A Study on Financial Distress of Indian Steel Industry

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Abstract

In order to assess the overall industrial situation over the study period of 5 years, from 2014 to 2018, the present study applied Altman's Z-Score model to identify the financially strong and weak steel companies in India. Five Indian steel companies were the subject of the study. The study initially included financial ratios drawn from a variety of categories, including profitability, liquidity, solvency, and efficiency. The most crucial sign to identify between financially strong and weak organizations is profitability and efficiency ratios like return on investment, debtor turnover ratio, and fixed assets turnover ratio. Research includes Altman's Z-Score model that can predict a firm's financial difficulty and distinguish between organizations that are healthy and those that are in financial trouble. Therefore, in order to improve return on investment, steel producers must implement appropriate debtor and fixed asset management policies within the context of India.

Keywords: Indian Steel Industry, Altman's Z-Score Model, Financial Distress in Indian Steel Industry

I. Introduction

Financial distress is the financial position of firms that may be resulting to bankruptcy. A large number of firms from all over the world are shutting down their operations due to financial distress. The situation is worst in India because many firms are closing down due to financial distress. Reserve bank of India asked banks to begin bankruptcy proceedings against twelve large loan defaulters. Overall, nearly 730 companies were undergoing insolvency proceedings at various branches of the national company law tribunal (NCLT), a report by distressed asset management firm eight capital advisory (Shailaja Sharma, 2018). Among these, metal Industry tops the list with 123 companies going under the process of distress. The results of stress tests on corporate balance sheets in India, has found that with decreasing profitability and high level of leverage, Indian firms are facing severe problems in repayment of loans taken in the past (IMF, 2014). Therefore, timely prediction of a financial distress or a failure of a firm is an important issue in the present economic system. This early predictions will be helpful to corporates to avoid potential bankruptcies.

There are different financial distress prediction models available in the literature that can be employed to predict financial distress. The mostly used analysis is Altman's analysis (1968). The company is categorized as bankrupt if it is unable to fulfill obligations at maturity (Sari, 2018).

The motivating factor for the study was the large number of reports on increasing indebtedness of Indian companies.

II. Review of Literature

N.C. Shilpa and M. Amulya investigated about the financial distress leads to bankruptcy. The study attempted to evaluate the financial health of automobile industry in India. Altman Z score model was used for analysis. The study concludes that commercial vehicle manufacturers are in intermediate area of financial distress. Saji (2018) analyzed potential financial distress and predicted stock failures of investment decisions. Altman Z score model has been used for assessing financial distress and stock market performance of Indian realty sector. The study suggested that the analytic value inherent in Altman Z score has utility in both distress classifications and stock market predictions in India. Shridan titman found that highly leveraged firms lose substantial market share to their more conservatively financial competitors in the industry downturns. The study finds that the firms with specialized products are especially vulnerable to financial distress. High leveraged firms that are into research and development suffer the most in economically distressed periods. Altman, Drozdowska, Laitinen and Suvas (2016) studied the performance of the Z score model in predicting the bankruptcy and the different types of firms distress. Study used 31 European & 3 non-European countries and concluded that general Z score model works well for most countries. Sari, Anwar, Susanti (2016) tested the accurate model among Altman, Zmijewski, CA score for predicting the condition of financial distress of manufacturing companies listed on Indonesian stock exchange. The study results show that the CA score model is the more accurate for each calculation. Palinko, Svoob (2016) examines the issues related to the economic efficiency of the Hungarian firm's bankruptcy procedures. The study confirms that the primary cause of corporate bankruptcy is the firm's inefficiency to create value by use of the asset. Narenhra (2013) used Altman Z score model to predict the risk of financial distress of kesoram cements for 7 years. The study reveals that the company is not suffering from financial distress and there are indications of turnaround activities. Masdupi, Tasman and Davista (2018) studied the influence of liquidity leverage and profitability on financial distress of manufacturing companies listed on Indonesian stock exchange. By using a logistic regression method, results show that liquidity, leverage and profitability has a negative and significant impact on the financial distress of companies listed. Priyanka, Sheokand (2017) analyzed the short term solvency of the banks. Study used Altman Z score model to investigate the level of financial distress in the banks. The study revealed that both banks were financially distressed. Kim, Lee(2009) found that there is a strong negative relation in the cross section between financial distress and subsequent banks stock returns. Shaukat, Affandi (2015) investigated the association between financial distress and financial performance. The study includes 15 non-financial companies listed on Karachi stock exchange using Altman's Z score model. The study concludes that financial performance of companies increases with the rise in Z score values.

III: Objective of the Study

To compute the financial distress of Indian listed Steel companies.

IV. Research Methodology

Research includes Altman's Z-Score model that can predict a firm's financial difficulty and distinguish between organizations that are healthy and those that are in financial trouble. For the firms listed on the BSE and NSE, this analysis is being undertaken. Secondary data from numerous websites has been utilized for the companies' further study. Under the new insolvency and bankruptcy code in India, this study will assist in identifying the best fit model to forecast the financial distress of the

firms. The financial information is obtained from the capital line database of the NSE or BSE-listed firms that are registered under India's insolvency and bankruptcy code. Finding financial ratios and the best fit model to forecast the firm's illness will be made easier with the aid of this study.

Altman's Z-Score Model

The likelihood of a company filing for bankruptcy within the next two years is forecast using Altman's Z-Score model, a numerical measurement. In order to assess the financial stability of businesses, American finance professor Edward Altman created the model in 1968.

The Z-score formula was developed to determine the likelihood that a business will fail within the next two years. On multiple cases, the model proven to be a reliable way to anticipate bankruptcy. Studies indicate that the model had a false positive rate of 6% and had an accuracy of 72% in forecasting bankruptcy two years in advance. The false-positive rate was lower than the 15% to 20% false-positive rate that was returned when the model was used to forecast bankruptcy one year in advance.

Formula for Altman's Z-Score Model

The 10-K report's data is used to calculate the Z-score model, which is based on five important financial ratios. It improves the model's accuracy when calculating a company's financial health and likelihood of bankruptcy.

The following is how the Altman's Z-score formula is expressed:

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

Where:

The Altman's Z-score is Zeta ().

A is the ratio of working capital to total assets.

B is the ratio of retained earnings to total assets.

C is the ratio of total assets to earnings before interest and taxes.

D is the ratio of Market Value of Equity/Total Liabilities is expressed as a ratio.

E is the ratio of total sales to total assets.

Z = Overall index

Z-Score Mean

The likelihood that a company will go bankrupt typically increases with the Z-score. A corporation is in financial difficulties and is highly likely to file for bankruptcy if its Z-score is less than 1.8. A score of 3 or higher, on the other hand, indicates that the business is in a good spot and is not likely to declare bankruptcy. A score of 1.8 to 3 indicates that the company is in the grey region and has a moderate likelihood of declaring bankruptcy.

Depending on the estimated financial strength, investors use Altman's Z-score to decide whether to purchase or sell a company's stock. Investors may think about buying the company's stock if a company's Z-score is near to 3, as there is little chance that it will fail within the next two years.

However, if a firm's Z-score is closer to 1.8, investors may think about selling the company's stock to protect their capital because the score denotes a significant likelihood that the company would fail.

The interpretation of Z-score by Altman (1968) is:

Z < 1.8 Impending situations of bankruptcy;

1.8 < Z < 3 Poor financial conditions with diminishing performances and relatively larger risks of bankruptcy.

Z > 3 Good financial credentials with fewer risks of bankruptcy.

V. Data Interpretation and Analysis

The study has taken into consideration 5 Steel Indian companies such as Essar Steel ltd, Tata Steel ltd, Monnet Ispat & Energy Ltd, Steel Authority of India Ltd, Jindal Steels & their performance for the years 2014 to 2018. The analysis is as displayed in the following table.

Table 1: Financial Distress

Year	2014	2015	2016	2017	2018
Essar Steel Ltd	0.976283	0.579577	0.591134	0.762694	1.196089
Tata Steel Ltd	0.20556	-0.38386	-0.51376	-5.0839	0.217873
Monnet Ispat & Energy Ltd	0.391642	-0.35965	-1.00517	-3.61367	-0.27455
Steel Authority of India Ltd	1.589252	1.018485	0.948338	1.099899	1.361177
Jindal Steel Ltd.	0.976283	0.579577	0.591134	0.762694	1.196089

The above table depicts the year wise level of financial distress of 5 Indian Steel companies for the period ranging from 2014- 2018 which is calculated with the help of Altman Z-Score model. Throughout Z-Score value of Steel authority of India is in better condition. All these companies were suffering from financial distress. In the year 2018, both Essar Steel Ltd and Jindal Steel Ltd performance is falling under second category of Poor financial conditions with diminishing performances and relatively larger risks of bankruptcy. One of the reasons these companies are at financial distress is due to excess use of debts.

VI. Conclusion

From the study we can conclude that there is no much significant difference between the profitability's of all the companies and all the steel companies undertaken are at financial distress. Modern steel mills are present in the Indian steel sector. It has always aimed to upgrade to better energy efficiency levels and continuously modernize older units. India's iron and steel industries are dealing with the following four issues: cooking coal is expensive and scarcely available, lower labour productivity, irregular power supply and inadequate facilities.

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