

A STUDY ON WORKING CAPITAL MANAGEMENT OF SELECTED AUTOMOBILE COMPANIES

Dr. Seema Pandit

Assistant Professor, Faculty of Business Administration, GLS University, Ahmedabad

Abstract

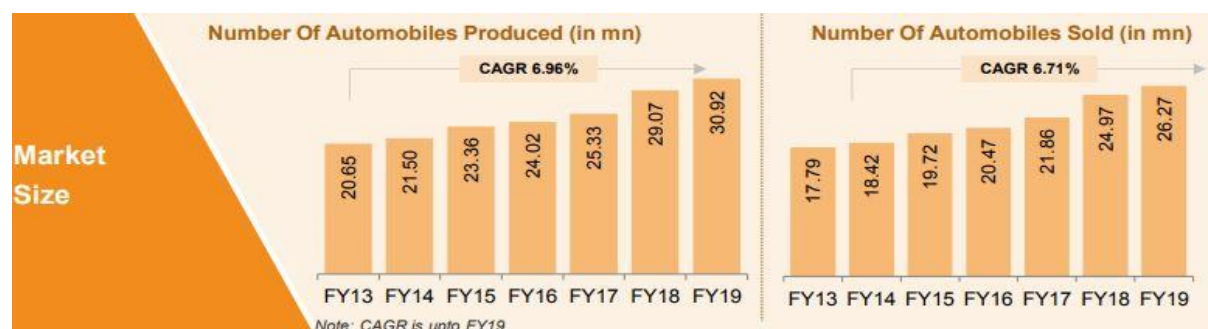
Efficient management of working capital is essential for the success of any business organization. Investment in working capital affects the liquidity and profitability of the business. An attempt to increase profitability would lead to decrease in liquidity and a high liquidity position would adversely affect the profitability. Therefore the business organization strives to maintain a tradeoff between the liquidity and profitability. The paper attempts to study the working capital management practices of selected companies in the automobile sector. Motaal's test has been applied to assess the liquidity position of the companies. Further an attempt has also been made to study whether there is correlation between the liquidity and profitability. The working capital management is measured in terms of various ratios like the current ratio, liquidity ratio, stock turnover ratio, debtors' ratio and working capital ratio. The profitability of the companies is measured as Return on Capital Employed and Return on Net Worth. The study is based on secondary data collected from the published corporate annual reports of the company. The results of Motaal's test indicate that out of ten companies selected for the study, the liquidity position of Bajaj Auto Ltd is best whereas Tata Motors is at rank ten indicating a very low liquidity position

Keywords: Working Capital, Liquidity, Profitability, Automobile companies, Motaal's test.

INTRODUCTION

Efficient management of working Capital is essential to the success of any business organization. (Mahato & Jagannathan, 2016). The organization can improve its financial attributes like liquidity, solvency and profitability through effective implementation of the working capital management. Working capital management indicates the relationship between current assets and current liabilities. The objective behind working capital management is to ensure continuity in the operations of a firm and that it has sufficient funds to honour its current liabilities. It mainly involves management of three components of Working capital – namely cash, debtors and inventories. (Mahato & Jagannathan, 2016). An efficient management of working capital necessitates a tradeoff between tradeoff between liquidity and profitability. Increased investment in working capital enhances the liquidity position of the business and thus brings down its default risk. However, such an investment leads to blockage of funds in assets that give zero/ low yield and consequently reduces the profitability /returns. The liquidity and profitability decisions are contradictory to each other for financial managers. Hence in order to achieve the desired goals, the financial managers of the organization are required to design proper policies on working capital management. (Srivastava & Mishra, 2018)

The **Indian automobile industry** is the 4th largest in the world. The Two Wheelers segment dominates the market in terms of volume owing to a growing middle class and a young population. Moreover, the growing interest of the companies in exploring the rural markets further aided the growth of the sector. India is also a prominent auto exporter and has strong export growth expectations for the near future. Automobile exports grew 14.5 per cent during FY 2019. It is expected to grow at a CAGR of 3.05 per cent during 2016-2026. In addition, several initiatives by the Government of India and the major automobile players in the Indian market are expected to make India a leader in the two-wheeler and four wheeler market in the world by 2020. (ibef.org)



Source: <https://www.ibef.org/industry/india-automobiles/infographic>

LITERATURE REVIEW

Mandal & Dutta (2010) tried to study the impact of working capital management on liquidity, profitability and non-insurable risk of ONGC for a period of nine years. The findings point out that the short term solvency position of ONGC as measured by current ratio, quick ratio, inventory turnover and debtors' turnover is found to be strong enough. The results of Motaal's test suggest that the liquidity position of ONGC shows an improvement over the period under study. The profitability position of ONGC has also been satisfactory over the period of the study. Further the working capital ratios have a high influence on the profitability of ONGC.

Gumber & Kumar (2012) did a comparative study on the working capital management of the three fertilizer industries and two cooperative societies. The technique of ratio analysis was employed to study the working capital management of these units. The study concluded that the cooperative sector possessed more amount of working capital and that the co-operative sector was better off than the public sector as regard liquidity and payment to creditors as their credit period were much shorter than the public sector.

Panigrahi (2013) compared the liquidity position of five leading Indian cement companies for period of ten years. The research applied the Motaal's ultimate rank test to analyse the data. The findings suggest that the liquidity position of small companies is better than the big companies. The growth rate of current ratio, quick ratio and working capital to current assets of all companies are negative which indicates unsound liquidity position.

Kandpal & Kavidayal (2013) examined the components of working capital and its impact on the profitability of ONGC Ltd. for a period of ten years. Correlation and Regression analysis was employed to study the impact of working capital on the profitability. The results show a negative correlation between Return on Investment and measures of Working Capital Management like Current Ratio Quick Ratio Working capital turnover ratio, Debtors Turnover Ratio Absolute Cash Ratio, and Cash to sales ratio while there is a positive relation between Return on Investment and Current Asset to Total assets Ratio, Current assets to sales ratio and Inventory Turnover ratio.

Kandpal (2015) analyzed the effect of working capital management policies on the profitability of ten construction companies for a period of five years. The study investigated into the impact of current ratio, quick ratio, debtors' turnover and creditors' turnover on the return on investment. The results pointed out that out of ten companies, in two companies there was significant impact of working capital ratios on the profitability whereas in the other eight there was insignificant impact of working capital ratios on the profitability

Mahato & Jagannathan (2016) examined the impact of working capital management on selected companies in the telecom industry. The study covered eight telecom companies for a period of 5 years. In order to measure the profitability, return on assets ratio was considered while the working capital management was studied using the ratios like average collection period, inventory conversion period, average payment period and current ratio. The result of correlation analysis pointed out that return on assets has negative relationship with inventory conversion period, average collected period, cash conversion cycle and current ratio while return on assets has positive relationship with average payment period.

Hoque, Taher & Das (2016) evaluated the structure of working capital of thirty eight listed companies of Dhaka Stock Exchange and Chittagong Stock Exchange during 2004 to 2008. The findings of the study pointed out that the share of inventories is the largest followed by the share of accounts receivables and cash. During the period considered for the study, the proportion of , accounts receivables has declined whereas the proportion of cash and inventories shows an increasing trend. The highest share of inventories in current assets suggests the less qualitative aspect of inventories.

Shivakumar & Thimmaiah (2016) attempted to study the working capital management of Coal India Ltd. The various working capital ratios and profitability ratios were analyzed to study their impact on liquidity and profitability of Coal India Ltd. for a period of five years. The results of Correlation and Spearman's Ranking indicate a weak correlation and negative relationship between liquidity and profitability. The Motaal's test was also applied to test the liquidity performance. The test results indicate an improvement in the liquidity position of the firm over the study period.

Tamragundi & Vaidya (2016) examined the liquidity profitability relationship of ten FMCG companies of India for a period of ten years. It is observed for all the studied years a significant and positive correlation between liquidity and the profitability variables

Sharma & Kaur (2016) examined the working capital performance of Bharti Airtel for a period of five years. Various working capital ratios and profitability ratios were computed to study the relationship between liquidity and profitability. Quick ratio, inventory turnover ratio, Debtors turnover ratio, gross profit ratio, operating profit ratio showed satisfactory performance but the current ratio of the company was not found to be satisfactory. Motaal's test indicated significant improvement in liquidity position during the study period. The findings also point out that there is significant negative relationship between liquidity and profitability

Vasanth & Thirumagal (2016) conducted an extensive literature review on factors that influence the working capital management. Cash conversion cycle is more important measure of liquidity than the current ratio. The studies also opine that the impact of working capital variables on profitability differ from industry to

industry. Working capital management efficiency is significantly influenced by various factors like industry practices, company size, and proportion of outside directors and future sales growth of the company.

Bala, Gupta & Khanna (2017) studied the various working capital components and its impact on the profitability of four steel companies for a period of five years. The profitability is measured in terms of Return on Investment and working capital in terms of current ratio, quick ratio, debtors turnover and inventory turnover. The study concluded that the liquidity of the company (as measured by working capital ratios) has impact on the profitability (as measured by return on investment) of the company. An increase in liquidity leads to decrease in the profitability of the companies and vice versa

Sarwat, Iqbal, Durrani, Shaikh, and Liaquat (2017) studied the association of working capital ratios on the profitability of the eighteen cement companies for a period of five years. The results of regression analysis pointed out that the assets turnover ratio and current ratios have positive and significant association with return on assets while the Inventory, account receivable and payable do not have significant association with return on assets.

OBJECTIVES OF THE STUDY

- To study the working capital position of ten automobile companies for a period of five years (2014-15 to 2018-19)
- To examine the relationship between the profitability and working capital ratios of these companies

RESEARCH METHODOLOGY

Sample Companies under Study

The top ten automobile companies have been selected according to their market capitalization

Name of Company	Market Capitalization (Rs in Crores)
Maruti Suzuki India Ltd	2,21,122.60
Bajaj Auto Ltd	93,189.20
Mahindra & Mahindra Ltd	65,559.76
Eicher Ltd	59,755.62
Tata Motors Ltd	54,211.46
Hero MotoCorp Ltd	48,605.06
Ashok Leyland	23,454.86
TVS Motors Company	21,958.53
Escorts Ltd	7,578.93
Force Motors	1,292.06

(Source: www.bseindia.com)

Period of Study

The study covers a period of five years from the year 2014-15 to 2018- 19.

Data Collection

The secondary data has been collected from the annual reports and websites of the companies.

Tools of Analysis

The technique of ratio analysis has been applied to calculate the working capital management ratios like the current ratio, quick ratio, debtors' ratio and inventory turnover ratio. The profitability has been measured in terms of Return on Capital Employed. Motaals' Comprehensive Liquidity Test has been applied to assess the liquidity position of the companies. Correlation analysis has been employed to find out whether there is any relationship between the working capital ratios and profitability of the firm.

RESULTS & ANALYSIS

Table -1 – Average of the five years

Company	Current Ratio	Quick Ratio	Inventory Turnover Ratio (Times)	Debtors Turnover Ratio (Times)	Return on Capital Employed (%)
Ashok Leyland	0.88	0.62	11.36	17.24	24.79

Bajaj Auto Ltd	2.09	1.88	30.64	24.32	28.43
Eicher Ltd	0.82	0.63	20.91	175.03	59.73
Escorts Ltd	0.90	0.76	9.08	9.18	14.34
Force Motors	1.63	1.10	7.14	20.64	12.18
Hero MotoCorp Ltd	0.97	0.79	40.02	20.35	47.71
Mahindra & Mahindra Ltd	1.08	0.89	16.51	15.73	17.27
Maruti Suzuki India Ltd	0.60	0.38	23.47	49.58	24.69
Tata Motors Ltd	0.51	0.44	10.34	24.21	2.91
TVS Motors Company	0.72	0.57	15.14	19.29	22.19

The **current ratio** is a liquidity ratio that measures a company's ability to pay short-term obligations or those due within one year. It can be seen from the above table that except Bajaj Auto Ltd, all the companies have a current ratio less than the standard ratio of 2:1.

The **quick ratio** is an indicator of a company's short-term liquidity position and measures a company's ability to meet its short-term obligations with its most liquid assets. A quick ratio of 1:1 is considered standard. The quick ratio of Bajaj Auto Ltd and Force Motors Ltd. is above the standard ratio. All other companies have quick ratio less than the standard ratio.

The **inventory turnover ratio** is an efficiency ratio that shows how effectively inventory is managed by comparing cost of goods sold with average inventory for a period. This measures how many times average inventory is "turned" or sold during a period. The inventory ratio suggests that Hero MotoCorp is very efficient in managing its inventory while Force Motors is the least efficient amongst the ten automobile companies.

The **Debtors Turnover Ratio** also called as **Receivables Turnover Ratio** shows how quickly the credit sales are converted into the cash. This ratio measures the efficiency of a firm in managing and collecting the credit issued to the customers. Eicher Ltd. is the most efficient in terms of managing its credit sales collections while Escorts Ltd is the least efficient in terms of managing its credit sales collection.

Return on Capital Employed or **ROCE** is a profitability ratio that measures how efficiently a company can generate profits from its capital employed by comparing net operating profit to capital employed. Eicher Ltd with ROCE of 59.73% is at the top and Tata Motors is at the bottom with only 2.91%.

MOTAAL'S COMPREHENSIVE TEST OF LIQUIDITY

Motaal has proposed a comprehensive test of liquidity to determine the financial health of the business with respect to liquidity. According to him, a process of ranking is used to arrive at a more comprehensive measure of liquidity in which the following three ratios are combined in a point score:

- Working Capital to Current Asset Ratio** = $\frac{\text{Working Capital}}{\text{Current Assets}} \times 100$
- Stock to Current Asset Ratio** = $\frac{\text{Inventory or Stock}}{\text{Current Assets}} \times 100$
- Liquid Resources to Current Asset Ratio** = $\frac{\text{Liquid Resources or Liquid Assets}}{\text{Current Assets}} \times 100$

Higher the value of working capital to current asset ratio, the more favourable is the liquidity position of the firm and vice versa. Similarly, higher the value of liquid resources/ liquid assets to current assets ratio, the more favourable is the liquidity position of the firm and vice versa. While the lower the value of stock/inventory to current assets ratio, the more favourable is the liquidity position of the firm. All the above three ratios are ranked in their order of preferences. Finally the ultimate rank is calculated on the basis of the principle that the lower the ranks scored, the more favourable is the liquidity position of the firm and vice versa.

Table – 2 - Motaal's Comprehensive Test of Liquidity

Sr. No	Name of the Company	Working Capital / Current Assets (%)	Rank	Inventory / Current Assets (%)	Rank	Liquid Resources / Current Assets (%)	Rank	Total Rank	Ultimate Rank
1	Ashok Leyland	-5.17	7	31.96	6	68.04	6	19	6
2	Bajaj Auto Ltd	49.28	1	10.63	1	89.37	1	3	1
3	Eicher Ltd	13.38	5	19.58	3	80.42	3	11	3

4	Escorts Ltd	9.12	6	29.86	5	70.14	5	16	5
5	Force Motors	39.03	3	41.01	9	58.99	9	21	7
6	Hero MotoCorp Ltd	40.67	2	11.62	2	88.38	2	6	2
7	Mahindra & Mahindra Ltd	18.04	4	21.34	4	78.66	4	12	4
8	Maruti Suzuki India Ltd	-41.69	9	35.16	7	64.84	7	23	8
9	Tata Motors Ltd	-79.86	10	44.07	10	55.93	10	30	10
10	TVS Motors Company	-27.68	8	39.24	8	60.76	8	24	9

Table -2 shows the Motaal's Comprehensive Test of Liquidity. On the basis of the Ultimate ranks calculated, it indicates that Bajaj Auto Ltd is at rank 1 indicating the most favourable liquidity position while Tata Motors is at rank 10 indicating an unfavourable liquidity position

CORRELATION ANALYSIS

ASHOK LEYLAND

Table -3

Year	Return on Capital Employed (%)	Current Ratio	Quick Ratio	Inventory Turnover Ratio (Times)	Debtors Turnover Ratio (Times)
2014-15	10.98	0.94	0.69	10.36	10.61
2015-16	25.97	1.06	0.78	12.3	15.1
2016-17	24.37	0.86	0.51	8.15	17.4
2017-18	32.59	0.6	0.42	15.15	26.24
2018-19	30.06	0.96	0.7	10.82	16.84

Table -4 - Correlation Matrix

	ROCE	CR	QR	ITR	DTR
ROCE	1				
CR	-0.40637	1			
QR	-0.37402	0.940041	1		
ITR	0.495007	-0.51628	-0.23789	1	
DTR	0.822781	-0.84216	-0.7817	0.651259	1

Table -3 presents the Return on Capital Employed, Current ratio, Quick ratio, Inventory turnover ratio and Debtors' turnover ratio of Ashok Leyland

Table -4 presents the correlation between the return on capital employed and working capital ratios. The results of correlation matrix indicates a negative correlation between ROCE and Current ratio (-0.40637), Quick ratio (-0.37402). This implies that an increase in current ratio and quick ratio leads to decrease in Return on Capital Employed and vice versa. There is positive correlation between Return on Capital Employed and Inventory turnover (0.495007) and a high positive correlation between Return on Capital Employed and debtors' turnover (0.822781). This implies that an increase in Inventory turnover and Debtors turnover leads to increase in Return on Capital Employed and vice versa.

BAJAJ AUTO LTD

Table - 5

Year	Return on Capital Employed (%)	Current Ratio	Quick Ratio	Inventory Turnover Ratio (Times)	Debtors Turnover Ratio (Times)
2014-15	25.38	2.13	1.95	26.55	28.57
2015-16	28.67	1.7	1.44	31.41	31.48
2016-17	30.32	2.92	2.7	29.88	26.05
2017-18	29.5	2.25	2.07	33.89	20.58
2018-19	28.28	1.45	1.25	31.46	14.93

Table -6 – Correlation Matrix

	ROCE	CR	QR	ITR	DTR
ROCE	1				
CR	0.381734	1			
QR	0.356487	0.998316	1		
ITR	0.719251	-0.18021	-0.18616	1	
DTR	-0.21306	0.282938	0.249999	-0.4634	1

Table -5 presents the Return on Capital Employed, Current ratio, Quick ratio, Inventory turnover ratio and Debtors' turnover ratio of Bajaj Auto Ltd

Table -6 presents the correlation between the return on capital employed and working capital ratios. The results of correlation matrix indicates a low positive correlation between Return on Capital Employed and Current ratio (0.381734), Quick ratio (0.356487) and a high positive correlation between Return on Capital Employed and Inventory turnover ratio (0.719251). This implies that an increase in current ratio, quick ratio and Inventory turnover ratio leads to increase in Return on Capital Employed and vice versa. There is low negative correlation between Return on Capital Employed and debtors' turnover (-0.21306). This implies that an increase in Debtors turnover leads to decrease in Return on Capital Employed and vice versa

EICHER LTD

Table - 7

Year	Return on Capital Employed (%)	Current Ratio	Quick Ratio	Inventory Turnover Ratio (Times)	Debtors Turnover Ratio (Times)
2014-15	64.82	0.48	0.28	16.19	265.55
2015-16	78.64	0.52	0.29	23.25	217.71
2016-17	57.13	0.47	0.28	24.64	148.06
2017-18	54.29	0.87	0.74	24.29	141.11
2018-19	43.78	1.75	1.54	16.18	102.74

Table -8 - Correlation Matrix

	ROCE	CR	QR	ITR	DTR
ROCE	1				
CR	-0.76077	1			
QR	-0.78774	0.997632	1		
STR	0.299609	-0.48773	-0.4603	1	
DTR	0.787501	-0.72045	-0.74121	-0.17658	1

Table -7 presents the Return on Capital Employed, Current ratio, Quick ratio, Inventory turnover ratio and Debtors' turnover ratio of Eicher Ltd

Table -8 presents the correlation between the return on capital employed and working capital ratios. The results of correlation matrix indicates a low positive correlation between Return on Capital Employed and Current ratio (0.381734), Quick ratio (0.356487) and a high positive correlation between Return on Capital Employed and Inventory turnover ratio (0.719251). This implies that an increase in current ratio, quick ratio and Inventory turnover ratio leads to increase in Return on Capital Employed and vice versa. There is low negative correlation between Return on Capital Employed and debtors' turnover (-0.21306). This implies that an increase in Debtors turnover leads to decrease in Return on Capital Employed and vice versa

ESCORTS LTD

Table - 9

Year	Return on Capital Employed (%)	Current Ratio	Quick Ratio	Inventory Turnover Ratio (Times)	Debtors Turnover Ratio (Times)
2014-15	7.19	0.76	0.76	9.77	10.64
2015-16	7.37	0.83	0.76	9.11	8.46
2016-17	13.78	0.81	0.64	9.7	9.28
2017	21.24	1.01	0.7	9.27	9.44

-18					
2018-19	22.13	1.08	0.95	7.54	8.09

Table -10 - Correlation Matrix

	ROCE	CR	QR	ITR	DTR
ROCE	1				
CR	0.923497	1			
QR	0.337647	0.59507	1		
ITR	-0.61985	-0.8184	-0.89991	1	
DTR	-0.42625	-0.60173	-0.51007	0.775845	1

Table -9 presents the Return on Capital Employed, Current ratio, Quick ratio, Inventory turnover ratio and Debtors' turnover ratio of Escorts Ltd

Table -10 presents the correlation between the return on capital employed and working capital ratios. The results of correlation matrix indicates a high positive correlation between Return on Capital Employed and Current ratio (0.923497) and a low positive correlation between Return on Capital Employed and Quick ratio (0.337647) This implies that an increase in current ratio and quick ratio leads to increase in Return on Capital Employed and vice versa. There is negative correlation between Return on Capital Employed and Inventory turnover ratio (-0.61985) and debtors' turnover (-0.42625). This implies that an increase in Inventory turnover ratio and Debtors turnover ratio leads to decrease in Return on Capital Employed and vice versa.

FORCE MOTORS

Table - 11

Year	Return on Capital Employed (%)	Current Ratio	Quick Ratio	Inventory Turnover Ratio (Times)	Debtors Turnover Ratio (Times)
2014-15	9.9	1.7	1.09	6.72	19.39
2015-16	17.09	1.6	0.92	6.37	23.62
2016-17	12.85	1.56	1.37	7.98	23.12
2017-18	11.5	1.65	0.99	7.39	19.17
2018-19	9.54	1.63	1.11	7.25	17.88

Table -12 - Correlation Matrix

	ROCE	CR	QR	ITR	DTR
ROCE	1				
CR	-0.57243	1			
QR	-0.30221	-0.45559	1		
ITR	-0.35841	-0.45853	0.804357	1	
DTR	0.875888	-0.70287	0.158891	-0.05592	1

Table -11 presents the Return on Capital Employed, Current ratio, Quick ratio, Inventory turnover ratio and Debtors' turnover ratio of Force Motors

Table -12 presents the correlation between the return on capital employed and working capital ratios. The results of correlation matrix indicates a negative correlation between Return on Capital Employed and Current ratio (-0.57243), Quick ratio (-0.30221) Inventory turnover ratio (-0.35841). This implies that an increase in current ratio, quick ratio and Inventory turnover ratio leads to decrease in Return on Capital Employed and vice versa. There is high positive correlation between Return on Capital Employed and Debtors' turnover (0.875888). This implies that an increase in Debtors turnover leads to increase in Return on Capital Employed and vice versa

HERO MOTOCORP

Table - 13

Year	Return on Capital Employed (%)	Current Ratio	Quick Ratio	Inventory Turnover Ratio (Times)	Debtors Turnover Ratio (Times)
2014-15	53.42	0.94	0.72	35.93	23.88
2015-16	55.34	0.83	0.67	45.85	21.4

2016-17	46.13	0.86	0.72	47.04	20.04
2017-18	44.61	0.85	0.69	39.91	20.92
2018-19	39.03	1.36	1.14	31.38	15.5

Table -14 - Correlation Matrix

	ROCE	CR	QR	ITR	DTR
ROCE	1				
CR	-0.57543	1			
QR	-0.52399	0.972841	1		
ITR	0.341414	-0.93315	-0.86057	1	
DTR	0.935094	-0.76302	-0.72967	0.570178	1

Table -13 presents the Return on Capital Employed, Current ratio, Quick ratio, Inventory turnover ratio and Debtors' turnover ratio of Hero MotoCorp

Table -14 presents the correlation between the return on capital employed and working capital ratios. The results of correlation matrix indicates a negative correlation between Return on Capital Employed and Current ratio (-0.57543) and Quick ratio (-0.52399). This implies that an increase in current ratio and quick ratio leads to decrease in Return on Capital Employed and vice versa. There is positive correlation between Return on Capital Employed and Inventory turnover. There is a high positive correlation between Return on Capital Employed and Debtors' turnover (0.935094). This implies that an increase in Inventory turnover and Debtors' turnover leads to increase in Return on Capital Employed and vice versa.

MAHINDRA & MAHINDRA

Table - 15

Year	Return on Capital Employed (%)	Current Ratio	Quick Ratio	Inventory Turnover Ratio (Times)	Debtors Turnover Ratio (Times)
2014-15	18.51	1.05	0.84	16.87	15.37
2015-16	18.13	1.1	0.9	16.24	16.13
2016-17	14.66	1.12	0.89	17.18	16.17
2017-18	17.43	1.06	0.92	18.3	15.93
2018-19	17.62	1.08	0.9	13.96	15.06

Table -16 - Correlation Matrix

	ROCE	CR	QR	ITR	DTR
ROCE	1				
CR	-0.73306	1			
QR	-0.24731	0.320114	1		
ITR	-0.21884	-0.13672	0.038839	1	
DTR	-0.48499	0.573441	0.360062	0.669274	1

Table -15 presents the Return on Capital Employed, Current ratio, Quick ratio, Inventory turnover ratio and Debtors' turnover ratio of Mahindra & Mahindra

Table -16 presents the correlation between the return on capital employed and working capital ratios. The results of correlation matrix indicates a high negative correlation between Return on Capital Employed and Current ratio (-0.73306) and a low correlation between Return on Capital Employed and Quick ratio (-0.24731) and moderate negative correlation between the Return on Capital Employed and Debtors' turnover (-0.48499). This implies that an increase in current ratio, quick, debtors' turnover and debtors' turnover ratio leads to decrease in Return on Capital Employed and vice versa.

MARUTI SUZUKI INDIA LTD

Table - 17

Year	Return on Capital Employed (%)	Current Ratio	Quick Ratio	Inventory Turnover Ratio (Times)	Debtors Turnover Ratio (Times)
2014-15	21.24	0.68	0.41	21.08	40.24

2015-16	25.11	0.7	0.45	20.77	48.11
2016-17	27.22	0.55	0.35	23.69	53.97
2017-18	27.1	0.49	0.31	25.94	59.95
2018-19	22.77	0.56	0.37	25.87	45.61

Table -18 - Correlation Matrix

	ROCE	CR	QR	ITR	DTR
ROCE	1				
CR	-0.57543	1			
QR	-0.52399	0.972841	1		
ITR	0.341414	-0.93315	-0.86057	1	
DTR	0.935094	-0.76302	-0.72967	0.570178	1

Table -17 presents the Return on Capital Employed, Current ratio, Quick ratio, Inventory turnover ratio and Debtors' turnover ratio of Maruti Suzuki India Ltd

Table -18 presents the correlation between the return on capital employed and working capital ratios. The results of correlation matrix indicates a negative correlation between Return on Capital Employed and Current ratio (-0.57543) and Quick ratio (-0.52399). This implies that an increase in current ratio and quick ratio leads to decrease in Return on Capital Employed and vice versa. There is a positive correlation between Return on Capital Employed and Inventory turnover and a high correlation between Return on Capital Employed and Debtors' turnover. This implies that an increase in Inventory turnover and Debtors' turnover leads to increase in Return on Capital Employed and vice versa,

TATA MOTORS LTD

Table - 19

Year	Return on Capital Employed (%)	Current Ratio	Quick Ratio	Inventory Turnover Ratio (Times)	Debtors Turnover Ratio (Times)
2014-15	-5.61	0.42	0.42	8.23	31.14
2015-16	5.38	0.51	0.41	9.26	27.12
2016-17	-1.11	0.53	0.42	8.83	21.24
2017-18	4.84	0.57	0.44	10.52	20.98
2018-19	11.07	0.54	0.51	14.84	20.56

Table -20 - Correlation Matrix

	ROCE	CR	QR	ITR	DTR
ROCE	1				
CR	0.716683	1			
QR	0.716335	0.379022	1		
ITR	0.856705	0.506426	0.973403	1	
DTR	-0.62606	-0.91948	-0.5504	-0.60452	1

Table -19 presents the Return on Capital Employed, Current ratio, Quick ratio, Inventory turnover ratio and Debtors' turnover ratio of Tata Motors Ltd

Table -20 presents the correlation between the return on capital employed and working capital ratios. The results of correlation matrix indicate a high positive correlation between Return on Capital Employed and Current ratio (0.716335), Quick ratio (0.716335) and Inventory turnover ratio (0.856705). This implies that an increase in current ratio, quick ratio and Inventory ratio leads to increase in Return on Capital Employed and vice versa. There is a negative correlation between Return on Capital Employed and Debtors' turnover. This implies that an increase in Debtors' turnover leads to decrease in Return on Capital Employed and vice versa.

TVS MOTORS COMPANY

Table - 21

Year	Return on Capital Employed (%)	Current Ratio	Quick Ratio	Inventory Turnover Ratio (Times)	Debtors Turnover Ratio (Times)
2014	18.85	0.87	0.66	13.19	24.1

-15					
2015-16	24.94	0.72	0.58	17.36	20.53
2016-17	21.25	0.71	0.54	13.64	18.64
2017-18	23.87	0.66	0.51	16.04	17.88
2018-19	22.04	0.65	0.56	15.49	15.29

Table -22 - Correlation Matrix

	ROCE	CR	QR	ITR	DTR
ROCE	1				
CR	-0.69668	1			
QR	-0.64214	0.907472	1		
ITR	0.947086	-0.58512	-0.42458	1	
DTR	-0.44418	0.944211	0.793681	-0.36727	1

Table -21 presents the Return on Capital Employed, Current ratio, Quick ratio, Inventory turnover ratio and Debtors' turnover ratio of Tata Motors Ltd

Table -22 presents the correlation between the return on capital employed and working capital ratios. The results of correlation matrix indicates a negative correlation between Return on Capital Employed and Current ratio (-0.69668), Quick ratio (-0.64214) and Debtors' turnover ratio (-0.44418). This implies that an increase in current ratio, quick ratio and Debtors turnover ratio leads to decrease in Return on Capital Employed and vice versa. There is a high positive correlation between Return on Capital Employed and Inventory turnover ratio. This implies that an increase in Inventory turnover ratio leads to increase in Return on Capital Employed and vice versa.

CONCLUSION

The study was conducted to examine the working capital management of the selected automobile companies. The correlation between liquidity and profitability has also been examined. Theoretically, there is inverse relationship between liquidity and profitability. In most of the cases, the results confirm with the theory. However, it is also found that highly liquid companies also earn profits and not all companies with low liquidity earn high profits. Further, except one company, all companies under the study have a current ratio less than the standard ratio of 2:1 and except two companies, all companies under the study has a quick ratio less than the standard ratio of 1:1. Even with a current ratio and quick ratio less than the standard, companies manage to earn profits. However, too less liquidity position is not desirable, especially during a period of recession and falling market demand. The companies should also try to reduce the percentage of inventory in current assets as it affects the profitability of the company.

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