



MEASURING THE FINANCIAL SUSTAINABILITY OF NATIONAL THERMAL POWER CORPORATION LTD- NEW DELHI BY USING Z - SCORE MODEL

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Abstract

Monetary proportions are investigation devices, connected to money related information, which are utilized to distinguish positive and negative patterns, qualities and shortcomings, venture properties, budgetary wellbeing and different patterns, which measure the suitability of the business. No single proportion count can give a significant finish photo of an organization's budgetary position. Remembering the above point, this investigation utilizes 'Z' – score show, which catches the predicate suitability of an organization's money related wellbeing by utilizing a blend of monetary proportions that eventually predicts a score, which are utilized to decide the budgetary soundness of an organization. NTPC is such an interesting organization which demonstrated its profound steered involvement and responsibility for the welfare of the nation men on a major a scale it has obvious focus of enhancing the way of life of a huge number of natives of India's and in this way this industry is in forward with a pennant of accomplishment and financial flourishing.

Keywords; Shortcomings; Venture Properties; Budgetary; Flourishing.

Introductions

Power is a standout amongst the most vital contributions to worldwide financial exercises, power has the ability to do work, is the "life blood of present-day economy" as each person utilizes it in one shape or the other every day and power utilize lies as a center of current society. The Indian economy is in the direction of upward development, and to keep up the energy of this development accessible of continuous, control supply is fundamental. As a developing economy, India just requires to lights, as well as necessities power to fuel the development of each industry, be it huge scale or little scale, assembling, medicinal services or instruction. The majority of this effects the monetary development of the country and it doesn't end here it is one of those key parts that encourages our everyday life. In the present world power largely affects human life. Indian power part is experiencing a huge change that has re-imagined the business standpoint. Managed financial development keeps on driving power request in India. The Government of India is center around achieving "Power for All" has quickened limit expansion in the nation. Interest for power in a developing economy originates from assorted divisions, for example, farming, industry, business, transport and private. The improvement of aggregate people and financial standard expands the utilization of power. Indian economy is maturing at a rate of more than 8 for every penny for each annum. To keep up this advancement, it is basic to have a solid power framework to help it, yet absence of energy will make development unsustainable. Be that as it may, in India the request and supply hole is augmenting; where request is more than supply.

Profile of the NTPC

NTPC Limited (National Thermal Power Corporation Limited) is an Indian Central Public Sector Undertaking (CPSU) under the Ministry of Power, Government of India, possessed with the matter of age of energy and related activities. It is an association joined under the Companies Act 1956 and an "Administration Company" inside the significance of the demonstration. The headquarters of the association is masterminded at New Delhi. NTPC's middle business is age and offer of energy to state-asserted control allocation associations and State Electricity Boards in India. The association similarly grasps consultancy and turnkey expand understands that incorporate building, broaden organization, improvement organization and task and organization of power plants.

Review of Literature

Mansur. A Mulla, (2002) "Utilization of Z score investigation for Evaluation of money related strength of Textile Mills-A contextual analysis", in his article made an examination in Textile plant with the assistance of Z score demonstrate for assessing the budgetary wellbeing with five weighted monetary proportions.

Selvam, M., Vanitha, S., and Babu (2004), " An examination on monetary strength of concrete industry-"Z score investigation" had uncovered about Cement industry's money related wellbeing with uncommon reference to India Cements Limited.

Krishna Chaitanya V (2005), "Estimating Financial Distress of IDBI Using Altman Z – Score Model" have considered monetary examination utilized Z model to gauge the money related trouble of IDBI and inferred that IDBI is probably going to end up indebted in the years to come.



M. Kannadhasan (2007) influenced an endeavor to have a knowledge into the examination of money related wellbeing of a watch to organization in India. To assess the budgetary conditions and execution of an organization, this examination utilized the Z-score show, which caught the prescient suitability of an organization's budgetary wellbeing by utilizing a mix of money related proportions that eventually anticipated a score, which can be utilized to decide.

Objectives of The Study

The study attempts to assess the financial health of the National Thermal Power Corporation in terms of Retained Earnings to Total Assets, Net working capital position, Equity and Debt position, Return on Total assets position, and Net sales turnover position of the company.

Research Methodology

Research methodology is a comprehensive approach to solving a research problem very systematically and scientifically. For a researcher, it is not just imperative to know the different methods or techniques of research, but also the researcher is supposed to know how and when a particular method or technique is to be used. Considering all the facts, the researcher has developed research methodology, which is very appropriate to the research study.

The study is based on secondary data and the auxiliary information is gathered from the published Annual Reports and also from official websites of the corporation. The National Thermal Power Corporation is one of the leading power companies of India. It occupied first rank in 2017 among the Indian power producing companies and so the researcher has purposively selected a financial sustainability of National Thermal Power Corporation Ltd for the study.

Keeping the above point in mind, this study uses 'Z' – score model, which captures the predicate viability of a company's financial health by using combination of financial ratios that ultimately predicts a score, which are used to determine the financial health of a company.

Measuring Financial Health Through 'Z'score

Z=1.2X1+1.4X2+3.3X3+0.6X4+1.0X5

Where;

- Z= discriminate function score of a firm
X1= Working Capital/ Total Assets
X2= Retained Earning/ Total Assets
X3= Earnings Before Interest and Taxes/ Total Assets
X4= Market Value of Equity/ Book Value of Liabilities
X5= Sales/ Total Assets

Altman guidelines the overall financial health of Reliance Group of Industries is measured during the study period with the Z score ingredients of X1, X2, X3, X4, and X5. The overall efficiency achieved by the companies in the management of working capital. Working capital turnover ratio indicates the velocity of utilization of net working capital.

Altaman Guidelines

Table with 4 columns: Situation, Z - Score, Zones, Remark. It details three financial health zones: I (Not Healthy), II (Healthy), and III (Too Healthy).



Empirical Analysis of National Thermal Power Corporation Limited

Table No 1
Working capital to total assets (X1) of NTPC

Year	Working capital	Total Assets	Ratio in times
2012-13	18093.13	178710.58	0.10
2013-14	14720.48	200039.93	0.07
2014-15	5845.34	205746.81	0.03
2015-16	-5533.5	224571.12	-0.02
2016-17	-8544.5	248497.36	-0.3
Mean			-0.02

Source: Compiled by researcher from the Annual Reports of NTPC

The above Table No 1 express the relationship between the working capital and total assets of the NTPC for the research period. It clearly shows that the ratios are decreasing all over the study period however, it was negative during 2015-16 and 2016-17. The mean value of the working capital to total assets ratio was -0.02 times. The working capital of the NTPC was decreasing simultaneously the current ratio reflected in the table. The low net working capital to total assets ratio shows the inability to match its account payable obligations on time, and it also indicate the low turnover of current assets.

Table No 2
Retained Earnings to Total Assets (X2) of NTPC

Year	Retained Earnings	Total Assets	Ratio in times
2012-13	7096	178710.58	0.04
2013-14	5429	200039.93	0.03
2014-15	7812	205746.81	0.04
2015-16	6922	224571.12	0.03
2016-17	5062	248497.36	0.02
Mean			0.03

Source: Compiled by researcher from the Annual Reports of NTPC

The above Table No 2 exhibits the relationship between the Retained Earnings to Total Assets of the NTPC. During the study period it was clear from the above analysis that the ratios are fluctuating, and it was recorded low 0.02 times in 2016-17. The mean value of the ratios was 0.03 times.

Table No 3
EBIT to Total Assets (X3) of NTPC

Year	EBIT	Total Assets	Ratio in times
2012-13	16610.95	178710.58	0.09
2013-14	14485.76	200039.93	0.07
2014-15	10456.21	205746.81	0.05
2015-16	10103.54	224571.12	0.04
2016-17	13760.55	248497.36	0.05
Mean			0.06

Source: Compiled by researcher from the Annual Reports of NTPC

The Table No 3 reveals the ratio of EBIT to Total Assets of the NTPC. It was observed from the above table that the ratios are unsustainable trend all over the study period. It was recorded highest in 2012-13 at 0.09 and it was low in 2015-16 at 0.04, and the mean value of the EBIT to Total Assets was 0.06.



Table No 4
Value of Equity to Total liabilities (X4) of NTPC

Year	Equity value	Total liabilities	Ratio in times
2012-13	81270.95	58146	1.40
2013-14	87003.49	67170	1.30
2014-15	84855.63	85995	0.98
2015-16	92368.88	91828	1.01
2016-17	98641.28	103840	0.95
Mean			1.13

Source: Compiled by Researcher from the Annual Reports of NTPC

The Table No 4 indicates the relationship between the Equity to Total liabilities of the NTPC during the study period. It was clear from the above analysis that the ratios are decreasing trend except the year 2015-16. The ratio was recorded highest in 2012-13 at 1.40 and it was lowest in 2016-17 at 0.95 and the mean value of the ratio was 1.13.

Table No 5
Sales to Total Assets (X5) of NTPC

Year	Sales	Total Assets	Ratio in Times
2012-13	72669.65	178710.58	0.40
2013-14	79619.15	200039.93	0.39
2014-15	81356.92	205746.81	0.39
2015-16	79545.42	224571.12	0.35
2016-17	82080.82	248497.36	0.33
Mean			0.37

Source: Compiled by Researcher from the Annual Reports of NTPC

The above Table No 5 shows the relationship between the Sales to Total Assets of the NTPC during the study period. It was observed from the table no 5 that the ratio is constant for 2 years i.e., from 2013-14 and 2014-15 at 0.39, however the ratio is decreasing throughout the study period. It was recorded highest in 2012-13 at 0.40 and it was lowest in 2016-17 at 0.33. the mean value of the ratio was 0.37 times.

Table No 6
NTPC of X in “Z” Score Ingredients

Ingredients	Financial Ratios	2012-13	2013-14	2014-15	2015-16	2016-17	Mean
X1	WC/TA	0.10	0.07	0.03	-0.02	-0.3	-0.02
X2	R E/TA	0.04	0.03	0.04	0.03	0.02	0.03
X3	EBIT/TA	0.09	0.07	0.05	0.04	0.05	0.06
X4	Equity/Liabilities	1.40	1.30	0.98	1.01	0.95	1.13
X5	Sales/ TA	0.40	0.39	0.39	0.35	0.33	0.37
Z Score	---	2.03	1.86	1.49	1.41	1.05	1.57

The above Table No 6 shows the ‘Z’ score ingredients of the National; Thermal Power Corporation limited. It is concluded that for determining the financial health of the corporation, the study used the ‘Z’ score model, which provides the financial soundness of the business and a road map outlining the direction in which the business is heading. As per the Altman’s guidelines, the Z- score value of the NTPC was 1.05, and the score was not healthy zone. The average z-score value throughout the study period was 1.57, the average score in not healthy zone. Hence the researcher concludes that the NTPC is suffering through financially, so the company has to work out on these parameters of the financial check to sustain the next coming years.

Results and Discussion

It has been seen from the analysis that the working capital of the national thermal power corporation limited was below the standard during the study period. Whereas, the total assets of the corporation were increasing throughout the study period, which shows that the company more concentrated on the investment in fixed assets. The efficiencies of NTPC in the matter of working



capital management helps the company to maintain the better financial health, but the same was recorded not effective and it was not sound during study period.

Conventionally, the retained earnings to total assets ratio of the NTPC reveals that the ratio was average close to 0.03 times which implies that the growth has been financed by debt, not even by retained earnings. The researcher concludes that the management of the NTPC should take adequate steps to improve the ratio in order to avoid the bankruptcy in future.

The operational performance and the earning power could be assessed by EBIT to total Assets, which leads to the analysis of business success or failure. During the study period the ratio are decreasing except 2016-17 and it was averagely recorded 0.06 times.

The sales and Total Assets ratio show decreasing trend, averagely recorded 0.37 times of the NTPC. It shows that the company has the capacity to increase their sales over period but not to the desired level. The researcher has concluded that the overall performance of the National thermal power corporation limited was not good, so the researcher suggests that the company should maintain adequate policy in terms of working capital, sales and investments.

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List of Abbreviations

CPSU : Central Public Sector Undertaking
EBIT : Earning Before Interest and Tax
NTPC : National Thermal Power Corporation Limited
TA : Total Assets
WC : Working Capital

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