

# ASSESSING THE CORPORATE FINANCIAL DISTRESS OF FERTILISER COMPANIES IN INDIA USING ALTMAN'S Z-SCORE PREDICTIVE MODEL

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**Abstract:** *The success of the agricultural sector in India is largely dependent on the fertiliser industry. The benchmark that the food industry in India has set is mainly due to the many technically competent fertiliser producing companies in the country. But over the past few years due to many challenges faced by the Industry many of the fertiliser companies have been recording huge losses, many have reduced production due to escalating costs or have shut shop, which are certainly not good signs which the Government can afford to send to the economy. A realistic understanding of the financial position in terms of where it stands in the continuum of Corporate Financial distress is imperative for all the stakeholders to assess, review and strategize bailout options. This paper focuses on assessing the level of the Financial Distress of listed Fertiliser Companies in India using Corporate Financial Distress Prediction model, Altman's Z-Score*

**Keywords:** *Fertiliser Companies, Corporate Financial Distress Prediction, Altman's Z-Score*

## 1. INTRODUCTION:

### THE INDIAN FERTILISER INDUSTRY:

#### BACKGROUND:

Since agriculture is a very important sector it goes without saying that the fertiliser industry is one which the Indian economy cannot do without. The fertiliser industry in India is extremely vital as it manufactures some of the most important raw materials required for crop production. The primary objective of this industry is to ensure the inflow of both primary and secondary elements required for crop production in the desirable quantities.

India is home to numerous top class private and government fertiliser companies. Ranging from fertilisers to seeds to fungicides the many fertiliser companies in India are the major reason behind the success story of the agricultural sector in India.

In the present scenario, there are more than 57 large and 64 medium and small fertiliser production units under the Indian fertiliser industry. The main products manufactured by the fertiliser industry in India are phosphate based fertilisers, nitrogenous fertilisers, and complex fertilisers. The fertiliser industry in India with its rapid growth is all set to make a long lasting global impression.

### CHALLENGES FACED BY THE FERTILISER INDUSTRY IN INDIA:

The growth trajectory of the Indian fertiliser industry has camouflaged the impending challenges with which it is faced. Growth and development of agriculture in India derives a significant stimulus from the fertiliser industry.

Agricultural milieu in India could be jeopardized by the uncertainties in the fertiliser industry. The government is faced with the piquant situation, which demands a balance between the needs of the farmers and the fertiliser manufacturers.

The challenges before the Indian fertiliser industry relate to the incertitude in the supply of fertilisers. There has been a surge in the demand for fertilisers in the past few years. Good monsoonal showers have led to the growth in agriculture, inadvertently increasing the consumption rate of fertilisers. However, the robust growth in consumption propensity has not been met with the required surge in fertiliser production. This has widened the gap between the demand and supply of fertilisers, which has led to an increase in the dependence of the country on imports. This also reflects on the lack of realizing of the domestic capacity utilization of the reserves in the country.

Another important factor that has led to the stunted growth of the fertiliser industry is the rise in prices of the feedstock. The fertiliser industry is dependent on gas for the production of urea and phosphoric acid for the production of phosphatic fertilisers and DAP. The country imports its inputs from other countries. The overseas suppliers of raw

materials realize the predicament of the Indian fertiliser industry and have started exploiting the shortage through clever pricing.

In recent years, some of the private companies, dedicated to the production of fertilisers have effectively taken stakes in the overseas sources of raw materials. Although this has aided the industry, it has however been unable to reduce the government's burden of subsidizing the rates. The fertiliser industry is remained protected under the umbrella of the Retention pricing scheme of the Indian government.

The government has introduced policies to decontrol the prices but delayed the implementation of the parameters that have not augured in favour of the industry. As a result, fertiliser subsidies continue to mount and are expected to cross Rs. 75,000 crore in the year 2018.

The small size of the older plants and the low efficiency of the public sectors also pose as drawbacks of the industry. Recent policies of the government are directed towards revamping of these industries and restoring them to health.

The fertiliser industry is faced with other challenges inter alia infrastructural bottlenecks and the uncertainties in government policies. The delay in decision making and obscurity in setting parameters are among some of the major drawbacks of the government policies directed towards the industry.

To retrieve the health and growth of the fertiliser industry, the Government of India is in need of long term realistic policies that would enable the industry to overcome the challenges and survive the present impasse.

## **CURRENT PROFILE OF THE FERTILISER INDUSTRY IN INDIA:**

### **Latest Aspects in Industry**

- There is a lot of development going on to meet the demand of fertilisers in the country through indigenous production, self-reliance in design engineering and execution of fertiliser projects is very crucial. There are consultancies which organize themselves to undertake execution of fertiliser projects starting from concept/designing to commissioning of fertiliser plants in India and abroad.
- Many concepts have been developed to carry out research and development / basic research work by mutual understanding between industry and academic institutions, and even there is support from the Department of Fertilisers to sponsor research and development projects through the Indian Institutes of Technology, Delhi and Kharagpur and even other major institutions in the country
- The fertiliser plant operators are now in the position to absorb and assimilate the latest technological developments, incorporating environmental friendly process technologies, and are in a position to operate and maintain the plants at their optimum levels without any foreign assistance and on international standards in terms of capacity utilization, specific energy consumption & pollution standards.
- Indian fertiliser industry is carrying out de-bottlenecking and energy saving schemes for the existing plants to enhance the capacity and reduce the specific energy consumption per ton of product.
- Today India has developed expertise for fabrication and supply of major and critical equipment such as high-pressure vessels, static and rotating equipment, Distributed Control System (DCS), heat exchangers and hydrolyser for fertiliser projects.
- The most significant development/advancement made by the Industry is in the field of manufacturing of catalysts of various ranges by catalyst-manufacturing Organisations like PDIL. PDIL helps in implementing the schemes for enhancement of capacity and technological upgradation in their existing catalyst plant and other utilities at Sindri to compete in the International market.

## **2. NEED FOR THE STUDY:**

Considering the strategic importance of the Fertiliser Industry in India and keeping in mind the many stakes that the Government and the stakeholders, it is important to understand the financial position of the companies involved in the Industry.

Considering that many of these companies have either dismal profits or some even face situation of continuous losses, it is imperative to study if these companies are headed towards Corporate Distress or in which stage of distress are they in. This is of paramount importance as by knowing the stage of corporate distress the companies and the Government can adopt suitable strategies to bail these companies out of the situation and save the fertiliser industry as a whole.

### 3. SCOPE OF THE STUDY:

The study focuses on predicting the corporate distress situation that the fertiliser companies in India will find themselves in, by adopting The Altman's Z score Method.

Financial distress prediction models have been developed and used for more than five decades for their ability to forecast whether a company will have certain financial problems or even go bankrupt in the next period, usually one year. Economic consequence of company failure is great. Therefore, creating a model by which it would be possible to identify financial distress is of great interest for entrepreneurs, investors, creditors, auditors and other stakeholders. It is possible not only to predict a probability that a company will default, but what is more important is to take certain actions in order to prevent more serious consequences.

It is usually gradually revealed that companies enter into financial crisis after a worse process of the financial situation, so there exists a certain predictability. There are many reasons for corporations getting into the financial crisis: mistakes in the management decision-making, loss of control in the management, the external environment changes and so on. Therefore, the establishment of a scientific financial distress prediction system in the normal operation of the financial system can track and monitor the companies' financial situation. The timely and effective prediction on the corporate financial distress by establishing prediction models has been a hot topic in this field. Corporate financial distress prediction as an economical and effective diagnostic tool has both high academic value. By establishing a complete and scientific financial prediction system, the management can forecast the corporate operation situations according to the information provided by the financial distress prediction system; can adjust the strategic plans and managing strategies timely according to the problems revealed by the system; and the investors and creditors can make the right investment choice by dynamic analyzing on the financial forecasting indicators. Therefore, the financial distress prediction has a very important practical significance.

### 4. REVIEW OF LITERATURE:

The statistical approach to Corporate Distress prediction includes discriminant analysis, regression analysis, logit analysis or probit analysis and usually requires that the data follow certain distributional assumptions to generate robust results (Beaver 1966, Altman 1968, Beaver 1968, Deakin 1972, Aharony et al. 1980, Ohlson 1980, Zmijewski 1983, Platt & Platt 1990, Hill et al. 1996, Clark et al. 1997, Mossman et al. 1998). Although financial data and ratios rarely have a normal distribution, rank transformation of data has been shown to be useful to make the models less sensitive to non-normal distributions. Kane et al. (1998) apply rank transformation to financial ratios and the results indicate an improvement in predicting corporate failure. Iterative learning models, on the other hand, are free from distribution constraints because they are based on criteria other than sample mean and variance (Frydman et al. 1985, Messier & Hansen 1988, Odom & Sharda 1990, Liang 1992, Tam & Kiang 1992, Hansen et al, 1993, Wilson & Sharda 1994, Lee et al. 1999).

#### Background to the Z-Score

The Z-Score was developed in 1968 by Edward I. Altman, an Assistant Professor of Finance at New York University, as a quantitative balance-sheet method of determining a company's financial health. A Z-score can be calculated for all non-financial companies and the lower the score, the greater the risk of the company falling into financial distress.

The original research was based on data from publicly held manufacturers (66 firms, half of which had filed for bankruptcy). Altman calculated 22 common financial ratios for all of them and then used multiple discriminant analysis to choose a small number of those ratios that could best distinguish between a bankrupt firm and a healthy one. To test the model, Altman then calculated the Z Scores for new groups of bankrupt and nonbankrupt but sick firms (i.e. with reported deficits) in order to discover how well the Z Score model could distinguish between sick firms and the terminally ill.

The results indicated that, if **the Altman Z-Score is close to or below 3, it is wise to do some serious due diligence before considering investing.** The Z-score results usually have the following "Zones" of interpretation:

- Z Score below 2.99 - "Safe" Zones. The company is considered 'Safe' based on the financial figures only.
- $1.8 > Z < 2.99$  - "Grey" Zones. There is a good chance of the company going bankrupt within the next 2 years of operations.
- Z below 1.80 - "Distress" Zones. The score indicates a high probability of distress within this time period.

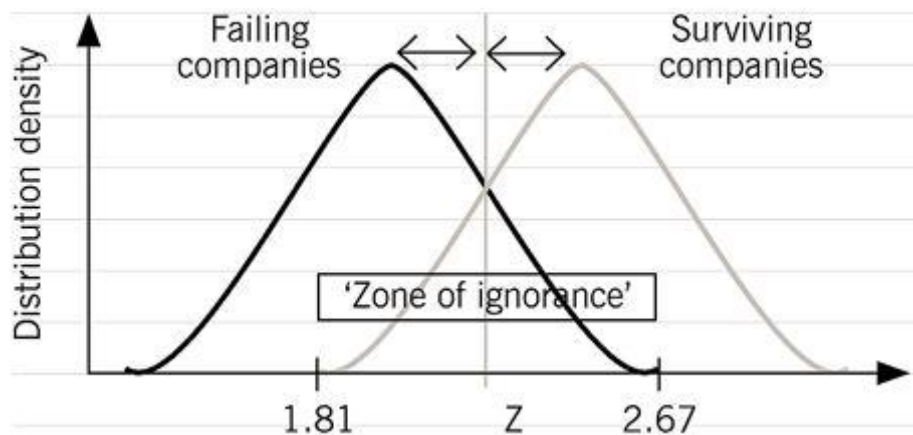
#### Calculation / Definition:

For public companies, the z-score is calculated as follows:  $1.2 * T1 + 1.4 * T2 + 3.3 * T3 + 0.6 * T4 + 1.0 * T5$ .

- $T1 = \text{Working Capital} / \text{Total Assets}$ . This measures liquid assets as firm in trouble will usually experience shrinking liquidity.
- $T2 = \text{Retained Earnings} / \text{Total Assets}$ . This indicates the cumulative profitability of the firm, as shrinking profitability is a warning sign.
- $T3 = \text{Earnings Before Interest and Taxes} / \text{Total Assets}$ . This ratio shows how productive a company in generating earnings, relative to its size.
- $T4 = \text{Market Value of Equity} / \text{Book Value of Total Liabilities}$ . This offers a quick test of how far the company's assets can decline before the firm becomes technically insolvent (i.e. its liabilities exceed its assets).
- $T5 = \text{Sales} / \text{Total Assets}$ . Asset turnover is a measure of how effectively the firm uses its assets to generate sales.

#### Zones of Discrimination:

- $Z > 2.99$  - "Safe" Zone
- $1.81 < Z < 2.99$  - "Gray" Zone
- $Z < 1.81$  - "Distress" Zone



#### 5. OBJECTIVES OF THE STUDY:

- To identify the parameters to calculate the Altman's Z Score and thus predict the stage of Corporate Financial Distress that the Indian Fertiliser companies find themselves in.
- To indicate the usefulness of such studies in bailing out distressed companies and hence save the industry.

#### 6. LIMITATIONS OF THE STUDY:

- For the purpose of this paper, it was decided to use only data with respect to the listed Fertiliser companies.
- Only quantitative factors have been taken for study. Non-financial indicators of corporate distress have not been taken into account.

#### 7. RESEARCH METHODOLOGY:

##### Sample selection and data analysis:

A list of all Indian Fertiliser companies listed in the Bombay Stock Exchange has been taken for the purpose of application of the model.

1. Aries Agro Ltd
2. Basant Agro Tech(India) Ltd
3. Bharat Agri Fert & Realty Ltd
4. Chambal Fertilisers & Chemicals Ltd
5. Coromandel International Ltd

6. Deepak Fertilisers & Petrochemicals Corporation Ltd
7. The Dharamsi Morarji Chemical Company Ltd
8. Gujarat Narmada Valley Fertilisers & Chemicals Ltd
9. Gujarat State Fertilisers & Chemicals Ltd
10. Khaitan Chemicals & Fertilisers Ltd
11. Madras Fertilisers Ltd
12. Mangalore Chemicals & Fertilisers Ltd
13. M.P. Agro Industries Ltd
14. National Fertilisers Ltd
15. Rama Phosphates Ltd
16. Rashtriya Chemicals & Fertilisers Ltd
17. Shiva Global Agro Industries Ltd
18. Southern Petrochemical Industries Corporation Ltd
19. Teesta Agro Industries Ltd
20. Zuari Agro Chemicals Ltd

Details regarding the Financial Indicators and variables for the purpose of identifying the Z Scores for the Altman's Model were collected for the past ten financial years, i.e., from 2007-08 to 2016-17.

- Working Capital
- Total Assets
- Retained Earnings
- Earnings Before Interest And Taxes
- Market Value Of Equity
- Book Value Of Total Liabilities
- Sales
- Profit Before Tax

The following calculations were made using MS Excel tools to indicate which are the companies which fall under the various zones as per the Altman's Z-Score.

**SAMPLE DATA POINTS FOR THE CALCULATION OF Z-SCORE (Rs. In Lakhs)**

Name of the Company	Net working Capital			Retained Earnings			Earnings Before Interest and Tax			Market Value of Equity			Book value of Total Liabilities			Sales			Total Assets		
	2009	2013	2017	2009	2013	2017	2009	2013	2017	2009	2013	2017	2009	2013	2017	2009	2013	2017	2009	2013	2017
Coromandel International Ltd	507.04	1036.7	1240.2	1099.2	2147.3	2782.8	801.1	566.3	711.9	8056.9	5237.4	9124.4	3570.9	5171.7	5751.1	9538.9	5558.5	74103	4698.1	7347.3	8563.0
Khaitan Chemicals & Fertilizers Ltd	159.1	44.4	59.2	68.9	117.4	119.3	6.3	13.1	6.1	146.2	120.3	154.7	151.2	367.1	308.6	354.9	452.3	352.4	229.8	494.2	398.1
Deepak Fertilisers & Petrochemicals Corporation Ltd	298.2	578.2	-277.3	714.9	1226.1	1641.5	215.4	200.6	123.3	1331.9	882.9	2308.3	384.7	1645.6	2976.2	1414.8	2282.1	2010.9	1754.8	2959.8	4705.9
Aries Agro Ltd	78.7	84.4	93.9	76.4	119.2	122.1	5.0	14.0	18.3	99.2	58.6	201.2	101.7	204.9	183.1	108.3	186.8	516.8	199.5	337.1	318.3
Basant Agro Tech (India) Ltd	17.7	-90.7	8.4	8.4	61.0	95.5	6.3	13.1	6.1	20.7	30.5	66.3	55.8	194.4	184.0	128.7	291.0	292.9	93.9	264.5	288.6
Rama Phosphates Ltd	-3.6	110.7	89.9	-14.1	122.5	110.5	-0.1	35.1	12.2	106.5	89.0	154.1	145.2	207.9	171.4	435.0	617.2	373.7	136.6	338.1	299.5
Teesta	25.3	-10.0	34.0	26.8	36.7	8.5	1.2	1.4	0.6	6.3	5.0	22.1	60.3	79.6	36.5	125.3	81.2	48.3	91.9	121.9	122.6
Tuticorin Alkali Chemicals & Fertilisers	-5.7	-127.1	-207.1	-62.1	144.5	-192.9	-32.4	-21.2	-34.5	11.1	6.0	18.4	96.0	214.9	285.7	14.4	155.9	132.6	71.7	108.2	130.7
Zuari Agro Chemicals Ltd	31.7	269.6	-348.5	742.5	752.2	780.7	68.7	30.5	30.4	542.1	616.8	1526.9	3681.9	3588.1	3644.5	6938.3	5236.7	3916.5	4981.1	4382.4	4467.2

**SAMPLE RATIO ANALYSIS FOR THE CALCULATION OF Z-SCORE**

Name of the company	Net working Capital/ Total assets (T1)			Retained Earnings/ Total Assets(T2)			Earnings Before Interest and Tax/Total Assets (T3)			Market Value of Equity/ Book value of Total Liabilities(T4)			Sales/ Total assets(T5)			Z Score= 1.2T1+1.4T2+3.3*T3+06 *T4+1.0*T5		
	2009	2013	2017	2009	2013	2017	2009	2013	2017	2009	2013	2017	2009	2013	2017	2009	2013	2017
Coromandel International Ltd	-0.11	0.14	0.14	0.23	0.29	0.32	0.17	0.08	0.08	2.26	1.01	1.59	2.03	0.76	0.87	4.14	2.20	2.72
Khaitan Chemicals & Fertilizers Ltd	0.69	0.09	0.15	0.30	0.24	0.30	0.03	0.03	0.02	0.97	0.33	0.50	1.54	0.92	0.89	3.46	1.64	1.83
Deepak Fertilisers & Petrochemicals corporation Ltd	0.17	0.20	-0.06	0.41	0.41	0.35	0.12	0.07	0.03	3.46	0.54	0.78	0.81	0.77	0.43	4.06	2.13	1.40
Aries Agro Ltd	0.39	0.25	0.30	0.38	0.35	0.38	0.03	0.04	0.06	0.98	0.29	1.10	0.54	0.55	1.62	2.22	1.66	3.36
Basant Agro Tech (India) Ltd	0.19	-0.34	0.03	0.09	0.23	0.33	0.07	0.05	0.02	0.37	0.16	0.36	1.37	1.10	1.02	2.16	1.27	1.80
Rama Phosphates Ltd	-0.03	0.33	0.30	-0.10	0.36	0.37	0.00	0.10	0.04	0.73	0.43	0.90	3.18	1.83	1.25	3.45	3.32	2.80
Teesta	0.27	-0.08	0.28	0.29	0.30	0.07	0.01	0.01	0.00	0.10	0.06	0.60	1.36	0.67	0.39	2.20	1.06	1.20
Tuticorin Alkali Chemicals & Fertilisers	-0.08	-1.17	-1.58	-0.87	1.34	-1.48	-0.45	-0.20	-0.26	0.12	0.03	0.06	0.20	1.44	1.01	-2.53	1.27	-3.79
Zuari Agro Chemicals Ltd	0.01	0.06	-0.08	0.15	0.17	0.17	0.01	0.01	0.01	0.15	0.17	0.42	1.39	1.19	0.88	1.74	1.64	1.30



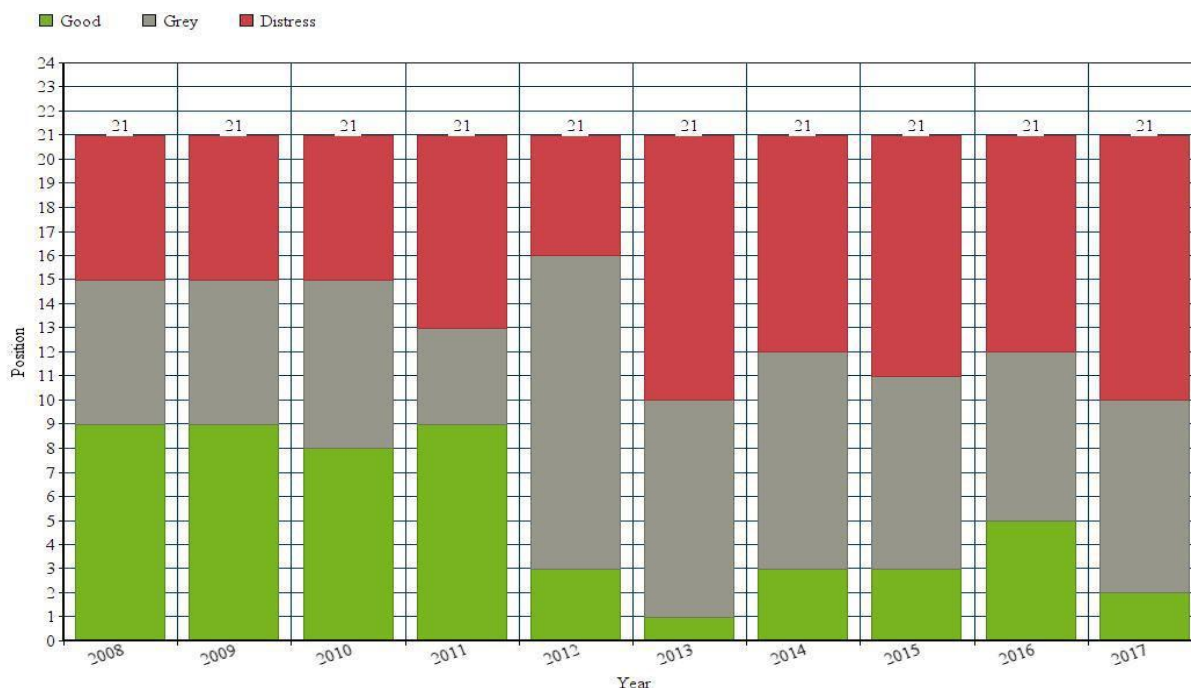
## 8. DATA ANALYSIS:

The Altman'S Z-Score has been calculated for all the 20 Fertiliser manufacturing companies for the financial years from 2007-08 to 2016-17 which has been presented in the following table:

CALCULATION AND CLASSIFICATION OF Z SCORES																				
Name of Companies	2008		2009		2010		2011		2012		2013		2014		2015		2016		2017	
Aries Agro Ltd	2.4	gray	2.515	gray	2.421	gray	1.638	distress	1.657	distress	1.443	Distress	1.791	distress	2.667	gray	2.306	gray	2.322	gray
Basant Agro Tech(India) Ltd	2.352	gray	3.696	good	4.129	good	2.518	gray	2.673	gray	1.762	Distress	1.732	distress	2.939	gray	2.746	gray	3.389	good
Bharat Agri Fert & Realty Ltd	1.473	distress	1.706	distress	4.378	good	4.496	good	2.584	gray	3.837	Good	4.535	good	4.482	good	1.801	gray	0.947	distress
Chambal Fertilisers & Chemicals Ltd	0.832	distress	1.923	gray	1.755	distress	1.708	distress	2.174	gray	1.42	Distress	1.834	gray	4.705	good	1.966	gray	2.035	gray
Coromandel International Ltd	3.937	good	4.817	good	4.965	good	6.933	good	3.571	good	1.189	Distress	2.341	gray	4.491	good	5.863	good	5.294	good
Deepak Fertilisers & Petrochemicals corporation Ltd	2.262	gray	2.535	gray	2.328	gray	2.017	gray	2.067	gray	1.919	Gray	1.976	gray	2.382	gray	4.512	good	0.78	distress
The Dharamsi Morarji Chemical Company Ltd	1.931	gray	2.032	gray	1.029	distress	0.622	distress	0.501	distress	3.774	Gray	3.53	good	1.709	distress	2.103	gray	1.915	gray
Gujarat Narmada Valley Fertilizers & Chemicals Ltd	9.797	good	6.98	good	10.042	good	4.745	good	4.031	good	0.973	Distress	1.875	gray	1.603	distress	1.553	distress	1.735	distress
Gujart State Fertilizers & Chemicals Ltd	1.104	distress	2.569	gray	3.712	good	3.141	good	2.813	gray	2.39	Gray	1.882	gray	2.319	gray	1.507	distress	1.012	distress
Khaitan Chemicals & Fertilizers Ltd	6.745	good	3.731	good	2.448	gray	2.643	good	2.345	gray	1.496	Distress	1.72	distress	2.256	gray	3.447	good	2.135	gray
Madras Fertilizers Ltd	3.204	good	0.966	distress	0.617	distress	0.387	distress	3.215	good	2.513	Gray	1.121	distress	0.146	distress	1.809	gray	1.582	distress
Mangalore Chemicals & Fertilizers Ltd	5.146	good	4.433	good	5.181	good	4.085	good	2.23	gray	1.924	Gray	1.905	gray	1.6	distress	1.527	distress	1.795	distress
M.P. Agro Industries Ltd	1.029	distress	0.655	distress	0.439	distress	0.389	distress	2.799	Gray	-1.074	Distress	0.675	gray	0.974	distress	0.109	distress	0.037	distress
National Fertilizers Ltd	4.784	good	4.602	good	3.808	good	3.451	good	2.061	Gray	1.27	Distress	2.923	gray	1.082	distress	1.01	distress	1.445	distress
Rama Phosphates Ltd	6.821	good	4.661	good	2.237	gray	2.098	gray	2.607	Gray	2.957	Gray	3.557	good	2.255	gray	1.455	distress	2.027	gray
Rashtriya Chemicals & Fertilizers Ltd	3.979	good	3.175	good	3.032	good	4.242	good	2.577	Gray	2.05	Gray	2.209	gray	2.934	gray	2.165	gray	2.326	gray
Shiva Global Agro Industries Ltd	5.036	good	6.104	good	3.3	gray	3.52	good	3.874	Good	1.465	Distress	1.378	distress	2.397	gray	1.308	distress	1.291	distress
Southern Petrochemical Industries Corporation Ltd	1.488	distress	1.658	distress	0.179	distress	1.008	distress	0.188	Distress	2.95	Gray	1.191	distress	1.544	distress	3.049	good	2.287	gray
Teesta Agro Industries Ltd	2.038	gray	2.32	grey	2.178	gray	1.393	distress	0.218	Distress	0.808	Distress	0.564	distress	1.301	distress	3.766	good	0.673	distress
Zuari Agro Chemicals Ltd	2.111	gray	1.708	distress	1.818	gray	1.969	gray	1.762	Distress	1.392	Distress	1.37	distress	1.133	distress	0.826	distress	2.123	gray
Tuticorin Alkali Chemicals & Fertilisers	-0.486	distress	-0.315	distress	-0.329	distress	-0.2	distress	2.857	Gray	2.201	Gray	-3.064	distress	-1.767	distress	-0.472	distress	0.287	distress

INTERPRETATION:

Position of fertilizer companies between 2008 and 2017



The analysis of the Altman’s Z-score shows that the financial position of the fertiliser industry as a whole is dwindling. With regard to the sample taken, in 2008, about 40% of the companies had a Z-score above 2.99, meaning they were safe and making profits. On the other hand, the other companies were either in the grey area or already distressed. The Z-score of the 2017 financial position confirms the worsening state of the fertiliser industry in India. Only 9% of the companies were surviving while around 50% of the companies were distressed. The rest are in the danger of becoming bankrupt in the near future if adequate actions are not taken.

Particularly after 2013, majority of the companies seem to be in a poor financial position, finding it difficult to come out of their distressed status. It can also be seen that once the business becomes distressed, it is difficult to improve its position.

A scrutiny of the Z-score of companies falling in the Grey zone as of 2017 shows the score hovering between 2-2.3. They are on the brink of becoming distressed. But they can be saved, provided immediate corrective measures are put in place.

**9. CONCLUSION:**

The purpose of the paper was to drive home the point that the Fertiliser Industry in India is on the verge of a collapse and which is something that the Government cannot afford to allow considering its colossal impact on the whole economy. Radical measures need to be taken with an urgency in mind to remove these predicaments for the fertiliser companies to survive.

Suitable amendments to the new investment policy in urea sector are required for creating conducive incentive based environment for new investments in Urea sector. The country would require an investment of about Rs 50,000 crore in the fertiliser sector to build up the additional capacity of about 13 million tonnes of urea by 2017-18. Besides this, investment in potash and phosphate assets/ mines for raw materials and joint ventures for finished fertilisers is required to ensure long-term supply of P & K fertilisers.

The Fertiliser Industry should be declared an industry of national importance. New investments need to be attracted to the special economic zones where fiscal benefits are provided to attract investments. Besides fiscal benefits (including exemptions on various taxes and duties), the fertiliser industry could be provided incentives in the form of

- a) Viability gap funding for investment in new projects,



b) Facilitating long term contracts for gas,

c) Securitization of subsidy receivables to ensure regular cash flow. Investor friendly look has to be given to New Investment policy declared in 2008.

These aspects need to be factored in as early as possible to avoid a total downfall of the industry as predicted by the Altman's Z-Score calculations.

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