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A STUDY OF THE FINANCIAL HEALTH PERTAINING TO SELECT INDIAN CPSE's - WITH SPECIAL REFERENCE TO SAIL, NTPC AND ONGC (1997 TO 2015)

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ABSTRACT

Public Sector Enterprises had been set up in the post-independent era in the core and strategic sectors of steel, heavy industries, power, coal, fertilizers etc. In this context, this paper tries to analyse the performance of select CPSE's against the backdrop of liberalization measures especially during the second generation reform period (i.e.) fag end of 2000 to 2015. The paper is with respect to the financial performance using Financial Ratios of select Maharatnas – Steel Authority of India Ltd., National Thermal Power Corporation and Oil and Natural Gas Commission. Using Prof. Edward I. Altman (1968) Z-score model, it is found that liquidity and profit earning capacity of the above stated enterprises have been quite good.

KEYWORDS

ratio analysis, SAIL, NTPC, ONGC, financial analysis, profitability, profits, Z-score.

INTRODUCTION

Ratio analysis is the most powerful tool to ascertain the financial health of the Company. A single ratio or a separate ratio would not give a holistic picturesque of the Company, therefore a single measure was evolved – by Altman, called the Z-score model. The model can provide a significant idea about the financial health of a company.

NTPC Limited (formerly ***National Thermal Power Corporation***) is the largest Indian state-owned electric utilities company based in New Delhi, India. It is listed in Forbes Global 2000 for 2011 ranked it 348th in the world. It is an Indian public sector company listed on the Bombay Stock Exchange in which at present the Government of India holds 84.5% (after divestment the stake by Indian government on 19th October, 2009) of its equity. With a current generating capacity of 36,014 MW, NTPC has embarked on plans to become a 75,000 MW company by 2017. It was founded on November 7, 1975. NTPC's core business is engineering, construction and operation of power generating plants and providing consultancy to power utilities in India and abroad. By 2017, the power generation portfolio is expected to have a diversified fuel mix with coal based capacity of around 27,535 MW, 3,955 MW through gas, 1,328 MW through Hydro generation, about 1400 MW from nuclear sources and around 1000 MW from Renewable Energy Sources (RES). NTPC has adopted a multi-pronged growth strategy which includes capacity addition through green field projects, expansion of existing stations, joint ventures, subsidiaries and takeover of stations. NTPC has been operating its plants at high efficiency levels. Although the company has 19% of the total national capacity it contributes 29% of total power generation due to its focus on high efficiency. The Net Profit after Tax on March 31, 2006 was INR 58,202 million. Net Profit after Tax for the quarter ended June 30, 2006 was INR 15528 million, which is 18.65% more than for the same quarter in the previous financial year. 2005).It is listed in Forbes Global 2000 for 2011 ranked it 348th in the world.

Steel Authority of India Limited (SAIL) is the leading steel-making company in India. It is a fully integrated iron and steel maker, producing both basic and special steels for domestic construction, engineering, power, railway, automotive and defence industries and for sale in export markets. SAIL is also among the seven Maharatnas of the country's Central Public Sector Enterprises. Steel Authority of India Limited (SAIL) manufactures and sells following wide range of steel products: Hot and Rolled sheets and Coils, Galvanised Sheets, Electrical Sheets, Railway Products, Plates, Bars and Rods, Stainless Steel and other Alloy Steels.

SAIL produces iron and steel at five integrated plants and three special steel plants, located principally in the eastern and central regions of India and situated close to domestic sources of raw materials, including the Company's iron ore, limestone and dolomite mines. The company has the distinction of being India's second largest producer of iron ore and of having the country's second largest mines network. This gives SAIL a competitive edge in terms of captive availability of iron ore, limestone, and dolomite which are inputs for steel making. SAIL's International Trade Division (ITD), in New Delhi- an ISO 9001:2000 accredited unit of CMO, undertakes exports of Mild Steel products and Pig Iron from SAIL's five integrated steel plants -

Bhilai Steel Plant (BSP) in Chhattisgarh, Durgapur Steel Plant (DSP) in West Bengal, Rourkela Steel Plant (RSP) in Orissa, Bokaro Steel Plant (BSL) in Jharkhand and Integrated Iron and Steel Company Steel Plant (ISP) in West Bengal.

Oil and Natural Gas Commission (ONGC) has been instrumental in transforming country's limited upstream sector into a large viable playing field, with its activities spread throughout the country and in overseas territories. Its main aim is to promote, organise, plan programmes for development of petroleum resources and the production and sale of petroleum and petroleum products.

The liberalised economic policy adopted by GOI sought to de regulate the petroleum sector with partial disinvestments of govt. equity in PSU's and other measures. Thus was reorganized as a Limited Company from 1994.It is a leader in exploration and production activities in the country having 75% contribution to India's total production of crude oil and 50% of natural gas.

OBJECTIVES OF THE STUDY

To evaluate the financial efficiency and performance of –

- SAIL
- NTPC
- ONGC

RESEARCH METHODOLOGY

Data for the Study – the study is based on secondary data sources compiled from Annual Reports, Balance Sheets, P&L accounts of the above mentioned CPSE's.
Period of the Study– the time frame is from late 2000 to 2015 pertaining to the three select CPSE's (i.e.) SAIL, NTPC and ONGC.
Methodology – the data have been tabulated and analysed from where inferences have been drawn with the help of Altman Z-score model as developed by Prof. Altman (1968).

The Model works with the help of Five Ratios (computed for the respective CPSE's)

- Net Working Capital to Total Assets
- Retained Earnings to Total Assets
- EBIT (Earnings before Interest & Taxes) to Total Assets
- Equity to Debt
- Sales to Total Assets

It is a linear combination of the above mentioned five ratios, weighted by a co-efficient. To calculate the Z score, the results of the five ratios are multiplied by a set of factor, the results of the multiplication are added together to arrive at the final result.

The Model is specified as:

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

The higher the score, the healthier is the financial position of the concerned Company.

Generalised Interpretation –

If Z-score is –

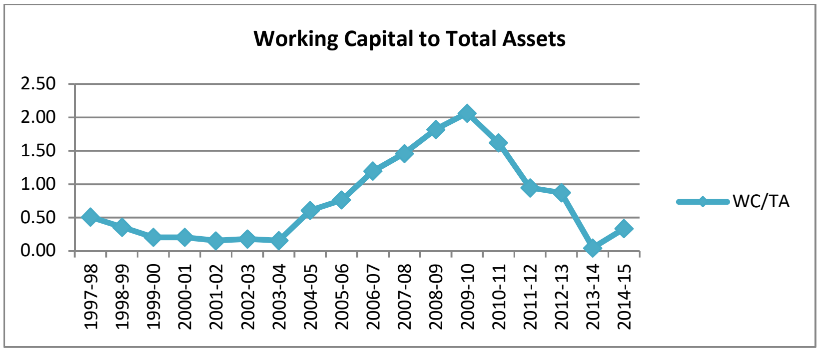
- <1.8 – the company is in the bankruptcy zone
- 1.8 to 3 – the company is in the grey zone (safety position)
- >3 – indicates good financial health of the company

ANALYSIS

I. TO GUAGE THE FINANCIAL EFFICIENCY OF SAIL USING Z-SCORE ANALYSIS – (1997 TO 2015)

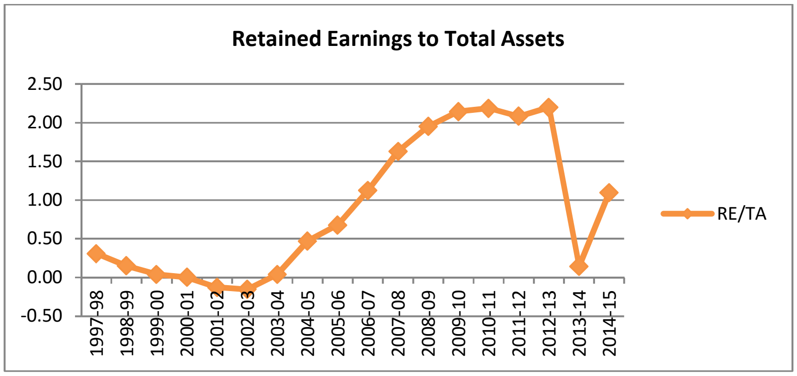
The following graphs depicts the five financial ratios, which is required to compute the final Z-score in the case of SAIL.

FIG. 1



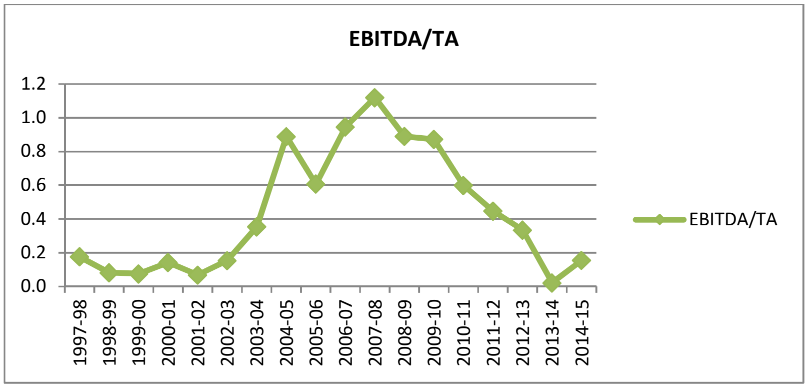
Working Capital to Total Assets has fluctuated between 0.15 to 2.06 during 1997 to 2014. Working Capital is the excess of total current assets, which shows the relative liquidity position of the enterprise. The ratio between 1997 to 2014 has ranged between 0.15 to 2.06, which indicates that SAIL has had good level of investment in current assets.

FIG. 2



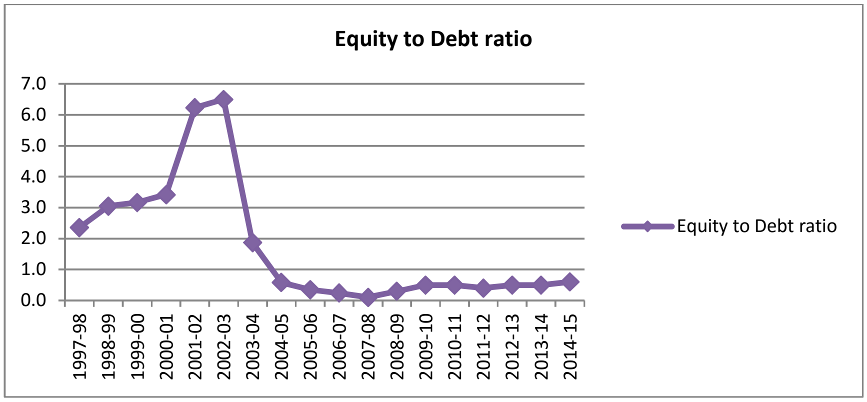
The ratio of Retained Earnings to Total Assets indicates that how much portion of total assets has been financed by retained earnings. Higher the ratio, the same enhances the financial stability of the company. Also the company is using its own earnings (cheaper source of finance rather debt finance. The ratio has been increasing from 0.15 to 2.20.

FIG. 3



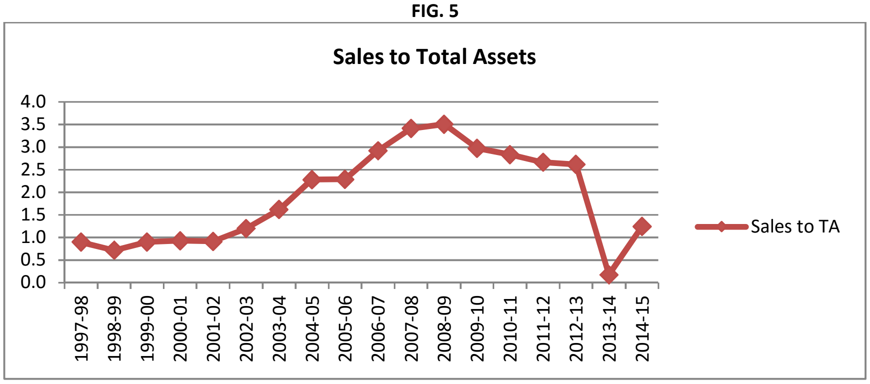
Earnings before interest and tax to total assets has been moderately fluctuating between 0.9 to 1.1.

FIG. 4



Equity to Debt ratio depicts the soundness of long term financial policies. Excessive debt would lead to insolvency and if the debt is more than equity, it will reduce the profits of the company, despite increasing the profitability to the shareholders. The ratio has been between 2.4 to 6.5 (SAIL provides measure of safety to its creditors).

FIG. 5



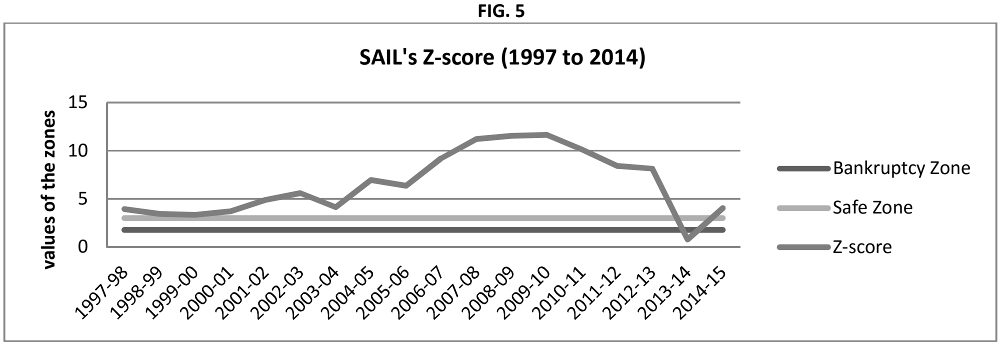
Sales revenue plays a vital role in the overall performance of the company, as the main source of revenue for an enterprise is through its sales. The study period experienced a ratio value between 0.7 to 0.9 upto 2004 and post 2004 saw a value of 2.1 to 3, thus showing considerable utilization of its assets to generate sales.

TABLE NO. 1 – STATEMENT SHOWING COMPUTATION OF Z-SCORE OF SAIL

Year	1.2 X1	1.4 X2	3.3 X3	0.6 X4	1.0 X5	Z score
1997-98	0.61	0.43	0.58	1.4	0.90	3.9
1998-99	0.43	0.21	0.27	1.8	0.72	3.5
1999-00	0.24	0.06	0.25	1.9	0.90	3.4
2000-01	0.24	0.00	0.47	2.1	0.93	3.7
2001-02	0.18	-0.18	0.23	3.7	0.91	4.9
2002-03	0.21	-0.21	0.51	3.9	1.20	5.6
2003-04	0.19	0.06	1.17	1.1	1.62	4.1
2004-05	0.73	0.66	2.93	0.3	2.28	7.0
2005-06	0.92	0.95	2.00	0.2	2.29	6.4
2006-07	1.44	1.58	3.12	0.1	2.92	9.2
2007-08	1.75	2.28	3.69	0.1	3.41	11.2
2008-09	2.18	2.73	2.94	0.2	3.51	11.5
2009-10	2.48	3.00	2.88	0.3	2.98	11.6
2010-11	1.94	3.06	1.98	0.3	2.84	10.1
2011-12	1.14	2.92	1.48	0.2	2.67	8.4
2012-13	1.04	3.08	1.11	0.3	2.62	8.1
2013-14	0.05	0.20	0.07	0.3	0.17	0.8
2014-15	0.40	1.54	0.51	0.4	1.25	4.1

Source: computed from Annual Reports of SAIL (various issues)

FIG. 5

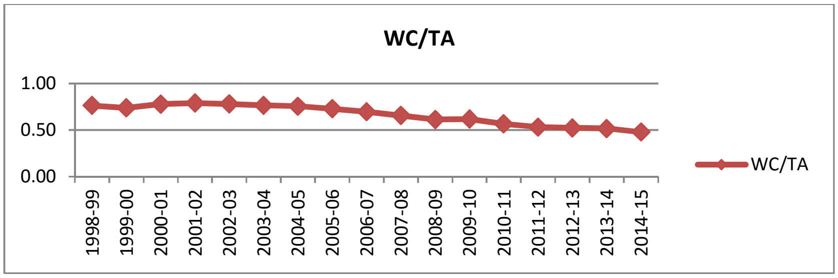


The above table and graph depicts the Z-score of SAIL from 1997 to 2015. The Z-score has varied from 3.4 to 11.6, except for 2013-14 when it was 0.8, which is below the bankruptcy zone. Otherwise, the company's composite financial position has been greater than 3, which is well above the safe zone.

II. TO EVALUATE THE FINANCIAL SOUNDNESS OF NTPC USING Z-SCORE ANALYSIS – (1998 TO 2015)

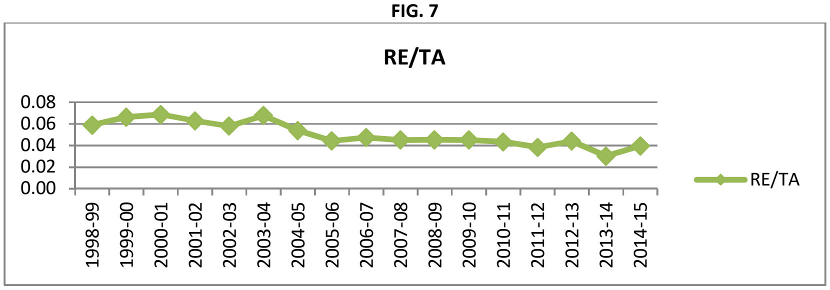
The following graphs depicts the five financial ratios, which is required to compute the final Z-score in the case of NTPC.

FIG. 6



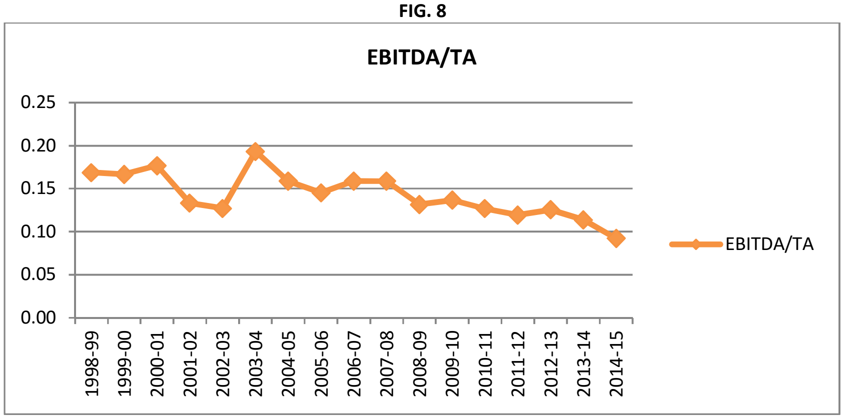
The Working Capital to Total Assets ratio has been oscillating between 0.5 to 0.7, except during 2014-15, when the same declined to 0.4. The ratio has been declining gradually.

FIG. 7



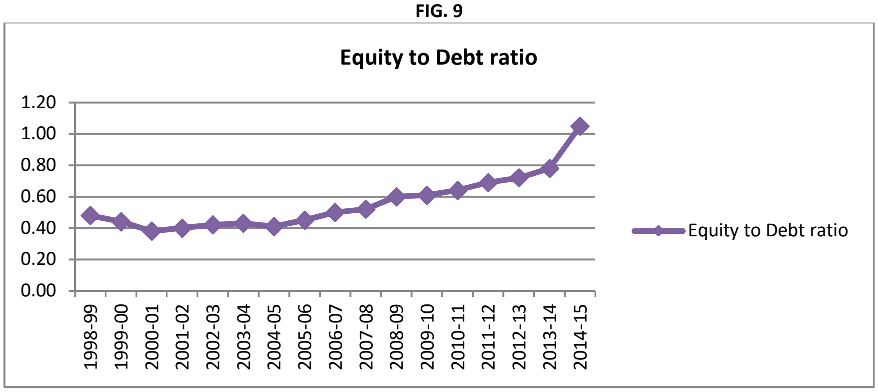
Retained Earnings to Total Assets has witnessed mixed trends of increase and decrease, but largely is on the decreasing trend. The values had been 0.03 to 0.07 between 1998 to 2015.

FIG. 8



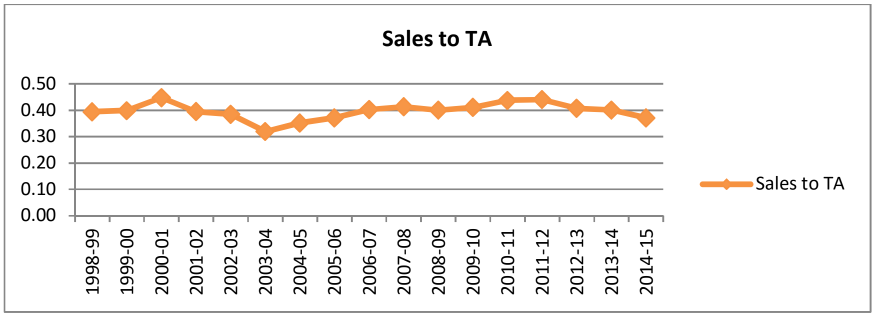
EBITDA ratio has been decreasing, it was 0.18 in 1998 which has come down to 0.09 in 2014-15.

FIG. 9



Equity to Debt has been rising steadily rising from 1998 to 2015 – from 0.4 to 1.05.

FIG. 10



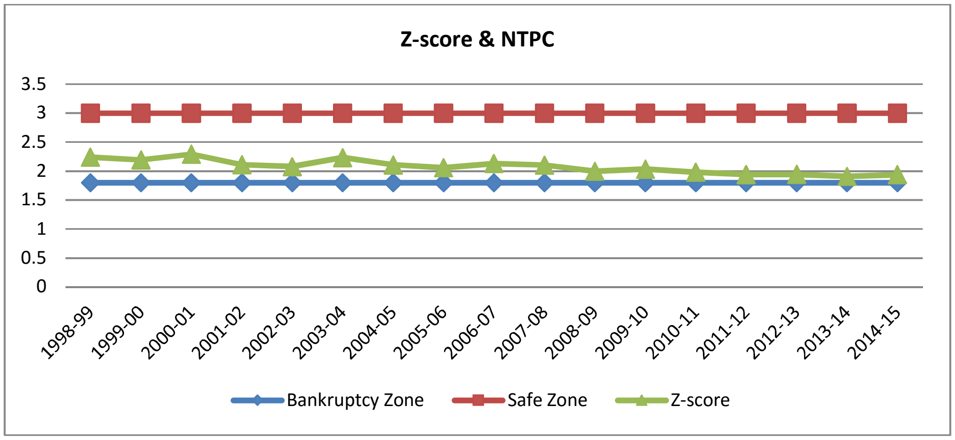
Sales to Total Assets has been considerably consistent between 0.3 to 0.4, but showing slight decline which is of concern for the enterprise.

TABLE NO. 2: STATEMENT SHOWING CALCULATION OF Z-SCORE OF NTPC

Year	1.2 X1	1.4 X2	3.3 X3	0.6 X4	1.0 X5	Z score
1998-99	0.92	0.08	0.56	0.29	0.39	2.24
1999-00	0.89	0.09	0.55	0.26	0.40	2.20
2000-01	0.94	0.10	0.58	0.23	0.45	2.29
2001-02	0.95	0.09	0.44	0.24	0.39	2.11
2002-03	0.94	0.08	0.42	0.25	0.39	2.08
2003-04	0.92	0.09	0.64	0.26	0.32	2.23
2004-05	0.91	0.08	0.52	0.25	0.35	2.11
2005-06	0.88	0.06	0.48	0.27	0.37	2.06
2006-07	0.84	0.07	0.52	0.30	0.40	2.13
2007-08	0.79	0.06	0.52	0.31	0.41	2.10
2008-09	0.74	0.06	0.43	0.36	0.40	2.00
2009-10	0.74	0.06	0.45	0.37	0.41	2.04
2010-11	0.68	0.06	0.42	0.38	0.44	1.98
2011-12	0.64	0.05	0.39	0.41	0.44	1.94
2012-13	0.63	0.06	0.41	0.43	0.41	1.94
2013-14	0.62	0.04	0.38	0.47	0.40	1.91
2014-15	0.58	0.06	0.30	0.63	0.37	1.94

Source: computed from Annual Reports of NTPC (various issues)

FIG. 11

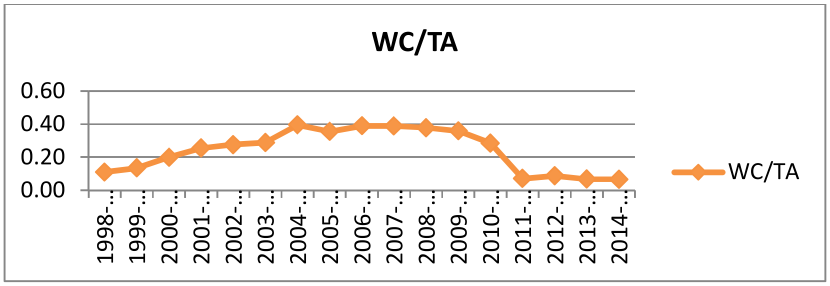


The Z-score of NTPC for the study period 1998 to 2015 has had a range of 1.9 to 2.4, but never has gone below 1.8 (i.e.) – the bankruptcy zone. But on the other hand, NTPC has not enjoyed comfortable financial position of greater than 3 Z-score for the last one and a half decades. Therefore, the Power Corporation has to be careful in terms of preventive steps so as to evade the bankruptcy zone.

III. TO EVALUATE THE FINANCIAL SOUNDNESS OF ONGC USING Z-SCORE ANALYSIS – (1997 TO 2015)

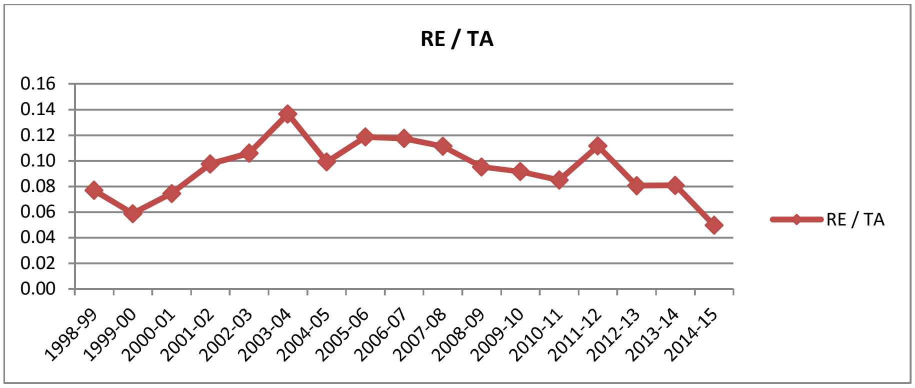
The following graphs depicts the five financial ratios, which is required to compute the final Z-score in the case of ONGC.

FIG. 12



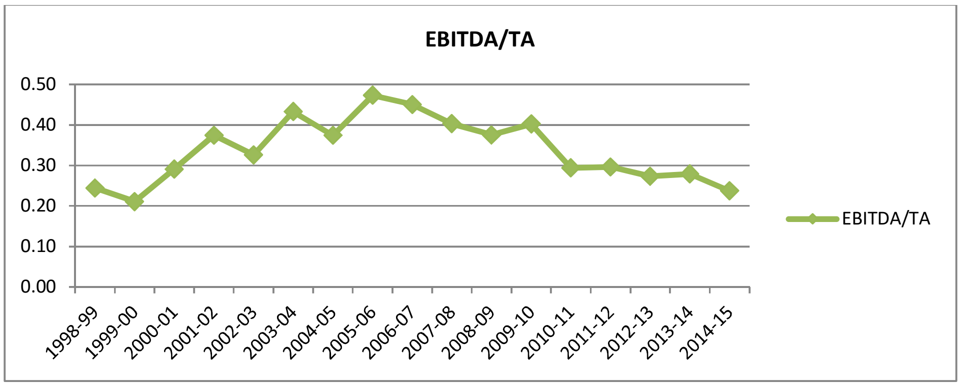
Working Capital to Total Assets had been 0.1 to 0.4 till 2005, but from then on has been on a decreasing trend and had come down to 0.07 from 2011-15.

FIG. 13



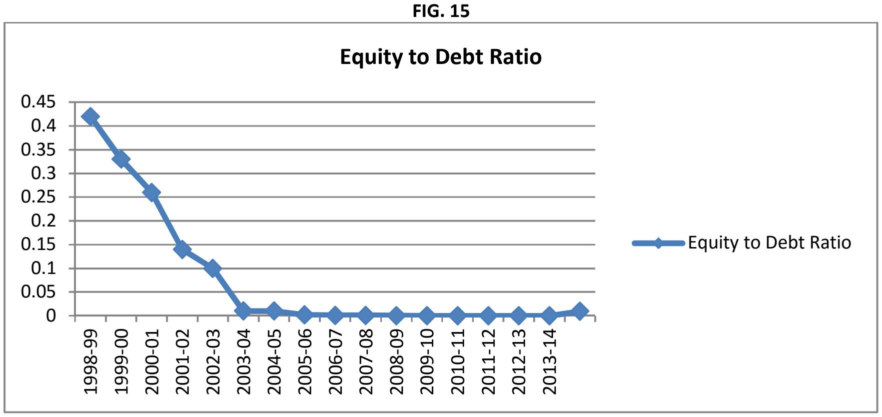
Retained Earnings to Total Assets had been increasing from 1999 to 2004 and from 2005 to 2007 and again started declining till 2004-2015 except for 2011-12.

FIG. 14



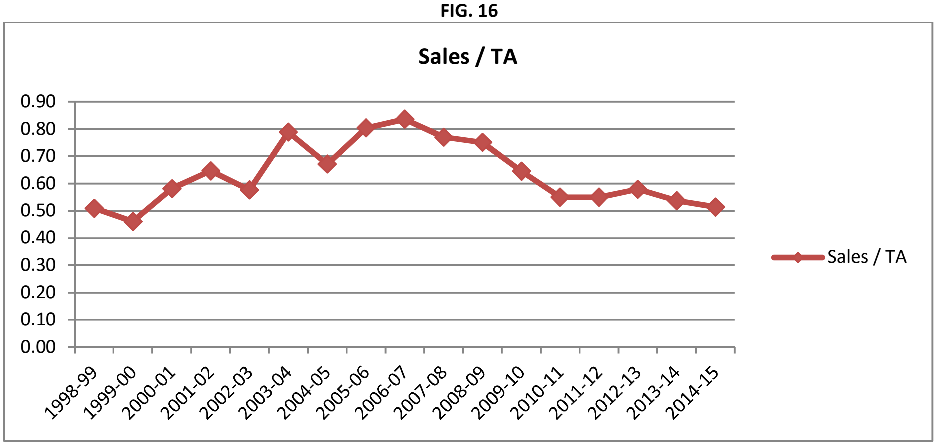
EBITDA to Assets has been fluctuating in terms of alternate increases and decreases, but ramined in the range of 0.2 to 0.4.

FIG. 15



Equity to Debt has had a drastic fall from 0.4 to 0.1 and from 2005 onwards till 2014-15, the ratio is almost close to zero.

FIG. 16



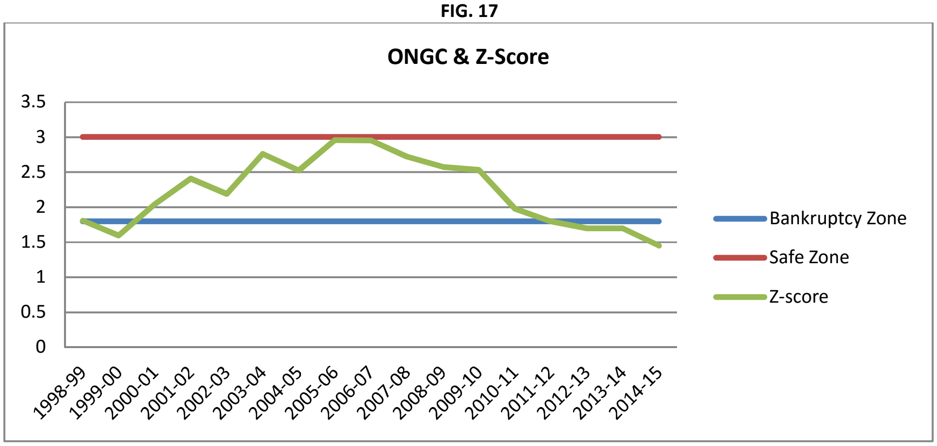
Sales to Total Assets has been in the band of 0.5 to 0.8; but the latter period from 2007 has been declining drastically.

TABLE NO. 3: STATEMENT SHOWING Z-SCORE OF ONGC

Years	1.2 X1	1.4 X2	3.3 X3	0.6 X4	1.0 X5	Z score
1998-99	0.13	0.11	0.81	0.25	0.51	1.81
1999-00	0.16	0.08	0.70	0.20	0.46	1.60
2000-01	0.24	0.10	0.96	0.16	0.58	2.04
2001-02	0.31	0.14	1.24	0.08	0.65	2.41
2002-03	0.33	0.15	1.08	0.06	0.58	2.19
2003-04	0.35	0.19	1.43	0.01	0.79	2.76
2004-05	0.47	0.14	1.23	0.01	0.67	2.53
2005-06	0.43	0.17	1.56	0.00	0.80	2.96
2006-07	0.47	0.16	1.49	0.00	0.84	2.96
2007-08	0.47	0.16	1.33	0.00	0.77	2.72
2008-09	0.45	0.13	1.24	0.00	0.75	2.58
2009-10	0.43	0.13	1.33	0.00	0.65	2.53
2010-11	0.34	0.12	0.97	0.00	0.55	1.98
2011-12	0.08	0.16	0.98	0.00	0.55	1.77
2012-13	0.10	0.11	0.90	0.00	0.58	1.70
2013-14	0.08	0.11	0.92	0.00	0.54	1.65
2014-15	0.08	0.07	0.78	0.01	0.51	1.45

Source: computed from Balance Sheets of ONGC (moneycontrol.com)

FIG. 17



The Z-score of ONGC from 1999-2000 and post 2012 has been disturbing for the Oil Corporation giant as it has been in bankruptcy zone. From 2000 to 2011, the financial position was within the Safe zone. But the warning signal has alarmed from 2012 – the Corporation needs to focus on corrective measures to reinstate its former comfortable financial footing.

SUMMARY OF FINDINGS

The Z-score of the three select Maharatnas are as follows –

- With regard to SAIL (1997 to 2015), the financial position is relatively very strong, except for 2013-14; otherwise the rest of the years have been very encouraging (i.e.) well above the safe zone.
- The Z-score of NTPC for the study period 1998 to 2015 has had a range of 1.9 to 2.4, but never has gone below 1.8 (i.e.) – the bankruptcy zone. The Power Corporation has not enjoyed comfortable financial position of greater than 3 Z-score for the last one and a half decades.
- ONGC's Z-score (1998 to 2015) from 1999-2000 and post 2012 has been disturbing for the Oil Corporation giant as it has been in bankruptcy zone. From 2000 to 2011, the financial position was within the Safe zone.

LIMITATIONS OF THE STUDY

- Only three select CPSE's is considered for the study
- No objective forecast done based on the past performance

CONCLUSION

It is a common phenomenon for companies to record mixed performances, and this is not an exception in the case of the CPSE's – the then commanding heights of the economy (according to Nehruvian economic literature).

From the above analysis, it can be deduced that, SAIL is in the forefront with good scores and enjoying a comfortable financial position. Next in the order is NTPC, whose scores have throughout been below the safe zone and is in the verge of touching bankruptcy zone, thus operating in the gray zone has to focus on preventive measures. Matter of concern is in the case of ONGC, which has registered bankruptcy during almost five years in the study period, thus has to adopt appropriate corrective measures to at least primarily recoop itself to the safe zone.

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