

## Financial Performance Evaluation of National Thermal Power Corporation Limited (NTPC)

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### 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 performance evaluation is to give 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 2006-07 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.

**Keywords:** Liquidity; Solvency; Efficiency; Multiple regression; Profitability; NTPC

### Introduction and Literature Review

#### Introductory background

The word performance is derived from the word 'parfourmen', which means 'to do', 'to carry out' or 'to render'. The dictionary meaning of performance refers to "achievement". It refers the act of performing, execution, accomplishment, fulfillment, etc. In broader sense, performance refers to the accomplishment of a given task measured against preset standards of accuracy, completeness, cost, and speed [1]. Performance of an enterprise is evaluated on financial and non-financial grounds. So far financial performance is concerned; it is understood in terms of various financial ratios, which are divided as profit performance measures and investment performance measures. However, non-financial measures include a range of indicators with orientation of customers, growth, and value to the community and societies [2]. In the present work, financial performance of NTPC has been evaluated with the help of certain ratios.

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 [3]. 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 [4]. It is the process of identifying the financial strengths and weakness of the firm by properly establishing relationships between the items of balance sheet and profit and loss account [5]. 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 [6].

#### 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 achievements.
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 strengths and weakness.

#### Literature review

Singh [7] examined the liquidity position of IDBI Bank since 1997 to 2001 and found that the financial position of the bank in the last five years remained satisfactory. Sami and Khan [8] in their study entitled, "Financial Performance Appraisal of Paper Industry in India: A Study of Selected Paper Mills" investigated the financial performance of paper industries namely Ballarpur Industries Limited (BILT) and Tamil Nadu Newsprint and Papers Limited (TNPL) with the application of independent sample t-test. The findings showed significant differences in gross profit, net profit, current ratios, quick ratios and debt equity ratios in BILT and TNPL. Khan and Dalayeen [9] in their research paper entitled, "Financial Performance of Cement Companies- A Critical Appraisal" evaluated the financial performance of Indian cement companies like UltraTech Cement, Shree Cement, Ambuja Cements Limited, Associate Cement Companies Limited

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(ACC), and Ramco Cements. Data were collected from the annual reports of the cement companies since 2005-06 to 2014-15 and analyzed by applying one way ANOVA as the statistical tool. The study revealed significant differences in gross profit ratios, net profit ratios, current ratios, quick ratios, and debt equity ratios of the cement companies under study. Yameen and Pervez [10] in the study titled, "Impact of Liquidity, Solvency and Efficiency on Profitability of Steel Authority of India Limited" analyzed the financial performance of Steel Authority of India Limited for a period of ten years from 2005 to 2014 using various financial ratios. The analysis revealed that there was a decline in the financial performance of SAIL during the study period. Ahmad [11] analyzed the financial performance of Hindustan Petroleum Corporation Limited for a period of fifteen years from 2000-01 to 2014-15 with the help of liquidity, solvency and efficiency ratio. The researcher used multiple regression analysis for measuring the impact of liquidity, solvency and efficiency on return on investment. The findings showed that liquidity, solvency and efficiency ratios have no significant impact on the financial performance of Hindustan Petroleum Corporation Limited.

## Objectives, Hypotheses and Methodology

### Objectives of the study

1. To evaluate the impact of liquidity on profitability of NTPC.
2. To investigate the impact of solvency on profitability of NTPC.
3. To analyze the impact of management efficiency on profitability of NTPC.
4. To provide requisite suggestions to improve the financial performance of NTPC.

### Hypotheses of the study

**There is no significant impact of liquidity on profitability of NTPC**

1. There is no significant impact of current ratio on Return on Capital Employed.
2. There is no significant impact of current ratio on Return on Assets.
3. There is no significant impact of current ratio on Return on Equity.

**There is no significant impact of solvency on profitability of NTPC**

1. There is no significant impact of debt to equity ratio on Return on Capital Employed.
2. There is no significant impact of debt to equity ratio on Return on Assets.
3. There is no significant impact of debt to equity ratio on Return on Equity.

**There is no significant impact of management efficiency on profitability of NTPC**

1. There is no significant impact of inventory turnover ratio on Return on Capital Employed.
2. There is no significant impact of inventory turnover ratio on Return on Assets.

3. There is no significant impact of inventory turnover ratio on Return on Equity.

### Research methodology

Analytical research design has been used in the present study. The study covers a period of ten years from 2006-07 to 2015-16. Data of NTPC were collected from various published annual reports and financial statements of NTPC. The variables incorporated in the present study are financial ratios. Various financial ratios under the categories of liquidity, profitability, management efficiency, solvency and market valuation have been calculated and analyzed. The present study employed a multi-regression technique to analyze the impact of liquidity, solvency and management efficiency on profitability of NTPC (Table 1).

**Regression models:** Multiple regression has been used to estimate the regression line. Following models have been estimated on data of NTPC during the financial period 2005-06 to 2014-15.

$$ROCE_t = \beta_0 + \beta_1 CR_t + \beta_2 DER_t + \beta_3 ITR_t + e$$

$$ROA_t = \beta_0 + \beta_1 CR_t + \beta_2 DER_t + \beta_3 ITR_t + e$$

$$ROE_t = \beta_0 + \beta_1 CR_t + \beta_2 DER_t + \beta_3 ITR_t + e$$

Where,  $ROCE_t$  = Return on Capital Employed at time t (Profitability)

$ROA_t$  = Return on Assets at time t (Profitability)

$ROE_t$  = Return on Assets at time t (Profitability)

$CR_t$  = Current Ratio at time t (Liquidity)

$DER_t$  = Debt to Equity Ratio at time t (Solvency)

$ITR_t$  = Inventory turnover ratio at time t (Efficiency)

$\beta_0$  = Intercept.

$\beta_1 - \beta_3$  = Coefficients of the explanatory variables.

$e$  = stochastic error term at time t.

### Analysis of Ratios

#### Profitability ratios

Gross profit ratio of NTPC has been in fluctuating trend during the study period. GPR was highest in the year 2007-08 (46.11%) and it was lowest in the year 2009-10 (37.01%). Operating profit ratio reveals declining operating efficiency of the company during the study period. In the year 2007-08, it was 18.94% 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 of the company in operating the business successfully during study period. However, ROE showed a decreasing trend from 37.05% in the year 2007-08 to 5.11% in the year 2015-16. It is an indication of very low return on shareholders' 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 2007-08, it was maximum and reduced to in 2015-16. Moreover, ROCE has been in decreasing trend from 36.15% in 2006-07 to 6.68% in the year 2015-16 indicating decreasing profitability of the company except the year 2008 in which it was 42.01% (Table 2).

Independent variables	Liquidity	Solvency	Management efficiency
Proxy measures	Current ratio	Debt-equity ratio	Inventory turnover ratio
Dependent variable: Profitability [Proxy measures: ROE, ROA, ROCE]			

Table 1: Data of NTPC.

Year	GPR	OPR	NPR	ROE	ROA	ROCE
2006-07	39.41	13.02	14.58	37.05	14.11	36.15
2007-08	46.11	18.94	18.64	41.69	17.84	41.92
2008-09	44.43	18.88	19.08	38.49	15.89	34.52
2009-10	37.01	10.86	14.11	23.97	11.95	25.63
2010-11	41.05	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 Profit Ratio; ROE: Return on Equity; ROA: Return on Assets; ROCE: Return on Capital Employed.

**Table 2:** Profitability ratios (in percent) of NTPC.

Year	Current ratio	Liquid ratio	Cash ratio
2006-07	1.57	1.11	0.89
2007-08	2.02	1.51	1.09
2008-09	2.01	1.54	1.05
2009-10	1.99	1.59	1.11
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

**Table 3:** Liquidity ratios of NTPC.

### Liquidity ratios

Table 3 shows the liquidity ratios of NTPC. The standard current ratio is 2:1 but NTPC has a lower current ratio in the study period except from 2008-2011. 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 2007-2016. The liquid ratio of NTPC was better from 2007 to 2012 but it starts decreasing in later years. 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 1.09 times in 2008-09 and reduced to 0.09 times only in 2015-16. It has also shown decreasing trend over the period of study except in the year 2010-11 when it was 1.24 times.

### Solvency ratio

Table 4 shows the solvency ratios of NTPC. Debt-Equity ratio of NTPC has been more than 1:1 during the study period except for the years 2008-09 and 2011-12. 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 initial years. It was 13.05 times in the year 2006-07 and increased to 46.11 times in the year 2008-09. Thereafter, it starts decreasing and reached to 2.89 in 2015-16. It indicates decreasing earning capacity and excessive use of debt during these years. 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.

### Management efficiency ratios

Table 5 exhibits the management efficiency ratios of NTPC from 2005-06 to 2014-15. Working capital turnover ratio has been in fluctuating trend during the study period. It was 7.05 times in 2006-07 and declined to 2.26 in the year 2010-11. But, WTR again starts

Year	DER	ICR	SR	CGR
2006-07	1.44	13.05	0.62	2.86
2007-08	1.52	29.09	0.54	3.79
2008-09	1.27	46.11	0.58	6.01
2009-10	0.99	37.19	0.51	3.39
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

**Table 4:** Solvency ratios of NTPC.

Year	WTR (in times)	TATR (in times)	ITR (in times)	ARTR (in times)
2006-07	7.05	0.98	5.59	15.29
2007-08	4.04	1.01	5.61	17.01
2008-09	3.25	0.84	6.04	15.59
2009-10	3.01	0.89	5.44	14.88
2010-11	2.26	0.74	4.49	13.05
2011-12	3.02	0.71	4.41	11.84
2012-13	4.49	0.57	3.87	11.02
2013-14	6.37	0.62	3.17	10.03
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

**Table 5:** Management efficiency ratios of NTPC from 2006-07 to 2015-16.

increasing in coming years since it was 5.82 times in 2015-16. It indicates a very low maintenance of working capital during last years of the study. Besides, total assets turnover ratio was 1.01 in 2007-08 and reduced to 0.49 times in 2015-16. It indicates that the management efficiency has decreased during the study period and NTPC has not been able to increase the sale with increase in the assets. Notwithstanding, inventory turnover ratio has been in decreasing trend from 6.04 times (2008-09) to 2.82 times in 2015-16. It documents that the company has not been able to use the increase in inventory stock efficiently over the study period.

### Market valuation ratios

Table 6 shows the market Valuation Ratios of NTPC from 2006-07 to 2015-16. Earnings per share of the Company was Rs 15.85 in 2007-08 and reduced to Rs 5.75 in 2015-16. It was higher in the initial years of the study but lower in subsequent years. It is an indication of

low return per share of the company. A lower ratio is the indication of the lower capacity of the concern to pay dividend to its equity shareholders. Moreover, Price-Earnings ratio of NTPC has been in decreasing trend from 2010-11 (13.98 times) to 2013-14 (11.12 times) indicating negative future expectations of investors during this period. The market value to book value ratio was higher during the initial years of the study indicating that the investors were ready to pay more than book value per share. However, MBR has been less than one from the year 2014-15 to 2015-16 (0.64 times) indicating that investors were willing to pay less than book value per share.

### Hypothesis Testing

Table 7 highlights the correlation matrix. It shows correlation coefficients of dependent and independent variables. ROCE is positively and highly correlated with ROE and ROA since they are the measures of profitability. Furthermore, ROCE is highly correlated with current ratio, inventory turnover ratio. However, ROCE is not significant correlated with debtors turnover ratio. Besides, ROE is

Year	Earnings per share (in rs.)	Price earnings ratio (in times)	Market to book value ratio (in times)
2006-07	10.01	8.79	3.69
2007-08	15.85	7.81	3.74
2008-09	19.07	10.14	4.66
2009-10	15.85	6.77	1.89
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

Table 6: Market valuation ratios of NTPC from 2006-07 to 2015-16.

	ROCE	ROE	ROA	CR	ITR	DER
ROCE	1					
ROE	0.776*	1				
ROA	0.944*	0.807*	1			
CR	0.811*	0.854*	0.776*	1		
ITR	0.914*	0.892*	0.968*	0.819*	1	
DER	0.604	0.743	0.551	-0.014	0.413	1
2012-13	9.00	11.10	1.11			
2015-16	5.75	13.05	0.75			

\*Correlation is significant at the 0.05 level (2-tailed)

Table 7: Correlation matrix.

R square	Adjusted R square	Standard error	Durbin watson	ANOVA (Model fitness)	
				F-value	p-Value
0.936	0.904	1.3641	2.0074	289.451	0.006

Table 8: Model summary-ROCE.

Independent variables	Regression coefficients	Standard error	t-Statistics	p-Value
(Constant)	0.857124	1.6742	-1.561	0.000
Current ratio	0.098064	0.8424	4.874	0.785
Debt equity ratio	0.317638	0.5133	-13.340	0.0008
Inventory turnover ratio	0.040868	0.4785	11.223	0.459

Dependent variable: ROCE

Table 9: Multiple linear regression analysis.

R square	Adjusted R square	Standard error	Durbin watson	ANOVA (Model fitness)	
				F-value	p-Value
0.864	0.805	1.7665	2.14045	377.465	0.000

Table 10: Model summary-ROA.

again significantly correlated with current ratio, inventory turnover ratio but not with debtors turnover ratio. So, far correlation of ROA is concerned; it is also highly correlated with current ratio, inventory turnover ratio but not with debtors turnover ratio.

Table 8 exhibits the value of adjusted R square, Durbin Watson, and results of ANOVA. The value of adjusted R square is 0.904 which means 90.4 percent variation in ROCE is explained by current ratio, debt equity ratio, inventory turnover ratio and rest of the variation (1-R<sup>2</sup>) is an unexplained variation due to variables that has not been considered in this model. Besides, ANOVA shows the model fitness. The F value is 289.451 and p value is 0.006 (P<0.05). It means that the overall regression model is accurate and validated.

Table 9 shows the results of multiple linear regression analysis. ROCE is dependent variable whereas current ratio, debt equity ratio, inventory turnover ratio are independent variables. Firstly, current ratio has positive impact on ROCE since the unstandardized beta coefficient is 0.098064. It indicates that for everyone unit change in current ratio, there will be 0.098 unit change in ROCE. However, its regression coefficient is statistically insignificant at 5% level of significance (P>0.05). Therefore, H<sub>01.1</sub> is accepted. Secondly, the unstandardized beta coefficient of debt equity ratio is 0.317638 which indicates that one unit change in debt equity ratio will bring 0.31-unit change in ROCE. Further, its regression coefficient is statistically significant at 5% level of significance (P<0.05). Therefore, H<sub>02.1</sub> is rejected. Thirdly, inventory turnover ratio (ITR) has significant positive relationship with return on capital employed at 5% level of significance. The unstandardized beta coefficient value of inventory turnover ratio is 0.068968 which highlights that for one unit change in ITR, there is 0.07 unit change in ROCE. The regression coefficient of ITR is statistically insignificant at 5% level of significance (P>0.05) meaning thereby H<sub>03.1</sub> is accepted. Hence, it can be said that there is no significant impact of current ratio and inventory turnover ratio on Return on Capital Employed. On the contrary, debt to equity ratio has significant impact on Return on Capital Employed.

Table 10 exhibits the value of adjusted R square, Durbin Watson, and results of ANOVA. The value of adjusted R square is 0.805 which means 80.5 percent variation in ROA is explained by current ratio, debt equity ratio, inventory turnover ratio and rest of the variation (1-R<sup>2</sup>) is an unexplained variation due to variables that has not been considered in this model. Besides, ANOVA shows the model fitness. The F value is 377.465 and p value is 0.000 (P<0.05). It means that the overall regression model is accurate and validated.

Table 11 shows the results of multiple linear regression analysis. ROA is dependent variable whereas current ratio, debt equity ratio, inventory turnover ratio are independent variables. Firstly, current ratio has positive impact on ROA since the unstandardized beta coefficient is 0.028337. It indicates that for everyone unit change in current ratio, there will be 0.028 unit change in ROA. However, its regression coefficient is statistically insignificant at 5% level of significance ( $P>0.05$ ). Therefore,  $H_{01.2}$  is accepted. Secondly, the unstandardized beta coefficient of debt equity ratio is 0.185508 which indicates that one unit change in debt equity ratio will bring 0.18 unit change in ROA. Further, its regression coefficient is statistically significant at 5% level of significance ( $P<0.05$ ). Therefore,  $H_{02.2}$  is rejected. Thirdly, inventory turnover ratio (ITR) has significant positive relationship with return on assets at 5% level of significance. The unstandardized beta coefficient value of inventory turnover ratio is 0.089548 which highlights that for one unit change in ITR, there is 0.08 unit change in ROA. The regression coefficient of ITR is statistically insignificant at 5% level of significance ( $P>0.05$ ) meaning thereby  $H_{03.2}$  is accepted. Hence, it can be said that there is no significant impact of current ratio and inventory turnover ratio on Return on assets. On the contrary, debt to equity ratio has significant impact on Return on assets.

Table 12 exhibits the value of adjusted R square, Durbin Watson, and results of ANOVA. The value of adjusted R square is 0.833 which means 83.3 percent variation in ROE is explained by current ratio, debt equity ratio, inventory turnover ratio and rest of the variation ( $1-R^2$ ) is an unexplained variation due to variables that has not been considered in this model. Besides, ANOVA shows the model fitness. The F value is 559.472 and p value is 0.004 ( $P<0.05$ ). It means that the overall regression model is accurate and validated.

Table 13 shows the results of multiple linear regression analysis. ROE is dependent variable whereas current ratio, debt equity ratio, inventory turnover ratio are independent variables. Firstly, current ratio has positive impact on ROE since the unstandardized beta coefficient is 0.081437. It indicates that for everyone unit change in current ratio, there will be 0.081 unit change in ROE. However, its regression coefficient is statistically insignificant at 5% level of significance ( $P>0.05$ ). Therefore,  $H_{01.3}$  is accepted. Secondly, the unstandardized beta coefficient of debt equity ratio is 0.251081 which indicates that one unit change in debt equity ratio will bring 0.251 unit change in ROE.

Further, its regression coefficient is statistically significant at 5% level of significance ( $P<0.05$ ). Therefore,  $H_{02.3}$  is rejected. Thirdly, inventory turnover ratio (ITR) has significant positive relationship with return on equity at 5% level of significance. The unstandardized beta coefficient value of inventory turnover ratio is 0.040148 which highlights that for one unit change in ITR, there is 0.04 unit change in ROE. The regression coefficient of ITR is statistically insignificant at 5% level of significance ( $P>0.05$ ) meaning thereby  $H_{03.3}$  is accepted. Hence, it can be said that there is no significant impact of current ratio and inventory turnover ratio on Return on equity. On the contrary, debt to equity ratio has significant impact on Return on equity.

## Conclusion, Suggestions, and Limitations of the Study

### Conclusion

The profitability ratios show that overall profitability of 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 liquidity 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 concluded 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 ratio indicates that company has more debt capital than equity capital indicating that NTPC is exploring the trading on equity advantages but because of declining profit and increase in interest charges, interest coverage of NTPC has decline. Although, NTPC is earning enough profit to cover its financial charges but proper attention is required in this area. The management efficiency of NTPC has declined over the study period. Asset turnover ratio of NTPC has declined indicating that NTPC has not been able to utilize the resources effectively. Decline in inventory turnover ratio indicates that increased stock could not be used to increase the sale. 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 decline over the period of study. Findings of the study brought the conclusion that overall financial performance of

Independent variables	Regression coefficients	Standard error	t-Value	p-Value
(Constant)	0.68324	1.2542	-7.561	0.000
Current ratio	0.028337	0.6874	4.874	0.554
Debt equity ratio	0.185508	0.4563	3.340	0.0068
Inventory turnover ratio	0.089548	0.3278	-1.223	0.327

Dependent variable: ROA

Table 11: Multiple linear regression analysis-ROA.

R square	Adjusted r square	Standard error	Durbin watson	ANOVA (Model fitness)	
				F Value	P Value
0.879	0.833	2.1463	2.2208	559.472	0.004

Table 12: Model summary-ROE.

Independent variables	Regression coefficients	Standard error	t Value	P Value
(Constant)	0.743692	2.1489	-1.587	0.000
Current ratio	0.081437	1.8976	11.246	0.309
Debt equity ratio	0.251081	0.9443	6.555	0.000
Inventory turnover ratio	0.040148	0.7845	11.789	0.785

Dependent variable: ROE

Table 13: Multiple linear regression analysis-ROE.

NTPC was satisfactory during initial years of the study but deteriorated in later years [12].

### 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 of 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 expenses 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.

### 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 limited to a period of

ten years only. The study covered only one company and therefore the findings may not be applicable to other companies as a whole.

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This is 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. Subramian T (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. Muthumoni A (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. Sami L, Khan A (2015) Financial Performance Appraisal of Paper Industry in India: A Study of Selected Paper Mills. *International Journal of Multidisciplinary Research and Development* 2: 69-72.
9. Khan A, Dalayeen BO (2016) Financial Performance of Cement Companies: A Critical Appraisal. *Research Journal of Finance and Accounting* 7: 53-56.
10. Yameen M, Pervez A (2016) Impact of Liquidity, Solvency and Efficiency on Profitability of Steel Authority of India Limited. *International Journal of Research in Management, Economics and Commerce* 6: 25-31.
11. Ahmad I (2016) Analysis of Financial Performance of Hindustan Petroleum Corporation Limited. *IJRMEC* 6: 1-14.
12. Khan A (2016) Profitability of Textile Industry in India: An Analytical Study. *Indian Streams Research Journal* 6: 1-11.