A Study on Selected Indian Software Developing Companies Based on Debtors Turnover Ratio

DR. IDRISH ALLAD
Asst. Professor of Accountancy
Smt. T. J. Patel Commerce College, Nadiad-387 001.

Abstract:

Indian Information Technology (IT) industry has played a major role in putting India on the global map. Now days, India has become the leader in IT and ITES sector in all over the world. IT-BPO sector has become one of the significant growth sectors for the Indian economy. Indian IT sector promotes the Indian economy to grow further. In addition to fuelling India's economy, this sector is also positively influencing the standard of living of its people through an active direct and indirect contribution to the various socio-economic parameters such as employment, standard of living and diversity. The main objective of this paper is to measures the efficiency with which the sundry debtors are converted into cash of selected Indian IT companies for a period of 10 years initiating from April, 2004 to March, 2014 using non-probability sampling method. To achieve such objective debtors turnover ratio is used. The result found that debtors turnover ratio of Infosys Ltd. wass showing very satisfactory result as compared to other selected Indian IT companies over the period of study. On country, Oracle Financial Services Limited was showing poor performance in terms of debtors turnover ratio. The result of ANOVA indicated that there is significant difference of debtors turnover ratio among the all selected Indian IT companies.

Keywords *IT, ITES, BPO, Ratio, Efficiency, Debtors Turnover Ratio, ANOVA*

1.Introduction of IT Industry in India

Indian Information Technology (IT) industry has played a major role in putting India on the global map. Now days, India has become the leader in IT and ITES sector in all over the world. IT-BPO sector has become one of the significant growth sectors for the Indian economy. Indian IT sector promotes the Indian economy to grow further. In addition to fuelling India's economy, this sector is also positively influencing the standard of living of its people through an active direct and indirect contribution to the various socio-economic parameters such as employment, standard of living and diversity. IT sector has played a significant role in transforming India's image from a slow moving bureaucratic economy to a place of innovative entrepreneurs and a global player in providing world class technology solutions and business services. Today IT and ITES sectors lead the economic growth in terms of employment, revenue generation, standards of living and export promotion. Indian IT sector is the major source of earning the foreign currency through software and services.

2.What is IT?

1.IT

The application of computer and telecommunication equipment to store, transmit, retrieve, and manipulate data, in context of business or an enterprise is known as IT.

2.According to the Information Technology Association of America,

"The study, design, development, application, implementation, support or management of computer-based information systems is known as IT."

3. Concept of Ratio
Ratio is the mathematical relationship between two or more quantities. It can be calculated either in the form of percentage, fraction, days or times. It is very powerful accounting tool to check the overall financial performance of an enterprise.

3.1 Concept of Debtors Turnover Ratio
1.Meaning: This ratio establishes a relationship between net credit sales with average sundry debtors.
2.Objective: The main objective of this ratio is to measures the efficiency with which the sundry debtors are converted into cash.
3.Components: There are two components of this ratio as follows.
    Net Credit Sales = Gross Credit Sales – Sales Return
    Average Debtors = (Opening Sundry Debtors + Opening Bills Receivable + Closing Sundry Debtors + Closing Bills Receivable)/2

3.2 Formula

$$\text{Debtors' Turnover Ratio} = \frac{Net\ Credit\ Sales}{Average\ Sundry\ Debtors}$$

3.3 Interpretation
It shows how many times sundry debtors are turned over during the year. It also reflects both the quality of debtors and the credit collection efforts of the company. In general, a high ratio indicates the shorter collection period which implies prompt payments by debtors and a low ratio indicates a longer collection period which implies delayed payments by debtors.

4. Review Literature
4.1 Dossani R. (2005)[1]
The main objective of this paper was to explain the origins, growth and sustainability of Indian software industry. The paper also discussed about the effect of rigid and hostile government policies in domestic and international market. The paper had also thrown light on the conditions in which transnational entry was made.

4.2 Ahmed A. (2012)[2]
The main objective of this research paper was to check an overall financial performance of the Square Pharmaceuticals Limited and compare it with the industry in Bangladesh. 11 ratios were selected to check the overall performance of the company. From the analysis, it was found that Square Pharmaceutical Limited performed very well in all the aspects as compared to an industry, except its liquid position. It was recommended that the company should improve its liquid position slightly to make it equal to the industry.

4.3 Dharmaraj A. & Kathirvel N. (2013)[3]
The study was conducted to analyze the financial performance selected Indian automobile industry and to give suggestions for the improvement of the profitability of the automobile companies for the period starting from 1998-99 to 2011-12. The sample size was 15 Indian automobile companies. The same study was conducted to analyze profitability, liquidity and solvency of the selected Indian automobile companies.

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[1] Dossani R. (2005), "Origins and Growth of Software Industry in India", Asia Pacific Research Center, pp. 1-33.
[2] Ahmed A. (2012), "Financial Ratio Analysis of Square Pharmaceuticals Limited", The Institute of Chartered Accountant of Bangladesh, pp. 1-24.
[3] Dharmaraj A. & Kathirvel N. (2013), "Financial Performance of Indian Automobile Industry – A Comparative Study during Pre and Post Foreign Direct Investment", International Journal of Scientific Research, 2(9), pp. 54-56.

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4.4 Devi K. K. & Maheswari C. V. (2015)[4]

They published research paper on A Study on Comparative Analysis on Financial Performance of Cipla Ltd. & Aurobindo Pharma Ltd. The present study was conducted to measure the financial performance of the top two pharmaceutical companies like Cipla Ltd. and Aurobindo Pharma Ltd. for the period of 5 years from 2009-2010 to 2013-2014. The technique of ratio analysis was applied to check the financial performance of both the companies. From the analysis it was ascertained that the overall financial performance of Cipla Ltd. was found to be better as compared to Aurobindo Phrama Ltd.

4.5 Selvekumal K. & Panneerselvam S. (2014)[5]

The aim of this study was to analyze the financial performance of software companies with reference to India. The study also analyzed the overall performance of 3 leading software companies in India like TCS, Infosys and Wipro Limited from 2005-06 to 2012-13 for a period of 8 years. From the analysis, it was ascertained that the overall performance of TCS was found to be comparatively good with the other two software companies. The position of Infosys Limited was found to be somewhat satisfactory, even though they had gained a good net profit.

5. Research Methodology

5.1 Statement of the Problem

Debtors turnover ratio shows how many times sundry debtors are turned over during the year. It also reflects both the quality of debtors and the credit collection efforts of the company. In general, a high ratio indicates the shorter collection period which implies prompt payments by debtors and a low ratio indicates a longer collection period which implies delayed payments by debtors. The main objective of this ratio is to measures the efficiency with which the sundry debtors are converted into cash. The paper will attempt to analysis management efficiency of selected Indian major IT companies in terms of debtors turnover ratio.

5.2 Scope of the Study

The main objective of this ratio is to measures the efficiency with which the sundry debtors are converted into cash of selected Indian IT companies for a period of 10 years initiating from April, 2004 to March, 2014. Hence, the present study is pertaining to IT sector.

5.3 Hypothesis

H_O: Debtors Turnover ratios do not differ significantly among the selected Indian IT   companies.
H_1: Debtors Turnover ratios differ significantly among the selected Indian IT companies.

5.4 Sample Design

Sample Unit: IT companies
Sample Size: Top 10 Indian IT companies
Sampling Method:Judgmental Sampling (Non-Probability Sampling) Method.

5.5 List of the selected Indian IT companies

In the present study, the selection of the Indian IT companies will be made on the basis of Turnover. The list of 10 Indian IT companies as follows.

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[4] Devi. K.K. & Maheshwari C. V. (2015), "A Study on Financial Performance of Cipla Ltd. & Aurobindo Pharma Ltd.-A Comparative Analysis", Journal of Progressive Research in Social sciences, 2(1), pp. 36-39.
[5] Selvekumal K. & Panneerselvam S. (2014), ""A Study on Strategic Financial Performance in Software Industry", International Journal of Financial Management 3(2), pp. 7-13.

1.TCS Limited
2.Infosys Limited
3.Wipro Limited
4.HCL Technologies Limited
5.Tech Mahindra Limited

6.Oracle Financial Services Limited
7.Mindtree Limited
8.Polaris Limited
9.Cyient Limited
10.Hexaware Limited
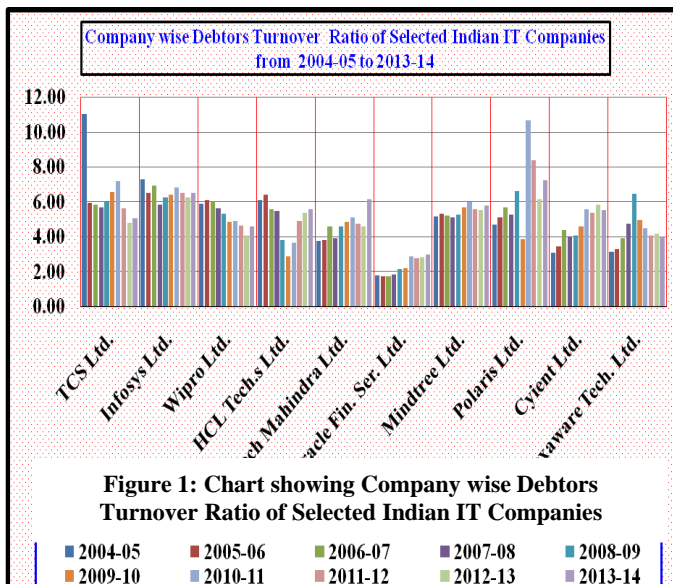
4.6 Sources of Data

This research paper will be based on Secondary Data available from the annual reports of the companies, websites, journals, etc. Before using Secondary Data the researcher will check Reliability, Suitability and Adequacy of data.

Table 1: Debtors Turnover Ratio of Selected Indian IT Companies [Amount in Times]

Years	TCS Ltd.	Infosys Ltd.	Wipro Ltd.	HCL Tech. Ltd.	Tech Mahindra Ltd.	Oracle Fin. Ser. Ltd.	Mindtree Ltd.	Polaris Ltd.	Cyient Ltd.	Hexaware Tech. Ltd.	Average
2004-05	11.00	7.28	5.86	6.09	3.74	1.77	5.12	4.70	3.07	3.13	5.18
2005-06	5.93	6.52	6.06	6.37	3.80	1.69	5.29	5.11	3.44	3.25	4.75
2006-07	5.83	6.90	6.01	5.55	4.57	1.74	5.20	5.64	4.37	3.92	4.97
2007-08	5.66	5.81	5.62	5.45	3.90	1.84	5.07	5.27	4.02	4.73	4.74
2008-09	6.00	6.25	5.32	3.79	4.56	2.13	5.23	6.62	4.04	6.43	5.04
2009-10	6.54	6.37	4.84	2.84	4.85	2.19	5.65	3.87	4.60	4.92	4.67
2010-11	7.19	6.81	4.87	3.63	5.07	2.88	5.99	10.67	5.56	4.46	5.71
2011-12	5.59	6.50	4.61	4.88	4.75	2.73	5.55	8.34	5.34	4.07	5.24
2012-13	4.77	6.25	4.04	5.32	4.59	2.78	5.50	6.15	5.82	4.16	4.94
2013-14	5.04	6.47	4.55	5.56	6.15	2.97	5.77	7.24	5.48	3.99	5.32
Average	6.35	6.52	5.18	4.95	4.60	2.27	5.44	6.36	4.57	4.31	5.05
S.D.	1.77	0.40	0.70	1.15	0.71	0.52	0.30	1.99	0.95	0.94	0.32

(Source: Computed from the Published Annual Financial Reports of the Companies from 2004-05 to 2014-15)

4.7 Tools of Analysis

1.Accounting Tool (Ratio Analysis): Debtors turnover ratio is used for present study.
2.Statistical Tools

4.8 Mean: It is used to know the average position of selected Indian IT companies.
ANOVA: One-way ANNOVA will be used for testing hypothesis

Figure 1: Chart showing Company wise Debtors Turnover Ratio of Selected Indian IT Companies

(Source: Computed from the Published Annual Financial Reports of the selected IT

5. Company wise Analysis and Interpretation of Debtors Turnover Ratio

5.1 TCS Limited

From the above Table 1, it is analyzed that debtors turnover ratio of TCS Ltd. was 11 times in 2004-05 that was the highest ratio during the study period and it presented shortest collection period of the company. However, a gradual fall was observed in succeeding three years i.e. 2005-06, 2006-07 and 2007-08, when it was 5.93 times, 5.83 times and 5.66 times respectively. Fortunately, for succeeding three years i.e. 2008-09, 2009-10 and 2010-11, it continuously increased to 6 times, 6.54 times and 7.19 times respectively. But during 2011-12 and 2012-13, it moved down to 5.59 times and 4.77 (lowest) times respectively. Finally, it stood at 5.04 times during 2013.14. The average of this ratio was 6.35 times which indicates that ratios of only certain three years were above the average whereas ratios of rest seven years were below the average. The analysis also was indicating fluctuating trend of debtors turnover ratio of TCS Ltd. during the study period.

5.2 Infosys Limited

Above Table 1 shows that debtors turnover ratio of Infosys Ltd. was 7.28 times during 2004-05 that was the highest ratio during the study period. It moved down to 6.52 times during 2005-06. During

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2006-07, it slightly improved to 6.90 times. However during 2007-08, it again moved down to 5.81 times and that was the lowest ratio during the study period. Fortunately during succeeding three years (from 2008-09 to 2010-11), it gradually moved up to 6.25 times, 6.37 times and 6.81 times respectively. During succeeding two years (2011-12 and 2012-13), it slowly moved down to 6.50 times and 6.25 times respectively. Finally, it stood at 6.27 times in 2013-14. This ratio was showing consistent and better trend during the study period. The average of this ratio was 6.52 times which indicates that ratios of only specific three years were above the average and ratios of remaining six years were below the average. Ratio of one year (2005-06) was as much as an average ratio.

5.3 Wipro Limited
Above Table 1 reveals that debtors turnover ratio of Wipro Ltd. was 5.86 times during 2004-05 which increased to 6.06 times during 2005-06. It slightly moved down to 6.01 times during 2006-07. During 2007-08, 2008-09 and 2009-10, the same ratio was gradually moved down to 5.62 times, 5.32 times and 4.84 times respectively. During 2010-11, it slightly improved to 4.87 times as compared to last year. However for succeeding two years i.e. 2011-12 and 2012-13, it reduced to 4.61 times and 4.04 times respectively. Finally, it stood to 4.55 times in 2013-14. The highest ratio during the study period was reported as 6.06 times in 2005-06 and the lowest ratio was reported as 4.04 times in 2012-13. Generally, debtors turnover ratio of Wipro Ltd. was showing decreasing trend during the study period that indicates poor and weak collection policy of the company. The average of this ratio was 5.18 times which states that for first five years, it was above the average and for rest five years, it was below the average ratio.

5.4 HCL Technologies Limited
Above Table 1 states that debtors turnover ratio of HCL Technologies Ltd. was 6.09 times during 2004-05 that grown to 6.37 times during 2005-06 and fortunately it was the highest ratio during the study period. It continuously fell down to 5.55 times, 5.45 times, 3.79 times and 2.84 times (lowest) respectively from 2006-07 to 2009-10. During last four years (from 2010-11 to 2013-14), it gradually improved to 3.63 times, 4.88 times, 5.32 times and 5.56 times respectively. This ratio was showing fluctuating trend during the study period. The average of this ratio was 4.95 times which suggests that for specific six years, it was above the average and for remaining four years, it was below the average ratio.

5.5 Tech Mahindra Limited
From the above Table 1, it is observed that debtors turnover ratio of Tech Mahindra Ltd. had shown improving trend during the study period. It was 3.74 times in 2004-05 and unfortunately that was the lowest ratio during the study period. Fortunately during 2005-06 and 2006-07, it improved to 3.80 times and 4.57 times respectively. However during 2007-08, it declined to 3.90 times. Surprisingly during succeeding three years (2008-09, 2009-10 and 2010-11), the same ratio was gradually moved up to 4.56 times, 4.85 times and 5.07 times respectively. However during 2011-12 and 2012-13, it moved down to 4.75 times and 4.59 times respectively. Finally, it stood at 6.15 times (highest). The average of this ratio was 4.60 times which tells that for specific four years, it was above the average and for remaining six years, it was below the average ratio.

5.6 Oracle Financial Services Limited
Above Table 1 indicates that debtors turnover ratio of Oracle Financial Services Ltd. was very poor over the study period. It was 1.77 times during 2004-05 that marginally decreased to 1.69 times during 2005-06 and that was the lowest ratio during the study period. A gradual rise was observed from 2006-07 to 2009-10, when it was 74 times, 1.84 times, 2.13 times, 2.19 times and 2.88 times respectively. However during 2011-12, it slightly moved down to 2.73 times. During 2012-13 and 2013-14, it again raised to 2.78 times and 2.97 times (highest) respectively. The average of this ratio was 2.27 times which indicates that for first six years, it was below the average and for subsequent four years, it was above the average ratio.

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5.7 Mindtree Limited

From the above Table 1, it is ascertained that debtors turnover ratio of Mindtree Ltd. was 5.12 times in 2004-05 which increased to 5.29 times during 2005-06. However during 2006-07 and 2007-08, it moved down to 5.20 times and 5.07 times respectively. Fortunately, it went up to 5.23 times, 5.65 times and 5.99 times respectively from 2008-09 to 2010-11. During 2011-12 and 2012-13, it went down to 5.55 times and 5.50 times respectively. Finally, it stood at 5.77 times in2013-14. During the study period, the highest ratio was 5.99 times in 2010-11, whereas the lowest ratio was 5.07 times during 2007-08. The average of this ratio was 5.44 times which suggests that for first five years, it was below the average and for subsequent five years, it was above the average ratio. During study period the same ratio was showing increasing trend of Mindtree Ltd.

5.8 Polaris Limited

Above Table 1 indicates fluctuating trend of debtors turnover ratio of Polaris Ltd. during the study period. In 2004-05, it was 4.70 times that increased to 5.11 times and 5.64 times respectively in 2005-06 and 2006-07. However during 2007-08, it decreased to 5.27 times but in 2008-09, it again increased to 6.62 times. Unfortunately, during 2009-10, the same ratio was rapidly moved down to 3.87 times and that was the lowest ratio during the study period. On contrary, it quickly moved up to 10.67 times in 2010-11 and that was the highest ratio during the study period. For succeeding two years (2011-12 and 2012-13), it moved down to 8.34 times and 6.15 times respectively. Finally, it improved to 7.24 times in 2013-14. The average of this ratio was 6.36 times which suggests that for certain four years, it was above the average and for rest six years, it was below the average ratio.

5.9 Cyient Limited

From the above Table 1, it is determined that debtors turnover ratio of Cyient Ltd. was 3.07 times during 2004-05 that was the lowest ratio during the study period. It moved up to 3.44 times and 4.37 times respectively during 2005-06 and 2006-07. However, it fell down to 4.02 times in 2007-08. Surprisingly from 2008-09 to 2010-11, the same ratio was gradually improved to 4.04 times, 4.60 times and 5.56 times respectively. However during 2011-12, it reduced to 5.34 times. Fortunately, it jumped up to 5.82 times during 2012-13 and that was the highest ratio during the study period. Finally, it reached to 5.48 times in 2013-14. This ratio was also indicating increasing trend during the study period. The average of this ratio was 4.57 times which shows that for first five years, it was below the average and for subsequent five years, it was above the average ratio.

5.10 Hexaware Technologies Limited

Above Table 1 represents that debtors turnover ratio of Hexaware Technologies Ltd. was 3.13 times in 2004-05 that was the lowest ratio during study period. For succeeding four years (from 2005-06 to 2008-09), it gradually moved up to 3.25 times, 3.92 times, 4.73 times and 6.43 (highest) times respectively. However from 2009-10 to 2011-12, it moved down to 4.92 times, 4.46 times and 4.07 times respectively. During 2012-13, it again increased to 4.16 times and finally, it stood at 3.99 times in 2013-14. The average of this ratio was 4.31 times that indicates that for specific four years, it was above the average and for remaining six years, it was below the average ratio.

6. Testing Hypothesis

H$_O$: Debtors Turnover ratios do not differ significantly among the selected Indian IT companies.
H$_1$: Debtors Turnover ratios differ significantly among the selected Indian IT companies.

Table 2: One Way ANOVA of Debtors Turnover Ratio among the selected Indian IT Companies

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	144.4047	9	16.0450	13.6757	0.0000	1.9856
Within Groups	105.5918	90	1.1732			
Total	**249.9966**	**99**				

Research Based Computed by Excel Data Analysis

7. Conclusion

$F_{cal} = 13.6757$ and $F_{crit} = 1.9856$. Thus $F_{cal} > F_{crit}$ and at the same time p value of selected IT companies is 0.0000 which is less than 0.05. So, null hypothesis is rejected at 95% level of significance. Hence, we conclude that debtors turnover ratios differ significantly among the selected Indian IT companies.

8. Findings

Debtors' turnover ratio showed fluctuating trend of selected Indian IT companies during the study period. It varied between 1.69 times in the year 2005-06 of Oracle Financial Services Ltd. and 11 times in the year 2004-05 of TCS Ltd. The highest average was registered as 6.52 times of Infosys Ltd; whereas the lowest average was registered as 2.27 times of Oracle Financial Services Ltd. The industry average was 5.05 times. From the analysis, it is found that average of TCS, Infosys, Wipro, Mindtree and Polaris Ltd. was above the industry average which implies that the receivables are more liquid and are being collected promptly. On contrary, the average of HCL Technologies, Tech Mahindra, Oracle Financial Services, Cyient and Hexaware Technologies Ltd. was below the industry average which implies that the receivables are less liquid and being collected slowly. The study also found that Mindtree Ltd. was most consistent in terms of debtors' turnover ratio, whereas, Polaris Ltd. was most inconsistent in terms of debtors' turnover ratio.

9. Suggestions

Debtors turnover ratio of Oracle Financial Services Ltd. is very poor which indicates that the collection policy of this company is very slow as compared to other selected Indian IT companies during the study period. So, it is suggested that the company should try to improve its collection policy and collect due amount on credit sales as early as possible.

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