

Fundamental Analysis of the Automobile Sector

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Abstract:

The fundamental analysis examines the companies' economic and financial reports, including all qualitative and quantitative information, to determine their value. While typically this method is used to evaluate the real value of traded stocks, it can also be applied to any other kind of assets. More specifically, it comprises an examination of the company's financial reports to analyze several financial indicators. Such analysis is usually carried out by analysts, brokers, and, investors. Fundamental analysis is a stock valuation methodology that uses financial and economic analysis to envisage the movement of stock prices. The fundamental data that is analyzed could include a company's financial reports and non-financial information such as estimates of its growth, demand for products sold by the company, industry comparisons, economy-wide changes, etc.

Keyword:

Efficiency Ratios, Growth Ratios, Performance Ratios, P/E, EPS, Economic Indicators.

Introduction:

A mathematical and fundamental approach to examining a firm and its prospects is called fundamental analysis. There are two methods for analyzing how much a firm is worth: fundamental analysis and technical analysis. For "analyzing the company with the help of financial statements of the company which will be published annually on BSE," this study employs fundamental analysis. To ascertain the company's genuine value while investing in stocks, comprehensive financial data analysis is necessary. Examining "the company's profit and loss account, balance sheet, and cash flow statement" is typically how this is done. This process can take a while. Fundamental Analysis is the "area of research that studies economics, industry, and company information to make an informed judgement on the worth of a company and future growth a potential." Looking at a firm's financial statistics is a simpler way to learn about its performance. Fundamental analysis' focus is on figuring out what a security's catchall phrase for stocks and shares is worth economically.

Equity Analysis:

The worth of an asset that an investor invests in after all of its related debts have been paid off is primarily defined as equity. Therefore, equity can be compared to ownership of the asset that an investor purchases through the purchase of corporate shares. A person's stake in an organization's assets is also indicated by this indicator.

Shareholders' equity = Total assets of a firm - Total liabilities of a firm is the simplified formula that represents equity definition accounting of a company.

Equities should be valued by equity analysts in a similar way to how companies are valued for their projects. A security analyst should constantly consider his valuation and the approach a corporate manager would take to their respective projects. Finding the value of a listed firm, such as one that is listed on the NSE and BSE, is the main goal of equity research.

- a) Take the firm into account first, then consider economic parameters like the GDP, inflation rate, unemployment rate, etc.
- b) Once we are aware of the economic conditions, we may do a basic analysis of the organization's balance sheet, profit and loss account, and cash flow statement.
- c) Calculated various ratios based on these reports, such as the current ratio, return on asset, return on equity, etc.
- d) To determine the company's valuation, use the P/E Ratio and EPS model.
- e) Based on the aforementioned model, determined the stock's intrinsic value and contrasted it with the current market price.
- f) The company stock should be suggested as a SELL if the Fair Price is less than the Current Market Price.
- g) The stock of the company is Undervalued and should be suggested as a BUY if the Fair Price is greater than the Current Market Price.

Review of Literature:

Dr. S. M. Tariq Zafar. (2009) The author of this research paper asserts that companies' performance evolves over time in the face of global dynamism. In this radical phase, the Indian automobile industry has been crucial. The investment perspective was more heavily emphasized in fundamental analysis. Analysis of the Bottom-up approach (Company - Industry - Economy) or the Top-down approach (Economy - Industry - Company) can assist determine the best investment strategy for a certain industry. The company's performance and the returns to shareholders are influenced by a number of factors. One of the investment rules states that greater risk results in higher return, and greater risk results in lower return. ANOVA, EPS, ROI, DPO, ROA, and other financial ratios and tools have been employed by Dr. S. M. Tariq Zafar. This study attempts to examine the previous performance, profitability position, and anticipated future performance of organizations as well as to identify the impact of different financial ratios on shareholder return.

AmimaShoeb, AdeelMaqbool. (2017) The writers of this study report claim that the automotive industry is a key contributor to and gauge of economic expansion. The automotive industry has changed its approach, concentrating on affordable, compact, and fuel-efficient vehicles to reach the widest possible audience. Both growth factors and important variables will be mentioned in this essay. The vehicle sector has experienced tremendous expansion and has sparked a great deal of interest among researchers and decision-makers. Government policies and the assistance provided by auxiliary industries are the favourable factors that have fueled the expansion of the automobile sector. According to authors, the

automobile industry is one of the most desirable for both manufacturers and consumers, and it benefits the economy, jobs, and stability for working families.

MeilianiLuckieta, DoniPurnamaAlamsyah, Ali Amran. (2020) This study examines the effects of debt-to-equity ratio, price earnings ratio, return on assets, and earnings per share on stock prices. This study incorporated secondary data from LQ 45 companies' financial statements for the years 2013 to 2017 that were listed on LQ 45 of the Indonesia Stock Exchange. Eight businesses serve as research samples. The findings of this study partially support the hypothesis that whereas EPS, PE Ratio, and D/E Ratio have positive and substantial effects on stock prices, ROA has a negative and insignificant effect on company prices. The state of the business utilising its assets to generate profits is better when ROA is higher; when ROA rises, profitability will as well. The price of shares in manufacturing companies is somewhat positively impacted by the PE Ratio. According to established ideas, the growth in PE Ratio will have an impact on the rise in stock prices. The stock prices of manufacturing businesses are influenced by D/E Ratio in a partially favourable manner. To give the data required for domestic and international investors to be able to estimate stock prices and make investments with accurate calculations, additional study can be conducted on companies with other types as well as more recent periods.

Neha Puri, Amity University Uttar Pradesh, Harjit Singh, Amity University, Uttar Pradesh, AmlanChakrabarti, University of Calcutta. (2022) After rising to the position of the fourth-largest car manufacturer in 2019 with a nine percent annual growth rate and adding 26 million vehicles a year to its fleet, of which 5 million are exported outside. India is anticipated to rank as the third-largest car market in terms of volume by 2025. A young population and increasing middle-class income will keep the momentum going. As a way to lessen pollution, electric automobiles are also rising in popularity. The Indian government intends to establish India as a hub of global manufacturing while taking into account industry readiness. By 2029, according to experts, India might aggressively lead the world in share mobility. The current study evaluates the contribution made by important automakers to the financial success of the Indian automobile industry. Consequently, in order to decrease the computational cost for their calculation while increasing accuracy, a novel construction of principal components by periodicity of key financial ratios has been examined.

Methodology:

a) Objectives of the study: -

- 1) To perform fundamental analysis of Automobile Industry using the bottom-up approach
 - a. Company analysis (Ratios)
 - b. Industry analysis (competing production and growth prospects)
 - c. Economy analysis (GDP, Inflation rates, unemployment, per capita, fiscal, revenue, and primary deficit)

b) Type of Research design: -

Author employed the analytical research approach in my investigation to determine the findings.

c) Research sample size: -

Based on the market cap size, author selected 4 companies from the automotive sector as a sample for my research.

d) Duration of the Research analysis: -

It covers data between March 2018 and March 2022.

e) Data source and data collation methods: -

- 1) LKP securities site
- 2) NSE website
- a) Balance Sheet
- b) Profit and Loss Account
- c) Cash flow Statement
- d) Annual Reports
- 3) Google Scholar site
- a) Research Papers
- b) Reference books

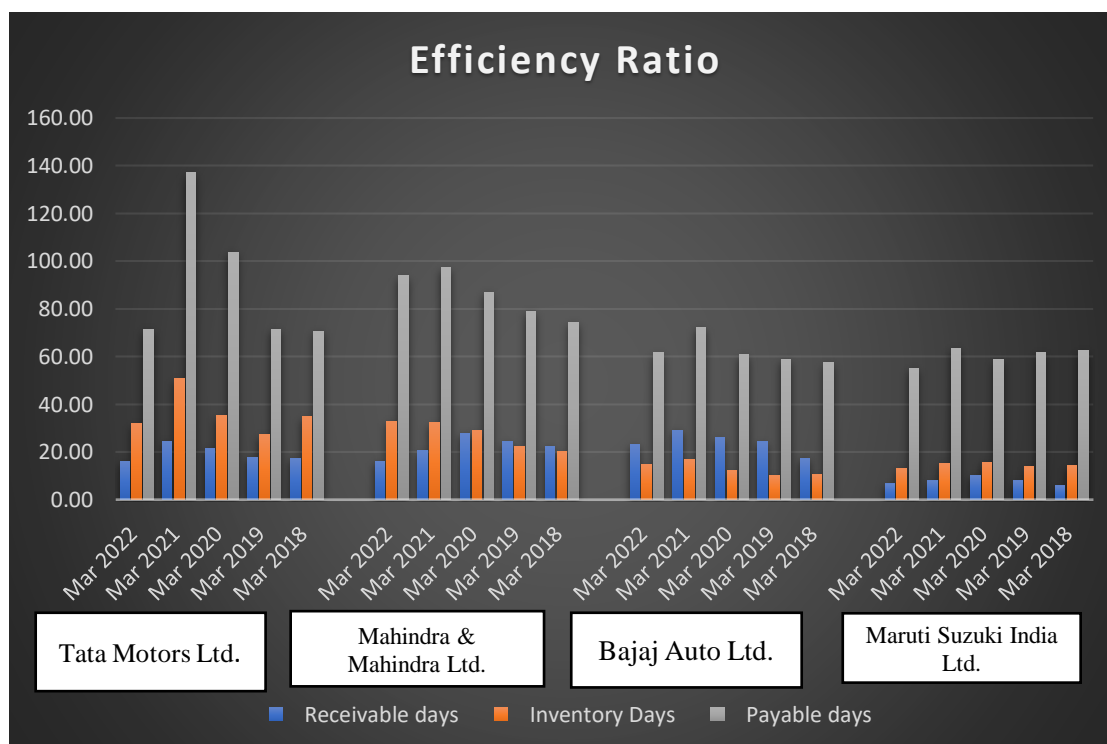
f) Data analysis tools: -

Excel is used as analysis tool and charts.

Data analysis and Interpretations:

Graph No. 1

Efficiency Ratios of the Automobile Industry



Interpretations

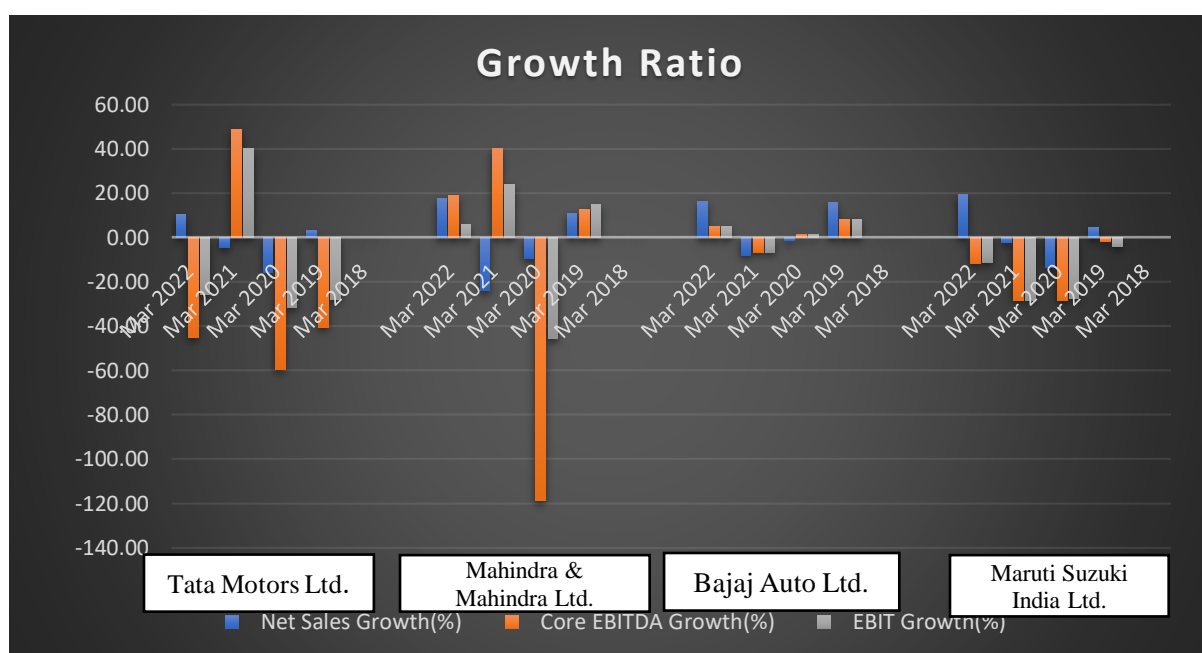
The **receivable days** indicate how much time takes for our customers/debtors to repay the amount for which they purchase products or services, in short how our customers or debtors are loyal to the company. Out of these 4 companies Maruti Suzuki India has gotten money so fastly / early.

Inventory days show how effectively the organization uses its inventory to produce the final/finished product. In other words, management orders to efficiently manage inventories and balance idle stock with being understocked. Maruti Suzuki India Ltd. and Bajaj Auto Ltd. have less inventory day cycle means they are not making the proper planning of the inventory due to that they are expending more money on transportation and Tata Motors Ltd. and Mahindra and Mahindra have to make proper planning. Idle Inventory days are 30 to 40 days.

Payable days means how much creditors give credit to the organization. Payable days are good for the organization because an organization can use this money for other activities. The creditors are the most trusted Tata Motors Ltd. During covid 19 period also creditors are trusted by Tata Motors Ltd. that's why he gives a credit period of more than 100 days.

Graph No. 2

Growth Ratios of the Automobile Industry



Interpretations

Net sales growth is the total sales of an organization minus the return inwards divided by the prior year's net sales. This ratio helps in checking whether the company is on a growth trajectory or not compared to the previous year. Consistent growth in sales is a measure of management's quality and performance. Growing sales signify a growth-oriented company. During covid 19 period all companies have fallen in their net sales growth ratio but in 2022 all company has grown up. Mahindra and Mahindra have rapidly grown up. In 2021 its net sales growth ratio is -24.11 and in 2022 it is 17.56.

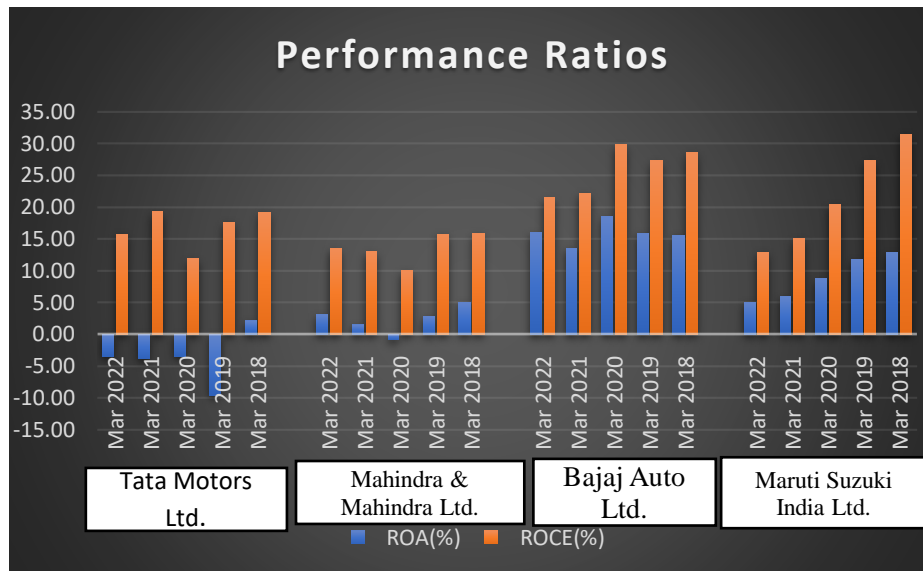
Core EBITDA (Earnings Before the Interest, Tax, Depreciation, and Amortization) growth ratio is indicating the core corporate profitability. Higher EBITDA is show that the company has taken more risk. Mahindra and Mahindra have very good EBITDA ratios which shows that Mahindra and Mahindra have strong management skills. Bajaj Auto Ltd has less fluctuation in EBITDA.

EBIT (Earnings Before Interest and Tax) growth ratio indicates companies' profitability, it's calculated as revenue minus expenses excluding interest and tax divided by prior period net sales. Inventors are more prefer EBIT because it's very easy to calculate using the income statement, as net income, interest, and

taxes are always broken out and it makes companies easily comparable. Mahindra and Mahindra have very good EBIT ratio its show that Mahindra and Mahindra have strong management skill. In Bajaj Auto Ltd have less fluctuation in EBIT.

Graph No. 3

Performance Ratios of the Automobile Industry



Interpretations

The **Return on Asset** figure gives investors an idea of how effective the company is in converting the money it invests into net income. The higher the ROA number, the better, because the company is able to earn more money with a smaller investment. Put simply, a higher ROA means more asset efficiency. Bajaj Auto Ltd. is the more profitable. In covid period also its ROA ratio has not fluctuated and this company has maintained its ROA.

The **Return on Capital Employed** ratio refers to a financial ratio that can be used to assess a company's profitability and capital efficiency. In other words, this ratio can help to understand how well a company is generating profits from its capital as it is put to use. The higher ROCE is, the better. This is because a higher ROCE indicates that a higher percentage of your company's value may be returned to stakeholders as profit. Bajaj Auto has maintained its ROCE.

Industry analysis: -

Introduction: -

Given that the automotive industry is crucial to both macroeconomic development and technical innovation, it has historically been a reliable barometer of how the Indian economy is performing. Due to India's large proportion of young people and expanding middle class, the two-wheeler category leads the industry in terms of volume. Additionally, the expanding interest of businesses in investigating the rural markets contributed to the sector's expansion. The demand for commercial vehicles is developing as a result of expanding passenger and logistical sectors. New trends, such as the electrification of vehicles, especially three-wheelers and compact passenger cars, are expected to fuel market expansion in the future. India is the world's largest tractor maker, second largest bus manufacturer, and third largest producer of heavy trucks, giving it a significant position in the market for heavy vehicles. In FY22, 22.93 million automobiles were produced annually in India.

India is a significant exporter of automobiles and anticipates rapid export development in the near term. Additionally, a number of government-sponsored programmes, including the Automotive Mission Plan 2026, the scrappage policy, and the production-linked incentive programme in the Indian market, are anticipated to elevate India to a position of prominence in the global two- and four-wheeler markets by 2022.

Market size: -

The India passenger car market was valued at US\$ 32.70 billion in 2021, and it is anticipated to grow at a CAGR of over 9% from 2022 to 2027 to reach US\$ 54.84 billion.

In India, the market for electric vehicles (EVs) is anticipated to reach Rs. 50,000 crores (US\$ 7.09 billion) by 2025.

According to a CEEW Centre for Energy Finance report, India might have a US\$206 billion market for electric vehicles by 2030.

This will require investing US\$ 180 billion in infrastructure for automotive production.

NITI Aayog and the Rocky Mountain Institute (RMI) estimate that by 2030, the Indian EV finance market will likely be worth Rs. 3.7 lakh crore (US\$ 50 billion). According to a report by the India Energy Storage Alliance, the country's EV industry is anticipated to grow at a CAGR of 36% until 2026. Additionally, it is anticipated that within the same time period, the market for EV batteries will grow at a CAGR of 30%. The Indian automobile sector plans to five-fold its car exports between 2016 and 2026. The total number of automobiles exported from India in FY22 was 5,617,244.

Segmented market:

- The automobile sector is split into four segments, i.e., two-wheelers, three-wheelers, passenger vehicles, and commercial vehicles, each having few market leaders.
- Two-wheelers and passenger vehicles dominate the domestic demand.
- 1,308,764 two-wheeler units were sold in June 2022.

Growth prospects:

- The Indian automotive industry is expected to reach US\$ 300 billion by 2026.
- Strong policy support from the Government.
- A study by CEEW Centre for Energy Finance recognized a US\$ 206 billion opportunity for electric vehicles in India by 2030. This will necessitate a US\$ 180 billion investment in vehicle manufacturing and charging infrastructure.

Table No 1

- Automobile Industry Analysis by Ratios

Table showing the P/E Ratio					
Year	Mar-22	Mar-21	Mar-20	Mar-19	Mar-18
Tata Motors Ltd	-14.4667	-8.6171	-2.0824	-2.0459	12.5885
Mahindra & Mahindra Ltd	13.6720	26.5000	274.4000	13.7531	10.7087
Bajaj Auto Ltd	17.2300	21.6976	11.2550	17.1068	18.9904
Maruti Suzuki India Ltd	59.0727	47.3048	22.8101	26.3737	33.9506

Table showing EPS					
Year	Mar-22	Mar-21	Mar-20	Mar-19	Mar-18
Tata Motors Ltd	-30.00	-35.00	-34.00	-85.00	26.00
Mahindra & Mahindra Ltd	59.00	30.00	1.00	49.00	69.00
Bajaj Auto Ltd	213.00	168.00	180.00	170.00	146.00
Maruti Suzuki India Ltd	128.00	145.00	188.00	253.00	261.00

Table showing DPS					
Year	Mar-22	Mar-21	Mar-20	Mar-19	Mar-18
Tata Motors Ltd	0.00	0.00	0.00	0.00	0.00
Mahindra & Mahindra Ltd	9.38	6.21	6.38	6.32	6.13
Bajaj Auto Ltd	6.57	8.33	6.67	3.53	4.11
Maruti Suzuki India Ltd	9.38	6.21	6.38	6.32	6.13

Table No 2

- Market Valuation of the Automobile Industry

Market Value				
Ratio	Tata Motors Ltd	Mahindra & Mahindra Ltd	Bajaj Auto Ltd	Maruti Suzuki India Ltd
Average DPR	0.000	0.069	0.058	0.069
Average Retention Ratio (1-Avg. DPR)	1.000	0.931	0.942	0.931
Average ROE	-0.214	0.088	0.194	0.120
Growth in Equity (Avg Retention Ratio * Avg ROE)	-0.214	0.082	0.183	0.112
Normalized Average P/E Ratio	-2.9247	67.8068	17.2560	37.9024
Projected EPS	₹ -23.57	₹ 63.85	₹ 251.87	₹ 142.32
Intrinsic Value	₹ 68.95	₹ 4,329.40	₹ 4,346.35	₹ 5,394.11

Market Value (As of 31st March 2022)	₹ 434.00	₹ 806.65	₹ 3,670.00	₹ 7,561.30
	Overvalued	Undervalued	Undervalued	Overvalued

Interpretations

As per Data, I was found out that Tata steel Ltd and Maruti Suzuki India Ltd have overvalued so this share fundamentally SELL call at that point because this falls at any time. Mahindra and Mahindra Ltd and Bajaj Auto Ltd have to be undervalued and these two companies' EPS was also good so this should BUY call for a large period of investment.

Economy Analysis

Economic analysis is the essentially entail the evaluation of costs and benefits. Its starts by ranking projects based on economic viability to aid better allocation of resources. It aims at analyzing the welfare impact of a project. For that author considered same economic factors like unemployment rate, GDP, per capita, inflation rate, fiscal deficit, revenue deficit, and primary deficit. Following is the table show the economic analysis from 2016-2017 to 2020-2021.

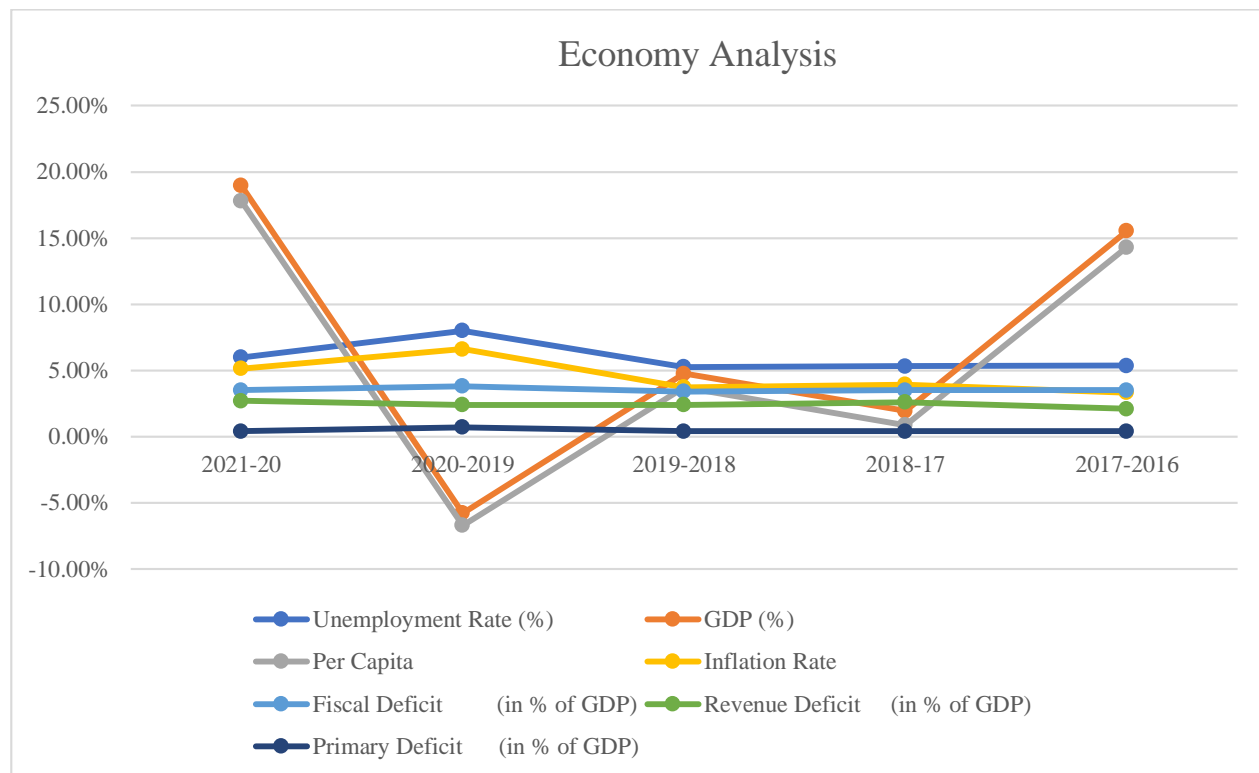
Table No 3

Table showing the Economic analysis

Year	2020-21	2019-20	2018-19	2017-18	2016-17
Unemployment Rate (%)	5.98%	8.00%	5.27%	5.33%	5.36%
GDP (%)	18.96%	-5.79%	4.76%	1.94%	15.54%
Per Capita	17.80%	-6.71%	3.70%	0.86%	14.31%
Inflation Rate	5.13%	6.62%	3.73%	3.94%	3.33%
Fiscal Deficit (in % of GDP)	3.5%	3.8%	3.4%	3.5%	3.5%
Revenue Deficit (in % of GDP)	2.7%	2.4%	2.4%	2.6%	2.1%
Primary Deficit (in % of GDP)	0.4%	0.7%	0.4%	0.4%	0.4%

Graph No. 4

Graph of the Economy Analysis



Interpretations

The GDP of the nation may be used to estimate economic growth. The GDP is displaying an increase trend from 2016–17 to 2020–21; in fact, the greatest GDP rate is in 2020–21. The population is growing far faster than the unemployment rate, hence the unemployment rate is declining relative to the population. Due to the current economic climate, unemployment is at its greatest in 2019–20. There are a lot of unemployed people due to that outbreak. Above mentioned table also shows an increase in per capita income. The buying power of the economy diminished as the inflation rate increased. Deficits in the fiscal, revenue, and primary budgets remain steady.

Finding and Conclusion

Finding: -

Automobile Company Analysis: -

- In all four Automobile industries, Mahindra and Mahindra Ltd are giving a good return to the investors. This is a good company for short-run grow as well as Tata Motors Ltd is also a good company. This company is good for long-term investment like 10 – 20 years.
- Tata Motors Ltd. and Maruti Suzuki India Ltd have Overvalued companies and other means Mahindra and Mahindra Ltd and Bajaj Auto Ltd have Undervalued companies.

Automobile Industry: -

- India's annual production of automobiles in FY22 was 22.93 million vehicles.
- In Tata Steel Ltd. has an increasing debt-to-equity ratio means risk capability year by year from 2018-22.
- In the steel industry also people are trusted by Tata Steel Ltd. and creditors are give credit period as compared to the other companies.
- In 2020, Mahindra and Mahindra have negative EPS that is -4800/- but in next year he has come back and EPS is 96.67/-.
- Bajaj Auto Ltd has efficiently use their asset and converting into the Income.

Conclusion: -

- The largest consumer market for the automotive sector is India. Everything is expanding extremely quickly. Our Indian economy is expanding significantly as well.
- The government of our nation is now implementing measures to lessen the impact of global warming and save the climate. The government is moving in the direction of green energy, and as a result, it is funding plantations, solar panels, EVs, and other environmentally friendly infrastructure. The SamruddhiMahamarg, which is a prime example of environmentally friendly transportation, was developed by the government, and it's great to see that there are more projects in the works. This indicates that the vehicle business will continue to develop over the next 30 to 40 years.
- The GDP growth rate and other economic indicators are also rising, according to the observation. These are all encouraging indicators that the investment sector will advance in the years to come.

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