AN EMPIRICAL ANALYSIS OF THE FINANCIAL PERFORMANCE OF THE SELECTED POWER SECTOR COMPANIES OF INDIA

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Abstract:

The Indian power sector industry is growing at a rate of 13.94% in Quarter one of financial year 2012-13 and improved to 21.58% in Q3. As of 2009, India is the fourth largest producer of electricity and oil products and the fourth largest importer of coal and crude-oil in the world. As a result of this, an attempt is made to study the financial strength of this industry. This paper attempts to provide an empirical validation of the widely held existing theories on the determinants of firm performance in the Indian context. The study uses one of the most acceptable financial statement analysis tool i.e., ratio analysis covering different ratios to check the overall financial viability and performance of top nine power sector companies in India over a time frame of Six years (2006-07 to 2011-2012)based on the availability of data. The data's were collected from the annual reports and authentic financial websites. The descriptive statistics includes Range, Mean & Standard Deviation. Analysis of variance is a tool used to test the differences amount of the means of populations by examining the amount of variation within each of these examples, relative to the amount of variation between the samples. The study provides companies with understanding the activities that would enhance their financial performances.

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1. INTRODUCTION:

The Indian Power Industry plays a critical role in the economic progress of the country and has to be emphasized. Before Independence British controlled the Indian power industry firmly. Then due to legal and policy framework it was conducive to private ownership. In 1970's India nationalized most of its energy assets, as it was committed to social goals. By 1980's the Indian economy felt the importance of socialist agenda and followed it since independence. Serious deterioration has been faced by the Union government as part of its policy of economic liberalization with public finance and balance of payment crisis, allowed greater investment by private sector in the power industry. Power falls in the Concurrent List (List III of the Seventh Schedule to the Constitution of India) as a matter of legislative and executive competence. The Union government passed several laws Understanding the critical part played by the power industry, and restructured the Power Industry to gear it up to meet the challenges posed to the Indian economy post Liberalization. Indian Power Sector has done commendable effort in the last decade to maintain the country's economic growth with a constant rate of 7.5% CAGR that has been phenomenal. India has achieved this impressive feat through advancements in Power Sector in terms of capacity and availability. With mass urbanization and increasing population there has been rising a demand for electricity in the nation, which makes compulsive the growth of Power Sector. Indian Power Sector is going through a revolutionary transition phase from labor to machine intensive production and constantly and constantly fuelling the energy requirements of various other industries, thereby, generating the urge of technological innovation. Power is one of the critical components of infrastructure and is directly proportional o the economic growth of the nation. The total installed capacity of power in India is calculated to be 145,554.97 mega watts, out of which 75,837.93 mega watts (52.5%) is from States, 48,470.99 mega watt (34%) from Centre, and 21,246.05 mega watt (13.5%) is from Private sector initiatives. The Generation capacity of power is 141 GW; 663 billion units produced (1 unit = 1kwh)-during the year January 2008 and the CAGR(Capital Accumulated growth Rate) is of 5% over the last 5 years. India has turned itself into the fifth largest electricity generation capacity in the world with Low per capita consumption at 631 units; less than half of China. The Transmission & Distribution

network of power is 6.6 million circuit km which accounts for the third largest in the world .All over India Coal fired plants constitute 54% of the installed generation capacity, followed by 25% from hydro power, 10% gas based, 3% from nuclear energy and 8% from renewable sources. During the year 2009-10, electricity generations by power utilities has been targeted to go up by 9.1 % to 789.5 billion KWh. During April-December 2009 the growth of power generation was about 6.0 % as compared to about 2.7 % during April-December 2008. Indian Power Industry has become the fore front of Indian growth story. Efficient potential for generation of power from renewable energy sources is due to the huge captive coal reserves and a highly investor friendly Government policy for setting-up green-field Power project, the industry is abreast with untapped opportunities.

2. STATEMENT OF THE PROBLEM:

This study is made to know the liquidity, profitability, solvency position against the background of above situation. Under this environment, the researcher considered it necessary to study financial performance of Power Sector Companies in India with the following objectives.

3. OBJECTIVES:

The main objective of the study is to analyze the financial performance of the Power Sector Companies in India and to offer suggestions for the improvement of the profitability of the top Nine Power Sector Companies.

4. RESEARCH METHODOLY:

The study is based on secondary data. The data were collected from the official directory and authentic financial websites.(Marjory from Money control.com) The published annual reports of the selected companies from respective websites, magazines and journals on finance have also been used as data source.

5. PERIOD OF THE STUDY:

The study covers a period of Six years covering a period from 2006-2007 to 2011 -2012. It is also decided by taking into consideration of the availability of data.

6. SAMPLE OF THE STUDY:

We have selected only Nine Indian Power Sector companies to see, to what extent they are profitable, financially sound, and liquidity position and their Market Capitalization rate. The lists of companies are:

01. Torrent Power
02. NTPC
03. Adani Power
04. Power Grid Corporation of India
05. TATA Power
06. NHPC
07. JSW Energy
08. Gujarat Industries Power Companies
09. CESC

7. FRAMEWORK OF ANALYSIS

Statistical tools are applied to analyze the financial performance with help of ratios analysis. Calculations were made to test the financial performance of the Power Sector Companies. The descriptive statistical analysis includes Minimum, Maximum, Mean and Standard Deviation.

8. LIMITATION OF STUDY

1. The study covers a period of Six years only on the basis of availability of data.

2. These findings and suggestions only suitable to these companies, it is not suitable to all other type of industries and power sector Industry as whole also.

9. ANALYSIS AND INTERPRETATION

Financial performance is analyzed with the help of ratio analysis based on Six years data (2006-07 to 2011-2012) through Range, Mean and Standard Deviation (SD). The ratios considered for the study are as follows; Current ratio, Fixed Assets Turnover, Inventory turnover, Debtors-Turnover, Debt-Equity ratio, Long term Debt- Equity ratio, Return on Net worth and Interest Coverage Ratios were calculated.

10. ANALYSIS AND INTERPRETATION OF DATA

Financial performance is analyzed with the help of ratio analysis based on six years data (2006-07 to 20011-12) through Mean and Standard Deviation (SD). The ratios considered for the study are as follows: Current Ratio, Debt-Equity Ratio, Fixed Assets Turnover, Inventory Turnover Ratio, Debtors Turnover Ratio, Interest coverage Ratio, Return on Net worth, Long Term Debt Equity Ratio.

Table I : Calculated Ratios of Indian Power Sector (2006-07 to 2011-12)

Sr.No	Company Name	Current Ratios		Debt-Equity ratio		Fixed Assets turnover ratio		Inventory turnover ratio	
		Mean	S.D.	Mean	S.D.	Mean	S.D	Mean	S.D.
1	Torrent power	0.785	0.172829	0.748333	0.180379	0.786667	0.234918	15.104	17.62522
2	NTPC	2.43	0.364033	0.58	0.05933	0.735	0.055045	24.915	7.653493
3	Adani Power	1.043333	0.580919	2.033333	1.292001	0.25	#DIV/0!	4.84	
4	Power Grid	0.68	0.136	1.96	0.2625	0.1	0.079	15.27	12.143

	Corporation of India		675		26		373		08
5	Tata power	1.843333	0.375269	0.598333	0.125286	0.863333	0.278544	16.45167	2.37584
6	NHPC	0.985	0.338063	0.586667	0.075807	0.173333	0.049261	84.98333	71.38399
7	JSW Energy	1.498333	0.731995	0.751667	0.28386	0.955	0.384435	86.87833	111.7281
8	Gujarat Industries Power Co.	0.5	0.096054	0.676667	0.140095	0.473333	0.12628	89.715	89.23179
9	CESC	0.778333	0.080353	0.91	0.285167	0.328333	0.029944	36.44	14.58166
Industry Coverage Ratio		1.171481		0.982778		0.518333		41.62193	

Current Ratio of Torrent Power, Power Grid Corporation of India, NHPC, Gujarat Industries Power Co and CESC are very low which is less than one while NTPC is maximum which suggest good amount of Working Capital in the company i.e excessive working capital in the company. In compare to this companies like Adani Power , Tata Power and JSW energy are near to two which is a thumb rule and so it can be said that they are having a good liquidity position. Overall industry's Current Ratio is on an average near to two which satisfies the thumb rule so overall we can say that in industry companies are having a good liquidity position. Overall industry average of debt equity ratio is 0.983. Accepted level of Debt-Equity ratio is 1:2. Companies like Adani Power and Power Grid Corporation of India is more than the accepted level, which suggest that these companies were utilizing the debt capital promptly. All other companies were lower debt equity ratio, which are advised to restructure their capital structure.

Fixed assets turnover ratio measures a company's ability to create net sales from fixed-assets investments. Turnover ratios for all the companies are below one. Inventory Turnover Ratio

establishes industry average of 41.63, CESC ratio is near to average so it is efficient while companies like NHPC, Gujarat Industries power companies and JSW energy are too high so such companies should take step to balance Sales and Stock. While all other companies are ratio are below the industry average mean so they should also take necessary steps to overcome this situation.

Sr.No	Company Name	Debtors Turnover ratio		Interest Coverage Ratio		Return on Net worth ratio		Long term debt Equity ratio	
		Mean	S.D.	Mean	S.D.	Mean	S.D	Mean	S.D.
1	Torrent power	9.761667	3.141582	5.766667	1.453226	14.57667	8.356096	0.741667	0.18584
2	NTPC	14.45	8.776876	10.42167	1.550167	13.545	0.545701	0.58	0.05933
3	Adani Power	5.693333	3.742317	3.75	2.50006	2.116667	6.613549	1.84	0.979367
4	Power Grid Corporation of India	5.326667	3.017136	1.855	1.776139	6.106667	14.97301	1.905	0.255402
5	Tata power	4.34	0.821657	3.95	0.464457	10.08667	1.21177	0.548333	0.120568
6	NHPC	6.083333	2.679453	5.841667	2.953401	7.611667	2.08541	0.595	0.075033
7	JSW Energy	9.31	4.993312	6.168333	3.504713	26.51833	22.13433	0.743333	0.28717
8	Gujarat Industries Power Co.	6.585	0.482027	5.56	4.28914	10.37	3.600539	0.535	0.171085
9	CESC	7.126667	1.210994	3.205	0.780557	13.61667	2.893888	0.651667	0.161916
Industry Coverage Ratio		7.630741		5.168704		16.78519		0.904444	

Table II : Calculated Ratios of Indian Power Sector (2006-07 to 2011-12)

The debtor's turnover ratio is an activity ratio, overall industry average is 7.63, and companies like Torrent Power, NTPC and JSW energy are above industry average ration so they are having efficient credit policies. All other companies debtors turnover ratio is less than the industry average so they have to re-assess their credit policies. The overall Industry Coverage Ratio is 5.17 approx. Companies like Torrent Power, NTPC, NHPC, JSW Energy and Gujarat Industries Power co., are having higher mean than Industry average mean so it says that they are having high capacity of paying interest, while other companies having low mean than industry average mean are said to be having lower capacity of paying interest. Industry average Return on Net Worth is 16.79 JSW Energy company is having higher mean that says it is having greater effectiveness in the utilization of assets, means greater profits reaped by the total assets and for other companies having lesser mean than average is vice versa. Long term to Debt Equity ratio, the overall industry average is 0.904, companies like Adani Power and Power Grid Corporation of India are having higher mean than industry average that means they are very good in long term debt to equity ratio while for all other companies it is less than the industry average.

Table III : One -Way ANOVA of ratios of selected IT Companies

Ratios		**Sum of Squares**	**Df**	**Mean Square**	**F**	***F crit***
Current Ratio	Between Groups	19.13794815	8	2.392243519	16.2415197	2.152133
	Within Groups	6.628133333	45	0.147291852		
	Total	25.76608148	53			
Debt Equity ratio	Between Groups	16.39763333	8	2.049704167	9.32998392	2.152133
	Within Groups	9.88605	45	0.21969		

	Total	26.28368333	53			
Fixed Assets Turnover Ratio	Between Groups	3.965231159	8	0.495653895	12.0106058	2.200826
	Within Groups	1.526916667	37	0.041268018		
	Total	5.492147826	45			
Inventory Turnover Ratio						
	Between Groups	48174.8296	8	6021.853701	1.65958024	2.208518
	Within Groups	130627.4489	36	3628.540248		
	Total	178802.2785	44			
Debtors Turnover ration						
	Between Groups	453.0557706	8	56.63197132	3.49542105	2.168117
	Within Groups	680.4739	42	16.20175952		
	Total	1133.529671	50			
Interest Coverage Ratio						
	Between Groups	280.9535794	8	35.11919743	5.85355071	2.168117

	Within Groups	251.9848833	42	5.999640079		
	Total	532.9384627	50			
Return on Net Worth						
	Between Groups	1987.844354	8	248.4805442	2.51810114	2.168117
	Within Groups	4144.465317	42	98.67774563		
	Total	6132.309671	50			
long Term Debt Equity Ratio						
	Between Groups	14.7423	8	1.8427875	13.5880226	2.152133
	Within Groups	6.102833333	45	0.135618519		
	Total	20.84513333	53			

11. ANOVA

Analysis of variance is a tool used to test the differences amount of the means of population by examining the amount of variation within each of these examples, relative to the amount of variation between the samples

Hypothesis:

H0 – There is no significant difference between calculated ratios of the selected Indian Power Sector Companies.

H1 – There is significant difference between calculated ratios of the selected Indian Power Sector Companies.

From the above table it can be concluded that for most of the ratios (Current Ratio, Debt-Equity Ratio, Fixed Assets Turnover, Debtors Turnover Ratio, Interest coverage Ratio, Return On Net worth, Long Term Debt Equity Ratio) calculated value is greater than the table value so null hypothesis is rejected. So alternative hypothesis is accepted which decides that there is a significant difference between calculated ratios of the selected Indian Power Sector Companies. Only Inventory turnover ratio whose calculated value is less than the table value which says that null hypothesis is accepted and so for this ratio it can be said that there is no significant difference between inventory turnover ratios of the selected Indian Power Sector Companies.

12. FINDINGS

Adani Power, Tata Power and JSW energy are near to two which is a thumb rule and so it can be said that they are having a good liquidity position. Adani Power and Power Grid Corporation of India is more than the accepted level that suggest that these companies were utilizing the debt capital promptly. Fixed assets turnover ratio measures a company's ability to create net sales from fixed-assets investments for all the companies are below one. CESC ratio is near to average which is considered as efficient in keeping balance between Sales and Stock. Torrent Power, NTPC and JSW energy are above having efficient credit policies. Torrent Power, NTPC, NHPC, JSW Energy and Gujarat Industries Power co., are having high capacity of paying interest. JSW Energy Company is having greater effectiveness in the utilization of assets, means greater profits reaped by the total assets. Adani Power and Power Grid Corporation of India are very good in long term debt to equity ratio. Lastly based on the ANOVA analysis. The result of ANOVA indicates that other than Inventory turnover ratio all other ratio are having value greater than the table value so null hypothesis is rejected that there is significant difference among the variables. While Inventory turnover ratio is significant at 5% level and so null hypothesis is accepted which says that there is no significant difference among the variables.

13. CONCLUSIONS

Finally it can be said that from the above nine companies Adani Power, Power Grid Corporation, JSW energy are highly improved as compared to the group average value for all ratios. Additionally, the study provides companies with understanding of the activities that would enhance their financial performances. The results of this study imply that it might be necessary for all companies to take all required decisions to enhance their financial position.

14. BIBLIOGRAPHY

A.Dharmaraj and Dr.N.Kathirvel, , April 2013, 'Analysing the Financial Performance of Selected Indian Automobile Companies', International Global Research Analysis, ISSN NO 2277 – 8160, Vol : 2, Issue : 4, pg no 18-20.

Pandey, I.M. 2010."Financial Management', Ninth Edition, Vikas Publishing, House Pvt.Ltd, NewDelhi

Research Journal of Finance and Accounting ISSN 2222-1697 (Paper) ISSN 2222-2847 (Online) Vol 2, No 5, 2011

GRA - GLOBAL RESEARCH ANALYSIS: Vol 2, Issue 4, April: 2013, ISSN No 2277-8160

www.moneycontrol.com

www.iiste.org

http://accountlearning.blogspot.in/2010/02/importance-and-advantages-of-ratio.html

http://money.livemint.com/IID64/F100400/Financial/Ratios/Company.aspx

http://www.kotaksecurities.com

http://www.investopedia.com/exam-guide/cfa-level-1/financial-ratios/uses-limitations-ratios.asp

http://smallbusiness.chron.com/significance-financial-ratios-3971.html

http://www.indianpowermarket.com/2011/05/indian-power-sector-snapshot.html

http://www.scribd.com/doc/25485875/India-GDP-Composition-Sector-Wise

http://www.pgea.in/info/History_of_Indian_Power_Sector