Assessing the Financial Health of Rajapalyam Cotton Spinning Mills Limited: A Quantitative Approach using the Z-Score

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ABSTRACT
This paper has attempted to study the financial health of Rajapalyam Cotton Spinning Mills Limited. Assessing the financial health has been done for a long period. The study is done for the period of 10 years from 2003-04 to 2012-13. Altman's Z score is applied to assess the financial performance of that company's the efficiency of its financial operations etc. Textile industry is the barometer to measure the economic strength of any country. And it is one of the industries which are hit hard in the global recession. The study reveals that after the Global Crisis this company is improved slightly. Research on financial health using Altman's Score is very limited in India. So, this paper focuses on applying and interpreting the financial performance of automobile industry using Altman's Z score.

Keywords---- Altman, Z score, financial crisis, ratios

I. INTRODUCTION
Indian textile industry is the second largest industry in the world after China and it is self reliant and independent industry and has greater diversification and versatility. The textiles and garments industry is the second-largest employer in India after agriculture as it directly employs 35 million people and indirectly provides a livelihood to an additional 88 million. This industry contributes nearly 3 to 4 percentages to GDP; Next to agricultural sector, it generates employment for more than 35 million people and excise collections nearly 9 percent and it contributes to 16 percent share of the country’s export. About 27 percent of the country’s foreign exchange comes from the textile exports. It contributes to nearly 14 percentage of the total industrial production of the country.

“The impact of the global crisis has been transmitted to the Indian economy through three distinct channels, viz., the financial sector, exports, and exchange rates”. This concern felt the necessities of analyzing the health of textile and garment production at Coimbatore in Tamil Nadu, and the main reason for their poor performance is high cost of production. Hence the present study has been undertaken.

A good financial analysis will help to identity the strengths and weaknesses of a company and facilitate a more informed management decisions. The company will be able to improve its financial image thereby enhancing its chances when applying a bank loan for various activities. Also, it will be able to identify and correct performance problem before they have a major impact on the business.

Financial ratio analysis is one of the important methods of analyzing a business. Financial ratios can be used to measure a firm’s liquidity, solvency, profitability and efficiency in utilizing its assets. In addition, these ratios can be used to compare the performance of one company against those of its competitors or other members of the same industry. The ratios calculated intend to show broad trends and thus to help one with decision making.

II. REVIEW OF LITERATURE
Beaver (1966) performed a study on the useful of financial ratios in the prediction of corporate failure. Although Beaver (1966) indicates the although the study primarily focuses on predicting corporate failure, there are a range of uses for financial ratios in predicting any sort of corporate event and therefore accounting ratios are useful
Chiung-Ying Lee and Chia-Hua Chang (2010) analyzed the financial health of public companies listed in
Taiwanese stock exchange using Logistic Regression model of early warning prediction.

Suzanne K. Hayes, Kay A. Larry W. Hughes (2010), Z, a multiple discriminate analysis bankruptcy model using commonly accepted cut-off criteria, may provide a useful decision rule to predict financial distress in firms operating in a wide variety of industries. In this study, we outline the construction and interpretation of the Z-Score and apply it to several pairs of firms (N=17) from a variety of specialty retail industries spanning two consecutive years. Past research indicates that Altman’s Z predicted future financial distress in 90 percent of the firms studied. In this study, all but two of the bankruptcies (94 percent) would have been accurately predicted. Despite some criticism of the model’s efficacy, two firms were misclassified yet later revealed potential financial distress.

Sasivimol Meeampol (2014) “Applying Emerging Market Z-Score Model To Predict Bankruptcy: A Case Study Of Listed Companies In The Stock Exchange Of Thailand (Set) “.This research aims to examine the financial distress of the listed companies on the Stock Exchange of Thailand (SET). It will examine the percentage that this model fit to the data of companies listed on the Stock Exchange of Thailand (SET), which applies the Z-score model and the emerging Market Score (EM Z-Score model) created by Edward L. Altman. This study used the companies listed on the SET in 2012, which these firms must contain the NC (Non-Compliance) sign. Having organized the data, we have the final sample of 31 firms to be examined.

III. OBJECTIVES OF THE STUDY

[1] To predict the financial health and viability of the Sample Cotton Spinning mills.
[2] Offer Suggestion based on the findings.

IV. METHODOLOGY AND DATA SOURCES

Secondary data is used for the study. Published financial statements are used for analysis. For the study Rajapalayam cotton spinning mill limited has been purposively selected from the list of cotton spinning mills are listed in Bombay Stock Exchange (BSE). The company information has been collected on a number variable during the period from 2003-2004 to 2012-2013, covering 10 years. The data required for calculating Z score is obtained from CMIE Prowess Database. The data base provides the financial statement, ratio analysis, fund flows, products profile, return and risk on the stock market. The published annual financial reports of the company’s other reports like the company’s magazines, published books and websites were also used for the purpose of the study.

V. METHOD OF ANALYSIS

Quantitative analysis is done using Multi discriminate data analysis. Altman's Z Score is used to analyze the financial statements of the companies.

VI. FRAMEWORK OF ANALYSIS

The Z Score Model Edward Altman developed a model based on his own research using ratios which indicates the firm’s solvency position. The concept is both simple and intuitive. Altman assembled a sample group of failed firms and a group of similar firms which had not failed. It was originally developed on a sample of manufacturing firms. The model uses common financial information such as ‘sales revenue’ and ‘total assets’ to derive five basic financial ratios. Each ratio is assigned a weight and summed together to produce the Z- Score.

<table>
<thead>
<tr>
<th>Year</th>
<th>X1</th>
<th>X2</th>
<th>X3</th>
<th>X4</th>
<th>X5</th>
<th>Z score</th>
<th>Re</th>
<th>Year</th>
<th>X1</th>
<th>X2</th>
<th>X3</th>
<th>X4</th>
<th>X5</th>
<th>Z score</th>
<th>Re</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>-</td>
<td>0.068</td>
<td>0.327</td>
<td>0.516</td>
<td>0.140</td>
<td>0.031</td>
<td>1.921</td>
<td>4</td>
<td>D</td>
<td>2009</td>
<td>-</td>
<td>0.213</td>
<td>0.207</td>
<td>0.412</td>
<td>0.106</td>
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<tr>
<td>2005</td>
<td>-</td>
<td>0.007</td>
<td>0.332</td>
<td>0.579</td>
<td>0.134</td>
<td>0.022</td>
<td>2.164</td>
<td>7</td>
<td>D</td>
<td>2010</td>
<td>-</td>
<td>0.109</td>
<td>0.224</td>
<td>0.450</td>
<td>0.132</td>
</tr>
<tr>
<td>2006</td>
<td>0.045</td>
<td>0.257</td>
<td>0.435</td>
<td>0.118</td>
<td>0.019</td>
<td>1.672</td>
<td>1</td>
<td>D</td>
<td>2011</td>
<td>-</td>
<td>0.016</td>
<td>0.227</td>
<td>0.499</td>
<td>0.152</td>
<td>0.031</td>
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<tr>
<td>2007</td>
<td>0.092</td>
<td>0.266</td>
<td>0.498</td>
<td>0.147</td>
<td>0.029</td>
<td>1.873</td>
<td>5</td>
<td>D</td>
<td>2012</td>
<td>0.000</td>
<td>0.290</td>
<td>0.606</td>
<td>0.114</td>
<td>0.000</td>
<td>2.180</td>
</tr>
</tbody>
</table>

Altman’s Z score Approach for Pre and Post Recession Time Period of Rajapalayam Cotton Spinning Mills Ltd
The data have been examined by Altman’s Z Score where as 
Z score = X1*0.717 + X2*0.847 + X3*3.107 + X4*0.420 + X5*0.998
X1= Net working capital to total Assets
X2= Retained earnings to total Assets or Net Profit to Net Sales
X3=Earnings before interest and tax to total Assets
X4= Market value of equity to total Liabilities or book value Equity to total Debt
X5= Net Sales to total Assets

To identify the future sickness of the company Altman’s Z score test is employed. If Z scores less than 1.80, the company said to be in distress zone. If Z score ranges between 1.80 and 3.99, the company is said to be in grey zone is the company may fall into sick zone. If Z scores is greater than 2.99 then the company is said to be in the Safe.

VII. Z SCORE ANALYSIS OF RAJAPALAYAM COTTON SPINNING MILLS LIMITED

For the purpose of predicting the finical health and capability of Rajapalayam Cotton Spinning Mills Ltd. the Z score model has been applied. The data has been obtained from sample mills financial statement. The Z score of the cotton mill has been computed for the last ten years. The above table shows the computation of various ratios for the purpose of arriving at the Z score of the cotton mill.

In pre financial crisis periods, Z score value ranges between 1.6721 and 2.1647. The Rajapalayam Cotton Spinning Mills Limited performance is in Distress Zone all years (2004-2008). It is found that Z score is less than 2.99, which implies that Rajapalayam Cotton Spinning Mills Limited may fall in Sick zone in future period.

Z score ranges between 1.3562 and 2.3535 in post financial crisis. During post financial crisis period it is noticed that the company performance is in distress zone except 2012 and 2013 (Grey Zone). During 2012 and 2013, the performance of the company is slightly improved. From the results of the study, Z score is between 1.80 and 2.99 which assists the company to be in the Grey zone. If the company wants to be in safe Zone it will improve its performance in future period.

VII. CONCLUSION

Assessing the financial health of a company periodically is very important. But in a developing country like India, such analysis is not given importance. It is not researched in depth in many emerging economies. This study has focused on measuring the financial health of Rajapalayam Cotton Spinning mills companies. And it revealed that pre financial crisis it was distress zone but post financial crisis it was Grey zone. The results that after the Global Crisis, this company is improved slightly. These inefficiencies have to addressed in time, or else the firms may move to grey zone.

REFERENCES


