

CORPORATE PROFITABILITY AS A FUNCTION OF WORKING CAPITAL MANAGEMENT: A CASE STUDY ON POWER SECTOR

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Abstract:

We examine here the influence of working capital management components on corporate profitability considering the National Thermal Power Corporation (NTPC) as the case domain. NTPC is the largest energy conglomerate in the Indian subcontinent with the roots planted way back in 1975 for accelerating power development in India. It was awarded as the Maharatna Company in 2010 which attained the rank 512th in the 2018 Forbes Global 2000 ranking of the World's biggest companies. In this paper several problems have been discussed simultaneously and the probable solutions for getting rid of these problems have also been highlighted. These solutions amongst others include, opening of the coal mines sector to private players to accelerate efficiency, investing more in renewable energy projects, opening up distribution sectors to private players so as to increase competition, stringent laws against power theft and greater implementation of these laws, judicious use of CAPEX and proper usage of capital budgeting techniques before execution.

IndexTerms: National Thermal Power Corporation (NTPC), working capital management, renewable energy sectors, private players.

I. INTRODUCTION

Working capital management plays a pivotal role in corporate finance as it directly affects the liquidity and profitability of the firm [1-6]. Working capital deals with the management of current liabilities. Working capital can be worth several months' revenues. Improving it, means to bring about the desired liquidity in an organization. We sometimes see that companies generate lakhs and some times crores of cash impact within 60 to 90 days, without increasing sales or cutting costs. Some companies reduce its net working capital cycle, i.e. the amount of time it takes to convert assets and liabilities into cash—by half the earlier average so as to unlock the cash. This can be a lifeline for distressed companies. For profitable companies, this cash can be reinvested directly which in turn helps in value creation, stability and flexibility. Working capital requirement is extremely industry-specific, and thus differs from industry to industry, and even within the sectors, requirement varies widely. However, not all reductions in working capital are beneficial as listed here.

- Too little inventory can disrupt operations,
- Deferring suppliers payment terms can leak back in the form of higher prices and send a signal of distress to the market.
- Similarly, too much reduction of debtors can reduce sales and thereby a fall in target.

Working capital is often given less importance when the performance of a business and of its employees is evaluated based on income-statement measures such as earnings before interest, taxes, depreciation, and amortization (EBITDA) or earnings per share, which don't reflect changes in working capital. This paper is a first order analysis to evaluate the efficiency of working capital management considering NTPC as the test bed.

II. METHODOLOGY

The entire network of the present study, encompasses two primary techniques, namely, accounting techniques and statistical techniques. The accounting techniques used the data bank as the foundation stone. Ratio analysis is an important component of accounting techniques which is a powerful analytical tool for measuring the performance of any organization. It reveals the interaction between two numbers and also indicates the strength and weakness of a concern. The statistical techniques include, processes like mean, standard deviation and ANOVA. ANOVA in this paper has been computed using microstat package. In this paper, we considered the consolidated balance sheet, which is an analysis of the last 5 years (2014 – 2018) financial statement of NTPC in order to reach the conclusion.

III. RESULTS

Table 1 highlights the consolidated balance sheet, which is an analysis of the last 5 years (2014 – 2018) financial statement of NTPC.

Table 1: Consolidated balance sheet, an analysis of last 5 years (2014 – 2018) financial statement of NTPC

Particulars	Mar '18	Mar '17	Mar '16	Mar '15	Mar '14
Source of Fund					
Equity Share Capital	8,245.46	8,245.46	8,245.46	8,245.46	8,245.46
Reserves	95,318.01	89,592.56	83,330.12	73,848.52	79,084.26
Net Worth	103,563.47	97,838.02	91,575.58	82,093.98	87,329.72
Secured Loans	123,456.19	107,194.66	24,750.55	38,465.31	25,852.44
Unsecured Loans	0	0	67,942.21	55,537.76	50,123.50
Total Debt	123,456.19	107,194.66	92,692.76	94,003.07	75,975.94
Minority Interest	947.77	803.26	793.3	887.94	680.43
Total Liabilities	227,967.43	205,835.94	185,061.64	176,984.99	163,986.09
Application of Funds					
Gross Block	150,085.94	117,045.54	98,824.60	144,202.11	131,254.06
Less: Accum. Depreciation	20,547.48	12,513.88	5,895.24	52,349.09	47,046.08
Net Block	129,538.46	104,531.66	92,929.36	91,853.02	84,207.98
Capital Work in Progress	82,093.06	86,895.71	75,045.53	67,554.69	53,824.96
Investments	8,875.61	7,613.92	6,473.36	1,901.51	3,300.42
Inventories	6,140.29	6,586.13	7,050.61	7,972.46	5,988.48
Sundry Debtors	8,812.19	8,963.89	8,288.79	9,249.92	6,725.66
Cash and Bank Balance	4,387.60	3,301.46	4,938.32	14,251.61	17,050.67
Total Current Assets	19,340.08	18,851.48	20,277.72	31,473.99	29,764.81
Loans and Advances	34,520.85	30,604.59	29,845.15	26,792.94	28,941.76
Total CA, Loans & Advances	53,860.93	49,456.07	50,122.87	58,266.93	58,706.57
Current Liabilities	37,667.95	34,077.54	32,144.45	33,451.38	27,581.91
Provisions	8,732.68	8,583.88	7,365.03	9,139.78	8,471.93
Total CL & Provisions	46,400.63	42,661.42	39,509.48	42,591.16	36,053.84
Net Current Assets	7,460.30	6,794.65	10,613.39	15,675.77	22,652.73
Total Assets	227,967.43	205,835.94	185,061.64	176,984.99	163,986.09

Table 2 below indicates the incremental increase or decrease in loan over the last years.

Table 2: Statement Showing the Incremental increase / decrease in Loan over last year

Year	2018	2017	2016	2015	Total of Incremental increase/ decrease in the last 4years
Incremental increase / decrease in Secured Loan	16,261.53	82,444.11	-13,714.76	12,612.87	97,603.75
Incremental increase / decrease in Unsecured Loan	0.00	-67,942.21	12,404.45	5,414.26	-50,123.50
Total	16,261.53	14,501.90	-1,310.31	18,027.13	47,480.25

Table 3 highlights the incremental increase/ decrease in Gross block and Capital Work-in-Progress over last year.

Table 3: Statement Showing the Incremental increase / decrease in Gross Block and Capital Work-in- Progress over last year

Year	2018	2017	2016	2015	Total of Incremental increase/ decrease in the last 4years
Incremental increase / decrease in Gross Block	33,040.40	18,220.94	-45,377.51	12,948.05	18,831.88
Incremental increase / decrease in Capital Work in Progress	-4,802.65	11,850.18	7,490.84	13,729.73	28,268.10
Total	28,237.75	30,071.12	-37,886.67	26,677.78	47,099.98

Table 4 highlights the Incremental increase/ decrease in Net Current Assets over last year.

Table 4: Statement Showing the Incremental Increase / Decrease in Net Current Assets over last year

Year	2018	2017	2016	2015	Total of Incremental increase/ decrease in the last 4years
Incremental increase / decrease in Net Current Assets	665.65	-3,818.74	-5,062.38	-6,976.96	-15,192.43

IV. DISCUSSION AND CONCLUSION

It is an interesting observation on the points of secured loans and Net Current Assets that these two parameters have significantly changed between years (vide Table 5 for ANOVA at $p < 0.05$) which confirms the loopholes in the working capital management sector. It can be seen from the above that the total of increment in Net Current Assets for the last five years is negative. Given the fact that the total increment in the Fixed Assets Block and Loan Block more or less match with each other, the incremental decrease in Net Current assets of Rs 15192.43 Crores in the last five years as shown in Table 4 above indicates shortage in the working capital cycle which in affects the yearly Cash flow as shown in Table 6. ANOVA results indicate significant variations between years as $F_{obs} (4.17) > F_{crit} (3.84)$.

Table 5: ANOVA

Source of Variation	SS	df	MS	F_{obs}	P-value	F_{crit}
Between Parameters	1.21E+10	2	6.06E+09	8.82	0.009472	4.47
Between years	5.96E+09	4	1.49E+09	4.17	0.162929	3.84
Error	5.49E+09	8	6.87E+08			
Total	2.36E+10	14				

Table 6: Cash flow for last five years

Particulars	Mar '18	Mar '17	Mar '16	Mar '15	Mar '14
Net Profit Before Tax	12339.46	12052.16	10595.77	10546.65	13904.65
Net Cash From Operating Activities	19248.35	20013.92	23987.38	14234.70	15732.18
Net Cash (used in)/from Investing Activities	-20388.19	-24414.12	-18346.09	-14562.60	-13979.71
Net Cash (used in)/from Financing Activities	1043.21	3184.98	-4549.62	-1878.08	-3308.99
Net (decrease)/increase In Cash and Cash Equivalents	-96.63	-1215.28	1091.75	-2205.96	-1556.33
Opening Cash & Cash Equivalents	157.12	1372.40	280.65	15311.37	16867.70
Closing Cash & Cash Equivalents	60.49	157.12	1372.40	13105.41	15311.37

It is clear from the Cash Flow in Table 6 above [7], that in each of the five years the Net Cash Generated from Operating Activities is negated by Net Cash used in Investing Activities resulting in negative Net Cash and Cash Equivalents. Thus, it can be said that because of the highly aggressive debt policy, NTPC is suffering from a reduction in Net cash and thereby affecting the Working Capital needs of NTPC. NTPC being a renowned giant in the power sector of the country can solve these problems by, accelerating the investment in renewable energy source like wind energy, solar energy, etc., opening the coal mining and distribution sectors to private players, implementing strict laws against power threats specially during the festivals, and judicious use of CAPEX.

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