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## **A Study on Financial Performance by using Ratio Analysis of Amaraja Batteries Ltd**

*<sup>1</sup>T. Vineesha, <sup>2</sup>C.H. Venkateshwarlu*

<sup>1</sup>MBA Student, Annamacharya Institute of Technology & Sciences, Tirupathi

<sup>2</sup>Assistant Professor, Annamacharya Institute of Technology & Sciences, Tirupathi

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### **ABSTRACT**

Ratio analysis is one of the widely used tool of financial analysis. It means expressing one item in relation to another in numerical term. To have a better understanding and Details about the financial statement, the analysis has been done using ratio analysis. Every business undertaking needs finance for its smooth working. This study aims to analyze the liquidity, profitability, solvency position of the firm and its efficiency. The data is collected through secondary data. The study covers a period of five years i.e. from FY 2017-2018 TO FY 2021-2022. The study reveals that the financial performance is better. However, the shareholders fund against the outsider's fund should be increased. The company should take suitable measures to increase its profitability position. Adequate steps have to be taken to improve its cash position and to reduce the operating expenses.

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### **INTRODUCTION:**

#### ***RATIO ANALYSIS:***

Ratio analysis is the process of determining and interpreting numerical relationships based on financial statements. A ratio is a statistical yardstick that provides a measure of the relationship between two variables or figures. This relationship can be expressed as a percentage or as a quotient. Ratios are simple to calculate and easy to understand.

#### ***RATIO:***

The term's "**Ratio**" refers to the mathematical relationship between any two inter-related variables. In other words, it establishes relationship between two items expressed in quantitative form. Financial ratios are no different they form a basis of comparison between figures found on financial statements.

Ratios are used to the analysis of the two or more any type of related items and express them in arithmetic expression such as a to b; a: b(a is b); or as a simple fraction, integer and decimal.

#### ***Meaning of Ratio analysis :***

Interpretation of financial statement with the help of ratio's is formed as ratio analysis. A Ratio is a mathematical relationship between two (or) more value of the financial statements. The study and interpretation of a interrelated transactions is known as ratio Analysis. Accounting ratio should be measured by the inter price all aspects.

#### **For ratios to be useful and meaningful, they must be ;**

- Calculated using reliable , accurate financial information .
- Calculated consistently from period to period .
- Used in comparison to internal benchmarks and goals .
- Used in comparison to other companies in your industry

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### **REVIEW OF LITERATURE:**

Review of Literature refers to the collection of the results of the various researches

Relation to present study. It takes into consideration the research of the previous researchers which are related to the present research in any way. Here are the reviews of the previous researches related with the present study

Dr. Navneet Joshi et al. Sanjive Saxena et al. Sakshi, Kathuria [2020] conducted research on RATIO ANALYSIS AS A REFLECTION OF FINANCIAL PERFORMANCE and concluded Findings indicate that there is no single component which dominates the contribution and that ratio analysis itself has several components for measurement parameters

K. Keerthi et al. S. Eswari [2020] conducted research on A STUDY ON FINANCIAL PERFORMANCE USING RATIO ANALYSIS OF KUMBAKONAM CENTRAL CO-OPERATIVE BANK and concluded This paper tells that not only about the financial position of the firm but also helps to identify the problems and offer suggestions to improve its performance.

Bollen (1999) conducted a study on Ratio Variables on which he found three different uses of ratio variables in aggregate data analysis: (1) as measures of theoretical concepts, (2) as a means to control an extraneous factor, and (3) as a correction for heteroscedasticity. In the use of ratios as indices of concepts, a problem can arise if it is regressed on other indices or variables that contain a common component.

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### NEED FOR THE STUDY:

The study help (Or) Beneficial to management Of the company by providing crystal clear picture Regarding important aspect such as, liquidity, solvency, profitability and turnover position of the company and the study we can get the result of the company growth through analysis the company balance sheet.

Finally to Know that this analysis To find or ability of the COMPANY Overall performance of working capacity

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### OBJECTIVES OF THE STUDY:

- To study **AMARA RAJA BATTERIES LTD** financial efficiency through an appropriate ratio analysis
- To measure the financial efficiency in and profitability position of the company
- To analysis the solvency ratio & liquidity ratio for the business concern.
- To suggest measuring for improvement of financial health of the company.

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### SCOPE OF THE STUDY:

- This study covers a period ranging from 2018 to 2022 aims to evaluate the company's performance through the ratio analysis and understand the efficiency and effectiveness of the company.
- Finally, to analysis the financial ratios which helps to assess the profitability of the company. the study of ratio analysis further the study is based on last 5 year annual reports of the company.

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### RESEARCH DESIGN:

- Research design is way to solve system the research problem in various different types and techniques such as,

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### DESCRIPTIVE RESEARCH:

- It is a type of research that is use to describe the characteristics of a population. This research aims to describe or define the topic at hand

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### SOURCE OF DATA COLLECTION:

Data source is simply the source of the data. Then data source can include data that are already collected and data that will be collected during the study. Data source can be used to describe different data collection method and /or tool

Such as:

- ✓ Primary data
- ✓ Secondary data

#### *Secondary data:*

This data is already existing in some internet browser, journals, magazines, & Articles and other etc.. I Collect above Information on company bsites.

**Classifications: of ratio analysis:****Liquidity Ratio's:****Current Ratio:**

The ratio between all current assets and all current liability; another way of expressing liquidity. It is a measure of the firm's short-term solvency. It indicates the availability of current assets in rupees for every one rupee of current liability. A Ratio of greater than one means that the firm has more current assets than current claims against them.

$$\text{CURRENT RATIO} = \frac{\text{CURRENT ASSETS}}{\text{CURRENT LIABILITY}}$$

**TABLE:**

S.NO	YEAR	CURRENT ASSETS (cr)	CURRENT LIABILITY (cr)	CURRENT RATIO (cr)
1	2018	2136.97	987.88	2.16
2	2019	2203.77	890.84	2.47
3	2020	2080.65	1074.07	1.93
4	2021	2547.45	1299.11	1.96
5	2022	2789.29	1495.25	1.86

**Interpretation:**

The above graph shows current ratio, In the year 2018 the current ratio was 2.16% and slightly increasing in 2019 i.e., 2.47% again it decrease in 2020 i.e., 1.93% and increase in 2021 i.e., 1.96%

Slightly it decrease in 2022 i.e., 1.86%.

**Quick ratio:**

Quick ratio establishes a relationship between quick, or liquid, assets and current liability. An assets is liquid if it can be converted into cash immediately or reasonably soon without a loss of value.

$$\text{QUICK RATIO} = \frac{\text{CURRENT ASSETS} - \text{INVENTORY}}{\text{CURRENT LIABILITIES}}$$

S.NO	YEAR	CURRENT ASSETS- INVENTORY (cr)	CURRENT LIABILITY (cr)	QUICK RATIO (cr)
1	2018	1087.26	987.88	1.1
2	2019	1169.35	890.84	1.31
3	2020	937.96	1074.07	0.87
4	2021	1109.21	1299.11	0.85
5	2022	985.51	1495.25	0.65

**INTERPRETATION:** It shows the quick ratio, in the year 2018. the quick ratio was 1.10% and increases in 2019 I.e., 1.31% decreases in 2020 I.e., 0.87%, then again decreases in 2021 I.e., 0.85% in slightly decreases in 2022 I.e., 0.65%.

**Cash Ratio:**

The ratio between cash plus marketable securities and current liabilities.

$$\text{CASH RATIO} = \frac{\text{CASH \& CASH EQUIVALENT}}{\text{CURRENT LIABILITIES}}$$

**TABLE:**

S.NO	YEAR	CASH&CASH EQUIVALENT (cr)	CURRENT LIABILITY (cr)	CASH RATIO (cr)
1	2018	111.28	987.88	0.11
2	2019	71.75	890.84	0.08
3	2020	84.51	1074.07	0.07
4	2021	175.81	1299.11	0.13
5	2022	53.57	1495.25	0.03

**Interpretation:**

This graph shows in a year 2018 the cash ratio was 0.11% was slightly decreases in 2019 I.e., 0.08% then again decreases in 2022 I.e., 0.07%. increases in 2021 of cash ratio is 0.13% then decreases in 2022 is 0.03%

## LEVERAGE RATIO'S

### Debt ratio:

If the firm may be interested in knowing the proportion of the interest bearing debt in the capital structure.

$$\text{DEBT RATIO} = \frac{\text{TOTAL DEBT}}{\text{TOTAL ASSETS}}$$

### TABLE:

S.NO	YEAR	DEBT (cr)	TOTAL ASSETS (cr)	DEBT RATIO (cr)
1	2018	63.53	3092.86	0.020
2	2019	58.43	3509.19	0.016
3	2020	83.9	3882.39	0.021
4	2021	92.32	4457.23	0.020
5	2022	125.89	4849.32	0.025

### Interpretation:

The above graph shows the debt ratio, in the year 2018 the debt ratio was 0.02%. in 2019 decreases 0.01% then again the debt ratio is increases in 2020-2022 continuously in 0.02%.

## ACTIVITY RATIO'S

### INVENTORY TURNOVER RATIO:

It indicates the firm efficiency of the firm in producing and selling its product .it is calculated by dividing the cost of goods sold by the average inventory.

$$\text{INVENTORY TURNOVER RATIO} = \frac{\text{COST OF GOODS SOLD}}{\text{AVERAGE INVENTORY}}$$

### Table:

S.NO	YEAR	COST OF GOODS SOLD (t)	AVERAGE INVENTORY(t)	INVENTORY TURNOVER RATIO (times)
1	2018	5969.39	1803.78	330.93
2	2019	4382.54	1438.24	304.71
3	2020	4219.07	1142.69	369.22
4	2021	4603.06	1061.42	433.66
5	2022	3921.71	1049.71	373.5

### Interpretation:

The above graph shows the inventory turnover ratio in the year 2018 the inventory turnover ratio was 330.93(T) and in 2019 decreases in 304.7(times) then again increases in 2020 is 369.22(T) then slightly increases in 2021 433.36(T) then 2022 is decreased in 373.5(T).

### Debtors turnover ratio:

It is found out by dividing the credit sales by average debtors. Debtor's turnover indicates the number of times debtor's turnover each year.

$$\text{DEBTOR TURNOVER RATIO} = \frac{\text{SALES}}{\text{AVERAGE DEBTOR'S}}$$

S.NO	Year	Sale(times)	Average debtors	Debtors turnover ratio
1	2018	8653.37	792.56	1091.82
2	2019	7133.14	787.46	905.84
3	2020	6813.08	636.28	1070.76
4	2021	6769.5	768.58	880.78
5	2022	6214.75	782.45	794.26

### Interpretation:

The above table shows the debtor turnover ratio in a year 2018 debtors turnover ratio was 1091(times) in 2019 was decreased ratio is 905(t) then again increasing the ratio 2020 is 1070(t) in 2021 decreased the value 880(t) in 2022 decrease the value 794(times)

**Creditors Turnover Ratio:**

Creditors come into being out of credit purchases. Creditors include both trade creditor and bills payables. It is included in the current liability since the payment has to be made within three months normally. The formula is as follow.

$$\text{CREDITOR TURNOVER RATIO} = \frac{\text{PURCHASES}}{\text{AVERAGE CREDITOR'S}}$$

Table:

S.NO	YEAR	PURCHASES (time)	AVERAGE CREDITOR'S (times)	CREDITOR'S TURNOVER RATIO (times)
1	2018	473.80	806.45	58.75
2	2019	429.99	746.47	57.60
3	2020	175.89	614.89	28.60
4	2021	170.18	510.44	33.33
5	2022	221.71	592.26	37.43

**Interpretation:**

The above graph shows the creditors turn over ratio. In the year 2018 the creditors turnover ratio was 58.75(times), Slightly decreases in 2019 i.e 57.60(times) and again decreases in 2020 i.e 28.60(times). Increases in 2021 i.e 33.33(times), Again increases in 2022 i.e 37.43(times).

**PROFITABILITY RATIO'S****GROSS PROFIT RATIO:**

This ratio measures the percentage of each sales value remaining after the firm has paid for its goods. The higher the gross profit margin, the better and lower the relative cost of merchandise sold.

$$\text{GROSS PROFIT RATIO} = \frac{\text{GROSS PROFIT}}{\text{NET SALES}} \times 100$$

Table:

S.NO	YEAR	GROSS PROFIT (cr)	NET SALES (cr)	GROSS PROFIT RATIO (cr)
1	2018	944.54	6059.15	15.58
2	2019	991.57	6793.11	14.59
3	2020	1141.42	6839.46	16.68
4	2021	1192.49	7149.68	16.67
5	2022	1085.52	8695.82	12.48

**Interpretation:**

The above graph shows the Gross profit Ratio. In the year 2018 the Gross profit Ratio was 15.5%, Slightly decreases in 2019 i.e 14.5%. Again increases in 2020 & 2021 i.e 16.6% and decreases in 2022 i.e 12.4%.

**Operating profit ratio:**

The operating profit ratio explains the changes in the profit margin ratio. A higher operating expense is unfavorable since it will leave a small amount of operating income to meet interest, dividends.

$$\text{OPERATING PROFIT RATIO} = \frac{\text{OPERATING PROFIT}}{\text{NET SALE}} \times 100$$

S.NO	YEAR	OPERATING PROFIT (cr)	NET SALE (cr)	OPERATING PROFIT RATIO (cr)
1	2018	949.60	6059.15	15.67
2	2019	998.52	6793.11	14.69
3	2020	1153.61	6839.46	16.86
4	2021	1203.02	7149.68	16.82
5	2022	1100.62	8695.82	12.85

**Interpretation:**

The above table shows that operating profit ratio in 2018 was 15.67% , in 2019 was decreased the ratio value is 14.69% again increase both 2020 & 2021 year was 16.86% then decreased in 2022 was 12.65%.

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### FINDINGS:

- Liquidity ratio of the firm is not better liquidity position in over the 5 years.It shows that the firm not sufficient liquid asset.
- The current asset turnover ratio is increasing during the period of 2018 to 2019 and again it decreases in the period of 2020 to 2021,2022 and again increase in next two years.
- It shows the quick ratio, in the year 2018. the quick ratio was 1.10% and increases in 2019 I.e., 1.31% decreases in 2020 I.e., 0.87%, then again decreases in 2021 I.e., 0.85% in slightly decreases in 2022 I.e., 0.65%.
- This graph shows in a year 2018 the cash ratio was 0.11% was slightly decreases in 2019 I.e., 0.08% then again decreases in 2022 I.e., 0.07%. increases in 2021 of cash ratio is 0.13% then decreases in 2022 is 0.03%.
- The above graph shows the debt ratio, in the year 2018 the debt ratio was 0.02% . in 2019 decreases 0.01% then again the debt ratio is increases in 2020-2022 continuously in 0.02%.
- The inventory turnover ratio of the firm in the 1st year has been sold very s.And there an increase in the movement of the inventories but it slightly decreased in the last year.This may be a sign not good to be firm.
- The above table shows the debtor turnover ratio in a year 2018 debtors turnover ratio was 1091(times) in 2019 was decreased ratio is 905(t) then again increasing the ratio 2020 is 1070(t) in 2021 decreased the value 880(t) in 2022 decrease the value 794(times).
- The above graph shows the fixed assets turnover ratio.In the year 2018 the fixed assets turnover ratio was 260.49(times),Slightly decreases in 2019 i.e 249.43(times)Again increases in 2020 i.e 256.49(t),Slightly increases in 2021 i.e 318.81(t) .Again increases in 2022 i.e 322.06(t).
- The above graph shows the creditors turn over ratio.In the year 2018 the creditors turnover ratio was 58.75(times),Slightly decreases in 2019 i.e57.60(times)and again decreases in 2020 i.e 28.60(times).Increases in 2021 i.e 33.33(times) ,Again increases in 2022 i.e 37.43(times).
- Gross profit and operating ratio are increasing during the period of 2018 and also during the period 2019 and 2022 is decreased then again 2020 and 2021 is increasing the gross profit which includes that firm efficient management in manufacturing and trading operation.

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### SUGGESTIONS:

The profit of the company is not in a good position for that company has to take alternative actions such as, Increasing in procurement in batteries Production and control in expenses like : administrative , selling etc..

The firms have low current ratio so it should increase its current ratio where it can meet its short-term obligation smoothly.

Liquidity ratio of the firm is not better liquidity position in over the five years .so I SUGGESTED that the firm maintain proper liquid funds like CASH & BANK BALANCE OF THE COMPANY.

It should enhance its employee's efficiency, more training needed to its employees in order to increase its production capacity and minimize mistakes while performance the tasks, also more safety precaution need to implementation to the employees who directly working on batteries production process.

The firms should have proper check on the manufacturing process of the plant. & also the direct material cost of the firm is very high so, its my advice to the firm that to decrease the direct material cost by purchasing raw material form the increase sales.

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### CONCLUSION:

After analysis of the financial performance of AMARAJA BATTERIES LTD for the period of five years from 2017to 2022, the study reveals that the overall financial performance of the company is improving gradually. However, it needs to minimize the operating expenses to get higher net profit. In order to carry on the business successfully the company should improve its liquidity and solvency position in the long run.

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