



Dupont Analysis and Corporate Performance: A Case Study of Grid Corporation of Odisha LTD.

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Abstract- DuPont analysis, a common form of financial statement analysis, decomposes return on net operating assets into two multiplicative components: profit margin and asset turnover. These two accounting ratios measure different properties prior research has found that a change in asset turnover is positively related to the future changes in earning. This paper comprehensively explores the DuPont components. Working capital management is the major area of concern. In this paper an attempt has been made to evaluate working capital position of Gridco Ltd. Odisha various statistical tools and financial statements were used to analyse working capital trends. Working capital management refers to the management of current assets and current liability. The present study analyzes the working capital management of Gridco Ltd.

Key words: Financial statement analysis, DuPont analysis, profit margin, assets, Gridco.

Introduction : The DuPont system is a way of visualizing the information so the everyone can see it. The system identifies profitability as being impacted by three different levers such as, earnings, turnings, leverage. Power sector has become important and indispensable practically in every sphere of activity. Without the functioning of power not a single work can be done. 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. The state Govt. in works department in their notification no 5824- E.I.T.V.-15/61 dated the 23rd Jan

1961 constituted the electricity Board in the state known as Odisha state Electricity Board (OSEB), as statutory authority constituted under section of the electricity (supply) act 1948 with effect from 01.03.1961. According to Odisha Electricity Reforms Act 1995, Gridco has been vested with the transmission and bulk supply business. Hence it has created different entitles: (i) Generation company (ii) transmission Company (iii) Distribution Company. With the enactment of OER Act 1995 the erstwhile OSEB was dissolved and three new corporations were created on 1.04.1996. Such corporation are as follows (i) Grid Corporation of Odisha Ltd (GRIDCO) (ii) Odisha Power Transmission corporation Ltd (OPTCL) (iii) Odisha Hydro Power Corporation Ltd (OHPC). Gridco Ltd. Purchases power from various sources and sales it to four Odisha distribution companies. Odisha Power transmission corporation Ltd. Is the sole licensee for



interstate power transmission and wheeling of electricity. It also controls the state load despatch centre activities for grid operation in the state. Odisha Hydro Power Corporation Ltd is the control for operation and maintenance.

1. Review of literature : Mishra, M. (2013), studied the performance evaluation of power sector in Odisha and finds that 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.

Maheshwari, M. (2014), conducted the Indian steel industry by selecting the four Indian steel companies. The study shows that the performance of steel industry is quite satisfactory. The efficient working capital management performs the crucial role in managing proper liquidity, solvency and profitability of the industry.

Harris, A. (2012), pointed out that working capital management is a simple and straightforward concept of ensuring the ability of the firm to find the difference between the short term assets and short term liabilities.

M, M. Petros, (2010), empirically investigated the effect of working capital management on firm's financial performance in an emerging market. They hypothesized that working capital management leads to improved profitability.

Padachi, K. (2010), Find in his research study that a firm is required to maintain a balance between liquidity and profitability while conducting its day to day operations. The manager of a business entity is in a dilemma of achieving desired tradeoff between

liquidity and profitability in order to maximize the value of a firm.

Amidu, M. (2011), stated that the factors to be considered whenever a capital structure decision is taken are capital intensity, Tangibility, Profitability, firm size, non-debt tax shield base on.

2. Objective & Methodology- The financial statement analysis is a broad topic and the most vital for any organization. It is also the most sensitive area in the field of the financial management. Research Methodology- The present study is a descriptive and analytical in approach. It is purely based on secondary data which were collected from the published annual reports of Gridco, Journals, books, newspaper, other publications various power sector company's websites etc. to analyze the Gridco's corporate profitability and working capital management various financial tools and statistical tools have been used. By giving special emphasis has to the analysis of the financial statements of Gridco the objectives of this paper are

(i) To study the financial structure of Gridco Ltd. and its impact of financial performance.

(ii) To analyse the financial statements with a view to examine its financial strength and weakness.

3. About Gridco : Grid Corporation of Odisha Ltd. (GRIDCO) is one of the largest power generation corporation of Odisha. It was formed in 01.04.1996 and was responsible for both transmission and distribution of electricity till 25th Nov. 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 unit are



spread all over Odisha. The day to day affairs to 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. The government of Odisha 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

Northern Zone- NESCO Ltd (North Eastern Electricity Supply Company of Odisha Ltd.)

Area of operation: Balasore, Bhadrak, Jajpur, Keonjhar, Mayurbhanj.

Western Zone: WESCO Ltd. (Western Electricity Supply Company of Odisha Ltd.)

Area of Operation: Baragarh, Balangir, Deogarh, Jharsuguda, Kalahandi, Nuapada, Sambalpur, Sonapur, Sundargarh.

Southern Zone: SOUTHCO Ltd. (Southern Electricity Supply Company of Odisha Ltd)

Central Zone: CESCO Ltd (Central Electricity supply company of Odisha Ltd.)

Area of operation: Angul, Cuttack, Dhenkanal, jagatsinghpur, Kendrapada, Khurda, Nayagarh, Puri.

Balance Sheet of Gridco : The comparative balance sheet is helpful to provide a quick reference about the company's position and financial performance.

Comparative Balance Sheet of GRIDCO Ltd.

From 2011-12 to 2014-15

TABLE-1

(` in Lakh)

Assets	2011-12	2012-13	2013-14	2014-15
Current Assets				
Current Investment	22,121.56	18,200.31	15,500.31	12,891.30
Trade receivable	73,383.86	105,224.25	94,636.68	96,934.85
Cash &Cash equivalent	27,019.29	52,211.08	48,687.70	39,744.79
Short – Term Loan & advances	6,394.60	8,126.13	10,395.70	24,878.40
Other current Assets	4,254.47	2,356.04	2,556.24	2494.02
Total Current Assets	133,173.79	186,117.82	1,71,776.80	1,76,943.37
Non - Current Assets				
Fixed Assets				
Tangible Assets	103.16	87.52	123.75	202.92
Intangible Assets	113,970.00	81,395.00	48,524.00	20,053.00
Non- Current Investment	11,022.06	11,022.06	11,022.06	11,022.06



Long – term loans & Advances	186,763.71	183,231.41	2,08,734.07	1,94,875.90
Other non- Current Assets	145,399.35	196,372.25	1,48,698.08	1,80,119.71
Total fixed Assets	457,258.28	472,108.24	3,15,101.97	-4,06,273.59
Total Assets	590,432.07	658,226.06	58,6878.77	5,83,216.96
Liabilities & Capital				
Current Liabilities				
Short – term borrowing	40,614.39	66,015.44	54,963.39	49,689.68
Trade payables	124,614.98	127,765.78	2,19,618.90	1,58,243.89
Other Current Liabilities	206,931.99	178,758.80	1,98,697.44	2,21,142.16
Short - term provision	0.25	1,017.77		2,082.50
Total Current liabilities	372,161.61	373,557.79	4,73,279.72	4,31,158.22
Non – Current Liabilities				
Long –Term borrowings	282,068.00	259,128.14	2,25,546.99	2,98,744.96
Other Long –Term liabilities	70,149.20	141,935.09	1,50,881.14	1,28,178.07
Total Non –Current Liabilities	352,217.20	401,063.23	3,76,428.13	4,36,923.03
Total Liabilities	724,378.81	774,461.02	8,49,707.85	8,68,081.25
Share holder’s fund				
Share Capital	43,298.14	57,671.14	57,671.14	57,671.14
Reserve & Surplus	177,244.88	174,066.10	3,20,500.22	332,535.44
Total	133,946.74	116,394.96	3,78,171.36	3,90,206.58
Total Liabilities & Capital	590,432.07	658,226.06	1,227,879.21	1258287.83

Source : GRIDCO Annual Reports, 2011-12 to 2014-15

4. Financial Statement 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, financial ratio analysis on the basis of reformulated and adjusted financial statements.

Application of financial statement analysis- Generally, the financial

statement of Gridco is responsible for analyzing the various application of the company. The applications are as follows:

- Financial statement analysis is useful for assessment of the corporate excellence.
- It judges the credit – worthiness of the company.
- It forecasts about the bankruptcy position of the company.
- It is helpful in valuing the equity shares.



e. Market risk of the company is also estimated by the financial statement analysis.

5. 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 or ratios between various items or groups of items of a given financial statement. We can also say that ratio

$$\text{Current ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}}$$

$$\text{Liquid Ratio} = \frac{\text{Quick Assets}}{\text{Current Liabilities}}$$

$$\text{Cash Ratio} = \frac{\text{Cash and Bank Balance} + \text{Current Investment}}{\text{Current Liabilities}}$$

Leverage Ratio :

Leverage ratio analysis is also known as capital structure ratio. This ratio measures about long term solvency of the organization. Various leverage ratio can be calculated by the following formulas:

$$\begin{aligned} \text{➤ Debt - Equity Ratio} &= \frac{\text{Debt}}{\text{Equity}} \\ \text{➤ Debt - Asset Ratio} &= \frac{\text{Debt}}{\text{Assets}} \\ \text{➤ Debt - Assets} &= \frac{\text{Debt}}{\text{Equity} + \text{Debt}} \\ \text{Interest - coverage Ratio} &= \frac{\text{EBIT}}{\text{Interest}} \end{aligned}$$

Turnover Ratio-

Turnover ratio or activity ratio is also one of the important financial ratio analysis. It generally measures how efficiently the company manage the assets. Various turnover ratio can be calculated by the following formulas:

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 organizations performance. Some of them are described below:

Liquidity Ratio: Liquidity ratio reflects the shorter solvency position of the company. In other words this ratio reflects the short-term financial strength or solvency of the company. To measure the liquidity of a firm, the following ratios can be calculated and the following are the formulas:



- Inventory turnover Ratio = $\frac{\text{Cost of goods sold}}{\text{Ave. Inventory}}$
- Debtor turnover ratio = $\frac{\text{Net credit sales}}{\text{Ave. Accounts Receivables}}$
- Fixed asset turnover ratio = $\frac{\text{Net Sales}}{\text{Ave. Net fixed Assets}}$
- Total Assets Turnover Ratio = $\frac{\text{Net Sales}}{\text{Ave. total Assets}}$

Profitability Ratios- The operation efficiency of a firm and its ability to ensure adequate returns of 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

Different 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 or total Asset (ROA) = $\frac{\text{Net Profit (after tax)}}{\text{Ave. Total Assets}}$
- Earning power ratio = $\frac{\text{Profit before Interest and taxes}}{\text{Ave total Assets}}$

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 2011-12 to 2014-15. In table 2 four types of financial ratios i.e., liquidity ratio, leverage ratio, turnover ratio, profitability ratio is taken into consideration.



Financial Ratio Analysis of GRIDCO Ltd.
 From 2011-12 to 2014-15
 TABLE-2

(` in Lakh)

Financial Ratios	2011-12	2012-13	2013-14	2014-15
Liquidity Ratio				
Current Ratio	0.35:1	050:1	0.36:1	0.41:1
Quick Ratio	0.35:1	050:1	0.36:1	0.41:1
Cash Ratio	0.14	0.19	0.14	0.13
Cash flow coverage Ratio	25.04	14.53	20.23	9.20
Leverage Ratio				
Debt- Equity Ratio	81.34	6.95	6.52	7.40
Debt – Assets Ratio	1.22	1.17	1.4	1.47
Interest Coverage Ratio	0.13	1.28	0.40	1.16
Proprietary Ratio	37.35	32.20	64.43	66.90
Turnover Ratio				
Total Assets Turnover Ratio	1.22	1.17	1.04	1.47
Fixed Assets Turnover	0.51	0.35	0.12	0.05
Profitability Ratio				
Net profit ratio	-17.62	0.47	-22.98	1.81
Return on Owners equity	-42.48	1.37	-38.72	3.08
Earnings per share	2164	55	2539	209
Return on Capital Employed	-2.13	16.78	-2.50	11.03

Source : GRIDCO Annual Reports, 2011-12 to 2014-15

6. Analysis of Data : The overall performance of GRIDCO Ltd can be analysed by its financial statement analysis.

Analysis of Liquidity Ratio : The current ratio of Gridco Ltd shows that the company's ability to meet the current obligation is low I.e, below the general norm of current ratio. Similarly, the quick ratio is not over or equal to general norm of quick ratio. The cash ratio of Gridco is very low and not so satisfactory. The cash flow coverage ratio measures the potentiality of the firm in meeting the current obligations on the basis of cash flow originating from the business operations. The cash flow coverage ratio

shows a fluctuating trend. It ranged between 9.20 per cent to 25.04 per cent.

Analysis of Leverage Ratio : From the debt – equity ratio analysis it is reflected that Gridco Ltd had a middle safety margin for the creditor for three years. The debt – Asset ratio indicates that the whole study period is equal ratio. The Interest coverage ratio of GRIDCO Ltd. are negative for two years and other two years is 1.28 and 1.16. It indicates that Gridco has been unable to pay interest to the lenders for some years which are a dangerous signal for the company.

Analysis of Turnover Ratio : The Turnover ratio of GRIDCO Ltd is also not so impressive. The total Assets Turnover



ratio measures the efficient employment all assets, the ratio is very equal. The fixed asset turnover ratio of GRIDCO in the year 2011-12 to 2014-15 was Negative. All total the turnover ratio of GRIDCO reflects about the inefficiency of the company is handling the assets.

Analysis of Profitability Ratio : The Net profit ratio of GRIDCO Ltd is very low and negative whole of the study period except, the year 2012-13 and 2014-15. So it indicates that GRIDCO has inadequate returns to the owners and shareholders. Similarly the return on owners equity is negative only for two years and positive, rest of the years. Earning per share is satisfactory for first and third years of the study period and rest of the two years is not satisfactory. Similarly the Return on capital Employed is also negative for two years and other two years is positive. It shows that the return on total Assets is very poor of GRIDCO Ltd. The earning power ratio of GRIDCO also indicates towards the poor performance of the company.

Findings-

- 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.
- From the debt equity ratio analysis it is reflected that GRIDCO Ltd, had a lower safety margin for the creditors.
- The interest coverage ratios of GRIDCO are also negative in all the years.
- 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.

Suggestions : 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.

- The Management should generate a systematic financial plan.
- There should be no over investment in stock.
- The cash collection from the customers should be improved.
- The company should be equipped with well qualified staff.
- 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 Gridco is not doubt one of the leading power generating companies in odisha, but its performance during these periods 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. 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 organization in the Odisha power section, which enriched with the excellence in the management of finance and position.



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