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LIQUIDITY AND PROFITABILITY ANALYSIS OF THE SELECTED AUTOMOBILE COMPANIES OF INDIA

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ABSTRACT

Liquidity and profitability ratios are very vital indicators of the company's performance for the short- and long-term view. Continuing profit help for the future growth of the company and liquidity proves the smooth running of the business on a short-term basis. In this study selected Automobile companies of India are used for the analysis. The purpose of the study is to find out the liquidity and profitability performance of companies. And to check relationship between liquidity and profitability of selected companies. For the purpose of the study three companies are selected from the Automobile sector which are Maruti Suzuki India Ltd., Tata Motors and Mahindra and Mahindra Ltd. The data is collected from annual report of selected companies. The study period is for 10 years. From 2013-14 to 2022-23. For the analysis two statistical techniques arithmetic mean and regression analysis are used. From the analysis it has been observed that in liquidity ratio, Mahindra and Mahindra Ltd. Performed better than Maruti Suzuki India Ltd and Tata Motors Ltd. while in profitability ratio Maruti Suzuki India Ltd. Performed better than Mahindra and Mahindra Ltd and Tata Motors Ltd. The study concludes that there is no statistically significant relationship between the liquidity ratio and profitability ratio.

Keywords - Liquidity, Profitability, Automobile, Performance

INTRODUCTION

Companies' performance affects many stakeholders like shareholders, directors, employees and customers etc. there are many factors that affect this performance which depends upon the size of the company, aera, customers and other factors. Financial ratios are useful indicators to measure a company's performance and financial situations. To understand the performance of the company varies indicator can be used from which liquidity and profitability ratios are commonly used. Liquidity indicates the ability of company to pay its debts in short-term maturing within one year. A company's liquidity resources can be maintained in variety of ways such as Cash on hand, cash in bank, current assets, cash credit and overdrafts. and profitability indicates the ability of company to earn a profit. Profitability is the basic aim of any organisation. Without profitability business will not survival in long run. Therefore, estimating future profitability and analysing past and present profitability are important. The Automobile industry is one of the key drivers that boost the economic growth of the country. The automobile industry is the significant driver of Indian economy. The automobile industry is one of the largest revenues generating industry in India. This study aims to measure the impact of liquidity ratio on the profitability of the listed automobile firms of India. This study also tries to find that is there is any significant impact of liquidity ratios on profitability either positive or negative.

REVIEW OF LITERATURE

The significant literature on liquidity and profitability is summarized below:

Bharti & Singh (2014). Their study presented the performance evaluation of different categories of banks viz. public, private and foreign bank groups in India. For evaluating the performance. From the study, it has been Found that during the study period the liquidity and profitability position of public sector bank group declined while it has Improved in the other two groups. Further the results indicated that in most of the financial Indicators foreign banks recorded the highest mean values. But as far as stability and consistency is concerned, it was negligible

In foreign banks and highest in public sector banks.

Ehiedu (2014). The study aimed to analysis the Impact of Liquidity (Current ratio, Acid test ratio) on Profitability (Return on Assets) of Some Selected Companies. From the analysis, it has been observed that, there is a significant positive correlation between current ratio and profitability as measured by Return on assets

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(ROA), There is no definite significant correlation between Acid test ratio and Profitability and There is no significant positive correlation between return on capital employed and Return on Assets

Khan et al. (2016) Have measured the liquidity and profitability of the selected Telecom Companies. They found that the profitability ratios showed return on assets is higher in Vodafone than that of Bharti Airtel which means former has higher rate of profits. And in terms of return on equity also Vodafone has performed far better than Bharti Airtel. They concluded that there is a vast difference in the performance of selected Telecom companies in terms of liquidity and profitability performance.

Madushanka & Jathurika (2018). Their study is aimed to investigate the relationship between liquidity and profitability. The analysis is based on 15 manufacturing companies listed on the Colombo Stock Exchange over a period of five years from 2012 to 2016. Descriptive statistics, Correlation and regression analysis were applied for the analysis and findings suggested that Liquidity ratios (Quick ratio) have positive and significantly related to the firm profitability among the selected companies. They recommended that Manufacturing Companies in SriLanka that, pay more attention on the liquidity ratios as they have the Significant impact on the profitability of the firms.

Sreegeetha & Revathi (2022) Have analysed the Liquidity position of select Electrical Machinery companies in India. They concluded that, the profitability analysis of the selected Electrical

Machinery companies revealed inefficiently utilizing their resources to improve profitability for increase the sales revenue and reduce the cost. Management function quality in products, customer service, manpower, goodwill, and market share it is valuable to increase productivity and wage costs in order to increase profitability, not only in terms of investment, but also in terms of investor return. They recommended improving the current ratio to increase current assets by raising shareholder funds and to improve net profit decrease in operating cost.

Tripathi (2020). Has examined the effects of M&As in FMCG sector in India. The study found that M&As positively affect productivity of acquiring Firms of FMCG organizations in India. There was additionally beneficial outcome of M&A action on Return on Capital Employed and Return on Net Worth and yet it found that M&A action has no constructive outcome on Operating overall revenue Ratio and Net Profit Margin Ratio of chose FMCG organizations. The study also found that the measures utilized for examination that shows in general improvement in the presentation of chose FMCG Organizations in India after M&As. The study Concluded that there have overall positive effects on performance of FMCG companies in long run with Reference to the Indian context.

RESEARCH GAP

Most of the studies regarding the analysis of the liquidity and profitability are done in developed countries like USA, Greece, Indonesia, Poland and other European countries. In India very few studies are done on the Indian automobile sectors of liquidity and profitability analysis and to check relationship between them.

OBJECTIVES OF THE STUDY

The study has following objectives:

1. To study the liquidity performance of selected automobile companies.
2. To study the profitability performance of selected automobile companies.
3. To study the relationship between the liquidity and profitability of selected automobile companies.

SCOPE OF THE STUDY

Scope of the study is confined to liquidity, profitability performance and relationship between them with reference to selected automobile companies in India. The study covers period of 10 years from 2013-2014 to 2022- 2023.

LIMITATION OF THE STUDY

Limitation of the study are as follow.

1. This study is carried out for a period of 10 years only from 2013-14 to 2022-23 so finding cannot be applicable for a very long period of time.
2. The study is carried out for selected 3 companies only. Hence, the limitations of sample size also apply to this research.
3. Ratio analysis & statistical techniques have their own limitations which might affect the conclusion.

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METHODOLOGY

Company's financial statement provide various values for measuring company's performance. Accounting ratios are very widely and commonly used by different stakeholders for the measurement of the company's performance.

HYPOTHESIS

Ho: There is no statistically significant impact of liquidity ratios on profitability.
H1: There is statistically significant impact of liquidity ratios on profitability.

DATA SET

The data used in the present research study was collected from the annual reports of selected automobile companies. Which are: Maruti Suzuki India Ltd., Tata Motors Ltd. And Mahindra and Mahindra Ltd. Companies are selected on the basis of highest revenue. The study is purely based on secondary sources.

VARIABLES

In this research paper to understand the performance of the selected automobile companies Liquidity ratios (Current ratio and quick ratio) and profitability ratios (Return on Assets and Return on Equity) are used. The brief explanations of these variables are as under.

LIQUIDITY RATIOS

Liquidity ratio provide the understanding between the relationship of current assets and short-term liabilities. Which indicates that how quickly a company can turn its assets in to cash. Higher ratio means company can pay its debts easily which can help to avoid defaulting in payment. Mainly there are two basic financial liquidity ratios.

Current Ratio = Current Assets/Current Liabilities

Current ratio is most commonly used ratio. It gives general idea of company's liquidity. The ratio shows the ability of the company to pay it's all current liabilities using its current assets.

Quick Ratio = Current Assets - Inventory/Current Liabilities

Inventory is the least liquid assets. For the better measurement of how fast company can pay its current liabilities, inventory is deducted from the other current assets. Quick ratio provides the understanding that against current liabilities, how much liquid current assets company have.

PROFITABILITY MEASUREMENT

Assets profitability ratios indicate the relationship between the net income and total assets of the company. This ratio helpful to determine company's earning compare to other competitors. Return of assets is basic profitability measurement, which provide the understanding that with proportion to the total assets how much company is earing.

Return on Assets = Net Income/Total Assets × 100

Return of equity ratio indicates the relationship between the Net Income and Equity of the company. Ratio between the net income and equity indicate compare to equity how much company is generating the profit. Higher ROE shows the better performance of company.

Return of Equity = Net Income/Equity × 100

DATA ANALYSIS

After collecting ten years data of three companies, statistical analysis is done by using Arithmetic mean method.

Liquidity ratios

Current Ratio = Current Assets/Current Liabilities

Year	Maruti Suzuki India Ltd.	Tata Motors Ltd.	Mahindra and Mahindra Ltd.
March – 2014	1.76	0.36	1.29
March – 2015	0.93	0.42	1.13
March – 2016	0.71	0.63	1.18
March – 2017	0.66	0.56	1.31

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March – 2018	0.51	0.62	1.24
March – 2019	0.87	0.58	1.26
March – 2020	0.75	0.53	1.38
March – 2021	1.15	0.60	1.34
March – 2022	0.99	0.58	1.38
March – 2023	0.58	0.45	1.33
Mean	0.891	0.533	1.284

(Sources: Annual reports of Maruti Suzuki India Ltd., Tata Motors Ltd. and Mahindra and Mahindra Ltd)
The above table of current ratio shows that except the March – 2014 in all ten years Mahindra and Mahindra Ltd. has the highest current ratio, which indicate its better abilities to fulfil its current liabilities. In most of the years Maruti Suzuki India Ltd. has higher current ratio than Tata Motors Ltd. which indicates that compare to Tata motors Ltd., Maruti Suzuki India Ltd. has better liquidity condition. Also, mean of all three companies indicates that Mahindra and Mahindra Ltd. has better liquidity condition as an average compare to other two companies and compare to Tata Motors Ltd., Maruti Suzuki India Ltd. has better condition. From the above table it can also be seen that Covid – 19 has almost no effect on the current ratio of all three companies.

Quick Ratio = Current Assets - Inventory/Current Liabilities

Year	Maruti Suzuki India Ltd.	Tata Motors Ltd.	Mahindra and Mahindra Ltd.
March – 2014	1.54	0.15	0.97
March – 2015	0.63	0.19	0.86
March – 2016	0.43	0.36	0.91
March – 2017	0.42	0.33	1.02
March – 2018	0.31	0.38	1.03
March – 2019	0.64	0.37	0.99
March – 2020	0.46	0.38	1.07
March – 2021	0.96	0.43	1.08
March – 2022	0.78	0.44	1.06
March – 2023	0.36	0.33	0.99
Mean	0.653	0.336	0.998

(Sources: Annual reports of Maruti Suzuki India Ltd., Tata Motors Ltd. and Mahindra and Mahindra Ltd)

Except in March - 2014 Mahindra and Mahindra Ltd. has the highest quick ratio in all ten years. While compare to Tata Motors Ltd., Maruti Suzuki India Ltd. has higher quick ratio in all years except March – 2018. Which indicates that Mahindra and Mahindra have better ability to convert its assets to fulfil its liabilities by liquid assets. Mean also indicates that in average Mahindra and Mahindra Ltd. has higher quick ratio and second is Maruti Suzuki India Ltd. Above table also shows that Covid – 19 has almost no effect on the quick ratio of all three companies.

Profitability measurement

Return On Assets = Net Income/Average Total Assets × 100

Year	Maruti Suzuki India Ltd.	Tata Motors Ltd.	Mahindra and Mahindra Ltd.
March – 2014	9.11	0.67	12.01
March – 2015	11.06	-9.48	10.08
March – 2016	12.79	-0.10	9.02
March – 2017	14.34	-4.12	9.11
March – 2018	13.00	-1.74	9.18
March – 2019	11.91	3.31	9.10
March – 2020	9.03	-11.64	2.63
March – 2021	6.03	-3.68	0.45
March – 2022	5.13	-2.17	7.35
March – 2023	9.67	4.41	8.64
Mean	10.21	-2.45	7.76

(Sources: Annual reports of Maruti Suzuki India Ltd., Tata Motors Ltd. and Mahindra and Mahindra Ltd)

The above table of return on assets shows that in most of the years Maruti Suzuki India Ltd. has higher return on assets compare to other two companies. Tata Motors Ltd. has negative return on assets in many years. Mean of companies also indicates that Maruti Suzuki India Ltd. has better average return on assets compare to other two companies, Mahindra and Mahindra Ltd. has also good average return compare to Tata Motors Ltd. While Tata

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Motors Ltd. has negative mean, which indicate negative average return on assets. Above table also shows that Covid – 19 has affected the return on assets of all three companies, it can be seen in the return of March - 2020 and March - 2021.

Return on Equity = Net Income/Equity × 100

Year	Maruti Suzuki India Ltd.	Tata Motors Ltd.	Mahindra and Mahindra Ltd.
March – 2014	13.26	1.74	22.39
March – 2015	15.64	-31.93	17.25
March – 2016	17.95	-0.26	14.29
March – 2017	20.17	-11.48	13.60
March – 2018	18.49	-5.13	14.37
March – 2019	16.25	9.11	14.01
March – 2020	11.66	-39.64	3.86
March – 2021	8.23	-12.57	0.77
March – 2022	6.96	-6.97	12.66
March – 2023	13.33	12.14	15.10
Mean	14.194	-8.50	12.83

Sources: Annual reports of Maruti Suzuki India Ltd., Tata Motors Ltd. and Mahindra and Mahindra Ltd.

In the above table of return on equity both Maruti Suzuki India Ltd. and Mahindra and Mahindra Ltd. has better return compare to Tata Motors Ltd. In both companies Maruti Suzuki India Ltd. has higher mean of return on equity. While Tata Motors Ltd. has negative return on equity mean. Above table also shows that Covid – 19 has affected the return on equity of all three companies, it can be seen in the return of March – 2020 and March – 2021 which shows the reduction in return on equity.

Regression Analysis

Regression analysis in this study is used to test the hypothesis that the significant impact of liquidity ratios on profitability. Linear regression is used to find out relationship between liquidity ratios and profitability ratios

Y = a + bx

Where,
Y – Dependent Variable
A – Y intercept of the equation
B – Slope of the equation
X – Independent Variable

In this study regression models could be created as follows;

ROA= a0+ a1 CR + b2 QR…………. Model 01
ROE= b0+b1 CR+ b2QR……………Model 02

Where, ROA indicates Return on Assets, ROE indicates Return on Equity, CR indicates Current assets and QR Indicates Quick ratio.

A0 and b0 indicate the constant terms A1, a2, b1, b2 are regression coefficients.

Model summary (Dependent variable- ROA and ROE)

Model	R	R Square	Adjusted R Square	F Statistics
ROA	0.490	0.240	0.184	4.263
ROE	0.497	0.247	0.191	4.426

Here for Model 01
R2= 0.240
Adjusted R2 = 0.184
It indicates that 24% of ROA can be explained by the differences in the independent variable (Liquidity ratios), the remaining 76% of the ROA is attributed to other factors.
Whereas for model 2
R2= 0.247

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Adjusted R2 = 0.191
In this model R2
It indicates that 25% of ROE can be explained by the differences in the independent variable (Liquidity ratios), the remaining 75% of the ROE is attributed to other factors.

Result of Regression Analysis (Dependent Variable = ROA)

Independent variable	B	Std. error	T	Sig.
(Constant)	-7.728	5.076	-1.522	0.140
Current Ratio	40.714	22.937	1.775	0.087
Quick Ratio	-36.013	24.735	-1.456	0.157

Result of Regression Analysis (Dependent Variable = ROE)

Independent variable	B	Std. error	T	Sig.
(Constant)	-21.350	10.937	-1.952	0.61
Current Ratio	83.134	49.419	1.682	0.104
Quick Ratio	-71.743	53.293	-1.346	0.189

Independent variable (Quick ratio) has negative insignificant impact on ROA and ROE. Whereas, independent variable (Current ratio) has positive insignificant impact on ROA and ROE. The Significant parameter estimates at 5% significance level. P-value is higher than 0.05, we can accept the null hypothesis and conclude that there is no relationship between Liquidity ratios on profitability ratios.

FUTURE SCOPE OF THE STUDY

The present study can be further extended in the following ways:
The present study is only for 3 companies for only Automobile sector, it can be further compared with other companies and sectors. The present study is only for 10 years. This can be increased in order to broaden up the scope of the study. The present study used only two statistical techniques. It can be further extended with the use of other statistical techniques to analysed the relationship between Liquidity and Profitability.

CONCLUSION

The purpose of the study is to find out the liquidity and profitability performance of companies. And to check relationship between liquidity and profitability of selected companies. For the purpose of the study three companies are selected from the Automobile sector. In the comparison of liquidity ratio which shows the ability of short-term liabilities payment, From the analysis it has been observed that in liquidity ratio, Mahindra and Mahindra Ltd. Performed better than Maruti Suzuki India Ltd and Tata Motors Ltd. while in profitability ratio Maruti Suzuki India Ltd. Performed better than Mahindra and Mahindra Ltd and Tata Motors Ltd. from the regression analysis it has been observed that there is no statistically significant relationship between the liquidity ratio on profitability ratio. So, study concludes that there is no impact of liquidity ratio on profitability ratio.

REFERENCE

1. Bharti, U., & Singh, S. (2014). Liquidity and Profitability Analysis of Commercial Banks in India–A Comparative Study. Global Journal of Enterprise information system, 6(4), 24-28.
2. Ehiedu, V. C. (2014). The impact of liquidity on profitability of some selected companies: The financial statement analysis (FSA) approach. Research Journal of Finance and Accounting, 5(5), 81-90.
3. Khan, M. M., & Safiuddin, D. (2016). Liquidity and Profitability Performance Analysis of Selected Telecoms Companies. International Journal of Research in Regional Studies, Law, Social Sciences, Journalism and Management Practices (AIJRRLSJM), 1(8), 365-376.
4. Madushanka, K. H., & Jathurika, M. (2018). The impact of liquidity ratios on profitability. International Research Journal of Advanced Engineering and Science, 3(4), 157-161.
5. Sreegeetha, M. T., & Revathi, P. (2022). Liquidity And Profitability Analysis Of Select Electrical Machinery Companies In India. Central European Management Journal, 30(4), 2381-2387.
6. Tripathi, S. (2020). A Study on Merger and Acquisition in FMCG Industry in India. GAP iNTERDISCIPLINARITIES-A GLOBAL JOURNAL OF INTERDISCIPLINARY STUDIES.