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## How Working Capital Management Efficiency Impacts On Profitability Of Maruti Suzuki In India?

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### ABSTRACT

The present paper is an attempt to study that How a working capital management efficiency impacts on profitability of Maruti Suzuki in India? Further purpose of this paper is to examine the relationship between inventory conversion period and Maruti Suzuki's profitability. The dependent variables are Inventory conversion period, Gross profit margin, Return on assets, Net profit margin, and Independent variable is Inventory Turnover Ratio. These variables are used as measure of profitability and the relation between inventory management and profitability. In this research researcher studied on Maruti Suzuki over a period of five years from 2014-2018. This study used correlation to analyze the impact of inventory conversion period over return on assets, gross profit margin, net profit margin and inventory turnover ratio. The result came in this research is that there is a significant relationship between inventory conversion period and profitability.

### INTRODUCTION

We need finance for two purpose long term purpose and short term purpose or we can say that long term investment and short term investment. Long term investment include purchase of plant and machinery, land and building, furniture etc. short term investment include purchase of raw material, payment of wages, and other daily expenses the money invested in these short term expenses is called working capital. Without working capital we can't run our manufacturing units. This working capital is the life blood of our business as blood required in human body to live life same working capital required to carry on daily business activities. This capital is important part of business.

“According to **Genestenberg**, “Circulating capital means current assets of a company that are changed in the ordinary course of business from one form to another, as for example, from cash to inventories, inventories to receivable, receivable into cash”

This research paper will be helpful for Maruti Suzuki to increase its profit and efficiency through proper working capital management. Further this research paper explains how to maintain the inventories? how much invest in stock?

## **WORKING CAPITAL MANAGEMENT CONCEPTS**

Basically there are two concepts of working capital.

### **a) Balance sheet concept**

### **b) Operating cycle concept**

**a) Balance sheet concept** This include gross working capital and net working capital, Gross working capital denotes capital employed in whole current assets of the production unit.

### **Current assets include the following items.**

1. Cash in hand and bank balances.
2. Bills receivables.
3. Sundry Debtors.
4. Short term loans and advances.
5. Inventories of stocks :
  - (a) Raw material
  - (b) Work in process
  - (c) Stores and spares
  - (d) Finished goods
6. Temporary investments of surplus funds.
7. Prepaid Expenses.
8. Accrued Incomes.

Net working can be calculated with the formula,

### **Net working capital = Current assets - current liabilities**

**Positive and negative working capital** After getting net working capital this may be comes as positive working capital and negative working capital. When current assets more that current liabilities it is called positive working capital and when current liabilities more than current assets it is called negative working capital.

### **Now we will see the main contents of current liabilities.**

### **Current Liabilities include the following items.**

1. Bills payable.

2. Sundry Creditors
3. Outstanding Expenses.
4. Bank Overdraft.
5. Dividends Payable.

Provision for Taxation, If it does not amount to appropriation of profits.

### **Literature Reviewed**

Literature review is an important part of any research because with the help of literature review a researcher understands the area of research on the topic selected by him. Researcher formulates the research design on the basis of literature review. Researcher thoroughly reviewed literatures like journals, national and international articles, Thesis, Textbooks, dissertations in order to study the working capital management and its impact on profitability, inventory management and operating cycle period and its impact.

**(Haresh, 2012)** in his research paper study “Working Capital Management and Profitability: Evidence from India – An Empirical Study” found out that there is a negative association between bills receivables and corporate profitability and a positive association between bills payable and profitability. As a result, it comes into views that profitability dictates how managers act in terms of managing bills receivables. Therefore, findings propose that managers can generate worth for their shareholders by decreasing the number of days for bills receivables.

**(Nzioki, et.al 2013)** in their study titled “Management of working capital and its effect on profitability of manufacturing companies listed on Nairobi securities exchange (NSE), Kenya” revealed that if the manufacturing firms managing its working capital efficient it will result in profitability of the firms. Gross operating profit is definitely related with average payment period and average collection period. Manufacturing firms should delay in payment so that this amount invests in different profitable opportunities or areas. The study concludes that the firms should collect receivables the moment possible because it is better to receive cash inflows quickly than later.

**(Arshad, Gondal, 2013)** “Impact of Working Capital Management on Profitability A Case of The Pakistan Cement Industry” they explained that If company decrease its inventory period practically the profitability of the undertaking increased. The constructive association between bills receivable period and profitability can be shortened due to what customers want more time to evaluate the quality of products that pay for companies with profitable **(Deloof, 2003)**. Though, this experimental conclusion argument with some financial models that explain the commercial credit. Bills receivables are generally inexpensive (Emery, 1984b) negotiable short-term investments, it is logical that, above all, business high profit that are most liquid move relatively large amounts of commercial credit to their purchasers. Since, as per the theory of liquidity, liquids are not as much of flat to commercial credit application and

more likely to offer. **(Tu, Nguyen 2014)** “Relationship Between Working Capital Management and Profitability – Empirical Evidence from Vietnamese Listed Firms” studied numerous policy suggestions would be derived from the results of the study that financial managers can recover the company’s performance by decreasing operating cycle period or cash conversion cycle. One side, reducing inventory period, payable period and receivable period will improve company’s liquidity and as a result bring positive outcome on its financial position. Furthermore, association between operating profitability and net working capital management in different sectors is different. . Therefore, the management should exercise suitable policies to recover company’s profitability. **(Agha,2014)** studied in her research paper “Impact of Working Capital Management on Profitability” he explained that by improving inventory turnover and debtors turnover ratios and by reducing creditors turnover ratios, the company can augment its profitability but there is no important effect of decreasing or increasing the current ratio on profitability. Thus, the findings of the research indicate that working capital management plays a significant role in profitability. Firms can improve or increase its profitability. This research will help by identifying how Pharmaceutical companies deal with their working capital in the most efficient and effective manner in order to increase profitability of the business.

**(Mestrado, 2013)** in his research title “How Does Working Capital Management Affect Firms’ Profitability? – Evidence From Portugal” searched for the existence of a non-linear relationship between WCM and profitability, showing that firm’s working capital levels is sensitive to industry factors, geographic location, size and age, once the main objective of firms is to achieve the optimal working capital level that maximizes performance by managing the trade-off between benefits and costs of investing in working capital, especially for small firms that operate under certain constraints. **(Rehman, Anjum 2013)** in their study “Determination of The Impact of Working Capital Management on Profitability: An Empirical Study From The Cement Sector in Pakistan” assessed downbeat in addition to optimistic association among the variables. Working capital turnover ratio registered harmful association with return on asset, Current asset to sales,. The inclines of the return on assets equation depict that pessimistic and optimistic association of difference in the independent variables on the efficiency of the company. Moreover this study found out that there is negative association of working capital management with productivity.

## **OBJECTIVES**

- 1- To analyze the working capital management efficiency of Maruti Suzuki in India.
- 2- To identify the relationship between inventory management and profitability of Maruti Suzuki in India.
- 3- To analyze the relationship between operating cycle period and profitability of Maruti Suzuki in India.

## **MARUTI SUZUKI**

Maruti Suzuki formerly known as Maruti Udyog Ltd. later on it is known as Maruti Suzuki India Ltd. It is an India's largest passenger car company. Maruti cover over fifty percent of the India's car market. The company has variety of cars range, from Maruti Alto to Sedans, Swift Wagon R, A-Star, Ritz and sports utility vehicle. The Japanese car key seized 56.21 % venture in Maruti Suzuki as on 31 December 2017. Maruti Suzuki is ancillary of Suzuki Motor Corporation of Japan.

The company's major activities in the business are production of sale & purchase of motor vehicles spare parts. In spite of these business activities Maruti is engaged in facilitation of pre-owned car sales, car financing and fleet management. Maruti has 4 plants one located at Manesar industrial town, Gurgaon Haryana and rest three located at Palam Gurgaon, Haryana. Maruti has nine subsidiary companies namely J J impex ( Delhi) Pvt. Ltd., Maruti insurance broker Ltd, True value solutions Ltd, Maruti insurance logistic Ltd, Maruti insurance agency services Ltd, Maruti Insurance agency network Ltd., Maruti Insurance agency solutions Ltd., and Maruti insurance business agency Ltd.

On February 24, 1981 Maruti Suzuki India Ltd. was incorporated in the company of Maruti Udyog Ltd. The company was created as Government Company with Suzuki as minor partner. Now Maruti is famous in middle class people. Gradually the company's product range increased.

### **Research Methodology**

This current study depends on secondary data base. Data collected from authentic and reliable sources like annual reports of the companies, websites etc. Researcher used analytical research in this study and explained each and everything clearly. The research design was based on previous similar research studies. This part contains the sampling method, tools and techniques that the researcher used to analyze the data.

**Sample:** Researcher selected Maruti Suzuki for research.

### **Data Analysis Techniques**

Data are analyzed with the help of statistical tools like, average, correlation etc. Researcher also used various ratios used relating to inventory turnover ratio, current ratio, gross profit margin ration, net profit margin ratio, and return on assets ratio.

The variables used in the study are as follows

#### **1. Dependent Variables:**

Inventory conversion period

Gross profit margin

Return on assets

Net profit margin

## 2. Independent Variable:

Inventory Turnover Ratio

## ANALYSIS AND INTERPRETATION OF DATA

### MARUTI SUZUKI

#### Current Assets of Maruti Suzuki

| YEARS | Current Investments | Inventories | Trade Receivables | Cash And Cash Equivalents | Short Term Loans And Advances | Other Current Assets | Total Current Assets |
|-------|---------------------|-------------|-------------------|---------------------------|-------------------------------|----------------------|----------------------|
| 2015  | 2,996.40            | 2,615.00    | 1,069.80          | 18.3                      | 1,172.80                      | 325.6                | 8,197.90             |
| 2016  | 1,056.80            | 3,132.10    | 1,322.20          | 42.2                      | 147.8                         | 2,144.90             | 7,846.00             |
| 2017  | 2,178.80            | 3,262.20    | 1,199.20          | 13.8                      | 2.5                           | 2,119.70             | 8,776.20             |
| 2018  | 1,217.30            | 3,160.80    | 1,461.80          | 71.1                      | 3                             | 2,007.40             | 7,921.40             |

#### Current Liabilities of Maruti Suzuki.

| YEARS/CL | Short Term Borrowings | Trade Payables | Other Current Liabilities | Short Term Provisions | Total Current Liabilities |
|----------|-----------------------|----------------|---------------------------|-----------------------|---------------------------|
| 2015     | 35.4                  | 5,561.40       | 1,865.80                  | 1,360.40              | 8,823.00                  |
| 2016     | 77.4                  | 7,407.30       | 3,155.60                  | 398.9                 | 11,039.20                 |
| 2017     | 483.6                 | 8,367.30       | 3,926.50                  | 449                   | 13,226.40                 |
| 2018     | 110.8                 | 10,497.00      | 4,274.30                  | 560                   | 15,442.10                 |

### Working Capital of Maruti Suzuki

| YEAR | Current Assets | Current Liabilities | Working Capital |
|------|----------------|---------------------|-----------------|
| 2015 | 8,197.90       | 8,823.00            | -625.10         |
| 2016 | 7,846.00       | 11,039.20           | -3,193.20       |
| 2017 | 8,776.20       | 13,226.40           | -4,450.20       |
| 2018 | 7,921.40       | 15,442.10           | -7,520.70       |

#### WORKING CAPITAL MANAGEMENT EFFICIENCY

The following ratios have been calculated in order to analyze the working capital management efficiency of Maruti Suzuki. These are:

- i. Inventory turnover ratio.
- ii. Debtors turnover ratio.
- iii. Working capital turnover ratio.
- iv. Assets turnover ratio

#### INVENTORY TURNOVER RATIO OF MARUTI SUZUKI

| YEARS        | MARUTI SUZUKI |
|--------------|---------------|
| 2015         | 21.08         |
| 2016         | 20.77         |
| 2017         | 23.69         |
| 2018         | 25.94         |
| <b>Total</b> | 230.1         |
| <b>Mean</b>  | 23.01         |
| <b>S.D</b>   | 3.223772807   |
| <b>CV</b>    | 14.01031207   |

**Source:** Computed by Researcher from Annual Reports of the Company.

#### DEBTORS TURNOVER RATIO

| YEARS | MARUTI |
|-------|--------|
| 2015  | 40.24  |

|              |            |
|--------------|------------|
| 2016         | 48.11      |
| 2017         | 53.97      |
| 2018         | 59.95      |
| <b>Total</b> | 408.53     |
| <b>Mean</b>  | 40.853     |
| <b>S.D</b>   | 9.8835869  |
| <b>CV</b>    | 24.1930504 |

**Source:** Computed by Researcher from Annual Reports of the Company  
**WORKING CAPITAL TURNOVER RATIO OF MARUTI SUZUKI**

| <b>YEARS</b> | <b>MARUTI</b> |
|--------------|---------------|
| 2015         | -77.75        |
| 2016         | 17.67         |
| 2017         | -15.03        |
| 2018         | -10.38        |
| <b>Total</b> | -192.46       |
| <b>Mean</b>  | -19.246       |
| <b>S.D</b>   | 53.24927171   |
| <b>CV</b>    | -276.6770846  |

**Source:** Computed by Researcher from Annual Reports of the Company.

#### **ASSETS TURNOVER RATIO**

| <b>YEARS</b> | <b>MARUTI</b> |
|--------------|---------------|
| 2015         | 2.15          |
| 2016         | 2.14          |
| 2017         | 2.03          |
| 2018         | 2.02          |
| <b>Total</b> | 20.675        |
| <b>Mean</b>  | 2.0675        |
| <b>S.D</b>   | 0.20972853    |
| <b>CV</b>    | 10.1440642    |

**Source:** Computed by Researcher from Annual Reports of the Company



### **OPERATING CYCLE PERIOD AND PROFITABILITY**

Operating cycle begins with the introduction of raw material into the manufacturing process and ends with the sale of finished goods. From manufacturing to sale there is a process which constitutes a cycle first manufacturer introduced raw material and processes it into finished goods and these finished goods sale in the market. It is not possible to sale whole goods totally in cash some part of the goods sale on credit. When manufacturer received cash from debtors this cycle period comes to an end.

### **INVENTORY CONVERSION PERIOD**

| <b>YEARS</b> | <b>MARUTI SUZUKI</b> |
|--------------|----------------------|
| <b>2015</b>  | 17                   |
| <b>2016</b>  | 17                   |
| <b>2017</b>  | 15                   |
| <b>2018</b>  | 14                   |
| <b>TOTAL</b> | 160                  |

### **GROSS PROFIT RATIO ( In percent)**

| <b>YEARS</b> | <b>MARUTI</b> |
|--------------|---------------|
| <b>2015</b>  | 8.49          |
| <b>2016</b>  | 10.53         |
| <b>2017</b>  | 11.39         |
| <b>2018</b>  | 11.66         |
| <b>TOTAL</b> | <b>81.11</b>  |

### **NET PROFIT RATIO**

| <b>YEARS</b> | <b>MARUTI</b> |
|--------------|---------------|
| 2015         | 7.42          |
| 2016         | 9.32          |

|              |              |
|--------------|--------------|
| 2017         | 10.8         |
| 2018         | 9.68         |
| <b>TOTAL</b> | <b>74.27</b> |

### CORRELATION ANALYSIS

When two quantitative facts having the relationship of cause and effect are varying simultaneously in the same or in opposite directions, the measurement of such variations is called the measure of correlation. Researcher used independent and dependent variable for correlation analysis.

#### (1) Relationship between Inventory Management and Profitability.

After calculating above ratios researcher compiled these ratios for correlation analysis of Maruti Suzuki in India.

| YEARS | INVENTORY TURNOVER RATIO | GROSS PROFIT RATIO | OPERATING PROFIT RATIO | NET PROFIT RATIO |
|-------|--------------------------|--------------------|------------------------|------------------|
| 2015  | 21.08                    | 8.49               | 13.43                  | 7.42             |
| 2016  | 20.77                    | 10.53              | 15.44                  | 9.32             |
| 2017  | 23.69                    | 11.39              | 15.21                  | 10.8             |
| 2018  | 25.94                    | 11.66              | 15.12                  | 9.68             |

### CORRELATION ANALYSIS OF MARUTI SUZUKI

|                        | INVENTORY TURNOVER RATIO | GROSS PROFIT RATIO | OPERATING PROFIT RATIO | NET PROFIT RATIO |
|------------------------|--------------------------|--------------------|------------------------|------------------|
| ITR                    | 1                        |                    |                        |                  |
| GROSS PROFIT RATIO     | 0.107485271              | 1                  |                        |                  |
| OPERATING PROFIT RATIO | 0.150211112              | 0.962378918        | 1                      |                  |
| NET PROFIT RATIO       | 0.080847935              | 0.978944809        | 0.94716916             | 1                |

**Source:** Computed by the researcher through MS Excel.

## INVENTORY CONVERSION PERIOD

| YEARS | MARUTI SUZUKI |
|-------|---------------|
| 2015  | 17            |
| 2016  | 17            |
| 2017  | 15            |
| 2018  | 14            |
| TOTAL | 160           |

## CORRELATION ANALYSIS OF MARUTI SUZUKI

|                             | INVENTORY CONVERSION PERIOD | GROSS PROFIT RATIO | OPERATING PROFIT RATIO | NET PROFIT RATIO |
|-----------------------------|-----------------------------|--------------------|------------------------|------------------|
| INVENTORY CONVERSION PERIOD | 1                           |                    |                        |                  |
| GROSS PROFIT RATIO          | -0.262407945                | 1                  |                        |                  |
| OPERATING PROFIT RATIO      | -0.296518086                | 0.962378918        | 1                      |                  |
| NET PROFIT RATIO            | -0.240724202                | 0.978944809        | 0.94716916             | 1                |

## CONCLUSION AND RESULTS

Researcher summarized the following results as per found in his study these results are – Maruti Suzuki’s working capital was negative in last four years except in 2016 these years are 2015, 2017 and 2019. However there is fluctuation in current assets in last five years on the other hand current liabilities increased more in last four years as compare to current assets. Maruti Suzuki’s working capital was satisfactory.

Moreover the results of working capital management efficiency were as follows- Inventory turnover ratio of Maruti Suzuki was very high in last four years period. Result of inventory turnover ratio came that Maruti Suzuki was managing its inventory efficiently. Result of debtors turnover ratio of the Maruti Suzuki are as follows- Maruti Suzuki’s debtors turnover ratio was high in last four years i.e 2015-2018. Overall result is that Maruti Suzuki was efficient in extending credit as well as collecting debt. Results of inventory management and profitability are as- Maruti Suzuki has positive correlation between Inventory Turnover Ratio and Gross profit Ratio. There is also a positive correlation between Inventory Turnover Ratio and Operating profit Ratio and same with net profit ratio.

Results of operating cycle and profitability are as- Maruti Suzuki has negative correlation between Inventory Conversion Period and Gross profit Ratio. There is

negative correlation between Inventory Conversion Period and Operating profit Ratio and same with net profit ratio.

### **FUTURE SCOPE OF THE STUDY-**

In this study researcher tried to cover many things but it is not possible for a researcher to cover all the things many things.

future scope of the study may cover the following points.

- i. The present study was conducted for only one company that is Maruti Suzuki. There may be significant scope for further studies considering a greater number of years and including more companies in the sample.
- ii. The study can also be extended to other similar companies and the results can be compared to see the difference.
- iii. Researcher can also add more profitability ratios.
- iv. The scope for further research may be extended to working capital management components including cash, marketable securities etc.

The outcomes of this study may help similar nature companies in keeping efficient working capital, inventory, and reduction in operating cycle period or cash conversion cycle.

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