



ISSN Print: 2394-7500
ISSN Online: 2394-5869
Impact Factor: 3.4
IJAR 2015; 1(6): 212-219
www.allresearchjournal.com
Received: 19-03-2015
Accepted: 11 -04-2015

Vijay H. Vyas
Atmiya Institute of Technology
& Science (MBA), RAJKOT –
36000

Financial performance analysis of selected companies of power sector in India

Vijay H. Vyas

Abstract

Electricity is one of the most important input factors for the economic development of the country. There is huge and increasing demand of electricity in India and it is continuously increasing with the countries corporate and economic growth. The Indian power sector has responded significantly and made significant progress in reducing the gap between demand and supply. Indian power sector offers one of the highest growth potential to players in this industry. However, this is subject to some challenges like to generate more power and to generate and distribute power efficiently and at minimum cost. The present study covers five selected companies operating in power sector for the financial performance using ratio analysis and ANOVA. Out of selected companies NTPC performance is better than other companies but overall Indian power sector needs to reduce too much dependence on coal and needs to generate more power availability, quality and reliability for successful future and growth of the country.

Keywords: Power generation, Ratio Analysis, Financial performance

Introduction

The Indian power sector has registered significant progress since the process of planned development of the economy began in 1950. Hydro-power and coal based thermal power have been the main sources of generating electricity. Nuclear power development is at slower pace, which was introduced in late sixties. The concept of operating power systems on a regional basis crossing the political boundaries of states was introduced in the early sixties. In spite of the overall development that has taken place, the power supply industry has been under constant pressure to bridge the gap between supply and demand.

Review of Literature

Performance of Indian Power Sector During A Decade Under Restructuring: A CRITIQUE by –D. parameswara Sharma, p.s. Chandramohan Nair and R. Balasubramanian

The Indian power sector has been facing serious functional problems during the past few decades. In order to re-vitalize the sector and to improve its techno-economic performance, Government of India has initiated restructuring process in 1991. This paper reviews the performance of the Indian power sector in the last decade (1991 – 2001), while Undergoing the restructuring process. The study also examines how far the restructuring process during this period has been effective in realizing its set objectives and benefited the social development of the Nation. A critical evaluation of the methodology and steps so far adopted for the restructuring process and a few suggestions for re-framing the future course of reforms also have been proposed in this paper.

Analysis of Power Sector in India: A Structural Perspective

The inhibitors to growth in power sector were many – small and big but the main roadblock in the growth path was government policy, which made it difficult or rather impossible for a private player to enter. This further aggravated that Indian entrepreneurs didn't have enough knowledge and experience in developing power projects. To worsen the scenario, the SEBs and other government agencies became financially weak to propel any future expansion or growth in the sector. Electricity Act, 2003 was a major step in solving the above underlying problems of the power sector. The whole new system is evolved where private players were invited to be active participants. The system demanded financial, political and other

Correspondence:
Vijay H. Vyas
Atmiya Institute of Technology
& Science (MBA), RAJKOT –
36000

infrastructural growth – with major requirements in roads and communication. Some of the bold steps taken in the Act were moving generation and distribution out of ‘License Raj’ regime, opening access to national grid and demolishing the ‘Single Buyer’ model. The failure of the huge federal structure and the changing global scenario has forced government to think of ways to revive this fundamental infrastructure sector. Two of the avenues that government can count on for future growth of this sector is “Midgets or Small power plants” and “CDM-Clean Development Mechanism”

Bawa, Vijay S, Elton, Edwin J, Gruber, and Martin J (1979) showed that the construction of optimal portfolio could be simplified by using simple ranking procedures when the returns are followed a stable distribution and the dependence structure had any of several standard forms. The ranking procedure simplified the computations necessary to determine optimum portfolio.

Objectives of the Study

1. To study the effectiveness of financial measures.
2. To compare & study the performance of companies engaged in power generation.
3. To study and understand the effectiveness of the management.
4. To evaluate and analyze the growth of power sector.

Hypothesis of the Study

H0: There would not be significance difference in the return of the selected power sector companies with reference to BSE power.

H1: There would be significance difference in the return of the selected power sector companies with reference to BSE power.

H0: There would not be significance difference in the performance evaluation of equity price of selected companies on BSE power.

H1: There would be significance difference in the performance evaluation of equity price of selected companies on BSE power.

Research Design and Methodology

Sampling Method

Convenient sampling method is used for the selection of sample companies.

Sample Size

5 leading companies of Indian power sector industry these are NTPC, NHPC, TATA POWER, TORRENT POWER and ADANI POWER are selected.

Sources of Data

For this research data have been collected from different resourced like company’s annual report, journals and different websites.

Tools and Techniques for Data Analysis

Here, I have used different ratio’s to know the profitability from many view points and presented in form of chart for better understanding. I have also formulated separate hypothesis by applying ANOVAs Analysis.

Limitations of Study

- As sampling technique is convenient sampling so it may result in personal bias.

- The time period taken in to consideration is one of the limitations and may not be sufficient to observe the performance of the industry.
- This study only considers the five companies so that it is very difficult to predict the whole industry’s profitability pattern.

Data Analys and Interpretation

Profit after Tax

Net Profit after Tax (NPAT) is one of the more important figures that a company makes public. Just like Earnings before net interest and tax (EBIT), NPAT is one of the figures that a fundamental analyst or value investor would consider before making an investment decision.

TABLE – 1 NET PROFIT RATIO						
Year	2009	2010	2011	2012	2013	Average
Name of the company						
NTPC	18.11	17.72	15.85	14.22	18.34	16.85
NHPC	32.42	42.37	43.17	41.27	37.27	39.30
TATA POWER	12.32	12.88	12.78	12.44	9.95	12.07
TORRENT POWER	9.16	14.07	15.88	15.52	4.65	11.86
ADANI POWER	0	37.07	23.87	-6.93	-28.42	5.12

From the above table, It can be concluded that in NTPC profit after tax is uneven 2009 to 2013, In NHPC there is considerable uneven performance of profitability from 2009 to 2013, In TATA power there is minor change in the profit from 2009-12 but decrease in 2013 sharply by approx. 25%, Where as in Torrent power and Adani power there is a fluctuation in profit for whole study period. Adani power had no profit 2009. In 2010 and 2011 profit earned 37% & 24% respectively but resulted in to losses in 2010 and 2011. Thus, in 2010 and 2011 there is an overall profit earning year for the power sector industry.

Hypothesis

Ho: Profit after tax to profitability ratio of all units is not same during the period of study.

H1: Profit after tax to profitability ratio of all units is same during the period of study.

ANOVA						
Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	868.4114	4	217.1029	0.798443	0.540275	2.866081
Within Groups	5438.157	20	271.9079			
Total	6306.569	24				

The above table indicates the calculated value of ‘F’. The calculated value of ‘F’ is 0.798 which is less than the table value. The table value of ‘F’ at 5% levels of significance is 2.866. It indicates that the null hypothesis is accepted and alternate hypothesis will rejected. It indicates that there is no significant difference of net profit ratio between the units undertaken for the study period.

Return on Networth

Return on net worth shows the actual accumulated funds of the company. This is used to pay long term liability.
 Net Worth=Share capital + Reserves & Surplus

TABLE – 2 RETURN ON NETWORTH						Average
Year	2009	2010	2011	2012	2013	
Name of the Company						
NTPC	13.90	13.69	13.31	12.58	15.69	13.83
NHPC	5.98	8.98	8.81	10.51	8.43	8.54
TATA POWER	10.66	8.47	7.36	8.72	8.35	8.71
TORRENT POWER	12.61	21.12	22.26	21.52	6.32	16.77
ADANI POWER	-	2.94	8.28	-4.87	-41.98	-7.02

From the above table, It can be concluded that in NTPC net worth is constant throughout the five years, In NHPC it is constant than increase in 2010 & 2011, In TATA power the net worth is decreasing year by year., Torrent power net worth is increasing up to 2011 and then decreasing. Adani power has its net worth in 2010-11 but then decreased and converted in to negative net worth.

Hypothesis

Ho: Return on net worth to profitability ratio of all units is not same during the period of study.

H1: Return on net worth to profitability ratio of Shareholder’s Fund ratio of all units is same during the period of study.

ANOVA						
Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	515.2121	4	128.803	0.854146	0.507961	2.866081
Within Groups	3015.948	20	150.7974			
Total	3531.16	24				

The above table indicates the calculated value of ‘F’. The calculated value of ‘F’ is 0.854 which is less than the table value. The table value of ‘F’ at 5% levels of significance is 2.866. It indicates that the null hypothesis is accepted and alternate hypothesis will rejected. It indicates that there is no significant difference of RONW between the units undertaken for the study period.

Gross Profit

Gross profit ratio (GP ratio) is the ratio of gross profit to net sales expressed as a percentage. It expresses the relationship between gross profit and sales.

Gross Profit Ratio = (Gross profit / Net sales) × 100

TABLE – 3 GROSS PROFIT RATIO						Average
Year	2009	2010	2011	2012	2013	
Name of the company						
NTPC	19.48	21.1	18.49	17.63	20.84	19.51
NHPC	46.26	47.86	43.78	49.3	44.37	46.31
TATA POWER	10.96	19.44	14.6	14.25	17.35	15.32
TORRENT POWER	12.85	24.16	21.79	23.73.	10.96	18.70
ADANI POWER	0	48.11	49.15	17.42	-5.38	21.8

From the above table, it can be concluded that in NTPC there is decrease in the gross profit, In NHPC also there is a decrease in the gross profit of the company, in both companies

it is uneven change. In TATA power there is an increase in 2010 but thereafter decreases for two years and increase in 2013. In Torrent power there is uneven but increase trend with sharp fall in 2013 profit. Adani power has no profit in 2009 it has entered in a profit making unit in 2010 & 2011 but huge decrease in 2012 and 2013.

Hypothesis

Ho: gross profit ratio to profitability ratio of all units is not same during the period of study.

H1: gross profit ratio to profitability ratio of all units is same during the period of study.

ANOVA						
Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	872.1372	4	218.0343	0.845104	0.513103	2.866081
Within Groups	5159.941	20	257.997			
Total	6032.078	24				

The above table indicates the calculated value of ‘F’. The calculated value of ‘F’ is 0.845 which is less than the table value. The table value of ‘F’ at 5% levels of significance is 2.866. It indicates that the null hypothesis is accepted and alternate hypothesis will rejected. It indicates that there is no significant difference of gross profit ratio between the units undertaken for the study period.

Return on Long Term Fund

This ratio establishes the relationship between net profit and long term funds. The term long term funds refer to the total investment made in business for long term. It is calculated by EBIT by the long term funds.

Return on long term funds = operating profit (EBIT)/long term funds*100

TABLE – 4 RETURN ON LONG TERM FUNDS						Average
Year	2009	2010	2011	2012	2013	
Name of the company						
NTPC	12.27	12.45	10.99	11.51	12.56	11.96
NHPC	6.3	7.2	6.75	9.02	7.39	7.33
TATA POWER	7.67	9.94	8.39	10.16	10.72	9.38
TORRENT POWER	9.95	20.97	20.33	21.87	9.74	16.60
ADANI POWER	-0.03	1.52	4.87	3.98	0.76	2.22

From the table, It can be concluded that in NTPC has a highest return on long term fund it can be seen that in NHPC there is very low return on the long term fund, Where as in TATA power also there is a comparative small part of fund they are getting as a return, IN Reliance & Adani there is not much return on the long term fund of the company. It means that in NTPC there is a highest return & in first three years Adani and than after Reliance power has reported the lowest return.

Hypothesis

Ho: return on long-term fund to owner’s fund of all units is not same during the period of study.

H1: return on long-term fund to owner’s fund of all units is same during the period of study.

ANOVA						
Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	57.20434	4	14.30109	0.412023	0.797884	2.866081
Within Groups	694.1895	20	34.70948			
Total	751.3939	24				

The above table indicates the calculated value of 'F'. The calculated value of 'F' is 0.412 which is less than the table value. The table value of 'F' at 5% levels of significance is 2.866. It indicates that the null hypothesis is accepted and alternate hypothesis will be rejected. It indicates that there is no significant difference of ROLTF between the units undertaken for the study period.

Return on Capital Employed

The return on net capital employed is a guide to compare the profitability of business. It is also an indication of proper utilization of net capital employed towards achieving desirable profits. Net capital employed is the total of fixed assets plus current assets minus current liabilities.

Return on Capital Employed= (Adjusted net profits*/Capital employed) *100

TABLE – 5 RETURN ON CAPITAL EMPLOYED						
Year	2009	2010	2011	2012	2013	Average
Name of the Company						
NTPC	12.27	12.45	11.32	11.37	12.56	11.20
NHPC	6.13	7.2	6.75	8.99	7.39	7.30
TATA POWER	7.32	9.94	8.39	10.16	10.72	9.31
TORRENT POWER	9.95	20.97	19.88	21.87	9.74	16.48
ADANI POWER	-	1.51	4.74	3.17	0.66	2.02

From the above table, it can be concluded that in NTPC return on capital employed is comparatively notable in the power sector. In NHPC also the capital employed is increasing in nature, The TATA power has also reported the increasing return on the capital employed, where as in Reliance and Adani the return on capital employed is not gained in four years. Thus in power sector there is highest return on capital employed is in the NTPC and in Reliance power it is lowest of all.

Hypothesis

Ho: Return on capital employed ratio to owner's fund of all units is not same.

H1: Return on capital employed ratio to owner's fund of all units is same.

ANOVA						
Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	55.82364	4	13.95591	0.398101	0.807627	2.866081
Within Groups	701.1248	20	35.05624			
Total	756.9484	24				

The above table indicates the calculated value of 'F'. The calculated value of 'F' is 0.398 which is less than the table value. The table value of 'F' at 5% levels of significance is 2.866. It indicates that the null hypothesis is accepted and alternate hypothesis will be rejected. It indicates that there is no significant difference of ROCE between the units undertaken for the study period.

Current Ratio

A liquidity ratio measures a company's ability to pay short-term obligations.

$$\text{Current Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}}$$

TABLE – 6 CURRENT RATIO						
Year	2009	2010	2011	2012	2013	Average
Name of the Company						
NTPC	2.89	2.81	2.13	1.97	1.83	2.33
NHPC	0.74	1.39	0.94	1.39	1.53	1.20
TATA POWER	1.64	2.39	1.55	1.48	1.3	1.68
TORRENT POWER	0.91	1.04	0.82	0.71	0.84	0.87
ADANI POWER	1.78	1.61	1.06	0.69	0.59	1.15

From the above table it can be concluded that ideal ratio of current ratio is 2:1 and NTPC has reported the current ratio near to the ideal one so NTPC is a good co., NHPC has reported the lowest current ratio throughout the duration of this five years, TATA power has also the ideal ratio near to 2, Reliance has increased its current ratio in 2010-11., IN Adani this ratio is low. Thus, it can be concluded that this current ratio is favorable in NTPC, TATA & ADANI.

Hypothesis

Ho: Current ratio of all units is not same during the period of study.

H1: Current ratio of all units is same during the period of study.

ANOVA						
Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	1.476544	4	0.369136	0.875464	0.496002	2.866081
Within Groups	8.43292	20	0.421646			
Total	9.909464	24				

The above table indicates the calculated value of 'F'. The calculated value of 'F' is 0.875 which is less than the table value. The table value of 'F' at 5% levels of significance is 2.866. It indicates that the null hypothesis is accepted and alternate hypothesis will be rejected. It indicates that there is no significant difference of current ratio between the units undertaken for the study period.

Quick Ratio

Quick ratio is an indicator of a company's short-term liquidity. The quick ratio measures a company's ability to meet its short-term obligations with its most liquid assets. The higher the quick ratio, the better the financial position of the company.

$$\text{Quick Ratio} = \frac{\text{Current Assets} - \text{Inventories}}{\text{Current Liabilities}}$$

TABLE – 7 QUICK RATIO						
Year	2009	2010	2011	2012	2013	Average
Name of the Company						
NTPC	2.59	2.5	1.93	1.8	1.68	2.10
NHPC	0.85	1.38	0.93	1.43	1.52	1.22
TATA POWER	1.77	2.17	1.74	1.53	1.64	1.77
TORRENT POWER	0.82	0.96	0.74	0.59	0.77	.78
ADANI POWER	1.78	2.04	1.44	1.66	0.82	1.55

From the above table it can be said that NTPC has a better quick ratio, NHPC has a very low quick ratio, TATA and Adani power has also reported the low quick ratio as compared to other companies, Where as in Reliance power this quick ratio is highest than any other company of this sector. And NHPC has a lowest quick ratio.

Hypothesis

Ho: Quick ratio of all units is not same during the period of study.

H1: Quick ratio of all units is same during the period of study.

ANOVA						
Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	0.873344	4	0.218336	0.668082	0.621628	2.866081
Within Groups	6.5362	20	0.32681			
Total	7.409544	24				

The above table indicates the calculated value of 'F'. The calculated value of 'F' is 0.668 which is less than the table value. The table value of 'F' at 5% levels of significance is 2.866. It indicates that the null hypothesis is accepted and alternate hypothesis will rejected. It indicates that there is no significant difference of quick ratio between the units undertaken for the study period.

Long Term Debt Equity Ratio

The debt equity ratio is determined to ascertain to soundness of the long term financial policies of the company. It is also known as external internal equity ratios.

Long term debt to equity ratio=long term debt/equity.

TABLE – 8 LONG TERM DEBT EQUITY RATIO						
Year	2009	2010	2011	2012	2013	Average
Name of the Company						
NTPC	0.59	0.59	0.63	0.65	0.66	.62
NHPC	0.67	0.63	0.62	0.6	0.61	.63
TATA POWER	0.53	0.55	0.56	0.71	0.81	.63
TORRENT POWER	1.01	0.81	0.6	0.55	0.74	.74
ADANI POWER	2.18	1.65	2.64	3.08	4.46	2.80

From the above table, it can be concluded that in NTPC long term debt equity is constant means there is no change every year it is near about 0.5 % IN NHPC also there is a very slight difference it is about 0.6%, Where as in TATA & Adani power also there is a very minor difference year after year, Where as in Reliance power they has not registered any long term debt equity ratio. Thus the long term debt equity ratio is highest in Adani & lowest in Reliance power.

Hypothesis

Ho: total turnover to long –term debt equity ratio of all units are not same during the period of study.

H1: total turnover to long –term debt equity ratio of all units are same during the period of study.

ANOVA						
Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	1.046984	4	0.261746	0.235902	0.91478	2.866081
Within Groups	22.19104	20	1.109552			
Total	23.23802	24				

The above table indicates the calculated value of 'F'. The calculated value of 'F' is 0.235 which is less than the table value. The table value of 'F' at 5% levels of significance is 2.866. It indicates that the null hypothesis is accepted and alternate hypothesis will rejected. It indicates that there is no significant difference of LDER ratio between the units undertaken for the study period.

Debt Equity Ratio

Debt Equity Ratio is a measure of a company's financial leverage calculated by dividing its total liabilities by stockholders' equity. It indicates what proportion of equity and debt the company is using to finance its assets.

$$\text{Debt Equity Ratio} = \frac{\text{Total Liabilities}}{\text{Shareholders' Equity}}$$

TABLE – 9 DEBT EQUITY RATIO						
Year	2009	2010	2011	2012	2013	Average
Name of the Company						
NTPC	0.59	0.59	0.63	0.65	0.66	.62
NHPC	0.68	0.6	0.59	0.62	0.63	.62
TATA POWER	0.61	0.57	0.63	0.78	0.91	.70
TORRENT POWER	1.01	0.81	0.64	0.55	0.74	.75
ADANI POWER	2.18	1.68	2.74	4.11	5.31	3.21

From the above table it can be said that there is very minor difference in the ratio of the power sector year after year in the Debt equity ratio the highest debt equity ratio is in Adani power & lowest is there in Reliance power. Thus some co. use the equity and debt to finance its asset where as some are not.

Hypothesis

Ho: total turnover to debt equity ratio of all units are not same during the period of study.

H1: total turnover to debt equity ratio of all units are same during the period of study.

ANOVA						
Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	2.007776	4	0.501944	0.307013	0.86985	2.866081
Within Groups	32.69852	20	1.634926			
Total	34.7063	24				

The above table indicates the calculated value of 'F'. The calculated value of 'F' is 0.307 which is less than the table value. The table value of 'F' at 5% levels of significance is 2.866. It indicates that the null hypothesis is accepted and alternate hypothesis will rejected. It indicates that there is no significant difference of debt equity ratio between the units undertaken for the study period.

Debtors Turnover Ratio

Debtors' turnover ratio or accounts receivable turnover ratio indicates the velocity of debt collection of a firm. In simple words it indicates the number of times average debtors (receivable) are turned over during a year.

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

TABLE – 10 DEBTORS TURNOVER RATIO						
Year	2009	2010	2011	2012	2013	Average
Name of the Company						
NTPC	12.78	9.06	7.54	9.02	11.73	10.03
NHPC	8.47	6.04	2.77	2.86	2.59	4.55
TATA POWER	4.83	3.99	3.49	5.76	19.07	7.43
TORRENT POWER	9.69	11.39	11.43	12.57	11.81	11.38
ADANI POWER	0	1.7	6.26	9.12	11.27	5.67

From the above table it can be concluded that In NTPC the debtor’s turnover ratio is decreasing year by year, IN NHPC also the trend is same of decreasing the ratio, Where as in Reliance and Adani power there is not any debtor turnover ratio is registered in year 2007-08 &09

Hypothesis

Ho: Total turnover to Debtors ratio of all units are not same during the period of study.

H1: Total turnover to Debtors ratio of all units are same during the period of study.

ANOVA						
Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	1329.613	4	332.4033	0.123826	0.972213	2.866081
Within Groups	53688.87	20	2684.443			
Total	55018.48	24				

The above table indicates the calculated value of ‘F’. The calculated value of ‘F’ is 0.123 which is less than the table value. The table value of ‘F’ at 5% levels of significance is 2.866. It indicates that the null hypothesis is accepted and alternate hypothesis will rejected. It indicates that there is no significant difference ITR between the units undertaken for the study period.

Inventory Turnover Ratio

The inventory turnover ratio measures the no. of times a company sells its inventory during the year it indicates that the product is selling well.

Inventory turnover ratio= Cost of goods sold / Average inventory.

TABLE – 11 INVENTORY TURNOVER RATIO						
Year	2009	2010	2011	2012	2013	Average
Name of the Company						
NTPC	28.21	27.54	29.18	16.87	16.32	23.62
NHPC	80.93	102.78	187.04	129.07	92.98	118.56
TATA POWER	15.49	18.98	17.79	14.5	12.57	15.87
TORRENT POWER	0	0	0	0	33.28	6.66
ADANI POWER	0	0	0	4.84	5.01	1.97

From the above table it can be concluded that Inventory turnover ratio is highest in NHPC & lowest in TATA power, where as in Adani power and Reliance power there is no inventory turnover during this five years period.

Hypothesis

Ho: Total turnover to Inventory turnover ratio of all units are not same during the study.

H1: Total turnover to Inventory turnover ratio of all units are same during the study.

ANOVA						
Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	1329.613	4	332.4033	0.123826	0.972213	2.866081
Within Groups	53688.87	20	2684.443			
Total	55018.48	24				

The above table indicates the calculated value of ‘F’. The calculated value of ‘F’ is 0.123 which is less than the table value. The table value of ‘F’ at 5% levels of significance is 2.866. It indicates that the null hypothesis is accepted and alternate hypothesis will rejected. It indicates that there is no significant difference ITR between the units undertaken for the study period.

Earning Per Share

It shows the portion of a company’s profit allocated to each outstanding share of common stock. Earnings per share serve as an indicator of a company’s profitability.

$$EPS = \frac{\text{Net Income-Dividend on preferred stock}}{\text{Average outstanding shares}}$$

TABLE – 12 EARNING PER SHARE						
Year	2009	2010	2011	2012	2013	Average
Name of the Company						
NTPC	9.95	10.59	11.04	11.19	15.3	11.61
NHPC	0.96	1.7	1.76	2.25	1.91	1.72
TATA POWER	41.65	39.93	39.67	4.93	4.32	26.10
TORRENT POWER	8.63	17.71	22.56	26.19	8.15	16.65
ADANI POWER	-0.02	0.78	2.4	-1.35	-8.16	-1.27

From the above table it can be said that the co. with highest EPS is efficiently working than the co. with lower one. Table and chart shows that TATA power has the highest EPS as compared to other companies the shareholders will be more beneficial of this company and the other companies like NTPC has somewhat average level of EPS Where as in NHPC & Reliance power has the very low EPS. Thus the highest EPS in power sector is announced by the TATA power and the lowest is that of the Adani power.

Hypothesis

Ho: Earning per share of all units is not same during the period of study.

H1: Earning per share of all units is same during the period of study.

ANOVA						
Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	409.5416	4	102.3854	0.516512	0.724482	2.866081
Within Groups	3964.493	20	198.2247			
Total	4374.035	24				

The above table indicates the calculated value of ‘F’. The calculated value of ‘F’ is 0.516 which is less than the table

value. The table value of 'F' at 5% levels of significance is 2.866. It indicates that the null hypothesis is accepted and alternate hypothesis will rejected. It indicates that there is no significant difference of EPS between the units undertaken for the study period.

Book Value

A measure used by owners of common shares in a firm to determine the level of safety associated with each individual share after all debts are paid accordingly.

$$\text{Book Value per Share} = \frac{\text{Total Shareholder Equity- Preferred Equity}}{\text{Total Outstanding Shares}}$$

BV	2009	2010	2011	2012	2013	Average
company						
NTPC	71.55	77.28	82.94	88.89	97.49	83.63
NHPC	16.08	18.92	19.99	21.42	22.63	19.81
TATA POWER	390.36	443.83	470.93	49.54	51.67	281.27
TORRENT POWER	68.44	83.82	101.33	121.66	128.91	100.83
ADANI POWER	12.44	26.6	29	27.65	19.43	23.02

From the above table it can be concluded that In NTPC the book value is increasing year by year, In NHPC there is an increase in 2007-08-09 & 10 where as it decrease in 2011, IN the TATA power the book value is comparatively very high as compared to other power sector company. In Reliance power the book value can be said be to increased In Adani power the book value is decreasing in nature. Thus, the highest book value is that of in TATA power & the lowest is that of in Adani power.

Hypothesis

Ho: Book value of all units is not same during the period of study.

H1: Book value of all units is same during the period of study.

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	27240.24	4	6810.06	0.354693	0.8377	2.866081
Within Groups	383996.9	20	19199.84			
Total	411237.1	24				

The above table indicates the calculated value of 'F'. The calculated value of 'F' is 0.354 which is less than the table

value. The table value of 'F' at 5% levels of significance is 2.866. It indicates that the null hypothesis is accepted and alternate hypothesis will rejected. It indicates that there is no significant difference of book value between the units undertaken for the study period.

Equity Dividend

The percentage of earnings paid to shareholders in dividends.

$$\text{Equity dividend} = \frac{\text{yearly dividend per share}}{\text{Earning per share}}$$

OR

$$\text{Equity dividend} = \frac{\text{Dividend}}{\text{Net Income}}$$

Year	2009	2010	2011	2012	2013	Average
Name of the Company						
NTPC	3.6	3.8	3.8	4	5.75	4.19
NHPC	0.29	0.55	0.6	0.7	0.6	0.55
TATA POWER	11.5	12	12.5	1.25	1.15	7.68
TORRENT POWER	2	3	5.5	6.5	2	3.8
ADANI POWER	0	0	0	0	0	0

From the above table it can be concluded that the dividend declared by NTPC is comparatively very high as compared to other company of the power sector, In NHPC the dividend is increasing year by year, In TATA power also the dividend is considerable. Where as in Reliance & Adani power they have not registered any profit to be distributed as dividend. Thus in the power sector in this five years the highest dividend is declared by NTPC & lowest is by the Reliance and Adani.

Hypothesis

Ho: Equity dividend of all units is not same during the period of study.

H1: Equity dividend of all units is during the period of study.

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	21.7459	4	5.436474	0.326893	0.856591	2.866081
Within Groups	332.6147	20	16.63073			
Total	354.3606	24				

The above table indicates the calculated value of 'F'. The calculated value of 'F' is 0.326 which is less than the table value. The table value of 'F' at 5% levels of significance is 2.866. It indicates that the null hypothesis is accepted and alternate hypothesis will rejected. It indicates that there is no significant difference of dividend between the units undertaken for the study period.

RATIOS	NTPC	NHPC	TATA	TORRENT	ADANI
PROFIT AFTER TAX	16.85	39.30	12.07	11.86	5.12
RETURN ON NET WORTH	13.83	8.54	8.71	16.77	2.24
GROSS PROFIT	19.51	46.31	15.32	18.70	21.8
RETURN ON LONG TERM FUND	11.96	7.33	9.38	16.60	2.22
RETURN ON CAPITAL EMPLOYED	11.20	7.30	9.31	16.48	2.02
CURRENT RATIO	2.33	1.20	1.68	0.87	1.15
QUICK RATIO	2.10	1.22	1.77	.78	1.55
LONG TERM DEBT EQUITY RATIO	.62	.63	.63	.74	2.80
DEBT EQUITY RATIO	.62	.62	.70	.75	3.21
DEBTORS TURNOVER RATIO	10.03	4.55	7.43	11.38	5.67
INVENTORY TURNOVER RATIO	23.62	118.56	15.87	6.66	1.97
EARNING PER SHARE	11.61	1.72	26.10	16.65	-1.27
BOOK VALUE	83.63	19.81	281.27	100.83	23.02
EQUITY DIVIDEND	4.19	0.55	7.68	3.8	0.00

The above table shows the average ratio of last five years of all the five companies of power sector the overall increase or decrease in any particular ratio can be judged from this table in sales and dividend giving NTPC is leading from others where as other companies are also performing good in power sector.

Conclusion

From the above research and data analysis and interpretation, following conclusion can be made.

In NTPC sales turnover is increasing significantly during last five year. These ever increasing sales can be the result of the efficient operations undertaken in the company as compared to other power sector companies. Higher profit ratio after tax indicates that company is efficient in their operations & generates higher revenues as compared to other firms operating in the same sector. Reliance power has higher profit after tax ratio which is the indication of the efficiency of their operation. Return on net worth shows the return given to owners of the co. and the net worth is a combination of share capital and reserves and surplus. NTPC has earned a highest return on net worth. Return on capital employed which shows the return on assets of the company it is higher in the NTPC. These shows whether the funds entrusted to enterprise have been properly used or not. Current ratio of the company shows the companies' ability to pay short term obligations which is more with the Reliance power as compared to others & lowest with the NHPC. The quick ratio measures a company's ability to meet its short-term obligations with its most liquid assets. The higher the quick ratio, the better the liquidity position of the company. And in the power sector Reliance power has more effective quick ratio. Debt equity ratio indicates what proportion of equity and debt the company is using to finance its assets. It is highest in the Adani power. Debtors' turnover ratio indicates the number of times average debtors are turned over during the year. It is highest in NTPC so it has good turn over its debtors. Earnings per share ratio indicate company's profit allocated to each outstanding share of common stock and company's profitability. EPS is highest paid in TATA power as compared to other power sector company it shows that the company's profit allocation strategy is quite good. The ratio related to equity dividend shoes the percentage of earning aid to shareholders in dividends. In the power sector NTPC, NHPC & TATA all have declared sound dividend but highest is paid by the NTPC. Reliance and Adani they have not declared any dividend.

References

1. www.ntpc.co.in
2. www.nhpcindia.com
3. www.tatapower.com
4. www.torrentpower.com
5. www.adanipower.com
6. www.moneycontrol.com