International Journal of Research in Economics and Social Sciences(IJRESS)
Available online at:http://euroasiapub.org
Vol. 7 Issue 11,November- 2017,
ISSN(o): 2249-7382 | Impact Factor: 6.939|

"An Empirical Analysis of Financial Performance of Leading Power Sector Organisation - NTPC"

Pranati Misra, Senior Research Fellowship,
Department of Commerce, University of Lucknow

Prof.s.k shukla

Dean, Faculty of Commerce, University of Lucknow

ABSTRACT

Financial performance evaluation is the process of discovering economic facts about an enterprise on the basis of interpretation of the available financial data. The primary objective of financial evaluation is to given an accurate picture of the financial condition of a concern in condensed form. The present study has been undertaken to examine the financial performance of NTPC for a period of ten years from 2010- to 2015-16. Data have been collected from various published annual reports and financial statements liquidity. profitability. Management efficiency. Solvency and market valuation ratios have been calculated and analyzed. Multiple regression technique has been used to evaluate the impact of liquidity. solvency and management efficiency on profitability of NTPC. ROCE, ROA, and ROE have been taken as proxy measures of profitability. The findings highlighted that there is no significant impact of current ratio and inventory turnover ratio on profitability. However, debt-equity ratio has a significant impact on profitability of NTPC.

1. INTRODUCTION

Infrastructure has become supremely important for a nations economic development. As it provides the basic structural foundation for it. And it is far more so in the case of developing countries of the world as their economic development, which had been neglected for long, for various reasons, depends very much upon their raising an effective and efficient infrastructure which can respond to demand and provide the required services promptly and efficiently. Effective and provide the required services promptly and efficiently. Effective service is the golden measure of infrastructure development. Infrastructure services in return enhance the welfare of the people, foster economic growth and productivity, and help to improve the quality of life in general. Therefore it has been said that infrastructure is like the wheels of economic

activity. Its failure, especially in major areas such as power, reduces productivity and radically affects the quality of life. There is every reason to believe that in the developing countries today countries today investments in infrastructure have been improper despite high cost, and therefore have not been rendering the services expected of its properly.

The Economic development of any country irrespective of its size mainly depends upon the development of the power sector, which in fact is a key indicator of the nation's overall economic development. Power is central not only to all household activities , but to economic development as well. In fact it is the fuel of economic progress in all sectors, not only agriculture and industrial but all allied areas. Economic progress depends very much upon how successfully and profitably a country manages it power sector. Agriculture, industry and other core areas of economic ultimately depends for their development and success on the availability of adequate power constantly and uninterruptedly throughout the year. How important is power consumption in the economic development a country, apart from other factors, may be taken known by taking into consideration its power consumption. If power consumption by all sectors is seen to increase, then the index of eco-development as a measure of its progress is also found to increase. Usually the correlation between consumption of power and the growth of economy is taken as a measure of progress.

The production of Electricity is a basic indicator of a country's size and level of development in all spheres. Some countries are exporting electricity on a massive scale and other are importing it on a large scale. In India most of the consumption is by the agricultural sector, where the rate of revenue is very low. Expanding the supply of electricity to meet the growing demand of ever increasing urbanized Indian economy without incurring unacceptable costs is a major challenge to it. People's standard of living depends on their use of energy in general and access to electricity in particular. It is a major factor on which the policy-makers have to seriously focus their attention and direct their efforts. Compared with several other countries of the world, India is lagging behind many in terms of production as well as per capita consumption of energy. ***(Fatima N, 2011)***

1.1 POWER SCENARIO IN THE WORLD

India has low energy consumption but high-energy intensity. In 1991 the energy consumption per capita (toe/persons) in India was 0.112, while it was 0.336 in Asia and 7.67 in U.S.A. in the year 1971. During 1996 it shot up to 0.277 in India. 0.733 in Asia, and 7.88 in USA. It clearly shows that the energy per capita consumption in our country doubled between 1971 and 1996 but there was a steady increase of it in USA. It clearly reveals that the energy consumption in India even in 1996 was only 0.277, whereas in Asia it was 0.733, and in USA 7.88. Obviously there is a lot of obviously there is a lot of variation in terms of energy consumption between developing countries and developed countries. In terms of electricity intensity (toe/ million US$) it was 462 in India, 385 in Asia and 503 in USA during the year 1971 and it shot up to 597 in India, 406 in Asia and 384 in USA during the year 1996.

It is clear that while the energy intensity has been increasing year after year in India. It is considerably getting reduced in USA over a period of time. But in the other Asian countries it exhibits a mixed trend. It indicates that though there is a considerable rate of growth in power generation in India over a period of time, its energy requirements have been so enormously increasing that there is no match between power generation and power requirement. It is dire necessity to reduce this disparity as quickly as possible to have overall economic development in the country. Unless adequate power is generated to meet the requirements of all sectors of our economy, economic progress will be invariably slow. ***(Joshi SM, 2008)***

The world per capita use of energy was 1.9 tonnes of coal equivalent, (T.C.E.). Developed countries like the USA. U.K. and Japan have their respective per capita consumption at a much higher level of 11.1 T.C.E, 5.4 T.C.E. and 3.2 T.C.E. respectively, while developing countries like China and India have a per capita energy consumption of 0.5 T.C.E. and 0.2 T.C.E. respectively. A lot of change has been taking place the world over in the consumption of energy. High-income countries consume energy $3^1/_2$times that of Europe and central Asia. The total energy use by South Asia and Middle East and North Africa is almost the same. The Latin American and Caribbean countries use more energy than South Asia. But the sub-Saharan Africa consumes less power than half of South Asia. The U.S. is the biggest consumer of commercial energy. it uses 4 times that of Japan and china, and the erstwhile Russian Federation was a large consumer of commercial energy. But India, Canada and the U.D. consume almost the same quantities of energy,

which indicate the stage of economic development of each of the countries. It is clearly noticed that rapidly industrialized countries have been increasing their consumption of energy considerably. India has registered a high overage growth of 4.4%. The world development report 2000. clearly specifies the world position of power in terms of per capita use. It points out that the use of electrical energy is very high in the developed and some of the Gulf countries. The per capita consumption of power globally was 2053 kWh. The per capita use of the U.S. was only one half of that of Norway. Japan, Belgium and Switzerland consumed 7000 kWh per capita each in the year 1997. ****(. Debasish SS, 2006)***

1.2 POWER SCENARIO IN INDIA

Power has become important and indispensable practically in every sphere of activity. It is used by many categories of consumers. Innumerable gadgets not only domestic ones are run on electricity. Industrial application of power has no bounds. Different kinds of machinery. which run on power, are in use in large, medium and small-scale industries, which have been major consumer of power, to run computers and robots power is required. It is now possible to contact and communicate with whomsoever one wants to, from any point of the universe, through telephone, inter-net, e-mail, e-commerce, video conference etc. Distance between places has little significance now, due to the development of modern communication systems. Satellites supporting all these channels of communication are controlled from earth station, with the help of both conventional and non-conventional power systems. The ever-increasing living standard of people leads to increasing energy consumption for meeting various comforts by means of energy-intensive devices, by electrical appliances, air conditioners and the like. but the production status of energy in India has been a match to the power requirements of various categories of consumers. (***Muthumone A., 2008)***

The production efforts in the power sector have not been increasing correspondingly and positively for enhancing the consumption levels of people and their standard of living. There is a constant widening of the gap between power generation and demand for power. Though there is a strong correlation between level of income and energy consumption, power development strategies have not been fruitful so far The stimulus for economic development is to be found in continuous energy production and supply. Energy consumption and National income are

interrelated, and require providing a strong link between adequate energy supply and economic growth in developing countries like India. It is also clear that economic development and power sector development are interrelated and inter-dependent. A close link between energy consumption and national income in both cross-sectional time series data power sector implies that inadequate power generation and supply could inhibit the economic growth of the country.

The overall operational efficiency of the India Power Sector is explained below by using the following parameters.

A. Total Power sector at glance:

The total power production of the power sector in India is furnished below.

TABLE 1: POWER SECTOR AT GLANCE

Fuel	MW	%age
Total Thermal	93,332.64	64.6
Hydro (Renewable)	36,762.76	24.7
Nuclear	4,120.00	2.9
RES**(MNRE)	13242.41	7.7
Total	1,47,457.81	

Source: Annual reports of Ministry of Power

Table 1 clearly shows that in general the fuel for power production is divided into thermal, nuclear and hydro Mostly in India, the power generation is done by thermal way only and it is the highest say 93332.64MW

Financial performance evaluation is the examination and interpretation of a firm's financial positions and operations. It involves a comparison and interpretation of accounting data. It means analysis of past performance , financial position, liquidity position, future prospects for earnings, ability to pay interest and debt on maturity and profitability of an organization. It is the process of identifying the financial strengths and weakness of the firm by properly establishing relationship between the items of balance sheet and profit and loss account. Nevertheless, it refers to an assessment of the viability, stability and profitability of a business, sub-business or project. Financial analysis is a scientific tool which has assumed an increasingly important role in terms of appraising the real worth of an enterprise, its performance during a

period of time and its pitfalls. It helps in drawing out the complications of what is contained in the financial statements. It is performed by professionals who prepare reports using ratios that make use of information taken from financial statements and other reports. ***(Sudershan K. et al., 2008)***

IMPORTANCE OF FINANCIAL ANALYSIS-

1. To judge the operational efficiency of the business.

2. to calculate return on investment.

3.To indicating the trend of achievement.

4. To assess the growth potential of the business..

5.To measure the profitability.

6.To make intra firm and inter firm comparison of the performance.

7. Helps in forecasting, budgeting and deciding future line of action.

8. To pinpoints strength and weakness.

2. REVIEW OF LITERATURE

Performance of Indian Power Sector During A Decade Under Restructuring : A CRITIQUE by -***D . parameswara Sharma p.s. Chandramohanan 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 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.

The inhibitors to growth 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 systems demanded financial, political and other 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. Tow 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". ***(Singh P.k. 2003)***

Bawa et. al (1979) showed that the construction of optimal portfolio could be simplified by using simple ranking procedures when the return 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.

3. RESEARCH METHODOLOGY

3.1 OBJECTIVES OF THE STUDY-

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

3.2 SOURCES OF DATA

For this research data have been collected from different resourced like company's annual report. Journals and different websites.

3.3 TOOLS AND TECHNIQUES FOR DATA ANALYSIS

Different ratio's to know the profitability from many view points and presented I form of chart for better understanding .

4 . DATA ANALYSIS AND INTERPRETATION

4.1 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 figure that a fundamental analyst or value investor would considered before making an investment decision.

Table 2- Net Profit ratio

Year ⟶	2009	2010	2011	2012	2013	Average
NTPC	18.11	17.72	15.85	14.22	18.34	16.85

In the above table it can be concluded that in NTPC profit after tax is uneven 2009 to 2013.

Hypothesis

H0: 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 not same during the period of study.

ANOVA						
Source of variation	ss	df	MS	F	P-value	F crit
Between groups	868.41	4	217.1029	0.798443	0.540275	2.866081
Within Groups	5438.15	20	271.9079			
Total	6306.569	24				

The above table indicates the calculated value of 'F' The calculated value of 'F' is 0.789 which is less than the table value. The table value of 'F' at 5% level 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.

4.2 PROFITABILITY RATIOS

Gross profit ratio of NTPC has been in fluctuating trend during the study period. GPR was highest in the year 2015-16 (41.84%) and it was lowest in the year 2012-13 (38.09%) Operating profit ratio reveals declining operating efficiency of the company during the study period. In the

year 2010-11, it was 19.06% and it decreased to 7.68% in 2015-16. Besides, Net Profit Ratio of the company has been in decreasing trend during study period and reveals declining management's efficiency during study period and reveals declining management's efficiency of the company in operating the business successfully during study period. However, ROE showed a decreasing trend from 21.94% in the year 2010-11 to 5.11% in the year 2015-16. It is an indication of very low return on share holders equity. Return on assets (ROA) of the company indicates that the company has not utilized the assets efficiently during the study period. In the year 2010-11, it was maximum and reduced to minimum in 2015-16. Moreover, ROCE has in decreasing trend from 25.33% in 2010-11 to 6.68% in the year 2015-16 indicating decreasing profitability of the company.

Independent variables Liquidity Solvency Management efficiency Proxy measures Current ratio Inventory turnover ratio Dependent variable : Profitability (Proxy measures. ROE, ROA, ROCE)

Table 3- Profitability ratios (In percent) of NTPC

Year	GPR	OPR	NPR	ROE	ROA	ROCE
2010-11	41.01	19.06	16.82	21.94	11.01	25.33
2011-12	41.01	15.57	11.23	13.98	7.05	16.63
2012-13	38.09	11.15	8.11	10.05	5.05	11.24
2013-14	38.87	9.44	5.88	6.07	3.89	8.25
2014-15	41.02	6.85	6.65	6.44	3.66	7.85
2015-16	41.84	7.68	6.15	5.11	3.09	6.68

Abbreviations : GPR Gross Profit Ratio, OPR: Operating Profit Ratio, NPR Net Ratio. ROE Return on Equity . ROA Return on Assets ROCE Return on Capital Employed

4.3 LIQUIDITY RATIOS

Table 4 shows the liquidity ratios of NTPC. The standard current ratio is 2:1 but NTPC has a lower current ratio in the study period. The mean value of current ratio of NTPC was 1.57 times during the study period which indicates that the short term liquidity position of the company was not satisfactory from 2010-2016. However, mean value of liquid ratio is satisfactory (1.01 times) but the company should revise the liquidity position . So, far cash ratio is concerned; it was 1.24 times in 2010-11 and reduced to 0.09 times only 2015-16. It has also shown decreasing

trend over the period of study except in the year 2010-11.

Table 4- Liquidity Ratios of NTPC

Year	Current ratio	Liquid ratio	Cash ratio
2010-11	2.24	1.81	1.24
2011-12	1.62	1.09	0.82
2012-13	1.57	0.84	0.35
2013-14	1.31	0.59	0.21
2014-15	1.01	0.49	0.14
2015-16	0.91	0.34	0.09

4.4 SOLVENCY RATIO

Table 5 shows the solvency ratios of NTPC. Debt Equity ratio of NTPC has been than 1:1 during the study period. It indicates that total liabilities were higher than owners' equity, The average Debt Equity ratio was 1.18 times indicating that the company has been financially leveraged during study period. Moreover , interest coverage ratio of the company was highly satisfactory in the initials yeas. It was 1.15 in 201-11thereafter, it starts decreasing and reached to 2.89 in 2015-16. It indicated decreasing earning capacity and excessive use of debt during these year. It is a warning signal for the company that NTPC may not have the ability to offer assured payment of interest to the lenders in the future.

Table 5- Solvency ratios of NTPC

Year	DER	ICR	SR	CGR
2010-11	1.15	23.05	0.54	2.01
2011-12	1.19	14.02	0.55	3.88
2012-13	1.06	7.98	0.47	3.44
2013-14	1.04	4.91	0.51	3.01
2014-15	1.24	4.32	0.54	3.07
2015-16	1.35	2.89	0.61	3.11

Abbreviations: DER Debt Equity Ratio: ICR Interest Coverage Ratio SR Solvency Ratio. CGR: Capital Gearing Ratio

4. 5 MANAGEMENT EFFICIENCY RATIOS

Table 6 exhibits the management efficiency ratios of NTPC from 2010-11 to 2015-16. working capital turnover ratio has been in fluctuating trend during the study period. It was 2.26 in the year 2010-11 But WTR again starts increasing.

Table 6- Management Efficiency Ratios Of Ntpc From 2010-11 To 2015-16

Year	WTR	TATR	ITR	ARTR
2010-11	2.26	0.74	4.49	13.05
2011-12	3.02	0.71	4.41	11.84
2012-13	6.37	0.62	3.17	10.03
2013-14	4.49	0.57	3.38	11.02
2014-15	5.98	0.61	3.09	9.78
2015-16	5.82	0.49	3.01	11.06

Abbreviations: WTR Working Capital Turnover Ratio. TATR Total Assets Turnover Ratio. ITR Inventory Turnover Ratio ACTR Average Receivable Turnover Ratio

4.6 MARKET VALUATION RATIOS

Table 7 shows the market Valuation Ratios of NTPC from 2010-11 to 2015-16. Earnings per share of the Company was Rs 17.09 in 2010-11 and reduced to Rs. 5.57 in 2015-16. It was higher in the initial years of the study but lower in subsequent years. It is an indication of 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 operations. 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 these shows whether the funds entrusted to enterprise have been properly used or not.

Table 7- Market Valuation ratios of NTPC from 2010-11 to 2015-16

Year	**Earnings per share (in Rs.)**	**Price earning ratio (in times)**	**Market to book value ratio (in times)**
2010-11	17.09	15.38	3.87
2011-12	12.46	14.05	2.34
2012-13	9.00	11.10	1.11
2013-14	7.05	10.94	0.76
2014-15	6.59	11.14	0.86
2015-16	5.75	13.05	0.75

5. CONCLUSION

The profitability ratios show that overall profitability on NTPC has been positive during the study period. However, the profitability of NTPC has declined over the period of study. The gross profit margin of NTPC has been in fluctuating trend while the operating profit margin is much lower than the gross profit margin which shows increase in operating expenses during the study period. Besides, the short term solvency position or liquidly position of NTPC was not good as current ratio and quick ratio were lower than standard norms. Negative working capital in last year of study indicates more current liabilities than current assets. Therefore, it can be conclude that liquidity position of NTPC deteriorated during the study period. Nevertheless Long term solvency position of NTPC has been satisfactory from 2007. 16. The overall debt equity capital indicating that NTPC is exploring the trading on equity advantages but because of declining profit to cover its financial charges but proper attention is required in this area. The management efficiency of NTPC has declined indicating that NPTC has not been able to utilize the resources effectively. Decline in account receivable turnover ratio brought the conclusion that debtors management of NTPC has weaken over the study period. Market valuation of NTPC. has weaken over the study period. Market valuation of NTPC has decline over the period of study. Finding of the study brought the conclusion that overall financial performance of NTPC was satisfactory during initial years of the study but deteriorated in later years.

6. SUGGESTIONS

On the basis of the findings of study, following suggestions are offered to improve the financial performance of NTPC

1. Current ratio of NTPC indicates poor liquidity position the company and it is suggested that the company must reduce the amount of current liabilities and/ or increase the amount of current assets up to a reasonable level.

2. The debt to equity position of the company has been satisfactory. It is suggested that NTPC should reduce debt burden in order to avoid financial distress.

3. NTPC has not been able to efficiently use the increase in inventory stock over the period of the study. It is suggested that the level of inventory should be fixed up scientifically in order to avoid the problem under-stocking and over stocking.

4. The operating expense ratio of NTPC indicated decline in the operational efficiency of management and rise in the operational expense over the period of study. It is advised that NTPC should reduce its operating expenses by focusing on cost management and improving operational efficiency.

5. The operating profit margin and net profit margin of NTPC have been much lesser than gross profit margin indicating higher operating cost. It is suggested to reduce operating expenses to improve the profitability.

7. LIMITATIONS OF THE STUDY

The study is based on annual financial reports and therefore the results and findings are subject to all limitations inherent in the published financial reports. Besides, the study is limit to a period of ten year only. The study covered only one company and therefore the findings may not be applicable to other companies as a whole.

8. ACKNOWLEDGEMENT

This an original work of the authors and any references and work uplifted in part or in whole is genuinely stated productive ideas and suggestions from persons are welcomed and appreciated Any errors and omissions are our own.

REFERENCES

1. Fatima N (2011) performance Appraisal of Paper industry in India A Case Study of Some Selected Paper Mills

2. D . parameswara Sharma p.s. Chandramohanan Nair and R. Balasubramanian (2009) Financial Performance of The Paper Mills in Tamil Nadu.

3. Joshi SM (2008) Financial Performance Appraisal of Selected Engineering companies in Gujarat .

4. Debasish SS (2006) Efficiency Performance in Indian Banking-Use of Data Envelopment Analysis Global Business review 7:325-333

5. MuthumoneA (2008) A study on the performance Appraisal of Indian Automobile Industry .

6. Sudershan K. Venkata Reddy M. Akbar Ali Khan M (2008) Financial Performance of Domestic and Foreign Owned Companies in India Journal of Asia Pacific Business 9:28-54

7.Singh Pk (2003) Financial Appraisal of IDBI bank ltd. Through Financial Indicators. The Management Accountant 38: 425-433

8. Bawa. (1979). Financial Performance Appraisal of Paper Industry in India A Study of Selected Paper Mills International Journal of Multidisciplinary Research and Development 2: 69-72