean	561.32	5193.63	39.77
Growth Rate	-15.60	-34.67	

Interpretations:

The typical time frame that an organization uses to collect its past-due invoices is known as the accounts receivable collection period. While a longer collection period suggests that clients can be slow to provide, a shorter collection period suggests that customers pay their debts promptly. Table 7 shows the years 2018–19 through 2022–23. The study covers the trade receivable collection time of 35.82, 41.80, 37.41, 37.55, and 46.28 days. With the exception of 2023, the trade receivable turnover ratio is declining annually, which is encouraging for the company. A short collection time is beneficial to the organization, and the chart above demonstrates that the current period's collecting duration is short compared to the ideal limit, which is typically 60 days.

VIII. Trade Payable Turnover Ratio = Net Credit Purchase /Average Trade payable

Table 8

Year	Net Credit Purchase	Average Trade Payable	Ratio
2018-19	3091.82	665.01	4.65
2019-20	3070.33	654.29	4.69
2020-21	3267.24	754.12	4.33

2021-22	3701.38	941.22	3.93
2022-23	4680.36	1026.58	4.56

Statistical Analysis:

Mean	3562.23	808.24	4.43
Growth Rate	51.38	54.37	

Interpretations:
The number of times the company pays its suppliers or debtors within an accounting period is determined by this ratio. Table 8 shows the years 2018–19 through 2022–23. According to the report, the trade payable turnover ratio is 4.65, 4.69, 4.33, 3.93, and 4.56 times. With the exception of 2022, the Trade Payable Turnover Ratio has decreased annually, which is not encouraging for the company. Nonetheless, it is thought that an AP ratio of six to ten times is optimal. A ratio of less than six suggests that a company is not making enough money to pay its suppliers on schedule.

IX. Trade Payable (Avg.) Payment period (APP) Ratio
= (Average Trade payable/ Net Credit Purchase) *365

Table 9

Year	Average Trade Payable	Net Credit Purchase	Ratio
2018-19	665.01	3091.82	78.51
2019-20	654.29	3070.33	77.78
2020-21	754.12	3267.24	84.25
2021-22	941.22	3701.38	92.82
2022-23	1026.58	4680.36	80.06

Statistical Analysis:

Mean	808.24	3562.23	82.68
Growth Rate	54.37	51.38	

Interpretation:
According to Table 9, over these study periods, the average payment periods were 78.51, 77.78, 84.25, 92.82, and 80.06 days, respectively. Creditors can determine the company's short-term payment liquidity and, consequently, its creditworthiness, by looking at the average payment period ratio. When a ratio is high, it means that suppliers are being paid on time for credit purchases. A high number can be the result of suppliers expecting prompt payments, or it could mean that the business is actively trying to raise its credit score or attempting to take advantage of early payment discounts. The payment to creditor ratio is high, as the accompanying table demonstrates. Therefore, the creditworthiness of the company is in doubt.

X. Cash Conversion Period (CCP)
= ACP + IHP- APP

Table 10

Year	Average Collection Period (ACP)	Inventory Holding Period (IHP)	Average Payment Period (APP)	Cash Conversion Period (CCP)
2018-19	35.82	58.01	78.51	15.32
2019-20	41.80	71.10	77.78	35.12
2020-21	37.41	57.94	84.25	11.1
2021-22	37.55	55.11	92.82	-0.16
2022-23	46.28	41.60	80.06	7.82

Statistical Analysis:

Mean	39.77	56.75	82.68	13.84
Growth Rate	29.20	-28.29	1.97	-48.96

Interpretations:
The amount of time (measured in days) that a business has to invest in inventory and other resources before it can turn those expenditures into cash flows from sales is called the cash conversion cycle (CCC). This metric accounts for the time it takes the business to sell its goods, the time it takes to collect receivables, and the amount of time it may pay its payments without facing penalties. With the exception of 2020, Table 10 above demonstrates how low the CCC is. The CCC for the organization's study period are 15.32, 35.12, 11.1, -0.16, and 7.82 days, in that order. For the corporation to conduct its business efficiently, it is a complex task.

Hypotheses testing
First Hypotheses

H01: There is no significant relationship between Average collection period and operating profit of selected organization.
H11: There is a significant relationship between Average collection period and operating profit of selected organization.

Year	Average Collection period (In Days)	Operating Profit					
2018-19	35.82	559.84	Correlation coefficient Results=-0.2835.	Level of Significance=5% Degree of Freedom=3	P-Value	T-test Results=0.512	**H01: Accept & H11: Failed to Accept**
2019-20	41.80	590.69					
2020-21	37.41	723.63					
2021-22	37.55	751.54					
2022-23	46.28	612.15					

Second Hypotheses:
H02: There is no significant relationship between Inventory holding period and operating profit of selected organization.
H12: There is a significant relationship between Inventory holding period and operating profit of selected organization.

Year	Inventory Holding Period (In Days)	Operating Profit				
2018-19	58.01	559.84	Correlation coefficient Results= (0.1319)	Level of Significance=5% Degree of Freedom=3	T-test Results=0.2305	**H02: Accept & H12: Failed to Accept**
2019-20	71.10	590.69				
2020-21	57.94	723.63				
2021-22	55.11	751.54				
2022-23	41.60	612.15				

Third Hypotheses
H03: There is no significant relationship between Cash conversion cycle Period and operating profit of selected organization.
H13: There is a significant relationship between Cash conversion cycle Period and operating profit of selected organization.

Year	Cash Conversion cycle Period (In Days)	Operating Profit				
2018-19	15.32	559.84	Correlation coefficient Results= (0.6241)	Level of Significance=5% Degree of Freedom=3	T-test Results=1.383	**H03: Accept & H13: Failed to Accept**
2019-20	35.12	590.69				
2020-21	11.1	723.63				
2021-22	-0.16	751.54				
2022-23	7.82	612.15				

Forth Hypotheses
H04: There is no significant relationship between Average payment period and operating profit of selected organization.
H14: There is a significant relationship between Average payment period and operating profit of selected organization.

Year	Average Payment Period (In Days)	Operating Profit				
2018-19	78.51	559.84	Correlation coefficient Results=0.909	Level of Significance=5% Degree of Freedom=3	T-test Results=3.78	**H14: Accept & H04: Failed to Accept**
2019-20	77.78	590.69				
2020-21	84.25	723.63				
2021-22	92.82	751.54				
2022-23	80.06	612.15				

Fifth Hypotheses
H05: There is no significant relationship between working capital and operating profit of selected organization.
H15: There is a significant relationship between working capital and operating profit of selected organization.

Year	Working Capital	Operating Profit				
2018-19	514.11	559.84	Correlation coefficient Results=0.0159	Level of Significance=5% Degree of Freedom=3	T-test Results=0.0275	**H05: Accept & H15: Failed to Accept**
2019-20	657.02	590.69				
2020-21	1241.02	723.63				
2021-22	84.55	751.54				
2022-23	521.36	612.15				

Findings, Conclusions & Suggestions:
Findings:
• An essential ratio for the company is the current ratio. A high current ratio indicates sufficient cash on hand. The greater the ratio, the better your ability is to settle your debts. A low current ratio indicates that you may struggle to make your immediate debt and liability payments. Table 1 presents data from 2018–19 to 2022–23. The current ratio for the research

period is 1.43, 1.61, 1.91, 1.03, and 1.30, all of which are below the organization's optimum limit of 2:1. Therefore, it is not good for the organization that the ratio decreased during the study time.

- Quick ratio above 1 or 1:1 is generally considered acceptable. The company's liquid assets and current liabilities would be equal in a ratio of 1:1. An elevated ratio suggests that the business has the capacity to settle its current debt multiple times. The years 2018–19 to 2022–23 is shown in Table 2. Throughout the study period, the Quick Ratio was 1.04, 0.97, 1.37, 0.71, and 0.76, covering the ideal ratio of 1:1 with the exception of 2021, 2022, and 2023 of course. Thus, the ratio increased in 2021 and decreased in 2022 and 2023 over the study years, which is beneficial for the firm.
- The number of times an organization has sold and refilled its inventory over a predetermined period of time is known as the inventory turnover ratio. Table 3 shows the years 2018–19 through 2022–23. Throughout the study period, the inventory turnover ratios were 6.29, 5.13, 6.30, 6.62, and 8.77. Both the cost of goods sold and inventories had negative growth rates (-33.94) and -52.63, respectively. It is encouraging for the company. The ideal inventory turnover ratio is five to ten times, and this ratio should be maintained by the company.
- Table 4 shows the years 2018–19 through 2022–23. The study's inventory is held for 58.01, 71.10, 57.94, 55.11, and 41.60 days. With the exception of 2020, the inventory holding period is decreasing year, which is encouraging for the organization and lowers the carrying costs of the business. Days in inventory can be used to determine how efficiently a business is running. Effectively, inventory is converted into sales through the application of organizational efficiency.
- Working capital turnover quantifies a company's ability to earn a profit for each stage of working capital invested. Better, as it shows that a business can produce more sales, is a greater working capital turnover ratio. On the other hand, an excessive increase in working capital turnover may indicate that a business needs to obtain more money in order to finance future expansion. Table 5 shows the years 2018–19 through 2022–23. The research's working capital turnover ratios are 13.29, 8.18, 3.86, 53.29, and 8.56. The Working Capital Turnover Ratio decrease year by year except 2022, So it is not good sign for the organization but in the year 2022 the ratio was 53.29 so an organization needs to raise additional capital to support for growth of the organization in future.
- The trade receivables turnover ratio is a financial metric that's used to evaluate how well a company collects credit sales payments from its customers. The trade receivables turnover ratio is used to determine how effective a company's credit and collection procedures are. Generally speaking, a high AR turnover percentage is preferable, but not if credit regulations are very onerous and have a detrimental effect on sales. Lenders won't be impressed by a low AR turnover percentage, but it doesn't automatically mean that the clients are dangerous. In certain situations, the owner of the business might give terms that are overly favorable or might be at the mercy of businesses who demand a payment cycle longer than thirty days. Table 6 shows the years 2018–19 through 2022–23. The Trade receivable Turnover Ratio of the study is 10.19,8.73,9.76,9.72 & 7.89. The Trade receivable Turnover Ratio decrease year by year except 2021, So it is a good sign for the organization. But this decrement is not the less-than-ideal limit (7.8 times).
- The typical time frame that an organization uses to collect its past-due invoices is known as the accounts receivable collection period. While a longer collection period suggests that clients can be slow to provide, a shorter collection period suggests that customers pay their debts promptly. Table 7 shows the years 2018–19 through 2022–23. The study covers the trade receivable collection time of 35.82, 41.80, 37.41, 37.55, and 46.28 days. With the exception of 2023, the trade receivable turnover ratio is declining annually, which is encouraging for the company. A short collection time is beneficial to the organization, and the chart above demonstrates that the current period's collecting duration is short compared to the ideal limit, which is typically 60 days.
- The number of times the company pays its suppliers or debtors within an accounting period is determined by this ratio. Table 8 shows the years 2018–19 through 2022–23. According to the report, the trade payable turnover ratio is 4.65, 4.69, 4.33, 3.93, and 4.56 times. With the exception of 2022, the Trade Payable Turnover Ratio has decreased annually, which is not encouraging for the company. Nonetheless, it is thought that an AP ratio of six to ten times is optimal. A ratio of less than six suggests that a company is not making enough money to pay its suppliers on schedule.
- According to Table 9, over these study periods, the average payment periods were 78.51, 77.78, 84.25, 92.82, and 80.06 days, respectively. Creditors can determine the company's short-term payment liquidity and, consequently, its creditworthiness, by looking at the average payment period ratio. When a ratio is high, it means that suppliers are being paid on time for credit purchases. A high number can be the result of suppliers expecting prompt payments, or it could mean that the business is actively trying to raise its credit score or attempting to take advantage of early payment discounts. The payment to creditor ratio is high, as the accompanying table demonstrates. Therefore, the creditworthiness of the company is in doubt.
- The amount of time (measured in days) that a business has to invest in inventory and other resources before it can turn those expenditures into cash flows from sales is called the cash conversion cycle (CCC). This metric accounts for the time it takes the business to sell its goods, the time it takes to collect receivables, and the amount of time it may pay its payments without facing penalties. With the exception of 2020, Table 10 above demonstrates how low the CCC is. The CCC for the organization's study period are 15.32, 35.12, 11.1, -0.16, and 7.82 days, in that order. For the corporation to conduct its business efficiently, it is a complex task.

Conclusions:

In the above analysis we concluded that the company performance was good in the context of Profitability. There is no significant relationship of operating profit with Average collection period, Inventory Holding Period and Working Capital but the Average payment period of the company is positive relationship with profit.

Further Research:

- We also recommend conducting future studies linking spontaneous financing and its impact on the company's performance and profitability in various industrial sectors.
- Study period can be increased for further research

Suggestions:

Working capital management is a skill that managers need to possess since it is critical to the organization's performance and profitability. With the lack of liquidity and credit limits brought on by the COVID-19 crisis, the company's operations must be financed through automated financing, which can only be achieved through optimal working capital management (efficient management of WCM components).

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