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Profitability Analysis of Tata Group of Companies

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Abstract: *The study examines the profitability position of Tata group of companies for the period of 10 years. Profitability means ability to make profit for all the business activities. My study is based on secondary data. The study analyzes the profitability of the company with the help of mean, ratios, correlation, and regression analysis.*

Keywords: *Tata Group, Profitability, Mean, Ratios, 10 Years.*

I. INTRODUCTION

Finance has become very much important for all the business activities. No business or firm can run without finance. The value of the firm may be considered by taking financial decisions of aspects like profitability and risk finance is the life blood of every business concern. Profitability means ability to make profit for all business, firms and companies. The main process of financial performance is to ascertain the company's current and past condition and also to provide some picture about its future condition. The company cannot run without making any profit for a long period of time. In India, the most of business are under the control of the families. The family business is very popular in India. India has 108 publicly- listed companies are concerned by family – owned business. India has ranked third in list of family – owned business. In family business, the company is controlled and owned by members of single family. Most of the corporate business are run by family concern such as Tata, Ambanis, Brila, Mahindra, Wadia's, Mittals, Godrej, Ranbaxy etc. in a developed economy, the global reach business are undergoing changes and the successful business models. The study has been made about Tata group of companies (Family business) Tata group is one of the global enterprise. The Tata group was established in the year 1868, founded by Jamsetji Tata. It was operated in more than 100 countries. It has focusing on new technologies and innovative business in India and all over the world. Tata group has been operated in more than 150 companies in seven business sectors.

II. OBJECTIVES OF THE STUDY

- To study the profitability position of Tata group of companies.
- To make suggestions for growth and development of the company.

III. SAMPLE DESIGN

In this study around 10 companies under the family business of Tata group companies. From the Tata group the selected companies for the purpose of research are Tata Chemicals Limited, Tata Metaliks Limited, Tata Tele Services Limited, Tata Consultancy Services, Tayo Rolls Limited, Tata Projects Limited, Tata Coffee Limited, Tata Motors Limited, Tata Steels Limited, Tata Power Limited.

IV. DATA COLLECTION AND STUDY PERIOD

In the research study, all the secondary data has been collected from Company's annual report, Journals, Capital line and Websites. The study was covered under the period of 10 years from 2007-2008 to 2016-2017.

V. ANALYSIS OF THE STUDY

The data has been collected, analyzed and interpreted to evaluate the financial performance of a Tata group of companies with the help of analyzing standard financial tools. Mean, Ratio Analysis, Correlation Analysis, Regression Analysis.

VI. REVIEW OF LITERATURE

- Behzad pagheh (2015)** investigated an analytical study of profitability position of tata motors. It indicates the firm has increase and its biggest status. The firm has to reduce the expenses will increase the profitability.
- Priyanka and Manoj kumar (2017)** examined the financial analysis as the determinant of profitability in Indian automobile industry The result shows that there is no significant relationship in terms of long term debt and dividend per share.
- Saaikala and balakrishnan (2015)** focused that the comparative financial performance about Tata steel and sail steel companies. They analyzed and show the result as both the industries provides an opinion of liquidity position of the company.

VII. FINDINGS**RATIO ANALYSIS**

Ratio analysis is one of the tool for using financial analysis. Ratios are expressed in systematic terms between figures. It is a tools and techniques of analysis and interpret the financial statements. Ratios help in taking various decisions. It helps in determining the company's financial strength and weakness. The ratio can be calculated with the help of company's financial statement, only a few ratios can be calculated in the objectives of analysis.

GROSS PROFIT RATIO**Rupees in crores**

| YEAR | TATA CHEMICALS LTD | TATA METALICS LTD | TATA TELE SERVICE LTD | TCS | TAYO ROLLS LTD | TATA PROJECTS LTD | TATA COFFEE LTD | TATA MOTORS LTD | TATA STEELS LTD | TATA POWER LTD | TOTAL INDUSTRY AVERAG |
|---------|--------------------|-------------------|-----------------------|-------|----------------|-------------------|-----------------|-----------------|-----------------|----------------|-----------------------|
| 2007-08 | 32.35 | 11.8 | 18.40 | 29.87 | 6.699 | 6.21 | 16.58 | 11.31 | 40.20 | 21.22 | 19.50 |
| 2008-09 | 9.846 | -14.90 | 14.90 | 24.80 | -9.01 | 6.03 | 13.02 | 7.508 | 34.04 | 19.83 | 10.60 |
| 2009-10 | 14.32 | 6.42 | 10.80 | 29.68 | -5.952 | 8.07 | 18.75 | 11.03 | 33.16 | 24.28 | 15.10 |
| 2010-11 | 12.05 | 3.44 | 35.60 | 31.56 | -18.60 | 9.44 | 20.14 | 7.554 | 37.16 | 23.25 | 16.20 |
| 2011-12 | 12.37 | -9.62 | 1.04 | 36.88 | -25.08 | 8.34 | 23.09 | 5.428 | 32.44 | 26.32 | 11.10 |
| 2012-13 | 12.40 | -4.45 | -2.42 | 34.08 | -8.222 | 4.24 | 24.40 | 4.451 | 24.81 | 21.51 | 11.10 |
| 2013-14 | 8.384 | 4.12 | 1.80 | 38.08 | -34.56 | 5.39 | 25.92 | 3.046 | 27.91 | 23.96 | 10.40 |
| 2014-15 | 10.38 | 10.90 | -0.15 | 35.26 | -38.51 | 6.67 | 23.89 | -3.78 | 25.14 | 25.34 | 9.51 |
| 2015-16 | 12.10 | 12.30 | 3.41 | 35.87 | -111.10 | 4.46 | 17.50 | 6.146 | 21.09 | 20.77 | 2.26 |
| 2016-17 | 17.36 | 13.30 | -57.7 | 34.14 | -180.10 | 4.59 | 26.24 | - | - | - | -140 |
| AVERAGE | 14.16 | 3.34 | 2.56 | 33.02 | -42.44 | 6.35 | 20.95 | 5.27 | 27.6 | 20.65 | 9.14 |

INTERPRETATION

It is fluctuating in all the companies. The average ratio of the individual company is high in case of Tcs and low in case of Tayo rolls ltd.

The overall company average is high in case of, Tata chemicals ltd, Tcs, Tata coffee ltd, tata steels ltd, Tata power ltd and low in case of all other companies.

OPERATING RATIO

Rupees in crores

| YEAR | TATA CHEMICALS LTD | TATA METALICS LTS | TATA TELE SERVICE LTD | TCS | TAYO ROLLS LTD | TATA PROJECTS LTD | TATA COFFEE LTD | TATA MOTORS LTD | TATA STEELS LTD | TATA POWER LTD | TOTAL INDUSTRY AVERAGE |
|---------|--------------------|-------------------|-----------------------|--------|----------------|-------------------|-----------------|-----------------|-----------------|----------------|------------------------|
| 2007-08 | 405.53 | 275.30 | -6.64 | 227.88 | 116.088 | 12789.9 | 132.33 | 63.031 | 75.557 | 394.12 | 1447.3 |
| 2008-09 | 192.17 | -588.10 | -8.412 | 237.35 | -163.16 | 2916.54 | 99.946 | 31.106 | 83.852 | 416.46 | 321.77 |
| 2009-10 | 178.69 | 180.10 | -15.71 | 189.99 | -112.38 | 6552.1 | 171.53 | 70.214 | 568.71 | 395.55 | 817.88 |
| 2010-11 | 160.31 | 90.75 | 2.6302 | 255.99 | -296.69 | 8864.69 | 295.34 | 57.088 | 715.62 | 396.70 | 1054.2 |
| 2011-12 | 230.20 | -72.31 | -27.28 | 371.16 | -55.763 | 7639.51 | 422.79 | 195.73 | 689.35 | 49.287 | 944.27 |
| 2012-13 | 252.46 | -43.53 | -34.72 | 432.38 | -35.419 | 4191.6 | 502.36 | 52.893 | 521.20 | 43.176 | 588.24 |
| 2013-14 | 171.13 | 30.81 | -28.65 | 943.22 | -41.172 | 4836.54 | 571.42 | 65.075 | 660.09 | 40.201 | 724.87 |
| 2014-15 | 250.36 | 66.77 | -31.47 | 983.15 | -27.571 | 4627.16 | 54.368 | -1229 | 662.86 | 37.352 | 539.38 |
| 2015-16 | 261.44 | 443.90 | -18.33 | 1171.3 | -1528.7 | 3085.93 | 34.652 | 60.774 | 504.52 | 28.528 | 404.41 |
| 2016-17 | 271.84 | 458.90 | -120.5 | 1200.7 | -808.48 | 5489.38 | 74.534 | - | - | - | 656.63 |
| AVERAGE | 237.41 | 84.26 | -28.91 | 601.31 | -295.32 | 6099.34 | 235.93 | -63.33 | 448.18 | 180.14 | 749.90 |

INTERPRETATION

It is fluctuating in all the companies. The average ratio of the individual company is high in case of Tata tele service ltd and low in case of Tata metaliks ltd.

The overall company average is high in case of, Tata tele service ltd, Tcs, tata steels ltd, Tata power ltd, Tata steels ltd, Tata coffee ltd and low in case of all other companies.

OPERATING PROFIT RATIO

Rupees in crores

| YEAR | TATA CHEMICALS LTD | TATA METALICS LTD | TATA TELE SERVICE LTD | TCS | TAYO ROLLS LTD | TATA PROJECTS LTD | TATA COFFEE LTD | TATA MOTORS LTD | TATA STEELS LTD | TATA POWER LTD | TOTAL INDUSTRY LTD |
|---------|--------------------|-------------------|-----------------------|-------|----------------|-------------------|-----------------|-----------------|-----------------|----------------|--------------------|
| 2007-08 | 33.29 | 13.88 | 28.52 | 29.89 | 6.6994 | 7.13 | 20.87 | 12.80 | 44.93 | 24.15 | 22.22 |
| 2008-09 | 12.13 | -11.1 | 30.55 | 24.84 | -9.01 | 6.63 | 17.19 | 10.70 | 40.16 | 24.33 | 14.65 |
| 2009-10 | 18.13 | 10.29 | 26.13 | 29.72 | -5.952 | 8.58 | 21.05 | 14.60 | 40.55 | 30.20 | 19.33 |
| 2010-11 | 15.23 | 5.815 | 51.33 | 31.62 | -18.60 | 9.92 | 22.70 | 10.50 | 43.06 | 29.84 | 20.14 |
| 2011-12 | 15 | -6.91 | 22.06 | 36.93 | -25.08 | 9.10 | 24.53 | 7.67 | 38.12 | 32.33 | 15.37 |
| 2012-13 | 14.83 | -2.08 | 19 | 34.15 | -8.222 | 5.08 | 25.16 | 7.55 | 29.72 | 28.64 | 15.38 |
| 2013-14 | 10.52 | 6.42 | 22.49 | 38.11 | -34.56 | 6.30 | 26.68 | 6.99 | 32.28 | 33.96 | 14.92 |
| 2014-15 | 12.23 | 13.94 | 22.35 | 35.37 | -38.51 | 8.87 | 25.23 | 0.66 | 29.87 | 38.04 | 14.81 |
| 2015-16 | 14.72 | 15.72 | 26.41 | 35.88 | -111.10 | 6.65 | 18.64 | 9.64 | 24.91 | 33.88 | 7.537 |
| 2016-17 | 20.81 | 16.09 | -10.3 | 34.15 | -180.10 | 6.70 | 27.33 | - | - | - | -8.53 |
| AVERAGE | 16.69 | 6.21 | 23.85 | 33.07 | -42.44 | 7.5 | 22.94 | 8.11 | 32.36 | 27.54 | 13.58 |

INTERPRETATION

It is fluctuating in all the companies. The average ratio of the individual company is high in case of Tata steels ltd and low in case of Tayo rolls ltd.

The overall company average is high in case of, Tata tele service ltd, Tcs, tata steels ltd, Tata power ltd, Tata chemicals ltd, and Tata coffee ltd and low in case of all other companies.

NET PROFIT RATIO

Rupees in crores

| YEAR | TATA CHEMICAL S LTD | TATA METALIC S LTD | TATA TELE SERVIC E LTD | TCS | TAYO ROLL S LTD | TATA PROJECT S LTD | TATA COFFE E LTD | TATA MOTOR S LTD | TATA STEEL S LTD | TATA POWE R LTD | TOTAL INDUSTRY AVERAGE |
|---------|---------------------|--------------------|------------------------|-------|-----------------|--------------------|------------------|------------------|------------------|-----------------|------------------------|
| 2007-08 | 23.5 | 6.75 | -7.365 | 24.65 | 3.0278 | 3.22 | 8.20 | 7.11 | 23.85 | 14.65 | 10.80 |
| 2008-09 | 5.41 | -14.80 | -8.22 | 20.96 | -10.15 | 3.05 | 5.97 | 3.98 | 21.36 | 12.66 | 4.02 |
| 2009-10 | 8.03 | 4.36 | -14.40 | 24.38 | -9.066 | 4.82 | 9.77 | 6.40 | 20.17 | 13.13 | 6.76 |
| 2010-11 | 6.45 | 1.74 | 2.219 | 25.86 | -22.82 | 5.87 | 13.7 | 3.85 | 23.36 | 13.49 | 7.38 |
| 2011-12 | 7.34 | -8 | -20.80 | 28.81 | -38.05 | 5.13 | 15.5 | 2.29 | 19.73 | 13.66 | 2.56 |
| 2012-13 | 7.67 | -6.31 | -25.01 | 26.4 | -19.03 | 2.36 | 15.7 | 0.67 | 13.25 | 10.66 | 2.64 |
| 2013-14 | 5.02 | 3.32 | -20.51 | 28.57 | -49.41 | 2.72 | 16.4 | 0.98 | 15.37 | 11 | 1.34 |

| | | | | | | | | | | | |
|---------|-------|------|--------|-------|--------|------|------|------|-------|-------|-------|
| 2014-15 | 6.33 | 7.62 | -21.27 | 26.17 | -47.72 | 2.80 | 14.8 | -13 | 15.41 | 12.25 | 0.34 |
| 2015-16 | 8.10 | 8.08 | -12.06 | 26.87 | -124.4 | 1.42 | 9.14 | 0.55 | 12.83 | 8.749 | -6.10 |
| 2016-17 | 11.10 | 8.23 | -87.18 | 25.52 | -196.5 | 1.85 | 17.9 | - | - | - | -22 |
| AVERAGE | 8.90 | 1.10 | -21.46 | 25.82 | -51.41 | 3.32 | 12.7 | 1.28 | 16.53 | 11.03 | 0.78 |

INTERPRETATION

It is fluctuating in all the companies. The average ratio of the individual company is high in case of Tcs and low in case of Tata rolls ltd.

The overall company average is high in case of all companies except Tayo rolls and Tata steels ltd.

RETURN ON INVESTMEN RATIO**Rupees in crores**

| YEAR | TATA CHEMICALS LTD | TATA METALICS LTD | TATA TELE SERVICE LTD | TCS | TAYO ROLLS LTD | TATA PROJECTS LTD | TATA COFFEE LTD | TATA MOTORS LTD | TATA STEELS LTD | TATA POWER LTD | TOTAL INDUSTRY AVERAGE |
|---------|--------------------|-------------------|-----------------------|-------|----------------|-------------------|-----------------|-----------------|-----------------|----------------|------------------------|
| 2007-08 | 26.58 | 36.185 | 62.69 | 40.97 | 13.428 | 25.08 | 7.225 | 25.90 | 17.16 | 10.70 | 26.60 |
| 2008-09 | 11.71 | -340.40 | 43.33 | 34.93 | -18.63 | 26.33 | 6.157 | 8.19 | 17.24 | 10.60 | -20 |
| 2009-10 | 10.15 | 51.036 | 44.72 | 37.17 | -14.72 | 39.11 | 8.889 | 15 | 13.65 | 8.84 | 21.40 |
| 2010-11 | 8.617 | 20.456 | -8.09 | 38.66 | -63.58 | 36.25 | 13.67 | 9.05 | 14.62 | 8.38 | 7.80 |
| 2011-12 | 11.89 | -74.51 | 45.64 | 44.16 | -67 | 24.70 | 17.24 | 6.41 | 12.82 | 9.90 | 3.12 |
| 2012-13 | 12.12 | -81.34 | 36.75 | 39.27 | -74.07 | 12.14 | 17.86 | 1.58 | 9.17 | 8.36 | -1.80 |
| 2013-14 | 7.649 | 36.536 | 23.80 | 41.94 | -131.60 | 12.44 | 17.65 | 1.74 | 10.49 | 7.27 | 2.79 |
| 2014-15 | 10.56 | 44.342 | 20.73 | 42.4 | -130.20 | 10.78 | 14.97 | -32 | 9.659 | 6.42 | -0.20 |
| 2015-16 | 8.239 | 113.36 | 8.99 | 35.49 | 46.166 | 6.709 | 8.307 | 1.05 | 6.954 | 4.82 | 24 |
| 2016-17 | 7.822 | 56.014 | 39.88 | 30.32 | 19.626 | 10.83 | 15.52 | - | - | - | 18 |
| AVERAGE | 11.53 | -13.84 | 31.84 | 38.53 | -42.06 | 20.44 | 12.75 | 3.70 | 11.18 | 7.53 | 8.16 |

INTERPRETATION

It is fluctuating in all the companies. The average ratio of the individual company is high in case of Tata metaliks ltd and low in case of Tata tele service ltd.

The overall company average is high in case of, Tata tele service ltd, Tcs, tata projects ltd, Tata coffee ltd, Tata chemicals ltd, and low in case of all other companies.

RETURN ON EQUITY CAPITAL RATIO**Rupees in crores**

| YEAR | TATA CHEMICALS LTD | TATA METALICS LTD | TATA TELE SERVICE LTD | TCS | TAYO ROLLS LTD | TATA PROJECTS LTD | TATA COFFEE LTD | TATA MOTORS LTD | TATA STEELS LTD | TATA POWER LTD | TOTAL INDUSTRY AVERAGE |
|---------|--------------------|-------------------|-----------------------|-------|----------------|-------------------|-----------------|-----------------|-----------------|----------------|------------------------|
| 2007-08 | 405.53 | 275.3 | -6.64 | 2279 | 116.088 | 1279 | 132.12 | 526.3 | 75.557 | 394.12 | 547.61 |
| 2008-09 | 192.17 | -588 | -8.412 | 2374 | -163.16 | 291.65 | 99.786 | 194.8 | 83.852 | 416.46 | 289.25 |
| 2009-10 | 178.69 | 180.1 | -15.71 | 1900 | -112.38 | 655.21 | 171.25 | 392.6 | 568.71 | 395.55 | 431.4 |
| 2010-11 | 160.31 | 90.75 | 2.6302 | 2560 | -296.69 | 886.47 | 294.86 | 285.5 | 715.62 | 396.7 | 509.6 |
| 2011-12 | 230.2 | -72.3 | -27.28 | 3712 | -55.763 | 763.95 | 422.11 | 195.7 | 689.35 | 492.87 | 635.04 |
| 2012-13 | 252.46 | -43.5 | -34.72 | 4324 | -35.419 | 419.16 | 501.55 | 47.3 | 521.2 | 431.76 | 638.36 |
| 2013-14 | 171.13 | 30.81 | -28.65 | 9432 | -41.172 | 483.65 | 570.5 | 51.96 | 660.09 | 402.01 | 1173.3 |
| 2014-15 | 250.36 | 66.77 | -31.47 | 9832 | -27.571 | 462.72 | 543.68 | -736 | 662.86 | 373.52 | 1139.6 |
| 2015-16 | 261.44 | 443.9 | -18.33 | 11713 | -1528.7 | 308.59 | 346.52 | 34.49 | 504.52 | 285.28 | 1235.1 |
| 2016-17 | 271.84 | 458.9 | -120.5 | 12007 | -808.48 | 548.94 | 745.34 | - | - | - | 1310.3 |
| Average | 237.41 | 84.26 | -28.91 | 6013 | -295.32 | 609.93 | 382.77 | 99.24 | 448.18 | 358.83 | 790.95 |

INTERPRETATION

It is fluctuating in all the companies. The average ratio of the individual company is high in case of Tcs and low in case of Tata tele service ltd.

The overall company average is high in case of Tcs, and low in case of all other companies.

EARNINGS PER SHARE

Rupees in crores

| YEAR | TATA CHEMICALS LTD | TATA METALICS LTD | TATA TELE SERVICE LTD | TCS | TAYO ROLLS LTD | TATA PROJECTS LTD | TATA COFFEE LTD | TATA MOTORS LTD | TATA STEELS LTD | TATA POWER LTD | TOTAL INDUSTRY AVERAGE |
|---------|--------------------|-------------------|-----------------------|--------|----------------|-------------------|-----------------|-----------------|-----------------|----------------|------------------------|
| 2007-08 | 405.53 | 275.30 | -6.64 | 227.88 | 116.088 | 12789.9 | 132.33 | 63.031 | 75.557 | 394.12 | 1447.3 |
| 2008-09 | 192.17 | -588.10 | -8.412 | 237.35 | -163.16 | 2916.54 | 99.946 | 31.106 | 83.852 | 416.46 | 321.77 |
| 2009-10 | 178.69 | 180.10 | -15.71 | 189.99 | -112.38 | 6552.1 | 171.53 | 70.214 | 568.71 | 395.55 | 817.88 |
| 2010-11 | 160.31 | 90.75 | 2.6302 | 255.99 | -296.69 | 8864.69 | 295.34 | 57.088 | 715.62 | 396.70 | 1054.2 |
| 2011-12 | 230.20 | -72.31 | -27.28 | 371.16 | -55.763 | 7639.51 | 422.79 | 195.73 | 689.35 | 49.287 | 944.27 |
| 2012-13 | 252.46 | -43.53 | -34.72 | 432.38 | -35.419 | 4191.6 | 502.36 | 52.893 | 521.20 | 43.176 | 588.24 |
| 2013-14 | 171.13 | 30.81 | -28.65 | 943.22 | -41.172 | 4836.54 | 571.42 | 65.075 | 660.09 | 40.201 | 724.87 |
| 2014-15 | 250.36 | 66.77 | -31.47 | 983.15 | -27.571 | 4627.16 | 54.368 | -1229 | 662.86 | 37.352 | 539.38 |
| 2015-16 | 261.44 | 443.90 | -18.33 | 1171.3 | -1528.7 | 3085.93 | 34.652 | 60.774 | 504.52 | 28.528 | 404.41 |
| 2016-17 | 271.84 | 458.90 | -120.5 | 1200.7 | -808.48 | 5489.38 | 74.534 | - | - | - | 656.63 |
| AVERAGE | 237.41 | 84.26 | -28.91 | 601.31 | -295.32 | 6099.34 | 235.93 | -63.33 | 448.18 | 180.14 | 749.90 |

INTERPRETATION

It is fluctuating in all the companies. The average ratio of the individual company is high in case of tata projects ltd and low in case of Tayo rolls ltd.

The overall company average is high in case of Tata projects ltd and low in case of all other companies.

VARIABLES ASSOCIATED WITH PROFITABILITY CORRELATION ANALYSIS

| VARIABLES COMPANY | BR | LEVERAGE | LIQUIDITY | TDC | WCTOR | DTOR | CI |
|-----------------------|---------------------|---------------------|--------------------|--------------------|-------------------|--------------------|---------------------|
| TATA CHEMICALS LTD | -0.690* (0.027) | 0.324 (0.361) | -0.44 (0.331) | -0.322 (0.365) | 0.056 (0.877) | -0.202 (0.575) | 0.102 (0.780) |
| TATA METALICS LTD | 0.628 (0.052) | -0.841** (0.002) | -0.580 (0.079) | 0.486 (0.155) | 0.177 (0.625) | 0.355 (0.314) | -0.242 (0.501) |
| TATA TELE SERVICE LTD | -0.714* (0.020) | -0.402 (0.249) | 0.025 (0.945) | 0.302 (0.397) | 0.190 (0.600) | 0.474 (0.166) | -0.189 (0.601) |
| TCS | 0.037 (0.919) | 0.291 (0.414) | -0.168 (0.644) | -0.456 (0.185) | -0.322 (0.365) | 0.587 (0.075) | -0.615 (0.059) |
| TAYO ROLLS LTD | 0.350 (0.3220) | -0.781** (0.008) | -0.617 (0.057) | 0.189 (0.601) | -0.328 (0.355) | -0.663* (0.037) | -0.665* (0.036) |
| TATA PROJECTS LTD | -0.754* (0.012) | -0.623 (0.054) | -0.398 (0.254) | 0.643* (0.045) | -0.482 (0.159) | -0.398 (0.254) | -0.823** (0.003) |
| TATA COFFEE LTD | -0.908** (0.000) | -0.753* (0.012) | 0.069 (0.851) | 0.721* (0.019) | 0.214 (0.554) | -0.371 (0.292) | -0.860** (0.001) |
| TATA MOTORS LTD | 0.027 (0.942) | -0.293 (0.412) | 0.466 (0.175) | 0.296 (0.406) | -0.538 (0.109) | 0.396 (0.257) | -0.289 (0.418) |
| TATA STEELS LTD | 0.676* (0.032) | 0.941** (0.000) | 0.727* (0.017) | 0.625 (0.053) | 0.056 (0.878) | 0.819** (0.004) | 0.706* (0.023) |
| TATA POWER LTD | 0.302 (0.396) | 0.517 (0.126) | 0.789** (0.007) | 0.884** (0.001) | 0.282 (0.430) | 0.749* (0.013) | 0.412 (0.237) |

**significant @ 1% level

* significant @ 5% level

Figures in parenthesis are r² value d.f-2**INTERPRETATION**

- The above table shows the results of correlation with respect to profitability of Tata group of companies
- In case of tata chemicals ltd, the variables found correlated with business risk (-0.690) at 5% level and negative relations.

- In case of tata metaliks ltd shows that only leverage (-0.841) is correlated negatively.
- Business risk (-0.714) are found to be negatively correlated in case of tata tele service ltd.
- There is no significant relations are correlated in case of tcs.
- Leverage (-0.781), debtors turnover (-0.663), capital intensity (-0.665) are found negatively correlated in case of tayo rolls ltd.
- In case of tata projects, business risk, total debt and capital intensity which all are found to be negatively correlated except total debt.
- In case of tata coffee ltd, there is a significant relations between business risk, leverage and capital intensity. Total debt is the highest value and positive relation.
- Tata motors ltd are found have no relations to be correlated.
- In case of tata steels ltd, business risk leverage, liquidity, debtors turnover and capital intensity are found to be positively correlated.
- Liquidity, total debt and debtor's turnover are found to be positively correlated in case of tata power ltd.

VARIABLES ASSOCIATED WITH PROFITABILITY REGRESSION ANALYSIS

| VARIABLES COMPANY | A | BR | LEVERAGE | LIQUIDITY | TDC | WCTOR | DTOR | CI | R ² |
|-----------------------|----------------------|----------------------|----------------------|---------------------|---------------------|--------------------|--------------------|---------------------|----------------|
| TATA CHEMICALSLTD | 81.209 (1.236) | -18.710 (-4.252)* | -2.340 (-0.089) | -3.406 (-0.905) | -40.426 (-0.710) | -0.296 (-0.382) | -0.030 (-0.362) | 4.190 (0.550) | 0.987 |
| TATA METALIKS LTD | 220.100 (0.600) | 29.253 (0.562) | -57.309 (-2.005) | -56.103 (-0.429) | -4.015 (-0.990) | 0.505 (0.417) | 0.364 (0.165) | 111.566 (0.220) | 0.892 |
| TATA TELE SERVICE LTD | -128.358 (-0.926) | -2.275 (-3.594) | -5.934 (-1.796) | 307.246 (4.812)* | -1.332 (-1.196) | 30.176 (4.537)* | 1.037 (0.563) | 2.907 (1.037) | 0.984 |
| TCS | 225.069 (0.962) | 26.200 (0.593) | -294.023 (-1.061) | -3.696 (-0.501) | -1.994 (-0.979) | 0.285 (0.107) | 0.170 (1.372) | -41.505 (-1.142) | 0.924 |
| TAYO ROLLS LTD | 208.162 (4.857)* | 1.915 (0.185) | -14.129 (-1.661) | -76.768 (-1.562) | -0.069 (-5.255)* | 1.897 (1.033) | -2.308 (-4.945) | -10.597 (-0.345) | 0.985 |
| TATA PROJECTS LTD | -302.431 (-2.879) | -9.739 (-2.728) | 242.514 (3.522) | 6.977 (0.166) | 3.582 (3.178) | -0.45 (-1.835) | 0.026 (0.141) | -76.159 (-0.924) | 0.971 |
| TATA COFFEE LTD | -166.669 (-1.546) | -17.009 (-2.398) | 187.544 (2.000) | 0.666 (0.097) | 2.688 (2.141) | -3.235 (-1.186) | 0.029 (0.304) | -31.434 (-3.285) | 0.988 |
| TATA MOTORS LTD | -0.216 (-0.036) | 0.225 (0.304) | -31.662 (-1.879) | -41.254 (-1.936) | -0.018 (-0.028) | -0.417 (-2.052) | 2.906 (3.642) | -9.801 (-0.290) | 0.963 |
| TATA STEELS LTD | 0.056 (0.023) | -12.694 (-1.395) | 45.197 (1.779) | -2.860 (-0.910) | 0.391 (1.113) | -0.016 (-0.362) | 0.057 (0.076) | -4.663 (-0.736) | 0.949 |
| TATA POWER LTD | 0.035 (0.035) | -2.713 (-1.919) | 9.913 (2.980) | 1.388 (0.847) | 0.162 (2.931) | -0.009 (-0.383) | -0.037 (-0.925) | -0.048 (-0.027) | 0.979 |

**significant @ 1% level

* significant @ 5% level

Figures in parenthesis are 't' value

The above table shows the result of regression co-efficient with respect to profitability of tata group of companies.

In case of Tata chemicals ltd , the variability business risk (-4.252) is found significant at 1% level and is negatively relation.

In case of Tata Tele service ltd the variables associated includes liquidity and working capital is found significant at 1% level and is positively relation.

In case of Tayo rolls ltd the variables associated includes total debt and debtors turnover is found significant at 1% level and is negatively relation.

R² value of various companies taken for study shows that in all Tata group of companies , the variables selected determine profitability to the extent of above 95% except in Tata metaliks ltd where the level is 89%.

$$ROA = A + \beta_1 BR + \beta_2 LEVERAGE + \beta_3 LIQUIDITY + \beta_4 TDC + \beta_5 WTOR + \beta_6 DTOR + \beta_7 CI + E$$

VIII. CONCLUSION

Now India stands growing among the global economies. In a global economy family business is very important and increasing certain percentage of countries gross domestic product. The study found that profitability position is satisfied with all the companies except Tayo rolls ltd, Tata Tele service ltd and Tata power ltd.

References

1. **Surekha.B, Rama krishnah.k (2015)** “A study on financial analysis of tata motors”, International Journal of Commerce, Business and Management,vol.4, No.4(2015).
2. **Shivam mathur and Krati agarwal** “The study on financial analysis of automobile industries (A comparative study of maruti suzuki and tata motors)”, International Journal of Applied Research 2016,(29) 533-539.
3. **Suvarun goswami and Aniruddha sarkar (2011)** “An analysis of financial performance of Tata steels (A case study)” International Journal of Multidisciplinary Reaearch, vol.1 no.5.
4. **Behzad pagheh (2015)** An analytical study of profitability position of tata motors”, Indian Journal of fundamental & Applied Life Science, vol.5(s4),PP,1142-1154.
5. **Kalaivani.p, Umameheswari and Jothi(2016)** “A comparative study on financial performance of tata motors and Mahindra and Mahindra motors”, International Journal for Scientific Research & Development vol.4,(2016).

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