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Financial Performance Analysis of Automobile Industry with Special Reference to Ratios

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Abstract

The automobile industry contributes 7.1 % (2022) in India's total GDP which plays a significant role to boost the economy. With the reference of the fact of growing economy, current study is conducted to examine the financial performance of Indian automobile Industry, in which 2 major companies Maruti Suzuki and Tata holding share of 41.6 % and 14.2% have been selected and . Data from the year 2016-21 has been collected from the relevant sources to analyse the financial performance. Statistical tool like correlation, reliability model and regression have been used for performance analysis and it was found that Maruti Suzuki is more efficient in utilizing their resources and making more profits whereas Tata is also making efficient use of their resources but failed to reduce their debt for the concerned years.

Key Words: Financial performance, ratios, automobile industry, Indian economy, efficiency.

Introduction

Before 1990's in Indian economy goes in down trend because of various factors such as unemployment, poor standard of living, undergrowth in GDP, trade deficit, low infrastructural developments etc. After that India had realized the need of liberalization policy. In July 1991 India had de-licensed for FDI. Many investors want to invest in India because of liberalization policy; they knew India is the fastest growing economy and developing country. Automobile is one of the main sector in which foreign and Indian investors like to invest because present government making new roads, bridges and developing infrastructure. All investors want to take advantage at this stage and sales of vehicles increasing at very high pace. Indian automobile market is destination for investors to invest in Indian market because purchasing power of an individual is increasing very fast and results to increase in sales. Majorly Germany, USA, South Korea, UK, Japan are investing in Indian Automobile market. **Automobile** sector contributing nearly 7-8%

to India GDP. It is one of the major sector which generating huge number of employment to skilled and unskilled worker directly and indirectly. In present Scenario many players are come forward and gives advanced feature to customers. Many MNC's setup their plants in India and gives cut throat competition to other players in the market. Now, Government takes initiatives to enhance electric vehicles market by reduce taxes on e-vehicles. Automobile sector is one of the largest sectors in production and generate employment. Indian automobile market is at the third numbers in terms of sales behind USA and China only. Automobile industry helps to improve in infrastructure, rails, roads, bridges etc. Indirectly it has impact on various sectors and works as a multiplier in an economy. **Financial performance** is uses of tools, techniques, formulas to analyse companies' profitability. By analysing financial performance of organisation and calculation of ratios we can tell financial condition of organisation to management which helps to increase profitability and maintain ratios of the organisation. Analysis of financial performance tells to internal and external users how the company is performing and helps to take decisions accordingly. There are four statements which help to analyse financial performance of company that is Balance Sheet, Income statement, Cash Flow Statement, Annual Report. Financial Performance have indicators which are also known as Key Performance Indicator. Key Performance Indicators include Gross Profit, Net Profit, Working Capital, Operating Cash flow, Current ratio, Debt to Equity Ratio, Quick Ratio, Inventory Turnover ratio, Return on Equity. All the key indicators help to smooth functioning of organisation and give clear insights to achieve their missions and vision.

Literature Review

Kanagavalli and Saroja focused on ratios and financial performance of automobile industry. They have analysed that automobile industry contribute huge amount to Indian economy. This sector generates employment to millions of people. This study deals with financial performance of companies and to measure the companies strategies and how effectively those strategies are implemented in the organisation and helps to increase profitability, maintain ratios to achieve goals easily. The research methodologies used in this paper are sample design, ratio computed, liquidity performance, solvency performance. As a statistical tool they have used regression which shows variation of one variable occurs with variation of another variable, whereas correlation tells the strenght of relationship between two or more variables. Their study concludes there is positive strong relationship of liquidity ratio. Some fluctuations are found in solvency ratio. Hero motors shows effectively utilization of their resources. They have analysed that Bajaj auto and TVS motors are good in position but more investors wants to invest in Hero motors because of less risk and good return due to their profitability **.Dharmaraj and Kathirvel** have found out the effect of FDI on Indian automobile industry and examined the growth of automobile industry after post liberalization period when 100 percent foreign direct investment is allowed. Their research helps to study the financial performance of automobile sector which helps to take decisions regarding increase or decrease in investment in this sector.In their research paper, according to RBI statistics automobile sector has grown 18 percent after liberalization policy. Post liberalization India has become the second most important destination for foreign direct investment. Across Asia China, India, Singapore are the three major countries for inward foreign direct investment. The objective of their study is to analyse and compare the financial performance of Indian automobile industry during the pre and post Foreign Direct Investment. They have choosen sixteen companies as a sample design. Data for study has been collected from annual reports of sixteen companies from 1999 to 2012. For analysing the liquidity of the firm the ratios which are computed Current Ratio, Quick Ratio, Inventory to Total Assets, Quick Assets to Total Assets and Working Capital to Total Assets Ratios and for profitability they have calculated the Return on Sales, Return on Equity, Return on Total Assets, Return on Capital Employed, Operating Profits to Sales and Net Income to Total Debts. They have calculated "t" test statistics from the data and than compared it with its table value. In their study null hypothesis was rejected which shows significant effect of Foreign Direct Investment on liquidity of Indian automobile sector. They have concluded their research paper increasing in the purchasing power of Indians creates demands for vehicles which attracted multinational corporations to invest in Indian market. **Jothi and Kalaivani** have researched upon two automobile companies that is Honda and Toyota to check their financial management. Automobile industry helps to boost the economy and creates millions of jobs. They have collected data from annual reports of selected companies. Their study covers five years which starts from 2010 to 2014. The objective of their study is to analyse and compare the liquidity, profitability and solvency ratios of selected companies. Their study was based on convenience sampling method. The data is collected from secondary source. They were computed financial ratios in the statistical tools like mean, standard deviation, co-efficient of variation to identify the profitability of Honda and Toyota. They have concluded their research paper as both the companies have good short term liquidity position. Honda Cash Ratio is good as compared to Toyota and sound cash management practice. **Shivam Mathur and Krati Agarwal** research helps to evaluating a company's financial statements for understanding the financial health of the company. Their research helps to both internal and external users such as analysts, creditors, investors etc. The main objective of their study is to compare the financial performance of both companies through inter firm and intra firm analysis. Data for their research is collected from annual reports of selected companies. They have taken two companies as a sample size and duration of their data is being started from 2012 to 2014. Liquidity, Debt, Profitability, Efficiency are used as a statistical tools. They have computed various ratios for evaluating the financial soundness of selected companies such as Gross Profit Ratio, Net Profit Ratio, Debt to Equity Ratio, Earning per Share Ratio and Dividend Pay-out Ratio. They have concluded that Maruti Suzuki has higher sales as compared to Tata and Maruti's Debt is lower than Tata. Maruti is earning more because Maruti's earning per share shows greater than Tata. **Rajalakshmi and Ramachandran** have focused on effect of inflows of FDI to automobile industry have been at increasing rate. They have studied that automobile sector has grown by 18 percent after liberalization. They have used three statistical tool for analysing the study that is Arima, Linear, Compound Model. They have also studied the impact of FDI inflows after liberalization policy. India is the main destination for investors to invest because of rapidly growing economy, low wages. Indian government takes initiatives and makes policy to boost Foreign Direct Investment. They have used Arima, Co-efficient, Linear and Compounded model. Their main objective of the study is to analyse the FDI inflows in automobile industry and give rank to companies based on highest inflows. The government is also preparing ten-year Automotive Mission plan which helps to improve infratructure and remove barriers in growth. They have concluded that FDI inflows have significant growth after liberalization policy. They have analysed FDI inflows helps to change in structure for developing countries and even the world. **Sumesh kuma and Gurbachan Kaur Bhatia** has measures the financial performance of selected companies that is Maruti and Tata since 1991 when the liberalization came in India. Their study is based upon liquidity, Profitability, Ratio, Performance, Liberalization of Tata and Maruti. They have analysed that automobile sector is the major contributor to Gross Domestic Product. The main objective of their study is to compare the ability to meet short term financial obligations of the companies, long term solvency, profitability and efficiency of the companies in utilization of financial resources. The data has been collected from annual reports of selected companies. The period of study is 1992 to 2013. In their research paper Current Ratio and Quick Ratio had computed for analysing the liquidity of selected companies and Gross Margin Ratio, Net Profitability Ratio is calculated to check the profitability of companies. To know the financial efficiency Fixed Asset Turnover Ratio and Capital Employed Turnover Ratio has been calculated. The‘t’ test statistics has calculated and compared with its table value. They have concluded that both the companies have sound in short term solvency, liquidity and profitability. **Abey and Velmurugan** have studied the determinants of profitability in Indian automobile industry. Automobile sector plays a important role in the development of the country. The main objective of their study is to analyse the factors which influencing the profitability of Indian automobile sector. They have collected secondary data from capitaline plus data base. They have chosen twenty-three companies as a sample size. Their study covers the period of 2008 to 2017. They have used Correlation and Multiple regressions as a statistical tool in their study. The limitation of their study is restricted tenure of ten years and data is secondary in nature. Their suggestions is to offering discounts and credit facility to increase the sales which directly helps to increase in profitability and the organisation should utilize their resources in optimum manner to generate more revenues. They have concluded their study is that determinants of profitability of automobile companies is totally affected by the factors which are leverage, size of the company, growth in the sales, asset turnover ratio, index of industrial production. Government also tries to boost automobile industry by improving infrastructure and give financial help.

Objectives of the Study

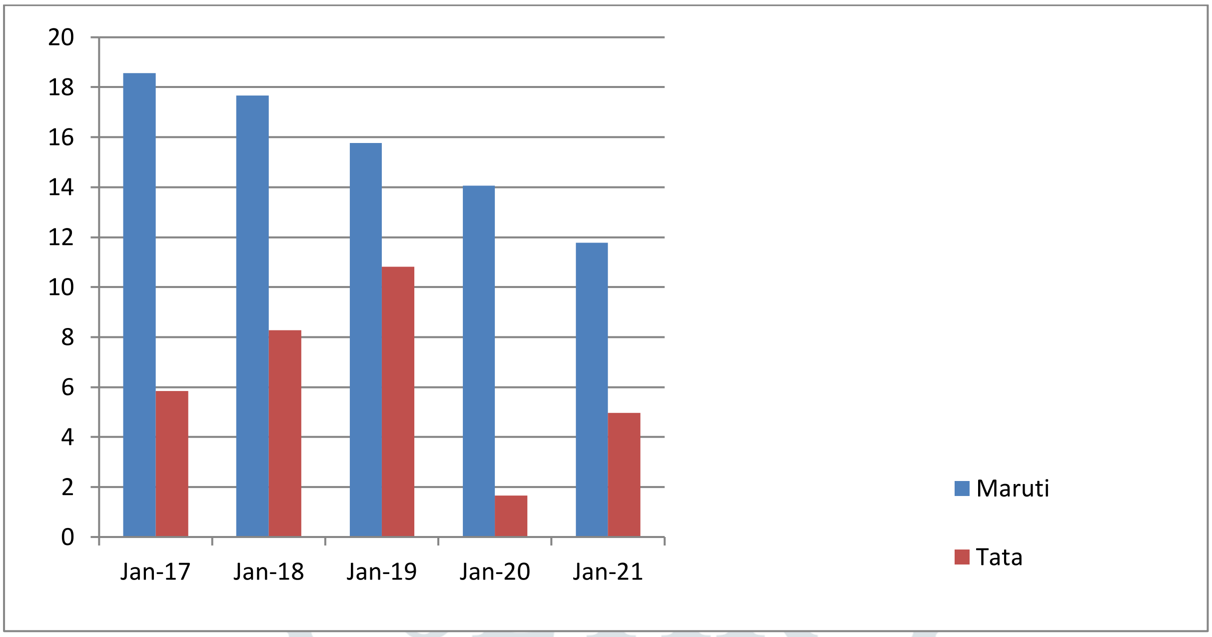
The main objective of this study is to analyse the financial performance of automobile industry by various ratios and comparison has been done of selected companies on the parameters of profitability, liquidity and efficiencies. Data from the year 2016-21 have been derived from BSE, NSE and companies websites.

Research Methodology

This study is based on secondary data. The data has collected from NSE, BSE, Money Control, Annual reports and from internet. Maruti and Tata have taken as a sample. Analysis for this study is the period of five years that is starts from 2016 to 2021. Regression and correlation is used as a statistical tool in this study.

Data Analysis and Results

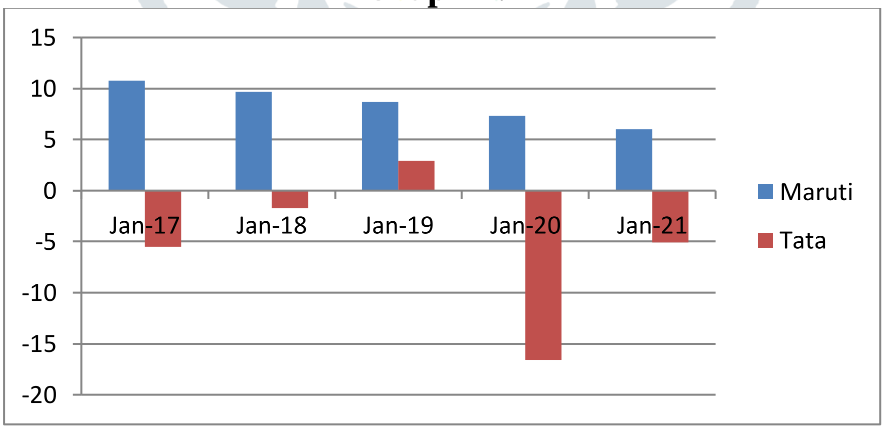
Gross Profit Ratio
Graph 1.1



Source: Author's Compilation

Interpretation: From the above graph we analysed that the Gross Profit Ratio is highest in 2016-17 which is 18.2 and lowest in 2020-21 which is 12. After this, it goes on increasing in next subsequent years and 2020-2021 which is due to the decrease in the profit of the industry. Firstly, there is a small increase in the Earnings Per Share after then it continuously goes on decreasing. We can say that profit of the selected effects the earnings per share of the industry.

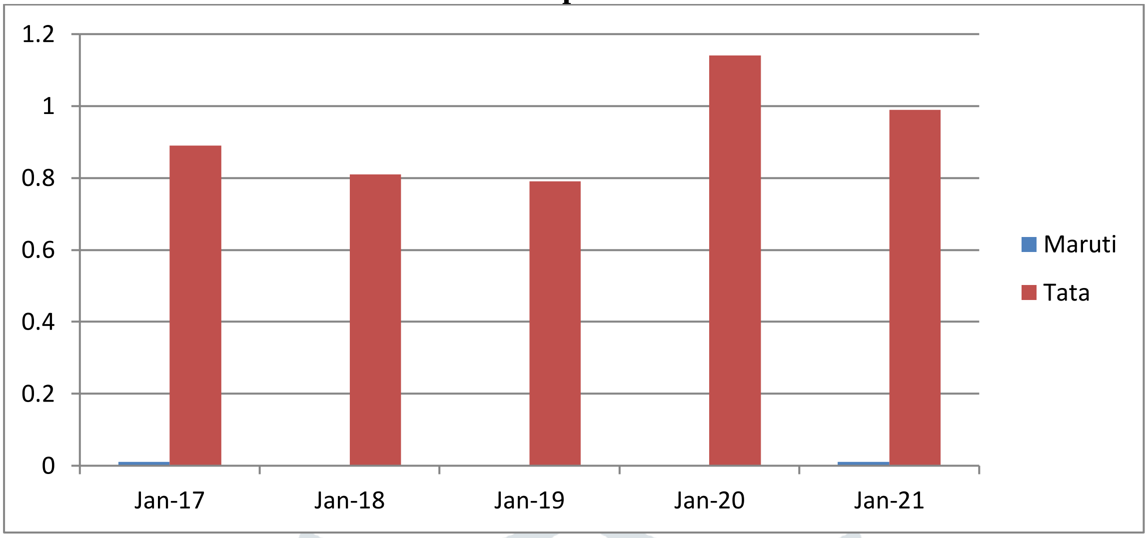
Net Profit Ratio
Graph 1.2



Source: Author's Compilation

Interpretation : From the above graph we analysed that the Net Profit Ratio is highest in 2016-17 which is 10.2 and lowest in 2020-21which is 5.3. After this year it goes on increasing in next subsequent years and 2020-2021 which is due to the decrease in the profit of the industry. Firstly, there is a small decrease in the Earnings Per Share and then it continuously goes on decreasing. We can say that profit of the selected effects the earnings per share of the industry.

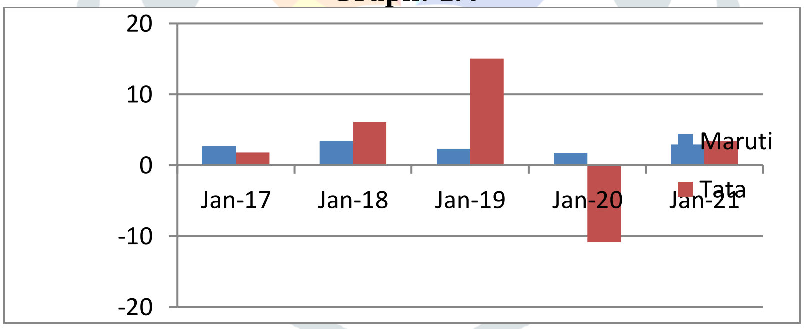
Debt to Equity Ratio
Graph 1.3



Source: Author's Compilation

Interpretation : From the above graph we analysed that the Debt to Equity Ratio is highest in 2019-20 which is more than 1 and lowest in 2018-19which is less than 0.8. After this year it goes on increasing in 2019-2020 and than decreasing in 2020-2021 which is due to the decrease in the profit of the industry. Firstly , there is a small increase in the Earnings Per Share after then it goes on decreasing. We can say that profit of the selected effects the earnings per share of the industry.

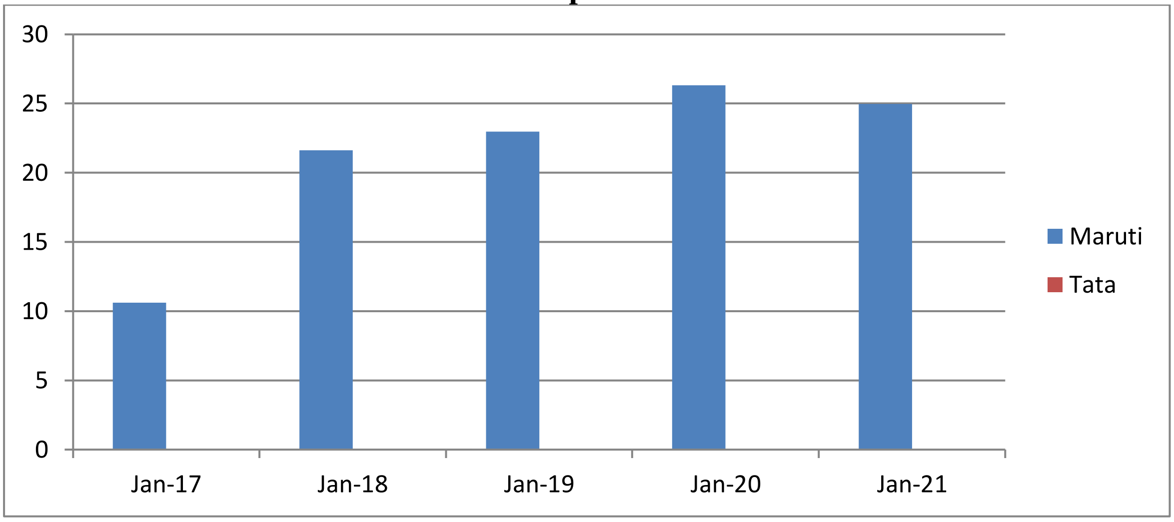
Earning Per Share
Graph: 1.4



Source: Author's Compilation

Interpretation : From the above graph we analysed that the Earning Per Share Ratio is highest in 2017-18 which is nearly 14 and lowest in2019 20 which is negative. After this year it goes on increasing in 2020-2021 and which is due to the increase in the profit of the selected company. Firstly , there is a increase in the Earnings Per Share in 2018-19 after then it goes on increase. We can say that profit of the selected effects the earnings per share of the industry.

Dividend Payout Ratio
Graph: 1.5



Source: Author's Compilation

Interpretation : From the above graph we analysed that the Dividend Pay-out Ratio is highest in 2019-20 which is nearly 27 and lowest in 2016-17 which is 10.1. After this year it goes on increasing in next subsequent years and which is due to the increase in the profit of the industry. Firstly , there is a increase in the Dividend Pay-out ratio and it goes increasing subsequent year till 2019-20. We can say that profit of the selected effects the Dividend Pay-out Ratio of the industry.

Descriptive Statistics
Maruti
Table: 1.1

Descriptive Statistics			
	Mean	Std. Deviation	N
EPS	3.086000	9.3467123	5
Gross Profit	6.310000	3.4585980	5
NP	-5.200000	7.2023816	5
DER	.924000	.1441527	5
DPR	.000000	.0000000	5

Source: Author's calculation

Interpretation: As value of Standard Deviation for majority of variables is very less, it shows that the data is consistent. The values of standard deviation shows the variations come which is .0000 for Dividend Payout Ratio , 0.1441527 for Debt to Equity Ratio, 7.2023816 for Net profit ratio,

Tata
Table: 1.2

Descriptive Statistics

	Mean	Std. Deviation	N
Earnings per share	3.0860	9.34671	5
Gross Profit	6.3100	3.45860	5
Net Profit	-5.2000	7.20238	5
Debt To Equity Ratio	.9240	.14415	5
Dividend Payout Ratio	.00	.000	5

Source: Author's calculation

Interpretation: As value of Standard Deviation for majority of variables is very less, it shows that the data is consistent. The values of standard deviation shows the variations come which is .000 for Dividend Payout Ratio , .14415 for Debt to Equity Ratio,3.45860 for Gross profit, 7.20238 for Net Profit Ratio.3.45860 for earning per share.

Correlation Analysis
Maruti
Table: 1.3

		EPS	Gross Profit	NP	DER	DPR
Pearson Correlation	EPS	1.000	.968	.992	-.910	.
	Gross Profit	.968	1.000	.966	-.955	.
	NP	.992	.966	1.000	-.945	.
	DER	-.910	-.955	-.945	1.000	.
	DPR	.	.	.	.	1.000
Sig. (1-tailed)	EPS	.	.003	.000	.016	.000
	Gross Profit	.003	.	.004	.006	.000
	NP	.000	.004	.	.008	.000
	DER	.016	.006	.008	.	.000
	DPR	.000	.000	.000	.000	.
N	EPS	5	5	5	5	5
	Gross Profit	5	5	5	5	5
	NP	5	5	5	5	5
	DER	5	5	5	5	5
	DPR	5	5	5	5	5

Source: Author's calculation

Interpretations: After applying correlation analysis it was found that the value of Pearson Correlation is highly positive correlated in case of net profit and gross profit ratio with earning per share and Dividend Equity Ratio is highly negative correlated with Earning per share.

Tata
Table 1.4

Correlations						
		Earnings per share	Gross Profit	Net Profit	Debt To Equity Ratio	Dividend Payout Ratio
Pearson Correlation	Earnings per share	1.000	.968	.992	-.910	.
	Gross Profit	.968	1.000	.966	-.955	.
	Net Profit	.992	.966	1.000	-.945	.
	Debt To Equity Ratio	-.910	-.955	-.945	1.000	.
	Dividend Payout Ratio	.	.	.	.	1.000
Sig. (1-tailed)	Earnings per share	.	.003	.000	.016	.000

	Gross Profit	.003	.	.004	.006	.000
	Net Profit	.000	.004	.	.008	.000
	Debt To Equity Ratio	.016	.006	.008	.	.000
	Dividend Payout Ratio	.000	.000	.000	.000	.
N	Earnings per share	5	5	5	5	5
	Gross Profit	5	5	5	5	5
	Net Profit	5	5	5	5	5
	Debt To Equity Ratio	5	5	5	5	5
	Dividend Payout Ratio	5	5	5	5	5

Source: Author's calculation

Interpretations: After applying correlation analysis it was found that the value of Pearson Correlation is highly positive correlated in case of Gross Profit and Earning per Share with Net Profit Ratio and highly negative correlated Net Profits with Debt to Equity Ratio.

Regression Analysis
Maruti
Table 1.5

ANOVA[a]						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	348.862	3	116.287	199.679	.052[b]
	Residual	.582	1	.582		
	Total	349.444	4			
a. Dependent Variable: EPS						
b. Predictors: (Constant), DER, NP, Gross Profit						

Source: Author's calculation

Interpretations: From the above table, there is 98.7% Impact of Independent variable (i.e., Dividend Payout Ratio) on Dependent variable (i.e., Earning Per Share). Further from ANOVA table it is found insignificant because p value is 0.001 which is smaller than 0.05.

Tata
Table 1.6

ANOVA[a]						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	348.862	3	116.287	199.679	.052[b]
	Residual	.582	1	.582		
	Total	349.444	4			
a. Dependent Variable: Earnings per share						
b. Predictors: (Constant), Debt To Equity Ratio, Net Profit, Gross Profit						

Source: Author's calculation

Interpretations: From the above table, there is 98.7% Impact of Independent variable (i.e., Dividend Payout Ratio) on Dependent variable (i.e., Earning Per Share). Further from ANOVA table it is found insignificant because p value is 0.001 which is smaller than 0.05.

Maruti
Reliability Analysis
Table 1.7

Cronbach's Alpha Maruti	**.97**
Cronbach's Alpha Tata	.797

Interpretations: It was found in the table 1.7 that the reliability score of the variables selected in current study is .97 which is excellent. That clearly depicts the suitablity of the variables to analyse the profitability or financial performance for Maruti Suzuki and the the reliability score of the variables selected in current study is .797 which is adequate. That clearly depicts the suitability of the variables to analyse the profitability or financial performance for Tata.

Findings

- From the Gross Profit Ratio it can be seen that there is continuous decline in Gross Profit Ration of Maruti in five consecutive years whereas Tata had an increase in gross profit ratio for three consecutive years and then sharp fall in fourth year and increase in fifth year.Net Profit Ratio for Maruti Suzuki has declining in five consecutive years whereas Tata Net Profit Ration is increasing in three consecutive years and then sharp fall in fourth year and increase in fifth year. Debt to equity ratio for Maruti has very less in first year and then has been zero for three years and then increase very less whereas debt to equity ratio of Tata has been reducing for first three consecutive year and increased in fourth year than decrease in fifth year. Earnings per share of Maruti has been increased in second year than decreased in third year lastly increased for further two years whereas Tata has been increased for first three years and then drastically decreased in fourth year than increased in fifth year. Dividend Payout Ratio of Maruti has been increasing in first four consecutive years and a little decrease in fifth year whereas Tata dividend payout ratio remains zero in five years.

Conclusion

Ratio analysis helps to tell the financial soundness of the organizations. There are various tools and techniques which are used in this study to analyse the financial performance of the selected companies. By calculating different ratios this study concludes that Maruti has higher Gross Profit Ratio as compared to Tata which shows that Maruti has high profit margin after deducting cost. Debt to Equity Ratio of Maruti is lower as compared to Tata which tells Maruti Suzuki has more reliable for investors. Earnings per share of Maruti has not much fluctuations but Tata showing very high fluctuations which is not good for Tata because investors do no rely on Tata's performance due to high fluctuations. Dividend is the income for shareholders they want to earn dividend income and Capital appreciation, in this study Maruti has given very good dividend to the their shareholders whereas Tata has not given any dividend to their shareholders in any year which shows that most of the investors wants to invest in Maruti and enjoys the dividend income. Every organisation wants to working for net profits, Net Profit Ratio of Maruti was going decreasing every year whereas Tata' Net Profit Ratio is Improving first three years and in fourth year decreased drastically because of covid pandemic and increase in fifth year which shows Tata is working hard to improve their net profits whereas Maruti is not able to increase their net profits. According to statistical tool gross profit ratio and debt to equity ratio for Maruti Suzuki is highly negative correlated which is very good for the organisation whereas Tata's is highly positive correlated in gross profit ratio and earning per share which attracts more investors. By considering all the key performance indicators, Maruti Suzuki is performing well as compared to Tata. Tata needs to improve their all key ratios and increase their net profits which are very less as compared to Maruti. Lastly this study concludes that Maruti Suzuki is Performing well As compared to Tata and more investors wants to invest in Maruti Suzuki.

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