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Liquidity and Profitability Analysis of Selected Automobile Companies

[1]Vikas Garg, [2]Pooja Tewari, [3]Shalini Srivastav

[1]*Amity Business School, Amity University, U.P, India*

[2]*ABES Engineering College, U.P, India*

[3]*Amity Business School, Amity University, U.P, India*

[1]vgarg@gn.amity.edu

[2]pooja.tiwari@abes.ac.in

[3]ssrivastav@gn.amity.edu

Abstract:

Liquidity management and Profitability of a firm is of a major importance in the current scenario majorly for financial management decision. The most accepted fiscal performance can only be achieved by organizations who can maintain a tradeoff between profitability and liquidity position of the organization. The main objective of this study is to know the importance of both of them. In this regard, researchers are interested in the study of Automobile companies. It is known that mangers can increase the profitability and sustain liquidity by working on various ratios of the companies like, Current ratio, liquidity ratio etc. It can also emphasize on maintaining the cost of goods sold and analyzing the various areas of operations in order to strengthen the financial position of the country. All financial ratios are used to assess the performance of the company but profitability ratios are helpful in calculation of the operations invested. Various liquidity ratios are also calculated for short term analysis of a business concern. Thus, we can say that profitability ratios are the major decision maker to understand the overall efficiency of an organization. Management and profitability ratios relating to investment are helpful in calculating a reasonable return on capital.

Keywords: *Profitability, Liquidity, Capital Employed, Ratio Analysis, Indicators.*

1. INTRODUCTION

Liquidity means the efficiency of a firm to fulfil its short term requirements and commitments. It is considered to be a very important factor to fulfil the working capital requirements of a concern on daily basis. In case of a bad liquidity it becomes difficult for a firm to fulfil its working capital requirements every day. The goodwill of a company are based on the firms borrowing capacity .In situations of excess liquidity it is difficult for firm to invest its excess funds as there are less option available for investment. Since excess funds are earning less returns it effects profitability which finally leads to changes in wealth maximisation. Profitability is categorised in various ways like profits before tax, profit after tax, shareholders return on investment and return on assets.

Profitability mainly deals in two areas: Income and Ability .The former indicates earnings based on sales and latter defines the capacity of a firm for effective utilisation of its resources. It is said that high profit cannot explain the effectiveness of any firm because at times it does not relate with organisational growth and low profitability every time does not show that the company is under losses. As we realise that profitability is the major criteria, there are various statistical tools which we require to understand the capacity of a business concern and asset management mangers and heads are authorised to take necessary action. The objective of these indicators is to calculate the operational efficiency and also the returns generated by the company by the help of stakeholders like management, owners, creditors etc.

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1.1 Ratios used for Liquidity and Profitability:

Three automobile companies like: Maruti Suzuki ltd, Mahindra and Mahindra, Tata Motors are providing services Automobile Industry. This paper deals with the study of above mentioned three automobile companies. The different ratios are meant to discuss the financial position of these companies.
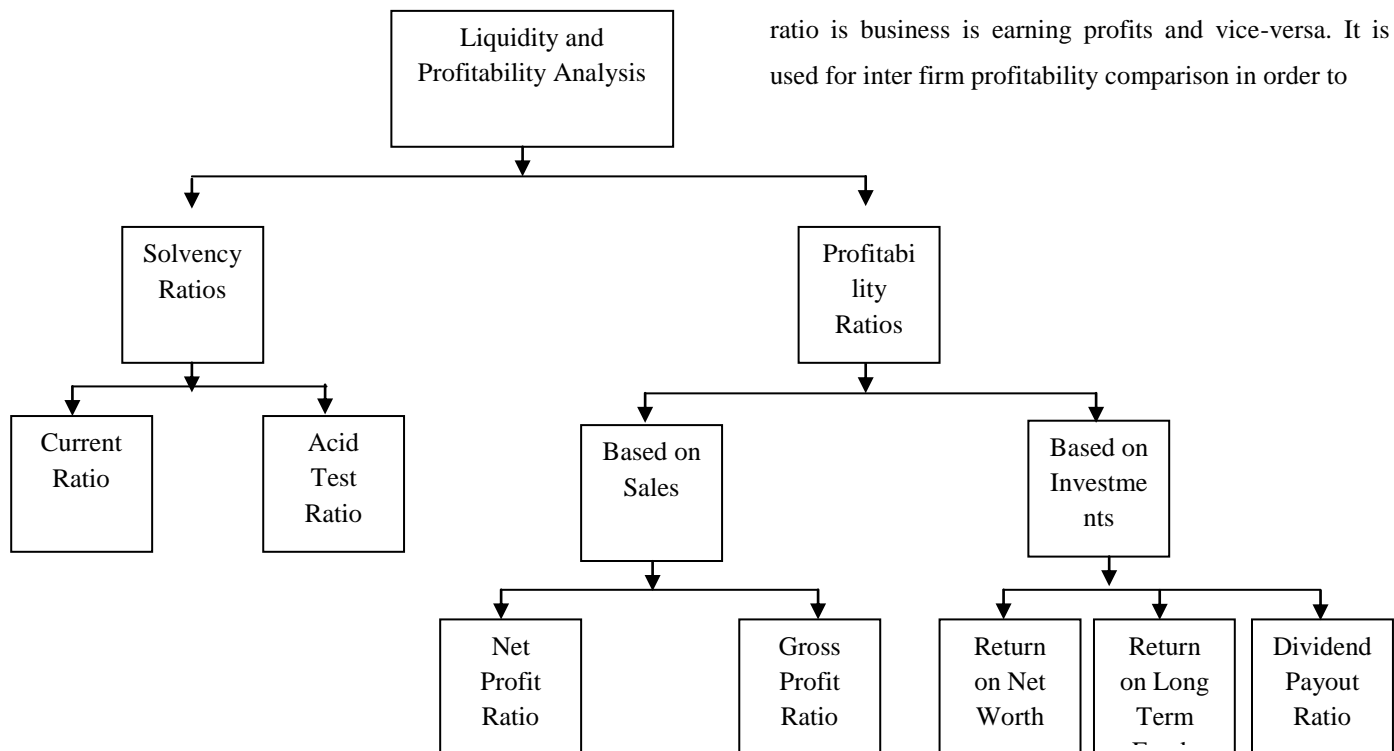
Acid test ratio

It is the company's requirements to fulfill its current requirements and a relationship between current assets and liabilities. This ratio measures the company's performance to meet short term requirements for majorly liquid assets. Under this ratio we do not include the inventories from current assets as it is named with the fact that cash and marketable securities are quick sources of cash.

Net Profit ratio

This ratio indicates the overall profits of the business. Higher this ratio is business is earning profits and vice-versa. It is majorly used for inter firm profitability comparison in order to

Figure 1. (Ratio)

Current ratio

The current ratio is also known as "Working capital Ratio". It is a ratio which is used to indicate the company's performance to overcome its short term obligations and also comparison of its current assets and current liabilities. Ideal ratio is considered to be 2:1 in business but higher ratios lead to increase in short term creditors.

Current ratio tells us about the short term liabilities which we require to complete soon. It is an indicator of the firm's liability and also defines the stability of a firm. A very high ratio indicates less sales, idle cash and bank balances and no efficient use of funds, similarly a very low ratio means any credit balance which can result in a negative image of the customer.

understand the firm's position in the market. It is one of the best ways to measure a company's report over a period of time and to judge the performance over time. It is also helpful to understand the market condition of a firm in relation to its competitors.

Net profit means not only cash flows ,but also large number of non cash expenses are also a part of it ,like depreciation, amortization etc It is considered as a ratio of net to net revenue . Net profit is not a pointer of cash flows, since net profit incorporates a number of non-cash expenses, such as accrued expenses, amortization, and depreciation etc. It is defined as the ratio of net profit to the net revenue.

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Gross profit ratio

This ratio bridges a gap between revenue and trading costs. In order to have a stable gross profit is important as the higher the better. It also has an impact on the efficiency of a business in terms of operations and also by dividing the gross profit with net sales in percentage terms.

Return on net worth

Return on net worth is also known as Return on Equity (ROE). It is calculated by the relationship of net income to the shareholder's equity. Return on Equity is a good indicator of a firm's ability at generating Income.

Return on long term fund

Return on long term fund is a relationship between the net profit and long term fund. Long term fund is the total investment by business unit for long term. It is considered by dividing the EBIT (Earnings before interest and tax) by the long term fund.

Dividend payout ratio

Dividend payout ratio is defined as the ratio of yearly dividend per share by the business unit. It is also defined as the ratio of dividends to the net income.

2. LITERATURE REVIEW

Lazaridis and Tryfonidis (2006) were done study of some selected firms of the Athens Stock Exchange for 2001-2004. Through different variables Bills payable, Bills Receivable, stock and etc. they using correlation, regression test and found relationship between ratios and other components of Balance Sheet of different- different years [1].

Chakraborty and Bandopadhyay (2007) shows during their study of strategic working capital management, and its role in corporate strategy development, ultimately ensuring the survival of the firm. They conclude that what is the impact on the performance of the company of strategic current asset and Liabilities decisions [2].

Raheman and Nasr (2007) studied the effect of working capital variables on the net operating profitability of selected 94 Pakistani firms who was listed in Karachi Stock Exchange from 1999 - 2004 and conclude negative relationship between variables of working capital management and profitability of the firm [3].

Singh and Pandey (2008) investigate the impact of working capital management on profitability for Hindalco Industries Limited and found management of working capital is essential as it has a direct impact on profitability and liquidity [4].

Ogbru (2009) shows in pharmaceutical sector, in coming years, we will require huge capital investments for medicinal compounds discovery. This may hamper the profitability situation of the pharmaceutical companies [5].

Bhunia, (2010), analyzed the   importance of liquidity management on profitability as a factor responsible for poor financial performance in the private sector steel Industry in India in his article "A study of liquidity trends on private sector steel companies in India" [6].

Bhunia and Sarkar (2011) found the few financial ratios can be used to predict the financial soundness of the pharmaceutical firms [7].

Khartik and Varghese, (2011) found that profitability totally depends on the efficient utilization of resources and to manpower and suggest to increase production capacity and cut down cost of production in order to increase profitability [8].

Sheila and Karthikeyan (2012) studied Indian pharmaceutical firms in terms of profitability. They found that Cipla was the best company having strongest financial performance out of all selected companies. They also found that ROE & ROI are the most comprehensive measure for profitability of a firm [9].

Vataliya (2012) also studied profitability performance of pharmaceutical companies in India. He also found that Cipla performed the best out of all selected companies. They also remarked about consistency of performance of Cipla [10].

Syed azhar and Ramesh, (2012), concluded that In case of the practice of an asset-liability difference may happen which may increase firm's profitability in the short-run with bankruptcy risk [11].

Nandi Chandra Kartik (2012) found that the selected company always tries to maintain adequate amount of net working capital in relation to current liabilities to keep a good amount of liquidity during the study period at the time of their study [12].

Nishanthini and Nimalathasan(2013), studied that selected manufacturing companies in Sri Lanka has different ranking

based on each profitability indicators such as Gross Profit Ratio, Net Profit Ratio, Return on Investment etc [13].

Karamehic (2013) analyzed the financial performance of the United States Pharmaceutical industry. He forecasted that financial performance will go down in coming future [14].

M. K. Jain, Vikas Garg and Shivranjan (2017) in their study made financial analysis of Tata Steel, Steel Authority of India and Jindal South West Steel Ltd and clearly shows relationship between all depends on Ratio Analysis [15].

In this paper, authors have proposed that analysis using Ratio Analysis and ANOVA analysis.

3. SAMPLING AND RESEARCH METHODOLOGY

The current study is based on secondary data and it is also analytical in nature. This study is based on understanding the liquidity and profitability of Automobile companies. The research is based on secondary data from the year 2012 -2017 which is analyzed from various annual reports of automobile companies. Data analysis is done by ratios, ANOVA, standard deviation, coefficient of variation are used.

3.1 Objectives of the Study

The study has been examined and evaluates all the prospects of the potency and profitability of selected Automobile companies on certain parameters through ratio analysis and ANOVA analysis. The following are the major objectives of the study:

- ✓ To analyze the trends in the growth and profitability of Maruti Suzuki Ltd., Mahindra and Mahindra, Tata Motors companies during the last five years.

- ✓ To appraise the financial position of Maruti Suzuki Ltd., Mahindra and Mahindra, Tata Motors companies through various ratios.

- ✓ To study the significance relationship between the companies and between the years by using ANOVA.

3.2 Hypotheses of Study

Null Hypotheses (H0) There is no significant variation in Current Ratio between the companies and between years.
Null Hypotheses (H0) There is no significant variation in Acid test Ratio between the companies and between years.

Null Hypotheses (H0) There is no significant variation in Net Ratio between the companies and between years.
Null Hypotheses (H0) There is no significant variation in Gross Profit Ratio between the companies and between years.
Null Hypotheses (H0) There is no significant variation in Return on Net Worth between the companies and between years.
Null Hypotheses (H0) There is no significant variation in Return on Long Term Funds between the companies and between years.
Null Hypotheses (H0) There is no significant variation in Return on dividend payout ratio between the companies and between years.

4. DISCUSSION

Liquidity comparison and Data Analysis through Current Ratio

TABLE1.1

COMPANIES/YEAR		2016-17	2015-16	2014-15	2013-14	2012-13	AVE	SD	CO-EFF	MIN	MAX
Current Ratio	Maruti Suzuki India	0.55	0.63	0.68	0.77	1.04	0.73	0.19	25.72	0.55	1.04
	Mahindra and Mahindra	1.03	1.01	1.05	1.19	1.02	1.06	0.07	7.00	1.01	1.19
	Tata Motors	0.52	0.53	0.42	0.43	0.42	0.46	0.06	12.06	0.42	0.53

Source: www.moneycontrol.com

Table 1.1 shows that Current Ratio of Maruti Suzuki India is decreasing year by year its 1.04 in 2012-13, 0.77 in 2013-14 and 0.55 in 2016-17. In Mahindra and Mahindra its Fluctuating 1.02 in 2012-13 but change year by year continuously and finally 1.03 in 2016-17. In case of Tata Motors it's so varied 0.42 in 2012-13, 0.43 in 2013-14, 0.53 in 2015-16 and 0.52 in 2016-17.
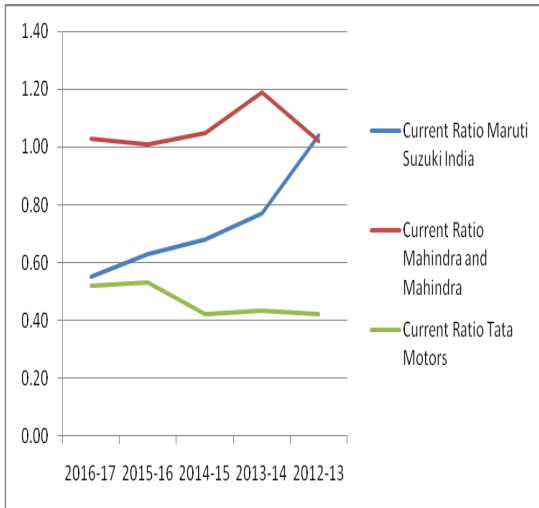
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CHART1.1

TABLE1.2

Source of Variation	Sum of Squares	Degrees of Freedom	Mean of Square	Calculated Variance Ratio	Tabulated Variance Ratio
Between Samples	0.8907	2	0.4453	30.1848	3.8853
Within Samples	0.1770	12	0.0148		
Total	**1.0677**	**14**			

From Table 1.2, it can be seen that the variance ratio after calculation is 30.1448 but Tabulated variance Ratio is 3.8853 who is lower at 5% level of significance. Hence, the assumed null hypothesis (Ho) is True, and thus, there is No significant variation in Current Ratio between the companies and between years.

Liquidity comparison and Data Analysis through Acid Test Ratio

TABLE1.3

	COMPANIES/ YEAR	20 16- 17	20 15- 16	20 14- 15	20 13- 14	20 12- 13	A V E	S D	CO - EF F	M I N	M A X
A ci d T es t R at io	Maruti Suzuki India	0.3 5	0.3 7	0.4 1	0.6 7	0.9 0	0. 5 4	0. 2 4	44. 25	0. 3 5	0. 90
	Mahindra and Mahindra	0.8 3	0.8 3	0.8 4	0.9 3	0.7 7	0. 8 4	0. 0 6	6.8 4	0. 7 7	0. 93
	Tata Motors	0.4 2	0.4 1	0.4 2	0.3 6	0.4 0	0. 4 0	0. 0 2	6.1 9	0. 3 6	0. 42

Source: www.moneycontrol.com

Table 1.3 shows that Acid Test Ratio of Maruti Suzuki India is fluctuating a lot 0.67 in 2012-13, 0.67 in 2013-14, 0.41 in 2014-15 and 0.35 in 2016-17. In case of Mahindra and Mahindra 0.77 in 2012-13 but after variation every year 0.84 in 2014-15, 0.83 in 2015-16 and 0.83 in 2016-17. In Tata Motors it's up down 0.40 in 2012-13, 0.42 in 2014-15, 0.41 in 2015-16 and 0.42 in 2016-17
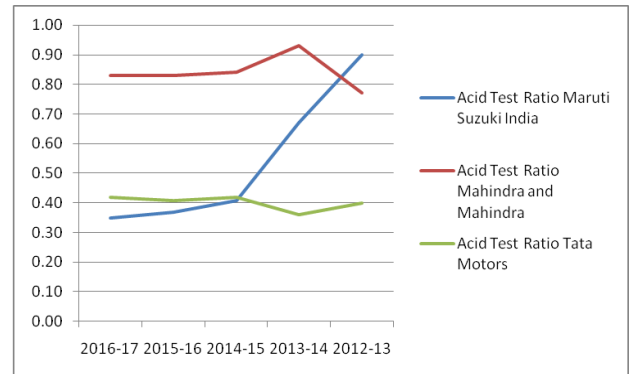
CHART1.2

TABLE 1.4

Source of Variation	Sum of Squares	Degrees of Freedom	Mean of Square	Calculated Variance Ratio	Tabulated Variance Ratio
Between Samples	0.5015	2	0.2507	12.3274	3.8853
Within Samples	0.2441	12	0.0203		
Total	**0.7456**	**14**			

From Table 1.4, it can be seen that the calculated value of 'F' (12.3274) is greater than the table value of 'F' (3.8853) at 5% level of significance. Hence, the null hypothesis is true, and thus, there is no significant difference in Net Ratio between the companies and between years.

Profitability Comparison & Data Analysis based on sales through Net Profit Ratio

TABLE1.5

COMPANIES/YEAR		2016-17	2015-16	2014-15	2013-14	2012-13	AVE	SD	CO-EFF	MIN	MAX
NET PROFIT RATIO	Maruti Suzuki India	10.78	7.91	7.42	6.36	5.48	7.59	2.02	26.57	5.48	10.78
	Mahindra and Mahindra	9.03	7.74	8.52	9.27	8.29	8.57	0.61	7.08	7.74	9.27
	Tata Motors	-5.59	0.55	-13.05	0.97	0.67	-3.29	6.11	-185.59	-13.05	0.97

Source: www.moneycontrol.com

Table 1.5 shows that the Net Profit to turnover ratio for Maruti Suzuki India was 5.48% in the year 2012-13 which increased to 10.78% in the year 2016-17. It is a good indication for the company. Net Profit to turnover ratio also so floating for Mahindra and Mahindra it was 8.29 % in 2012-13 its decrease/increase since 2015-16 that's so danger zone of the company. In case of Tata Motors its 0.67% in the year 2012-13 then its go so down -5.59 % in 2016-17 this is not a good indication for company.
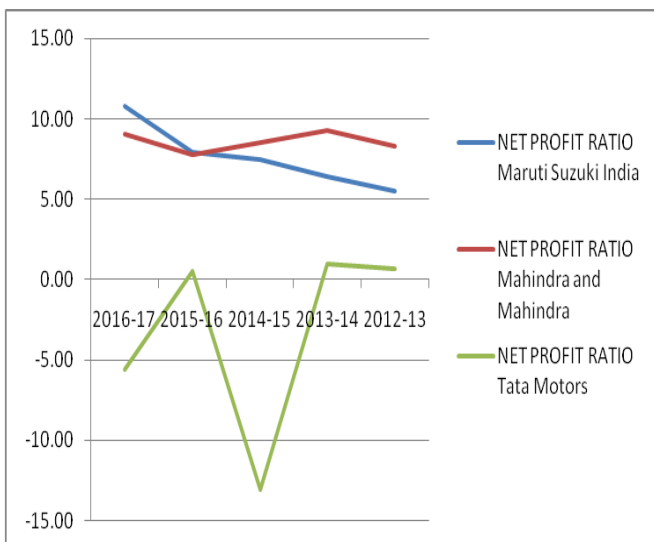
CHART1.3

TABLE 1.6

Source of Variation	Sum of Squares	Degrees of Freedom	Mean of Square	Calculated Variance Ratio	Tabulated Variance Ratio
Between Samples	433.3240	2	216.6620		
Within Samples	166.8662	12	13.9055	15.5810	3.8853
Total	600.1902	14			

From Table 1.6, it can be seen that the calculated value of 'F' (15.5810) is more than the table value of 'F' (3.8853) at 5% level of significance. Hence, the null hypothesis is true, and thus, there is no significant difference in Net Ratio between the companies and between years.

Profitability Comparison & Data Analysis based on sales through Gross Profit Ratio

TABLE-1.7

COMPANIES/YEAR		2016-17	2015-16	2014-15	2013-14	2012-13	AVE	SD	CO-EFF	MIN	MAX
Gross PROFIT RATIO	Maruti Suzuki India	11.39	10.65	8.49	6.89	5.43	8.57	2.50	29.15	5.43	11.39
	Mahindra and Mahindra	7.86	8.46	8.21	9.52	9.88	8.79	0.87	9.91	7.86	9.88
	Tata Motors	-3.88	-0.32	-10.58	-8.69	-0.24	-4.74	4.75	-100.16	-10.58	-0.24

Source: www.moneycontrol.com

Table 1.7 shows that the Gross Profit to turnover of Maruti Suzuki India was 5.43% in the year 2012-13 which increased to 11.39% in the year 2016-17. It shows that the company's profit has increased as against the turnover of the company and then it continuously increased which shows the operating efficiency of the management of the company. It is a good indication for the company. In Mahindra and Mahindra 9.88 % in 2012-13 and it's in decline mode till 2016-17, 7.86 %. It's not a good indication for the company. Tata Motors Gross profit ratio in 2012-13 is -0.24%

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and continuously fluctuate and in 2016-17 it's -3.88% and it's not good time for the company.
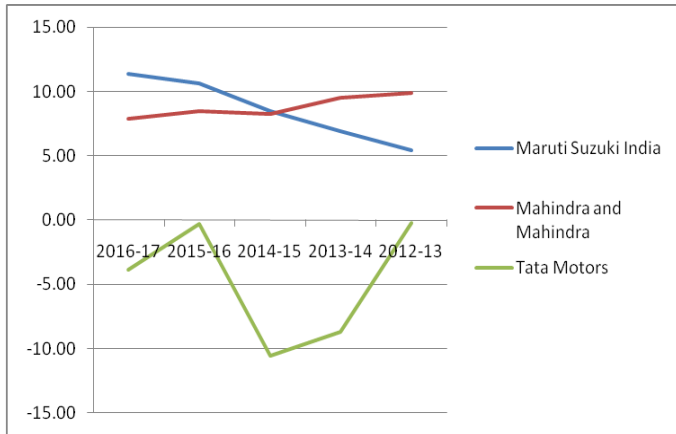
Chart No-1.4

Table 1.8

Source of Variation	Sum of Squares	Degrees of Freedom	Mean of Square	Calculated Variance Ratio	Tabulated Variance Ratio
Between Samples	600.4380	2	300.2190	30.4707	3.8853
Within Samples	118.2324	12	9.8527		
Total	718.6704	13			

From Table 1.8, it can be seen that the calculated value of 'F' (30.4707) is more than the table value of 'F' (3.8853) at 5% level of significance. Hence, the null hypothesis is true, and thus, there is no significant difference in Net Ratio between the companies and between years.

Profitability Comparison & Data Analysis based on capital employed through Return on Net Worth

TABLE 1.9

COMPANIES/ YEAR		2016-17	2015-16	2014-15	2013-14	2012-13	AVE	SD	CO-EFF	MIN	MAX
Return on Net Worth	Maruti Suzuki India	20.28	16.92	15.65	13.26	12.87	15.80	3.02	19.09	12.87	20.28
	Mahindra and Mahindra	15.40	14.59	17.25	22.39	22.88	18.50	3.90	21.07	14.59	22.88
	Tata Motors	-11.91	1.04	-31.93	1.74	1.57	-7.90	14.63	-185.23	-31.93	1.74

Source: www.moneycontrol.com

Table No. 1.9 shows that Maruti Suzuki India Return on Net Worth is 12.87 in 2012-13 and after that it's continuously up till 20.28 in 2016-17. Mahindra and Mahindra Return on Net Worth is 22.88 in 2012-13, then its continuously decreasing 22.39 in 2013-14, 17.25 in 2014.15, 14.59 in 2015-16 and 15.40 in 2016-17. In Tata Motors Return on Net worth 1.57 in 2012-13, 1.74 in 2013-14 and then its go in negative -31.93 in 2014-15, and then fall down to -11.91 in 2016-17.
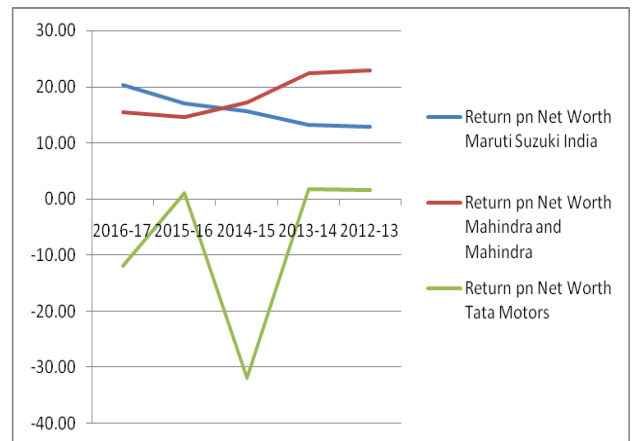
CHART 1.5

TABLE 1.10

Source of Variation	Sum of Squares	Degrees of Freedom	Mean of Square	Calculated Variance Ratio	Tabulated Variance Ratio
Between Samples	2109.4801	2	1054.7401	13.2781	3.8853
Within Samples	953.2159	12	79.4347		
Total	3062.6960	14			

From Table 1.10, it can be seen that the calculated value of 'F' (13.2781) is more than the table value of 'F' (3.8853) at 5% level of significance. Hence, the null hypothesis is true, and thus, there is no significant difference in Net Ratio between the companies and between years.

Profitability Comparison & Data Analysis based on capital employed through Long term Funds

TABLE 1.11

COMPANIES/YEAR		2016-17	2015-16	2014-15	2013-14	2012-13	AVE	SD	CO-EFF	MIN	MAX
Return on Long Term Funds	Maruti Suzuki India	27.73	24.49	21.27	17.88	16.63	21.60	4.60	21.29	16.63	27.73
	Mahindra and Mahindra	17.14	18.61	18.60	22.29	25.51	20.43	3.42	16.73	17.14	25.51
	Tata Motors	-2.15	6.03	-7.21	2.94	7.28	1.38	6.02	437.10	-7.21	7.28

Source: www.moneycontrol.com

From Table 1.11, it can be seen that Long term Funds of Maruti Suzuki India is 16.63 in 2012-13, 17.88 in 2013-14 it's continuously increasing till 27.73 in 2016-17. Mahindra and Mahindra Long term Funds 25.51 in 2012-13 then highly varied till 17.14 in 2016-17. Tata Motors 7.28 in 2012-13, 2.94 in 2013-14, then finally its -2.15 in 2016-17.
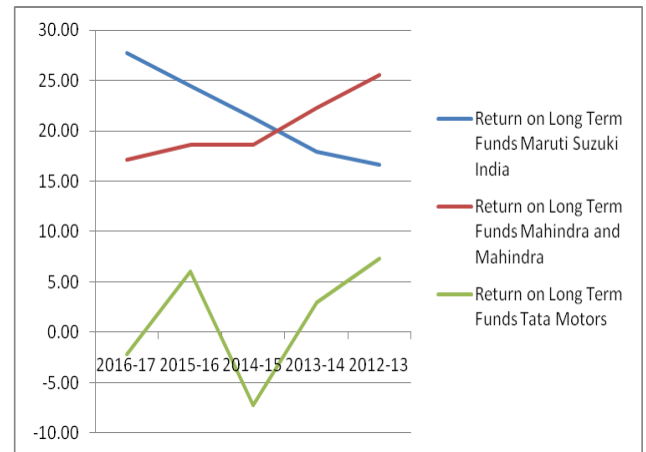
CHART 1.6

TABLE 1.12

Source of Variation	Sum of Squares	Degrees of Freedom	Mean of Square	Calculated Variance Ratio	Tabulated Variance Ratio
Between Samples	1288.7948	2	644.3974	27.9723	3.8853
Within Samples	276.4437	12	23.0370		
Total	1565.2385	13			

From Table 1.12, it can be seen that the calculated value of 'F' (27.9723) is more than the table value of 'F' (3.8853) at 5% level of significance. Hence, the null hypothesis is true, and thus, there is no significant difference in Net Ratio between the companies and between years.

Growth and Profitability Comparison & Data Analysis through Dividend Payout Ratio

TABLE 1.13

COMPANIES/YEAR		2016-17	2015-16	2014-15	2013-14	2012-13	AVE	SD	CO-EFF	MIN	MAX
Dividend Payout Ratio	Maruti Suzuki India	14.40	23.12	20.34	13.02	10.10	16.20	5.38	33.19	10.10	23.12
	Mahindra and Mahindra	18.22	23.53	22.44	22.94	23.80	22.19	2.28	10.27	18.22	23.80
	Tata Motors	0	26.04	0	193.87	213.77	144.56	103.12	71.34	26.04	213.77

Source: www.moneycontrol.com

From Table 1.13, it can be seen that Dividend Payout Ratio of Maruti Suzuki India 10.10 in 2012-13, then continuously increase till 23.12 in 2015-16, then decrease 14.40 in 2016-17. Mahindra and Mahindra Dividend Payout Ratio 22.19 in 2012-13 then varied year by year and 18.22 in 2016-17. In case of Tata Motors 213.77 in 2012-13 then adopt increasing order 1963.87 in 2013-14 but its Zero in 2014-15 and 26.04 in 2015-16 but sudden decline Zera in 2016-17.
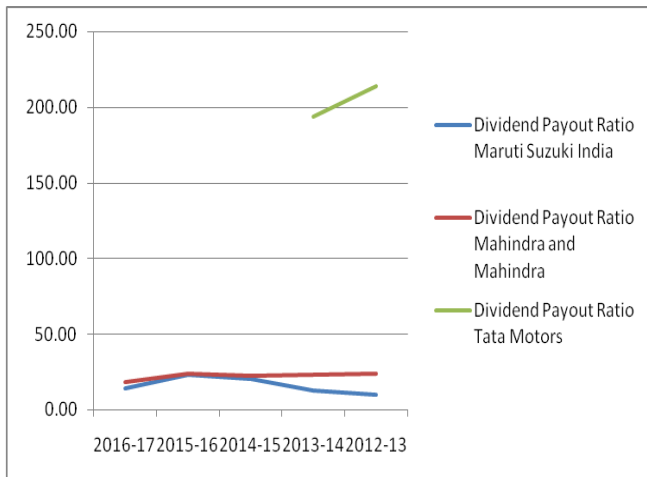
CHART 1.7

TABLE 1.14

Source of Variation	Sum of Squares	Degrees of Freedom	Mean of Square	Calculated Variance Ratio	Tabulated Variance Ratio
Between Samples	52480.9875	2	26240.4937	**4.9824**	**3.8853**
Within Samples	63200.0396	12	5266.6700		
Total	**115681.0271**	**14**			

From Table 1.14, it can be seen that the calculated value of 'F' (4.9824) is more than the table value of 'F' (3.8853) at 5% level of significance. Hence, the null hypothesis is true, and thus, there is no significant difference in Net Ratio between the companies and between years.

Limitations of the study:

1. For this study data is taken by secondary data which is published in various annual reports of these automobile companies.

2. Different observations can be applied in the calculations of different ratios.

3. The current study is majorly based on ANOVA and ratios analysis. These mathematical tools have their own limitations.

5. CONCLUSION AND SUGGESTIONS

Management of liquidity and profitability is important in financial decision making. The most important fiscal performance is achieved by companies having a balance between Profitability and liquidity performance indicators. By this study we are able to calculate the financial position of companies and also to calculate the importance of them. Descriptive statistics tells us about the performance of a firm which is efficient and also helps us to analyze the liquidity position of a firm. Thus the study deals about the financial concern, financial variables and the company's shareholders wealth. On the basis of this information the following conclusions can be made:

1. The liquidity of a company has been changed by detailed study of the company and the necessary steps which can be taken by the company to increase their current ratio.

2. All the organizations must contain a substantially large number of money and bank balance in order to fulfill its short-term activities for emergency purposes. In that case we should always increase our capital margin of working capital and necessary arrangements of credit with financial institutions and banks to maintain sufficient amount of liquidity.

3. Various organizations should make an effort to collect sufficient amount of liquid assets to fulfill all the short term requirements.

4. Companies should majorly be able to find the cost of goods sold and operating expenses in order to increase the profit of the organization and should also be able to find various ways to control it.

5. Companies should try to adopt various cost reduction techniques in order to overcome the problems of the company under critical conditions.

6. In order to strengthen the financial position of a company it is suggested to concentrate on the liquidity, solvency and profitability position of the company.

7.By analyzing on various issues and ANOVA calculation there is a significant difference on the profitability and liquidity ratios of various units suggesting the benefits of comparisons by various financial tools and it is came out to be 5% while the degree of freedom was 14 in this study.

On the basis of this calculation it is clear that there is no difference between various organizations in return on net worth, return on capital employed and also on dividend payout ratio. It is clear from the above ratios that the Maruti Suzuki India is having an outstanding performance in terms of Operating profit ratio, net profit ratio and gross profit ratio .Return on net worth and long term funds of Mahindra and Mahindra is below average and also in the same performance in case of Tata Motors during the same period.

8. The Automobile companies can try to find a major component amongst various variables of working capital in relation to the understanding of total current assets to have sufficient and required amount of liquidity at all times. Such things can also be calculated on the basis of the past performance of the company.

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