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RESEARCH ARTICLE

MEASURING FINANCIAL HEALTH OF SELECTED TEXTILE COMPANIES OF SOUTH RAJASTHAN.

*Enock Mochama Maina

Research scholar Sir Padampat Singhania University

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ABSTRACT

Bankruptcy for a company is a final declaration of its inability to sustain current operations given in its current debt obligations. Practically all firms must have source debt, load to expand operations or just to survive. Business failure is a major concern to the parties involved and can create high costs and heavy losses, due to this predication is highly beneficial. If bankruptcy could be predicted with reasonable accuracy ahead of time, firms could better protect their business and could take action to minimize risk and loss of business and perhaps even prevent the bankruptcy itself. The Indian textile industry is one of the leading textile companies in the world. It largely depends upon the textile manufacturing and exports, IBEF Report on Textile Industry and market Growth in India assesses the Indian textiles industry, currently estimated at around US\$ 108 billion, is expected to reach US\$ 223 billion by 2021. The industry is the second largest employer after agriculture, providing employment to over 45 million people directly and 60 million people indirectly. The Indian Textile Industry contributes approximately 5 per cent to India's Gross Domestic Product (GDP), and 14 per cent to overall Index of Industrial Production (IIP). High interest rates, demand, mismanagement and power costs are the major factors that which leads to bankruptcy of textile companies. The specific aim of this research paper is to predict the financial health of the selected textile companies of Southern Rajasthan. One of the most commonly used statistical ratio models for predicting business distress is Altman's Z-score Model. A sample of 05 textile companies was selected randomly from South Rajasthan to conduct the present research.

INTRODUCTION

The latest report from IBEF and another report from ICRA assess that the textiles sector is one of the largest contributors to India's exports with approximately 11 per cent of total exports. The textiles industry is also labour intensive and is one of the largest employers. The textile industry has two broad segments. First, the unorganised sector consists of handloom, handicrafts and sericulture, which are operated on a small scale and through traditional tools and methods. The second is the organised sector consisting of spinning, apparel and garments segment which apply modern machinery and techniques such as economies of scale. The textile industry employs about 40 million workers and 60 million indirectly. India's overall textile exports during FY 2015-16 stood at US\$ 40 billion. The Indian textiles industry is extremely varied, with the hand-spun and hand-woven textiles sectors at one end of the spectrum, while the capital intensive sophisticated mills sector at the other end of the spectrum. The decentralised power looms/ hosiery and knitting sector form the largest component of the textiles sector. The close linkage of the textile industry to agriculture (for raw materials such as cotton) and the ancient culture and traditions of the country in terms of

textiles make the Indian textiles sector unique in comparison to the industries of other countries. In the last eight years, the sector has shown an average growth of almost 5%. After the end of Quota regime, textiles sector in India grew by 10%. In 2011-12, the sector registered a de growth of 5.7% owing to weak global demand. Thereafter the sector started recovering and registered positive growth in next two years due to stimulus provided by Government of India. Though, the growth of 7% in 2015-16 is highest in the last five years but manmade filament yarn production registered a fall of 6% during 2015-16. Cotton yarn production grew by 14% and man-made fibre production by a miniscule 2% in 2015-16. Fabrics production in the country has not grown to its true potential since 2008; fabric production has shown a Compound Annual Growth Rate (CAGR) of only 3.8% in the twelve year period. Production in handloom sector has been shrinking while in hosiery and mill sectors have been increasing. Power loom sector has also seen growth in production owing to some technological up gradation and adoption of shuttle less looms but this is not adequate. Financial distress is a condition where a company cannot meet / has difficulty paying off its financial obligations to its creditors that can produce substantial losses to various parties involved in the business. Therefore, financial distress prediction is important for various parties such as creditors, investors, management, shareholders, vendors, company, labour and the state.

*Corresponding author: Enock Mochama Maina,
Research scholar Sir Padampat Singhania University.

Many research works have been done to be able to predict the financial soundness/ distress of a business and it has been a crucial endeavor for ages.

Table 1. Growth of Textile Industry

Year	Growth Rate (%)
2012-13	10.1
2013-14	11.7
2014-15	7.5
2015-16	-5.7
2016-17	4.8
2017-18	5.8
2018-19	3.6
2019-20	7.3

Source : Ministry of Textiles

The specific aim of this research paper is to predict bankruptcy in textile companies of South Rajasthan through the study of randomly selected textile companies. This research paper also attempts to evaluate the financial health of the sample textile companies. The inspiration to undertake the research was provided by the plentiful reports on increasing indebtedness of Indian companies (and business groups at the aggregate level) which pointed towards an ever increasing corporate leverage situation. The Financial Stability Report (RBI, 2014) has also cited high and increasing leverage and low profitability of Indian corporate sector as a high risk area. In the Indian context, Gupta (1979) attempted refinement of Beaver's (1966) method and used a simple non-parametric test for measuring the differentiating power of various financial ratios. Studies in the Indian context have been done for specific industries or companies' viz. Gupta (1983) and Mulla (2002) for the textile industry, Selvam, et al. (2004) for cement industry, Krishna (2005) for IDBI, Sheela et al. (2012) and Bhunia et al. (2011) for pharmaceuticals and Kirubakaran et al. (2013) for public sector companies. Bagchi (2004) analyzed practical implication of accounting ratios in risk evaluation and concluded that accounting ratios still play a major role in credit risk evaluation.

When a company enters financial distress, it may face one of two possible conflicts. These can be defined either as a cash shortage on the assets side of the balance sheet, or as a debt overhang in liabilities. Both sets of circumstances however draw similar results, that cash flow is insufficient to cover current obligations. This may involve financial restructuring between the firm, its creditors, and its equity investors. Financial distress in long term may result in business failure or even result in Bankruptcy. The various interpretations of bankruptcy as per 'The Company Act 1956' and other related Laws can be summarized thus:

We can understand default, financial distress and bankruptcy as under:

Default

Failure to meet an interest payment, or
Violation of debt agreement

Financial Distress

Includes default and bankruptcy, but also
Threat of default or bankruptcy and its effect on the company
Defined to capture the costs and benefits of using large amounts of debt finance

Bankruptcy

Formal procedure for working out default
Does not automatically follow from default.

Financial distress is a situation, which makes the company's survival difficult. A firm, which is exposed to higher business risk, faces a greater chance of financial distress (Pandey 1999). A firm experiences financial distress when it defaults the external obligations. Though a leveraged firm has the tax advantage, a highly leveraged firm is always under the threat of distress because of the high cost of debt. A firm in distress condition reduces the value of the firm because: Value of the firm = Value of equity finance + PV of tax shield - PV of cost of financial distress. As a result, as the PV cost of financial distress increases, the value of the firm declines. Financial distress leads to incipient sickness, ultimately resulting into closure of the unit, unless a revival programme is effectively put into operation.

Definition of Industrial Sickness: In broader lines, sickness in industrial and business units is defined as "an industrial unit may be regarded as sick if (i) it faces financial embarrassment (arising out of its inability to honour its obligations as and when they mature) and (ii) its viability is threatened by adverse factors" (Prasanna Chandra 2001). The Sick Industrial Companies (Special Provision) Act 1985 has defined sickness as "an industrial company (being a company registered for not less than seven years) which has at the end of any financial year accumulated losses equal to or exceeding its entire net worth and has also suffered cash losses in such financial year and the financial year immediately preceding such financial year" A company becomes sick when its cash inflows are insufficient to meet the cash outflows. Often such companies would be depending on debt to source their funds and eventually would move to a debt trap.

Scope of the Study: Based on the consistency of the Z – Score model, the present study will be helpful for predicting the financial performance in general and financial distress in particular of various companies of textile sector at large. The similar kind of study can be done for other companies of different sectors as well. The study can be applied not only to public traded manufacturing firms but also to private firms and firms in service sector by applying revised models of Altman's Z – score.

Research Objectives: The specific aim of this research paper is to predict the bankruptcy probability and assess the financial health and of the randomly selected 05 textile companies of South Rajasthan. Altman Z-score has been used to substantiate a score function effective in bankruptcy risk prediction of enterprises in textile sector.

Objectives of the Study: To predict the solvency status/ bankruptcy risk of the chosen Textile companies in South Rajasthan through Altman Z score model

RESEARCH METHODOLOGY

Data source: For testing the financial health of the selected Textile companies, Altman's Z score model has been used in this study which is based on secondary data. The data from the published reports, annual reports, etc is the basis for analysis. This information will be used to determine the application of

Z-score model in predicting financial distress. From about 1985, onwards, the Z - Score have gained acceptance by auditors, management accountants, courts, and database systems used for loan evaluation. It has been used in a variety of contexts and countries, but was designed originally for publicly held manufacturing companies with assets of more than \$ 01 million. Later revisions take into account the book value of privately held shares and the fact that turnover ratios vary widely in non-manufacturing companies. X_1 is considered liquidity. Working capital is defined as the difference between a firm's current assets and its current liabilities. One would expect current assets to decrease while current liabilities increase in periods of financial distress.

$$X_2 = \frac{\text{Retained Earnings}}{\text{Total Assets}}$$

X_2 is considered a measure of cumulative profitability over measure of cumulative profitability over time. Retained earnings, at any point in time, are equal to net income less dividends since the inception of the firm (although there are other items that can affect retained earnings). The Cumulative Measure of profitability ranks fourth in its contribution to the overall discriminating ability of the models.

$$X_3 = \frac{\text{EBIT}}{\text{Total Assets}}$$

X_3 is considered as a measure of productivity of a firm's assets. A Firm's existence is based on the earning power of its assets. Insolvency occurs when the total liabilities exceed a fair valuation of the firm's assets with value determined by the earning power of the assets. The Measure of productivity ranks first in its contribution to the overall discriminating ability of the model.

$$X_4 = \frac{\text{Market Value of Equity}}{\text{Book Value of Liabilities}}$$

Equity is measured by the combined value of all shares of stock, preferred and common, while liabilities include both current and long term. This shows how much the firm's assets can decline in value before the liabilities exceed the assets and the firm becomes insolvent. It ranks third in its contribution to overall discriminating ability of the model.

$$X_5 = \frac{\text{Sales}}{\text{Total Assets}}$$

The Capital Turnover Ratio is a standard financial ratio illustrating the sales generating ability of the firm's assets. It is one of measure management's capacities in dealing with competitive conditions. It ranks second in its contribution to the overall discriminating ability of the model. The Resulting Z-Score puts a company in one of three categories. Companies with a Z-score above 2.99 are considered healthy. A Z- Score less than 1.8 indicates a high probability for bankruptcy in the next 01 to 02 years. Scores 1.8 to 2.99 are considered within the 'Grey area'. There are two revisions of the Z- Score that are designed to apply private companies. For public companies, the original Z-score should be preferred.

Zones of Discrimination:

- $Z > 2.99$ = "Safe" zone.
- $1.8 < Z < 2.99$ = "Grey" zone.
- $Z < 1.80$ = "Distress" zone.

Altman's original Z- Score model requires a firm to have publicly traded equity and be a manufacturer. He uses a revised model to make it applicable for private firms and non-manufacturers. The Resulting Model is this:-

$$Z = 6.56X_1 + 3.26X_2 + 1.05 X_3 + 6.72 X_4$$

Where – Z is an index of bankruptcy.

$$X_1 = \frac{\text{Net Working Capital}}{\text{Total Assets}}$$

$$X_2 = \frac{\text{Retained Earnings}}{\text{Total Assets}}$$

$$X_3 = \frac{\text{EBIT}}{\text{Total Assets}}$$

$$X_4 = \frac{\text{book Value of Equity}}{\text{Total Liabilities}}$$

Where- $Z > 2.90$ indicates no bankruptcy. It means 'Safe' zone. $1.23 < Z < 2.90$ indicates a 'Grey' zone. $Z < 1.23$ indicates bankruptcy prediction. It means 'Distress' zone.

- Z-Score
- $1.8 < Z <= 2.99$
- Safe Zone
- GrayZone
- Distress Zone
- Period
- $Z > = 2.99$
- $Z < 1.8$

Evaluation of the Altman's Z-Score Model: Looking at inconsistently of ratios of textile companies, the researcher found it appropriate to examine the financial health using the Altman Z - Score model. The textile companies are private enterprises and not listed companies, therefore the third (Altman's original Z –Score model requires a firm to have publicly traded equity and a manufacturer) model is applicable for such an organization (as these organizations do not have market value of shares). An analysis of Z – Score calculated on the basis of the information available indicates that in the initial years of the study, financial health of Kamal Suiting Private Limited was in Grey Zone. But after year 2010, it has entered in the Distress Zone which shows a condition of financial distress. In the year 2012 and 2016, the figure became negative also. The Z – score of the year 2017, 2018 and 2019 are also below 2.99 which indicate that all Z –scores of the study are not in Safe Zone.

Kamal Suiting Private Limited

Year	Score
2007	2.824857
2008	2.728294
2009	2.024949
2010	2.133978
2011	1.636506
2012	-0.93991
2013	1.251605
2014	0.522424
2015	1.031494
2016	-0.02883
2017	1.041366
2018	0.96615
2019	1.256385

Source: Annual Reports of the Company from RoC

An analysis of Z – Score calculated on the basis of the information available indicates that in the initial years of the study, financial health of the **Shree Rajasthan Syntex Ltd** was in Safe Zone. This indicates that all Z –scores of the study are in Safe Zone.

Shree Rajasthan Syntex Ltd

Year	Z-score
2007	2.958857
2008	2.428294
2009	2.564949
2010	2.953978
2011	2.632506
2012	2.832914
2013	2.251605
2014	2.456424
2015	2.789494
2016	2.689333
2017	2.555666
2018	2.96515
2019	2.981638

Source: Annual Reports of the Company from RoC

An analysis of Z – Score calculated on the basis of the information available indicates that in the initial years of the study, financial health of Janki Corp Limited was in Gray Zone. But after year 2009, it has entered in the Distress Zone which shows a condition of financial distress. In the year 2014, 2016 and 2018, the figure became negative also. This indicates that all Z –scores of the study are not in Safe Zone.

Janki Corp Limited

Year	Z-score
2007	2.934857
2008	2.338294
2009	2.064949
2010	1.223978
2011	1.566506
2012	1.709914
2013	1.201605
2014	-0.52042
2015	1.020494
2016	-0.02533
2017	1.042666
2018	-0.94515
2019	1.756385

Source: Annual Reports of the Company from RoC

An analysis of Z – Score calculated on the basis of the information available indicates that in the initial years of the study, financial health of the **Sangam Textile** was in Safe Zone. This indicates that all Z –scores of the study are in Safe Zone.

Sangam Textile

Year	Z-score
2007	2.934857
2008	2.538294
2009	2.864949
2010	2.942978
2011	2.566506
2012	2.709914
2013	2.201605
2014	2.520424
2015	2.620494
2016	2.725333
2017	2.542666
2018	2.94515
2019	2.845638

Source: Annual Reports of the Company from RoC

An analysis of Z – Score calculated on the basis of the information available indicates that in the initial years of the study, financial health of **Nutech Global Ltd** was in Gray Zone. But after year 2008, it has entered in the Distress Zone which shows a condition of financial distress. In the year 2016, 2017, 2018 and 2019, the figure became negative also. This indicates that all Z –scores of the study are not in Safe Zone.

Nutech Global Ltd

Year	Z-score
2007	2.594637
2008	2.654394
2009	1.158944
2010	1.478651
2011	1.654706
2012	1.653984
2013	1.428792
2014	1.598424
2015	1.692844
2016	-0.69693
2017	-0.53473
2018	-0.02835
2019	-0.26579

Source: Annual Reports of the Company from RoC

The companies being Privately owned may not have shown financial problems but the analysis of Z – score clearly indicates that the financial health of 03 textile companies viz. Kamal Suiting Private Limited, Janki Corp Limited and Nutech Global Ltd is not good and remaining two companies viz. Shree Rajasthan Syntex Ltd and Sangam's Textile Companies are in safe zone. Although the application of Z – score in predicting financial health of an organization has been widely used and has got strong support from the researchers particularly for manufacturing organizations, but complete dependence on this model may not be enough to predict bankruptcy. As the model suffers from applicability of limitations with regards to time, period of application and type of industry, and some limitations and has also been questioned by Grice and Ingram (2001), Hall (2002).

Conclusion

The analysis of Z – Score calculated on the basis of the information available indicates that in the initial years of the study, financial health of the 03 textile companies was in Gray Zone. And rest 02 companies were in safe zone. It indicates that this financial distress may be cause of Bankruptcy in future for 03 companies. The Researcher used Altman Z - Score Model approaches to conclude their views as why the firm under study went bankrupt. Therefore, we concluded that Altman’s Model may be used as an indicator and perhaps evidence to determine the firm’s bankruptcy in the future. We know that a mathematical model and abstraction of reality, therefore, we believe that further evidence and economic indicators may be needed to determine outcome of the firm’s future operating activities and its financial position or performance.

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