RESEARCH HUB – International Multidisciplinary Research Journal
(RHIMRJ)
Research Paper
Available online at: www.rhimrj.com

# A Financial Ratio Analysis of Gujarat Narmada valley fertilizer & Chemicals Ltd.

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*Abstract: **The purpose of the study is to know about the Gujarat Narmada valley fertilizer & Chemicals Ltd, to study the growth of Gujarat Narmada valley fertilizer Ltd. The data required for the paper has been taken from "www.moneycontrol.com" from 2009-10 to 2013-14. In the next step, ratios, growth for each year, Mean, Standard Deviation, correlation coefficient for the data of company has been calculated. The fertilizer industry presents one of the most energy intensive sectors within the Indian economy and is therefore of particular interest in the context of both local and global environmental discussions. The study conducted is based on the ratio analysis, t-test which helped to analyze the performance of companies in Indian Fertilizer Industry.***

***Keywords: Growth, Profitability, Trend.***

## I. WHAT IS FINANCIAL STATEMENT?

A financial statement may be defined as an organized collection of accounting information in a systematic, logical and consistent manner with the users of accounting information. According to the Kohler, "Financial statements are those statements which show both the performance and the financial position. They indicate Balance Sheets, Income statements, Fund statements or any supporting statements or other presentation of financial data derive from accounting records.

**Purpose of financial statement:**

- **Owners and managers** require financial statements to make important business decisions that affect its continued operations. Financial analysis is then performed on these statements to provide management with a more detailed understanding of the figures. These statements are also used as part of management's annual report to the stockholders.
- **Employees** also need these reports in making collective bargaining agreements (CBA) with the management, in the case of labor unions or for individuals in discussing their compensation, promotion and rankings.
- **Prospective investors** make use of financial statements to assess the viability of investing in a business. Financial analyses are often used by investors and are prepared by professionals (financial analysts), thus providing them with the basis for making investment decisions.
- **Financial institutions** (banks and other lending companies) use them to decide whether to grant a company with fresh working capital or extend debt securities (such as a long-term bank loan or debentures) to finance expansion and other significant expenditures.
- **Government entities** (tax authorities) need financial statements to ascertain the propriety and accuracy of taxes and other duties declared and paid by a company.
- **Vendors** who extend credit to a business require financial statements to assess the creditworthiness of the business.
- **Media and the general public** are also interested in financial statements for a variety of reasons.

## II. RATIO ANALYSIS

Ratio analysis is an important and powerful technique or method, generally, used for analysis of Financial Statements. Ratios are used as a yardstick for evaluating the financial condition and performance of a firm. Analysis and interpretation of various accounting ratios gives a better understanding of financial condition and performance of the firm in a better manner than the perusal of financial statements. Profitability ratios were calculated for present study.

### 1. PROFITABILITY RATIOS:

The following two profitability ratios are calculated for this study (1) Gross profit ratio, (2) Net profit ratio.

#### i. Gross Profit Ratio:

The first ratio in relation to sales is gross profit ratio or gross margin ratio. The ratio can be calculated by

$$\text{Gross Profit Ratio} = \frac{\text{Sales–Cost of Goods Sold}}{\text{Sales}} \times 100$$

$$= \frac{\text{Gross Profit}}{\text{Sales}} \text{ x } 100$$

**ii. Net Profit Ratio:**

Net profit is obtained, after deducting operating expenses, interest and taxes from gross profit. The net profit ratio is calculated by

$$\text{Net Profit Ratio} = \frac{\text{Profit after Tax}}{\text{Sales}} \text{ X100}$$

Net profit includes non-operating income so the later may be deducted to arrive at profitability arising from operations.

**2. Liquidity Ratio:**

The following two liquidity ratios are calculated for this study

1. Current ratio
2. Liquidity ratio

**i. Current Ratio:**

**Current ratio is defined as the relationship between current assets and current liabilities.** It is also known as working capital ratio. This is calculated by dividing total current assets by total current liabilities.

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

**ii. Liquid ratio:**

Liquid ratio establishes the relationship between liquid assets and current liabilities. Liquid assets are those that can be converted into cash, quickly, without loss of value. Cash and balance in current account with bank are the most liquid assets.

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

## III. Scope of the Study

The study covers analysis of financial statements of GNFC Limited for the period 2009-2010 to 2013-2014. It can be extended to future period also. With the help of statistical analysis, the forecasting of subsequent years can also be made for particular item such as sales, inventory, profit, etc. The statistical analysis can also be applied to every ratio and by their upon more comprehensive results can be obtained. The statistical analysis can also be applied to other similar companies as well as the industry as a whole in order to know the prevailing situation in the whole industry.

## IV. Limitations of Data

1. The study is based on historical data.
2. The study depends on the secondary data obtained from www.money control.com, www.gnfc.in.
3. Accounting techniques used for the study like ratio analysis has its own limitations.It is calculated from past data. So it is no useful to assume the future.
4. Financial statements are primarily based on cost concept. Hence, It cannot give the current position.

## V. DATA ANALYSIS

### *A. GROSS PROFIT RATIO:*

| Year | Gross Profit(In Caror) | Growth rate per year (In %) | Net Sales (In caror) | Growth rate per year (In %) | Ratio(%) |
|---|---|---|---|---|---|
| 2009-10 | 244.44 | ---- | 2614.37 | ---- | 9.35 |
| 2010-11 | 259.98 | 6.36 | 2844.42 | 8.80 | 9.14 |
| 2011-12 | 420.57 | 61.77 | 3862.01 | 35.77 | 10.89 |
| 2012-13 | 444.39 | 5.66 | 4252.57 | 10.12 | 10.45 |
| 2013-14 | 471.15 | 6.02 | 4847.19 | 13.98 | 9.72 |

**Statistical Techniques:**

| Particulars | Mean | Standard Deviation |
|---|---|---|
| Gross Profit | 368.11 | 107.44 |
| Net Sales | 3684.11 | 942.99 |

The correlation coefficient between Gross Profit and Net Sales is 0.98

**Testing of Hypothesis:**

$H_0$: There is no linear correlation between Gross Profit and Net sales.
$H_1$: There is linear correlation between Gross Profit and Net sales.

$t_{cal} = 7.80$

$t_{0.05} = 3.18$

$t_{cal} > t_{0.05}$

The hypothesis is rejected so we can say that there is linear correlation between Gross Profit and Net sales.

### *B. NET PROFIT RATIO:*

| Year | Net Profit (In Caror) | Growth rate per year (In %) | Net Sales (In caror) | Growth rate per year (In %) | Ratio (%) |
|---|---|---|---|---|---|
| 2009-10 | 121.83 | ---- | 2614.37 | ---- | 4.66 |
| 2010-11 | 263.68 | 116.43 | 2844.42 | 8.80 | 9.27 |
| 2011-12 | 281.54 | 6.77 | 3862.01 | 28.74 | 7.29 |
| 2012-13 | 270.46 | -3.93 | 4252.57 | 10.11 | 6.36 |
| 2013-14 | 289.38 | 7.00 | 4847.19 | 13.98 | 5.97 |

**Statistical Techniques:**

| Particulars | Mean | Standard Deviation |
|---|---|---|
| Net Profit | 245.38 | 69.77 |
| Net Sales | 3684.11 | 942.99 |

The correlation coefficient between Net Profit and Net Sales is 0.72

**Testing of Hypothesis:**

$H_0$: There is no linear correlation between Net Profit and Net sales.
$H_1$: There is linear correlation between Net Profit and Net sales.

$t_{cal} = 1.78$

$t_{0.05} = 3.18$

$t_{cal} < t_{0.05}$

Thus we fail to reject the null hypothesis. Hence there is no linear correlation between Net Profit and Net sales.

### *C. CURRENT RATIO:*

| Year | Current Assets (In Caror) | Growth rate per year (In %) | Current liabilities (In caror) | Growth rate per year (In %) | Ratio (%) |
|---|---|---|---|---|---|
| 2009-10 | 2124.31 | ---- | 1778.88 | ---- | 1.19 |
| 2010-11 | 2593.23 | 22.07 | 2073.07 | 16.53 | 1.25 |
| 2011-12 | 2119.46 | -18.27 | 1931.14 | -06.85 | 1.10 |
| 2012-13 | 2332.20 | 10.03 | 1474.40 | -23.65 | 1.58 |
| 2013-14 | 4240.85 | 81.84 | 1790.40 | 21.43 | 2.37 |

**Statistical Techniques:**

| Particulars | Mean | Standard Deviation |
|---|---|---|
| Current Assets | 2682.01 | 892.71 |
| Current Liabilities | 1809.58 | 222.41 |

The correlation coefficient between current assets and current liability is 0.02.

**Testing of Hypothesis:**
$H_0$: There is no linear correlation between Current Assets and Current liability.
$H_1$: There is linear correlation between Current Assets and Current liability

$t_{cal}$ = 0.027

$t_{0.05}$ = 3.18

$t_{cal} < t_{0.05}$

Thus we fail to reject the null hypothesis. Hence there is no linear correlation between Current Assets and Current liability.

### *D. LIQUID RATIO:*

| Year | Liquid Assets (In Caror) | Growth rate per year (In %) | Liquid liabilities (In caror) | Growth rate per year (In %) | Ratio (%) |
|---|---|---|---|---|---|
| 2009-10 | 1719.28 | ---- | 1778.88 | ---- | 0.97 |
| 2010-11 | 2129.70 | 23.87 | 2073.07 | 16.53 | 1.03 |
| 2011-12 | 1520.26 | -28.61 | 1931.14 | -06.85 | 0.79 |
| 2012-13 | 1695.21 | 11.51 | 1474.40 | -23.65 | 1.03 |
| 2013-14 | 3416.26 | 101.52 | 1790.40 | 21.43 | 1.91 |

**Statistical Techniques:**

| Particulars | Mean | Standard Deviation |
|---|---|---|
| Liquid Assets | 2096.14 | 771.08 |
| Liquid Liabilities | 1809.58 | 222.41 |

The correlation coefficient between liquid assets and liquid liability is 0.08.

**Testing of Hypothesis:**
$H_0$: There is no linear correlation between Liquid Assets and Liquid liability.
$H_1$: There is linear correlation between Liquid Assets and Liquid liability.

$t_{cal}$ = 0.15

$t_{0.05}$ = 3.18

$t_{cal} < t_{0.05}$

Thus we fail to reject the null hypothesis. Hence there is no linear correlation between Liquid Assets and Liquid liability.

## VI. CONCLUSION

GNFC Ltd. was earning averagely 9.91% gross profit on sales. The highest profit percentage was recorded in 2011-12(10.89%) and lowest profit was recorded in 2010-11(9.14%).the company was earning averagely 6.71% Net profit on sales during these five years.

The average current ratio of GNFC is 1.50 of last five years which is 75% of standard ratio (2:1) the current ratio of GNFC Ltd. is increasing continuously except 2011-12 year. Current ratio situation is unsatisfactory in GNFC Company as per standard ratio except 2013-14. Average liquid ratio of GNFC Ltd. was 1.17. The average ratio of the company was above than standard Liquid ratio (1:1).GNFC Ltd. having lower liquid ratio than standard ratio in 2009-10 and in 2011-12 and the highest ratio was recorded in 2013-14.

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