

LIQUIDITY AND PROFITABILITY MANAGEMENT: A COMPREHENSIVE CASE OF INDIAN AUTOMOBILE INDUSTRY

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Abstract - In today's competitive business world, enduring for a long period is the biggest challenge for every company and future is turned so uncertain. Firms have been able to make profits despite being affected by the pandemic as they possess a strong and healthy financial framework. The management of profitability and liquidity are crucial for determining the economic health of the firms. Moreover, the management teams of the companies also believe that management of liquidity and profitability are the significant corporate finance functions that assist in crucial decision making. Hypothetically, profitability position of the company could be affected by liquidity management. Therefore this study has been intended to study the relationship between profitability and liquidity in Automobile Industry for ten years from 2010 to 2019. The study has been made by the use of statistical tools such as correlation, coefficient and regression analysis. Moreover, the outcome of the study reveals that there is insignificant effect of management of liquidity on profitability. Further, the result also showed that there is negative association between profitability and the explanatory variables (CR, LRS and WCTR).

Keywords: *Liquidity Management, Profitability, Correlation Coefficient and Regression*

1. INTRODUCTION

Automobile industry is the significant part in the growth of the Indian Economy and play a vital role in handle the demand and supply of liquidity in a suitable way with the aim to continue their business safe and sound for a long period of time and also avoid any liquidity issues. Generally, the liquidity problems arise due to failure in expecting sudden shocks like recently automobile industry shutdown their business operations due to COVID-19, changes in the industry policies and managing resources internally so on.

Automobile Sector of India is facing many disparities and confronts, and consistency in the liquidity management, as the failure in the level of liquidity reflected on the financial performance of its profitability. In view of this financial performance of industry with regard to liquidity and profitability is required to measure and study in detail. Many studies have been found that there is strong relation between liquidity and profitability ratios vice-a-versa. Liquidity versus profitability management has thus, become a basic and broad aspect of judging the performance of a corporate entity. It is, therefore, essential to maintain an adequate degree of a smooth running of the business operations. With regard to this, the article studies the significance impact of liquidity management on profitability.

2. REVIEW OF LITERATURE

Saleem & Rehman, 2011-they study and found that every firm has to manage their liquidity and profitability relationship in a greater manner. In their study there is significant relationship between ROE, ROA and liquidity. Moreover, other ratios have different impact on the selected ratios of the company. **Innocent, Mary, & Matthew, 2013**- studies that how liquidity ratios impact on profitability on Nigerian pharmaceutical companies. They were also explained how selected firms improve their profitability and how to minimize the cost. From their study found that there is a negative impact of liquidity ratios on

profitability except inventory turnover ratio. The study also suggested that use their liquid asset more in order to improve profitability. **Zygmunt & Justyna, 2013**—in their study found that liquidity management is associated with profitability with reference to IT companies. The study showed that inventory conversion period, receivable conversion period had relationship with profitability. The study also proven that if growth of account payable days increases their profitability. Moreover, companies should focus on available opportunities of liquidity ad profitability for surviving in the business world. **Iqbal, Ahmad, & Ria, 2014**—study the relationship between cash conversion cycle and profitability in KSE, Pakistan. The study found that there is a negative relationship between the selected financial variable. Firms should have financial frame work in order to overcome the debt issues and can maintain current assets and liabilities in an efficient manner. **Ravivathani thuraisingam-2015**—they were studied on Sri Lankan listed firms, with the title of Effects of liquidity management on firm profitability. The study found that there is no relationship between selected financial variable. The results are also consistent with prior empirical studies. **Dr Mohamed Aymen Ben Moussa, Adel boubaker**—they were study the two models in their research and found that some selected variable (liquid assets/total assets, total credits/total deposits) have positive relationship and also there is a Impact on ROA where as other variables likes current ratio ration have not impact on Return on Assets. **Charmler and al (2018)** studied impact of liquidity on profitability with reference to Ghana Bank industry, he study 21 banks during the period 2007 to 2016 and found that liquidity management positively associated with profitability of bank industry. **Lucy and all – 2018** also studied same during the 2007 to 2016 in five banks of Nigeria. In his study also found that there is positive impact of liquidity on profitability. Moreover, **Mohanty and Mehrota (2018)** studied 47 banks out of 20 banks are private sector in India during the period of 2010 to 2016. From their study found that negative impact of investment deposit ratio and cash deposits ratio on Return on Assets where as there is no impact of liquidity on Return of Equity of the banks.

3. RESEARCH METHODOLOGY OF THE STUDY

3.1 NEED FOR THE STUDY

Any firm required strong Financial Framework for running business in efficient manner for a longer period of time and liquidity and profitability are key ratios. In order to this profitability and liquidity are considered as most suitable techniques for providing economic benefit to the company and also company management considered as one of the significant corporate finance functions into their decision making.

3.2 OBJECTIVES OF THE STUDY

- To examine the Liquidity and Profitability Management of the Indian Automobile Industry during the study period of 2010– 2019.
- To measure the extent of the relationship between Liquidity and Profitability.
- To study the significant impact of Liquidity Management on Profitability of the Indian Automobile Industry.

3.3 HYPOTHESIS STATEMENTS

In order to achieve the above objective of this study, the following hypothesis formulated:

H1: There is a significant impact of Liquidity Management on ROE (1)

H2: There is a significant impact of Liquidity Management on ROCE(2)

H3: There is a significant impact of Liquidity Management on OPM (3)

H4 There is a significant impact of Liquidity Management on NPM(4)

3.4 MULTIPLE REGRESSION MODEL

In this article multiple regression model applied for attaining the third objective of the study i.e., significant impact of Liquidity Management on Profitability of the Mahindra and Mahindra Company. Liquidity Management (CR, LR and WCTR) considers as independent variable whereas Profitability

Ratios are considered as dependent variables for the study. The following regression model used for the four selected hypothesis statements

$$\alpha = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + e$$

Whereas α = Dependent Variable

β_0 = intercept

$\beta_1, \beta_2, \beta_3$ are the regression co-efficient

e = random error

ROE- Return on Equity (x_1)

CR-Current Ratio (x_2)

LR – Liquidity Ratio(x_3)

WCTR – Working Capital Turnover Ratio

ROCE – Return on Capital Employed

OPM – Operating Profit Margin

NPM – Net Profit Margin

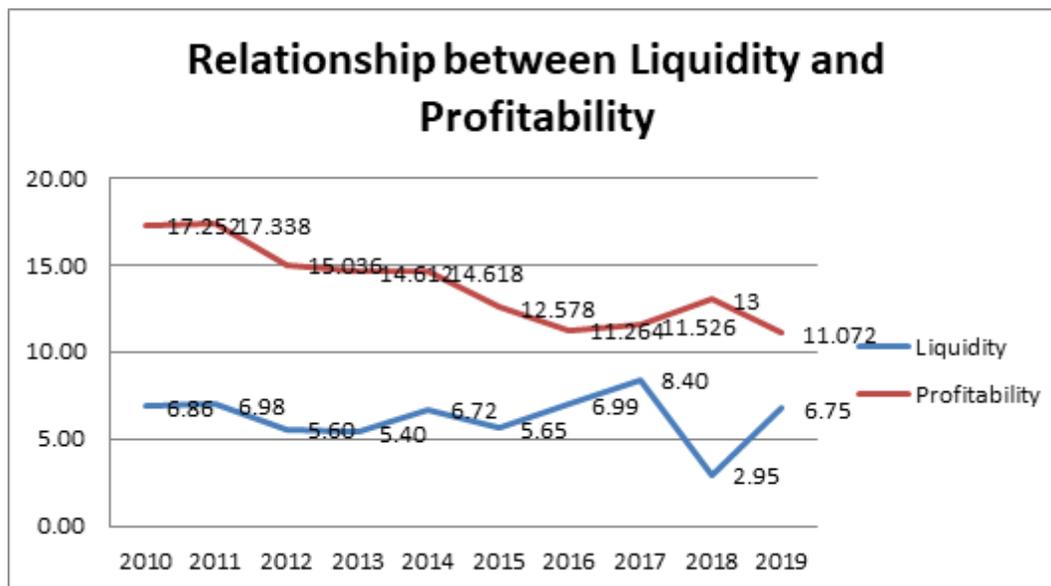
4. DATA ANALYSIS AND INTERPRETATION

Table No: 1 Pearson Correlation Matrix

	C.R	L.R	W.C.T.R	ROE	OP.M	R.C.E.R	NPM	R.A
C.R	1							
LR	0.961809	1						
WCTR	0.045288	-0.07388	1					
ROE	-0.65328	-0.67973	0.068812	1				
OPM	-0.18762	0.026026	-0.17147	0.218271	1			
RCER	-0.47083	-0.42133	-0.16695	0.746622	0.606319	1		
NPM	-0.43987	-0.39896	-0.06151	0.607994	0.007266	0.248986	1	
RA	-0.67737	-0.71396	0.088712	0.987924	0.182312	0.751823	0.620351	1

Table 1 shows Pearson Correlation Matrix among the selected variables concentrating on the relationship between dependent and independent variables. Correlation matrix explains how two different selected variables react to each other e.g., what change will occur in one variable with the change in the other variable. From the table, CR in the industry related negatively with ROE indicating that if industry increases investment in current assets, it will lead to increase in profitability. Liquidity of the industry correlated negatively with profitability showing that when industry invest their liquid assets, low returns will be generated. Apart from LR and WCTR, had negative relationship with the profitability. It's clearly shows that automobile industry have not been maintain liquidity as per standard norms. Therefore, the industry profits are not register as per expectation of the investors.

Graph 1:



Multipieregressionanalysis was performed to investigate the impact of Liquidity on profitability which the model used for the study is given below. Profitability = $f(\text{CR}, \text{LR}; \text{ and LR})$. It is important to note that the Profitability depend upon Current Ratio (CR); Liquid Ratio (LR) & Working Capital Turnover Ratio (WCTR). The following four models are formulated to measure the impact of Liquidity on Profitability.

H1: There is a significant impact of Liquidity Management on ROE

$$\text{ROE} = \beta_0 + \beta_1 \text{CR} + \beta_2 \text{LR} + \beta_3 \text{WCTR} + e \quad (1)$$

$$\text{ROE} = 45.08 + (-1.2) \text{CR} + (-27.52) \text{LR} + (0.02) \text{WCTR}$$

H2: There is a significant impact of Liquidity Management on ROCE

$$\text{ROCE} = \beta_0 + \beta_1 \text{CR} + \beta_2 \text{LR} + \beta_3 \text{WCTR} + e \quad (2)$$

$$\text{ROCE} = 28.78 + (-12.83) \text{CR} + (4.07) \text{LR} + (-0.04) \text{WCTR}$$

H3: There is a significant impact of Liquidity Management on OPM

$$\text{OPM} = \beta_0 + \beta_1 \text{CR} + \beta_2 \text{LR} + \beta_3 \text{WCTR} + e \quad (3)$$

$$\text{OPM} = 28.75 + (44.76) \text{CR} + 40.71 \text{LR} + 0.058 \text{WCTR}$$

H4: There is a significant impact of Liquidity Management on NPM

$$\text{NPM} = \beta_0 + \beta_1 \text{CR} + \beta_2 \text{LR} + \beta_3 \text{WCTR} + e \quad (4)$$

$$\text{NPM} = 24.10 + (-19.36) \text{CR} + 7.56 \text{LR} + (-0.0025) \text{WCTR}$$

Table 2: Regression Statistics

Model	Dependent	Independent	R ²	p-Value
1	ROE	CR	46.24	0.98
		LR		0.60
		WCTR		0.94
2	ROCE	CR	24.63	0.64
		LR		0.87
		WCTR		0.77
3	OPM	CR	63.59	0.01

		LR		0.02
		WCTR		0.49
4	NPM	CR	20.12	0.63
		LR		0.83
		WCTR		0.99

INTERPRETATION

In this study regression model were used to test the impact of liquidity management on profitability of the industry which is mentioned in the above table along with results. Here, CR, LR, WCTR considered as independent variables and ROE, ROCE, OPM and NPM considered as dependent variables revealed that the ability to predict the profitability ($R^2 = 46.24, 24.63, 63.59$ and 20.12). p value of model 3 is statistically significant at 5 percent level of significance. In this case it reveals that CR(0.01) and LR(0.02) have a significant impact on OPM at 5% level of significance than WCTR. It can explain that contribution and relationship of CR and LR to OPM is more than WCTR (0.49). Moreover, p value of model 1 is 0.98, 0.60, and 0.94 which are statistically insignificant at 5 percent level of significance. In this case it revealed that none of the independent variables are significantly impacting on ROE at 5% level of significance. Likewise model 2 and 4 are also statistically insignificant at 5 percent level on ROCE and NPM. However, it should be noted that there may be some other liquidity variables which can have an impact on profitability position of the selected company, which need to be studied.

5. CONCLUSION

This study exhibits empirical evidence about the Liquidity and Profitability Management of Automobile Industry in India over the period of 2010 to 2019. This article studies four models to find significant impact of liquidity on profitability. The results found that one model (OPM) shows significant impact on liquidity and profitability and the rest of the three models (ROE, ROCE and NPM) show a negative impact.

The study observed that there is insignificant impact of liquidity management on profitability. The study also found that the automobile industry is awfully managing their liquidity. The study also provided the significant conclusions that the profitability of industry should increase with the proper financial framework of liquidity management. Further, according to standard norms none of the standard liquidity ratios (2:1) were maintained at a specified level and the study unambiguously proposed that some companies should have a strong financial framework in order to increase the profitability. The adequate liquidity supports the industry to slacken the financial crises or pandemic situations and liquidity risk. However, it should be noted that there may be some other liquidity variables apart from liquidity which may have an impact on profitability position on selected industries, which can be taken up by further researchers.

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