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Original Article

Working Capital Management and Operating Profit of Indian Automobile Companies

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Abstract *- Working Capital management is a hot topic gaining a lot of momentum in today's environment. Working capital management is an inevitable part of finance which, if ignored, can significantly affect the profits of the companyand, in some cases, its future existence. In order to explain the relationship between working capital management and profitability, various researches have been conducted to analyze the impact of working capital on profits of the firm all across the globe. Profitability in a business context explains the ability of any business, institutions, enterprises, and corporations to earn profits. Profitability isused to determine the operating efficiency of any given business. It is important for any firm to be profitable in order to fuel its growth ambitions and, more importantly, to survive in the future. Profitability is the overall measure and indicator of the success of any enterprise.*

The basic purpose of the research is to assist and develop the relationship between different variables of working capital & net operating profit and its effect on profitability ratios.The paper intends to present this in a more lucid, simple, unambiguous, and precise manner so that reader is able to evaluate its implication for the company.

The financial accounting approach to ratio analysis is used to determine the performance of the firm'sprofitability management. In addition, statistical methods have been adopted, such as central tendency measurements, dispersion measurements, and Pearson correlation.

Keywords *- Working capital management, Profitability management, profits, ratio analysis, and Indian automobile sector.*

I. INTRODUCTION

A. Working Capital Management

The term working capital management is mathematically defined as a company's current assets minus its current liabilities. It also refers to the company's investments in account receivables, marketable securities, short-term assets-cash, and inventories. The most critical elements of any working capital are cash, inventory holdings, accounts receivable, and accounts payable. All these elements are very important and tend to vary. For example, if the company is facing low seasonal demand, this directly impacts the sales, inventory, and cash. Another can be if there is a sudden demand for the product, the company needs to manufacture more inventory. This will also affect the cash levels. The company's requirement of cash is for paying the suppliers; short-term loans etc. are generally known as current liabilities, whereas the difference or time taken for the firm to convert inventory into cash or debtor to cash is a current asset. Working capital management mainly handles cash, and so cash management or treasury management is the focus of it. Other areas that need to be focused on efficient working capital management are credit, inventory, and short-term liabilities. Working capital can also be termed as most popularly are Short-term capital, Revolving, or Circulating capital.

The main idea of working capital management is to ensure that the firms are managing their liquidity. Liquidity management involves short term asset management. A company needs to maintain a balance between liquidity and efficient profitability. There needs to be a proper trade-off between the two. Profitability helps in maintaining or increasing the profit, whereas the liquidity help in the proper management of cash and other operation of the company. A proper balance needs to maintain in case of a lack of liquidity that can lead to the firm's insolvency. However, a firm needs to manage profitability and liquidity. Sound techniques need to be implemented for maintaining the working capital as if insufficient funds in assets can lead to insolvency and excess funds lying idle can lead to loss of opportunity cost. Excess funds can be invested, and interest can be earned by the company.

B. Profitability Management

Profitability in a business context is explained as the ability of any business, institution, enterprise, or corporation to earn profits. Profit is the sum amount of money that is left from the revenue after the business pays off all the expenses which were directly incurred to generate the revenue—examples of business like producing a product and paying off the expenses to

produce that particular product. Profitability is used to determine the operating efficiency of any given business. It is the sole measure to understand if the business undertaken is worth continuing. It is used as an indicator to understand the efficiency of the firm to generate value to its shareholders. The management is continuously trying to maximize value by maximizing the profitability by ensuring efficient management in areas such as reduction of excess cash in hand, minimizing inventories to reduce the holding cost, the efficient collection of their receivables to avoid costly short term borrowing, all to increase the profitability of the business. It is important for any firm to be profitable in order to fuel its growth ambitions and, more importantly, to survive in the long run. Profitability can be defined as the overall measure and indicator of the success of any enterprise.

II. REVIEW OF LITERATURE

Managing an optimum balance between short term/current assets and liabilities to earn the maximum profit is the basic aim of working capital management. Different types of studies have been publishing and conducted by various researchers in different countries on the same domain of research. These studies are basically focused on different variables and methods of study.

Ghosh and Maji's research was something worth noting and agree. They studied the management of working capital. This was in direct relation to my own research study. The study sample chosen by them was the Indian cement sector companies, and the size was also 20 large cement companies with financial data ranging from the period of 1992-93 to 2001-02. They observed that the performance of these 20 different cement companies was not very good during this period. The industry average for efficiency index was greater than one in 6 years out of 10 years study period. However, the efficiency of some of the firms has successfully been improved. In view of the observed values, the author believes it may not be unwise to conclude that firms understudy should take necessary steps in order to improve efficiency in this regard.

Kim, Mauer, and Sherman (1998) found a significant impact of an efficient cash conversion cycle on the profitability position and liquidity position of companies. The author has examined the determinants of corporate liquidity of 915 US industrial firms for the period of 1975 to 1994 by using panel data and different models. They have found that firms with a large market to book ratio have a significantly larger position in liquid assets. In addition, firm size tends to be negatively related to liquidity. Their finding revealed that there exists a positive relationship between liquidity and the external financing cost, the extent that the market to book ratio and firm size are reasonable alternatives for the cost of external financing. They also found that firms with more volatile earnings and lower returns on physical assets relative to those on liquid assets lead to having a significantly larger position in liquid assets.

Weinraub and Visscher (1998), studies working capital management. The research was based on quarterly data of US firms from period 1984-93, which was spread among 10 different sectors of industry groups. The study aimed at finding and examining the relationship between both types of working capital policies, the balanced type, and aggressive type working capital management policies. The finding of the study demonstrated high stability over the 10 year study period. Another finding was a high and significant negative correlation among the industry asset and liability policies, which can further be analyzed that when a comparative aggressive working capital policy is followed, it is balanced by comparatively conservative working capital financial policies.

Lyroudi and Lazardis (2000), studies the association of the cash conversion cycle and the position of liquidity. The study aims to focus on the food sector in the European country of Greece. It has utilized the cash conversion cycle as a liquidity level indicator of the food industry in Greece. They tried to determine its relationship with traditional liquidity measurement and profitability measurement. ROI, net profit margin and return on equity was used as a tool for the measurement of profitability. The findings of the study conducted revealed a constant relationship between both the cash conversion and the respective current ratio. In addition, it also provided a constant relationship between the cash conversion cycle and the respective quick ratio. It also revealed an inverse relationship between cash conversion and deferred payables. The study reveals that the variable is not having a statistical relationship between liquidity measurement variables and profitability measurement variables. No relationship between the cash conversion cycle and the leverage ratio was found. They applied different techniques to measure the liquidity to determine the solvency level, according to sample firms. The most widely used liquidity measurement techniques that have been used traditionally and still prevalent in today's environment is cash ratio, current and quick ratio. The dynamic technique for measurement of liquidity level of firms is the cash conversion cycle.

Teigen (2001) aimed to study the working relationship between the managers of these two financial functions. Treasury can be regarded as a staff service function that supports many different areas of the organization. Its responsibilities and the advice it provides are (advice areas in parenthesis): Capital management (cost of capital), Risk management, and Relationship management (the effects of the team's action on vendors, customers or investors)

Deloof (2003), studies the effects of working capital management practices on the efficiency of earnings in a wider sense. The study proved that the less time it takes to collect its outstanding receivables, the more improvement could be seen in the performance of the firm. In order to back this finding, the sample selected for the study was 1009 Belgian firms. The period studied for the analysis was 5 years. The findings revealed an inverse association between the cash conversion and profitability position. In

addition, the findings also stated that there existed an inverse relationship between the profitability of the firm and the trade payables of the respective firms.

Mukhopadhyay(2004), aimed at studying the association between liquidity position and profitability position of the firms in his research paper. The variable under study was the cash conversion cycle to measure liquidity. It also suggested that for better performance of the company, inventory must be converted into cash as early as possible.

Singh (2004), aimed at studying the liquidity position of the companies. The three variable accounts receivable collection, payables deferred policy, and inventories conversion period. The study reveals the efficiency of the firm to run the day to day operations.

Meena,G.L., & Reddy, I.L. (2016), studies the effect of working capital on the profitability. The paper further analyze different components of working capital and its affect on the profitability on sugar factory. This study was confined to a particular region of Andhra Pradesh. The findings shows that the major components namely as account receivable, account payable and inventory days have insignificant relationship.

Krishnamohan,V. &Rajitha, P. (2019), studies the relationship between the liquidity and solvency of 6 automobile companies located in India. The focus of the paper was analyzed using ratio analysis for the period 2008-2018. The companies in focus wasHeroMotoCorp, Maruti Suzuki, Ashok Leyland, Tata Motors, TVS Motor and Mahindra and Mahindra.

III. MATERIALS AND METHODS

A. Need of the Research

The fundamental need for research is to increase the existing knowledge pool. Further, to bring to light information that might never be discovered during the ordinary course of life. The purpose is to build and analyze the interrelationships between variables and finding potential solutions to a specific research issue. Developing new theories or testing existing theories is the nature of the process of research. It helps in planning and organizing national policies that aids in national developments. It also brings a great benefit in form of prestige to the researcher, their guide and its institute.

B. Research Design

The research tends to study the liquidity management of various manufacturing companies by studying their liquidity ratios. This research thesis would use Interpretive/Constructivist paradigm (Mackenzie &Knipe, 2006). As per the research question identified, the focus will be dominantly on ratio analysis. The research question influences the nature of data collected to shape the methodology and to study research interpretation (Black, 2006).

C. Scope of the study

The overall scope of the study in relation to the research is limited to studying the liquidity management of six automobile companies that are listed on the National Stock Exchange of India (NSE). The study collects and analyzes 10 years of data for six automobile companies.

D. Statement of Problem

The automobile sector is a major growth sector for the Indian economy. This research aims to study the effect of Variables of Working Capital on Profitability of Companies.

E. Objecctive of the study

To examine the various effects of several variables in managing of working capital over the net operating profitability of the companies under study.

F. Methodology of study

The data have been suitably structured, arranged, classified and tabulated according to the requirements of the study.

- Type of Study: Inferential
- Sample Design: Cluster
- Data Source: Annual report of the companies.
- Type of Data: Secondary Data
- Period of Data: 10 years
- Statistical Tools: To analyze the efficiency and performance of treasury management by examining the accounting technique that are used is ratio analysis. In addition, the statistical techniques such as Measures of Central Tendency, Pearson correlation, Measures of Dispersion, Spearman's Rank Correlation etc. was used to analyze the data.

G. Sample Size

Six Automobile, and Auto Ancillary Manufacturing Sector Companies listed in NIFTY 50 index. The NIFTY 50 flagship index is the National Stock Exchange of India (NSE). It's a benchmark stock market index for the Indian equity market. Full form of NIFTY is National Stock Exchange Fifty.

H. Limitations of the Study

The study suffers from certain limitations, which are listed as follows:

- The study has been performed over a period of ten years span of time which might act as a limiting factor.
- The study is limited to 6 companies. Hence, it reflects only a reflective view of the overall working capital management in the Indian automobile industry.

IV. PREPARATION OF TABLES

A. Introduction

Data Analysis is the method of extracting meaningful information from massive amounts of data. Applying mathematical and logical methods for data classification. It

also demonstrates, condenses and recaptures, and assesses results. Data integrity ensure the accuracy and appropriateness analysis of research findings. Interpretation is to make sense from the collected data. Further, it provides a theoretical perspective on which further research work can be taken up. Following we will see the profiles of all the companies under study.

Table 1. Profitability Ratio of Bajaj Auto Ltd.

Year	Gross Profit Ratio	Net Profit Ratio	Return on Net Worth	Return on Capital Employed	Return on Asset	Earnings Per Share
2008- 2009	12.75	7.52	35.00	19.50	10.83	45.24
2009- 2010	21.19	14.39	58.05	38.24	19.46	117.51
2010- 2011	22.85	20.36	68.01	61.93	36.11	115.40
2011- 2012	22.16	15.38	49.72	46.53	27.10	103.80
2012- 2013	22.15	15.21	38.51	36.47	24.39	105.20
2013- 2014	23.88	16.09	33.75	32.37	21.99	112.10
2014- 2015	21.74	13.01	26.31	25.38	18.08	97.20
2015- 2016	25.92	17.39	29.62	28.67	23.83	135.80
2016- 2017	25.93	17.58	22.46	21.74	18.38	132.30
2017- 2018	24.36	16.16	21.29	20.64	17.07	140.60
Average	22.29	15.31	38.27	33.15	21.72	110.52
SD	3.74	3.39	15.61	13.33	6.81	27.09
COV	17%	22%	41%	40%	31%	25%

From the above table we can understand that net profit ratio over the sales of Bajaj Auto Ltd. has been fluctuating for the last 10 years. The average net profit ratio of the firm is 15.31. It is evident that the profitability over the sales of Bajaj Auto Ltd. is highly profitable. Another deduction is that the management has been operating the firms successfully in relation to the revenues earned and the related costs incurred. The indicators ROCE and ROA has seen an increase with exception of RONW on YOY basis. However, the profitability shown above is fluctuating over time in relation to their coefficient of variation that stands at 40%, 31% and 41% respectively which is quite high. The EPS has been increasing YOY since last 10 years.

Table 2. Profitability Ratio of Eicher Motors Ltd.

Year	Gross Profit Ratio	Net Profit Ratio	Return on Net Worth	Return on Capital Employed	Return on Asset	Earnings Per Share
2008- 2009	15.08	-15.24	-14.85	-14.00	-10.36	-45.58
2009- 2010	22.55	17.06	16.51	16.17	11.79	28.00
2010- 2011	23.36	18.54	23.06	22.42	15.91	46.00
2011- 2012	18.22	13.79	23.01	22.34	14.13	53.31
2012- 2013	23.13	16.36	33.92	32.84	18.78	102.58
2013- 2014	28.03	18.43	45.30	43.93	25.07	205.37
2014- 2015	30.69	20.00	0.00	0.00	0.00	340.82
2015- 2016	32.19	21.16	56.03	54.04	36.12	480.68
2016- 2017	34.57	22.16	39.77	38.44	28.15	572.17
2017- 2018	35.56	19.12	31.88	30.58	21.97	627.88
Average	26.34	15.14	25.46	24.68	16.16	241.12
SD	6.95	10.94	21.11	20.31	13.54	246.74
COV	26%	72%	83%	82%	84%	102%

From the above table we can understand that Net Profit Ratio (NPR) over the sales of Eicher Motors Ltd. has increased over the 10 years. The average net profit ratio of the firm is 15.14. It is evident that the profitability over the sales of Eicher Motors Ltd. has improved. Another deduction is that the management has been operating the firms efficiently in relation to the revenues earned and the related costs incurred. The NPR has pulled other indicators to a significant high; making the company at a favorable position. The profitability shown in the table in relation to variation coefficient stands at 83%, 82% and 84% respectively needs further assessment. The EPS has increased impressively YOY.

Table 3. Profitability Ratio of Hero Motocorp Ltd.

Year	Gross Profit Ratio	Net Profit Ratio	Return on Net Worth	Return on Capital	Return on Asset	Earnings Per Share
2008- 2009	15.93	10.39	33.72	31.78	21.06	64.18
2009- 2010	19.09	14.09	64.41	60.45	26.18	111.76
2010- 2011	14.96	9.93	65.21	40.93	17.97	96.54
2011- 2012	16.89	10.08	55.43	42.86	24.04	119.09
2012- 2013	15.49	8.91	42.31	38.71	21.96	106.07
2013- 2014	15.77	8.34	37.66	37.16	20.88	105.61
2014- 2015	14.62	8.64	36.47	35.93	22.67	119.46
2015- 2016	16.91	10.95	39.42	37.77	25.38	156.86
2016- 2017	18.09	11.84	33.39	31.85	22.98	169.12
2017- 2018	18.01	11.47	31.41	29.82	22.08	185.13
Average	16.58	10.46	43.94	38.73	22.52	123.38
SD	1.47	1.73	12.89	8.69	2.36	36.57
COV	9%	17%	29%	22%	10%	30%

From the above table we can understand that Net Profit Ratio (NPR) over the sales of Hero MotoCorp Ltd. has increased over the 10 years. The average net profit ratio of the firm is 10.46. The profitability over the sales of Hero MotoCorp Ltd. has improved slightly. Another deduction is that the management has been operating the firms efficiently in relation to the revenues earned and the related costs incurred. The NPR has maintained the other indicators as well; keeping the company at a favorable position. All of these three indicators has helped the company maintained its returns. The profitability shown in the table in relation to variation coefficient stands at 29%, 22% and 10% respectively. The EPS has increased impressively YOY since last 10 years.

Table 4. Profitability Ratio of Mahindra & Mahindra Ltd.

Year	Gross Profit Ratio	Net Profit Ratio	Return on Net Worth	Return on Capital Employed	Return on Asset	Earnings Per Share
2008- 2009	10.75	6.42	16.07	9.38	5.96	30.84
2009- 2010	17.83	11.27	26.72	18.75	12.78	36.89
2010- 2011	16.57	11.34	26.46	19.59	13.62	44.33
2011- 2012	13.29	9.03	24.08	17.39	12.03	46.89
2012- 2013	13.00	8.29	22.88	17.36	12.21	54.61
2013- 2014	13.42	9.27	22.39	16.68	12.01	61.07
2014- 2015	12.89	8.52	17.25	13.85	10.08	53.66
2015- 2016	13.38	7.83	14.29	12.49	9.02	52.80
2016- 2017	13.30	8.27	13.60	12.01	9.11	30.54
2017- 2018	14.91	8.94	14.37	12.77	9.18	36.47
Average	13.93	8.92	19.81	15.03	10.60	44.81
SD	2.02	1.49	5.22	3.37	2.33	10.74
COV	14%	17%	26%	22%	22%	24%

From the above table we can understand that Net Profit Ratio (NPR) over the sales of Mahindra & Mahindra Ltd. has increased over the 10 years. The average net profit ratio of the firm is 24.87. The profitability over the sales of Mahindra & Mahindra Ltd. has improved slightly. Another deduction is that the management has been operating the firms efficiently in relation to the revenues earned and the related costs incurred. The NPR has maintained the other indicators as well; keeping the company at a favorable position but still requires improvement. All of these three indicators has helped the company maintained its returns. The profitability shown in the table in relation to variation coefficient stands at 26%, 22% and 22% respectively. The EPS has been fluctuating but gradually increasing since last 10 years, This phenomenon in terms of SD is at 10.74 with COV at 24% with average EPS being 44.81 calculated over 10 years. From the analysis of EPS.

Table 5. Profitability Ratio of Maruti Suzuki India Ltd.

Year	Gross Profit Ratio	Net Profit Ratio	Return on Net Worth	Return on Capital Employed	Return on Asset	Earnings Per Share
2008- 2009	11.55	5.87	13.04	11.93	8.91	42.17
2009- 2010	15.00	8.51	21.10	20.01	15.18	86.42
2010- 2011	11.32	6.24	16.50	15.88	12.42	79.22
2011- 2012	9.38	4.59	10.76	10.37	7.33	56.60
2012- 2013	11.56	5.48	12.87	11.95	8.94	79.19
2013- 2014	13.54	6.36	13.26	12.39	9.11	92.13
2014- 2015	15.09	7.42	15.65	15.00	11.06	122.85
2015- 2016	17.98	9.32	17.95	17.35	12.79	177.58
2016- 2017	18.59	10.80	20.17	19.33	14.34	242.91
2017- 2018	17.68	9.68	18.49	17.57	13.00	255.62
Average	14.17	7.43	15.98	15.18	11.31	123.47
SD	3.22	2.06	3.45	3.39	2.64	76.02
COV	23%	28%	22%	22%	23%	62%

From the above table we can understand that Net Profit Ratio (NPR) over the sales of Maruti Suzuki India Ltd. has been fluctuating over the 10 years but has increased marginally. The average net profit ratio of the firm is 7.43. The profitability over the sales of Maruti Suzuki India Ltd. has improved. Another deduction is that the management has been operating the firms efficiently in relation to the revenues earned and the related costs incurred. The NPR has maintained the other indicators as well; keeping the company at a favorable position. All of these three indicators has helped the company maintained its returns. The profitability shown in the table in relation to variation coefficient stands at 22%, 22% and 23% respectively. The EPS has increased impressively YOY since last 10 years.

Table 6. Profitability Ratio of Tata Motors Ltd.

Year	Gross Profit Ratio	Net Profit Ratio	Return on Net Worth	Return on Capital Employed	Return on Asset	Earnings Per Share
2008- 2009	9.98	3.96	8.21	4.96	2.64	19.78
2009- 2010	14.44	6.33	15.15	7.75	4.38	39.26
2010- 2011	10.80	3.84	9.06	5.14	3.34	5.78
2011- 2012	8.74	2.28	6.33	3.84	2.27	3.77
2012- 2013	8.48	0.67	1.57	0.97	0.57	0.93
2013- 2014	8.52	0.97	1.74	1.08	0.67	1.03
2014- 2015	1.77	-13.05	-31.93	-16.02	-9.48	-14.72
2015- 2016	10.15	-0.14	-0.26	-0.16	-0.10	0.18
2016- 2017	5.84	-5.48	-11.48	-6.50	-4.12	-7.15
2017- 2018	8.27	-1.75	-5.13	-2.95	-1.74	-3.05
Average	8.70	-0.24	-0.67	-0.19	-0.16	4.58
SD	3.29	5.58	13.32	6.95	4.12	15.09
COV	38%	-2353%	-1977%	-3679%	-2625%	329%

From the above table we can understand that Net Profit Ratio (NPR) over the sales of Tata Motors. Ltd. has decreased over 10 years. The average net profit ratio of the firm stands at -0.24. It is evident that the profitability over the sales of Tata Motors Ltd. is highly unstable. Another deduction is that the management has not been operating the firms efficiently in relation to the revenues earned and the related costs incurred. The NPR has decrease significantly to its lowest, which has also affected other indicators RONW, ROCE, and ROA all of which have decreased to negative as well. The management has not been operating the firms efficiently. All of these shows clearly, the management needs to improve significantly in order to increase the effectiveness of its returns in all three indicators. The profitability shown above is unstable over time in relation to their coefficient of variation that can be seen in the above able. The EPS has decreased to negative YOY since last 10 years.

Table 7. Average Net Profit Ratio of Automobile, Ancillary Manufacturing Sector

Year	Bajaj Auto Ltd	Eicher Motors Ltd.	Hero Motocorp Ltd.	Mahindra & Mahindra Ltd.	Maruti Suzuki India Ltd.	Tata Motors Ltd.
2008- 2009	7.52	-15.20	10.39	6.42	5.87	3.96
2009- 2010	14.39	17.06	14.09	11.27	8.51	6.33
2010- 2011	20.36	18.54	9.93	11.34	6.24	3.84
2011- 2012	15.38	13.79	10.08	9.03	4.59	2.28
2012- 2013	15.21	16.36	8.91	8.29	5.48	0.67
2013- 2014	16.09	18.43	8.34	9.27	6.36	0.97
2014- 2015	13.01	20.00	8.64	8.52	7.42	-13.10
2015- 2016	17.39	21.16	10.95	7.83	9.32	-0.14
2016- 2017	17.58	22.16	11.84	8.27	10.80	-5.48
2017- 2018	16.16	19.12	11.47	8.94	9.68	-1.75
Average	15.31	15.14	10.46	8.92	7.43	-0.24
SD	3.39	10.94	1.73	1.49	2.06	5.58
COV	0.22	0.72	0.17	0.17	0.28	-23.53

It is seen that the average Net Profit Ratio of the sector is at 9.50.

The above table illustrates the Automobile manufacturing sector related companies which has been chosen for our study with their recent last 10 years data in relation to the Net Profit Ratio (NPR). Overall, the companies chosen in our study average NPR is 9.50. Net profit ratio (NPR) indicates the relation between the net profits expressed as percentage of sales. We can analyze and interpret that the Automobile sector has a high profit in relation to its revenue. Eicher Ltd. and Bajaj Auto Ltd. both have almost equal NPR, which shows that Bajaj Auto is efficient in remaining par with Eicher even though the GPR is lower comparatively. However, Tata Motors Ltd., has a negative NPR which is riskier to the business. Also, Eicher Motors has a very high SD and COV.

Table 8. Effect of Variables Of Working Capital on Profitability Of Bajaj Auto Ltd.

Year	Inventories	S. Debtors	Cash/Bank Bal	Net Profit	Inv/NP	Debtors/NP	Cash/NP
2008- 2009	338.84	358.65	135.68	1089.87	0.31	0.33	0.12
2009- 2010	446.21	272.84	100.2	2542.71	0.18	0.11	0.04
2010- 2011	547.28	359.89	228.78	4472.28	0.12	0.08	0.05
2011- 2012	678.53	422.79	1653.83	4194.03	0.16	0.10	0.39
2012- 2013	636.28	767.58	558.86	4430.74	0.14	0.17	0.13
2013- 2014	639.72	796.21	495.48	4812.15	0.13	0.17	0.10
2014- 2015	814.15	716.96	586.15	4358.68	0.19	0.16	0.13
2015- 2016	719.07	717.93	859.52	5854.67	0.12	0.12	0.15
2016- 2017	728.38	953.29	293.68	5631.28	0.13	0.17	0.05
2017- 2018	742.58	1491.87	778	6084.69	0.12	0.25	0.13
Average	629.10	685.80	569.02	4347.11	0.17	0.16	0.13

As per the table we find the relationship between different variables and net profit. All variables are quite low as compared to other companies. Inventories seems to be strongest variables with compared to debtor and cash. Inventories on an average is 17% of the net profit. However, cash seems to be very low as 12% which is bad for the company. As from liquidity analysis also the company have inadequate cash to meet the requirement. Company have low debtor, which is good as no credit sales is promoted and management believe in cash sales.

Table 9. Effect Of Variables of Working Capital on Profitability of Eicher Motors Ltd.

Year	Inventories	S. Debtors	Cash/Bank Bal	Net Profit	Inv/NP	Debtors/NP	Cash/NP
2008- 2009	19.37	5.08	33.25	52.58	0.37	0.10	0.63
2009- 2010	22.03	5.19	3.78	57.2	0.39	0.09	0.07
2010- 2011	28.23	3.64	3.63	99.85	0.28	0.04	0.04
2011- 2012	45.27	4.1	2.98	156.87	0.29	0.03	0.02
2012- 2013	75.41	6.2	3.5	191.21	0.39	0.03	0.02
2013- 2014	143.84	12.13	18.71	393.83	0.37	0.03	0.05
2014- 2015	205.13	10.7	43.05	849.86	0.24	0.01	0.05

2015- 2016	300.36	46.13	44.52	1991.22	0.15	0.02	0.02
2016- 2017	322.45	48.94	20.61	2433.04	0.13	0.02	0.01
2017- 2018	379.23	78.02	1208.82	2872.51	0.13	0.03	0.42
Average	154.13	22.01	138.28	909.82	0.27	0.04	0.13

As per the table, we find the relationship between different variables and net profit. Inventories seems to be strongest variables with compared to debtor and cash. Inventories on an average is 27% of the net profit. However, cash seems to be very low as 13% which is bad for the company. As from liquidity analysis also the company have inadequate cash to meet the requirement. Company have very low debtor as 4%, which is good and company is blocking less cash and deals in cash sales.

Table 10. Effect of Variables of Working Capital on Profitability of Hero Motocorp Ltd.

Year	Inventories	S. Debtors	Cash/Bank Bal	Net Profit	Inv/NP	Debtors/NP	Cash/NP
2008- 2009	326.83	149.94	217.49	1975.16	0.17	0.08	0.11
2009- 2010	436.4	108.39	1863.48	3034.34	0.14	0.04	0.61
2010- 2011	524.93	130.59	71.52	2822.31	0.19	0.05	0.03
2011- 2012	675.57	272.31	76.82	3983.35	0.17	0.07	0.02
2012- 2013	636.76	665	181.04	3682.86	0.17	0.18	0.05
2013- 2014	669.55	920.58	117.5	3986.44	0.17	0.23	0.03
2014- 2015	815.49	1389.59	159.25	3879.88	0.21	0.36	0.04
2015- 2016	672.98	1282.8	131.36	4838.13	0.14	0.27	0.03
2016- 2017	656.31	1561.87	136.73	5143.16	0.13	0.30	0.03
2017- 2018	823.58	1520.18	141.34	5801.3	0.14	0.26	0.02
Average	623.84	800.12	309.65	3914.70	0.16	0.18	0.09

As per the table, we find the relationship between different variables and net profit. Debtor seems to be strongest variables with compared to inventory and cash. Debtor on an average is 18% of the net profit. It signifies that company is blocking cash keeping the credit, which is not good as more credit sales is promoted. Inventory is 16% as compared to net profit which is quite low. Having too less inventory can be dangerous at time of emergency and urgency. However, cash seems to be very low as 10% which is very low for the company. It seems management of the company believes in just in time practice.

Table 11. Effect of Variables of Working Capital On Profitability of Mahindra & Mahindra Ltd.

Year	Inventories	S. Debtors	Cash/Bank Bal	Net Profit	Inv/NP	Debtors/NP	Cash/NP
2008- 2009	1060.67	1043.65	635.61	1417.2	0.75	0.74	0.45
2009- 2010	1188.78	1258.08	475.17	3301.89	0.36	0.38	0.14
2010- 2011	1694.21	1260.31	614.64	4005.96	0.42	0.31	0.15
2011- 2012	2358.39	1988.36	1188.43	4344.78	0.54	0.46	0.27
2012- 2013	2419.77	2208.35	1781.41	5349.09	0.45	0.41	0.33
2013- 2014	2803.63	2509.84	2950.39	5491.99	0.51	0.46	0.54
2014- 2015	2437.57	2558.03	2064.77	5358.09	0.45	0.48	0.39
2015- 2016	2687.93	2511.64	2287.03	5545.54	0.48	0.45	0.41
2016- 2017	2758.01	2938.84	1687.48	6405.32	0.43	0.46	0.26
2017- 2018	2701.69	3172.98	2893.73	7702.06	0.35	0.41	0.38
Average	2211.07	2145.00	1657.87	4892.19	0.48	0.46	0.33

As per the table, we find the relationship between different variables and net profit. Inventories and debtors both are almost same ratio with compared to debtor and cash. Inventories on an average is 47% and debtor is 46% of the net profit. It signifies that company is blocking too cash keeping the inventory. Company have very high debtors, this means management is promoting credit sales. However, cash seems to be at 33% which is bad for the company. As from liquidity analysis also the company indicate the same.

Table 12. Effect of Variables of Working Capital on Profitability of Maruti Suzuki Ltd.

Year	Inventories	S. Debtors	Cash/Bank Bal	Net Profit	Inv/NP	Debtors/NP	Cash/NP
2008- 2009	902.3	918.9	239	2468.3	0.37	0.37	0.10

2009- 2010	1208.8	809.9	98.2	4486.6	0.27	0.18	0.02
2010- 2011	1415	824.5	2508.5	4147.3	0.34	0.20	0.60
2011- 2012	1796.5	937.6	2436.1	3339.8	0.54	0.28	0.73
2012- 2013	1840.7	1469.9	775	5042	0.37	0.29	0.15
2013- 2014	1705.9	1413.7	629.7	5918.8	0.29	0.24	0.11
2014- 2015	2615	1069.8	18.3	7544.5	0.35	0.14	0.00
2015- 2016	3132.1	1322.2	42.2	10339.3	0.30	0.13	0.00
2016- 2017	3262.2	1199.2	13.8	12641.8	0.26	0.09	0.00
2017- 2018	3160.8	1461.8	71.1	14093.9	0.22	0.10	0.01
Average	2103.93	1142.75	683.19	7002.23	0.33	0.20	0.17

As per the table, we find the relationship between different variables and net profit. Inventory seems to be strongest variables with compared to debtor and cash. Debtor on an average is 20% of the net profit. It signifies that company is blocking cash keeping the credit. Inventory is 33% as compared to net profit which is quite low. Having too less inventory can be dangerous at time of emergency and urgency. However, cash seems to be very low as 17% which is very low for the company. It seems management of the company believes in just in time practice

Table 13. Effect of Variables of Working Capital on Profitability of Tata Motors Ltd.

Year	Inventories	S. Debtors	Cash/Bank Bal	Net Profit	Inv/NP	Debtors/NP	Cash/NP
2008- 2009	19.37	5.08	33.25	52.58	0.37	0.10	0.63
2009- 2010	22.03	5.19	3.78	57.2	0.39	0.09	0.07
2010- 2011	28.23	3.64	3.63	99.85	0.28	0.04	0.04
2011- 2012	45.27	4.1	2.98	156.87	0.29	0.03	0.02
2012- 2013	75.41	6.2	3.5	191.21	0.39	0.03	0.02
2013- 2014	143.84	12.13	18.71	393.83	0.37	0.03	0.05
2014- 2015	205.13	10.7	43.05	849.86	0.24	0.01	0.05
2015- 2016	300.36	46.13	44.52	1991.22	0.15	0.02	0.02
2016- 2017	322.45	48.94	20.61	2433.04	0.13	0.02	0.01
2017- 2018	379.23	78.02	1208.82	2872.51	0.13	0.03	0.42
Average	154.13	22.013	138.285	909.817	0.27	0.04	0.13

As per the table, we find the relationship between different variables and net profit. Inventories seems to be strongest variables with compared to debtor and cash. Inventories on an average is above 100% of the net profit. It signifies that company is blocking too much cash keeping the inventory. However, it's an automobile company and it requires inventory due to the nature of the business. However, cash seems to be high as 60% which is bad for the company. As company is keeping too much idle cash compared to the net profit. Company have high debtor, which is not good as more credit sales is promoted and management believe in sales on credit which impact the overall cash of the company.

V. RESULTS AND DISCUSSION

A. Bajaj Auto Ltd.

The profitability shown above is fluctuating over time in relation to their coefficient of variation. The statistics show that the company is in a favorable position towards its earnings available to its equity shareholders on a per share basis and it is unwavering over time. The EPS has been increasing YOY since last 10 years, from FY2008-09 to FY2017-18. However, we can stress that the management needs to be more efficient and wise to work towards increasing its RONW and ROCE and maintaining ROA for a longer time to stand against its industry competitors. The average relationship between the net profit and inventory, debtors and cash is 0.17,0.16 and 0.129 respectively.

B. Eicher Motors Ltd.

The profitability over the sales of Eicher Motors Ltd. has improved. The NPR has pulled other indicators to a significant high; making the company at a favorable position. The EPS has increased impressively YOY since last 10 years. The statistics show that the company is in its favorable position in relation to its earnings available to its equity shareholders on a per share basis, however, there is much more assessment required to understand more concretely. The management has done a tremendous job in changing the company's effectiveness and the company's overall profitability position for the period under study to bring to satisfactory level. The average relationship between the net profit and inventory, debtors and cash is 0.274, 0.04 and 0.133 respectively.

C. Hero Motocorp Ltd

The profitability over the sales of Hero MotoCorp Ltd. has improved slightly. The NPR has maintained the other indicators as well; keeping the company at a favorable position. The EPS has increased impressively YOY since last 10 years. Overall, it can be said that the profitability position of the company is satisfactory enough for the period under study and the company is in a favorable position to create sufficient surplus for its growth and survival stability in the present competitive business environment. The average relationship between the net

profit and inventory, debtors and cash is 0.163, 0.184 and 0.097 respectively.

D. Mahindra & Mahindra Ltd.

The profitability over the sales of Mahindra & Mahindra Ltd. has improved slightly. The NPR has maintained the other indicators as well. Average EPS being 44.81 calculated over 10 years. Overall, the company's profitability position can be said to be sufficiently satisfactory for the period under study and the company is in a favorable position to create sufficient surplus for its growth and stability of survival. The average relationship between the net profit and inventory, debtors and cash is 0.474, 0.456 and 0.332 respectively.

E. Maruti Suzuki India Ltd.

The profitability over the sales of Maruti Suzuki India Ltd. has improved. Another deduction is that the management has been operating the firms efficiently in relation to the revenues earned and the related costs incurred. The NPR has maintained the other indicators as well; keeping the company at a favorable position. From the analysis of EPS, the statistics show that the company is in its favorable position in relation to its earnings available to its equity shareholders on a per share basis though it fluctuates over time. The average relationship between the net profit and inventory, debtors and cash is 0.331, 0.202 and 0.172 respectively.

F. Tata Motors Ltd.

The profitability over the sales of Tata Motors Ltd. is highly unstable. The NPR has decreased significantly to its lowest, which has also affected other indicators RONW, ROCE, and ROA all of which have decreased to negative as well. The EPS has decreased to negative YOY since last 10 years. The management has not been operating the firms efficiently. All of these observations shows clearly, the management needs to improve significantly in order to increase the effectiveness of its returns in all three indicators. The average relationship between the net profit and inventory, debtors and cash is 3.162, 1.028 and 0.599 respectively. It signifies that company is blocking too much cash keeping the inventory.

VI. RESEARCH CONCLUSION

From our observation, it is clear that the overall financial health of an enterprise not only depends on the profitability of the concern but also it depends on the liquidity position of the firm. It is also observed that liquidity and profitability are two closely related concepts in the financial management of a firm in the way of achieving its desired goals. Moreover, the risk dimension of liquidity cannot be ignored in the measurement of the overall performance of the firm. Thus, it can be said that the efficiency of financial managers largely depends on their effective utilization of working capital for the growth and sustainability of the enterprise in the present global scenario.

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