

Performance Evaluation of Power Sector in Odisha: A Case Study of Gridco

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Abstract

The growth and development of a country depends on better infrastructures. Among which one of the most important and essential infrastructure is the power sector. Power sector has become important and indispensable practically in every sphere of activity. The power sector is comprised of conventional energy like oil, coal, natural gas, electricity or electric power, & non-conventional energy like solar energy, tide energy etc. Power stands as a critical and necessary infrastructure in which the modern economy and various activities are fully dependent. Without power the industrial sector, agricultural sector as well as the service sector would come to a standstill. Adequate availability of power is essential for sustained growth and development of an economy. So, the importance of power including the power sector cannot be overlooked. Gridco stands as a leading power sector in Odisha. The primary objectives in this sector are utilisation of power in a productive manner, optimum generation of power and properly meeting the anticipated increase in demand for power over the coming years. To fulfill this objective Gridco, as a growing organisation, in power sector plays an important role. So, the performance and financial position of Gridco plays an important role in the power sector.

The present work makes a research on the sources and applications of funds of the company through balance sheet with Gridco's performance in the financial sector as well as in the field of business operation. With these, the paper provides a brief overview of Gridco. To make the financial performance analysis the present work emphasizes on financial ratio analysis.

Keywords: Power sector, Sustained growth, Gridco, Performance, Ratio Analysis

Introduction

Power sector has become important and indispensable practically in every sphere of activity. Power sector rules over in the every field of activities. Without the functioning of power not a single work can be done. So, this stands as a critical and necessary infrastructure in which the modern economy and various activities are fully dependent.

Without power the industrial sector, service sector as well as the agricultural sector would come to a stand-still. So, the importance of power including the power sector cannot be overlooked.

Gridco stands as a leading power sector in Odisha. So, the performance and financial position of Gridco plays an important role in the power sector. The overall performance of Gridco Ltd. can be analysed by its financial statement analysis. Our State Odisha is pioneer in the power sector reforms in the country with the Orissa Electricity Reforms Act, 1995. The need for reform was due to the backdrop of huge Transmission and Distribution (T & D) losses on account of theft of power and system malfunctions. Power Sector Reform in Odisha was started in November, 1993. The main objective of the reform was generation, transmission and distribution and to establish an independent and transparent regulatory regime in order to promote efficiency and accountability in the sector. Further, it was expected that the reforms would result in substantial private sector investment on the state power sector. In accordance with the provisions of Electricity supply Act 1948, the Orissa State Electricity Board (OSEB) was formed in 1962, which became the only institution for carrying out three major activities such as generation, transmission and distribution of electricity in the state. Hence, it has created different entities: (a) Generation Company (b) Transmission Company (c) Distribution Company. With the enactment of OER (Orissa Electricity Regulatory) Act, 1995, the erstwhile OSEB was dissolved and three new corporations were created on 1st, April, 1996. The three new companies were as follows:

- Grid Corporation of Orissa (Gridco),
- Orissa Hydro Power Corporation (OHPC)
- Orissa Power Generation Corporation (OPGC)

Objectives

The financial statement analysis is a broad topic and the most vital for any organisation. It is also the most sensitive area in the field of the financial management. By giving special emphasis has to the analysis of the financial statements of Gridco, the objectives of this paper are

- To get a general impression about Gridco.
- To get knowledge about the sources and applications of funds of the company through balance sheet and profit/ loss account.
- To find out the GRIDCO's performance in the financial sector as well as in the field of business operation.

Hypothesis

The current paper makes a research over the performance of the Gridco for the time period of 2000-07. Below given hypothesis is the provisional supposition of this work:

H1: Financial performance as well as the business performance of the Gridco is not satisfactory.

Research Methodology

For this research paper data has collected from the financial sheets i.e., balance sheet and profit loss account of Gridco. Here study has been made for a time period from 2000-2007. The data has been analysed in a systematic manner by some financial tools like ratio analysis. The entire data was arranged systematically by the help of simple statistical tools. The analysis of data in this paper has been made with the help of various Financial Ratio Analysis.

Literature Review

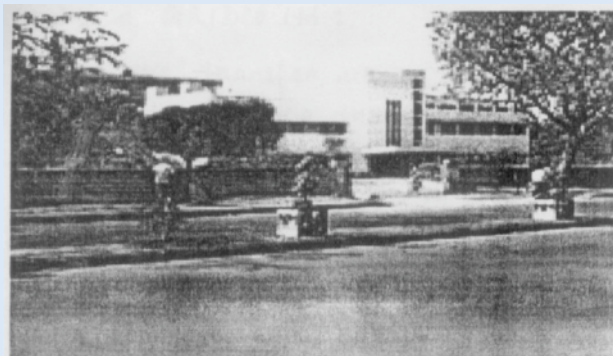
In this field of financial statement analysis various authors have contributed their ideas and thoughts. Among those some of the literatures are reviewed here.

E. Eversull and L. Rotan (1997) in their research report make an analysis of the balance sheets and income statements of local farm supply and marketing cooperatives. They have taken the time period from 1995 and 1994 and trends over the past 10 years. Common size income statements and balance sheets are used to compare different cooperative sizes and types. Staff of the Cooperative Services (CS) program in USDA's Rural Business-Cooperative Service annually survey farmer cooperatives. Data from this survey are used in their study. Bajkowski (1999) in his paper highlights about the income sheet as one of the tool to analysis the financial statement of any organisation. He points out that the income statement provides insights on how well management can translate sales revenues into earnings. Henry Reeves in the revised report of Virginia Small Business Development Center Network (2011) in their resource Guide intended to provide you with a basic understanding of the components and purposes of financial statements. In their guide they provide various steps which will be very much helpful for the financial statement analysis. Dasaraju, H and Murthy, K.S., (2011) in their article explains the overall operational efficiency of the Indian power sector. They also points out the various multifarious problems encountered in the production and distribution of power sector such as theft of power, misuse of power, un- authorised use of power etc. Their study suggests some of the suitable measures, taken by the government, for the development of the power sector. To sum up their article aims at analysing the importance of power sector, consumer utility, demand and generation of power.

Brief Profile of Gridco

Grid Corporation of Orissa Ltd. (GRIDCO, Ltd.) is one of the largest power generation corporations of Odisha. It was formed in 1st April, 1996 and was responsible for both transmission and distribution of electricity till 25th November, 1999. The registered Office of the Corporation and its corporate headquarters is situated at Janpath, Bhubaneswar, the capital of the State, Odisha. Its projects

and field units are spread all over Orissa. The day-to-day affairs of the company are managed by the Chairman-cum-Managing Director assisted by Whole-time directors under the overall supervision of the Board of Directors. They are in turn assisted by a team of dedicated and experienced professional in various field. It has about 62 maintenance centres throughout Orissa, otherwise called as “Accounting Center”.



Administrative Block of Gridco, Bhubaneswar



Finance Block of Gridco, Bhubaneswar

The Government of Orissa transferred the distribution asset and properties along with personnel of GRIDCO Ltd. to the four distribution companies with effect from 26.11.1998. the

four distribution zones, which are converted to companies , are namely as:

Northern Zone:	NESCO Ltd. (North Eastern Electricity Supply Company of Orissa, Ltd.)
Area of Operation:	Jaipur, Bhadrak, Balasore, Mayurbhanj, Keonjhar
Western Zone:	WESCO Ltd. (Western Electricity Supply Company of Orissa, Ltd.)
Area of Operation:	Sambalpur, Sundargarh, Bargarh, Jharsuguda, Bolangir, Sonepur, Deogarh
	Kalahandi, Nuapada.
Southern Zone:	SOUTHCO Ltd. (Southern Electricity Supply Company of Orissa Ltd.)
Area of operation:	Ganjam, Gajapati, Boudh, Kandhamal, Nabarangpur, Koraput, Rayagada,
	Malkangiri
Central Zone:	CFESCO Ltd. (Central Electricity Supply Company of Orissa Ltd.)
Area of operation :	Puri, Khurda, Nayagarh, Cuttack, Angul, Kendrapada, Jagatsinghpur,
	Dhenkanal

A. Sources and Applications of Fund of Gridco

The comparative balance sheet is helpful to provide a quick reference about the company's position and financial

performance. Sources and application of funds of Gridco can be analysed from its balance sheet of various years. (Table 1)

Table 1: Comparative Balance Sheet of Gridco from 2000-07 (Rs. In crore)

Balance Sheet Particulars	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07
Sources of Funds							
Share Capital	488.17	491.04	492.98	492.98	492.98	60.07	60.07
Reserve and surplus	233.73	394.98	446.05	484.88	506.46	476.94	514.31
Secured loans	--	--	125.00	649.43	1041.92	688.71	612.12
Unsecured loans	3251.89	4125.37	4841.48	4696.75	4103.57	875.98	912.81
Other funds	00.01	00.01	0.008	0.008	0.008	0.008	0.008
Total	3973.80	5011.41	5905.53	6324.06	6144.95	2101.72	2099.33
Application of Funds							
Fixed Assets (Net)	1060.37	1056.38	1101.23	1066.58	1029.94	1096.77	1142.33
Capital work in Progress	726.69	799.86	836.42	927.13	955.22	859.92	824.33
Investments	1032.77	1053.80	1132.85	1132.71	1148.08	27.05	27.05
Current Assets , Loans and Advances	1639.07	2239.80	2509.97	2984.21	2969.99	341.96	321.50
Less : Current Liabilities	1755.85	133.42	1465.43	1164.29	986.99	250.15	250.80
Net Current Assets	(116.77)	906.37	1044.54	1819.91	1982.99	91.81	70.70
Miscellaneous expenditure to the extent not written off or adjusted	6.50	5.24	2.64	0.998	0.560	1.21	0.907
Profit & Loss Account	1264.24	1189.73	1787.82	1376.70	1028.14	24.94	34.00
Total	3973.80	5011.41	5905.53	6324.06	6144.95	2101.72	2099.33

Source: Compiled from Gridco Annual Reports, 2000-01 to 2006-07

Financial Status Analysis of Gridco

Financial statement analysis is the process of understanding the risk and profitability of a firm through analysis of reported financial information, by using different accounting tools and techniques. It generally consists of

- Reformulating the reported financial statements,
- Analysis and adjustments of measurement errors, and
- Financial ratio analysis on the basis of reformulated

and adjusted financial statements.

Combinely, we can say that the process of reviewing and evaluating a company's financial statements (such as the balance sheet or profit and loss statement), thereby gaining an understanding of the financial health of the company and enabling more effective decision making is termed as Financial Statement Analysis.

A. Applications of Financial Statement Analysis

Generally, the financial statement of Gridco is responsible for analysing the various applications of the company. The

applications are as follows:

- (i) Financial statement analysis is useful for the assessment of the corporate excellence.
- (ii) It judges the credit-worthiness of the company.
- (iii) It forecasts about the bankruptcy position of the company.
- (iv) It is helpful in valuing the equity shares.
- (v) Market risk of the company is also estimated by the financial statement analysis.

B. Tools of Financial Statement Analysis

There are various types of tools used for the analysis of the financial statement. The most popularly used tool for the financial statement analysis is the *Ratio Analysis*. From the

arithmetical point of view, ratio is a relationship between two given figures. Financial ratio analysis is the study of ratios between various items or groups of items of a given financial statement. We can also say that, ratio analysis is a systematic use of ratio to interpret the performance and status of the company. There are different types of financial ratio used to make analysis of organization's performance. Some of them are described below:

Liquidity Ratio

Liquidity ratio reflects the short-term solvency position of the company. We can say this ratio reflects the short-term financial strength or solvency of the company. Liquidity ratio in general based on the relationship between the current assets and current liabilities. Various liquidity ratio can be calculated by the following formulas:

- Working capital ratio = $\frac{\text{Total Current Assets}}{\text{Total (Net) Assets}}$
- Current Ratio* = $\frac{\text{Current Assets}}{\text{Current Liabilities}}$ (*The general norm of current ratio in India is 1.33 whereas, internationally it is 2.)
- Current Ratio* = $\frac{\text{Quick Assets}}{\text{Current Liabilities}}$
- Cash Ratio = $\frac{\text{Cash and Bank Balance} + \text{Current Investments}}{\text{Current Liabilities}}$

Leverage Ratio

Leverage ratio analysis is also known as “Capita Structure

Ratio”. This ratio measures about long-term solvency of the organisation. Various leverage ratio can be calculated by the following formulas:

- Debt-Equity Ratio = $\frac{\text{Debt}}{\text{Equity}}$
- Debt-Asset Ratio = $\frac{\text{Debt}}{\text{Assets}}$ This ratio is related to the debt –equity ratio as follows:
- $\frac{\text{Debt}}{\text{Assets}} = \frac{\text{Debt/Equity}}{\text{Equity/Equity} + \text{Debt/Equity}} = \frac{\text{Debt/Equity}}{1 + \text{Debt/Equity}}$
- Interest – Coverage Ratio = $\frac{\text{EBIT}}{\text{Interest}}$

Turnover Ratio

Turnover ratio or activity ratio is also one of the important

financial ratio analyses. It generally measures how efficiently the company manages the assets. Various turnover ratio can be calculated by the following formulas:

- Inventory Turnover Ratio = $\frac{\text{Cost of goods Sold}}{\text{Average Inventory}}$
- Debtor Turnover Ratio = $\frac{\text{Net Credit Sales}}{\text{Average Accounts Receivables}}$
- Fixed asset turnover ratio = $\frac{\text{Net Sales}}{\text{Average Net Fixed Assets}}$
- Total Assets Turnover Ratio = $\frac{\text{Net Sales}}{\text{Average Total Assets}}$

Profitability Ratios

The operating efficiency of a firm and its ability to ensure adequate returns to its shareholders depends ultimately on the profit earned by it. So, the profitability of a firm can be measured by its profitability ratio. This ratio can be determined on the basis of either sales or investments. This ratio is of various types:

- Gross Profit Margin Ratio
- Net Profit Margin Ratio
- Return To Total Asset Ratio
- Earning Power Ratio

Various types of profitability ratio can be calculated by the following formulas:

- Gross Profit Margin Ratio = $\frac{\text{Gross Profit}}{\text{Net Sales}}$
- Net Profit Margin Ratio = $\frac{\text{Net Profit}}{\text{Net Sales}}$
- Return on Total Asset (ROA) = $\frac{\text{Net Profit (After Tax)}}{\text{Average Total Assets}}$
- Earning Power Ratio = $\frac{\text{Profit before interest and Taxes}}{\text{Average Total Assets}}$

To evaluate the performance of Gridco, ratio analysis is also very much necessary. Taking it into consideration, here various types of ratio analysis for Gridco has been calculated, which throw light on the financial position and the performance of the company in various years. Table 2

gives a detailed idea regarding the various financial ratio analysis of Gridco Ltd. Here the time period is taken from 2000-07. In table 2 four types of financial ratios i.e., liquidity ratio, leverage ratio, turn-over ratio, profitability ratio is taken into consideration.

Table 2: Financial Ratio Analysis of Gridco Ltd (2000-01 to 2006-07)

Financial Ratios	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07
Liquidity Ratio							
Current Ratio	0.933	1.679	1.712	2.563	3.009	1.367	1.281
Acid-Test Ratio	0.906	1.645	1.676	2.520	2.948	1.086	0.982
Cash Ratio	0.619	0.816	0.830	1.253	1.284	0.182	0.366
Working Capital Ratio	2.915	1.689	1.689	1.431	1.384	1.210	1.174
Leverage Ratio							
Debt-Equity Ratio	2.594	3.621	3.820	3.669	3.581	2.722	1.328
Debt-Assets Ratio	0.473	0.544	0.524	0.468	0.497	0.115	0.056
Interest-Coverage Ratio	(0.446)	(1.506)	(1.790)	(2.861)	(2.493)	(0.705)	(1.124)
Turnover Ratio							
Inventory Turnover Ratio	34.91	30.75	37.54	37.56	37.84	4.52	3.31
Debtors' Turnover Ratio	1.415	1.165	0.841	1.256	1.591	0.375	2.920
Fixed assets turnover Ratio	1.580	1.676	1.428	2.140	2.713	0.340	0.317
Total Assets Turnover Ratio	0.509	0.394	0.282	0.379	0.456	0.087	0.169
Profitability Ratio							
Gross-profit Margin Ratio	0.137	0.259	(0.116)	0.382	0.310	0.241	0.369
Net-profit margin Ratio	(0.051)	0.041	(0.388)	0.177	0.122	(0.068)	(0.025)
Return to TA* Ratio	(0.026)	0.016	(0.109)	0.067	0.055	(0.006)	(0.004)
Earning Power Ratio	0.043	0.123	0.140	0.213	0.198	0.017	0.062

Source: Compiled and collated from Gridco Annual Reports, 2000-01 to 2006-07

* TA= Total Assets

Analysis of the Data

The overall performance of Gridco Ltd. can be analysed by its financial statement analysis.

A. Analysis of Liquidity Ratio

Working capital ratio of Gridco Ltd. is moving in a declining order from year 2000 to 2007. In 2000-01 it was 2.915 which with a continuous decrease reaches to 1.174 in 2006-07. It shows that GRIDCO faced bit difficulty to meet the day-to-day business in comparison with previous years. The current ratio of the company shows that the company's ability to meet the current obligation is low i.e. below the general norm of current ratio. In the middle years, the current ratios are high i.e. in year 2003-04 and 2004-05 it was 2.563 and 3.009 respectively. However, in other years, the ratios do not exceed 2. It was below that and in the year 2006-07, it is 1.281 as per the calculation. Similarly, the acid-test ratio of Gridco in 2000-2001 was 0.906 and in 2001-02, 2002-03 it was 1.645 and 1.676 respectively. In the year 2003-04, and 2004-05 it rose to 2.520 and 2.948 respectively which falls to 1.086 and 0.982 in 2005-06 and 2006-07 respectively. The cash ratio of Gridco is very low and not so satisfactory. In the

year 2005-06 and 2006-07, it is 0.182 and 0.366 respectively. However, in 2003-05 it is little bit satisfactory.

B. Analysis of Leverage Ratio

From the debt-equity ratio analysis it is reflected that Gridco Ltd. had a lower safety margin for the creditors. The debt-assets ratio was 0.473 in the year 2000-01 and which increases in the next year to 0.544. But after this it decreases. It was found from the calculation that there occurs variation in the debt-asset ratio. In the year 2006-07 it was 0.056. The interest-coverage ratios of GRIDCO are also negative in all the years. It indicates that GRIDCO has been unable to pay interest to the lenders which are a dangerous signal for the company.

C. Analysis of Turnover Ratio

The turnover ratio of GRIDCO Ltd. is also not so impressive. The inventory turnover ratio of GRIDCO reflects that the inventories of the company are not so efficiently managed in recent years. From the above calculation of the inventory turnover ratio it comes to light that in the previous years GRIDCO was efficiently managing its inventories which is very less in the year 2005-

06 and 2006-07. In these two years, the inventory turnover ratio of GRIDCO was 4.52 and 3.31 respectively. The debtor's turnover ratio of GRIDCO is highlighted. In the year 2000-01 and 2001-02 it was 1.415 and 1.165 respectively. But in the next year i.e. 2002-03 it was lower i.e. 0.841. In the next two years it was 1.256 and 1.591 respectively. But in the year 2005-06 it was again lower and the ratio was 0.375. In 2006-07, the ratio is 2.920. It reflects that the debtors turnover ratio of GRIDCO varies continuously through all the years and it affects the credit management of GRIDCO. Similarly, the fixed asset turnover ratio of GRIDCO in the year 2003-04 and 2004-05 was 2.140 and 2.713 respectively, which was better than the previous years. But in the year 2005-06 and 2006-07 it is 0.340 and 0.317 respectively. These lower ratio indicates the lower degree of efficiency in the utilisation of assets. As the total asset turnover ratio measures the efficient employment of all assets, for GRIDCO this ratio is very low. It is very low throughout the time period. All total the turnover ratio of GRIDCO reflects about the inefficiency of the company in handling the assets.

D. Analysis of Profitability Ratio

The gross profit margin ratio of GRIDCO is very low, which indicates that GRIDCO has a higher cost of production and has inefficient management structure. In all the year it is very low however in, 2002-03 it is negative, i.e., (0.116). Similarly, the net profit margin ratio of GRIDCO is also very low and negative in year 2000-01, 2002-03, 2005-06, 2006-07. So, it indicates that GRIDCO has inadequate returns to the owners and shareholders. The return to total asset ratio of GRIDCO is also low and negative which is alarming for the operation and functioning of the company. In the year 2000-01 it was negative i.e. (0.026). But in 2001-02, it improves little bit and had a positive value of 0.016. But again in 2002-03 it was (0.109) which was a negative ratio. In year 2003-04 and 2004-05 it was 0.067 and 0.055 respectively. This ratio for the year 2005-06 and 2006-07 was again negative. It shows that return on total asset is very poor for GRIDCO Ltd. the earning power ratio of GRIDCO also indicates towards the poor performance of the company.

Findings and Suggestions

Followings are the some of the major findings from the analysis of the different financial ratio of the given data of Gridco Ltd.:

- Working capital ratio of GRIDCO Ltd. is moving in a declining order, which shows that the ability of the company to meet its day-to-day business is decreasing. GRIDCO faces little bit difficulty to meet the claims of the creditors.
- Liquidity ratio reflects the short-term solvency

position of the company.

- The current ratio of the company shows that the company's ability to meet the current obligation is low i.e. below the general norm of current ratio
- From the debt-equity ratio analysis it is reflected that GRIDCO Ltd. had a lower safety margin for the creditors. The debt-asset ratio of the company also varies frequently, which is not a good indicator for the company.
- The interest-coverage ratios of GRIDCO are also negative in all the years. It indicates that GRIDCO has been unable to pay interest to the lenders, which is a dangerous signal for the company.
- The inventory turnover ratio of GRIDCO reflects that the inventories of the company are not so efficiently managed in recent years.
- The debtor's turnover ratio of GRIDCO also varies in a continuous manner, which affects the credit management of GRIDCO Ltd. Similarly, the fixed asset turnover ratio of GRIDCO is very low. It reflects that the company has a lower degree of efficiency in the utilisation of assets.
- The gross profit margin ratio of GRIDCO is very low, which indicates that GRIDCO has a higher cost of production and has inefficient management structure.

From the financial analysis of GRIDCO, it is found that the company's performance is not so good. Here some suggestions are highlighted which would be helpful to the company. These are not official in nature. On the other hand, these are the outcomes of the researcher's observation, a few of which are enumerated below:

- The company should find out the financial requirement because of operation by understanding the balance sheet and profit and loan account, which will be helpful for better decision-making in part of the company.
- The management should generate a systematic financial plan
- There should be no over investment in stock.
- The corporate income tax should not be high.
- The cash / revenue collection from the customers should be improved.
- The company should be equipped with well-qualified staff.

- The company should have adequate source of supply in order to obtain spares at right price.
- Misuse of the major portion of power by the consumers (people) and by different industries and distribution zones should be controlled in a proper manner.
- Last but not the least; the company should have to adopt certain tools and techniques, which will help it to recover in a better way without any obligation imposing on customers.

Conclusion

Combining all the above results and the analysis it can be concluded that the financial performance as well as the business performance of the Gridco Ltd. is not so satisfactory. So, the hypothesis taken in this work proved to be correct. The analysis and the findings are only limited to the year 2000 to 2007. Gridco is no doubt one of the leading power generating companies in Orissa; but its performance during these limited period is not so satisfactory. The findings about the Gridco provide a slight picture about the company's position and performance at the given time period. This work is open for further research. If the Gridco Ltd. takes some effective measure to overcome, its drawback, then one day will come when Gridco will stand as a most powerful and efficient organisation in the Orissa power sector, which enriched with the excellence in the management of finance and position.

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