

## A Study on Ratio Analysis

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### ABSTRACT

The project report to “A study on ratio analysis at BHARATHI CEMENT CORPORATION PVT LTD”. The main objective of the study is to analyze the financial position of the company. It is the process of identifying the financial strength and weaknesses of the firm properly establishing a relationship between the item of balance sheet and profit and loss account. The details regarding the history and finance details were collected through discussion with the company officers. Secondary data are based on the annual reports of 2015-16 to 2019-20. The various tools used for the study are ratio analysis, funds flow statement, and cash flow statement. Charts and tables are used for better understanding. Through ratio analysis, the company could be able to assess the Profitability, Liquidity, Leverage, Turnover positions of the company.

**KEYWORDS:** Liquidity ratio, Profitability ratio, Financial leverage ratio, Turnover

### INTRODUCTION

Ratio analysis is one of the powerful tools of the Financial statement analysis. It is the process of establishing, interpreting various ratios and analyze these ratios for the purpose of decision making.

Ratio analysis is done to measure the firm solvency, liquidity and profitability positions.

A Ratio is a mathematical relationship between the two related items which are expressed in quantitative form. Ratio analysis is one of the financial statement analysis tools which is used for analyzing the past, present data and estimating the future.

### NEED FOR THE STUDY:

➤ The need of the study is to analyze the financial information of the BCCPL. The study helps in measure the long-term solvency position of the BCCPL. This study provides the ratio analysis of the performance of the BCCPL.

### SCOPE OF THE STUDY:

This study confirmed to BHARATHI CEMENT CORPORATION PVT. LTD At

**How to cite this paper:** R. Krupakar | Dr. P Basaiah "A Study on Ratio Analysis" Published in International Journal of Trend in Scientific Research and Development (ijtsrd), ISSN: 2456-6470, Volume-5 | Issue-5, August 2021, pp.1540-1546, URL: www.ijtsrd.com/papers/ijtsrd45106.pdf



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NAGALINGAYAPALLI (V) KADAPA(D) The study covers 5 years data for interpretation i.e., 2015-16 to 2019-20

### RESEARCH OBJECTIVES:

- To study the Liquidity position of Bharathi Cement Corporation Pvt Ltd
- To study the Profitability position of Bharathi Cement Corporation Pvt Ltd
- To study the Long term solvency position Bharathi Cement Corporation Pvt Ltd
- To study the Operational efficiency position of the Bharathi Cement Corporation Pvt Ltd

### RESEARCH METHODOLOGY:

The study is based on secondary data of Bharathi Corporation Pvt Ltd In Kadapa.

### SECONDARY DATA

- BCCPL annual reports
- BCCPL website: www.bharathicement.com

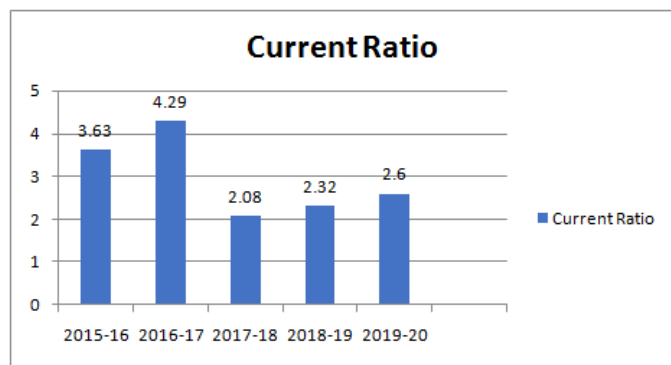
### 1. LIQUIDITY RATIOS:

#### A. Current Ratio:

➤ Current ratio is calculated by dividing current assets by current liabilities

$$\text{Current ratio} = \frac{\text{Current assets}}{\text{Current liabilities}}$$

Years	Current Assets	Current Liabilities	Current Ratio
2015-16	313,112,005	86,229,274	3.63
2016-17	343,123,264	79,938,108	4.29
2017-18	277,203,371	133,280,414	2.08
2018-19	301,924,932	130,061,660	2.32
2019-20	337,265,000	129,620,400	2.60



#### INTERPRETATION:

From the above chart shows that current ratio of the company is gradually fluctuating that is 3.63,4.29,2.08,2.32, and 2.6.

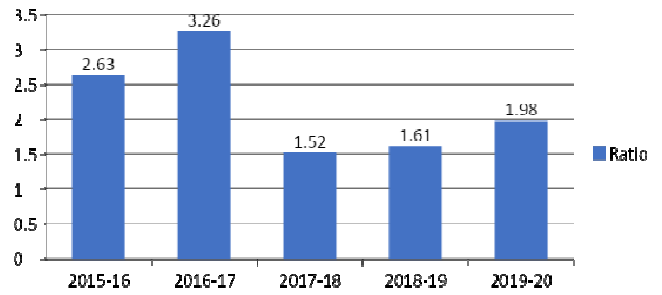
The standard ratio of the company must be 2:1. It shows that the current ratio of the company is above of the standard ratio. So it is considered satisfactory of the company.

#### B. QUICK RATIO:

$$\text{Quick ratio} = \frac{\text{Quick Assets}}{\text{Current liabilities}}$$

Years	Current Assets	Invent	Quick Assets	Current Liabilities	Ratio
2015-16	313,112,005	86,293,250	226,818,755	86,229,274	2.63
2016-17	343,123,264	82,873,616	260,249,648	79,938,108	3.26
2017-18	277,203,371	74,338,239	202,865,132	133,280,414	1.52
2018-19	301,924,932	92,240,814	209,684,118	130,061,660	1.61
2019-20	337,491,265	80,506,086	256,985,179	129,620,400	1.98

#### Quick ratio



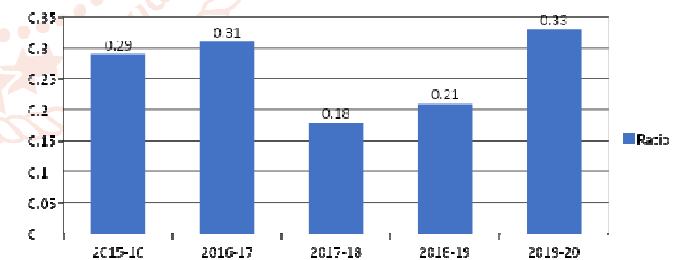
#### INTERPRETATION:

The above chart shows that quick ratio of the company is gradually fluctuating year by year are 2.63,3.26,1.52,1.61 and 1.98. The standard ratio of the company must be 1:1. It shows that the Quick ratio of the company is above of the standard ratio.

#### C. ABSOLUTE LIQUIDITY RATIO:

$$\text{Absolute Liquidity Ratio} = \frac{\text{Cash Equivalents} + \text{Current Investments}}{\text{Current Liabilities}}$$

Years	Cash Balances	Current Liabilities	Ratio
2015-16	3,04,10,675	86,229,274	0.352672
2016-17	6,61,94,671	79,938,108	0.828074
2017-18	2,52,32,373	133,280,414	0.189318
2018-19	1,125,30,010	130,061,660	0.865205
2019-20	1,83,64,453	129,620,400	0.141679



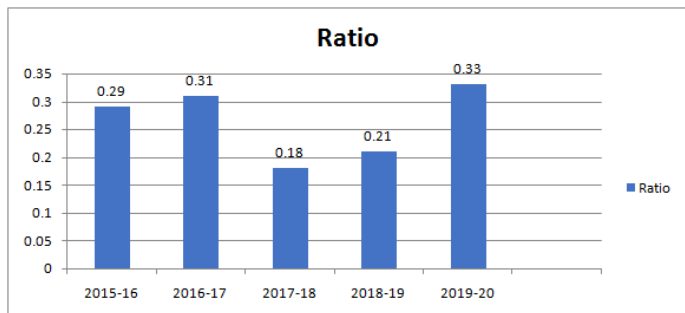
#### INTERPRETATION:

The above chart shows the absolute cash ratio of the company that is gradually increased and decreased year by year are 0.352672, 0.828074, 0.189318, 0.865205, 0.141679.

#### D. NET WORKING CAPITAL RATIO:

$$\text{Net working capital} = \frac{\text{Net working capital}}{\text{Net assets}}$$

Years	Networking Capital	Net Assets	Ratio
2015-16	256,882,731	774,272,560	0.29
2016-17	263,185,156	863,333,951	0.31
2017-18	143,522,957	802,344,940	0.18
2018-19	171,663,272	800,354,191	0.21
2019-20	207,872,865	628,657,725	0.33



**INTER PRETATION:**

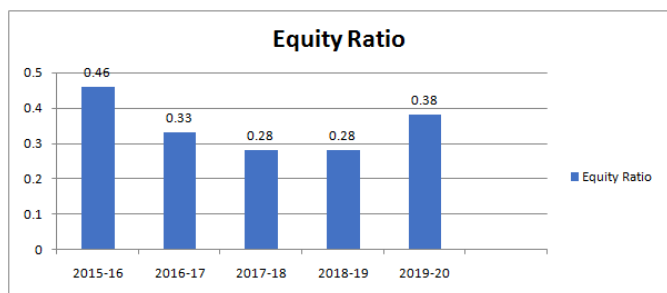
The above chart shows the absolute of the company is gradually increased and decreased year by year. The net working capital ratio of BCCPL in 2015-16 is 0.29, in the year 2016-17 it increase to 0.31, in the year 2017-18 it decrease to 0.18, in the year 2018-19 it increase to 0.21 and year 2019-20 it raises to 0.33, in the year 2017-18 is lowest ratio and in the year 2019-20 is the highest ratio.

**2. LONG TERM SOLVENCY RATIOS:**

**A. EQUITY RATIO:**

$$\text{Equity ratio} = \frac{\text{Shareholder's Equity}}{\text{Net Assets}}$$

Years	Shareholder's fund	Net assets	Equity Ratio
2015-16	362,416,111	783,902,491	0.46
2016-17	294,115,863	868,201,200	0.33
2017-18	221,451,162	784,002,435	0.28
2018-19	227,909,537	812,885,375	0.28
2019-20	232,934,542	617,240,000	0.38



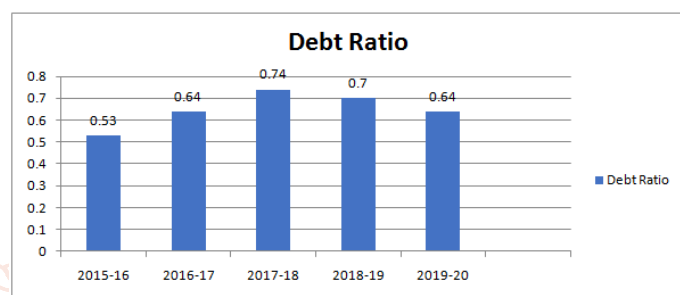
**INTER PRETATION:**

The above chart shows that the Equity Ratio in the year 2015-16 is 0.46. The debt equity ratio was moved from 0.46 to 0.28.

**B. DEBT RATIO:**

$$\text{Debt ratio} = \frac{\text{Total Debt}}{\text{Net Assets}}$$

Years	Total Debt	Net assets	Total Debt Ratio
2015-16	411,856,449	783,902,491	0.53
2016-17	568,208,088	868,201,200	0.64
2017-18	580,893,778	784,002,435	0.74
2018-19	572,444,654	812,885,375	0.70
2019-20	395,753,183	617,240,000	0.64



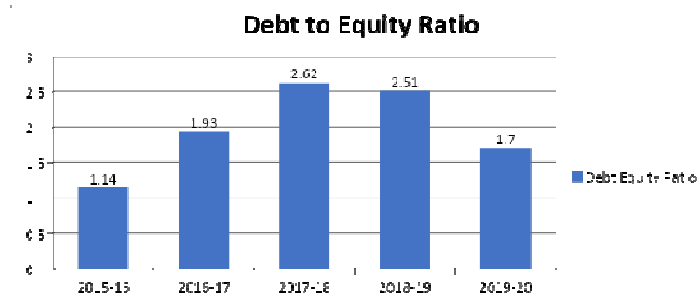
**INTER PRETATION:**

From the above chart shows that the Total Debt Ratio in the year 2015-16 is 0.53. The total debt ratio of the company varied between 0.53 & 0.74. High ratio of company is favorable to the shareholders & creditors.

**C. DEBT TO EQUITY RATIO:**

$$\text{Debt to equity ratio} = \frac{\text{Total debt}}{\text{Shareholder's equity}}$$

Years	Total Debt	Shareholder's fund	Debt equity Ratio
2015-16	411,856,449	362,416,111	1.14
2016-17	568,208,088	294,115,863	1.93
2017-18	580,893,778	221,451,162	2.62
2018-19	572,444,654	227,909,537	2.51
2019-20	395,753,183	232,934,542	1.70



**INTER PRETATION:**

The above chart shows that the Debt to Equity Ratio in the year 2015-16 is 1.14. The debt equity ratio was moved from 1.14 & 2.62. It was found that during the year 2017-18 the ratio was very high. It means the company owns more liabilities than it does assets.

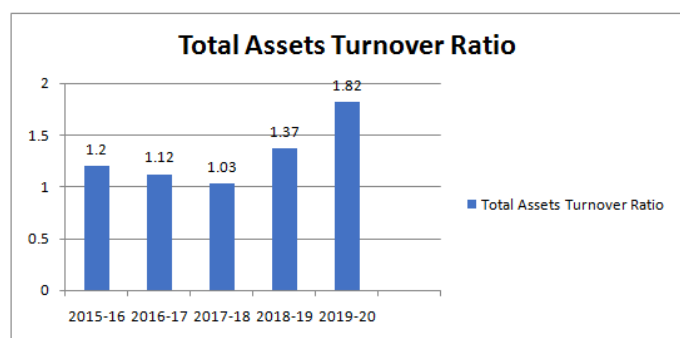
### 3. ACTIVITY RATIOS:

#### A. TOTAL ASSETS TURNOVER RATIO

Sales

$$\text{Assets Turnover ratio} = \frac{\text{Sales}}{\text{Total Assets}}$$

Years	Net Sales	Total Assets	Ratio
2015-16	941,569,646	783,902,491	1.20
2016-17	998,839,169	888,201,200	1.12
2017-18	809,678,391	784,002,435	1.03
2018-19	1,111,831,603	812,885,375	1.37
2019-20	1,120,359,310	617,240,000	1.82



#### INTERPRETATION:

The above chart total Assets Turnover Ratio in the ear 2015-16 is 1.20. It decreased in 2016-17, 2017-18, and increased in 2018-19, 2019-20 i.e. 1.37 and 1.82.

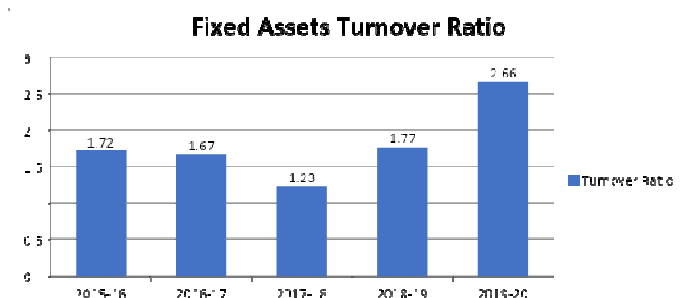
This ratio is ideal capacity the fraction standard ratio 2:1. The company is maintaining satisfactory level. The Total Turnover Ratio is high because the sales are increasing due to the market condition.

#### B. FIXED ASSETS TURNOVER RATIO:

Net sales

$$\text{Fixed assets turnover ratio} = \frac{\text{Net sales}}{\text{Net fixed assets}}$$

Years	Net Sales	Fixed Assets	Ratio
2015-16	941,569,646	546,796,293	1.72
2016-17	998,839,169	599,138,795	1.67
2017-18	809,678,391	658,421,983	1.23
2018-19	1,111,831,603	628,490,919	1.77
2019-20	1,120,359,310	420,816,860	2.66



#### INTERPRETATION:

The above chart fixed asset turnover ratio in the ear 2015-16 is 1.72. It is decreased up to 2016-17 is 1.67. The ratio was highest in 2019-20 as 2.66 and the same was lowest in the years 2017-18 as 1.23. The ratio explains the sales productivity and effective utilization of plant and equipment of the company.

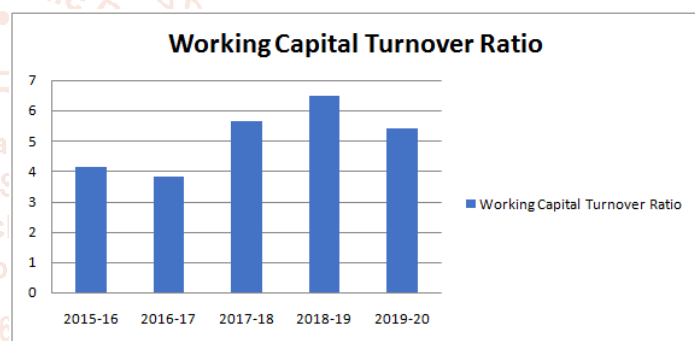
#### C. WORKING CAPITAL TURNOVER RATIO:

The efficiency of business operation is also judged by comparing capital invested to sales.

Sales

$$\text{Working capital turnover ratio} = \frac{\text{Sales}}{\text{Working capital}}$$

Years	Net Sales	Working Capital	Ratio
2015-16	941,569,646	226,882,731	4.15
2016-17	998,839,169	263,185,156	3.80
2017-18	809,678,391	143,922,957	5.63
2018-19	1,111,831,603	171,863,272	6.47
2019-20	1,120,359,310	207,870,865	5.39



#### INTERPRETATION:

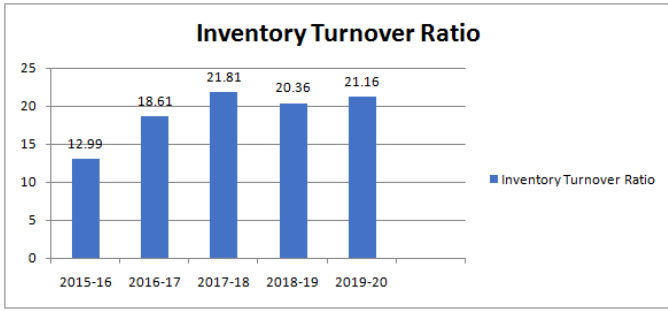
The above chart the working capital turnover ratio in the year 2015-16 is 4.15. But it is growing year by year up to 2013-16. But in 2019-20 the working capital ratio decreased to 5.39. This ratio indicates net working capital has been effectively utilized in making sales.

#### D. INVENTORY TURNOVER RATIO:

Cost of goods sold

$$\text{Inventory Turnover Ratio} = \frac{\text{Cost of goods sold}}{\text{Average Inventory}}$$

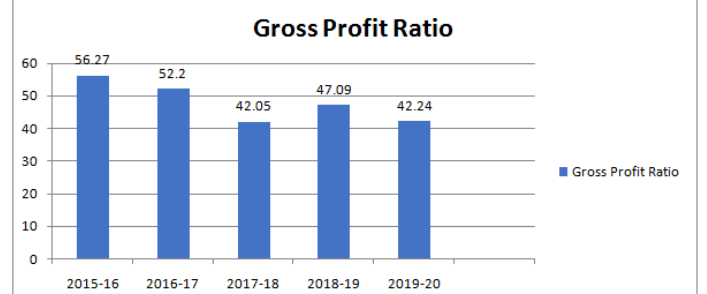
Years	Sales	Inventory Sales	Ratio
2015-16	411,694,563	31,692,631	12.99
2016-17	477,398,435	25,655,096	18.61
2017-18	469,176,471	21,511,563	21.81
2018-19	588,172,030	28,890,999	20.36
2019-20	647,008,028	30,581,444	21.16



Years	Gross Profit	Sales	Percentage(%)
2015-16	529,875,083	941,569,646	56.27
2016-17	521,440,734	998,839,169	52.20
2017-18	340,501,920	809,678,391	42.05
2018-19	523,659,573	1,111,831,603	47.09
2019-20	473,351,262	1,120,359,310	42.24

**INTER PRETATION:**

The above chart shows that the Inventory turnover ratio in 2015-16 is 12.99. it is increased after 2013-15 from 18.61 to 21.81. After it is decreasing in the year 2018-19 i.e., 20.36 and increased in 2019-20 i.e. 21.16. High inventory turnover is indicating good inventory management.



**E. DEBTOR TURNOVER RATIO:**

$$\text{Debtors turnover ratio} = \frac{\text{Net credit sales}}{\text{Average Debtors}}$$

Years	Net Sales	Debtors	Ratio
2015-16	941,569,646	121,345,962	7.76
2016-17	998,839,169	125,208,797	7.98
2017-18	809,678,391	100,098,882	8.09
2018-19	1,111,831,603	108,881,625	10.21
2019-20	1,120,359,310	97,854,277	11.45

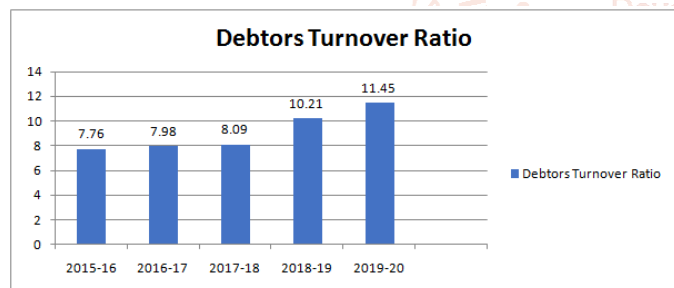
**INTER PRETATION:**

The above chart shows that Gross Profit Ratio in the year 2015-16 is 56.27. This ratio shows the average spread between the cost of goods sold and the sales revenue. The ratio was recorded at low 0.42% and high is 0.56%. It decrease year by year in 2015-16 the ratio is yearly 0.56%, 0.52%, 0.42%, 0.47% and 0.52

It is a sign of good management.

**B. NET PROFIT RATIO:**

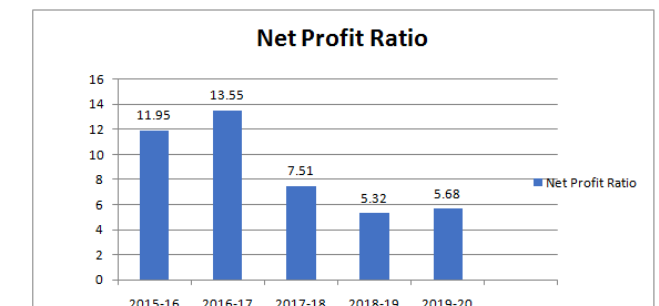
$$\text{Net profit Ratio} = \frac{\text{Net profit}}{\text{Sales}} \times 100$$



Years	Net Profit	Sales	Percentage(%)
2015-16	103,112,094	941,569,646	10.95
2016-17	125,404,766	998,839,169	12.55
2017-18	52,740,065	809,678,391	6.51
2018-19	59,198,440	1,111,831,603	5.32
2019-20	63,723,445	1,120,359,310	5.68

**INTER PRETATION:**

The above chart shows that Debtors Turnover ratio in the year 2015-16 is 7.76. It is increased in 2016-17 i.e. 7.98. After 2017-18 it is increased i.e. 8.09 and again increases to 10.21 in 2018-19 & it increases to 11.45 in 2019-20. Here higher ratio shows that collections are made rapidly



**4. PROFITABILITY RATIOS:**  
**A. GROSS PROFIT RATIO:**

$$\text{Gross profit ratio} = \frac{\text{Gross profit}}{\text{Sales}} \times 100$$

**INTER PRETATION:**

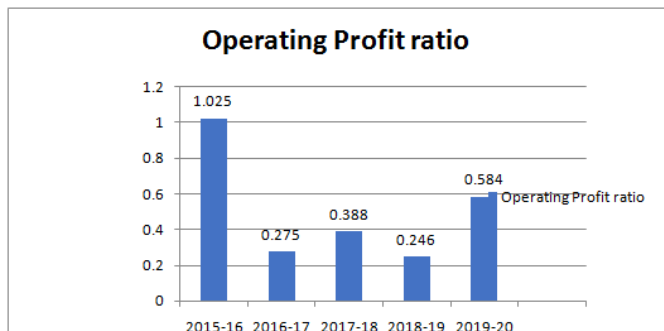
The above chart shows that Net Profit Margin in the year 2015-16 is 11.95. Net profit increased and decrease from 2016-17 i.e. 13.55, 7.51, 5.32 and 5.68.

So, overall company net profit is fluctuating. The net profit is satisfactory thus we can carry say BCCPL performance is good.

**C. OPERATING PROFIT RATIO:**

$$\text{Operating Profit Ratio} = \frac{\text{Operating Profit}}{\text{Sales}}$$

Years	Earnings before Interest and Taxes	Sales	Ratio
2015-16	96,52,100	941,569,646	1.025
2016-17	27,47,682	998,830,169	0.275
2017-18	31,40,728	809,678,391	0.388
2018-19	27,34,707	1,111,831,603	0.246
2019-20	65,46,370	1,120,359,310	0.584



**INTER PRETATION:**

The above chart shows the Operating Profit ratio of BCCPL. It is very high in the year 2015-16 as 1.025 and gradually fluctuating in the following years. It is very low in the year 2018-19 as 0.246 and increases to 0.584 in the year 2019-20. Here all the ratios are

**FINDINGS**

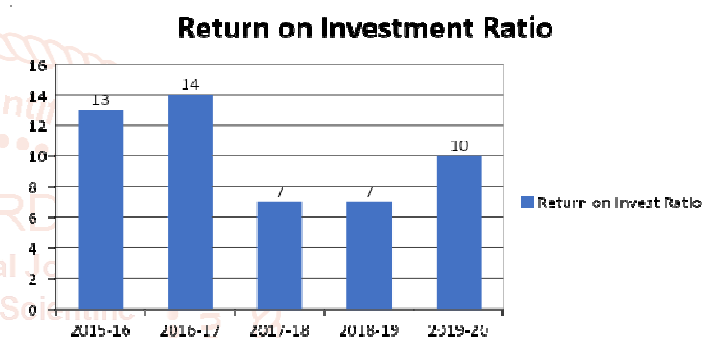
- The current ratio of the BCCPL i.e., the ratio between the current assets and current liabilities crossed the 2:1 ratio in the past five years. The current ratio should be 2:1 which is generally treated as ideal. The years 2019-20, increase the current assets, remaining years small decrease in the current assets. The firm’s economic situation is well.
- The debtor’s turnover ratio of BCCPL i.e., was highest during the years 2019-20 is 11.45 and during the year 2018-19, the ratio is 7.76 that is the lowest one. The higher the value of debtors turnover the more liquid are the debtors.
- Fixed assets turnover ratio is in a good position in respect of BCCPL. It has been observed that in the year 2019-20 as 2.66. The fixed asset turnover ratio indicates that BCCPL effectively used Investments.
- Liquidity position of the company as revealed by the current ratio during the study period of an annual average was 2.98. It is above the Ideal

comparatively low, this indicates that profit generated from operations are not enough as compared to the total revenue generated from sales.

**D. RETURN ON INVESTMENT RATIO:**

$$\text{Return on investment} = \frac{\text{Net profit after tax}}{\text{Investment}} \times 100$$

Years	Net Profit after Tax	Investments	Ratio
2015-16	103,112,094	783,902,491	13
2016-17	125,404,766	888,201,200	14
2017-18	52,740,065	784,002,435	7
2018-19	59,198,440	812,885,375	7
2019-20	63,723,445	617,240,000	10



ratio that means it is well capable to pay short-term debts.

- Debt to Equity ratio is high in 2017-18 is 2.62 and decreased to 1.7 in the year 2019-20. BCCPL has a ratio greater than 1 it means it has high leverage and high risk.

**SUGGESTIONS**

- It is suggested that better to depend on borrowed capital rather than owned capital. Because the interest is inexpensive.
- The above study indicates a moderate trend in the utilization of working capital and the financial position of the company. Correct estimation of working capital should be done and fluctuation in quantum of working capital to sales should be avoided.
- The company has to attempt to use funds more effectively by keeping an optimum level of working capital.
- The impact of working capital complete through it is moderately positive over the study period efforts should be made to ensure a positive trend of profitability by prepare estimation of working capital.

- The company has to give importance to the management resources because the operating profit is less.

The liquidity position of the company was revealed by the current ratio during the study period was crossed by the ideal ratio. So that BCCPL is liquidity position in future also, the position of the debt the capitalization of the firm is always low. So it is unfavorable to shareholders and creditors.

## CONCLUSION

After evaluating and analyzing the liquidity, leverage, profitability, efficiency ratios of Bharathi Cement Ltd. The following conclusion is drawn.

