An Analysis of Financial Health of Selected Steel Companies Listed In BSE

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Abstract

This study used the Z score approach to estimate the amount of financial distress of three firms listed on the BSE: Jindal Stainless, Usha Martine, and Techno Craft for the period from 2016-17 to 2020-21. For the purposes of the analysis, only secondary data is employed. The data used in this study is from annual report and provace data base and analysed in Microsoft Excel. Altman analyses four different types of financial performance indicators that may be combined to determine the difference between a firm in financial crisis and one that is not. This model has been successfully used to a number of financial crisis and bankruptcy studies. The results reveal that the average Z score of Jindal stainless is 1.452, Usha martine 0.522, and Technocraft 1.578, indicating that all three firms are financially distressed and likely to go bankrupt in the future.

Key Words: Steel Companies, Altman Z score model, Financial Health

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1. Introduction

The financial health of a company is critical to its successful operation. Poor financial health endangers a company's survival and leads to business collapse. Corporate profitability has plummeted, but debt burdens have risen. Corporation failures are a widespread issue in both emerging and industrialised economies. The steel business is noted for being a high-risk sector. In today's world of cutthroat competition, there are numerous reasons why manufacturing industries such as steel fail, and thus effective tools and models to predict bankruptcy in advance would assist industries, creditors, and the general public in avoiding the negative consequences of a company going dry or bankrupt. Altman's Z score model is a prominent and extensively used bankruptcy prediction model for manufacturing enterprises, in which he employed multivariate analysis and numerous ratios to forecast bankruptcy in advance. The relevance of Altman's Z score model has not been put to the test in previous studies on the Indian steel sector by applying it to companies that have gone through difficult times or bankruptcy proceedings in the past, and thus it is the need of the hour to study if the model works accurately for various divisions of the Indian steel sector.

2. Literature review

(Dalvadi & Pandit, 2018)The researcher used the springate score method to assess the financial distress of eight chosen public sector enterprises from 2011-12 to 2016-17. According to the Springate score model, four public sector firms are financially distressed and four public sector enterprises are financially healthy out of eight public sector enterprises.

(C, 2016) The study analysed the Altman Z score on Nifty 50 companies excluding banks and financial companies for the study period. The score attempts to estimate the likelihood of a company's default due to financial difficulties based on the company's current financial information. The results suggest that out of 50 firms, 26 are in the safe zone, 9 are in the grey zone, and 5 are in the distress zone. The outcome demonstrates that the Z score is not meant to forecast when a company would declare for formal bankruptcy. It is instead a measure of how closely a company resembles other companies that have declared bankruptcy.

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(Imanzadeh, Mahdi, & Sepehri, 2011) The goal of this study was to give the theoretical foundations of the research and to compare the results obtained by applying the springate and zmijewski models for company bankruptcy prediction. Data from 2004 to 2008 were examined. The data was analysed using binomial non parametric techniques. The results indicate a considerable difference in bankruptcy prediction between the two models. Furthermore, the springate model predicts bankruptcy more conservatively than the Zmijewski model.

(Bhunia, 2007) The researcher conducted a study on 64 private pharmaceutical businesses from 1996 to 2005 and used multiple discriminate analysis on chosen financial measures from several segments such as liquidity, profitability, stability, and efficacy to construct a business failure prediction model.

2.1 Objective

The study's objective is to examine a company's financial health using the Altman Z score methodology.

2.2 Hypothesis

H_{01} There is no significant difference in Z score value of selected companies.

H_{02} There is significant difference in Z score value of selected companies

3. Research design

3.1 Sample selection

The research is analytical in nature. Three companies from the middle and small sectors of the steel industries listed on the BSE were chosen using a purposive sample approach for a five-year period beginning in 2016-17 and ending in 2020-21. The decision is based on the availability of data. Three companies selected from steel industry are:

Sr. No	Company's Name
1	Jindal Staileness
2	Usha Martine
3	Teachnocraft

3.2 Data collection and period of the study

The necessary information is gathered from the CMIE Prowess database and the firms' annual reports. Data collected for five year period from 2016-17 to 2020-21.

3.3 Tools and techniques

The Altman Z Score approach was used to analyse data.

The Altman Z score is determined by five financial ratios: profitability, leverage, liquidity solvency, and activity ratio. In this
study, the Z score model for manufacturing enterprises is applied is as under.

Z score = 1.2A + 1.4B + 3.3C + 0.6D + 0.999E

Where,

A = working capital / total assets i.e. liquidity ratio

B = retained earnings / total assets i.e. efficiency ratio

C = earnings before interest and tax/ total assets i.e. profitability ratio

D = market value of equity/ total liabilities i.e. solvency ratio

E = sales/ total assets i.e. activity ratio

Z score analysis

Z score value	Zone	Interpretation
Below 1.81	Distress Zone	Failure is certain
1.81 - 2.99	Gray Zone	Uncertain to predict
More than 2.99	Safe Zone	Healthy financial position

4. Analysis and interpretation

The tables below indicate the five ratios applied in the Altman Z score model, as well as the Z score value of selected companies from 2016-17 through 2020-21.

Table 1. Altman Z score value of Jindal Stainless Steel

Year	A	B	C	D	E	Z Score value
2016-17	0.105	0.007	0.315	0.005	0.777	1.210
2017-18	0.128	0.039	0.342	0.002	0.965	1.477
2018-19	0.103	0.017	0.266	0.002	1.128	1.517
2019-20	0.095	0.019	0.253	0.004	1.098	1.469
2020-21	0.115	0.054	0.356	0.010	1.055	1.589

The above table shows the Z score value of Jindal Stainless Steel for the period of five years from 2016-17 to 2020-21. Its shows in the above table that Z score value of company for the five years are less than 1.81 which shows that this company is financially distressed for last five years.

Table 2. Altman Z score value of Usha Martine Ltd

Year	A	B	C	D	E	Z Score value
2016-17	-0.073	-0.066	0.105	0.002	0.479	0.448
2017-18	-2.471	-0.055	-0.094	0.003	0.198	-2.419
2018-19	-0.035	0.012	-0.041	0.002	0.250	0.189
2019-20	0.138	0.363	1.437	0.014	0.912	2.864
2020-21	0.152	0.091	0.378	0.035	0.872	1.528

The above table shows the Z score value of Usha Martine Ltd for the period of five years from 2016-17 to 2020-21. This table shows that Z score value of the company is 2.864 in the year 2019-20 which indicate during this period company's financial position is healthy. In other all four years the Z score value of the company is less than 1.81 which indicate company is financially distressed during that period.

Table 3. Altman Z score value of Technocraft Ltd

Year	A	B	C	D	E	Z Score value
2016-17	0.316	0.109	0.423	0.261	0.700	1.809
2017-18	0.226	0.103	0.391	0.243	0.685	1.648
2018-19	0.229	0.088	0.350	0.107	0.710	1.484
2019-20	0.265	0.078	0.297	0.116	0.645	1.402
2020-21	0.345	0.079	0.288	0.272	0.562	1.546

The above table shows the Z score value of Technocraft Ltd for the period of five years from the year 2016-17 to 2020-21. This table shows the Z score value of the company is 1.809 in the year 2016-17 which indicate during this period company's financial position is uncertain to predict. In other all four years the Z score value of the company is less than 1.81 which indicate company is financially distress during that period.

Table 4. Altman Z score value of all the companies for the study period

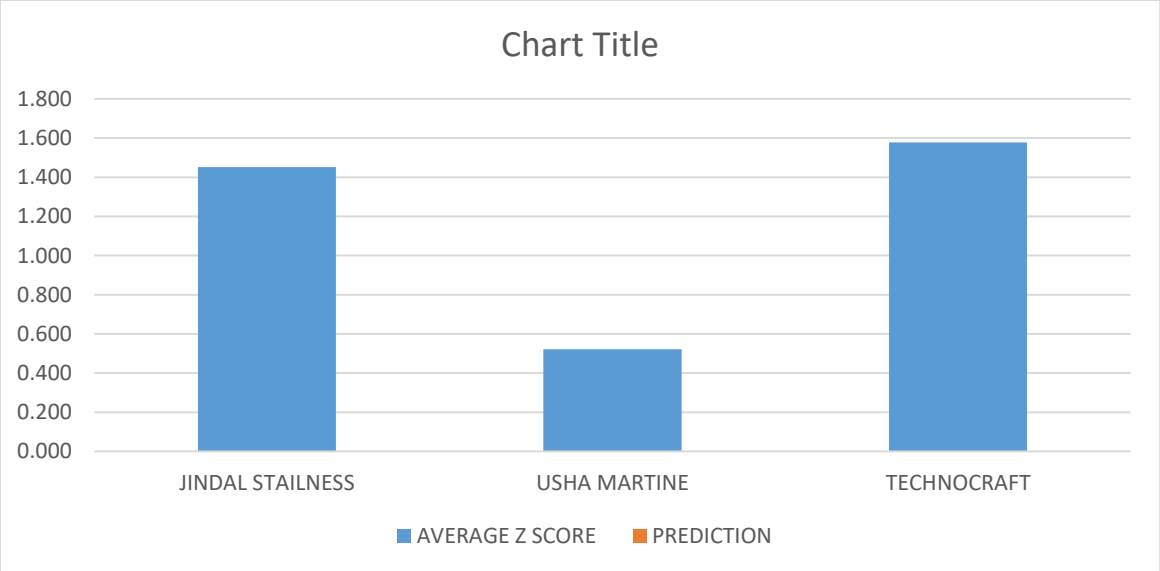
Year	JINDAL STAILNESS	USHA MARTINE	TECHNOCRAFT
2016-17	1.210	0.448	1.809
2017-18	1.477	-2.419	1.648
2018-19	1.517	0.189	1.484
2019-20	1.469	2.864	1.402
2020-21	1.589	1.528	1.546
AVERAGE	1.452	0.522	1.578

The above table shows average Z score value of all the company for the period from year 2016-17 to 2020-21. This table indicate that in Jindal Stainless ltd has Z score value less than 1.81 for the study period. In Usha martine ltd in first three year Z score value is less than 1.81 and then in fourth year Z score value is 2.864 which is more than 1.81 and less than 2.99. In other four years Z score value is less than 1.81 for the Usha Martine Ltd. Technocraft company shows that in the year 2016-17 Z score value is 1.81 which indicate that during that period company's financial position is uncertain to predict. In other all years Z score value is less than 1.81 which shows that company is financially distressed during that period.

Table 5. Average Z score value of all the companies for the study period

COMPANY NAME	AVERAGE Z SCORE	PREDICTION
JINDAL STAILNESS	1.452	Financially Distressed
USHA MARTINE	0.522	Financially Distressed
TECHNOCRAFT	1.578	Financially Distressed

Chart 1: Average Z score value of all the companies for the study period



The above table and chart shows the average Z score value of the all the companies for the period from 2016-17 to 2020-21 which indicate Z score value is less than 1.81 for all the company which indicate that all the companies are financially distressed position during the five years.

5. Conclusion

Using the Altman Z score model, the researcher attempts to forecast the financial distress of three medium and small-scale steel businesses listed on the BSE from 2016-17 to 2020-21. The financial status is divided into three categories. Specifically, there are three zones: distress, grey, and healthy.

The results reveal that the average Z score of Jindal stainless is 1.452, Usha martine 0.522, and Technocraft 1.578, indicating that all three firms are financially distressed and likely to go bankrupt in the future.

According to the findings of the investigation, each firm, namely Jindal stailness, Usha Martin Ltd, and Technocraft, is in a state of difficulty. This result shows a financially unhealthy situation and predicts that these firms will go bankrupt in the near future. Companies must enhance their liquidity and profitability positions, as well as endeavour to raise their sales and stock market value.

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