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## RESEARCH ARTICLE

# LIQUIDITY AND WORKING CAPITAL MANAGEMENT- A CASE STUDY OF CONSTRUCTION INDUSTRY IN KERALA, INDIA

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### ARTICLE INFO

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Working Capital, Liquidity,  
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Current Liability.

### ABSTRACT

Working capital management is one of the most important and crucial function of financial management that ensures the smooth function of the business organisation and it denotes the index of sound position of the business. The success and failure of a business enterprise depends on how it can manage the liquidity and working capital. The finance manager of a business organisation is used to spend more time for managing the short term or working capital management. The purpose of this paper is to study the working management of the construction industry based on their financial statements. The area of studies is related to the working capital management of various components like Management of Cash and Marketable Securities, Management of Receivables, Inventory Management and Payable Management practices in the management of working capital. The key difference between long term financial management and short term financial management is in terms of the timing of cash. While long term financial decisions like buying capital equipment or issuing debentures involve cash flows over an extended period of time (5 to 15 years or even more), short term financial decisions typically involve cash flows within a year or within the operating cycle of the firm.

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## INTRODUCTION

The task of the financial manager in managing Working Capital efficiently is to ensure the sufficient liquidity in the operations of the enterprise. The liquidity of a business firm is measured by its ability to satisfy short term obligations as they become due. Working capital represents firm's total investment in current assets. The need for working capital, business firms are interested in enhancing stockholder wealth, and this requires a steady generation of profits by the firm. The firm has to invest enough funds in current assets for the success of the sales activity. Current assets are needed because sales do not convert in to cash instantaneously due to involvement of operating cycle in the conversion of sales in to cash. There are two concepts of working capital: gross and net. The 'gross working capital' means the total of current assets. The 'net working capital' (NWC) is the difference between current assets and current liabilities. Working capital management refers to the administration of all aspects of current assets, namely cash, marketable securities, debtors and stock (inventories) and current liabilities.

The financial manager must determine the levels and composition of current assets. He must see that right sources are tapped to finance current assets and current liabilities are paid in time. Working capital is an index of the short term financial solvency of every business. Working capital to business as blood is to body. Adequate flow of working capital is a must for the survival of business. The following are the importance of working capital:

- Index of Sound Liquidity Position.
- Facility of Cash discount.
- Prompt payment to suppliers.
- Easy Loans from Banks:
- Attractive Dividends:
- Creation of good will:
- Meeting special needs
- Survival during adverse business conditions
- Off season Purchasing
- High morale

There are many aspects of working capital management which make it an important function of the financial manager.<sup>1</sup>

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<sup>1</sup> Weston, J.Fred and Eugene F.Brigham Management Finance, Illinois; Dryden Press, 1975,P.123-124.

- Working capital management requires much of the financial manager’s time.
- Working capital represents a large portion of the total investment in assets.
- Working capital management has greater significance for small firms.
- The need for working capital is directly related to sales growth.

Empirical observations show that financial manager have to spend much of their time to the daily internal operating relating to current assets and current liabilities of firms. Investment in current assets represent very significant portion of the total investment in assets. For example, in case of the 1650 large and medium public limited companies in India, current assets constituted 62 percent of total net assets or total capital net assets or total capital employed. This is very clearly indicates that the financial manager should pay special attention on the management of current assets in a continuing basis.

**Statement of The Problem:** The area or the problem of Liquidity and working capital management is one of the crucial problems as far as a the financial management of the business concern is concerned. The success and failure of a business enterprise depends on how it can manage the liquidity and working capital. That is why the problem of managing working capital has got a separate entity and more relevance in the academic and pragmatic point of view.

**Objectives of the study**

- To analyse the effectiveness of working capital management of construction Industry.
- To study the trend analysis of working capital

**METHODOLOGY OF STUDY ADOPTED**

In this study of ‘working capital management - A case study of Construction industry in Kerala, India’. the data which is to be collected for the study is of primary in nature and some secondary. For collection of data, the researcher visited 10 companies of large and medium scale construction companies and interview the Finance Manager, Stores Manager and also to conduct the stores observation. Memorandum of Association, Articles of Association, Published reports and records like Balance Sheet, Profit and Loss account, Annual reports stores records are the instruments use for this study

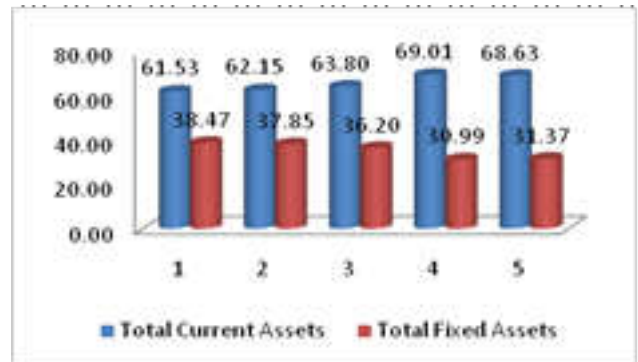
**Analytical tools:** This study mainly consists of interpretation of the financial statements. The major tools of interpretations of the financial statements are

- Comparative financial statements
- Common – size financial statements
- Ratio analysis : Ratios which will disclose the short term liquidity, working capital, activity (turnover) ratios are used for this study consisting of Current ratio, Liquidity ratio, Cash ratio, working capital ratio, stock turnover, debtors turnover ratios etc.

**Limitations of Study:** No research is free from limitations, this study is also not free from limitations. The following are some of the limitations of this study.

**Table No.1 Table showing the composition of total assets as Current Asset and Fixed assets in %**

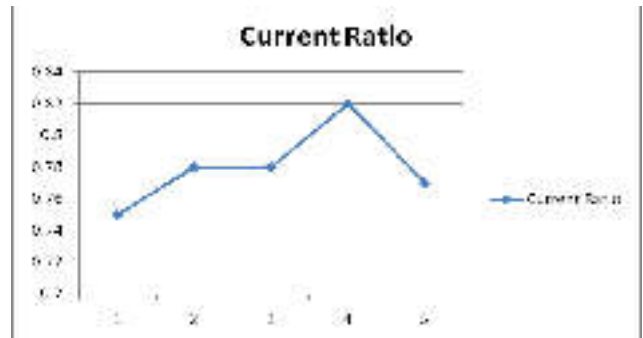
Year	2015	2016	2017	2018	2019
Total Current Assets	61.53	62.15	63.80	69.01	68.63
Total Fixed Assets	38.47	37.85	36.20	30.99	31.37



**Chart showing the composition of the Current assets and Fixed Assets in Total Assets in %**

**Table 2. Statement showing the computation of Current Ratio**

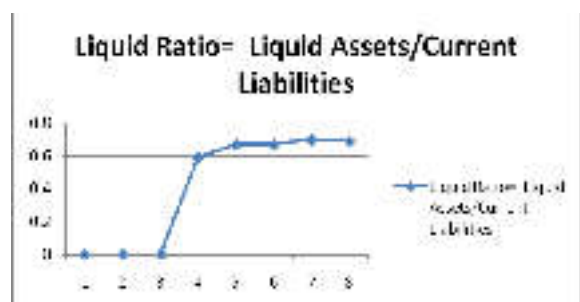
Year	Current Assets	Current Liabilities	Current Ratio
2015	149916	201252	0.75
2016	152189	194184	0.78
2017	146972	187713	0.78
2018	139855	170056	0.82
2019	114257	148257	0.77



**Fig. No.2 Chart showing the relationship between Current Assets and Current Liabilities**

**Table No.3. Statement showing the computation of Liquid Ratio**

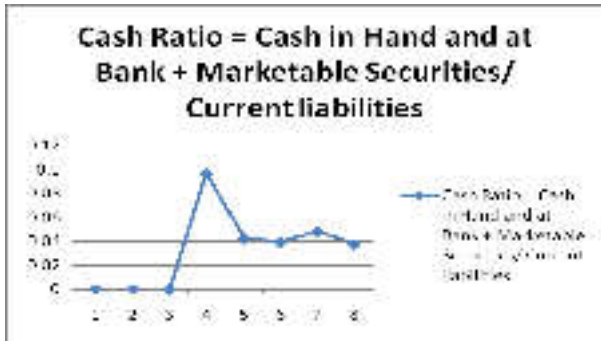
Year	Liquid Assets	Liquid Liabilities	Liquid Ratio
2015	118670	201252	0.60
2016	130579	194184	0.67
2017	125453	187713	0.67
2018	118524	170056	0.70
2019	101946	148257	0.67



**Chart showing the Liquid Ratio of the company**

**Table No.4 Statement showing the computation of Absolute Liquid Ratio**

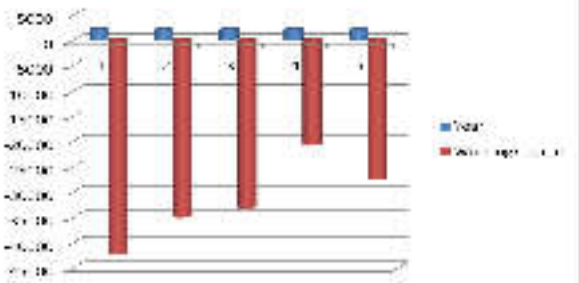
Year	Cash and Marketable Securities	Liquid Liabilities	Absolute Liquid Ratio
2015	15079	155676	0.097
2016	6508	153407	0.042
2017	6371	159559	0.04
2018	7328	152325	0.048
2019	5080	134933	0.038



**Chart showing the relationship between Absolute Liquid Assets to Current Liabilities**

**Table No. 5 Statement showing the working capital of the company**

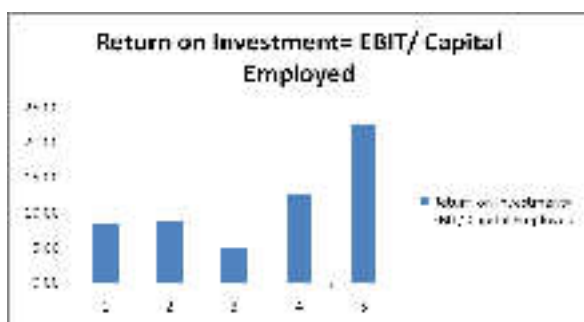
Year	Working Capital
2015	-42346
2016	-35128
2017	-33191
2018	-20834
2019	-27587



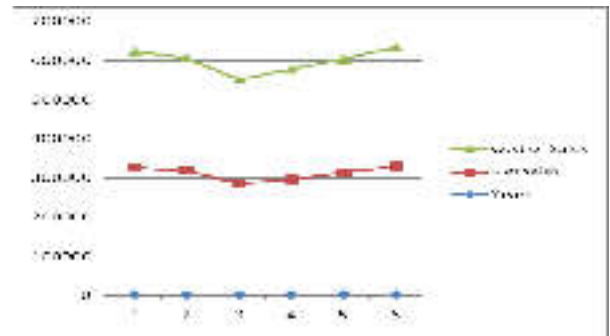
**Fig.No5**

**Table No.6. Table showing the Return on Investment (ROI)**

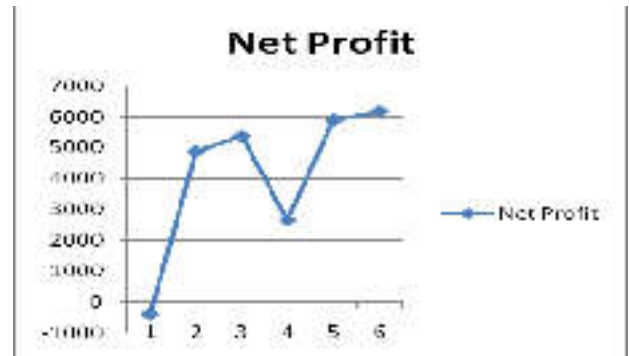
Earnings Before Interest and Tax (EBIT)	4880	5364	2651	5900	6195
Return on Investment= EBIT/ Capital Employed	8.56	8.69	4.87	12.78	22.46



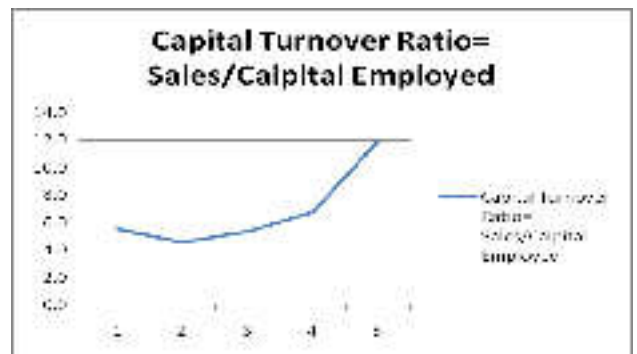
**Fig. No.6. Chart showing the Return on Investment**



**Fig. No.7. Chart showing the Net sales and Cost of Sales**



**Fig. No.8. Chart showing the Net profit of the company**



**Fig. No.9**

**Table No.7. Stock/Inventory Turnover Ratio**

Year	Average Inventory	Net Sales	Stock Turnover Ratio
2015	26428	315615	11.94 Times
2016	26428	283828	10.74 Times
2017	21565	292501	13.56 Times
2018	21425	312210	14.57 Times
2019	16821	327821	19.49 Times



**Fig. No.10**

**Debtors Turnover Ratio**

**Table No.8. Table showing the Debtors turnover ratio and Debt collection period**

Year	Net Sales	Receivables	Debtors Turnover Ratio	Debt Collection Period
2015	315615	77842	4.05 Times	89 Days
2016	283828	94900	2.99 Times	120 Days
2017	292501	89226	3.28 Times	110 Days
2018	312210	86492	3.61 Times	100 Days
2019	327821	81566	4.02 Times	90 Days



**Fig. No.11**

**Table No.9. Table showing Creditors Turnover Ratio and Creditors Payment Period**

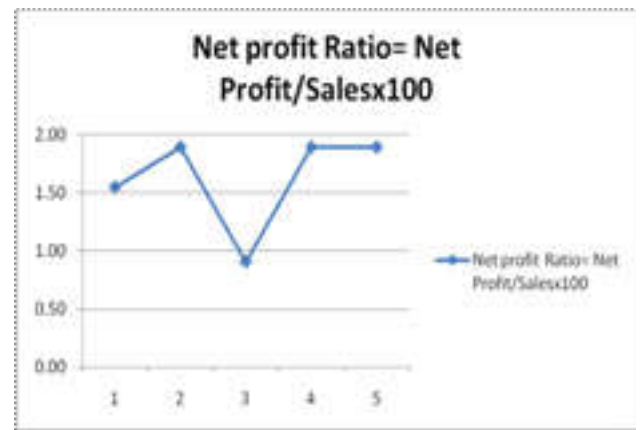
Year	Cost of goods Sold	Payables/ Creditors	Creditors Turnover Ratio	Creditors Payment Period
2015	315615	97750	3.23 Times	113 Days
2016	283828	108940	2.6 Times	140 Days
2017	292501	107174	2.73 Times	134 Days
2018	312210	107417	2.91 Times	125 Days
2019	327821	87602	3.74 Times	98 Days



**Fig. No.12. Chart showing the Fixed Assets Turnover Ratio**



**Fig. No.13. Chart showing theGross Profit Ratio**



**Fig. No. 14. Chart showing the Net Profit Ratio**

- This study is only a case study based on one of the private sector construction companies in Kerala, India, the chance to generalization is also limited.
- The major sources of data is the data from secondary sources, it may affect the accuracy of the study.
- This study is based on the facts and figures available for 5 years from the annual reports of this company. The scope of this study is only 5 years, in the long run the analysis and interpretations may change.
- The economic and trade cycles of the economy also influence the results of the study.

**Data analysis and interpretation**

**Findings**

- The organization set up and the structure of these organisations are well defined and centralized under the control of the General Manager. The Organisation structure consists of the various Line and Staff Departments. The company following a decentralized system of purchase. No separate department for handling HR issues.
- The Liquidity Ratios like Current Ratios, Liquid ratios and Cash ratios are not meeting the standards accepted by the Management Accountants.
- The requirement of the Net working capital of the company is always negative, showing that the company is keeping excess working capital. In other words, long term assets are financed by Current liability, this capital financing is not that much recommendable.
- Return on Investment (ROI) of the companies is also not up to the mark according to the industrial standards.
- The companies capital turnover ratio is good in 2019 and other years not up to the standard according to the industrial norms in UAE.
- The companies inventory turnover ratio is showing a good trend in the utilization of inventory. This is mainly due to the less investment in inventory.
- The debtors turnover and debt collection period for the company is good according to the industry norms.
- The fixed turnover ratio of the company is showing a better utilization of the company and to make proper return out of it.

**Table No. 10. Table showing the trend of Working Capital, Cash, Inventory, Receivables and Creditors with the base of 2019**

Year	WC	Trend	Cash & MS	Trend	Inventory	Trend	Receivables	Trend	Creditors	Trend
2015	-42346	100	15079	100	31246	100	77842	100	97750	100
2016	-35128	83%	6508	43.16%	21610	69.16%	94900	122%	108940	111.45%
2017	-33191	78.38%	6371	42.25%	21519	68.87%	89226	114.62%	107174	109.64%
2018	-20834	49.19%	7328	48.60%	21311	68.20%	86492	111.11%	107417	109.89%
2019	-27587	65.14%	5080	33.69%	12311	39.40%	81566	104.78%	87602	89.62%

**Table No.11. Table showing Working Capital Turnover Ratio**

Year	Working Capital	Sales	Working Turnover Ratio
2015	-42346	315615	7.45 Times
2016	-35128	283828	8.08 Times
2017	-33191	292501	8.81 Times
2018	-20834	312210	14.98 Times
2019	-27587	327821	11.88 Times

**Table No.12. Table showing the calculation of Correlation between Working capital and Sales**

Year	Working Capital	Sales	X	Y	x <sup>2</sup>	y <sup>2</sup>	Xy
2015	-42346	315615	-10528.8	9220	110855629	85008400	-97075536
2016	-35128	283828	-3310.8	-22567	10961396.6	509269489	74714823.6
2017	-33191	292501	-1373.8	-13894	1887326.44	193043236	19087577.2
2018	-20834	312210	10983.2	5815	120630682	33814225	63867308
2019	-27587	327821	4230.2	21426	17894592	459073476	90636265.2
			0	0	262229627	1280208826	151230438

$$\frac{151230438}{\sqrt{262229626.8} \times \sqrt{1280208826}}$$

$$\frac{151230438}{16193.51 \times 35780} = \frac{151230438}{579403787.8}$$

$$r = 0.261$$

**Table No.13. Table showing the calculation of Correlation between Working capital and Profit**

Year	Working Capital	Profit	X	Y	x <sup>2</sup>	y <sup>2</sup>	Xy
2015	-42346	4880	-10528.8	-118	110855629	13924	1242398.4
2016	-35128	5364	-3310.8	366	10961396.6	133956	-1211752.8
2017	-33191	2651	-1373.8	-2347	1887326.44	5508409	3224308.6
2018	-20834	5900	10983.2	902	120630682	813604	9906846.4
2019	-27587	6195	4230.2	1197	17894592	1432809	5063549.4
			0	0	262229627	7902702	18225350

$$\frac{18225350}{\sqrt{262229626.8} \times \sqrt{7902702}}$$

$$\frac{18225350}{16193.51 \times 2811.17}$$

$$\frac{18225350}{45522709.51}$$

$$r = 0.4$$

**Fixed Assets Turnover ratio****Table No.14. Table showing the Fixed Assets Turnover ratio**

Year	Sales	Fixed Assets	Fixed Assets Turnover Ratio
2015	315615	99333	3.2 Times
2016	283828	96870	2.9 Times
2017	292501	87657	3.3 Times
2018	312210	66999	4.7 Times
2019	327821	55169	5.9 Times

## Gross Profit Ratio

**Table No.15 Table showing theGross Profit Ratio**

Year	Gross Profit	Sales	Gross Profit Ratio
2015	26607	315615	8.43%
2016	20190	283828	7.07%
2017	9579	292501	3.27%
2018	22077	312210	7.07%
2019	23180	327821	7.07%

## Net Profit Ratio

**Table No.16 Table showing the Net Profit of the Company**

Year	Net Profit	Sales	Net Profit Ratio
2015	4880	315615	1.55%
2016	5364	283828	1.89%
2017	2651	292501	0.91%
2018	5900	312210	1.89%
2019	6195	327821	1.89%

## Suggestions

- The companies has to make effective steps to reduce its cost of production and other expenses to increase the profitability of the company.
- The companies has to improve the working capital management of the company effective by improving the liquidity ratios.
- The companies has to keep the practice of the financing policy of financing the long assets by long term finance only instead of financing with short term capital.
- The companies has to enhance the Return On Investment by improving the profitability of the company.
- The companies has to improve the Capital Turnover Ratio by utilizing the capital of the company effectively.
- The companies has to follow the practice of centralized purchasing and stores with sub stores system to reduce the unnecessary storage of materials. The company has to appoint store keepers at various sites possessing knowledge in stores management.

## Conclusion

Empirical observations show that Financial Managers have to spend much of their time to the daily internal operating relating to current assets and current liabilities of firms. Investments in current assets represent a very significant portion of the total investment in assets. For example, in case of the 1650 large and medium public limited companies in India, current assets constituted 62 percent of total net assets or total capital employed.

This is very clearly indicates that the financial manager should pay special attention on the management of current assets on a continuing basis. As per the discussions in this project with the help of ratio analysis and other interpretation techniques, The researcher can conclude that the working and short term capital management of the company is effective and be should implemented in a proper manner. The financial health of any organisation may change at any time due to the changes in the external environment, economic and other factors, hence there is wider scope of studies in this topic and industry in the future.

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