"A Study on DuPont Analysis with Special Reference to GRASIM Industry Limited, Harihara"

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ABSTRACT:

The main field of this work is to study using DuPont analysis the efficiency and profitability of Grasim industry limited situated in harihara. This main intention of this study is to help the investor to make a decision while making investment. The DuPont analysis measures the wealth of the stockholder with ROI index with other index affect each other. It is compared with the technique and they are three step, five step DuPont analysis and with leverages.

For the study of DuPont analysis of Grasim industry limited whose parent company is Aditya Birla groups for this study the time period that have been selected is of 5 years i.e. starts from 2014 - 2015 to 2018 – 2019. The financial information has been extracted from the company's annual report published by the company. The main intention of this study is to help the investor to take the decision while making investment.

I. INTRODUCTION:

The Du Pont Company in the year 1920, at united state. Started DuPont analysis for financial analysis which has gain a worldwide identification, acceptance and recognition. This is a financial ratio used to calculate an organisation's capability to expand their ROE. This model was established in order evaluate the present return on equity and to answer which part of the business is in problematic can be measured by management.

There model used in calculating DuPont analysis of any company are-

- Three step DuPont model

Formulae to calculate this is

$$ROE = \frac{\text{Net income}}{\text{Sales}} \times \frac{\text{Sales}}{\text{Assets}} \times \frac{\text{Assets}}{\text{Equity}}$$

- Five step DuPont model

Formulae to calculate this is

$$ROE = \frac{\text{Net income}}{\text{EBT}} \times \frac{\text{EBT}}{\text{EBIT}} \times \frac{\text{EBIT}}{\text{Sales}} \times \frac{\text{Sales}}{\text{Assets}} \times \frac{\text{Assets}}{\text{Equity}}$$

- Z- Score method

Formulae to calculate this is

Z= 1.2 Net Working capital / Total asset + 1.4 Retained earnings / Total asset + 3.3 EBIT / Total asset + 0.6 Market value of equity / Book value of debt + 1.0 Sales / Total asset.

When it comes to interpretation the DuPont analysis is significant to complete what is driving on company's return on equity. The net profit margin shows how much profit the company get from its revenue, asset turnover shows how capably the company make use of its assets and leverage. Equity multiplier demos how much the enterprise is leveraged. The examination goes beyond profit margin to identify how efficiently an organisation's assets produce sales or else cash and how deeply an organisation uses debts to create incremental returns.

II. STATEMENT OF PROBLEM:

The statement of the problem is **"A study on DuPont analysis of Grasim industry limited"**

This topic is selected because as it helps the investors to make a decision whether to invest or not in a particular company.

III. OBJECTIVES:

- To help investor in making decision about investment.
- To study and analysis relation of DuPont with reference of ROE.
- To know whether the company is under bankruptcy position or not.

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IV. RESEARCH METHODOLOGY:

The research methodology that have been selected for this study is secondary method of data collection where data have been collected from the company provided annual report, company magazines and company website.

V. LITERATURE REVIEW:

1. **Hak-Seon Kim (2016)**

According to paper this is a DuPont analysis on the Food Distribution market. The main aim of this paper is to measure the ratio of ROE and ROI by using DuPont method. They have considered 7 food distribution company for the analysis, by this study we can make decisions like operating and investing decision, and even financial and leverage-related decisions which are more important.

2. MishelleDoorasamy (2016)

According to this study the author has taken three top food companies for the study of financial performance by DuPont analysis. To achieve the objective of the research ratio investing in any sector there should be a proper analysis so that they can get proper return, this can be seen in profitability and financial sustainability of the company.

3. MsDhanalakshmi K and Dr. Mohamed Siddik (2016)

This paper involves the study of Nestle Indian Limited Company on performance analysis with regard to profitability, efficiency and risk using DuPont analysis. Here the author gives more important to money as it is blood for all and finance manager should raise money at low cost and risk and use it in more earning project. By this analysis they concluded that nestle company lacks in managing their cash correctly so they must correct the imbalance of cash by inflowing more cash into the firm.

4. K.T. Gopi (2018)

According to this study the researcher have chosen three major companies in cement industry they are ACC, Gujarat Ambuja and UltraTech Company for the period of 8 years by using DuPont analysis. The DuPont analysis showed that there was a decline in ROE of leading cement Company’s. The author says that when there is a need of taking economic decisions the company can use DuPont analysis across companies within an industry or between industry or within a firm itself.

5. MehthaPiyush Ramesh (2015)-

This is the study based on DuPont analysis of Axis bank, where the author says that Return on equity can even be done by tradition way as well as by DuPont analysis, here the author have used three step model. Return on equity is calculated to evaluate how best the company's is effectiveness in translating the equity into profit or revenue of shareholders or investors. In this paper they have compared the return on equity of Axis bank with other three peer banks and have concluded that Axis bank is comparatively better for investors to invest so that they get good return on their investment.

VI. SCOPE OF STUDY:

The study is based for 6 weeks of project and it includes information of only Grasim industry ltd. The topic I have selected is related to DuPont analysis for which I have collected information from the company for 5 years. The scope of the study includes

- To measure the profitability margin that the company can earn.
- To know how best the company can put its asset into profitability.

VII. LIMITATION OF THE STUDY:

The study of this project include the following limitation or drawbacks and they are

- The study is limited for only 5 years that is from 2018-2019 to 2014-2015.
- The method which is used to collect data is secondary method, it is based on the audited account report and the report are ambiguous which may result to mislead.
- Less importance was given to primary data which was realistic and original.
- The company was maintaining very much confidential in providing financial information.

TOOLS USED FOR CALCULATION:

The tools used for calculating DuPont analysis are

- Three step model
- Five step model
- Z score method

VIII. ANALYSIS AND INTERPREATION:

1. Three step DuPont analysis

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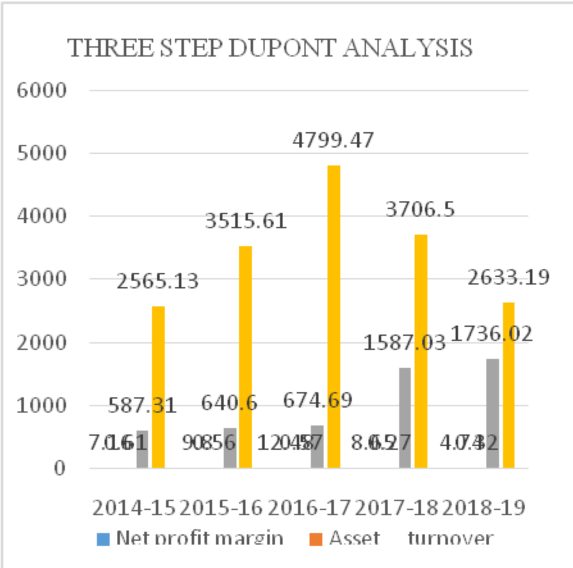
(Table number -1)

Year	Net profit margin	Asset turnover	Equity multiplier	Return On Equity
2014-15	7.16	0.61	587.31	2565.13
2015-16	9.80	0.56	640.60	3515.61
2016-17	12.48	0.57	674.69	4799.47
2017-18	8.65	0.27	1587.03	3706.50
2018-19	4.74	0.32	1736.02	2633.19

(Source- company annual report)



(Source- table number 1)

Interpretation:

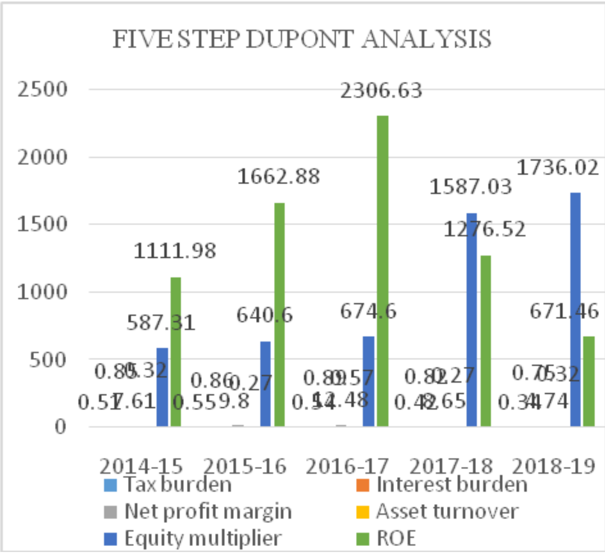
From the above drawn graph it is clearly shown that the return on equity is in fluctuation trend, and by observing clearly I can conclude that the company fails to manage properly, because the net profit margin for first three year was increased and it declined, and even asset turnover was in declining trend. The return on equity holder of the company is also in decreasing since last two years this is because the company depends more on debt which increase in operational expenses.

2. Five step DuPont analysis:

(Table number -2)

Year	Tax burden	Interest burden	Net profit margin	Asset turnover	Equity multiplier	ROE
2014-15	0.51	0.85	7.61	0.32	587.31	1111.98
2015-16	0.55	0.86	9.80	0.27	640.60	1662.88
2016-17	0.54	0.89	12.48	0.57	674.60	2306.63
2017-18	0.42	0.82	8.65	0.27	1587.03	1276.52
2018-19	0.34	0.75	4.74	0.32	1736.02	671.46

(Source: company annual report)



(Source- table number 2)

Interpretation:

From the above graph we can clearly judge that interest and tax burden have been fluctuating every year. The Aditya Birla ltd having volatility in interest lead to increase in tax burden. The net profit margin of the company is not much good because for the first three it has been increased and in the last two years it has been dramestacilly decreased. It conforms that the company fails to keep up strong management in using the available fixed asset, Because of continues in sales of the company it leads to decrease in revenue of the company.

3. Z- SCORE METHOD

Z= 1.2 Net Working capital / Total asset + 1.4 Retained earnings / Total asset + 3.3 EBIT / Total asset + 0.6 Market value of equity / Book value of debt + 1.0 Sales / Total asset

A: Net working capital / Total asset

= 2696 / 229155

= 0.011

B: Retained earnings / Total asset

= 41828 / 229155

= 0.183

C: EBIT / Total asset

= 6985/ 229155

= 0.030

D: Market value of equity / book value of long debt

= 232610 / 61972

= 3.75

E: Sales / Total asset

= 72971 / 229155 = 0.318

Z = 1.2 (A) + 1.4 (B) + 3.3 (C) + 0.6 (D) + 1.0 (E)

Z = 1.2 (0.011) + 1.4 (0.183) + 3.3 (0.030) + 0.6 (3.75) + 1.0 (0.318)

Z = 0.0132 + 0.2562 + 0.099 + 2.25 + 0.318

Z = 2.95

XI. FINDINGS, SUGGESTION AND CONCLUSION

FINDINGS:

The three step model of DuPont analysis brief that the equity multiplier, the profit margin and asset turnover are fluctuating every year. The return on equity of this company in this model increases first and for last two year it is in decreasing trend.

- The five step model of DuPont analysis displays that all the five parameters like asset turnover, equity multiplier, profit margin, tax burden and interest burden are in fluctuating mode and even the return on equity of this company was in increasing trend for 1st three year and goes on decreasing trend.
- The z score of the company to know the bankruptcy was 2.95 in the previous year

SUGGSTIONS:

- Company need to focus on reducing operational expenses and to control cost. It would help for the company to maximize return on equity. The company need to have efficient management to overcome from slow growth.
- The company need to focus more on using fixed asset maximum so that the sales of the firm will also increase by mean of decrease in the operational expenses will leads to increase in the return so its equity holders.
- The ideal ratio of Z score method is 2.999. The company scored exactly to the standard. Company is in good position to concentrate more towards profit maximization.
- The company's performance can be increased through overall performance can reach to industrial average performance bench mark.

CONCLUSION:

To study the financial performance of Grasim industry limited for the evaluation of financial performance we have taken DuPont analysis. The DuPont analysis splits ROE in to three parts namely net profit margin, asset turnover, and equity multiplier ratios and part indicates which part is affecting the return on equity of the company.

From the analysis companies ROE is fluctuating year by year and shows decreasing sign, because net profit margin is decreasing through there is an increasing in sales of the company, to improve companies net profit margin company can reduce its operational expense and control its cost.

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