

# Financial Performance of Software Companies in the Global Recession with Reference to India

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## Abstract

The software industry is the main component of the information technology in India. Presently there are more than 500 software firms in the country which shows the monumental advancement that the Indian software Industry has experienced. In India, the software boom started somewhere in the late 1990's. The study aim at analysing the financial performance of software companies like TCS, Infosys, Wipro and Satyam. The study being an external analyst, had to depend mainly upon secondary data for the purpose of studying the financial performance of top 10 software Industries in India. The data and information required for the study have been collected mostly from the annual reports of the units for the period from 2000-2001 to 2008-2009. In order to evaluate the financial performance, tools like Anova, mean, standard deviation and correlation have been used.

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## I. Introduction

THE INDIAN SOFTWARE industry has brought about a tremendous success for the emerging economy. The software industry is the main component of the information technology in India. Presently there are more than 500 software firms in the country which shows the monumental advancement that the Indian software Industry has experienced. In India, the software boom started somewhere in the late 1990s. Most of the Indian software companies at that moment offered only limited software services such as the banking and the engineering software. The business software boom started with the emergence of Y2K problems when a large number of skilled personnel were required to fulfill the mammoth database-correction demand in order to cope up with the advent of the new millennium. The

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profile of the Indian IT services has undergone a change in the last few years, partly as it moved up the value chain and partly as a response to the market dynamics. Ten years ago, most US companies would not even have considered outsourcing some of their IT projects to outside vendors. Now, ten years later, a vast majority of US companies use the professional services of Indian Software engineers in some manner, through large, medium or small companies or through individuals recruited directly. The market competition is forcing organizations to cut down the costs of products. The professional IT services on the other hand are becoming increasingly expensive. The offshore software development model is today where onsite professional services were ten years ago. There is high chance (almost a mathematical certainty), that in less than ten years, the vast majority of IT services (software development being just one of them) from developed countries, will be, outsourced and that is too to an offshore vendor.

The Indian software Industry has grown from a mere US \$ 150 million in 1991-92 to a staggering US \$ 5.7 billion in 1999-2000. No other Indian industry has performed so well against the global competition. According to statistics, India's software exports reached total revenues of Rs. 46100 crores. The total share of India's exports in the global market rose from 4.9 percent in 1997 to 20.4 percent in 2002-03. In India, the software boom started somewhere in the late 1990s.

Despite the global economic slowdown, the Indian IT software and services industry is maintaining a steady pace of growth. Software development activity is not confined to a few cities in India. Software development centers, such as Bangalore, Hyderabad, Mumbai, Pune, Chennai, Calcutta, Delhi-Noida-Gurgaon, Vadodara, Bhubaneswar, Ahmedabad, Goa, Chandigarh, and Trivandrum are all developing quickly. All of these places have state-of-the-art software facilities and the presence of a large number of overseas vendors. Government has also played a vital role in the development of the Indian software Industry. In 1986, the Indian government announced a new software policy which was designed to serve as a catalyst for the software industry. This was followed in 1988 with the World Market Policy and the establishment of the Software Technology Parks of India (STPs) scheme. In addition, to attract foreign direct investment, Indian Government permitted foreign equity up to 100 percent and duty free import on all inputs and products.

## **II. Review of Literature**

Hamasalakshmi and Manickam (2005) examined the liquidity, profitability and leverage position of thirty four software companies during the period 1997-1998 to 2001-2002 by using different financial tools like ratios, correlation and multiple regression analysis. The study revealed favorable liquidity and sufficient working capital performance of selected software companies, which concluded that the companies rely on the internal financing and overall profitability position of the software companies showed a moderately increasing trend.

Maran and Sarangi (2010) analyzed the financial performance of leading software companies like TCS, Infosys, Wipro and Satyam. The study revealed that TCS and Infosys were shown better financial performance in term of short term and long term solvency position while Wipro had a second place and Satyam computers was at last.

Guo, Wang and Shou (2004) analyzed the rate of profit to sales (ROS) and the logarithm of average sales income per capita (PERS) to measure the firm performance, i.e., financial performance and labor productivity respectively. They used logarithm of firm employment to measure firm size and two indicators measure of R&D inputs first is R&D intensity (RDI), and the other is the rate of R&D personnel to firm employment (RDPR).

Cohen and El-Sawad (2007) focused on the accounts of individuals in a financial services company operating in the UK and in Mumbai, India. It examines the ways in which respondents constructed and positioned themselves in relation to one another in the stories they told. They argue that in their accounts of their respondents mobilized discourses of culture and cultural difference to describe and justify this positioning, with particular reference to 'the language barrier', work ethics and notions of competence.

Natesan and Allimuthu (2008) evaluated the performance of Tube Investments of India Limited in terms of comparative and common size income statements. The trend is also projected for next four years. The study reveals that there was a significant increase in the reported net profit during the year 2005-2006. The study concluded that company has to give more attention in maintaining reducing power and fuel as to have increase wealth to the shareholders.

Mohapatra (2003) explores dichotomy in industry perception and government policy response in detail. Based on data from interviews of senior executives of Indian software companies in Bangalore and the US, and also by drawing upon secondary data sources, he developed a typology of India's competitive advantages and threats thereto in the information technology sector. An examination of the demand and supply constraints beyond quantitative estimates reveals a set of serious challenges to the expansion of India's information workforce.

The software industry has become a part of everyday life, by providing solutions for business or entertainment. In the last 15 years, the Indian software industry has brought a tremendous growth for the emerging economy and also the industry is the main component of the Information technologies not only in India but in other leading developed countries also. Because of world financial and economical crisis almost all countries economy went down in the last two years. In India the major sources of income is through software Industry and its exports. All software companies are facing financial crisis especially the top 10 software companies in India. In the year 2005, TCS's net profit growth is 2959 percent but it went down to 83 percent in the year 2008, Wipro's net profit growth was 24.1 percent in

the year 2002 and it went down to 9.24 percent in 2008. The other leading companies such as Infosys, Satyam are also facing the financial crisis in the global meltdown. Hence the study aims to analysed the financial performance of software companies in India.

### III. Objectives of the Study

- To analyze the financial performance of software industry in India
- To identify the fixed assets and working capital turnover.
- To analyze the significance of capital efficiency, return on capital employed.
- To analyze the correlation between exports sale and software revenue growth, dividend and book value of shares, return on capital employed and return on net worth.

### IV. Methodology

The researcher, being an external analyst, had to depend mainly upon secondary data for the purpose of studying the financing performance of software Industry in India. Out of the top 10 software companies in India enlisted by NASSCOM, the selected companies are Tata Consultancy Services, Wipro, Infosys Technologies Ltd., and Satyam Computer Services. The data and information required for the study have been collected mostly from the annual reports of the unit for the period from 2000-2001 to 2008-2009. Though there was found apathy or indifference on the part of executives in supplying information, the researcher could overcome through moral persuasion and intensive pestering. It was made clear to them that the information so collected would be exclusively used for academic purposes and proper secrecy would be maintained. The data for the years 2000-2001 to 2008-2009 has been taken in order to study the change in the financial pattern in terms of overall growth, operating, profitability, capital efficiency, short term solvency and dividend payout ratio over a period of 8 years i.e., from 2000-2001 to 2008-2009.

#### 4.1 Source and Collection of Data

The present study is mainly based on secondary data collected from the prowess Corporate Database Software. Further, the available secondary data was collected from the Annual Reports, published Research Reports by various industries, and research organizations.

#### 4.2 Period of the Study

The present study is mainly intended to examine the financial performance of software companies for eight years in the period between 2000-2001 to 2008-2009.

#### 4.3 Selected Software Companies Profile

##### 4.3.1 Tata Consultancy Service

Founded in 1968, TCS is one of India's largest corporate house. It is also India's largest IT employer with staff strength of 1,11,000 employees. TCS is IDC-Data quest IT best employer in IT services in 2007. TCS also topped Data Quest DQT top 20 list of IT Service providers in 2007.

4.3.2 Wipro

Wipro is a \$ 5 billion revenue generating IT, BPO and R&D services organization with presence in over 50 countries. The company has over 72,000 employees. Wipro was the only Indian company to be ranked among the top 10 global outsourcing provider in IAOP’s 2006 Global Outsourcing 100 list. Wipro had also won the International Institute for Software Testing’s Software Testing best practice Award.

4.3.3 Infosys Technologies Ltd.

Infosys Technologies Ltd was started in 1981 by seven people with \$ 250. Today, the company boasts of revenues of over \$ 4 billion and 94,379 employees. Forbes magazine named Infosys in its list of Global High Performers. Waters magazine rated Infosys as the Best Outsourcing Partner. The Banker magazine conferred two Banker technology Awards on Infosys to acclaim its work in wholesale and capital markets in two categories- Payments and Treasury Services, and Offshoring and Outsourcing. The International Association of Outsourcing Professional (IAOP) ranked Infosys at No.3 in its ‘2008 Global Outsourcing 100.

4.3.4. Satyam Computer Services

Established in 1987 by Ramalinga Raju, Satyam has a staff strength of 51, 000 employees. In 2008, the company’s revenues crossed the \$ 2-billion mark. Satyam is among the youngest IT services companies to reach \$1 billion in annual revenue. It is ranked number 1 in the ASTD (American Society for Training and Development) BEST Award, 2007.

4.4 Tools used for Analysis:

The present study has analyzed the financial performance of four software companies. In order to evaluate the financial performance, tools like Anova, mean, standard deviation, Tamhane comparison and correlation have been used.

**V. Results and Discussion**

5.1 Net Profit Growth Ratio

Net profit growth ratio indicates the overall operations of the firm, it shows what percentage of sales is left to the shareholders after meeting all costs. An increase in net profit ratio year after year is an indication of improvement in the working of firm.

Hypothesis H0<sub>1</sub>: *There is no significant difference between net profit growth for selected software companies.*

**Table I**

		Sum of Squares	df	Mean Square	F	Sig.
Net Profit Growth	Between Groups	2187925.469	3	729308.490	2.761	0.065
	Within Groups	6074870.496	23	264124.804		
	Total	8262795.965	26			

**Note:** df = 26; Significance level = 0.05; Calculated values = 0.065

In order to analyse there is no any significant difference between net profit for selected software companies TCS, Infosys, Satyam and Wipro. The calculated  $F$  value 0.065 is more than the table value at 0.05. which infers that null hypothesis is accepted. Hence there is no significant difference between net profit growth of selected four software companies.

### 5.1.2 EPS Growth Ratio

The earning per share helps in determining the market price of the equity shares of the company. A comparison of earning per share of the company with another will also help in deciding whether the equity share capital is being effectively used or not. It also helps in estimating the company capacity to pay dividend to its equity share holders.

Hypothesis  $H_{0_2}$ : *There is no significant advance between earning per share between selected four software companies.*

**Table II**

		Sum of Squares	df	Mean Square	F	Sig.
EPS Growth	Between Groups	2529439.998	3	843146.666	3.943	0.021*
	Within Groups	4918266.013	23	213837.653		
	Total	7447706.011	26			

**Note:** df = 26; Significant Level = 0.05; Calculated  $F$  values = 3.943

\* Denote Significant at 5% level of significance.

In order to find out, whether there is any significant different between EPS of selected software companies, TCS, Satyam, Infosys and Wipro. The one way Anova is used to find out the significant difference between EPS in selected four software companies, the calculated value 0.021 is less than the table value 0.05. Hence null hypothesis is rejected and there is significant difference between EPS of selected four software companies.

### 5.1.3 Fixed Assets Turnover Ratio

This ratio measures the efficiency and profit earning capacity of the firm. Higher the ratio, greater is the intensive utilization of fixed assets. A lower ratio means under utilization of fixed assets.

Hypothesis  $H_{0_3}$ : *There is no significant difference between fixed assets turnover ratio of selected software companies.*

**Table III**

		Sum of Squares	df	Mean Square	F	Sig.
Fixed Asset Turnover Ratio	Between Groups	470.026	3	156.675	26.095	.000**
	Within Groups	144.096	24	6.004		
	Total	614.122	27			

**Note:** df = 27; Significant level = 0.05; Calculated values = 26.095

\*\* Denote Significant at 1% level of significance.

In order to analyse, whether there is significant difference between fixed assets turnover of selected software companies TCS, Infosys, Wipro and Satyam, the calculated value 0.000 is less than the table value of 0.05 which infers that null hypothesis is rejected. Hence there is significant relationship between fixed assets turnover among the selected four software companies.

5.1.4 Working Capital Turnover Ratio

Hypothesis H<sub>04</sub>: There is no significant difference between the mean value of working capital turnover of selected software companies.

**Table IV**

		Sum of Squares	df	Mean Square	F	Sig.
Working Capital Turn Over Ratio	Between Groups	31.804	3	10.601	9.974	.000**
	Within Groups	25.510	24	1.063		
	Total	57.314	27			

Note: df = 27; Significance level = 0.05; Calculated values = 9.974

\*\* Denote Significant at 1% level of significance.

The working capital ratio is a measure of the efficiency of the employment of working capital. It's overtrading and under trading is harmful for the smooth conduct of business. This ratio find out the relationship between the cost of sale and working capital, to determine the liquidity of a firm.

An attempt has been made to find out whether there exists significant difference between working capital turnover of leading software companies TCS, Infosys, Wipro and Satyam. It is found that the calculated value 0.000 is less than the table value 0.05 which infers that null hypothesis is rejected. Hence there is a significant relationship between the mean value of working capital of selected software companies.

5.1.5 Return on Capital Employed

Return on capital employed is a measure of efficiency of capital, profit after tax is commonly used as a measure of return. It facilitates comparison with the cost of capital of the firms. If return on capital employed is greater than the weighted average cost of capital, the firm can be classified as efficient. Return on capital employed of a firm can also be compared with the competing firms in the industry to establish classification of relatively efficient and inefficient firms.

Hypothesis H<sub>05</sub>: There is no significant difference between return on capital employed of four selected software companies.

**Table V**

		Sum of Squares	df	Mean Square	F	Sig.
Return on Capital Employed	Between Groups	17533.261	3	5844.420	3.048	.048
	Within Groups	46014.834	24	1917.285		
	Total	63548.095	27			

Note: df = 27; Significance level = 0.05; Calculated values = 3.048

An attempt has been made to analyze whether there is any significant difference between return on capital employed for selected four software companies. It is found that calculated value 0.048 is less than the table value 0.05 which infers that the null hypothesis is rejected. Hence, there is significant difference between return on capital employed for selected software companies.

5.1.6 Operating and Administrating Expenses

The operating and administrating expenses ratio shows the percentage of sales observed by the cost of goods sold and operating expenses. A lower notice

is much favorable as it would leave a higher margin for operating profit. Operating expenses include selling and distribution expenses and administration expenses.

Hypothesis  $H_{06}$ : *There is no significant difference between operating and administrating expenses for selected four software companies.*

**Table VI**

	Sum of Squares	df	Mean Square	F	Sig.
Ope & Admin Exp. Between Groups	11891.316	3	3963.772	147.897	.000**
to Soft. Revenue Within Groups	00643.221	24	0026.801		
Total	12534.537	27			

**Note:** df = 27; Significance level = 0.05; Calculated values = 147-897

\*\* Denote Significant at 1% level of significance.

An attempt has been made to analyze, whether there is any significant difference between operating and administrating expenses for selected four software companies TCS, Satyam, Infosys and Wipro. It is found that, the calculated value 0.000 is less than the table value 0.05. Hence null hypotheses is rejected and there is no significant relationship between operating and administrating expenses of four selected software companies.

#### 5.1.7 Tamhane Comparison Test

In order to analyse the significant relationship between dependent variable (Net profit, Total income, Operation & Administrative Expenditure to software revenue, return on capital employed, fixed asset turn over ratio) for four selected software companies (Satyam, Infosys, TCS and Wipro) the Tamhane Comparison test was applied. The second column in the table VII is (I) each individual software company is related with third clumn (J) of remaining 3 companies, to find out the mean difference between I and J with the significant value of 0.05

**Table VII**

Dependent Variable	Company (I)	Company (J)	Mean Diff. erence (I-J)	Std. Error	Level of Significance
EPS Growth	Satyam	Infosys	-4.1213	231.21292	1.000
		TCS	-850.3025	283.17683	0.854
		Wipro	37.4904	239.32811	0.792
	Infosys	Satyam	4.1213	231.21292	1.000
		TCS	-846.1813	283.17683	0.856
		Wipro	41.6116	239.32811	0.686
	TCS	Satyam	850.3025	283.17683	0.854
		Infosys	846.1813	283.17683	0.856
		Wipro	887.7929	289.84073	0.833
	Wipro	Satyam	-37.4904	239.32811	0.792
		Infosys	-41.6116	239.32811	0.686
		TCS	-887.7929	289.84073	0.833
Operating & Admin Exp to Software Revenue	Satyam	Infosys	9.6962(*)	2.58848	0.000**
		TCS	-50.9650(*)	3.17023	0.002*
		Wipro	10.1387(*)	2.58848	0.047*
	Infosys	Satyam	-9.6962(*)	2.58848	0.000**
		TCS	-60.6613(*)	3.17023	0.002**
	Wipro	0.4425	2.58848	1.000	



	TCS	Satyam	50.9650(*)	3.17023	0.002*
		Infosys	60.6613(*)	3.17023	0.002*
		Wipro	61.1038(*)	3.17023	0.000**
	Wipro	Satyam	-10.1387(*)	2.58848	0.047*
		Infosys	-0.4425	2.58848	1.000
		TCS	-61.1038(*)	3.17023	0.000**
Net Profit to Total income	Satyam	Infosys	-12.0350(*)	2.54753	0.000**
		TCS	-0.7075	3.12007	0.992
		Wipro	4.4750	2.54753	0.747
	Infosys	Satyam	12.0350(*)	2.54753	0.000**
		TCS	11.3275(*)	3.12007	0.000**
		Wipro	16.5100(*)	2.54753	0.006*
	TCS	Satyam	0.7075	3.12007	0.992
		Infosys	-11.3275(*)	3.12007	0.000**
		Wipro	5.1825	3.12007	0.618
	Wipro	Satyam	-4.4750	2.54753	0.747
		Infosys	-16.5100(*)	2.54753	0.006*
		TCS	-5.1825	3.12007	0.618
Return on Capital Employed	Satyam	Infosys	-53.6275(*)	21.89341	0.007*
		TCS	-69.0300	26.81384	0.608
		Wipro	-27.6975	21.89341	0.792
	Infosys	Satyam	53.6275(*)	21.89341	0.007*
		TCS	-15.4025	26.81384	0.999
		Wipro	25.9300	21.89341	0.876
	TCS	Satyam	69.0300	26.81384	0.608
		Infosys	15.4025	26.81384	0.999
		Wipro	41.3325	26.81384	0.930
	Wipro	Satyam	27.6975	21.89341	0.792
		Infosys	-25.9300	21.89341	0.876
		TCS	-41.3325	26.81384	0.930
Fixed Asset Turn Over Ratio	Satyam	Infosys	8.9050(*)	1.22515	0.003**
		TCS	0.7500	1.50050	0.998
		Wipro	8.0788(*)	1.22515	0.004*
	Infosys	Satyam	-8.9050(*)	1.22515	0.003
		TCS	-8.1550(*)	1.50050	0.009*
		Wipro	-0.8263	1.22515	0.645
	TCS	Satyam	-0.7500	1.50050	0.998
		Infosys	8.1550(*)	1.50050	0.009*
		Wipro	7.3288(*)	1.50050	0.001*
	Wipro	Satyam	-8.0788(*)	1.22515	0.004*
		Infosys	0.8263	1.22515	0.645*
		TCS	-7.3288(*)	1.50050	0.001

Note: \* Denote Significant at 5% level of significance

\*\* Denote Significant at 1% level of significance.

Hypothesis H1<sub>1</sub>: There is no significant difference between net profits to total income for selected software companies.

Hypothesis H1<sub>2</sub>: There is no significant difference between operating and administration expenditure to software revenue for four selected software companies.

Hypothesis H1<sub>3</sub>: There is no significant difference between return on capital employed for selected software companies.

Hypothesis H1<sub>4</sub>: There is no significant difference between fixed asset turn over ratio for selected software companies.

Hypothesis H1<sub>5</sub>: There is no significant difference between working capital turn over ratio and selected software companies.

Hypothesis H1<sub>1</sub>, there is no significant difference between net profit to total income selected four software companies. Dependent variable of Satyam net profit total income is analyzed with Infosys, TCS, and Wipro respectively. The calculated value for analysis with Infosys (0.000) is less than table value (0.05). Hence it is evident that there is significant difference between net profit to total income of Satyam and Infosys. When Satyam is compared to TCS and Wipro respectively the calculated value are (0.992) and (0.747) respectively which is found to be greater than the table value (0.05). It interprets that there is no significant difference between net profit and total income of Satyam and TCS. The second selected company (I) Infosys is compared to other three companies (Satyam, TCS, Wipro) for net profit to total income. From the table it is inferred that calculated value of Satyam (0.000), TCS (0.000) and Wipro (0.006) are less than table value (0.05). Hence there is a significant difference between net profit of Infosys when compared to the total income of other three software companies (Satyam, TCS, Wipro). When the third company TCS (net profit total income) is analyzed with Wipro, the calculated value (0.001) is less than the table value (0.05) which means that there is significant difference in the net profit of TCS to the total income of Wipro.

Hypothesis H1<sub>2</sub>, dependent variable of operation and administration expenditure revenue of Satyam is compared to other three companies like Infosys, TCS, and Wipro. The calculated value are (0.000, 0.002, 0.47) respectively. As the calculated value is less than table value (0.05) it is interpreted that there is significant difference between operation and administration expenditure of Satyam with other three software companies (Infosys, TCS, Wipro). When operation and administration expenditure of Infosys is compared to other three software companies (Satyam, TCS, Wipro), the calculated values are (0.000, 0.002) respectively for Satyam and TCS which infers that there is significant difference in operation and administration expenditure of Infosys to software revenue with Satyam and TCS. When Infosys is compared to Wipro the calculated value (1.000) is found to be greater than the table value (0.05) which interprets that there is no significant difference between operation and administration expenditure of Infosys to software revenue of Wipro. The operation and administration expenditure of TCS is compared with software revenue of Wipro. The calculated value (0.000) is less than the table value (0.05) which interprets that there is significant difference between operation and administration of TCS and software revenue of Wipro.

Hypothesis H1<sub>3</sub>, Satyam (Dependent variable) Return on capital employed is compared with other three companies (Infosys, TCS, Wipro). The calculated value is (0.007) for analyzing the significant relationship with Infosys. As the calculated value is less than table value (0.05), it can be interpreted that there exists significant difference of Return on capital of Satyam with Infosys. When Satyam is compared with TCS and Wipro for

analyzing the significant relationship of return on capital employed, the calculated values are 0.608, 0.792 respectively which means that there is no significant relationship between Satyam return on capital employed to TCS and Wipro. The return on capital of Infosys is compared with TCS and Wipro, the calculated values are (0.999, 0.876) respectively. As the calculated value is greater than the table value (0.05) it is inferred that there is no significant difference between return on capital of Infosys with TCS and Wipro. In the comparison of TCS return on capital employed with Wipro, the calculated value (0.930) was found to be greater than the table value (0.05) which means that there is no significant difference of return on capital of TCS with Wipro.

Hypothesis H1<sub>4</sub>, the Dependent Variable fixed asset turn over ratio of Satyam is compared with other three companies. The calculated values are (0.003) for Infosys and (0.004) for Wipro. As the calculated values are less than the table value (0.05) it can be inferred that turnover ratio of Satyam has significant relationship with turnover ratio of Infosys and Wipro. From the analysis of fixed asset turnover ratio of Infosys with TCS, the calculated value (0.009) is found to be less than table value (0.05), which can be interpreted that there is significant difference between Infosys fixed asset turn over ratio with TCS. As the calculated value of Wipro (0.645) is greater than table value (0.05) it can be interpreted that there is no significant difference of Infosys fixed asset turn over ratio with Wipro. When the third company TCS fixed asset turn over ratio is compared with Wipro, the calculated value (0.001) is less than table value (0.05). It can be interpreted that there is significant difference of TCS fixed asset turn over ratio with Wipro.

Hypothesis H1<sub>5</sub>, the Dependent variable Working capital turn over ratio of Satyam is compared to other three companies (Infosys, TCS, Wipro). From the analysis it is found that calculated value (0.032) of TCS is less than the table value (0.05). It can be interpreted that there is a significant difference of working capital turn over ratio of Satyam. The calculated values (0.501) Infosys, (0.804) Wipro are greater than table value (0.05). It means that there is a significant difference of Satyam working capital turnover ratio with Infosys and Wipro. In the comparison of working capital turnover ratio of Infosys with TCS the calculated value (0.016) is less than the table value (0.05). From the value it can be inferred that working capital turnover ratio of Infosys has significant relationship with TCS. As the calculated value (0.368) of Wipro is greater than the table value (0.05) it can be inferred that there is no significant relationship of working capital turnover ratio of Infosys and Wipro. When the third company TCS is compared with Infosys for significant relationship of working capital turnover ratio the calculated value (0.016) is found to be less than the table value (0.05). It can be inferred that there exist significant relationship of working capital turnover ratio between TCS and Infosys.

**Table VIII**  
**Mean and Standard Deviation of TCS, Infosys Satyam and Wipro**

	Company							
	Satyam		Infosys		TCS		Wipro	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
EPS Growth	38.35	40.05	42.47	33.15	888.65	1274.35	0.86	67.68
Ope & Admin Exp to Soft. Revenue	17.23	2.76	7.53	0.73	68.19	7.06	7.09	7.90
Net Profit to Total income	22.73	2.35	34.76	1.97	23.43	1.60	18.25	8.86
Return on capital Employed	29.14	6.75	82.76	29.53	98.17	70.42	56.83	59.42
Fixed Asset Turn Over Ratio	9.15	4.18	0.24	0.03	8.40	1.46	1.07	1.48
Working Capital Turn Over Ratio	1.25	0.52	0.78	0.58	4.08	0.95	2.02	1.63

### 5.2 EPS Growth

Equity per share growth rate is another factor to determine the corporate growth. The mean value of TCS (888.65), when compared with other three selected software companies, it has got tremendous growth in EPS within a short span of period. The second position in EPS growth rate was of Infosys (42.77) and Satyam had got the third position (38.75) and the last one is Wipro EPS growth is very low (0.86) when it is compared with other three software companies.

### 5.3 Operating and Administrating Expenses to Software Revenue

Operating and administrating expenses of TCS mean value is (68.19) which is the highest. This can be interpreted that company has maintained and controlled its operating and administrating expenses. Mean value of Satyam, Infosys, Wipro are (17.25), (7.53) and (7.09) respectively.

### 5.4 Net Profit to Total Income

Infosys (34.26) net profit to total income was highest as compared to other three software companies. The mean values for TCS and Satyam net profit were found to be (23.43) and (22.73) respectively. While Wipro mean value was found to be (18.25) lowest among all the other software companies.

### 5.5 Return on Capital Employed

TCS has got highest return on capital employed, mean value is (98.17) when compared with other three software companies. Infosys rate of return is (82.86) and the third mean value is (70.42) for Wipro and Satyam got the last position in rate of return with its mean value (29.14). From these figures highest rate of return on capital employed is for TCS and the lowest one is for Satyam.

### 5.6 Fixed Asset Turnover Ratio

Satyam had a fixed asset turnover ratio (9.15) and TCS fixed asset turn over ratio (8.40) was highest compared to other three software companies. Wipro (1.07) fixed asset turn over ratio was found to be moderate. Infosys (0.24) fixed asset ratio was found to be least as compared to all other software companies.

### 5.7 Working Capital Turn over Ratio

In order to find out the mean value of selected four software companies, the mean and standard deviation is applied, to find out whether the working capital turnover efficiency of all selected companies are similar or not. The mean value

(1.25) of Satyam and Wipro (2.03) is somewhat at satisfactory level when it is compared with other three software companies. TCS has got (4.08) mean value so it is at highly satisfaction level, compared to all other three companies, Infosys mean value for working capital is very low (0.78), this indicates that there is a low efficiency of working capital management among all companies.

**VI. Correlation Results**

In order to analyze the correlation between Infosys as dependent variable, correlation coefficient was analysed. From the (Table IX) it is evident that there exists a strong correlation (-0.999) between Infosys export sales to total income and domestic sales to total income. Which makes it clear that increase in export sales to total income will decrease the domestic sales to total income.

**Table IX**  
**Correlation for Infosys**

Company		Revenue Growth Software	Total Revenue Growth	Net Profit Growth	EPS Growth
Infosys	Ex. Sales to Total Income	Pearson Correlation	1	-0.999(**)	0.122
		Sig. (2-tailed)	.	0.000	0.774
		N	8	8	8
Infosys	Dom. Sales to Total Income	Pearson Correlation	0.999(**)	1	-0.113
		Sig. (2-tailed)	0.000	.	0.790
		N	8	8	8

Note: \*\* Denote Significant at 1% level of significance

**Table X**  
**Correlation for Satyam**

Company		Net Profit to Total Income	Return on Cap. Employed	Return on Net Worth
Satyam	Net Profit to Total Income	Pearson Correlation	1	0.654
		Sig. (2-tailed)	.	0.031
		N	8	8
Satyam	Return on Capital Emp.	Pearson Correlation	0.754(*)	1
		Sig. (2-tailed)	0.031	.
		N	8	8

Note: \*\* Denote Significant at 1% level of significance

**Table XI**  
**Correlation for Satyam**

Company		Dividend	Book Value of Shares	Market Price to Book Value	Price Earning Multiple
Satyam	Dividends	Pearson Correlation	1	0.856(**)	-0.503
		Sig. (2-tailed)	.	0.007	0.204
		N	8	8	8

	Book Value of Shares	Pearson Correlation	0.856(**)	1	-0.612	-0.240
		Sig. (2-tailed)	0.007	.	0.107	0.567
		N	8	8	8	8
Infosys	Book Value of Shares	Pearson Correlation	0.991(**)	1	-0.254	-0.323
		Sig. (2-tailed)	0.000	.	0.545	0.436
		N	8	8	8	8
	Market price to Book Value	Pearson Correlation	-0.304	-0.254	1	0.941(**)
		Sig. (2-tailed)	0.464	0.545	.	0.000
		N	8	8	8	8

Note: \* Denote Significant at 5% level,

\*\* Denote Significant at 1% level of significance.

From the Table X it is clear that there exists a strong correlation (0.976) between Satyam return on capital employed and return on net worth. From the Table XI it is clear that there exists a strong correlation (0.856) between book value share and dividend of Satyam. Which makes it clear that increase in book value share leads to increase in dividend of the company. From Table XI it is clear that there exists a strong correlation(0.941) between price earning multiple and market price to book value share of Infosys

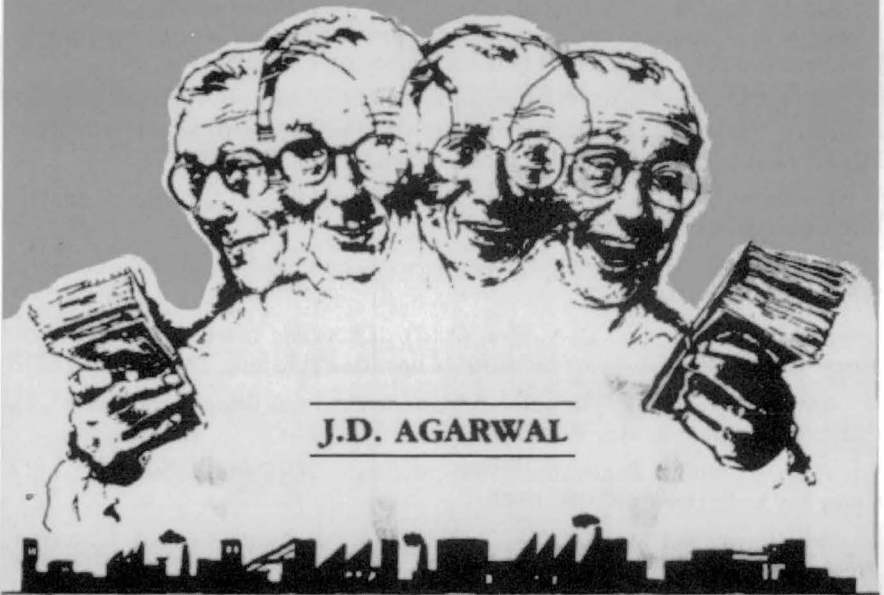
## VII. Conclusion

The global meltdown has created a negative effect on the financial performance of software companies. This study has analyzed the overall performance of the leading software companies, some of the important ratios were used to measure the financial performance of these companies. From the Anova analysis the following results were found and they were found to be relevant to the current scenario. Net profit growth, EPS growth, Fixed asset turnover, Working capital, Operating and administrative expenses were found to be highly significant between the four software companies. The second part of the study used Tamhane comparison to study the relationship between dependent variables (Net profit growth, fixed asset turnover, working capital, operating and administrative expenses) for selected four software companies. The results were found to be more informative and they were well correlated with the Anova findings. Based on the above two tests the mean and standard deviation of dependent variable of selected four software companies were interpreted to identify the positions of various ratios, the results obtained are similar to the existing scenario. Based on the above analysis the overall performance of TCS was found to be comparatively good with the other three software companies and Infosys position was found to be not satisfactory, even though they have gained a better net profits. From the above results it is proved that financial statements of Satyam computer were recently window dressed and its financial position was constant for the past years. Hence the results of the study reflect the current global economic downturn.

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