Quest Journals
Journal of Research in Business and Management
Volume 10 ~ Issue 3 (2022) pp: 62-66
ISSN(Online):2347-3002
www.questjournals.org

Research Paper

Financial Performance Analysis of Bharat Heavy Electricals Limited Through Du Pont Model

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ABSTRACT
The study was an attempt to analyse the financial performance of BHEL with the help of financial tool i.e.,Du Pont Model. The Du Pont Company of the U.S. pioneered a system of financial analysis which has received widespread recognition and acceptance. A useful system of analysis , which considers important interrelationships based on information found in financial statements, it has been adopted by many firms. DU Pont Model is also known as Du Pont Analysis. It is basically anatomy of return on equity ratio. As the concept was applied in DU Pont company in 1920's hence the name DU Pont .To determine the financial soundness of Bharat Heavy Electricals Limited, the researcher collected the data for a period of ten years since 2010-11 to 2019-20. The study was based on secondary data collected from the published annual reports of BHEL. The available data were analyzed to test the financial health of BHEL by using Du Pont Model.
KEYWORDS: *Financial Performance , BHEL , Du Pont Model*

Received 01 Mar, 2022; Revised 10 Mar, 2022; Accepted 13 Mar, 2022 © The author(s) 2022. Published with open access at ***www.questjournals.org***

I. INTRODUCTION

BHEL, one of India's largest engineering and manufacturing enterprises in the energy and infrastructure sectors and a leading power equipment manufacturer globally, is a celebration of India's industrial achievements. In its journey of over 55 years, it has gained the status of being one of the strongest pillars of Indian industry. BHEL serves the core sectors of the economy and provides a comprehensive portfolio of products, systems and services to customers in power transmission, transportation, renewable, water, defence & aerospace, oil & gas, and industry. BHEL has created value for its stakeholders due to the scale and depth of its operations, rich experience, competent manpower, innovative ecosystem, diverse product-mix and focus on sustainable business solutions. BHEL is engaged in the design, engineering, manufacture, construction, testing, commissioning and servicing of a wide range of products and services for the core sectors of the economy, viz. Power Sector and Industry Sector that includes Transmission, Transportation, Renewable Energy, Oil & Gas and Defence etc. https://www.bhel.com/

Now- a- days, due to the changing policies of the government and the competition in the globalize era ,the financial performance of the BHEL has been taken ,as it has made tremendous growth within a longer period, from its inception but from last few years there were several ups and downs in its financial performance.

II. REVIEW OF LITERATURE

Subbarayudu,S.,et al.(2020) "A Study on Working Capital with reference to Ultratech Cements Ltd in Anantapuramu District" analyze the financial position through various tools like Ratio Analysis, Statement of changes in working capital. The major source of data for was collected through annual reports, P & L account from 2013-14 to 2017-18. Through this study,it was found that the financial status Ultra Tech Cement is good. (Subbarayudu, Naveena, & Ravikishore, 2020)

Thakur, Seema (2019) in her research article talks about accounting analysis and financial analysis of a business. The main indication behind this study is to investigate the financial functioning position of the Dabur India Limited. This investigation was done with the help of secondary data which was collected from the Annual Reports of the company.It has been found that the company has got enough funds to encounter its obligations including debts & as well as liabilities. (Thakur, 2019)

Lokganathan et al (2019) in their study entitled," A Study on Financial Performance of Selected Public Sector Banks in India Using Camel Approach "attempted to evaluate the performance of public sector banks in India using CAMEL approach. Researchers selected 5 public sector banks out of 27 public sector banks for the study. The study had used the secondary from the period 2014-2018. The study evaluates the performance of selected public sector banks are Bank of Baroda , Canara Bank etc. Through this study,it was found that on an average SBI was at the top position and Indian bank was at the bottom position in selected CAMELS ratio. (Lokganathan & Cresida, 2019)

Patel, Bhumi (2019) analyse the financial performance with the help of ratio analysis at Patco Food Pvt ltd .This is analytical study ,based on the secondary data and is collected from the official website of Patco Food Pvt Ltd from 1-4-2011 to 31-3-2015. Based on the analysis, it was found that the company was financially sound. (Patel, 2019)

Mukdad Ibrahim (2019) in his paper," Measuring the Financial Performance of a Telecommunications Corporation" measures the financial performance of the Emirates Telecommunications Group Company, during the years 2016 to 2018. This paper empirically analyzed three groups of indicators, profitability, liquidity and capital structure. The researcher has used Ratio analysis technique and reflect various aspects of the firm's financial health .The findings indicated strengthening in the firm's ability to control costs in its pursuit of higher profit margins. (Ibrahim, 2019)

Sankaran.,V.S.(2019) in his research paper, "FINANCIAL PERFORMANCE ANALYSIS WITH REFERENCE TO SHIPPING SECTORS**"** attempts to understand the overall financial position of shipping sectors The researcher had selected sample of fifty companies selected from various areas of Chennai city. The data collection instrument used for the study was balance sheet i.e. secondary data. The paper concludes with a positive response of financial performance in shipping sectors. (Sankaran, 2019)

Kiran,K.(2019) in her research paper," A Comparative Analysis of Financial Performance of Selected Telecom Companies Using Z Score Model " focuses on assessing the financial health of selected Telecom units i.e BSNL ,Bharti Airtel , Vodafone and Idea from 2013-14 to 2017-18.The study revealed that Vodafone needs to take corrective actions immediately as Z score is warning its bankruptcy in near future. Moreover, Airtel has also to be serious to improve its performance.financial years 2007-08 to 2011-12 which has depicted the financial distress of BSNL. (Kiran, 2019)

Malini (2019) in their research study ,"A STUDY ON FINANCIAL PERFORMANCE ANALYSIS OF INDIAN TOBACCO CORPORATION LIMITED" aims to analyze the liquidity, profitability, solvency position of the firm and efficiency which it converts its resources into service. The required data were collected from the secondary sources. The study covers a period of five years i.e. from 1st April 2013 to 31st March 2017. The researchers has used the Ratio analysis in the study .The study strongly reveals that the financial performance is better.. (Malini & Banu, 2019)

RESEARCH GAP

Researcher reviewed a number of studies on analysis of financial performance which showed that not too much work had been conducted regarding the financial performance of Bharat Heavy Electricals Limited. The present study, therefore strives to bridge the gap by focusing attention on important aspects of financial management and accounting practices. Such a comprehensive study in this area is the need of the hour and present study has been undertaken with a view to fill this gap.

RESEARCH OBJECTIVE

To main objective of the study is to analysis the financial performance of Bharat Heavy Electricals Limited with the help of Du Pont Model.

III. RESEARCH METHODOLOGY

A research design is purely and simply the basic frame work or plan for a study that guides the collection and analysis of the data. The present research design is descriptive in nature which is a fact finding approach.

The data has been collected by the researcher for ten years from 2010-11 to 2019-20 from secondary sources like annual reports of BHEL and its website.

To analyse the financial performance of BHEL, researcher has used financial technique i.e. Du Pont model .The researchers has used MS EXCEL for carrying out the data analysis and interpretation

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DU PONT MODEL

DU Pont Model is also known as Du Pont Analysis. It is basically anatomy of return on equity ratio. As the concept was applied in DU Pont company in 1920's hence the name DU Pont . (Kapil, 2015)

Here the return on equity ROE is separated into three parts equation.

$$ROE = \left(\frac{\text{Net Income}}{\text{Revenue}} \right) * \left(\frac{\text{Revenue}}{\text{Total Assets}} \right) * \left(\frac{\text{Total Assets}}{\text{Total Equity}} \right)$$

1. FIRST PART- Profitability of the firm measured by Net Profit Margin – NPM

$$NPM = \left(\frac{\text{Net Income}}{\text{Revenue}} \right)$$

2. SECOND PART- Operating efficiency measured by asset turnover – AT

$$AT = \left(\frac{\text{Sales}}{\text{Total Assets}} \right)$$

3. THIRD PART- Financial leverage of the firm measured by equity multiplier – EM

$$EM = \left(\frac{\text{Total Assets}}{\text{Total Equity}} \right)$$

All three components together signify the return on equity of the firm. ROE is a strong indicator of firm's financial health. Equity is the ownership money. High return on ownership signals good financial decisions, investment in good quality assets and high operating efficiency of the firm. Strong ROE signals that shareholders money is invested in a firm that has cash flow generating capacity and embedded growth potential. (Kapil, 2015)

For an investor the ROE acts as trigger points for investment. ROE is compared to return on market index. If ROE is higher than index return , the firm is considered good investment choice as it outperforms the market and vice-versa. Investors also prefer firms with steady ROE. Fluctuating ROE signify high risk and steady ROE signify consistency and stability of firm.

A very easy and simple way to increase ROE is to increase the debt portion of the firm. This makes the equity portion smaller thereby increasing ROE. Such companies use leverage for generating growth. However such companies also tend to have higher bankruptcy risk due to high debt. Higher ROE due to the first two components equation --;-- signify fundamentally stronger firm. High profit margin of a firm signify high competitive advantage of the firm in the market. High Asset turnover signifies high volume player in the market. So basically once ROE is strong for a given firm one must evaluate the source of its strength i.e. the strength of the different components of the DU Pont must be analyzed. for single period or time series basis. firms and source of the same. (Kapil, 2015)

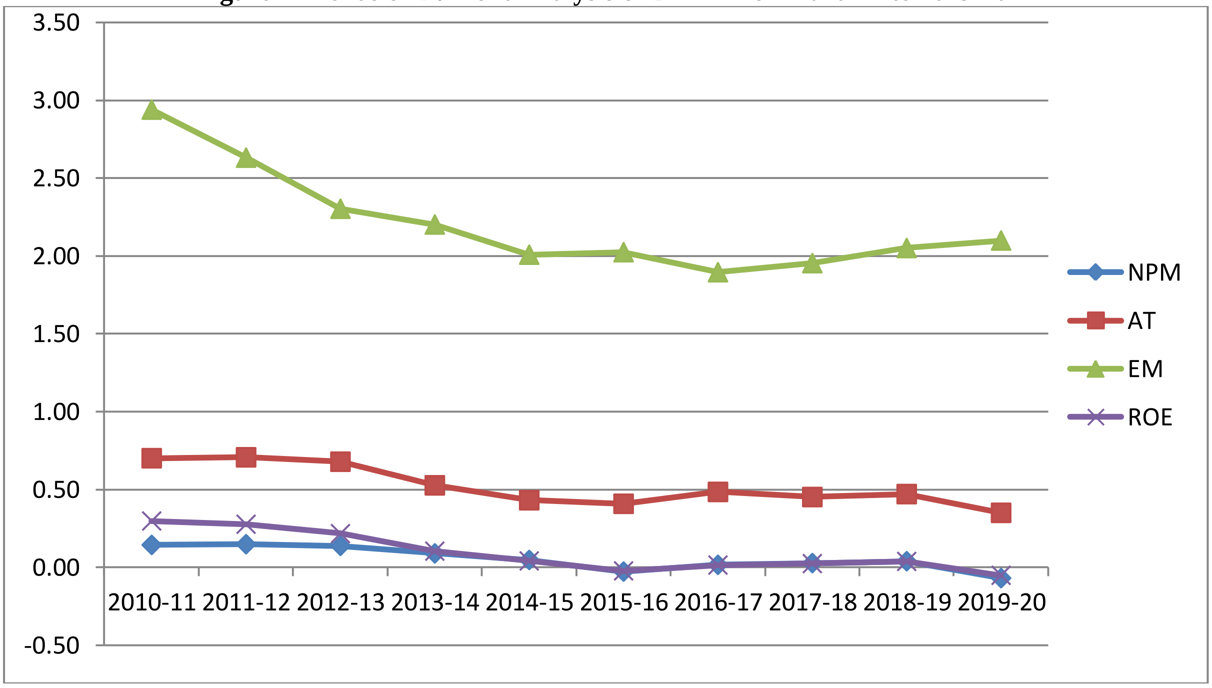
Table 1 Du-Pont Analysis of BHEL from 2010-11 to 2019-20

YEARS	NPM	AT	EM	ROE
2010-11	0.14	0.70	2.94	**0.30**
2011-12	0.15	0.71	2.63	**0.28**
2012-13	0.14	0.68	2.30	**0.22**
2013-14	0.09	0.53	2.20	**0.10**
2014-15	0.05	0.43	2.01	**0.04**
2015-16	-0.03	0.41	2.02	**-0.02**
2016-17	0.02	0.49	1.90	**0.02**
2017-18	0.03	0.45	1.95	**0.02**
2018-19	0.04	0.47	2.05	**0.04**
2019-20	-0.07	0.35	2.10	**-0.05**

Source: Calculated from Annual Reports of BHEL from 2010-11 to 2019-20

NPM – Net Profit Margin,
AT – Asset Turnover,
EM – Equity Multiplier,
ROE –Return on Equity.

Figure 1 Trends of Du-Pont Analysis of BHEL from 2010-11 to 2019-20



Source: *Prepared by the researcher from the Annual Reports of BHEL from 2010-11 to 2019-20*
NPM – Net Profit Margin**, AT –** Asset Turnover**, EM –** Equity Multiplier
ROE – Return on Equity.

The above figure 1 shows the Du-Pont analysis of BHEL from 2010-11 to 2019-20. The analysis has been done by considering the Net Profit Margin, Assets Turnover and Equity Multiplier for calculating Return on Equity(ROE). The trend achieved from Du-Pont analysis shows that return on equity has not been good during the study period. In 2010-11, it is 0.30 which decreases to 0.28 in 2011-12 and finally it comes to -0.05 which means that company has not able to earn adequate profits during the study period. There were low net profit margin, low asset turnover and low equity give low return on equity during the period of the study. The Net profit margin of BHEL is continuously decreasing during the study period. In 2010-11, it is 0.14% which decreased in subsequent years and finally dropped to (-0.07%) in 2019-20 which means net profit of the company is decreasing every year. The Asset turnover of BHEL also shows a decreasing trend during the study period. In 2010-11, it is 0.70 times which increased to a level of 0.71 times in 2011-12 and 0.68 times in 2012-

13. After this, it decreased and reached to 0.35 times in 2019-20 which means the company is not performing well. As the rule say, higher the asset turnover results the better performance of the company. The equity multiplier of the company also shows the same trend as asset turnover. It is 2.94% in 2010-11 which reached to 2.10% in 2019-20 which mean the company having more debt in relation to total assets or if the equity multiplier is high, it means the more leveraged the company.

The following figure shows the trends of Du-Pont analysis of BHEL From 2010-11 to 2019-20. The Net profit margin shows a decreasing trend during the study period. Initially, it was more than the subsequent years which followed a declining trend. The Asset turnover also showed a decreasing trend. In initial year, it increased and finally it again declined. The Equity multiplier shows an decreasing trend. Through the analysis, it can be seen that the performance of the company is not good and showed a poor position of return on equity during the study period.

Findings of DU PONT MODEL of BHEL

- In 2010-11, return on equity is 0.30 which decreases to 0.28 in 2011-12 and finally it comes to -0.05 in the year 2019-20 which means that company has not able to earn adequate profits during the study period.
- . In 2010-11, net profit margin is 0.14% which decreased in subsequent years and finally dropped to (-0.07%) in 2019-20 which means net profit of the company is decreasing every year.
- In 2010-11, Asset turnover of BHEL is 0.70 times which increased to a level of 0.71 times in 2011-12 and 0.68 times in 2012-13. After this, it decreased and reached to 0.35 times in 2019-20 which means the company is not performing well.
- The equity multiplier of the company also shows the same trend as asset turnover. It is 2.94% in 2010-11 which reached to 2.10% in 2019-20 which mean the company having more debt in relation to total assets or if the equity multiplier is high, it means the more leveraged the company.
- The Net profit margin shows a decreasing trend during the study period.
- The Asset turnover also showed a decreasing trend and the Equity multiplier also shows a decreasing trend.

IV. Suggestions and Conclusion

Financial soundness of a company is a centre theme for the share holders as they have to do the investment in the company. Therefore, periodical analysis of the financial performance of a company is very crucial as any decision taken by the company depends on its financial soundness.. In the present study, Du Pont Model plays a vital role in deciding the financial health of the company through Return on Equity. The present study was conducted to analyze and predict the financial performance of Bharat Heavy Electricals Limited.

Through the analysis, it can be seen that the performance of the company is not good and showed a poor position of return on equity during the study period.

The researcher suggested that the management should set and select appropriate financing and operating strategies to be competent in the industry. It is also suggested that the company will try to improve its return on equity position so as to improve its overall financial health.

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