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A Comparative Study on the Ratio Analysis of Indian IT Industry for the Period Between 2018-2023

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ABSTRACT

The paper presents a comparative analysis of the financial performance of 2 leading IT Companies, Tata Consultancy service (TCS) and Wipro, through ratio analysis. The study aims to provide insights into the financial health. Efficiency, and profitability of both companies, thereby aiding investors, stakeholders and management in informed decision-making.

The findings of the study highlight the comparative strengths and weakness of TCS and Wipro in various financial aspects. It delves into liquidity ratios to assess short-term solvency, profitability ratios to evaluate earning capacity, efficiency ratios to gauge operational effectiveness, and solvency ratios to measure long-term financial viability

Ultimately, this comparative study on ratio analysis provides valuable insights for investors, financial analysts, and corporate decision-makers seeking to understand the financial strengths and weaknesses of TCS and Wipro. Moreover, it serves as a foundation for further research and strategic planning aimed at enhancing both companies' financial performance and sustainability in a dynamic business environment.

KEYWORD: Ratio analysis, financial performance, TCS, Wipro, Liquidity, Profitability, Activity

I. INTRODUCTION

The Indian IT industry came into existence in the year 1974. It was the time when mainframe manufacturer Burroughs asked Tata Consultancy service (TCS) to export programmers for installing a system software for a US client. The Indian IT industry started it roots from Mumbai based businessmen. They started their operations by sending software programmers to global IT firms located abroad and making money from this. India is the Global center of IT including the largest exporter of BPO and IT services worldwide. India accounts of 55% of the global outsourcing marketing share.

The Indian IT industry has emerged as a global powerhouse having an imp role in the country's economic growth and development. GDP Share of Indian IT Industry in 1998 was 1.2% and in 2021 it was 8% even due to global pandemic, in 2022 it was 7.4% and in 2023 it was 7.5%.

Indian IT Market various sector had a total market size of 99 billion US dollar in the F.Y 2021 and market expanded by 2% on an annual basis.

II. LITERATURE REVIEW

Rohit Bansal, (2015) The paper investigates the financial and accounting information of leading IT companies which is TCS, Wipro, Infosys and Tech Mahindra for the period from 2010-2014. Based on the factors like current ratio, debt to equity ratio and earning per share ratio, Infosys is the best company for the investors and TCS is the best company for the investors whose main motive is profit maximization based on the factors like Dupont analysis, Working capital turnover and Asset turnover ratio.

J Mehta, R raj, S Sharma, (2021) The paper investigates financial performance of Indian IT industry for the period of 13 years (2007-08-2020-21) with help of various accounting ratios and statistical tools like CAGR and Anova which shows Infosys is the best performer in terms of Net profit, gross profit and current ratio whereas Wipro is the best performer in terms of Return on capital, Return on equity and financial leverage ratio and HCL and TCS gained the third and fourth position in terms of performance.

N Nitin, (2023) TCS and WIPRO are two of the top Indian IT companies. The financial statement analysis of TCS and Wipro using various analytical methods such as Ratio analysis, Common size analysis, Comparative statement analysis, DuPont analysis, Statement of changes in working capital, and Sustainable growth rate analysis, revealed that both companies have shown overall positive growth in their financial performance over the years.

M Raju, D.P.V Rao, (2020) The paper investigates the financial analysis of TCS and Wipro which shows benefit after tax to sale execution ratio of TCS is on better way at 20% and Wipro is having between 12% and 19%.

J Devanathan, (2019) The paper focuses on suggesting the best investment company among 5 companies (TCS, Wipro, Infosys, Tech Mahindra and HCL) for the investors with respect of intrinsic value and location (which is taken to be Chennai). The report shows lowering on intrinsic value for each company.

R.N. Jana, S.K. Yadav, (2020) The paper investigates about transformation of Indian IT sector into IT powerhouse for foreign sector firms over past 10 years. The study shows the growth of IT sector at a rate of 10% during the period 2019-2020 which also tells that IT sector generate up to a revenue $300-$350 billion annually till 2025, if it uses the current growing technology like cyber security and Artificial Intelligence (AI).

Rashmi, BH, Mohankumar, MS, Nayana KS, (2011) The purpose of this study is to examine the effect and relationship between working capital management practices, Liquidity & profitability of IT firms in India. For this purpose, they have obtained last five-year working capital data (2011-2015) and the study suggest that current assets of both company related with each other and also there is significant difference between working capital of both the organization.

K.S. Shilpa, JS Mol, AS Ambily, (2017), This paper investigates to study on Fundamental analysis of selected IT companies which is listed at NSE. Fundamental analysis is studied in three parts. Economic analysis deals with fundamental factors like GDP, IIP, fiscal deficit, inflation, current account deficit etc. Industry analysis Indian IT sector is analysed based on entry barriers, type of industry, government interference, Porter's five force model. Finally, Company analysis deals with various ratios such as dividend payout ratio, EPS, P/E ratio, Debt-Equity ratio are used. It also focuses on the calculation of Intrinsic value of shares and compared with Market value.

DD Gadhavi, DM Barad, (2021) The article investigates the financial performance of Tata consultancy services and Infosys for the period of five years from 2016-17 to 2020-21. The aim of the present study is to evaluate various aspects of financial performance such as profitability and liquidity. To analyse the data, accounting technique financial ratios and statistical tools test have been used.

M Rathi, KA Goyal, (2020) This paper investigates the financial performance of India's most renowned company in the IT sector--Tata Consultancy Services (TCS). Trend analysis, DuPont analysis and Altman B Model was used to enumerate the financial performance of the company during the last 5 years. The results indicate a positive trend in the revenue, net profit earnings etc of the company. The company is growing positively with great swiftness.

T,Dulababu, (2017) The research paper investigates the potential for earnings in the top 10 IT companies. The IT companies were selected on the basis of different media ratings. The factors such as Net Profit Margin (NP), Earnings Per Share (EPS), Book-Value (BV), P/E Ratio (P/E), Return on Assets (ROA), Return on Equity (ROE), Return on Capital (ROC), Price/Book Value Ratio (PBV), Dividend Yield Ratio (DYR), Dividend per Share (DPS), 52 wk. High/Low Price are taken for analysis to recommend for investment purpose.

Mansiben.J Patel (2022) The paper investigates the liquidity management of India's selected Indian IT industry. Liquidity management is very important for the company for their growth and success in the market that's why it is important to study about liquidity management of Indian IT Industry.

Dr. Dhanyabhakam M (2011) The paper investigates the financial performance of the selected Indian IT industry with the help of Balance sheet and profit and loss statement and providing the best possible results through this.

Dr. PK Das (2022) The paper investigates the financial statements of Indian selected Information Technology company based on specific ratios. The study shows that Wipro Ltd. remains a leading performer over the last six years in the Information Technology sector with good results in its financial performance. Overall, the paper provides important result and is efficient for managers, stakeholders and groundwork.

Rohit Bansal, Sanjay Kumar kar, Rakesh Kumar Verma (2021) This paper investigates about the various methods for the valuation of a company to get a deep understanding of analyzing the financial statements of a company, and finally find out their financial /Investment decisions on such analysis.

Dr. Idrish Allad (2017) The paper investigates the efficiency related to the sundry debtors who are converted into cash of selected Indian IT companies for a period of 10 years from April, 2004 to March, 2014 using non-probability sampling method. To achieve such objective debtor's turnover ratio is used. The result shows that debtor's turnover ratio of Infosys Ltd. is showing very satisfactory result as compared to other selected Indian IT companies over the period of study. On other hand, Oracle Financial Services Limited was showing poor performance in terms of debtor's turnover ratio. The result of ANOVA shows that there is significant difference of debtor's turnover ratio among the all-selected Indian IT companies.

III. NEED FOR THE STUDY

A comparative study between 2 companies through ratio analysis is very important in order to provide financial performance of the companies for investors and even understand where the companies stand in the market. Liquidity analysis is important because it provides us with current ratio and quick ratio of the company which tell the liquidity position of the company. Similarly, profitability ratios is also important is order to ascertain the profitability of the company.

IV. OBJECTIVE OF STUDY

- To compare and analyze key financial ratios such as liquidity, profitability, long-term solvency and Activity ratios for both TCS and Wipro.

- To evaluate the financial stability and risk exposure of TCS and Wipro and assessing the impact of financial risk on their operations.

- To assess the efficiency of operations to understand how well TCS and Wipro are utilizing their assets and managing their working capital.

V. RESEARCH METHODOLOGY

Research methodology is a process where specific procedure or technique is used to analyse a particular information about the topic.

There are basically two types of data i.e. primary data and secondary data.

Primary data are those data which are collected for the first time, to meet the objective of research only.

Secondary data is data which has been already collected and used for any other purpose and can be used for this research also. This study is based on financial statements of companies, which is secondary data.

SAMPLE DESIGN

Convenient sampling is a process where data collection and research on a particular data is conducted on the basis of availability of that data.

The convenient sampling technique is used for the study.

The selection of sample companies is on the basis of consumer preference and their position in the market.

Following is the list of 2 IT companies which are chosen from top ten IT companies in India as sample size for the study. **1. Tata Consultancy Service (TCS) and 2. Wipro.**

PERIOD OF STUDY

The study covers a period of 2 years covering a period from **2018-19 to 2022-23.** It is also decided by taking into consideration of the availability of data.

SOURCE OF DATA

This study is based mainly on secondary data. The data relating to the study is obtained from Moneycontrol.com, Investopedia, Grow and Company website. In addition, the annual reports of the sample companies, Magazines, Journals were also referred for finalizing the methodology for the study

Statement of data:

 P&L account

Balance sheet

Tools to analyze: ratio analysis and Graphs for presentation

VI. DATA ANALYSIS

KEY FINANCIAL RATIOS –

The 5 category of Ratios that have been used in ratio analysis of TCS and Wipro are as follows –

1. **LIQUIDITY RATIO –**

a. Current ratio

b. Quick ratio

2. **LONG-TERM SOLVENCY RATIO** –

a) Debt-Equity ratio

b) Debt-Asset ratio

c) Proprietary Ratios

3. **ACTIVITY RATIO –**

a) Working capital turnover ratio

b)   Debtors' turnover ratio

c)   Creditors turnover ratio

4.   PROFITABILITY RATIO (%) –

a)   Net Profit margin

b)   Return on Equity

c)   Return on Capital Employed

Table 1 to Table 2 shows the values of various financial ratios of TCS and Wipro respectively for comparing their performance 0f last 5 years from March 2019 to March 2023. Various ratios have been taken which are Current ratio and quick ratio under Liquidity ratio, Debt-Equity ratio, Debt-Asset ratio and Proprietary ratio under Long-term solvency ratio, working capital ratio under activity ratio and Finally under Profitability Ratio there comes Net profit margin, return on equity, return on asset and Return on Capital employed.

TABLE 1 - FINANCIAL RATIOS OF TCS					
RATIOS	**Mar-23**	**Mar-22**	**Mar-21**	**Mar-20**	**Mar-19**
LIQUIDITY RATIO -					
1. CURRENT RATIO	2.35	2.48	2.91	3.29	4.18
2. QUICK RATIO	2.35	2.48	2.91	3.29	4.18
LONG-TERM SOLVENCY RATIO -					
1. DEBT-EQUITY RATIO	0.004	0.017	0.018	0.003	0.002
2. DEBT-ASSET RATIO	0.002	0.011	0.012	0.002	0.001
3. PROPRIETARY RATIO	0.78	0.63	0.68	0.7	0.79
ACTIVITY RATIO -					
WORKING CAPITAL RATIO	0.79	0.68	0.59	0.58	0.52
PROFITABILITY RATIO - (%)					
1. NET PROFIT MARGIN	18.7	20.05	26.65	20.67	21.54
2. RETURN ON EQUITY	54.46	49.48	41.39	44.7	38.1
3. RETURN ON CAPITAL EMPLOYED	63.49	67.42	56.23	52.79	50.71

SOURCE – SELF CALCULATED

TABLE 2 - FINANCIAL RATIOS OF WIPR0					
RATIOS	**Mar-23**	**Mar-22**	**Mar-21**	**Mar-20**	**Mar-19**
LIQUIDITY RATIO -					
1. CURRENT RATIO	2.86	2.23	2.5	2.77	2.95
2. QUICK RATIO	2.85	2.23	2.49	2.76	2.93
LONG-TERM SOLVENCY RATIO -					
1. DEBT-EQUITY RATIO	0.08	0.14	0.13	0.11	0.1
2. DEBT-ASSET RATIO	0.077	0.113	0.109	0.097	0.091
3. PROPRIETARY RATIO	0.78	0.67	0.68	0.71	0.73
ACTIVITY RATIO -					
WORKING CAPITAL RATIO	3.28	4.28	3.98	3.29	2.85
PROFITABILITY RATIO - (%)					
1. NET PROFIT MARGIN	12.56	15.47	17.34	16.01	15.3
2. RETURN ON EQUITY	14.62	22.32	22.23	18.68	15.41
3. RETURN ON CAPITAL EMPLOYED	22.21	26.46	28.95	25.07	19.4

SOURCE – SELF CALCULATED

INSIGHTS

Now the results related to each specific ratio of each company is presented and discussed as follows –

1. **LIQUIDITY RATIO** – It refers to the firm's ability to meet its current obligations i.e. Short-term Liabilities. It is of 2 types –

    a. **CURRENT RATIO** - It establishes a relationship between Current assets and current liabilities, it indicates whether the enterprise will be able to meet its short-term obligations as and when they become due for payment. Formula of current ratio is

$$CURRENT\ RATIO = \frac{CURRENT\ ASSET}{CURRENT\ LIABILITIES}$$

IDEAL CURRENT RATIO – The acceptable Current ratio differs from industry to industry depending on the risk involved. However, generally accepted standard of current ratio is **2:1**, i.e. current assets should be twice the current liabilities.

If the current ratio is 2 or more than 2, it means the firm is adequately liquid and able to meet its current obligation bit if current ratio is less than 2, it means the firm may face difficulty in meeting its current obligation.

Hight current ratio means better liquidity position.

CURRENT RATIO CALCULATION –

YEAR	TCS	WPR
2018-2019	79032/18896 = 4.18	47730.4/16144.8 = 2.96
2019-2020	79194/24026 = 3.3	45713.3/16443.8 = 2.78
2020-2021	83160/26525 = 2.92	45379.5/18132.4 = 2.50
2021-2022	94192/37901 = 2.40	51772.2/23173.7 = 2.23
2022-2023	92784/39324 = 2.36	53977.8/18842.8 = 2.86

FIG 1.1 - CURRENT RATIO OF TCS AND WIPRO
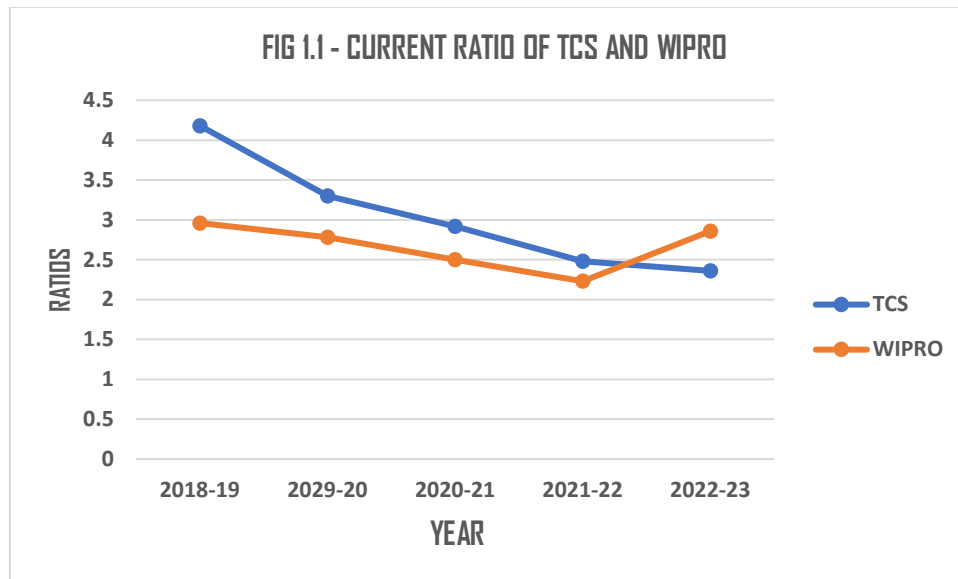
INTEPRETATION

- From Fig. 1.1 we can see that Current ratio of TCS was highest in 2018-19 which was 4.18 which means that TCS were able to meet their short-term obligation easily and without any hurdle,

- Similarly, from Fig. 1.1. we can see that the Current ratio of Wipro was also highest in year 2018-19 which was 2.96 but it was less from that of TCS in 2018-19 which means Wipro was also able to meet their short-term obligations but not comfortably if compared with TCS in the year 2018-19.

- Now, if we watch the trend of TCS and Wipro year wise we can see that the current ratio of TCS was gradually declining every year i.e. in 2019-20 it was 3.29, then in 2020-21 it was 2.91, in 2021-22 it was 2,48 and in 2022-23 it was 2,35.

- Wipro's current ratio was also declining ever year i.e. in 2019-20 it was 2.77, in 2020-21 it was 2.50, in 2021-22 it was 2.25 but after that unlikely TCS the current ratio of Wipro again increased in 2022-23 which was 2.86.

- The results show that despite of gradual decline in current ratio of both the companies, Wipro manged to come on track quickly as compared to TCS.

  b. **QUICK RATIO** – Liquid/quick/acid-test ratio is a liquidity ratio which measures the ability of enterprise to meet its short-term financial obligations i.e. Current Liabilities. It establishes the relationship between Liquid assets and current liabilities.

$$QUICK\ RATIO = \frac{CURRENT\ RATIO - INVENTORY}{CURRENT\ LIABILITIES}$$

IDEAL RATIO – Quick ratio of 1;1 is an accepted standard, since for every rupee of current liabilities, there is rupee of quick assets.

In case, Liquid ratio is less than 1, it means that current liabilities are more than its liquid assets, as a result the enterprise may not able to meet its short-term financial obligations.

QUICK RATIO CALCULATION -

YEAR	TCS	WIPRO
2018-2019	79022/18896 = 4.01	49590.1/16144.6 = 2.44
2019-2020	79188/24026 = 3.3	45539.2/16443.8 = 2.76
2020-2021	83153/24026 = 2.92	45283.5/18132.4 = 2.49
2021-2022	94173/37901 = 2.48	51684.7/23173.7 = 2.23
2022-2023	92757/39324 = 2.36	53886.5/18842.5 = 2.85

FIG. 1.2. - QUICK RATIO OF TCS AND WIPRO
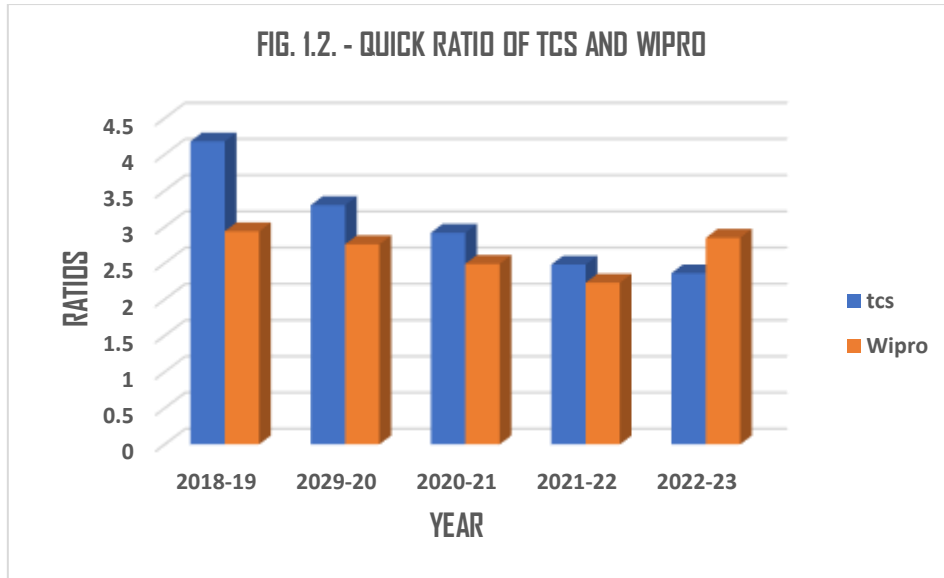
INTEPRETATION

- From Fig. 1.2 we can see that Quick ratio of TCS was highest in 2018-19 which was 4.18 which means that TCS were able to meet their short-term financial obligation i.e. Current Liabilities easily and without any hurdle,

- Similarly, from Fig. 1.2. we can see that the Quick ratio of Wipro was also highest in year 2018-19 which was 2.93 but it was less from that of TCS in 2018-19 which means Wipro was also able to meet their short-term financial obligations i.e. Current Liabilities but not comfortably if compared with TCS in the year 2018-19.

- Now, if we watch the trend of TCS and Wipro year wise we can see that the Quick ratio of TCS was gradually declining every year i.e. in 2019-20 it was 3.29, then in 2020-21 it was 2.91, in 2021-22 it was 2,48 and in 2022-23 it was 2,35.

- Wipro's current ratio was also declining ever year i.e. in 2019-20 it was 2.76, in 2020-21 it was 2.49, in 2021-22 it was 2.23 but after that unlikely TCS the Quick ratio of Wipro again increased in 2022-23 which was 2.85.

- The results show that despite of gradual decline in Quick ratio of both the companies, Wipro manged to come on track quickly as compared to TCS.

2. **LONG-TERM SOLVENCY RATIO** – Solvency of a business means that the business is in a position to meet its long-term obligations as and when they become due.

Solvency ratios are the ratios which show whether the enterprise will be able to meet its long-term obligations or not.

a. **DEBT-EQUITY RATIO (D/E RATIO)** – Debt-Equity ratio shows the relationship between Long-term external equities i.e. external debts and internal equities i.e. Shareholder's Fund of the enterprise. It is calculated to assess long-term financial soundness of the company,

$$DEBT - EQUITY\ RATIO = \frac{TOTAL\ DEBT}{TOTAL\ SHAREHOLDER'S\ EQUITY}$$

(TOTAL DEBT = LONG - TERM DEBT + SHORT – TERM DEBT)

(LONG TERM DEBT = LONG-TERM BORROWING + LONG-TERM PROVISION)

(SHORT-TERM DEBT = SHORT-TERM BORROWING + SHORT-TERM PROVISION)

IDEAL RATIO – 2:1

DEBT-EQUITY RATIO CALCULATION -

YEAR	TCS	WIPRO
2018-2019	174/78898 = 0.002	5074.9/49392 = 0.10
2019-2020	235/64368 = 0.003	5027/46453.7 = 0.11
2020-2021	1350/74794 = 0.018	5805.3/45241.6 = 0.13

2021-2022	1377/78173 = 0.017	7643.1/54350.7 = 0.14
2022-2023	279/74538 = 0.004	5180.7/62762.3 = 0.08

FIG 1.3 - DEBT-EQUITY RATIO OF TCS AND WIPRO
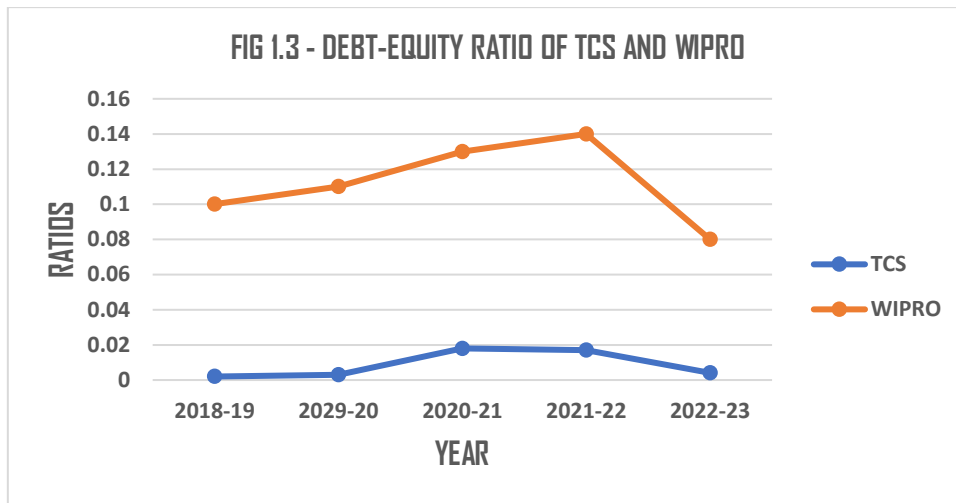
INTEPRETATION –

- From fig. 1.3. we can see that Debt-Equity ratio of TCS was 0.002 in 208-19, 0.003 in 2019-20, 0.018 in 2020-21, 0.017 in 2021-22, 0.004 in 2022-23 with highest D/E Ratio in 2020-21 which was 0.018.

- Similarly, Debt-equity ratio of Wipro was 0.10 in 2018-19, 0.11 in 2019-20, 0.13 in 2020-21, 0.14 in 2021-22 and 0.08 in 2022-23 with highest D/E Ratio in 2021-22 which 0.14.

- But if we watch the year wise trend of both TCS and Wipro we will see that the D/E Ratio of both the companies were gradually increasing with a healthy rate till 2021-22 but after that ratio decline drastically of both companies in 2022-23.

- But the result that came out from this observation was that, in the whole year wise trend of TCS and Wipro the D/E Ratio of Wipro was far better and healthier as compared to that of TCS even after the decline in 2022-23.

- This indicates that Wipro was able to meet their long-term external equities and internal equities and were able to maintain their financial soundness more comfortably than compared to TCS.

  b. **DEBT-ASSET RATIO (D/A RATIO)** – Debt to asset ratio measures the relationship between long term debts and assets of the enterprise.

It measures the extent to which long term debt is covered by the assets of the enterprise.

IDEAL RATIO – 1:1

A high ratio means higher safety for lenders to the business. On the other hand lower ratio means lower safety for lenders to the business.

$$DEBT - ASSET\ RATIO = \frac{TOTAL\ DEBT}{TOTAL\ ASSET}$$

Where,

Total debt = Long-term debt + Short-term debt

Total assets = Current assets + non-current assets

DEBT-ASSET RATIO CALCULATION -

YEAR	TCS	WIPRO
2018-2019	674/99580 = 0.001	6122.8/66998.1 = 0.091
2019-2020	235/104975 = 0.002	6370.5/65306.4 = 0.097
2020-2021	1350/109381 = 0.012	7181.2/65736.3 = 0.109
2021-2022	1377/121263 = 0.011	9114.2/80382.8 = 0.113
2022-2023	279/119827 = 0.002	6593.6/85307.6 = 0.077

FIG 1.4. DEBT TO ASSET RATIO OF TCS AND WIPRO
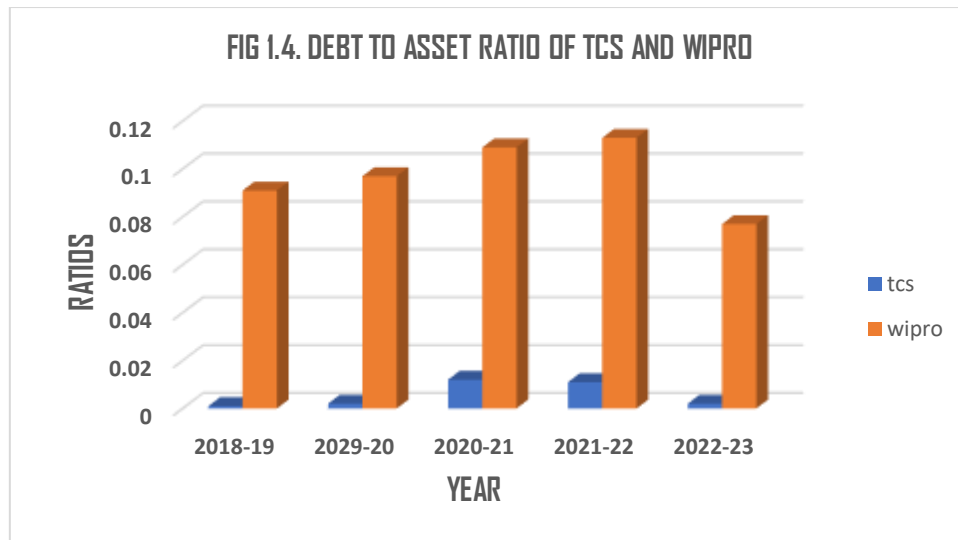
INTEPRETATION –

- From fig.1.4. we can see that D/A Ratio of TCS was 0.001 in 2018-19, 0.002 in 2019-20, 0.012 in 2020-21, 0.011 in 2021-22 and 0.002 in 2022-23. With highest being in 2021-22 which was 0.011.

- Similarly, D/A Ratio of Wipro was 0.091 in 2018-29, 0.097 in 2019-20, 0.109 in 2020-21, 0.113 in 2021-22 and 0,077 in 2022-23 with highest being 0.113 in 2021-22.

- On observing the year wise trend of D/A Ratio of both TCS and Wipro we see that D/A Ratio was increasing of both the companies till 2021-22 but it declined in the year 2022-23.

- But even after increasing and then decreasing trend Wipro performed far better than TCS which means if investor will invest money in Wipro there invested amount will be safest while compared with those investors who invested in TCS.

C. PROPRIETARY RATIO - It establishes the relationship between proprietor's fund and the total assets.

The objective of computing this ratio is to measure the proportion of total assets financed by proprietor's fund. The ratio is important for unsecured lenders and creditors.

A high proprietary ratio means adequate safety for unsecured creditors and lenders and a low proprietary ratio indicates greater risk to unsecured lenders and creditors.

$$PROPRIETARY\ RATIO = \frac{PROPRIETAR'S\ FUND}{TOTAL\ ASSET}$$

Where,

Total assets = Current assets + non-current assets

PROPRIETARY RATIO CALCULATION -

YEAR	TCS	WIPRO
2018-2019	78896/99500 = 0.79	49392/66998.1 = 0.73
2019-2020	74368/104975 = 0.70	46453.7/65306.4 = 0.71
2020-2021	74794/109381 = 0.68	45241.6/65736.3 = 0.68
2021-2022	77173/121263 = 0.63	54350.7/86382.8 = 0.67
2022-2023	74538/92784 = 0.78	66762.3/85307.6 = 0.78

FIG 1.5. - PROPRIETARY RATIO OF TCS AND WIPRO
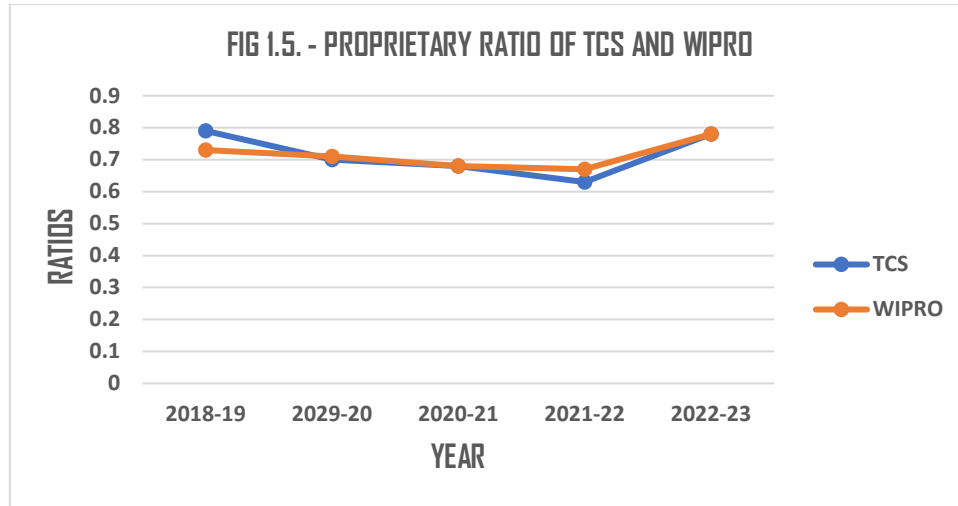
INTEPRETATION –

- According to Fig. 1.5. Proprietary ratio of TCS was 0.79 in 2018-19, 0.70 in 2019-20, 0.68 in 2020-21, 0.63 in 2021-22, 0.78 in 2022-23 with highest being in 2018-19 which was 0.79.

- Similarly, Proprietary ratio of Wipro was 0.73 in 2018-19, 0.71 in 2019-20, 0.68 in 2020-21, 0.67 in 2021-22 and 0.78 in 2022-23.

- If we analyse the year wise trend of proprietary ratio of TCS and Wipro we will se that there is not much difference in ratio of each year of both the companies. Ratio of both the companies were declining every year and gradually increased in 2022-23.

- So from the observation we can conclude that both the companies is safe to insecure lenders and creditors because both the companies are in a good position to pay of their creditors and lenders

3. **ACTIVITY RATIO** – Also termed as Performance ratio or turnover ratio measures how well the resources have been used by the enterprise.

   a. **WORKING CAPITAL TURNOVER RATIO** – It shows the relationship between working capital and revenue from operations. It shows the number of times a unit of Rupee invested in working capital produces sales.

$$WORKING\ CAPITAL\ TURNOVER\ RATIO = \frac{NET\ SALES}{WORKING\ CAPITAL}$$

Where,

Working capital – Current assets – current liabilities

A higher ratio shows efficient use of Working capital, whereas low ratio shows it's inefficient use.

Higher the ratio, better it is, but a very higher ratio indicates overtrading – the working capital being inadequate for the scale of operations.

YEAR	TCS	WIPRO
2018-2019	31472/60136 = 0.52	90179/31585.4 = 2.85
2019-2020	32447/55168 = 0.58	97718/29269.5 = 3.29
2020-2021	32562/54635 = 0.59	108680/27247.1 = 3.98
2021-2022	38449/56291 = 0.68	122434/28598.5 = 4.28
2022-2023	42303/55460 = 0.79	113665/34605 = 3.28

FIG 1.6. - WORKING CAPITAL TURNOVER RATIO OF TCS AND WIPRO
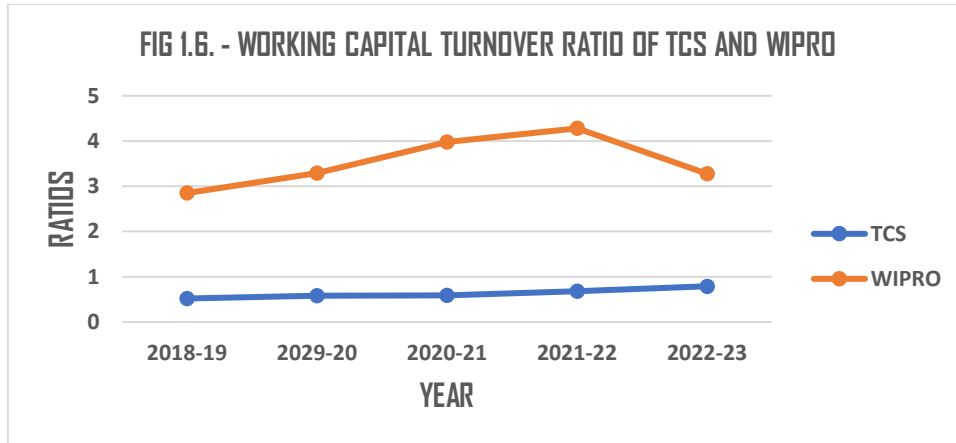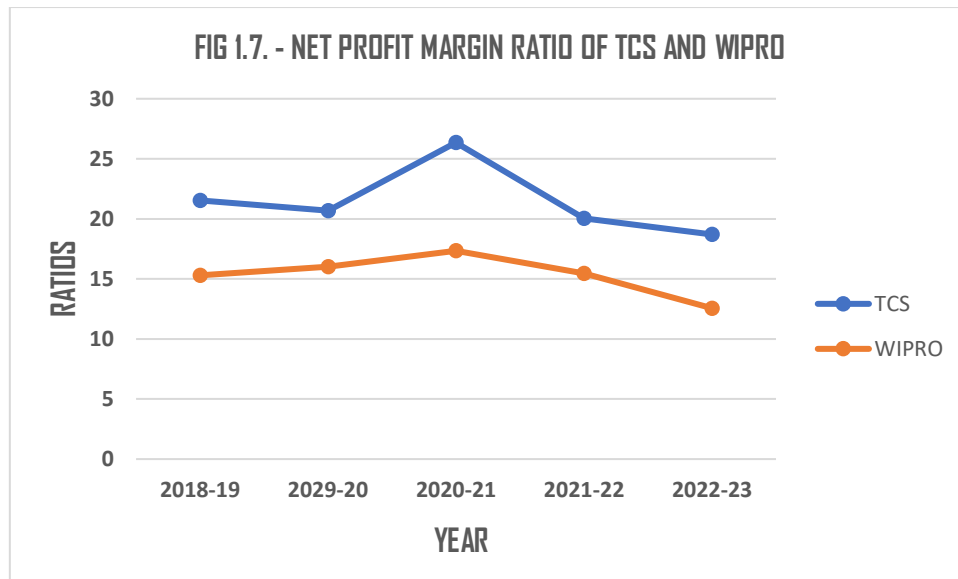
INTEPRETATION –

- From fig.1.6. the ratio of TCS was 0.52 in 2018-19, 0.58 in 2019-20, 0.59 in 2020-21, 0.68 in 2021-22 and 0.79 in 2022-23 which was the highest one among all of them.

- Similarly, the ratio of Wipro was 2.85 in 2018-19, 3.29 in 2019-20, 3.98 in 2020-21, 4.28 in 2021-22 and 3.28 in 2022-23 with highest being 4.28 in 2021-22.

- From the year wise trend, we can see that the Working capital turnover ratio of TCS was Increasing gradually and even Working capital turnover ratio of Wipro was increasing but it declined in 2022-23.

- The result we can draw from this evaluation was even increasing and then decreasing phase the Working capital turnover ratio of Wipro was far better than TCS which means Wipro was much ahead of TCS in managing their Working capital.

4. **PROFITABILITY RATIO** – Efficiency in business is measured by profitability. "Profitability refers to the financial performance of the business.

a. **NET PROFIT MARGIN RATIO** – It establishes the relationship between Net profit and revenue from operations i.e. Net sales.

Net profit ratio is an indicator of overall efficiency of the business, Higher the ratio better the business.

$$NET\ PROFIT\ RATIO = \frac{NET\ PROFIT}{NET\ SALES} * 100$$

NET PROFIT RATIO CALCUATION -

YEAR	TCS	WIPRO
2018-2019	31562/146463*100 = 21.54	90179/585845*100 = 15.3
2019-2020	32447/156949*100 = 20.67	97718/610232*100 = 16.01
2020-2021	43760/164177*100 = 26.35	108680/619430*100 = 17.54
2021-2022	38449/141754*100 = 20.05	122434/790934*100 = 15.47
2022-2023	42303/225458*100 = 18.7	113665/904876*100 = 12.56

INTEPRETATION –

- From fig.1.7. we see that Net profit margin ratio of TCS was 21.54 in 2018-19, 20.67 in 2019-20, 26.35 in 2020-21, 20.05 In 2021-22 and 18.7 in 2022-23 with highest being in 2020-21.

- Net profit margin ratio of Wipro was 15.3 in 2018-19, 16.01 in 2019-20, 17.54 in 2020-21, 15.47 in 2021-22 and 12.56 in 2022-23 with highest in 2020-21.

- From year wise trend we can analyse that the net profit margin ratio of TCS first declined till 2019-20 and then increased drastically in 2020-21 but again declined, whereas Ratio of Wipro increased till 2020-21 and then declined.

- On comparing year wise trend of both companies, we see that the trend was reverse of both company but TCS performed much better every year and in every trend which says that TCS was much efficient than Wipro.

B.　**RETURN ON EQUITY RATIO** – It is a ratio that provides with the insight as how efficiently a company is handling the money contributed by it's shareholders.

The higher the ROE, the more efficient a company's management is at generating income and growth from its equity financing.

$$RETURN\ ON\ EQUITY = \frac{NET\ EARNINIGS\ (TTM)}{SHAREHOLDER'S\ EQUITY} * 100$$

RETURN ON EQUITY RATIO CALCULATION -

YEAR	TCS	WIPRO
2018-2019	30065/78898*100 = 38.10	76140/49932*100 = 15.41
2019-2020	33260/74368*100 = 44.7	86807/46453.7*100 = 18.68
2020-2021	30960/74794*100 = 41.39	100609/45291*100 = 22.23
2021-2022	38187/77173*100 = 49.48	121353/54350.7*100 = 22.32
2022-2023	39106/74538*100 = 54.46	91767/62762*100 = 14.62

FIG 1.8. - RETURN ON EQUITY RATIO OF TCS AND WIPRO
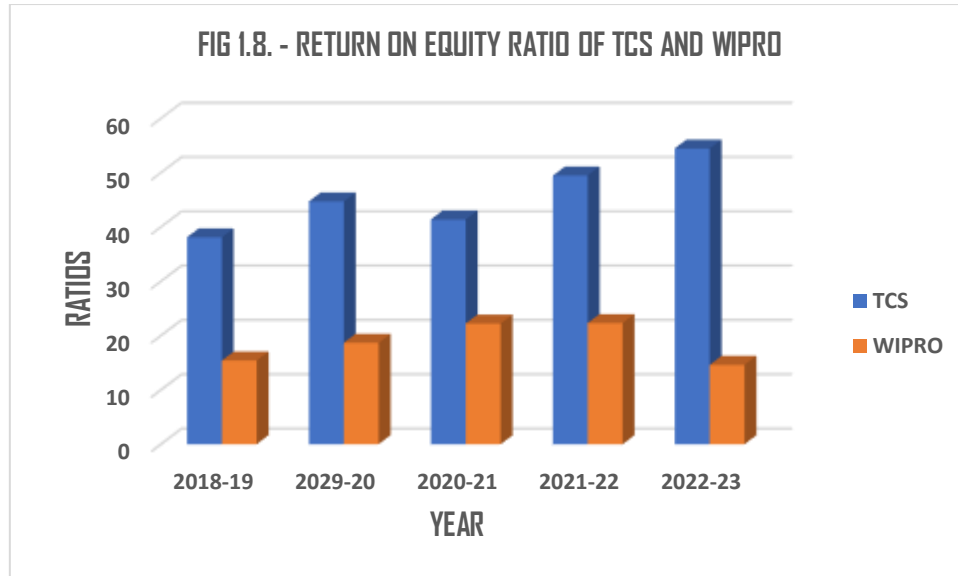
INTEPRETATION –

- According to fig. 1.8. ROE ratio of TCS was 38.10 in 2018-19, 44.7 in 2019-20, 41.39 in 2020-21, 49.48 in 2021-22 and 54.46 in 2022-23 which was the highest.

- Similarly, ROE ratio of Wipro in 2018-19 was 15.41, 18.68 in 2019-20, 22.23 in 2020-21, 22.32 in 2021-22 and 14.62 in 2022-23 with highest in 2021-22.

- After observing year wise trend of both company we saw that the ROE ratio of TCS was increasing every year with a healthy rate whereas ROE ratio of Wipro increased till 2021-22 but then declined.

- Result drawn was that TCS were much better than Wipro in maintaining their ROE ratio every year which tells that TCS were able to manage the money given by shareholder's efficiently as compared to Wipro.

b. **RETURN ON CAPITAL EMPLOYED RATIO (ROCE)** – It shows the relation between profit (profit before interest and tax) and Capital employed.

It shows the profitability of the company.

$$RETURN\ ON\ CAPITAL\ EMPLOYED\ RATIO = \frac{EBIT}{TOTAL\ ASSETS - TOTAL\ CURRENT\ LIABILITIES} * 100$$

Where,

Capital employed = Total assets – Total current liabilities.

ROCE RATIO CALCULATION –

YEAR	TCS	WIPRO
2018-2019	40875/80604*100 = 50.71	98705/50853.5*100 = 19.40
2019-2020	42734/80949*100 = 52.79	122519/48862*100 = 25.07
2020-2021	42657/75856*100 = 56.23	134029/65736.3*100 = 28.95
2021-2022	56209/83362*100 = 67.42	151408/67209.1*100 = 26.46
2022-2023	52385/80503*100 = 53.49	147657/66464.8*100 = 22.21

FIG 1.9.- RETURN ON CAPITAL EMPLOYED RATIO OF TCS AND WIPRO
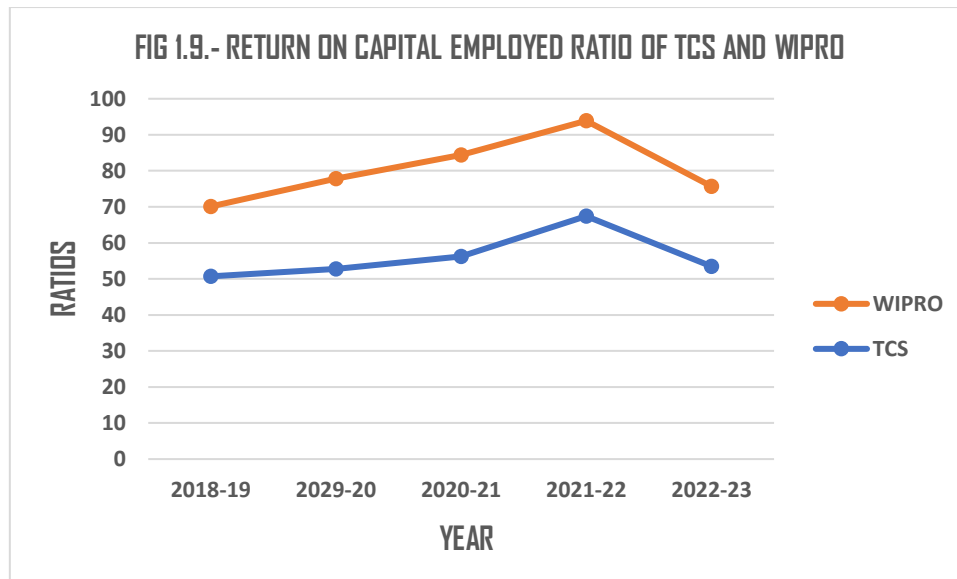
INTEPRETATION –

- From fig.1.9. the Return on capital employed ratio of TCS was 50.71 in 2018-19, 52.79 in 2019-20,

- 56.23 in 2020-21, 67.42 in 2021-22 and 53,49 in 2022-23 with highest in 2021-22.

- Working capital turnover ratio of Wipro was 19.4 in 2018-19, 25.07 in 2019-20, 28.95 in 2020-21, 26.46 in 2021-22 and 22,21 in 2022-23 with highest in 2020-21.

- If we analyse the year wise trend of TCS and Wipro we see that the ratio of TCS increased till 2021-22 and then decreased whereas ratio of Wipro increased till 2020-21 and then decreased,

- The result we can conclude is that the Return on capital employed ratio of TCS was better and higher than Wipro in every year which says that TCS was more profitable than Wipro.

VII. FINDINGS

Finding from the data analysis which involved comparative study on Ratio analysis of TCS and Wipro is as follows –

- We can conclude that current ratio of both TCS and Wipro was declining every year but then also Wipro performed better than TCS in terms of Current ratio.

- We conclude that quick ratio of TCS and Wipro was declining every year but then also Wipro performed better than TCS in terms of quick ratio.

- We conclude that Debt-equity ratio (D/E Ratio) of both TCS and Wipro was increasing but also declined in later phase but then also in every phase Wipro performed better than TCS.

- We conclude that Debt-asset ratio (D/A ratio) of both TCS and Wipro was increasing but also declined in later phase but then also in every phase Wipro performed better than TCS.

- We conclude that there was not much difference in proprietary ratio of both TCS and Wipro as the ratio of both the companies were declining year by year which also tells that both the companies performed equally better.

- We conclude that Working capital turnover ratio of TCS was increasing every year but the ratio of Wipro first increased and then decreased, but even then, Wipro performed better than TCS.

- We conclude that Net profit margin ratio of TCS first declined then increased and then decreased and ratio of Wipro first increased and then decreased but even then TCS were more efficient than Wipro.

- We conclude that Return on equity (ROE) ratio of TCS increased every year whereas ROE ratio of Wipro first increased and then decreased which tells that performance of TCS was much better than Wipro.

- We conclude Return on capital employed ratio of both the companies first increased and then decreased in later phase but TCS was more profitable than Wipro.

VIII. CONCLUSION

In this research project on the topic "A comparative study on the Ratio analysis of TCS and Wipro" we conducted many ratio analysis of both the companies in which we saw that in some ratios TCS was better and in some ratio, Wipro was better like –

- In terms of Current ratio, quick ratio, Debt-equity ratio (D/E Ratio), Debt-asset ratio (D/A Ratio) and Working capital turnover ratio Wipro performed better than TCS.

- In terms of Proprietary ratio performance of both the company was equally better.

- In terms of Net profit margin ratio, return on equity (ROE) and return on capital employed TCS performed better than Wipro.

IX. LIMITATIONS

The limitations from the above project were as follows –

- Only 2 companies were taken for the comparative study, we could have taken more than 2 companies for better results.

- Due to time constraint only 2 companies were taken.

- Data of the company was very small which was from 2018-2023 which could have been little big in size for better results.

- Data was collected from the online source because we can't get the data from company itself.

- Apart from ratio analysis many more tools could have been used like Variances, Dupont analysis and ANNOVA, etc. for better results.

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