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# Fundamental Analysis with Reference to Selected IT Stocks

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**ABSTRACT:** Now investors are more conscious about fluctuations in stock market. In order to minimise risk investors should know about the performance of the company, market fluctuations, economic policies inflation etc. before making investment in securities. Otherwise the investors can be applied for security analysis. There are two approaches for security analysis such as Fundamental analysis and Technical analysis. Fundamental analysis is to appraise the intrinsic value of security. The investors take buy or sell decision depending upon the result drawn from those analysis.

Key words; Fundamental analysis , Intrinsic value, Ratio analysis.

## I. INTRODUCTION

The capital market of India forms an important part of development of the nation. Now a days people are showing more interest in investing in shares. Investors are more conscious about the fluctuations in the stock market. Investors are using Fundamental analysis for selecting securities and make buy or sell decision.

## II. OBJECTIVES OF THE STUDY

For the effectiveness of the study the objectives are:

### PRIMARY OBJECTIVE:

- To analyse and determine the selected IT stocks through fundamental analysis for the right investment.

### SECONDARY OBJECTIVES:

- To study the performance and growth of the IT sector.
- Applying the fundamental analysis for four company scrips to choose for investment.
- To know the intrinsic value and forecast the future value through fundamental analysis.

### SAMPLE SELECTION

The study is based on the secondary data. The financial statement of the companies is the main source of data. The IT companies which satisfy the following criteria have been selected:  
IT companies listed in NSE.

- Availability of data for the period of five years.
- Accounting year must be from April to March

Companies that satisfy the above conditions are

1, Tata Consultancy Services Ltd. 2, Infosys Ltd. 3, Wipro Ltd. 4, Mind tree Ltd.

## III. SCOPE OF THE STUDY

The scope of the study is limited to four companies only, namely Tata Consultancy Services Ltd, Infosys Ltd, Wipro Ltd, Mind tree Ltd, Tech . Company's those have substantial market share of the IT sector. External data would be used from brokers, besides internal data like financial statements.



## COMPANY ANALYSIS

In company analysis, the **financial ratios** of the companies are analyzed in order to ascertain the category of stock as value stock or growth stock. These ratios include price to book ratio and price-earnings ratio. Other ratios like return on equity etc. can also be analyzed to ascertain the potential company for making investment.

Selected IT sector companies are:

- Tata Consultancy Services Ltd.
- Infosys Ltd.
- Wipro
- Mind tree Ltd.

## DATA ANALYSIS

### RATIO ANALYSIS

### EARNINGS PER SHARE

EPS is the portion of a company's profit that is allocated to every individual share of the stock. Earnings per share serve as an indicator of a company's profitability. It is a term that is of much importance to investors and people who trade in the stock market. The higher the earnings per share of a company, the better is its profitability. While calculating the EPS, it is advisable to use the weighted ratio, as the number of shares outstanding can change over time. However, data sources sometimes simplify the calculation by using the number of shares outstanding at the end of the period.

Earnings per share can be calculated in two ways:

1) Earnings per share = Net Income after Tax/Total Number of Outstanding Shares

2) Weighted earnings per share = (Net Income after Tax - Total Dividends)/Total Number of Outstanding Shares  
or

$$= \frac{\text{Net Income} - \text{Dividends on Preferred Stock}}{\text{Average Outstanding Shares}}$$

EPS values below zero mean that the company is losing money and is the reason why it is possible to have a negative P/E ratio. Negative EPS numbers are usually reported as "not applicable" for quarters in which a company reported a loss.

Table 3.1 showing 5 years EPS of 5 top IT Companies ( in ₹ Cr.)

Company	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020
Tata Consultancy Services Ltd	116.13	120.04	131.15	79.34	88.64
Infosys Ltd	55.26	60.16	71.28	33.66	36.34
Wipro Ltd	32.38	16.80	16.26	12.67	14.88
Mind tree Ltd	36.08	26.56	37.69	45.94	38.35

Interpretation: As per the available data, TCS Ltd shows the highest EPS than other four companies. Wipro Ltd shows the lowest. In 2018-2019 and 2019-2020, three companies out of five shows a decreasing trend in EPS. It may define that these two years are not advantageous for the IT sector development.

### DIVIDEND PER SHARE

Dividend per share (DPS) is the sum of declared dividends issued by a company for every ordinary share outstanding. Dividend per share (DPS) is the total dividends paid out by a business, including interim dividends, divided by the number of outstanding ordinary shares issued. A company's DPS is usually derived using the dividend paid in the most recent quarter, which is also used to calculate the dividend yield. DPS can be calculated by using the following

formula:

$$DPS = \frac{D - SD}{S}$$

Where,

D - Sum of dividends over a period (usually 1 year)

SD - Special, one time dividends

S - Shares outstanding for the period

Table 3.2 showing 5 years DPS of 5 top IT Companies( in ₹ Cr.)

Company	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020
Tata consultancy services Ltd	43.50	47.00	50	30	73
Infosys Ltd	24.25	25.75	43.50	21.50	17.50
Wipro Ltd	6.00	3.00	1	1	1
Mindtree Ltd	16.00	10.00	11	33	13

Interpretation: Comparatively TCS Ltd shows the high DPS and Wipro Ltd has the lowest. Investors will be more interested in companies which pay high dividend.

### DIVIDEND PAYOUT RATIO

The dividend pay-out ratio is the amount of dividends paid to stockholders relative to the amount of total net income of a company. The amount that is not paid out in dividends to stockholders is held by the company for growth. The amount that is kept by the company is called retained earnings.

The Dividend Pay-out Ratio is calculated as follows:

Dividend Pay-out Ratio = Dividends per Share (DPS) / Earnings per Share (EPS)

Or equivalently:

Dividend Pay-out ratio = Dividends / Net Income

Since investors want to see a steady stream of sustainable dividends from a company, the dividend pay-out ratio analysis is important. A consistent trend in this ratio is usually more important than a high or low ratio.

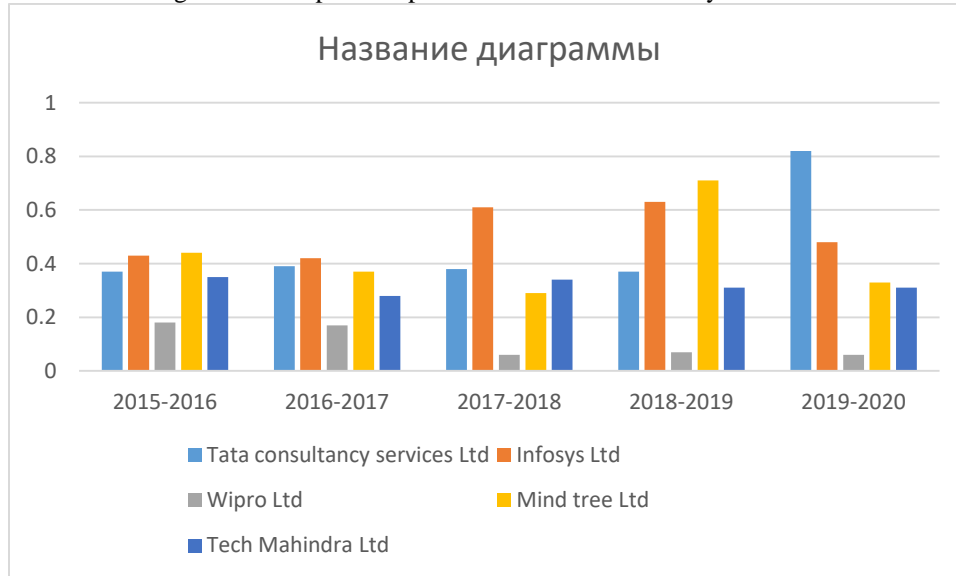
Generally, more mature and stable companies tend to have a higher ratio than newer start-up companies.

Table 3.3 showing 5 years Dividend Payout ratio of 5 top IT Companies.

Company	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020
Tata consultancy services Ltd	0.37	0.39	0.38	0.37	0.82
Infosys Ltd	0.43	0.42	0.61	0.63	0.48
Wipro Ltd	0.18	0.17	0.06	0.07	0.06
Mindtree Ltd	0.44	0.37	0.29	0.71	0.33



Figure 3.3: Graphical representation of Dividend Payout Ratio.



Interpretation: A range of 0% to 35% shows a good payout and 35% to 55% is considered healthy and between 55% and 75% is considered high payout. Between 75% and 95% shows very high payout. According to these ranges, companies show a payout between good and high. But in the last year TCS Ltd shows an unsustainable payout ratio. Only two things can happen from here: the dividend would be cut or eliminated altogether.

**EBIT MARGIN**

EBIT margin is a measure of a company's profitability, calculated as EBIT (earnings before interest and tax) divided by net revenue. The value of EBIT margin helps evaluate how a company has grown from year to year. EBIT is also referred to as "operating earnings", "operating profit" and "profit before interest and taxes (PBIT)."

The EBIT Margin calculation formula is as following:

$$\text{EBIT Margin} = \text{EBIT} / \text{Net Revenue}$$

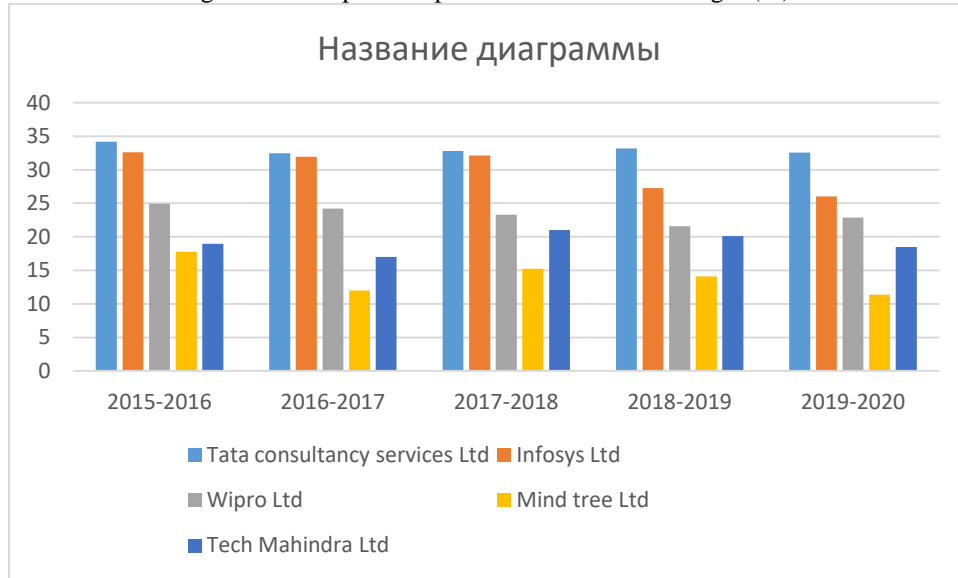
It is a measure of a company's profitability on sales over a specific time period. This indicator gives information on a company's earnings ability. Increase in EBIT is mainly due to growth of net revenue, good cost control and strong productivity, Decrease in EBIT margin largely results from reduction in revenue and higher operating costs. EBIT margin is most useful when compared against other companies in the same industry. The higher EBIT margin reflects the more efficient cost management or the more profitable business. If no positive EBIT margin can be generated over a longer period, then the company should rethink the business model.

Table 3.5 showing 5 years EBIT Margin (%) of 5 top IT Companies.

Company	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020
Tata consultancy services Ltd	34.18	32.45	32.82	33.18	32.54
Infosys Ltd	32.60	31.94	32.14	27.25	26.04
Wipro Ltd	24.94	24.22	23.30	21.60	22.89
Mind tree Ltd	17.76	11.97	15.23	14.09	11.35



Figure 3.5: Graphical representation of EBIT Margin (%).



Interpretation: TCS Ltd shows the highest EBIT Margin. Information about this margin is very important to the investors for comparing between companies and to decide where they want to invest. This margin shows the profitability of a company.

**RETURN ON ASSETS (ROA)**

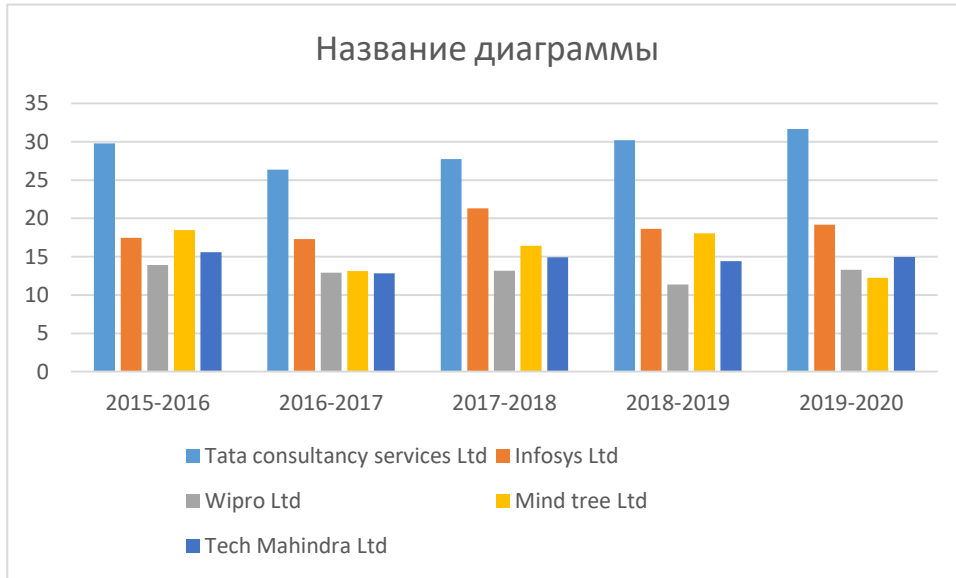
This ratio indicates how profitable a company is relative to its total assets. The return on assets (ROA) ratio illustrates how well management is employing the company's total assets to make a profit. The higher the return, the more efficient management is in utilizing its asset base. The ROA ratio is calculated by comparing net income to average total assets, and is expressed as a percentage

Formula: Return on Assets = Net Income/Average Total Assets

Table 3.7 showing 5 years ROA (%) of 5 top IT Companies.

Company	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020
Tata consultancy services Ltd	29.80	26.35	27.72	30.21	31.68
Infosys Ltd	17.45	17.29	21.29	18.62	19.17
Wipro Ltd	13.91	12.92	13.16	11.36	13.29
Mind tree Ltd	18.46	13.13	16.42	18.04	12.23

Figure 3.7: Graphical representation of Return on Asset (%).



Interpretation: Above figure shows that TCS Ltd has the highest ROA in all financial years. ROA gives an indication of the capital intensity of the company. Companies that require large initial investments will generally have lower ROA. ROAs over 5% are generally considered good. Therefore, this figure reveals that TCS Ltd utilized their assets efficiently to make profit.

### RETURN ON EQUITY (ROE)

Return on equity (ROE) is the amount of net income returned as a percentage of shareholders equity. Return on equity measures a corporation's profitability by revealing how much profit a company generates with the money shareholders have invested. Also known as "return on net worth" (RONW).

ROE is expressed as a percentage and calculated as:

Return on Equity = Net Income/Shareholder's Equity

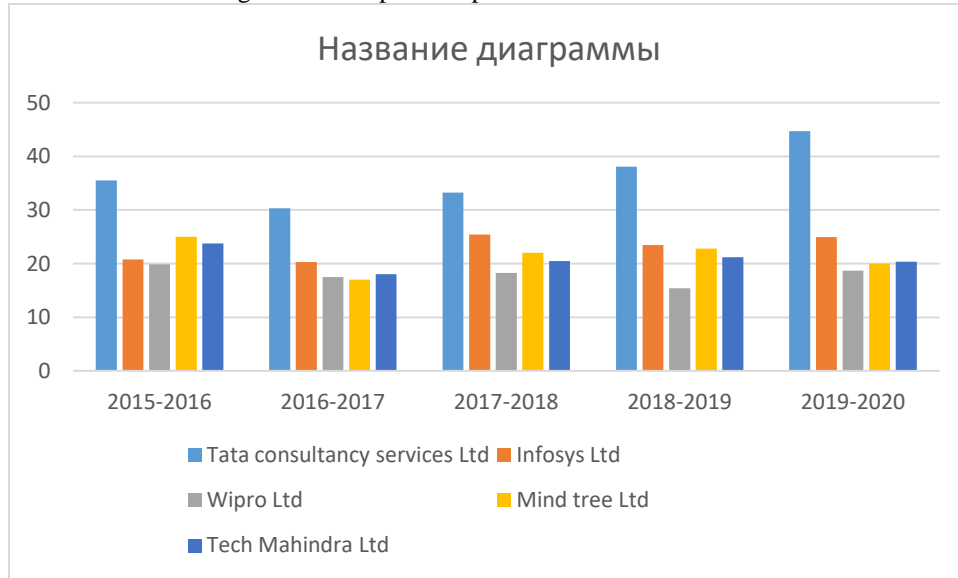
Net income is for the full fiscal year (before dividends paid to common stock holders but after dividends to preferred stock.) Shareholder's equity does not include preferred shares.

Table 3.8 showing 5 years ROE Ratio of 5 top IT Companies.

Company	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020
Tata consultancy services Ltd	35.49	30.31	33.27	38.10	44.72
Infosys Ltd	20.78	20.31	25.44	23.44	24.97
Wipro Ltd	19.89	17.47	18.27	15.41	18.68
Mind tree Ltd	25.03	17.02	22.01	22.80	19.98



Figure 3.8: Graphical representation of ROE Ratio.



Interpretation: Above figure shows TCS Ltd has highest ROE as compared to other companies. TCS Ltd generated more profit with the shareholders’ money compared to other companies. ROEs of 15-20% are generally considered good.

**ASSET TURNOVER RATIO**

Asset turnover ratio is the ratio of the value of a company’s sales or revenues generated relative to the value of its assets. The Asset Turnover ratio can often be used as an indicator of the efficiency with which a company is deploying its assets in generating revenue.

$$\text{Asset Turnover} = \text{Sales or Revenues} / \text{Total Assets}$$

Asset turnover is a financial ratio that measures the efficiency of a company's use of its assets in generating sales revenue or sales income to the company. Companies with low profit margins tend to have high asset turnover, while those with high profit margins have low asset turnover.

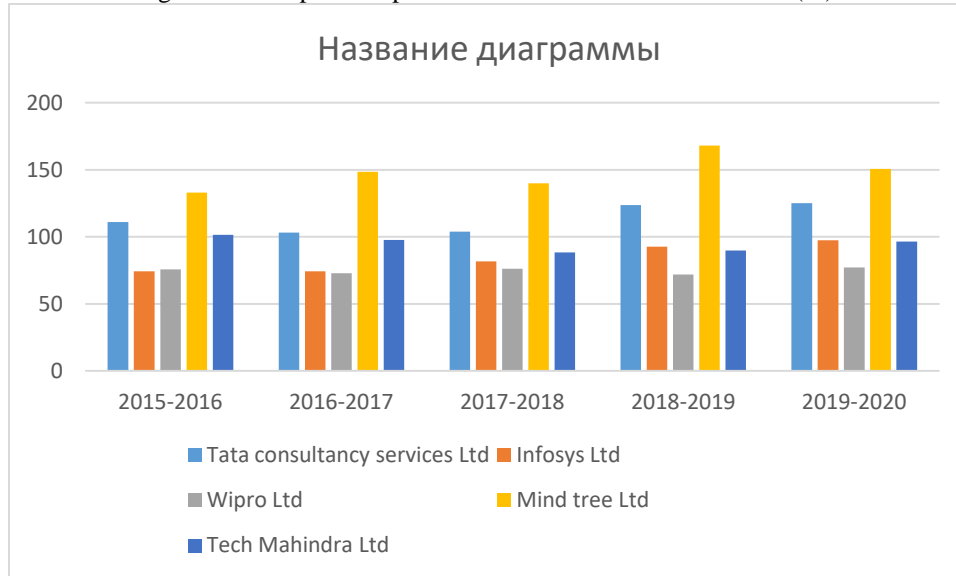
Table 3.9 showing 5 years Asset Turnover Ratio (%) of 5 top IT Companies

Company	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020
Tata consultancy services Ltd	110.91	103.26	103.91	123.78	125.08
Infosys Ltd	74.22	74.21	81.63	92.62	97.53
Wipro Ltd	75.82	72.91	76.20	71.82	77.18
Mind tree Ltd	132.96	148.37	139.93	168.01	150.57





Figure 3.9: Graphical representation of Asset Turnover Ratio (%).



Interpretation: Figure 3.9 show that Mind tree Ltd has the highest Asset Turnover Ratio in all FY. It shows the company’s efficiency to use its assets. TCS Ltd holds the second position in all years. Infosys Ltd and Wipro Ltd maintain almost the constant level of Asset Turnover Ratio. So from this figure, we can understand, Mind tree Ltd utilized their assets efficiently to generate sales revenue.

**INVENTORY TURNOVER RATIO**

Inventory turnover is a ratio showing how many times a company’s inventory is sold and replaced over a period of time. The days in the period can then be divided by the inventory turnover formula to calculate the days it takes to sell the inventory on hand. It is calculated as sales divided by average inventory.

Inventory turnover measures how fast a company is selling inventory and is generally compared against industry averages. A low turnover implies weak sales and, therefore, excess inventory. A high ratio implies either strong sales and/or large discounts.

The speed with which a company can sell inventory is a critical measure of business performance.

Inventory turnover is calculated as sales divided by average inventory.

Average inventory is calculated as:

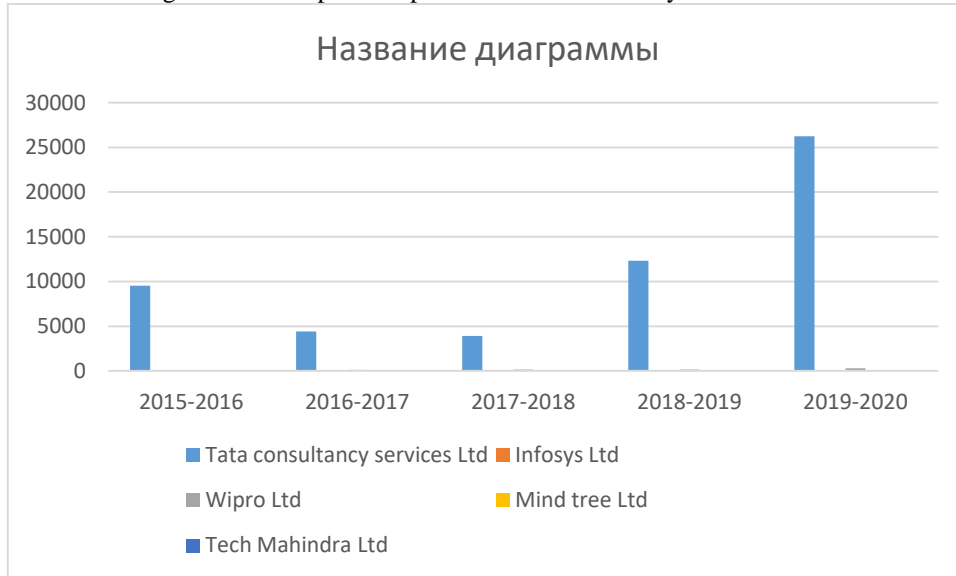
$$(\text{Beginning inventory} + \text{Ending inventory})/2.$$

Table 3.10 showing 5 years Inventory Turnover Ratio of 5 top IT Companies.

Company	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020
Tata consultancy services Ltd	9540.44	4413.95	3894.24	12317	26261
Infosys Ltd	-	-	-	-	-
Wipro Ltd	84.91	129.38	151.92	141.42	289.53
Mind tree Ltd	-	-	-	-	-



Figure 3.10: Graphical representation of Inventory Turnover Ratio.



Interpretation: In the above figure, TCS Ltd has the highest Inventory Turnover Ratio and Wipro Ltd is in second position. But all other companies have weak position Inventory Turnover Ratio. That means TCS Ltd is strong in sales.

**P/E RATIO** The price-earnings ratio (P/E ratio) is the ratio for valuing a company that measures its current share price relative to its per-share earnings. The price-earnings ratio is also sometimes known as the price multiple or the earnings multiple.

The P/E ratio can be calculated as:

**Market price per Share / Earnings per Share**

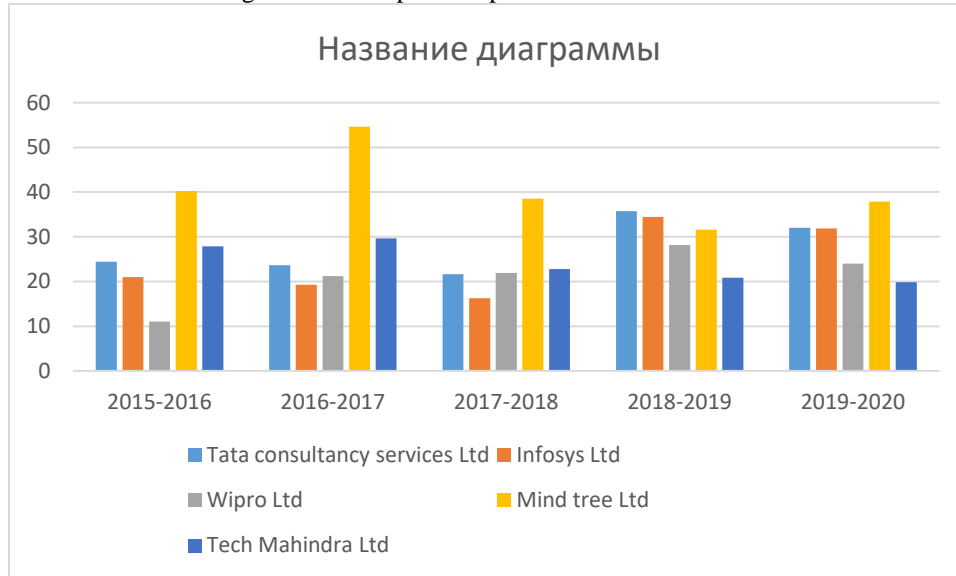
If a company has a high P/E, investors are paying a higher price for the stock compared to its earnings. If a company has a lower P/E, investors get more earnings for their investment. This makes a low-P/E stock a good value, but it can also simply indicate that investors aren't very confident about the company's prospects.

Table 3.21 showing 5 years P/E Ratio of 5 top IT Companies

Tata consultancy services Ltd	24.43	23.64	21.64	35.77	32.01
Infosys Ltd	20.97	19.26	16.26	34.43	31.89
Wipro Ltd	11.02	21.24	21.94	28.16	23.98
Mind tree Ltd	40.24	54.67	38.52	31.60	37.86



Figure 3.21: Graphical representation of P/E Ratio



Interpretation: Figure shows that Mind tree Ltd has the highest Price Earning Ratio. That means its share price is high compared to its earnings.

#### IV.EMPIRICAL RESULTS

##### TATA CONSULTANCY SERVICES LTD

$$\text{Dividend Payout Ratio} = \frac{\sum \text{Dividend Per Share}}{\sum \text{Earnings Per Share}} = \frac{243.50}{535.30} = 0.454$$

$$\text{Average Dividend Payout Ratio} = \frac{\sum \text{Dividend Payout Ratio}}{\text{Number of Years}} = \frac{2.33}{5} = 0.466$$

$$\text{Average retention Ratio} = 1 - \text{Average Dividend Payout Ratio} = 1 - 0.466 = 0.534$$

$$\text{Average Return on Equity} = \frac{\sum \text{Return on Equity}}{\text{Number of years}} = \frac{181.89}{5} = 0.363$$

$$\text{Growth rate in Equity} = \text{Average Retention Ratio} * \text{Average Return on Equity} = 0.534 * 0.363 = 0.193$$

$$\text{Normalized Average P/E Ratio} = \frac{\sum \text{P/E Ratio}}{\text{Number of years}} = \frac{137.49}{5} = 27.49$$

$$\text{Projected EPS} = \text{Current EPS} * (1 + \text{Growth in Equity}) = 88.64 * (1 + 0.193) = 105.74$$

$$\text{Intrinsic Value} = \text{Projected EPS} * \text{Normalized Average P/E Ratio} = 105.74 * 27.49 = 2906.79$$

Intrinsic Value	Market Value as on 17/12/2020(NSE)
2906.79	2838.20

Intrinsic Value > Market Value



INFERENCE: Tata Consultancy Services Ltd has a higher intrinsic value compared to market value ie., it is undervalued. So it is preferable to buy the stock as the current market value would have a tendency to increase in order to reach its intrinsic value.

### INFOSYS LTD

$$\begin{aligned} \text{Dividend Payout Ratio} &= \frac{\sum \text{Dividend Per Share}}{\sum \text{Earnings Per Share}} \\ &= 132.50 / 256.7 = 0.516 \end{aligned}$$

$$\begin{aligned} \text{Average Dividend Payout Ratio} &= \frac{\sum \text{Dividend Payout Ratio}}{\text{Number of Years}} \\ &= 2.57/5=0.514 \end{aligned}$$

$$\begin{aligned} \text{Average retention Ratio} &= 1- \text{Average Dividend Payout Ratio} \\ &= 1-0.514 = 0.486 \end{aligned}$$

$$\begin{aligned} \text{Average Return on Equity} &= \frac{\sum \text{Return on Equity}}{\text{Number of years}} \\ &= 1.14/5 = 0.228 \end{aligned}$$

$$\begin{aligned} \text{Growth rate in Equity} &= \text{Average Retention Ratio} * \text{Average Return on Equity} \\ &= 0.486 * 0.228 = 0.110 \end{aligned}$$

$$\begin{aligned} \text{Normalized Average P/E Ratio} &= \frac{\sum \text{P/E Ratio}}{\text{Number of years}} \\ &= 122.81/5 = 24.56 \end{aligned}$$

$$\begin{aligned} \text{Projected EPS} &= \text{Current EPS} * (1+ \text{Growth in Equity}) \\ &= 36.34 * (1+0.110) = 40.33 \end{aligned}$$

$$\begin{aligned} \text{Intrinsic Value} &= \text{Projected EPS} * \text{Normalized Average P/E Ratio} \\ &= 40.33 * 24.56 = 990.50 \end{aligned}$$

Intrinsic Value	Market Value as on 17/12/2020(NSE)
990.50	1159.20

Intrinsic Value < Market Value

INFERENCE: Infosys Ltd has a higher intrinsic value compared to market value ie., it is overvalued. So it is preferable to sell the stock as the current market value would have a tendency to decrease in order to reach its intrinsic value.

### WIPRO LTD

$$\begin{aligned} \text{Dividend Payout Ratio} &= \frac{\sum \text{Dividend Per Share}}{\sum \text{Earnings Per Share}} \\ &= 12/92.99 = 0.129 \end{aligned}$$

$$\begin{aligned} \text{Average Dividend Payout Ratio} &= \frac{\sum \text{Dividend Payout Ratio}}{\text{Number of Years}} \\ &= 0.54/5=0.108 \end{aligned}$$

$$\begin{aligned} \text{Average retention Ratio} &= 1- \text{Average Dividend Payout Ratio} \\ &= 1-0.108 = 0.892 \end{aligned}$$

$$\begin{aligned} \text{Average Return on Equity} &= \frac{\sum \text{Return on Equity}}{\text{Number of years}} \\ &= 0.897/5 = 0.179 \end{aligned}$$

$$\begin{aligned} \text{Growth rate in Equity} &= \text{Average Retention Ratio} * \text{Average Return on Equity} \\ &= 0.892 * 0.179 = 0.159 \end{aligned}$$

$$\begin{aligned} \text{Normalized Average P/E Ratio} &= \frac{\sum \text{P/E Ratio}}{\text{Number of years}} \\ &= 106.34/5 = 21.26 \end{aligned}$$

$$\begin{aligned} \text{Projected EPS} &= \text{Current EPS} * (1+ \text{Growth in Equity}) \\ &= 14.88 * (1+0.159) = 17.24 \end{aligned}$$

$$\begin{aligned} \text{Intrinsic Value} &= \text{Projected EPS} * \text{Normalized Average P/E Ratio} \\ &= 17.24 * 21.26 = 366.52 \end{aligned}$$



Intrinsic Value	Market Value as on 17/12/2020(NSE)
366.52	356.90

Intrinsic Value >Market Value

INFERENCE:Wipro Ltd has a higher intrinsic value compared to market value ie., it is undervalued. So it is preferable to buy the stock as the current market value would have a tendency to increase in order to reach its intrinsic value.

#### MIND TREE LTD

$$\text{Dividend Payout Ratio} = \frac{\sum \text{Dividend Per Share}}{\sum \text{Earnings Per Share}} = \frac{83}{184.62} = 0.449$$

$$\text{Average Dividend Payout Ratio} = \frac{\sum \text{Dividend Payout Ratio}}{\text{Number of Years}} = \frac{2.14}{5} = 0.428$$

$$\text{Average retention Ratio} = 1 - \text{Average Dividend Payout Ratio} = 1 - 0.428 = 0.572$$

$$\text{Average Return on Equity} = \frac{\sum \text{Return on Equity}}{\text{Number of years}} = \frac{1.06}{5} = 0.212$$

$$\text{Growth rate in Equity} = \text{Average Retention Ratio} * \text{Average Return on Equity} = 0.572 * 0.212 = 0.121$$

$$\text{Normalized Average P/E Ratio} = \frac{\sum \text{P/E Ratio}}{\text{Number of years}} = \frac{202.89}{5} = 40.57$$

$$\text{Projected EPS} = \text{Current EPS} * (1 + \text{Growth in Equity}) = 38.35 * (1 + 0.121) = 42.99$$

$$\text{Intrinsic Value} = \text{Projected EPS} * \text{Normalized Average P/E Ratio} = 42.99 * 40.57 = 1744.10$$

Intrinsic Value	Market Value as on 23/08/2017(NSE)
1744.10	1452.10

Intrinsic Value > Market Value

INFERENCE: Mind treeLtd has a higher intrinsic value compared to market value ie., it is undervalued. So it is preferable to buy the stock as the current market value would have a tendency to increase in order to reach its intrinsic value.  
=1292.84

### V.SUMMARY AND CONCLUSION

#### CONCLUSION

A study on the Fundamental Analysis of five companies in the IT sector in India has brought in deep knowledge about the performance of the company. Moreover this study helped to acquire more knowledge and concepts about the financial aspects of the companies.

The fundamental analysis of IT sector stocks is a relevant topic on account of the increased investor interest in stock market and there is rational investment behavior, there is always a need to study and analyze share before investing into it. On this fundamental analysis, the investors of TCS Ltd may get more returns for their investment.

Each of the companies has their own weaknesses and strengths. If a company is weak in any ratios, but strong in any other ratios. So it is very difficult to say which company is strong or weak. One point to be noted is that this project is used for predicting the future but the future is always uncertain so the predictions may not be correct.

This is so because, even though many common ratios were used, these are not the only ratios that affect the companies' performance, there are lots of ratios that may affect the results of such study. Also, since secondary data has been used for data analysis and these data may not be always accurate and reliable which would definitely affect the results.



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