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AN ANALYSIS OF THE EFFECTS OF GLOBAL RECESSION, 2008 AND THE COMPANIES ACT, 2013 ON THE FINANCIAL PERFORMANCE OF INDIAN POWER SECTOR

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Abstract

The power sector in India is being updated day to day to make the country a super power. Since independence, the GoI along with state governments and other regulatory bodies have been working hard to supply quality electricity at reasonable prices. Recent changes in the business environment of the country may affect the industry seriously. Global recession sourced from the USA in 2008 resulted in sudden fall in the share market, retrenchment of employees mainly in service industries, cut down in production of goods, minimizing salary etc. in India. Just after the recession the demand of electricity got down which might have a serious impact on the financial performance of electricity sector of India. The Companies Act, 2013 is provided with few new features and moderation in few existing features. These features have affected almost all the companies in India. It might also have an impact on the financial performance of the companies operating in Indian power sector. In this study the data of 14 selected companies for the period 2002-03 to 2016-17 were analysed in respect of profitability, efficiency in assets management and liquidity. Changes in aforesaid parameters over the study period were measured using Wlcoxon Signed-Ranks test.

Keywords:

Global recession, 2008;

Companies Act, 2013;

Indian power sector;

Financial performance;

Wilcoxon signed-ranks test.

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1. Introduction

Since independence the power sector in India has been supporting the economy by supplying energy for its continuous growth. In 1947 the country had a capacity of generating only 1362 MW of electricity. During that time the country was going through such a socio-economic condition that the use of electricity was assumed as a luxury. The Electricity (Supply) Act, 1948, was promulgated by the Central Government to develop the electricity industry in India in a systematic way. The Act led to the creation of the State Electricity Boards (SEBs) that were responsible for all new generation, transmission, and distribution. The industrial Policy Resolution, 1956 also reserved the right of generation with the public sector. A few private companies, such as, Tata Power and Reliance Infra., were involved in generation and distribution of electricity since pre-independence period. Till 1980 the performance of SEBs were satisfied but these started to incur huge losses when the Govts. decided to deliver electricity at subsidized price. The financial crisis of SEBs resulted into poor quality of service.

With the passage of time enough development in the process of generation and distribution resulted into the optimization of the cost of the service. There was an increasing demand as the people started to learn its economic uses. The continuous growth of industrialization and increasing rate of domestic consumption pushed the demand up.

During 1975 the industry got huge investments from the Govt. of India. The incorporation of NTPC Ltd. (formerly known as National Thermal Power Corporation Ltd.) and National Hydro Power Corporation Ltd. brought a significant change in the market. The CPSEs were later awarded as Maharatan company and Miniratna Company respectively. The former one is able to generate more than 25 per cent of the total electricity produced in India. During 1989 the Government took another big step by incorporating the Power Grid Corporation of India, which later earned the capacity to transmit more than 50 per cent of electricity generated in India and was crowned as a Navaratna company. During 1990 the country reached the production capacity of about 75000 MW of electricity.

The new industrial policy, 1991 liberalised the Electricity industry too. This allowed private companies to participate in power generation and also permitted foreign companies to build up

power projects in India. Adani Group, Reliance, Suzlon, Lanco Infratech, CLP Power, etc. got the ticket to enter the industry.

The promulgations of Energy Conversation Act, 2001 and Electricity Act, 2003 were significant steps of the Govt. to optimize the consumption of electricity and bring regulations respectively. Presently India is having an installed capacity of more than 3.5 lakh MW of electricity.

The study considers there are few impacts of the recession of 2008 and Companies Act, 2013 on the financial performance of the selected companies. That is why the 15 years' data have been categorised into three periods- i) the first period:- pre recession period (from 2002-03 to2006-07), ii) the second period:- post recession period (from 2007-08 to 2011-12), iii) the third period:- post implementation of Companies Act, 2013 period (from 2012-13 to 2016-17).

Global recession sourced from the United States of America engulfed the world economy during 2008. It had a varying degree of impact on different economies. India, being a part of the world could not escape this situation. Sudden fall in the share market, retrenchment of employees mainly in service industries, cut down in production of goods, minimizing salary etc. were few of the impacts that were faced by Indian economy. The Govt. of India along with other regulatory bodies took several measures to reinforce the economy gradually. Just after the recession the demand of electricity got down which might had a serious impact on the financial performance of electricity sector of India.

The Companies Act, 2013 is provided with few new features and moderation in few existing features, such as, one person company, corporate social responsibility, class action suits for shareholders, more power for shareholders, women empowerment in corporate sector, national company law tribunal, fast track mergers, cross border mergers, Indian resident directors, rotation of auditors etc. These features have affected almost all the companies in India. It might also have an impact on the financial performance of the companies operating in Indian power sector.

2. Review of related literature

Before stepping into the empirical study, a quick look through the existing literature on the issue connected with the study seems desirable. The following few paragraphs provide a brief

explanation of some significant studies carried out during the last decade on this issue and the last paragraph deals with the identification of the research gaps.

Rathod (2011), after comparing the financial performance of Karnataka Power Corporation Ltd. (KPCL) with that of NTPC Ltd., Tata Power, Reliance Energy, NHPC Ltd. and APGENCO Ltd. found a comparatively poor performance of KPCL and suggested the company to implement modern management tools for better financial performance.

Pandey and Choubey (2011) appraised the financial strength of NTPC Ltd. A number of financial ratios were used for trend analysis in the study. The researchers found sufficient profitability of the selected company during the study period.

Leepsa (2012) analysed the post merger financial performance of six selected companies in Indian power sector and concluded that the mergers in this sector were done by the companies to survive in the highly regulated environment.

Nandal (2012) made an attempt to compare the financial health of NTPC Ltd. with that of Tata Power Co. Ltd. Financial measures, such as return on capital employed, earning per share, dividend per share, debt-equity ratio, return on net worth etc. were analysed in the study. A better performance of Tata Power compared to NTPC Ltd. was found for the period under study.

Sharma (2013) measured the financial performance of Indian power sector by analyzing the profitability, liquidity and management efficiency ratios of Petronet Lng. Ltd. The study found a satisfactory financial performance of the company during the study period.

Gupta and Gupta (2014) analysed the financial performance of Power Grid Corporation of India Ltd. The researchers examined current asset turnover ratio, working capital turnover ratio, fixed assets turnover ratio and total assets turnover ratio. The study found that the liquidity position of the selected Navaratna company was at alarming level.

Maji and Sur (2014) compared the value generating capability of NTPC Ltd. in the pre-liberalisation period with that in the post-liberalisation period. The study was also meant to

examine the relationship between the value generating capability and its determinants. Assessment of the joint effect of the determinants on the value generating capability was also done in the study. A considerable improvement in value generating capability of the company was found during the post-liberalisation period. Only fixed assets management and inventory management had a significant impact on the value generating ability of the firm.

Parikh and Dave (2014) made a study to know the liquidity, profitability and solvency positions of Indian power sector. Data for the period 2005-06 to 2011-12 were collected for nine companies in Indian power sector. These are Torrent Power, NTPC Ltd., Adani Power, Power Grid Corporation, Tata Power, NHPC Ltd., JSW Energy, Gujrat Industries Power Companies and CESC Ltd. Current ratio, fixed assets turnover ratio, inventory turnover ratio, debtors turnover ratio, interest coverage ratio, return on net worth and long term debt-equity ratio were evaluated in the study. Mean values of all these ratios with Std. deviation were calculated for each company. One-way ANOVA was also employed in the study, which concluded that only in the case of inventory turnover ratio there was no significant mean difference among the companies under study.

Vyas (2015) selected five companies of Indian power sector, namely, NTPC Ltd., NHPC Ltd., Tata Power, Torrent Power and Adani Power, to analyse financial performance. Data for the period of 2009-10 to 2012-13 were collected from annual reports of the selected companies. Net profit ratio, return on net worth, return on long-term fund, gross profit ratio, return on capital employed, current ratio, quick ratio, long-term debt-equity ratio, debtors turnover ratio, inventory turnover ratio, earning per share and equity dividend were used for the analysis of the study. ANOVA was applied in the study which concluded that financial performance of NTPC Ltd. was better compared to other companies selected for the study.

Narayanan and Hamsalaxmi (2015) studied the financial leverage and operating leverage of power sector companies in India. Tata Power and Reliance Power were selected among the private companies along with NTPC Ltd., Power Grid Corporation of India Ltd. and NHPC Ltd among the CPSEs in Indian power sector. Data for the period of 2009-10 to 2013-14 were collected from annual reports of the selected companies. The researchers prepared Pearson's

correlation matrix individually for each company to find out the relationship among earning before interest and tax, interest, profit before tax, operating cost and sales. One-way ANOVA was also applied which found that the financial leverage ratio of the selected companies were not significantly different from each other.

Dilli et al. (2016) examined the impact of working capital on profitability of Andhra Pradesh Transmission Corporation Ltd. Data for the period from 2004-05 to 2013-14 were collected form annual reports of the selected company. The researcher applied correlation analysis and found there was a positive relationship between the debtors' turnover ratio and return on investment. But return on investment was negatively correlated with current ratio, liquid ratio, cash turnover ratio, and inventory turnover ratio.

Choudhury et al (2016) analysed the impact of 2007-08 recession on profitability performance of Power Grid Corporation of India Ltd. The researchers considered the data for the period of 2002-03 to 2013-14 and demarcated it into two as pre-recession period and post-recession period. Du-pont analysis was applied in the study. It was concluded that the average net profit ratio of the company was around 30% which was highly satisfactory for that company. There was an increasing trend in the return on share holders' equity. The company was capital intensive one as the inventory turnover ratio was not optimum. There was no impact of 2007-08 recession on the profitability of the selected company.

Patidar and Movalia (2016) in a study attempted to forecast the financial health of Indian power sector after analyzing the financial performance. NTPC Ltd. and NHPC Ltd. were selected for the study. Data for the period of 2010-11 to 2014-15 were collected from the annual report of the selected companies. Edward I Altman's Z-score model, also known as multiple discriminate analysis was applied with specific weights for working capital to total assets ratio, retained earnings to total assets ratio, earning before interest and taxes to total assets ratio and sales to total assets ratio. The conclusion of the study showed that NTPC Ltd. was in a financially healthy zone during the period under study.

Singh and Sur (2016) analysed the financial performance of NTPC Ltd. on the basis of technical efficiency score (TES) to compare with other Maharatna CPSEs. TES as non-parametric

approach based Data Envelopment Analysis was employed in this study. Data for the period of 2001-02 to 2013-14 were collected from secondary sources. Return on capital employed was used as a proxy of profitability and fixed assets turnover ratio, inventory turnover ratio, debtors turnover ratio and cash turnover ratio were selected to assess the efficiency of the firms. A wide variation across the selected companies in the level of TES was found in the study. The composite score based on the average profitability and its consistency aspects revealed that the performance of NTPC Ltd. could occupy the second last position among the selected Maharatna CPSEs.

Khan (2017) evaluated the impact of liquidity, solvency and management efficiency on the profitability of NTPC Ltd. Data for the period of 2006-07 to 2015-16 were collected from annual reports of the company. Various financial ratios like ROCE, ROA, ROE, CR, DER, ITR etc. were used in this study. the researcher applied multiple regression technique and found that the deteriorating current ratio and inventory turnover ratio had a positive significant impact on the declining profitability ratios of the company for the period under study. The researcher suggested that the company should maintain an optimum level of current ratio and inventory turnover ratio to optimise the profitability performance.

Rashid and Manivanan (2017) made an attempt to analyse the liquidity and profitability of NTPC Ltd. in a research study. The researcher collected the data for the period of 2011-12 to 2015-16 from published annual reports of the company. Liquidity ratios like current ratio, quick ratio and cash position ratio, and profitability ratios like gross profit ratio, net profit ratio, net operating profit ratio, return on investment ratio and return on capital employed ratio were analysed in the study. The researchers found that the company had deteriorating situation in liquidity position but the profitability of the company was satisfactory. (LR-54)

Mishra and Shukla (2017) attempted to evaluate the impact of liquidity, solvency and management efficiency on profitability of NTPC Ltd. Data for the period of 2010-11 to 2015-16 were used in this study. The researchers applied multiple regression technique and found that there was no significant impact of current ratio and inventory turnover ratio on the profitability of NTPC Ltd.

Angappapllai and Kandasamy (2017) concentrated mainly on the cost of production and subsidized price of electricity to analyse the financial performance of power sector in Tamil Nadu, India. Data for the period of 1986-87 to 2013-14 of Tamil Nadu Electricity Board were used in this study. The study period was segregated into two parts, from 1986-87 to 1997-98 and from 1998-1999 to 2013-14, to make a comparative analysis. The researchers applied simple mathematical and statistical tools and found that in the first half of the study period the company had a reasonable level of average profitability but during the second half the company had huge loss on an average.

Narang (2018), in a study, attempted to compare the financial performance of NTPC Ltd. during the pre-disinvestment with that during post-disinvestment period. Data for the period of 1997-98 to 2010-11 were used. The period from 1997-98 to2002-03 was considered as pre-disinvestment period and the period from 2003-04 to 2010-11 was taken as post-disinvestment period. Operating profit margin, net profit margin, return on total assets, return on capital employed and return on net worth were used t represent profitability and total assets turnover ratio, fixed assets turnover ratio, current assets turnover ratio and inventory turnover ratio were selected to represent management efficiency. Operating cost ratio, non-operating cost ratio, net sales per employee and net profit per employee were also analysed in this study. The researcher found that during the post disinvestment period the company performed better in terms of profitability.

Saha (2018) made a comparative analysis of financial performance of selected units in Indian power sector. The researcher collected data of NTPC Ltd., NHPC Ltd., Tata Power and Reliance Infra for the period of 2001-02 to 2015-16 from Capitaline database of Capital Market Publishers (I) Ltd. Current ratio and acid test ratio were used to measure the liquidity; return on capital employed and return on owners' equity were used to assess the profitability, and working capital ratio and fixed assets turnover ratio were used to measure the efficiency in assets management of the selected companies. Statistical techniques, such as, one-way ANOVA and statistical tests like F test, test of homogeneity of variances, Welch's and Brown-Forsythe's robust test of equality of means etc. were applied in appropriate places of the study. The researcher found that all the ratios selected for the study were significantly different for the companies under study and in most of the cases NTPC Ltd. performed best during the study period.

Mushahid (2018) emphasised on the impact of liquidity, solvency and profitability ratios on sales of NTPC td. Data for the period of 2011-12 o 2015-16 collected from annual reports of the company were used in the present study. Current ratio, quick ratio, debt-equity ratio, proprietary ratio, interest coverage ratio, gross profit ratio and net profit ratio were analysed in the study. The researcher applied pearson's simple correlation analysis and simple regression analysyis to find individual impact of the side ratios on sales of the company. No significant relationship was found.

From the above discussion it is revealed that a number of studies were conducted in the recent past to anlyse the financial performance of Indian power sector. However, the outcomes derived from these studies were contradictory in nature, which were unable to provide a concrete conclusion. Further, no such study had considered all the facets of financial performance simultaneously. None of the studies have considered the effect of global ression of 2008 and the new Companies Act, 2013. To bridge this gap the present study was made in which all the major dimensions of financial performance of Indian power sector were taken into consideration and the data were catagorised to look for the effect of the global recession and the New Companies Act in the study.

3. Objectives of the study:

The present study analysed the financial performance of selected companies in Indian power sector for the period 2003-04 to 2016-17. More specifically the objectives are:

1. To measure the financial performance of the selected companies considering the major dimensions of financial performance, such as profitability, efficiency in assets management and liquidity.
2. To compare the financial performance of the selected companies among the first, second and third periods.

4. Methodology of the study:

Fourteen companies operating in Indian power sector were selected for the study. In the beginning companies (total 40 Companies) of which shares are registered in Bombay Stock Exchange were taken into consideration. Later sorting was made depending on the availability of data. Name of selected companies for the study is shown in Appendix-1. Data for the study were collected from the secondary source, i.e. from Capitaline Corporate Database of Capital Market India Pvt. Ltd. Three major dimensions of financial performance, such as profitability, efficiency in assets management, and liquidity were taken into consideration. Return on assets (ROA), return on capital employed (ROCE), return on net worth (RONW), operating profit margin (OPM) and net profit margin (NPM) were used to assess the profitability; total assets turnover ratio (TATR), fixed assets turnover ratio (FATR), inventory turnover ratio (ITR) and debtors turnover ratio (DTR) were used to measure the efficiency in assets management; whereas liquidity was analyzed using current ratio (CR) and acid test ratio (ATR).

A test of normality was run to know the applicability of paired "t" test in the study. Appendix-1 shows the result of the test of normality. It was found that data related to most of the ratios catagorised in respect of time period were not normal. It led to use of non-parametric test to substitute the paired "t" test. Wilcoxon Signed Ranks test was applied in the study to compare the mean values.

5. Results and Analysis

Profitability of the selected companies was measured in terms of ROA, ROCE, RONW, OPM and NPM. Table-1 shows that all the measures of profitability for all the three periods were satisfactory. During the first period the average values of the aforesaid parameters were 31.33, 30.88, 52.16, 59.63 and 22.40 respectively; during the second period the values were 27.39, 29.02, 47.13, 60.92 and 24.19 respectively and during the third period the values were 20.18, 21.66, 41.40, 60.86 and 16.99 respectively.

In the above paragraph it is clear that among the average values of profitability ratios, ROA, ROCE and RONW decreased over the total study period but OPM and NPM increased in the second period and decreased in the third period.

Efficiency in assets management was measured by TATR, FATR, ITR and DTR. In Table-1 it is found that the mean values of these parameters during the first period were 0.46, 0.61, 16.07 and 5.81 respectively; in the second period the mean values were 0.39, 0.54, 21.93 and 6.13 respectively, whereas in the third period the values were 0.29, 0.36, 20.32 and 5.36 respectively. The above paragraph clarifies that TATR and FATR decreased over the study period, whereas ITR and DTR increased in the second period but decreased later in the third period.

Liquidity of the selected companies was measured in terms of CR and ATR. Table-1 shows that the values of these parameters in the first period were 14.70 and 2.81 respectively; in the second period were 26.34 and 3.53 respectively and in the third period the values were 24.86 and 3.18 respectively. It means that both the ratios CR and ATR increased initially in the second but later it decreased in the third period.

In Table-2, the results of Wilcoxon Signed-Ranks test are shown. In respect of profitability the test found that the mean values of all the ratios for the second period were not different from the first period. In case of the third period it was found that RONW and OPM did not changed over the second period but other ratios, such as, ROA, ROCE and NPM changed significantly. It means that the global recession of 2008 did not affect the profitability of the selected companies in Indian power sector but after the promulgation of new Companies Act, 2013 the vales of average ROA, ROCE and NPM deceased significantly.

In respect of efficiency in assets management it was found that only TATR and ITR changed significantly in the second period over the first period but in the third period only TATR and FATR changed over the second period. It means that after recession TATR of the selected companies decreased significantly but ITR increased significantly and after the implementation of new Companies Act TATR and FATR decreased significantly. Changes in all other ratios over the study period were statistically insignificant.

Among the liquidity ratios the CR changed significantly during the second period over first period and also in the third period over the second period. It reflects that after the recession the CR increased significantly but after the promulgation of new Companies Act it decreased significantly.

6. Conclusion

The study found that-

i) the performance of the selected companies in respect of probitability was highly satisfactory.

ii) the assets of the selected companies were used efficiently during the study period to optimize the turnover.

iii) the average liquidity position of the selected companies was more than enough, which resulted into inefficient use of working capital.

iv) the global recession did not affect the profitability ratios of the selected companies but ROA, ROCE and NPM decreased significantly after the Companies Act, 2013 was implemented.

v) TATR of the selected companies decreased significantly after the 2008 global recession.

vi) the overall liquidity of the selected companies increased significantly after the recession.

References

- Angappapllai, A., & Kandasamy, P. (2017). AN ANALYSIS OF FINANCIAL PERFORMANCE OF POWER SECTOR IN TAMILNADU. *International Journal of Management Research & Review, Volume 7/Issue 7/Article No-4* , 781-792.
- Chaudhary, K., Gupta, S., Sethi, P. K., & Gupta, M. (2016). A study on the Profitability Analysis of Power Grid Corporation of India Ltd. *International Conference on Industrial Engineering and Operations Management, Kuala Lumpur, Malaysia, March 8-10, 2016* (pp. 1818-1825). Kuala Lumpur: IEOM Society International.
- Dilli, S., Gurumurthy, N., & Reddy, K. J. (2016). Working Capital Management in Transmission Corporation Ltd. of Andhra Pradesh. *BIMS International Journal of Social Science Research, ,* 44-49.
- Gupta, S., & Gupta, M. (2014). A Case Study of Efficiency Analysis on Power Grid Corporation of India Ltd. *International Journal of Science and Research (IJSR), Volume 3 Issue 12, December 2014* , 1950-1953.
- Khan, A. (2017). Financial Performance Evaluation of National Thermal Power Corporation Limited (NTPC). *Arabian Journal of Business and Management Review, Volume 7, Issue 2* .

- Leepsa, N. (2102). MERGER MOTIVES, TRENDS AND POST MERGER PERFORMANCE: EVIDENCE FROM ELECTRICITY COMPANIES IN INDIA. *Journal of Business Economics and Finance* , 59-82.
- Maji, S., & Sur, D. (2014). VALUE GENERATING CAPABILITY OF NTPC LTD. IN THE PRE- AND POST- LIBERALIZATION PERIODS: A COMPARATIVE ANALYSIS. *Time's Journey/ISSN : 2278-6546 1 Vol. 3, No. 1* , 1-9.
- Mishra, P., & shukla, K. (2017). "An Empirical Analysis of Financial Performance of Leading Power SectorOrganisation - NTPC. *International Journal of Research in Economics and Social Sciences(IJRESS), Vol. 7, Issue 11* , 706-719.
- Mushahid, S. (2018). EVALUATION OF FINANCIAL PERFORMANCE OF NATIONAL THERMAL POWER CORPORATION LIMITED. *International Journal of Accounting Research* , 43-53.
- Nandal, S. (2012). A COMPARATIVE ANALYSIS OF FINANCIAL HEALTH OF SELECTED UNITS IN POWER SECTOR. *INTERNATIONAL JOURNAL OF MANAGEMENT RESEARCH* , 1405-1413.
- Narang, M. (2018). Pre and post disinvestment analysis: A case of national thermal power corporation (NTPC). *International Journal of Academic Research and Development, Volume 3; Issue 1* , 959-964.
- Narayanan, R., & Hamsalakshmi, R. (2015). Leverage analysis of selected Indian power sector companies. *International Journal of Multidisciplinary Research and Development 2015; 2(3)* , 829-834.
- Pandey, M., & M.K. Choubey. (2011). Appraisal of NTPC Financial Strength. *Tecnia Journal of Management Studies, Vol.5, No.2, Dated: Oct, 2010-Mar, 2011* , 65-69.
- Parikh, P., & Dave, A. (2014). AN EMPIRICAL ANALYSIS OF THE FINANCIAL PERFORMANCE OF THE SELECTED POWER SECTOR COMPANIES OF INDIA . *International Journal of Management, IT and Engineering* , 34-46.
- Patidar, V., & Movalia, N. (2016). An Empirical Study on Financial Health of NTPC and NHPC. *Pacific Business Review International Volume 8, Issue 9, March 2016* , 16-22.
- Rashid, N., & Manivanan, B. (2017). A study on liquidity and profitability position of national thermal power corporation limited New Delhi. *International Journal of Commerce and Management Research Volume 3; Issue 2* , 112-116.

- Rathod, D. T. (2011). Management of Power Generation Projects in Karnataka: A case study of KPCL . *Eighth AIMS International Conference on Management.* BANGALORE.
- Saha, M. (2018). Financial Performance of Selected Units in Indian Power Sector: A Comparative Analysis. *Asian Journal of Research in Bankng and Finance, Vol. 8, No. 1* , 36-46.
- Sharma, A. (2013). An Analysis of Financial Performance in Power Industry in India. *Asia Pacific Journal of Management & Entrepreneurship Research (APJMER), Volume 2, Issue 2, April 2013* , 143-148.
- Singh, K., & Sur, D. (2016). Profitability of Maharatna enterprises in India during the post-liberalisation era: a cross-sectional analysis. *Int. J. Management Concepts and Philosophy, Vol. 9, No. 3* , 239-254.
- Vyas, V. (2015). Financial performance analysis of selected companies of power sector in India. *International Journal of Applied Research* , 212-219.

Table-1:

First Period		ROA	ROCE	RONW	OPM	NPM	TATR	FATR	ITR	DTR	CR	ATR
	Mean	31.33	30.88	52.16	59.63	22.40	0.46	0.61	16.07	5.81	14.70	2.81
	Std. Deviation	32.81	32.79	57.05	31.26	15.06	0.36	0.52	16.79	5.50	18.38	2.24
Second Period		ROA	ROCE	RONW	OPM	NPM	TATR	FATR	ITR	DTR	CR	ATR
	Mean	27.39	29.02	47.13	60.92	24.19	0.38	0.54	21.93	6.13	26.34	3.53
	Std. Deviation	24.25	26.48	46.43	30.97	16.23	0.25	0.41	21.08	5.16	37.42	3.60
Third Period		ROA	ROCE	RONW	OPM	NPM	TATR	FATR	ITR	DTR	CR	ATR
	Mean	20.18	21.66	41.40	60.86	16.99	0.29	0.36	20.32	5.36	24.86	3.18
	Std. Deviation	15.31	15.93	38.18	26.21	17.70	0.17	0.22	19.90	3.01	39.59	3.66

Table-2:

Second Period, *minus* First Period		ROA	ROCE	RONW	OPM	NPM	TATR	FATR	ITR	DTR	CR	ATR
	Z	-.495[b]	-.134[b]	-.060[b]	-.575[c]	-.054[b]	-2.232[b]	-1.775[b]	-2.075[c]	-.489[c]	-3.217[c]	-1.551[c]
	Asymp. Sig. (2-tailed)	0.621	0.893	0.952	0.565	0.957	0.026	0.076	0.038	0.625	0.001	0.121
Third Period, *minus* Second Period		ROA	ROCE	RONW	OPM	NPM	TATR	FATR	ITR	DTR	CR	ATR
	Z	-2.632[b]	-2.328[b]	-1.343[b]	-1.705[c]	-4.542[b]	-3.301[b]	-2.827[b]	-.931[b]	-.366[b]	-1.987[b]	-.572[b]
	Asymp. Sig. (2-tailed)	0.008	0.02	0.179	0.088	0	0.001	0.005	0.352	0.714	0.047	0.567

Appendix-1:

Sl.No.	Name of Companies
1	TATA POWER CO. LTD.
2	SURYACHAKRA POWER CORPORATINO LTD.
3	SJVN LTD.
4	RELIANCE INFASTRUCTURE LTD.
5	POWER GRID CORPORATION OF INDIA LTD.
6	NTPC LTD.
7	NLC INDIA LTD.
8	NHPC LTD.
9	NAVA BHARAT VENTURES LTD.
10	LANCO INFRATECH LTD.
11	JSW ENERGY LTD.
12	JAIAKASH POWER VENTURES LTD.
13	INDOWIND ENERGY LTD
14	GUJRAT IDUSTRIES POWER COMPANY LTD

Appendix-2:

Tests of Normality (Kolmogorov-Smirnova)											
	Statistic	df	Sig.		Statistic	df	Sig.		Statistic	df	Sig.
ROA1	.152	25	.137	ROA2	.236	25	.001	ROA3	.215	25	.004
ROCE1	.151	25	.144	ROCE2	.184	25	.029	ROCE3	.223	25	.002
RONW1	.168	25	.068	RONW2	.154	25	.128	RONW3	.169	25	.065
OPM1	.198	25	.013	OPM2	.203	25	.009	OPM3	.194	25	.016
NPM1	.157	25	.112	NPM2	.201	25	.010	NPM3	.180	25	.035
TATR1	.136	25	.200*	TATR2	.174	25	.050	TATR3	.149	25	.157
FATR1	.202	25	.010	FATR2	.174	25	.049	FATR3	.148	25	.163
ITR1	.141	25	.200*	ITR2	.296	25	.000	ITR3	.334	25	.000
DTR1	.248	25	.000	DTR2	.215	25	.004	DTR3	.136	25	.200*
CR1	.174	25	.049	CR2	.379	25	.000	CR3	.404	25	.000
ATR1	.221	25	.003	ATR2	.241	25	.001	ATR3	.186	25	.026