



## A comparative study on performance of Tata consultancy services and infosys for the period 2013-2017 by using Valuation ratios

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### Abstract

A sustainable business and mission requires effective planning and financial management. The term "Ratio" refers to the numerical and quantitative relationship between two items or variables. This relationship can be exposed as percentages, fractions, proportion of numbers. Ratio analysis is defined as the systematic use of ratio to interpret the financial statement. Ratio analysis is a useful management tool that will improve your understanding of financial results and trends over time, and provide key indicators of organisational performance common basis of comparison is to look at how a company's ratios compare to similar firms in the industry. It is also important to recognise that a single ratio does not provide adequate information to evaluate the strength or weakness of the company. Ratios presented below represent some of the standard ratios used in business practise. We have selected the appropriate data and calculated only valuation ratios. Valuation ratios relates to a company's stock price to its earnings and book value per share. These ratios are the indicators of the performance of the company and reflects the likely performance of the company in the near future. If the company's profitability, liquidity and turnover ratios are good then the valuation ratios will be high. Most of the valuation ratios are useful for the investors who are interested in regular returns. Book value is the function of the past earnings and distribution policy of the company.

**Keywords:** earnings, valuation, book value, ratio

### 1. Introduction

Valuation ratios are ratios computed based on parameters in financial statements of a company and used to estimate the value of a company. These can be used to easily compare companies and determine which is the better investment. A particular company's valuation ratio can be compared with that of other companies to determine investments attractiveness.

Infosys is a public limited company incorporated and domiciled in India and has its registered office at Bangalore, Karnataka, India. The company has its primary listing on Bombay Stock Exchange and National Stock Exchange in India. The company's American depositary shares representing equity shares are also listed on the New York stock exchange, Euronext London and Euronext Paris. Infosys provides business consulting, information technology and outsourcing services Tata Consultancy Services is a provider of information technology (IT) services. It provides a wide range of services including business consulting, information technology, business process outsourcing (BPO), infrastructure and engineering. The company operates in America, Europe, Middle east and Asia pacific. The company is headquartered in Mumbai, India. The company is a part of one of India's most respected business conglomerates the Tata Group.

### 2. Objectives

- To analyse investment potential of both Tata Consultancy Services and Infosys using valuation ratios

### 3. Scope

Valuation ratios has implications for investors, managers, lenders and other stakeholders to estimate the attractiveness of a potential or existing investment and get an idea of its valuation.

### 4. Research methodology

- The study is based on secondary data. Data pertaining to valuation ratios were collected from the balance sheet and profit and loss account of Infosys and Tata Consultancy Services
- The necessary data were obtained from the published annual report from 2013-2017.

#### 4.1 Tools applied

- To have a meaningful analysis and interpretation of various data collected, the following tools were used for the study.

#### Valuation ratios

- Dividend yield ratio,

- Dividend pay-out ratio,
- Price earning ratio,
- Earnings yield ratio,
- Market value to book value ratio,
- Market price to cash flow ratio.

**5. Analysis & Interpretation**

**5.1. Dividend Pay-out Ratio**

DPR measures the percentage of earnings that the company

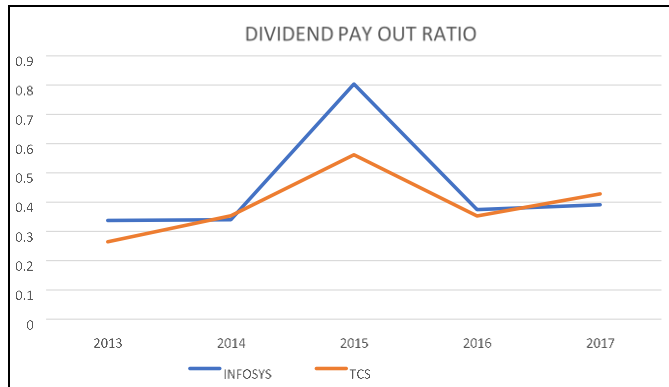
pays in dividends. The Dividend pay-out ratio of a firm indicates the percentage of earnings that is distributed to the owners in the form of cash. It is calculated by dividing the firm’s cash dividend per share by its earnings per share. The formula is

$$\text{Dividend Pay-out ratio} = \frac{\text{Dividends per share}}{\text{Earnings per share}}$$

**Table 1:** Dividend pay-out ratio of Infosys and Tcs

Year	Infosys			TCS		
	Earnings Per Share	Dividend Per Share	Dividend Pay-Out Ratio	Earnings Per Share	Dividend Per Share	Dividend Pay-Out Ratio
2013	65.23	22	0.33	158.76	42.00	0.26
2014	94.17	32	0.33	178.39	63.00	0.35
2015	98.31	79	0.80	105.91	59.50	0.56
2016	116.13	43.50	0.37	68.73	24.25	0.35
2017	120.04	47	0.39	60.16	25.75	0.42

**Exhibit-1**



**Fig 1**

**Interpretation**

The dividend pay-out ratio should not be too high. The earnings should support the payment of dividends. Dividends are paid in cash; therefore, high dividend pay-out ratio can have implications for the cash management and liquidity of the company. Dividend pay-out ratio differs from company to

company. Mature, stable and large companies usually have higher dividend pay-out ratio. Companies which are young and seeking growth have lower or modest dividend pay-out ratio.

INFOSYS pays a moderate amount of dividend to its shareholders in the increasing trend. TCS also pays dividend in an increasing trend so that the investors may be profitable. The market may be higher in 2015 so that both the company provides dividend increasingly when compared to other years

**5.2. Dividend yield ratio**

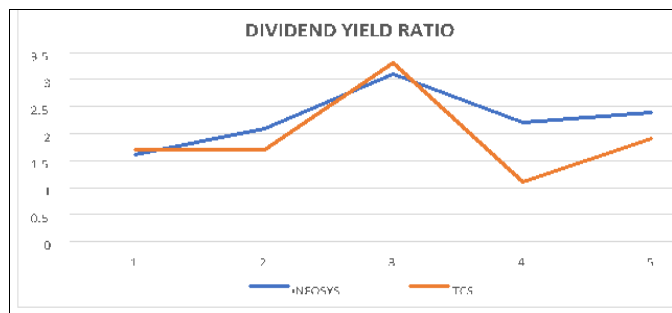
The dividend yield is a financial ratio that measures the amount of cash dividends distributed to common shareholders relative to the market value per share. The dividend yield is used by investors to show how their investment in stock is generating either cash flows in the form of dividends or increases in asset value by stock appreciation. The formula for yield ratio is

$$\text{Dividend Yield Ratio} = \frac{\text{Dividend per share}}{\text{Market per share}}$$

**Table 2:** Dividend yield ratio of Infosys and Tcs

Year	INFOSYS			TCS		
	Dividend per share	Market per share	Dividend yield ratio	Dividend per share	Market per share	Dividend yield ratio
2013	42	2625	1.6	22	1294.12	1.7
2014	63	3000	2.1	32	1882.35	1.7
2015	59.5	1919.36	3.1	79	2392.94	3.3
2016	24.25	1102.27	2.2	43.5	3954.55	1.1
2017	25.75	1072.92	2.4	47	2473.68	1.9

**Exhibit -2**



**Fig 2**

**Interpretation**

The ratio is important for those investors who purchase shares to earn dividend income. Also, the shares that earn higher dividend income can be sold in the market at higher prices that usually results in higher profits of the investors.

Infosys has higher dividend yield ratio when comparing to TCS but high dividend yield percentage may be due to decrease in market price of the stock of the company due to severe financial troubles. A company with a high dividend yield pays its investors a large dividend compared to the fair market value of the stock.

**5.3. Price earnings ratio**

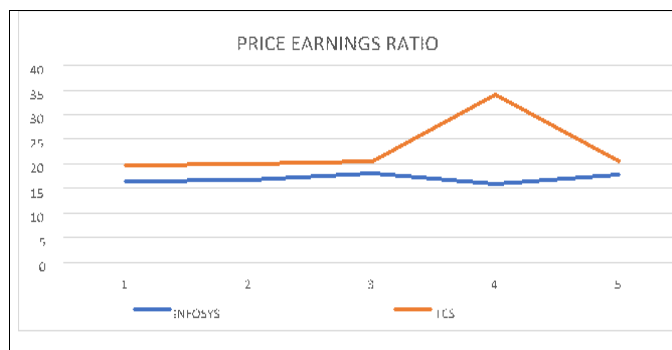
Price earnings ratio is the ratio between market price per equity share and earnings per share. The ratio is calculated to make an estimate of appreciation in the value of a share of a company and is widely used by investors to decide whether or not to buy shares in a particular company. The ratio is calculated as:

$$\text{Price earnings ratio} = \frac{\text{market price per equity share}}{\text{earnings per share}}$$

**Table 3:** Price earnings ratio of Infosys and Tcs

YEAR	Infosys			TCS		
	Earnings per share	Market per share	P/e Ratio	Earnings per share	Market per share	P/E Ratio
2013	158.76	2625	16.534	65.23	1294.118	19.83
2014	178.39	3000	16.817	94.17	1882.353	19.98
2015	105.91	1919.355	18.122	98.31	2392.939	20.60
2016	68.73	1102.273	16.037	116.13	3954.545	34.05
2017	60.16	1072.917	17.834	120.04	2473.684	20.60

**Exhibit - 3**



**Fig 3**

earnings in anticipation of future earnings growth. A relatively low P/E ratio could indicate that the company is under-priced. Conversely, investors expect high growth rate from companies with high P/E ratio.

To earn ₹1 the investors of Infosys are willing to invest minimum of ₹16 and the investors of TCS are willing to invest minimum of ₹ 20 which can be treated as market value.

**5.4. Earnings yield ratio**

Earnings yield are the earnings per share for the most recent 12 -month period divided by the current market price per share. It is the inverse of the price-to-earnings (P/E) ratio.

$$\text{Earnings Yield Ratio} = \frac{\text{Earnings per share}}{\text{Market Price per share}} \times 100$$

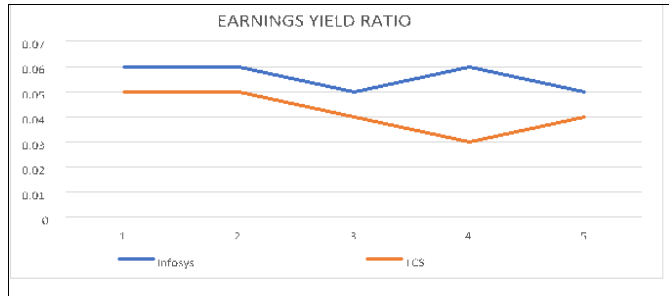
**Interpretation:**

A high P/E ratio means investors are paying more for today's

**Table 4:** Earnings yield ratio of Infosys and Tcs

Year	Infosys			TCS		
	Earnings per share	Market price share	Earnings yield ratio	Earnings per share	Market price share	Earnings yield ratio
2013	158.76	2625	0.06	65.23	1294.11	0.05
2014	178.39	3000	0.06	94.17	1882.35	0.05
2015	105.91	1919.355	0.05	98.31	2392.93	0.04
2016	68.73	1102.273	0.06	116.13	3954.54	0.03
2017	60.16	1072.917	0.05	120.04	2473.68	0.04

**Exhibit- 4**



**Fig 3**

**Interpretation**

An overvalued investment can lower earnings yield and conversely, an undervalued investment can raise earnings

yield. High P/E ratios might generate more earnings over time and eventually boost up their earnings yield. On the other hand, low P/E ratios might generate less earnings over time and, in the end, drag down their earnings yield. Both Infosys and TCS has a reasonable percentage of P/E ratio so it has generated good amount of earnings and it maintains a percentage of earnings yield.

**5.5. Market value to book value ratio**

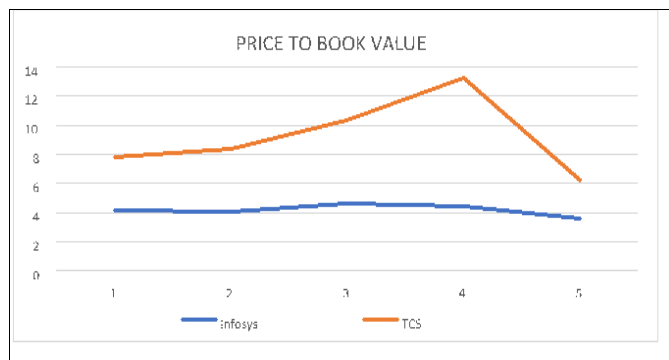
The price-to-book ratio measures a company's market price in relation to its book value. The ratio denotes how much equity investors are paying for each rupee in net assets

$$\text{Market value to book value Ratio} = \frac{\text{Market Price per Share}}{\text{Book Value per Share}}$$

**Table 5:** Market value to book value ratio of Infosys and Tcs

YEAR	INFOSYS			TCS		
	BVPS	MPS	Price bv Ratio	BVPS	MPS	PRICE /Bv Ratio
2013	628.21	2625	4.17	165.86	1294.11	7.80
2014	735.87	3000	4.07	224.90	1882.35	8.37
2015	418.71	1919.35	4.58	231.87	2392.93	10.32
2016	248.94	1102.27	4.43	298.76	3954.54	13.24
2017	296.24	1072.91	3.62	396.05	2473.68	6.25

**Exhibit – 5**



**Fig 4**

**Interpretation:**

A low ratio (less than 1) could indicate that the stock is undervalued (i.e. a bad investment), and a higher ratio (greater than 1) could mean the stock is overvalued (i.e. it has

performed well). In both Infosys and TCS the stock is overvalued as the ratio is above 1 therefore, they have performed well

**5.6. Market price to cash flow ratio:**

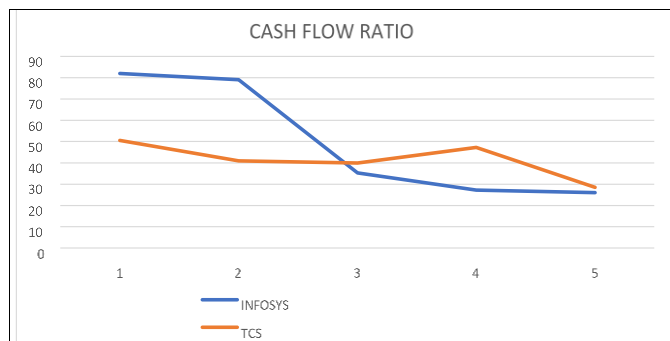
The price-to-cash-flow ratio is a stock valuation indicator that measures the value of a stock's price to its cash flow per share. The ratio takes into consideration a stock's operating cash flow (OCF) which adds non-cash earnings, such as depreciation and amortization, to net income. It is especially useful for valuing stocks that have positive cash flow but are not profitable because of large non-cash charges. The price-to-cash-flow ratio is calculated as:

$$\text{Price to cash flow} = \frac{\text{share price}}{\text{cash flow per share.}}$$

**Table -6** Market price to cash flow ratio of Infosys and Tcs

YEAR	INFOSYS			TCS		
	Market per share	Cash flow per share	Price/CFPS Ratio	Market per share	Cash flow per share	Price/ CFPS Ratio
2013	2625	31.90	82.2	1294.11	25.54	<b>50.7</b>
2014	3000	37.89	79.2	1882.35	45.83	<b>41.1</b>
2015	1919.35	54.26	35.4	2392.93	59.41	<b>40.1</b>
2016	1102.27	40.35	27.3	3954.54	83.46	<b>47.4</b>
2017	1072.91	41.11	26.09	2473.68	86.63	<b>28.6</b>

**Exhibit-6**



**Fig 5**

**Interpretation**

A high P/CF ratio indicated that the specific company is trading at a high price but is not generating enough cash flows to support the multiple—sometimes this is ok, depending on the firm, industry, and its specific operations. Smaller price ratios are generally preferred, as they may reveal a firm generating ample cash flows that are not yet properly considered in the current share price.

Infosys had P/CF ratio very high in 2013 as 82.2% but in the upcoming years they have maintained a reasonable amount cash flow. TCS also has traded at high price in 2013 by not generating enough cash flows but in the following years they have rectified.

**6. Findings**

- Infosys pays a moderate amount of dividend to its shareholders in the increasing trend.
- In both Infosys and TCS the stock is overvalued as the ratio is above 1 therefore, they have performed well
- TCS also has traded at high price in 2013 by not generating enough cash flows but in the following years they have rectified.
- Infosys has higher dividend yield ratio when comparing to TCS but high dividend yield percentage may be due to decrease in market price of the stock of the company due to financial troubles

**7. Suggestions**

- The company should maintain its debt position.
- The companies have to maintain its goodwill and it may lead to investment potential.

**8. Conclusion**

The study is aimed to analyse the comparative financial performance of the two top most IT companies Infosys and Tata Consultancy Services for the period of 2013 – 2017.

It has been concluded that value of the TCS is relatively high when comparing with Infosys.

Thus these valuation ratios attracts the investors who are interested in regular returns. By the study TCS has positive impact for greater investment opportunities.

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