

**A Project Report**

**“A COMPARATIVE STUDY OF RATIO ANALYSIS  
OF MAHINDRA & MAHINDRA LTD  
AND TATA MOTORS LTD”**

**Submitted to**

G. S. College of Commerce & Economics, Nagpur

**Affiliated to**

Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur

In partial fulfillment for the award of the degree of

**Bachelor of Business Administration**

**Submitted by**

**RUCHITA A. RAUT**

**Under the Guidance of**

**Dr. PRAGATI PANDEY**

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**G.S. College of Commerce & Economics, Nagpur**

**Academic Year 2023 – 24**

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**G.S. College of Commerce & Economics, Nagpur**



**Academic Year 2023 – 24**

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**CERTIFICATE**

This is to certify that “**Ruchita A. Raut**” has submitted the project report titled “**A Comparative study of ratio analysis of Mahindra & Mahindra ltd and Tata motors ltd**”, towards partial fulfillment of **BACHELOR OF BUSINESS ADMINISTRATION** degree examination. This has not been submitted for any other examination and does not form part of any other course undergone by the candidate.

It is further certified that he/she has ingeniously completed his/her project as prescribed by Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur

**Dr. Pragati Pandey**

**(Project Guide)**

**Dr. Afsar Sheikh**

**( Co-Ordinator)**

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**G.S. College Of Commerce & Economics, Nagpur**



**Academic Year 2023 – 24**

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**DECLARATION**

I here-by declare that the project with title “**A Comparative study of ratio analysis of Mahindra &Mahindra ltd and Tata motors ltd**” has been completed by me in partial fulfillment of **BACHELOR OF BUSINESS ADMINISTRATION** degree examination as prescribed by **Rashtrasant Tukadoji Maharaj Nagpur University**, Nagpur and this has not been submitted for any other examination and does not form the part of any other course undertaken by me.

Place: Nagpur  
Date:

**RUCHITA ANIL RAUT**  
(Project Researcher)

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**G.S. College Of Commerce & Economics, Nagpur**



**Academic Year 2023 – 24**

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## **ACKNOWLEDGEMENT**

With immense pride and sense of gratitude, I take this golden opportunity to express my sincere regards to **DR. PRAVEEN MUSTOOR**, Principal, G.S. College of Commerce & Economics, Nagpur.

I am extremely thankful to my Project Guide **DR. PRAGATI PANDEY** for his/her guideline throughout the project. I tender my sincere regards to Co-Ordinator, **PROF.AFSAR SHEIKH** for giving me outstanding guidance, enthusiastic suggestions and invaluable encouragement which helped me in the completion of the project.

I will fail in my duty if I do not thank the Non-Teaching staff of the college for their Co-operation.

I would like to thank all those who helped me in making this project complete and successful.

Place: Nagpur

Date:

**RUCHITA ANIL RAUT**

(Project Researcher)

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# **INTRODUCTION**

## **Introduction**

The Indian automobile industry has historically been a good indicator of how well the economy is doing, as the automobile sector plays a key role in both macroeconomic expansion and technological advancement. The two wheelers segment dominates the market in terms of volume, owing to a growing middle class and a huge percentage of India's population being young. Moreover, the growing interest of companies in exploring the rural markets further aided the growth of the sector. The rising logistics and passenger transportation industries are driving up demand for commercial vehicles. Future market growth is anticipated to be fueled by new trends including the electrification of vehicles, particularly three-wheelers and small passenger automobiles.

India enjoys a strong position in the global heavy vehicles market as it is the largest tractor producer, second-largest bus manufacturer, and third-largest heavy trucks manufacturer in the world. India's annual production of automobiles in FY23 was 25.93million units.



## **Meaning Of Financial Analysis**

Financial analysis is the process of evaluating businesses, projects, budgets, and other finance-related transactions to determine their performance and suitability. Typically, financial analysis is used to analyze whether an entity is stable, solvent, liquid or profitable enough to warrant a monetary investment.

### **Key Takeway**

- If conducted internally, financial analysis can help fund managers make future business decisions or review historical trends for past successes.
- If conducted externally, financial analysis can help investors choose the best possible investment opportunities.
- Fundamental analysis and technical analysis are the two main types of financial analysis.
- Fundamental analysis uses ratios and financial statement data to determine the intrinsic value of a security.
- Technical analysis assumes a security's value is already determined by its price, and it focuses instead on trends in value over time.



## **Meaning of financial statement**

Financial statements are a collection of summary-level reports about an organization's financial results, financial position, and cash flows. They include the income statement, balance sheet, and statement of cash flows.

## **The balance sheet:-**

One of the financial statements is the balance sheet. It shows an entity's assets, liabilities, and stockholders' equity as of the report date. In this report, the total of all assets must match the combined total of all liabilities and equity. The asset information on the balance sheet is subdivided into current and long-term assets. Similarly, the liability information is subdivided into current and long-term liabilities. This stratification is useful for determining the liquidity of a business. Ideally, the total of all current liabilities should exceed the total of all current liabilities, which implies that a business has sufficient assets to pay off its current obligations. The balance sheet is also used to compare debt levels to the amount of equity invested in the business, to see if its leverage level is appropriate.

**The income statement:-**

One of the financial statements is the balance sheet. It shows an entity's assets, liabilities, and stockholders' equity as of the report date. In this report, the total of all assets must match the combined total of all liabilities and equity. The asset information on the balance sheet is subdivided into current and long-term assets. Similarly, the liability information is subdivided into current and long-term liabilities. This stratification is useful for determining the liquidity of a business. Ideally, the total of all current liabilities should exceed the total of all current liabilities, which implies that a business has sufficient assets to pay off its current obligations. The balance sheet is also used to compare debt levels to the amount of equity invested in the business, to see if its leverage level is appropriate.

**The statement of cash flows:-**

The final financial statement is the statement of cash flows. It shows changes in an entity's cash flows during the reporting period. These cash flows are divided into cash flows from operating activities, investing activities, and financing activities. The bulk of all cash flows are generally listed in the operating activities section, which state the cash inflows and outflows related to the basic operations of the business, such as from changes in receivables, inventory, and payables balances. The investing activities section contains cash flows from the purchase or sale of investment instruments, assets, or other businesses. The financing activities section contains cash flows related to the acquisition or pay down of debt, dividend issuances, stock sales, and so forth. The presented information is useful for determining the sources and uses of cash.

**Elements of financial analysis:-****1. Revenues**

Revenues are probably your business's main source of cash. The quantity, quality and timing of revenues can determine long-term success.

**2. Profits**

If you can't produce quality profits consistently, your business may not survive in the long run.

**3. Operational Efficiency**

Operational efficiency measures how well you're using the company's resources. A lack of operational efficiency leads to smaller profits and weaker growth.

**4. Capital Efficiency and Solvency**

Capital efficiency and solvency are of interest to lenders and investors.

**5. Liquidity**

Liquidity analysis addresses your ability to generate sufficient cash to cover cash expenses. No amount of revenue growth or profits can compensate for poor liquidity.

## Meaning of ratio analysis

Ratio analysis is referred to as the study or analysis of the line items present in the financial statements of the company. It can be used to check various factors of a business such as profitability, liquidity, solvency and efficiency of the company or the business.



## Uses of ratio analysis:-

**Ratio analysis is useful in the following ways:**

1. **Comparing Financial Performance:** One of the most important things about ratio analysis is that it helps in comparing the financial performance of two companies.
2. **Trend Line:** Companies tend to use the activity ratio in order to find any kind of trend in the performance. Companies use data from financial statements that is collected from financial statements over many accounting periods. The trend that is obtained can be used for predicting the future financial performance.
3. **Operational Efficiency:** Financial ratio analysis can also be used to determine the efficiency of managing the asset and liabilities. It helps in understanding and determining whether the resources of the business is over utilized or under utilized.

## **Methods of ratio analysis:-**

**1. Liquidity Ratios:** Liquidity ratios are helpful in determining the ability of the company to meet its debt obligations by using the current assets. At times of financial crisis, the company can utilize the assets and sell them for obtaining cash, which can be used for paying off the debts. Some of the most commonly used liquidity ratios are quick ratio, current ratio, cash ratio, etc. The liquidity ratio are used mostly by creditors, suppliers and any kind of financial institutions such as banks, money lending firms, etc for determining the capacity of the company to pay off its obligations as and when they become due in the current accounting period.

**2. Solvency Ratios:** Solvency ratios are used for determining the viability of a company in the long term or in other words, it is used to determine the long term viability of an organization .

Solvency ratios calculate the debt levels of a company in relation to its assets, annual earnings and equity. Some of the important solvency ratios that are used in accounting are debt ratio, debt to capital ratio, interest coverage ratio, etc. Solvency ratio is used by government agencies, institutional investors, banks, etc to determine the solvency of a company.

**3. Activity Ratio:** Activity ratios are used to measure the efficiency of the business activities. It determines how the business is using its available resources to generate maximum possible revenue.

These ratios are also known as efficiency ratios. These ratios hold special significance for business in a way that whenever there is an improvement in these ratios, the company is able to generate revenue and profits much efficiently. Some of the examples of activity or efficiency ratios are asset turnover ratio, inventory turnover ratio, etc.

**4. Profitability ratios:** The purpose of profitability ratios is to determine the ability of a company to earn profits when compared to their expenses. A better profitability ratio shown by a business as compared to its previous accounting period shows that business is performing well.

The profitability ratio can also be used to compare the financial performance of a similar firm, i.e. it can be used for analyzing competitor performance.

### **Advantages of ratio analysis: -**

#### **1. Forecasting and Planning: -**

The trend in costs, sales, profits and other facts can be known by computing ratios of relevant accounting figures of last few years. This trend analysis with the help of ratios may be useful for forecasting and planning future business activities.

#### **2. Budgeting:**

Budget is an estimate of future activities on the basis of past experience. Accounting ratios help to estimate budgeted figures. For example, sales budget may be prepared with the help of analysis of past sales.

#### **3. Control of Performance and Cost:**

Ratios may also be used for control of performances of the different divisions or departments of an undertaking as well as control of costs.

#### **4. Inter-firm Comparison:**

Comparison of performance of two or more firms reveals efficient and inefficient firms, thereby enabling the inefficient firms to adopt suitable measures for improving their efficiency. The best way of inter-firm comparison is to compare the relevant ratios of the organization with the average ratios of the industry.

### **Disadvantages of ratio analysis: -**

#### **1. Different Accounting Policies:**

Different accounting policies regarding valuation of inventories, charging depreciation etc. make the accounting data and accounting ratios of two firms non-comparable.

**2. Different Accounting Policies:**

Different accounting policies regarding valuation of inventories, charging depreciation etc. make the accounting data and accounting ratios of two firms non-comparable.

**3. Lack of Standard of Comparison:**

No fixed standards can be laid down for ideal ratios. For example, current ratio is said to be ideal if current assets are twice the current liabilities. But this conclusion may not be justifiable in case of those concerns which have adequate arrangements with their bankers for providing funds when they require, it may be perfectly ideal if current assets are equal to or slightly more than current liabilities.

**4. Quantitative Analysis:**

Ratios are tools of quantitative analysis only and qualitative factors are ignored while computing the ratios. For example, a high current ratio may not necessarily mean sound liquid position when current assets include a large inventory consisting of mostly obsolete items.

**5. Window-Dressing:**

The term 'window-dressing' means presenting the financial statements in such a way to show a better position than what it actually is. If, for instance, low rate of depreciation is charged, an item of revenue expense is treated as capital expenditure etc. the position of the concern may be made to appear in the balance sheet much better than what it is.

# **COMPANY PROFILE**



**Mahindra & Mahindra Limited (M&M)**

Mahindra & Mahindra Limited (M&M) is an Indian multinational automotive manufacturing corporation headquartered in Mumbai. It was established in 1945 as Mahindra & Mohammed and later renamed Mahindra & Mahindra. Part of the Mahindra Group, M&M is one of the largest vehicle manufacturers by production in India. Its unit, Mahindra Tractors, is the largest manufacturer of tractors in the world by volume. It was ranked 17th on a list of top companies in India by Fortune India 500 in 2018. Its major competitors in the Indian market include Maruti Suzuki India and Tata Motors. Dr. Anish Shah is the current CEO and Managing Director of Mahindra & Mahindra.

Mahindra & Mahindra was founded as a steel trading company on October 2, 1945, in Ludhiana as Mahindra & Mohammed by brothers Kailash Chandra Mahindra and Jagdish Chandra Mahindra, along with Malik Ghulam Muhammad. Anand Mahindra, the present Chairman of Mahindra Group, is the grandson of Jagdish Chandra Mahindra. In 1948, Ghulam Mohammed decided to move to the newly formed Pakistan. The Mahindra were left with stationery and company stamp that said M&M. They didn't have the financial resources to change the name. Since there were two Mahindra brothers in the business, they decided to change the company name to Mahindra & Mahindra.



**Mahindra**

**MAHINDRA: -**

<b>TYPE</b>	PRIVATE
<b>INDUSTRY</b>	CONGLOMERATE
<b>FOUNDER</b>	JAGDISH CHANDRA MAHINDRA KAILASH CHANDRA MAHINDRA
<b>FOUNDED</b>	2 OCTOBER 1945
<b>AREA SERVED</b>	WORLDWIDE
<b>KEY PEOPLE</b>	ANAND MAINDRA (CHAIRMAN) ANISH SHAH (MD& CEO)
<b>NO. OF EMPLOYEES</b>	23,495+(2023)
<b>PARENT COMPANY</b>	MAHINDRA GROUP
<b>REVENUE</b>	122,475 CRORE (2023)
<b>SERVICES</b>	AUTOMOTIVE FINANCE

## **MISSION AND VISION STATEMENT OF MAHINDRA & MAHINDRA LTD: -**

### **MISSION**

To challenge conventional thinking and innovatively use our resources to drive positive change in the lives of our stakeholders and communities across the world, to enable them to rise.

This purpose is why they exist, come to work every day, and strive continuously in delivering our promise.

### **VISION**

By FY 2025, we will become the most aspirational Indian auto brand, consistently winning by,

- Making humanity's innate desire to rise driving purpose
- Challenging conventional thinking and innovatively use the resources to drive positive changes in the lives of the stakeholders and communities across the world
- Exceeding customer expectation and,
- Creating a highly engaged work force

### **VALUES**

- Good corporate
- Teamwork
- Accountability
- Customer focus
- Excellence
- Speed
- Professionalism
- Quality focus

## **SWOT ANALYSIS OF TATA MOTORS: -**

### **STRENGTHS: -**

- **Market Leader in Multiple Automotive Segments:** Mahindra & Mahindra has a leading market share in tractors as well as in the utility vehicles segment. Also, the company has a strong market share in the commercial vehicle as well as passenger vehicle segment. Strong market share provides a competitive advantage to the company and allows the company to focus on innovation.
- **Strong Research & Development (R&D):** M&M has a highly focused R&D department constantly focusing on developing new products and technologies. M&M majorly focuses on the Value addition and Value Engineering (VAVE) approach, designing modularity, use of alternate materials, etc.
- **Excellent Products According to Indian Road Conditions:** Mahindra & Mahindra's SUVs are suited perfectly to Indian road conditions especially, Mahindra Scorpio which has been an outstanding performer for many years.
- **Low After-Sale Cost:** M&M has a competitive advantage on after-sale cost since it is lower than the industry average and also has a high availability of spare parts in different parts of the country.
- **E-commerce:** One of the biggest strengths of M&M is that with the use of e-commerce M&M is achieving results from both sides one in which the business wants to head from an outcomes point of view and how digitalization in business can help them achieve those results, and another side is addressing the needs of their customers.
- **Strong Branding and Advertising:** M&M's advertisements are heartwarming and are often telecasted on commercial TV which has helped them to create strong branding.

### **WEAKNESS: -**

- **Geographic Dependence:** Mahindra & Mahindra is dependent on the majority of its revenue (over 60%) from India, which would affect its business in case of any economic slowdown or high inflation.
- **Overdependence on the Automotive Industry:** Mahindra & Mahindra's major part of revenues comes from its automotive business which makes it vulnerable to any breakthrough in the industry or slowdown in the market.

- **Product Recalls Affect Brand Image:** Mahindra & Mahindra has had to recall many of its products in the recent past. For instance, In February 2015, M&M recalled XUV500 manufactured before July 2014. Such incidents affect the brand image of the company and consequently affect sales.

### **OPPORTUNITY: -**

- **Growth in the Indian Automotive Industry:** The Indian automotive industry is growing year on year with over 12% growth from the previous 3 years. The industry is expected to grow at a CAGR of 13% in the next 4 years. This growth can be beneficial for M&M.
- **Increasing Demand for Hybrid Electric Vehicles:** There is an increasing demand for Hybrid Electric Vehicles (HEVs) around the world. The demand for HEVs is expected to grow at a CAGR of 19% in the next 3 years. M&M has a strong portfolio of HCVs and is set to benefit from the growing demand.
- **Emerging Nations:** M&M should look forward to tapping the emerging nations around the world that have high potential. M&M should build over its global footprint to tap emerging markets.

### **THREATS: -**

- **Competition in Other Businesses Puts Pressure on M&M:** Mahindra group faces strong competition in other businesses as well.
- **Stringent Regulations:** M&M is subject to strict regulations by the government and environmental agencies in terms of emission levels, noise levels, etc. Such regulations keep changing and thus increase compliance costs for the companies.

**Tata Motors: -**

Tata Motors Limited (TML), a USD 42 billion organization, is India's largest automobile company by revenues. The company is a leading global manufacturer of cars, utility vehicles, buses, trucks and defense vehicles and is working towards developing Smart Mobility Solutions for Smart Cities. Tata Motors is also developing a smart range of EVs, to accelerate the adoption of Electric Vehicles (EV) in the country, supporting the government's mission on electric vehicles. Incorporated in India, in the year 1945, Tata Motors is a part of the USD 100 billion Tata group and has operations across India, UK, South Korea, Thailand, South Africa, and Indonesia.

A leader in the Indian commercial vehicle market, Tata Motors also ranks amongst India's top passenger vehicle manufacturers, with over 9 million vehicles plying on Indian roads. The company has played an instrumental role in transforming the country into a destination for world-class automotive manufacturing and continues to work towards building the nation. Tata Motors has always been at forefront of innovating technologies and providing products and experiences catering to the discerning needs of our customers across both passenger and commercial vehicles business. With its corporate brand identity - Connecting Aspirations, Tata Motors continues to create segment-defining products that will fire up the imagination of customers - generation after generation; reiterating the company's promise of offering better journeys.



**TATA MOTORS: - TATA MOTORS**

<b>TYPE</b>	<b>PUBLIC</b>
<b>INDUSTRY</b>	<b>AUTOMOTIVE</b>
<b>FOUNDER</b>	<b>JRD TATA</b>
<b>FOUNDED</b>	<b>1945</b>
<b>AREA SERVED</b>	<b>WORLDWIDE</b>
<b>HEADQUATER</b>	<b>MUMBAI, MAHARASTRA</b>
<b>KEY PEOPLE</b>	<b>NATARAJAN CHANDRASEKARAN(CHAIRMAN)</b> <b>MARTIN UHLARIK(CDO)</b>
<b>NO. OF EMPLOYEES</b>	<b>81,811+(2023)</b>
<b>PARENT COMPANY</b>	<b>TATA GROUP</b>
<b>REVENUE</b>	<b>RS.350,600.15CRORE (2023)</b>
<b>TOTAL ASSETS</b>	<b>RS.336,081.38CRORE (2023)</b>
<b>SERVICES</b>	<b>AUTOMOTIVE FINANCE</b> <b>VEHICLE LEASING, VEHICLE SERVICES</b>

## **MISSION AND VISION STATEMENT OF TATA MOTORS: -**

### **MISSION**

To be the most reliable global network for customers and suppliers that delivers value through Products and services to be a responsible value creator for all our stakeholders.

We innovate mobility solutions with passion to enhance the quality of life.

### **VISION**

By FY 2025, we will become the most aspirational Indian auto brand, consistently winning by,

- Delivery superior financial returns
- Driving sustainable mobility solutions
- Exceeding customer expectation and,
- Creating a highly engaged work force

### **VALUES**

- Integrity
- Teamwork
- Accountability
- Customer focus
- Excellence
- Speed



## **SWOT ANALYSIS OF TATA MOTORS: -**

### **STRENGTHS: -**

- **Recognized Brand Image: -** Tata Motors is a well-recognized global automotive brand. The company itself sells its vehicles under various brand names like Jaguar Land Rover, Tata Hitachi, Tata Daewoo, Tata Marcopolo etc. This has not only expanded the company's market but has also increased the brand value and the brand image of the company
- **Market value: -** The estimated market capitalization of Tata Motors by Forbes is 4.5 billion dollars in 2021. They ranked as the 1037th position in the Global 2000 top companies in 2020.
- **Research and Development: -** The company spends more than 23% of its complete budget on research and development. It shows the company's dedication to its productivity and growth. Tata Motors has also established its research centers in countries like the UK, India, Spain, South Korea.
- **International Presence: -** Tata Motors is running its business in more than 125 countries globally

### **WEAKNESS: -**

- **Greater operational costs and a lower rate of profits: -** Though the company has the acquisition of brands like Jaguar and Landover which were successful in the initial years it made the company more dependent on its subsidiaries. This resulted in a decrease in the overall sales and profits of the company from the last five years.
- **No Foothold in Luxury Segment: -** Tata Motors is still struggling to find a strong foothold in the luxury market, where profit rates are more.
- **Limited Presence: -** As we saw that Tata Motors is operating the business in over 125 countries globally. But unfortunately, the company failed to make a strong impact like its competitive brands like Ford, Toyota, Honda and Volkswagen.

**OPPORTUNITY: -**

- **Digital Marketing: -** We are all familiar with the terms of digital marketing and the benefits of marketing a product digitally. Almost every top brand and company is using social media to connect with their target audience. Tata Motors should also take full advantage of all the platforms of social media and increase their engagement with their target audience. Which will help the company to get proper feedback about improving the products and services.
- **The Supply Chain and Service: -** The best way for the company to enlarge its market further is by expanding its supply chain system and distribution network in its current market.
- **Acquisition, Merger, Joint Venturing: -** This has already helped the company before as it already has famous brands like Jaguar, Daewoo, Hitachi etc. The company should keep following the same pattern with other brands. As it will help the company to increase its sales and profitability.

**THREATS: -**

- **Pandemic: -** Pandemic was not only deadly to health but also to the economy as well all around the world. During the pandemic, - people lost jobs and lots of companies went out of business. Pandemic will always be a big threat to all the companies and businesses out there.
- **Competitors: -** Tesla, Honda, Hyundai, BMW etc. are big competitors of Tata Motors. Competitors market share growth and customer's market expansion results in lower market share for the company.
- **Price: -** The competitors are always in competition with Tata Motors on price as they offer the latest advanced designs and features at lower prices. Which in return impacts the sales and profit of Tata Motor

# **LITERATURE REVIEW**

**Shinde Govind P. & Dubey Manisha (2011):**

The study has been conducted considering the segments such as passenger vehicle, commercial vehicle, utility vehicle, two and three-wheeler vehicle of key players performance and also analyze SWOT analysis and key factors influencing growth of automobile industry.

**Dawar Varun (2012): -**

Study to analyze the effect of various fundamental corporate policy variables like dividend, debit, capital expenditure on stock prices of automobile companies of India. The study tends that dividend & investment policy are relevant and capital structure irrelevant to stock prices.

**Murlidhar, A. Lok Hande & Rana Vishal S. (2013): -**

The author tries to evaluate the performance of Hyundai Motors Company with respect to export, Domestic Sales, productions and profit after tax. For this purpose, the pie chart and bar graph are used to show the performance of company various years.

**Shende Vikram (2014): -**

This research will be helpful for the new entrants and existing car manufacturing companies in India to find out the customer expectations and their market offerings. The objective of study is the identification of factors influencing customers performance for particular segment of cars.

**Priyanka R Gowda (2017)**

“Financial Performance Analysis as a determinant of Profitability in Indian Automobile Industry” This study show that ratio analysis helps to compare the financial statements of the firms and comparison of financial performance also investigated over a period of time. The study found the positive strong relationship between current ratio and quick ratio. Many analysts believe that quick ratio indicates an adequate ability to satisfy current obligations but one should aware that such general rule does not apply to all situations. A more significant evaluation is obtained by comparing the current ration and quick ratio.

**Kallu Rao (1993)**

“A study of intercompany financial analysis of tea industry- retrospect and prospect”. An attempt has been made in this study to analyze the important variables of tea industry and projected future trends regarding sales and profit for next 10 years periods, with a view to help the policy makers to take appropriate decisions. Various financial ratios have been calculated for analyzing the financial health of the industry. The recent changes in Indian economic policies will boost up the foreign exchange earnings, which will benefit those companies, which are exporting to hard currency areas.

**Jothi K. &Geethalakshmi, A. (2017)**

This study tries to evaluate the profitability and financial position of selected companies of Indian automobile industry using statistical tools like ratio analysis, mean, standard deviation, correlation. The study reveals the positive relationship between profitability, short term and long-term cap.

# **RESEARCH STUDY**

**PROBLEM DEFINITION**

The automotive industry is a highly competitive sector, and companies are continuously striving to gain an edge over their competitors. Two prominent players in the Indian automobile industry are Tata Motors Ltd and Mahindra & Mahindra Ltd. Both companies have a significant market share and a strong presence in the country.

The purpose of this research project is to conduct a comparative ratio analysis of Tata Motors and Mahindra group. Ratio analysis is a tool used to evaluate a company's financial performance, and it involves calculating and analyzing various ratios that measure different aspects of a company's financial health.

## **OBJECTIVES OF STUDIES**

The purpose of the study is to analyze the financial performance of automobile companies in India.

. The specific objectives are: -

1. To study the automobile sector and its current trends.
2. To evaluate the liquidity position of companies in automobile industry.
3. To measure the profitability of companies in automobile industry.
4. To evaluate the financial strength of companies in automobile industry.



## **HYPOTHESIS**

Hypothesis for the study are as follows:

H0: There is no significant difference between high or low financial efficiency of companies in automobile industry in India.

H1: There will be significant difference between high or low financial efficiency of companies in automobiles in India.

## **SCOPE OF STUDY**

- 1) **Financial Performance:** Analyzing the financial performance of both companies by comparing their profitability ratios, liquidity ratios, solvency ratios, and efficiency ratios over a period of time.
- 2) **Market Share:** Examining the market share of Tata Motors and Mahindra group in the automobile industry in India and globally.
- 3) **Competitive Advantage:** Assessing the competitive advantage of both companies in terms of their product offerings, pricing strategies, distribution networks, and branding efforts.

# **RESEARCH METHODOLOGY**

The research design of the present study is basically exploratory in nature. This Include following sections: -

**Sample size and Period of study: -**

Top two companies have been selected for the present study and proposed study are limited to a select sample of automobile companies during the period of 2017-21.

**Data collection: -**

The present study is based on secondary data. Data has been collected from published annual reports, companies' website and PROWESS database (CMIE).

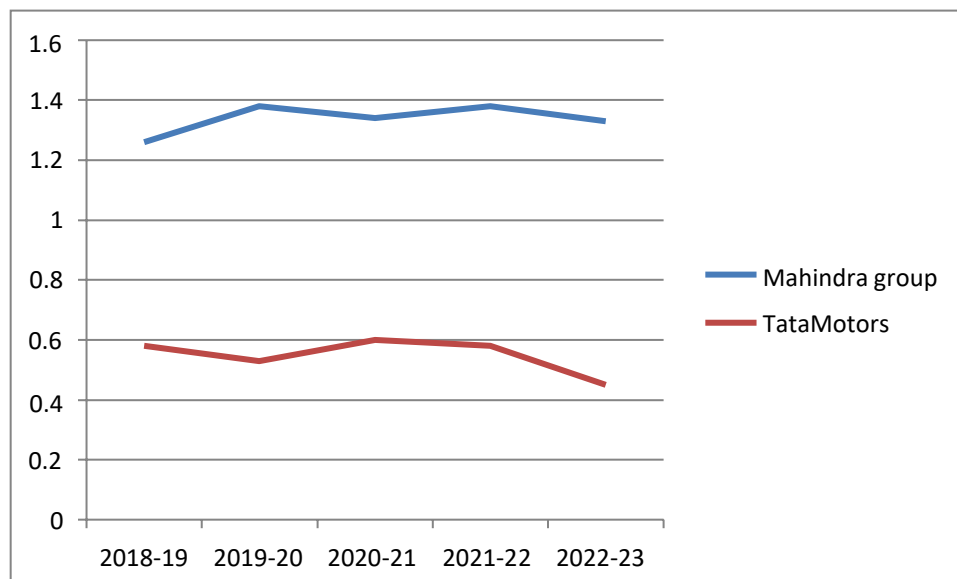
**Tools and Techniques for Analysis: -**

- Ratio Analysis
- Arithmetic mean
- Standard deviation

# **DATA ANALYSIS AND INTEPRETATION**

## 1. CURRENT RATIO(X)

YEAR	2018-19	2019-20	2020-21	2021-22	2022-23
<b>Mahindra group</b>	1.26	1.38	1.34	1.38	1.33
<b>Tata Motors</b>	0.58	0.53	0.60	0.58	0.45



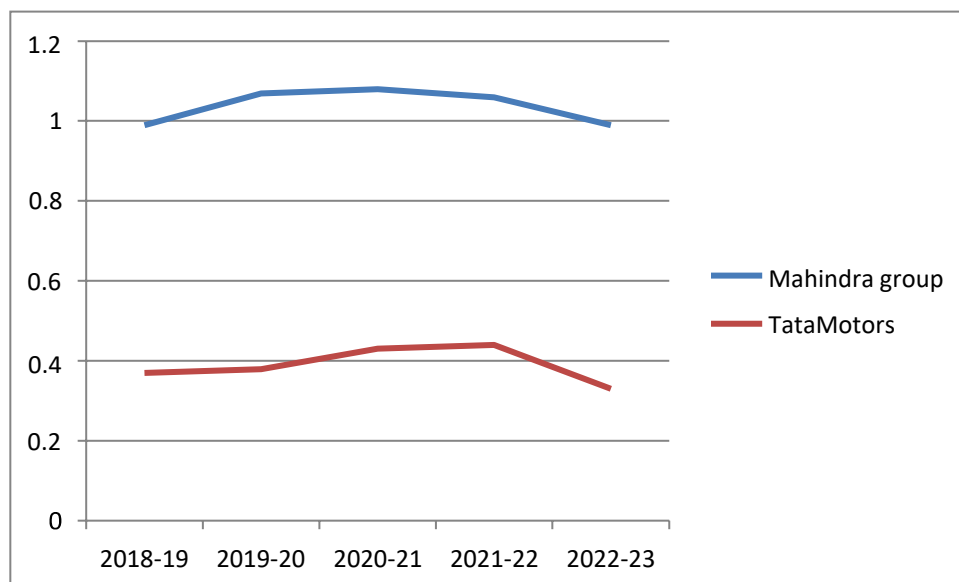
### Interpretation:

The Current Ratio of Tata motors in the year 2018-19 was 0.58 and decreases in the year 2019-20 to 0.53. In the year 2020-21 increases to 0.60 and in the year 2021-22 and year 2022-23 decreases to 0.58 and 0.45. The Current Ratio of Mahindra group in the year 2018-19 was 1.26 and increases till the year 2022-23 to 1.33

In the above graph the Current Ratio of the Mahindra group is more than Tata Motors.

## 2. QUICK RATIO(X)

YEAR	2018-19	2019-20	2020-21	2021-22	2022-23
Mahindra group	0.99	1.07	1.08	1.06	0.99
Tata Motors	0.37	0.38	0.43	0.44	0.33

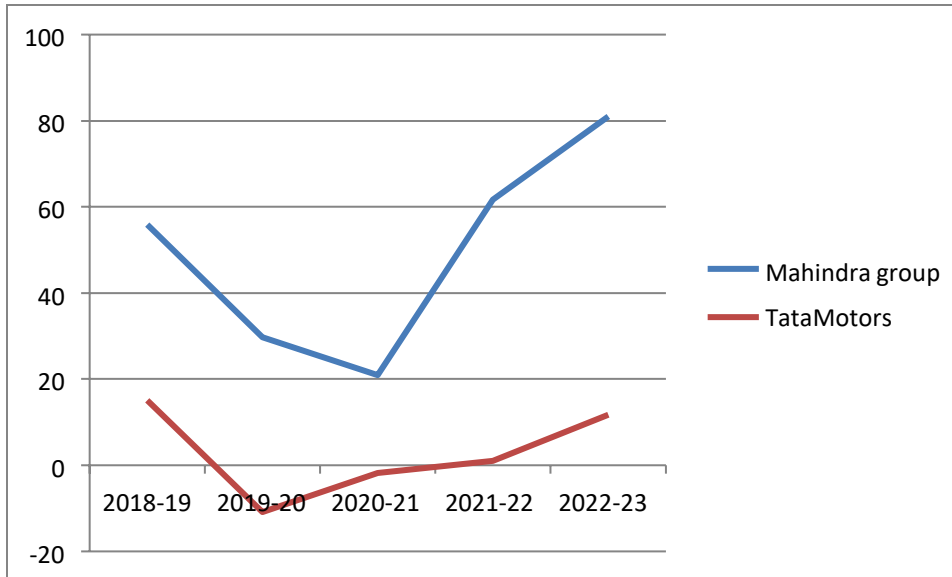


### Interpretation:

The quick ratio of tata motors in the year 2018 -19 was 0.37 thereafter it increases to 0.38 in 2019-20. In year 2020-2021 and 2021-2022 increases to 0.43 and 0.44 and the decreases in year 2022 -23 to 0.33. The quick ratio of Mahindra and Mahindra Ltd was 0.99 in year 2018-2019 and increased in the year 2019-2020 ,2020-2021 and 2021-2022 to 1.07,1.08 ,1.09 and then decreased in year 2022 -23 to 0.99. In the graph the quick ratio of the Mahindra is more than tata motors.

### 3. CASH EPS(RS)

YEAR	2018-19	2019-20	2020-21	2021-22	2022-23
Mahindra group	55.86	29.78	20.94	61.73	80.99
Tata Motors	15.07	-10.88	-1.74	0.97	11.74



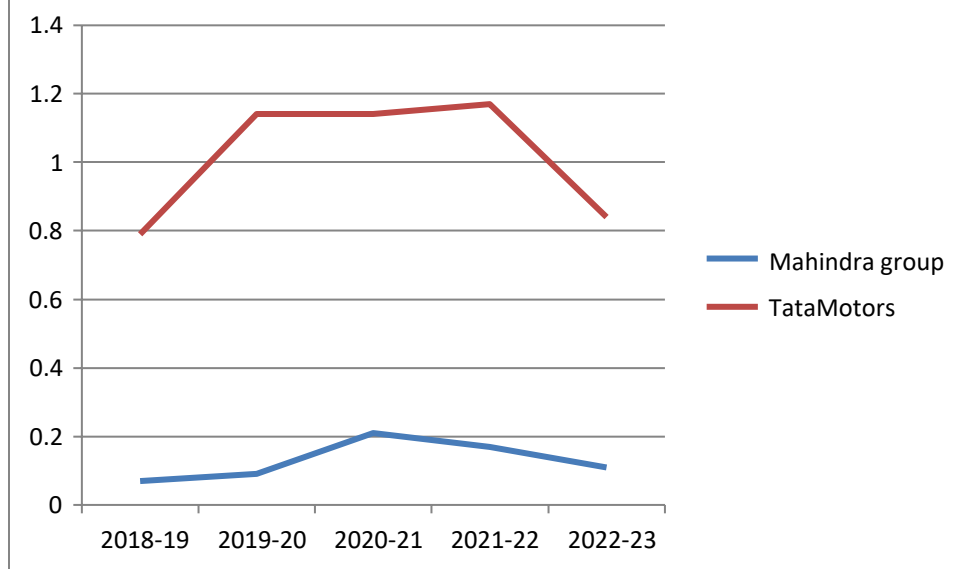
#### Interpretation:

The Cash Eps of tata motors in the year 2018 -19 was 15.07 thereafter it decreased in negative to -10.88 in 2019-20 and in year 2020-2021 decreases to -1.74. In the year 2021-2022 it increases to 0.97 and 11.74 in the in year 2022 -23.

The Cash Eps of Mahindra and Mahindra Ltd was 55.86 in year 2018-2019 and decreased in the year 2019-2020 ,2020-2021 to 29.78 and 20.94. in the year 2021-2022 and 2022-23 it increases to 61.73 and 80.99. In the graph the Cash Eps ratio of the Mahindra is more than tata motors in the year 2023.

**4 TOTAL DEBT/EQUITY RATIO(X)**

YEAR	2018-19	2019-20	2020-21	2021-22	2022-23
Mahindra group	0.07	0.09	0.21	0.17	0.11
Tata Motors	0.79	1.14	1.14	1.17	0.84

**Interpretation:**

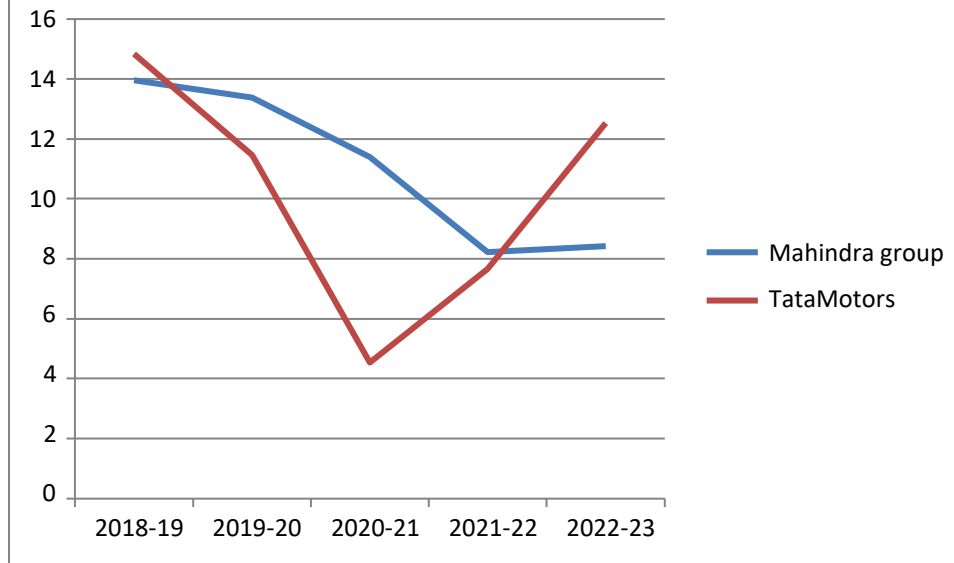
The Total Debt /Equity Ratio of Mahindra and Mahindra Ltd in 2018-19 was 0.07 and increases in the year 2019-20, 2020-21 to 0.09 and 0.21 and decreases in 2021-22 and 2022-23 to 0.17 and 0.11. The TotalDebt /EquityRatio of Tata Motors in 2018-19 was 0.79 and increases in 2019-20 and remain same in 2020-21 to 1.14 and increases in year 2021-22 to 1.17 and sudden decreases in 2022-23 to 0.84.

In the above graph the Totaldebt/ equityratio of Tata motors is more than Mahindra group.



## 5 INVENTORY TURNOVER RATIO(X)

YEAR	2018-19	2019-20	2020-21	2021-22	2022-23
Mahindra group	13.96	13.38	11.39	8.23	8.43
Tata Motors	14.84	11.46	4.54	7.66	12.52



### Interpretation:

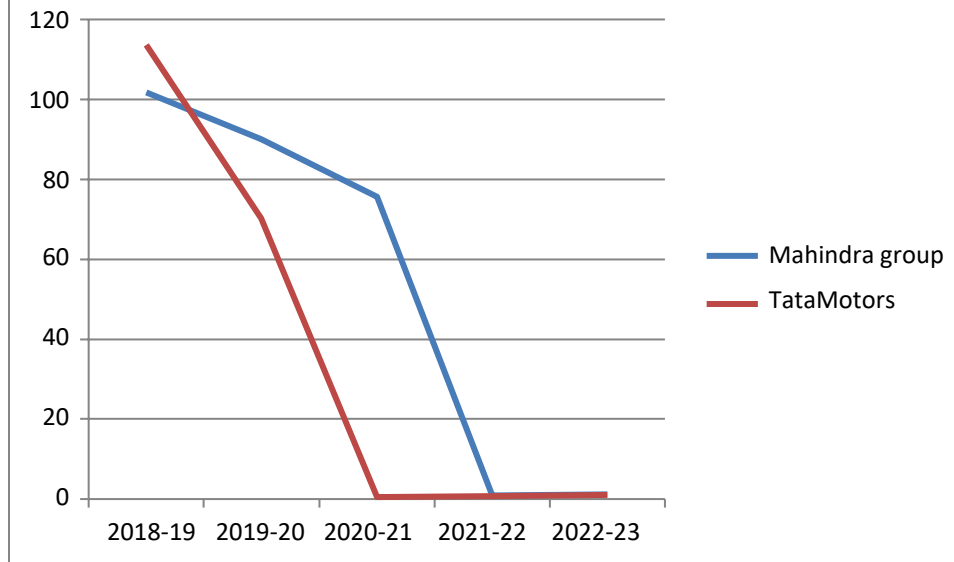
The Inventory turnover ratio of Mahindra group in 2018-19 was 13.96 and decreases in the year 2019-20, 2020-21, 2021-22 to 13.38, 11.39, 8.23 and increases in the year 2022-23 to 8.43.

The inventory turnover ratio of Tata Motors in 2018-19 was 14.84 and decreases till the year 2022-23 to 12.52.

In the above graph the Tata Motors has more Inventory Turnover Ratio than of Mahindra group.

**6 ASSET TURNOVER RATIO (%)**

YEAR	2018-19	2019-20	2020-21	2021-22	2022-23
<b>Mahindra group</b>	101.74	90.07	75.58	0.91	1.19
<b>Tata Motors</b>	113.61	70.18	0.47	0.73	1.05

**Interpretation:**

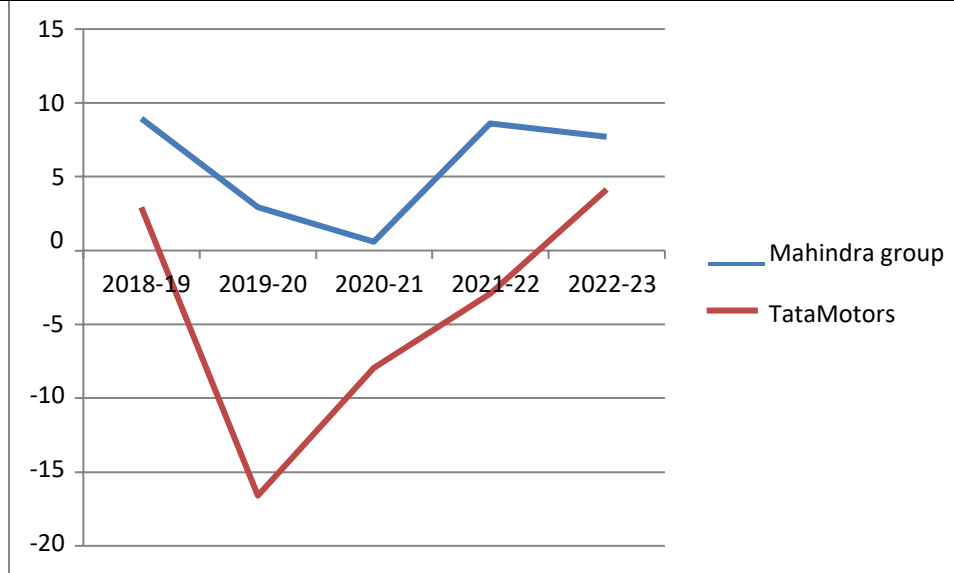
The Asset Turnover Ratio of Mahindra group in the year 2018-19 was 101.74 and decreases in the year 2019-20, 2020-21, 2021-22, 2022-23 to 70.18, 0.47, 0.73, 1.05.

The Asset Turnover Ratio of Tata Motors in the year 2018-19 was 113.61 and decreases to 1.05 till the year 2022-23.

In the above graph the Asset Turnover Ratio of Mahindra group is more than Tata motors.

## 7 NET PROFIT MARGIN (%)

YEAR	2018-19	2019-20	2020-21	2021-22	2022-23
Mahindra group	8.94	2.92	0.59	8.59	7.70
Tata Motors	2.91	-16.59	-7.93	-2.94	4.14



### Interpretation:

The Net Profit Margin of Mahindra group in 2018-19 was 8.94 and continue decreases by the few points till 7.70 in the year 2022-23.

The Net Profit Margin of Tata Motors in 2018-19 was 2.91 and turns into negative in the year 2019-20, 2020-21, 2021-22 to -16.59, -7.93, -2.94 then increase and turn to positive in the year by 2022-23 to 4.14.

In the above graph the Net Profit Ratio of Mahindra group is more than Tata motors.

**Hypothesis result: -**

**H1:** - There will be significant difference between high or low financial efficiency of companies in automobiles in India.

As we had done the data analysis of various financial ratios of both automobile industries and we got that there is a significant difference between high or low financial efficiency of companies in automobiles industry in India.

## **CONCLUSION AND LIMITATION**

**CONCLUSION: -**

The study of financial performance of automobile companies (Tata and Mahindra) would reflect the company performance on the basis of its financial ratios and statistical tools involved. It is concluded that financial ratios are the basic and most important part of any business. It describes the firm's financial position. As the data indicates that automobile company has expanded its business on the large geographical area and also offers the large range of products. After applying all the ratios, the study concludes that Mahindra & Mahindra Ltd. is a profitable company in year 2022-2023 because we found that the company is getting a profitable return on short term and long-term investment. The ratios increase every year and they are in position to pay their debts with their resources. Further study revealed that Tata Motors Ltd. is not a profitable company in year 2022-2023 as compared to Mahindra & Mahindra Ltd.

In short, the net sales of Mahindra are higher than net sales of Tata Motors. It is good for Mahindra group. The gross profit of Mahindra group is higher than Tata Motors. This means Mahindra has more sales. In Mahindra Ltd the proportion of debt is lower as compared to Tata Motors. The earnings per share of Mahindra Ltd are more than Tata Motors which shows Mahindra Ltd is earning more. After analyzing all the aspects, concerning this research, the study concludes that Mahindra Ltd is better than Tata Motors.

**LIMITATION OF STUDY: -**

**Limitations of the study are: -**

- The selection of automobile industry.
- This study is based on secondary data.
- The present study is based on ratio analysis. Ratios has its own limitations.

# **RECOMMENDATION AND SUGGESTION**



**RECOMMENDATION SUGGESTION: -**

From this study it would be clear that Mahindra and Mahindra ltd has better financial position compare to Tata motors.

Tata motors should be more flexible to capture more customer. Use different models and technique which help to increasing sales.

Tata motors should try to decrease its expense and try to increase sales. Mahindra group has also tried to increase its sales and maintain the present percentage of sales.

Tata motors has declining trends in Net profit ratio, so Tata motors can increase by reducing debts

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# **ANNEXURE**

**Balance sheet of**  
**Mahindra and Mahindra Ltd.**

BALANCE SHEET OF MAHINDRA AND MAHINDRA (in Rs. Cr.)	Mar-23	Mar-22	Mar-21	Mar-20	Mar-19
	12 months	12 months	12 months	12 months	12 months
<b>EQUITIES AND LIABILITIES</b>					
<b>SHAREHOLDER'S FUNDS</b>					
Equity Share Capital	599.05	598.3	597.39	596.52	595.8
<b>TOTAL SHARE CAPITAL</b>	<b>599.05</b>	<b>598.3</b>	<b>597.39</b>	<b>596.52</b>	<b>595.8</b>
Reserves and Surplus	42,497.35	38,139.19	33,649.65	33,606.36	33,613.43
<b>TOTAL RESERVES AND SURPLUS</b>	<b>42,497.35</b>	<b>38,139.19</b>	<b>33,649.65</b>	<b>33,606.36</b>	<b>33,613.43</b>
<b>TOTAL SHAREHOLDERS FUNDS</b>	<b>43,356.73</b>	<b>38,960.95</b>	<b>34,501.92</b>	<b>34,467.84</b>	<b>34,209.23</b>
<b>NON-CURRENT LIABILITIES</b>					
Long Term Borrowings	2,331.56	5,678.02	7,070.03	2,032.03	2,031.78
Deferred Tax Liabilities [Net]	1,470.29	1,700.80	1,343.15	1,408.17	634.13
Other Long-Term Liabilities	1,374.15	1,057.54	585.11	698.22	604.92
Long Term Provisions	1,207.09	912.66	955.42	922.98	882.93
<b>TOTAL NON-CURRENT LIABILITIES</b>	<b>6,383.09</b>	<b>9,349.02</b>	<b>9,953.71</b>	<b>5,061.40</b>	<b>4,153.76</b>
<b>CURRENT LIABILITIES</b>					
Short Term Borrowings	2,312.17	811.93	24.74	900	448.54
Trade Payables	17,145.62	12,893.54	9,988.16	6,785.83	9,678.15
Other Current Liabilities	5,975.37	4,661.21	4,633.79	2,691.43	3,518.71

Short Term Provisions	606.83	453.61	486.48	595.56	688.67
<b>TOTAL CURRENT LIABILITIES</b>	<b>26,039.99</b>	<b>18,820.29</b>	<b>15,133.17</b>	<b>10,972.82</b>	<b>14,334.07</b>
<b>TOTAL CAPITAL AND LIABILITIES</b>	<b>75,779.81</b>	<b>67,130.26</b>	<b>59,588.80</b>	<b>50,502.06</b>	<b>52,697.06</b>
<b>ASSETS</b>					
<b>NON-CURRENT ASSETS</b>					
Tangible Assets	13,050.12	12,004.37	7,872.59	7,980.76	7,614.71
Intangible Assets	3,926.08	2,544.25	2,306.76	2,413.83	2,467.04
Capital Work-In-Progress	950.27	1,521.52	1,708.88	1,196.68	706.77
Other Assets	0	0	0	0	0
<b>FIXED ASSETS</b>	<b>19,760.82</b>	<b>19,566.79</b>	<b>15,011.51</b>	<b>14,404.05</b>	<b>12,501.54</b>
Non-Current Investments	17,539.06	17,207.75	19,576.60	17,748.48	19,032.07
Deferred Tax Assets [Net]	0	0	0	0	0
Long Term Loans and Advances	177.45	960.2	1,652.72	138.86	37.55
Other Non-Current Assets	3,658.85	3,477.82	3,035.67	3,069.18	3,054.84
<b>TOTAL NON-CURRENT ASSETS</b>	<b>41,136.18</b>	<b>41,212.56</b>	<b>39,276.50</b>	<b>35,360.57</b>	<b>34,626.00</b>
<b>CURRENT ASSETS</b>					
Current Investments	9,548.01	7,902.06	4,488.47	2,189.65	2,983.96
Inventories	8,881.35	5,882.85	3,955.47	3,400.91	3,839.27
Trade Receivables	4,041.73	3,035.11	2,342.85	2,998.98	3,946.30
Cash And Cash Equivalents	4,481.75	3,650.53	6,255.42	4,236.51	3,731.66
Short Term Loans and Advances	2,176.96	1,845.52	756.94	512.02	673.4
Other Current Assets	5,513.83	3,601.63	2,513.15	1,803.42	2,896.47
<b>TOTAL CURRENT ASSETS</b>	<b>34,643.63</b>	<b>25,917.70</b>	<b>20,312.30</b>	<b>15,141.49</b>	<b>18,071.06</b>

<b>TOTAL ASSETS</b>	<b>75,779.81</b>	<b>67,130.26</b>	<b>59,588.80</b>	<b>50,502.06</b>	<b>52,697.06</b>
<b>OTHER ADDITIONAL INFORMATION</b>					
<b>CONTINGENT LIABILITIES, COMMITMENTS</b>					
Contingent Liabilities	7,279.74	4,067.07	5,540.49	5,233.59	5,622.13
<b>CIF VALUE OF IMPORTS</b>					
Raw Materials	0	0	0	0	0
Stores, Spares and Loose Tools	0	0	0	0	0
Trade/Other Goods	0	0	0	0	0
Capital Goods	0	0	0	0	0
<b>EXPENDITURE IN FOREIGN EXCHANGE</b>					
Expenditure In Foreign Currency	7,048.74	2,628.79	1,096.54	1,096.90	1,005.75
<b>REMITTANCES IN FOREIGN CURRENCIES FOR DIVIDENDS</b>					
Dividend Remittance in Foreign Currency	--	--	--	--	--
<b>EARNINGS IN FOREIGN EXCHANGE</b>					
FOB Value of Goods	--	--	--	--	--
Other Earnings	4,466.66	3,294.13	2,000.03	2,237.45	3,063.06
<b>BONUS DETAILS</b>					
Bonus Equity Share Capital	481.41	481.41	481.41	481.41	481.41

**NON-CURRENT INVESTMENTS**

Non-Current Investments Quoted Market Value	51,714.55	57,237.27	44,346.71	23,044.04	42,340.50
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Non-Current Investments Unquoted Book Value	18,855.74	17,635.00	20,071.85	16,635.21	14,591.94
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**CURRENT INVESTMENTS**

Current Investments Quoted Market Value	6,977.23	6,796.86	4,488.47	1,718.34	2,194.69
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Current Investments Unquoted Book Value	2,570.78	1,105.20	--	471.31	789.27
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**Balance sheet of**  
**Tata Motors Ltd.**

BALANCE SHEET OF TATA MOTORS (in Rs. Cr.)	MAR 23	MAR 22	MAR 21	MAR 20	MAR 19
	12 months	12 months	12 months	12 months	12 months
<b>EQUITIES AND LIABILITIES</b>					
<b>SHAREHOLDER'S FUNDS</b>					
Equity Share Capital	766.02	765.88	765.81	719.54	679.22
<b>TOTAL SHARE CAPITAL</b>	<b>766.02</b>	<b>765.88</b>	<b>765.81</b>	<b>719.54</b>	<b>679.22</b>
Reserves and Surplus	21,701.37	19,171.88	18,290.16	16,800.61	21,483.30
<b>TOTAL RESERVES AND SURPLUS</b>	<b>21,701.37</b>	<b>19,171.88</b>	<b>18,290.16</b>	<b>16,800.61</b>	<b>21,483.30</b>
<b>TOTAL SHAREHOLDERS FUNDS</b>	<b>22,467.39</b>	<b>19,937.76</b>	<b>19,055.97</b>	<b>18,387.65</b>	<b>22,162.52</b>
<b>NON-CURRENT LIABILITIES</b>					
Long Term Borrowings	10,445.70	14,102.74	16,326.77	14,776.51	13,914.74
Deferred Tax Liabilities [Net]	51.16	173.72	266.50	198.59	205.86
Other Long-Term Liabilities	1,411.78	1,212.34	1,786.93	1,646.56	404.11
Long Term Provisions	1,588.75	1,474.11	1,371.94	1,769.74	1,281.59
<b>TOTAL NON-CURRENT LIABILITIES</b>	<b>13,497.39</b>	<b>16,962.91</b>	<b>19,752.14</b>	<b>18,391.40</b>	<b>15,806.30</b>
<b>CURRENT LIABILITIES</b>					

Short Term Borrowings	8,426.74	9,129.91	5,421.95	6,121.36	3,617.72
Trade Payables	7,162.60	6,102.10	8,115.01	8,102.25	10,408.83
Other Current Liabilities	9,805.30	11,152.74	11,671.05	10,180.46	7,765.57
Short Term Provisions	408.89	608.06	1,043.54	1,406.75	1,148.69
<b>TOTAL CURRENT LIABILITIES</b>	<b>25,803.53</b>	<b>26,992.81</b>	<b>26,251.55</b>	<b>25,810.82</b>	<b>22,940.81</b>
<b>TOTAL CAPITAL AND LIABILITIES</b>	<b>61,770.77</b>	<b>63,899.87</b>	<b>65,059.66</b>	<b>62,589.87</b>	<b>60,909.63</b>
<b>ASSETS</b>					
<b>NON-CURRENT ASSETS</b>					
Tangible Assets	12,129.14	12,065.89	19,922.06	19,540.25	18,316.61
Intangible Assets	2,413.18	2,009.87	6,501.04	5,667.73	3,970.22
Capital Work-In-Progress	575.65	585.21	1,400.82	1,755.51	2,146.96
Other Assets	0.00	0.00	0.00	0.00	0.00
<b>FIXED ASSETS</b>	<b>15,627.27</b>	<b>15,543.00</b>	<b>29,429.56</b>	<b>29,702.78</b>	<b>28,573.42</b>
Non-Current Investments	29,181.62	29,256.39	16,114.91	15,730.86	15,434.19
Deferred Tax Assets [Net]	1,477.26	0.00	0.00	0.00	0.00
Long Term Loans and Advances	114.40	48.43	72.39	138.46	143.13
Other Non-Current Assets	3,870.27	3,432.44	3,588.21	3,449.01	3,529.59
<b>TOTAL NON-CURRENT ASSETS</b>	<b>50,270.82</b>	<b>48,280.26</b>	<b>49,205.07</b>	<b>49,021.11</b>	<b>47,680.33</b>
<b>CURRENT ASSETS</b>					
Current Investments	3,142.96	5,143.08	1,578.26	885.31	1,433.18
Inventories	3,027.90	3,718.49	4,551.71	3,831.92	4,662.00

Trade Receivables	2,307.72	2,111.78	2,087.51	1,978.06	3,250.64
Cash And Cash Equivalents	1,414.65	2,605.43	4,318.94	3,532.19	1,306.61
Short Term Loans and Advances	132.29	139.37	184.49	232.14	200.08
Other Current Assets	1,474.43	1,901.46	3,133.68	3,109.14	2,376.79
<b>TOTAL CURRENT ASSETS</b>	<b>11,499.95</b>	<b>15,619.61</b>	<b>15,854.59</b>	<b>13,568.76</b>	<b>13,229.30</b>
<b>TOTAL ASSETS</b>	<b>61,770.77</b>	<b>63,899.87</b>	<b>65,059.66</b>	<b>62,589.87</b>	<b>60,909.63</b>
<b>OTHER ADDITIONAL INFORMATION</b>					
<b>CONTINGENT LIABILITIES, COMMITMENTS</b>					
Contingent Liabilities	2,515.88	3,353.04	3,694.20	4,737.19	7,246.04
<b>CIF VALUE OF IMPORTS</b>					
Raw Materials	0.00	0.00	0.00	0.00	0.00
Stores, Spares and Loose Tools	0.00	0.00	0.00	0.00	0.00
Trade/Other Goods	0.00	0.00	0.00	0.00	0.00
Capital Goods	0.00	0.00	0.00	0.00	0.00
<b>EXPENDITURE IN FOREIGN EXCHANGE</b>					
Expenditure In Foreign Currency	1,297.57	1,983.68	2,159.77	2,946.64	0.00
<b>REMITTANCES IN FOREIGN CURRENCIES FOR DIVIDENDS</b>					
Dividend Remittance in Foreign Currency	--	--	--	--	--
<b>EARNINGS IN FOREIGN EXCHANGE</b>					

FOB Value of Goods	--	--	--	--	--
Other Earnings	2,979.25	4,006.60	2,181.66	3,144.88	--
<b>BONUS DETAILS</b>					
Bonus Equity Share Capital	111.29	111.29	111.29	111.29	111.29
<b>NON-CURRENT INVESTMENTS</b>					
Non-Current Investments Quoted Market Value	574.37	718.49	446.23	140.96	270.17
Non-Current Investments Unquoted Book Value	630.45	620.45	521.42	407.61	393.21
<b>CURRENT INVESTMENTS</b>					
Current Investments Quoted Market Value	--	--	--	--	0.91
Current Investments Unquoted Book Value	3,142.96	5,143.08	1,578.26	885.31	1,174.46