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Financial Performance of Select Fmcg Companies Using 'Z' Score Model

KEYWORDS: financial distress, z score model, ratios, Merger and Acquisition

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ABSTRACT *The Fast Moving Consumer Goods (FMCG) sector is one of the booming sectors of the Indian economy. This sector has experienced an outstanding growth in the past decade. FMCGs sector is an important contributor to India's Gross Domestic Product (GDP) and is also the fourth largest sector in the Indian economy, responsible for providing employment for more than three million people in downstream activities which are generally carried out in smaller towns and also in rural India. Financial performance analysis is a tool to estimate the financial position and also the strength and weakness of the company's management. These analysis are useful to increase the credibility of the company. The objective of this study is to analyse the performance of FMCG companies in India and predict the solvency of selected companies using Altman's z score model which is based on Discriminant analysis. The study also purports to identify significant variables affecting the solvency of the company. Financial indicators like working capital, retained earnings, EBIT and total assets would be used. The identification of performance and distress indicators of the companies is expected to provide new insight into company analysis. Financial ratios are proposed to be used as variables.*

INTRODUCTION

Fast Moving Consumer Goods (FMCGs), are the products that are sold quickly at a low price. The profit from these products is relatively very small and the selling is in large quantities and hence the cumulative profit on such products is large. Bankruptcy, foreclosures, unemployment are all too familiar terms and headline news over the past several years. The economy is slowly recovering, but the loss of jobs and businesses will be with us for years to come. The reasons for bankruptcy are varied, but ultimately cash inflow was not sufficient to meet the cash outflow demands of creditors and lenders. There are tools available, if not crystal balls, to help provide guidance to businesses. Altman Z-Score is one such tool that should be in every business management toolbox. It is a critical tool for emerging entrepreneurial ventures or those in the early stages of developing business plans and seeking financial support. It is also useful as a tool for due diligence in merger and acquisition endeavors. An attempt has been made to analyze the difference in the performance of selected companies using Altman's model. Primary purpose of this study is to study the variables contributing to the differences in the firm's performance and the possibility of the firm facing the financial distress. This study helps us to find out whether the selected companies will survive in the future or not.

REVIEWS OF LITERATURE

The prediction of company failure has been well researched using developed country data (Beaver, 1967; Altman E. I., Corporate Financial Distress and Bankruptcy,, 1993; Altman E. I., 1968; Wilcox, 1973; Deakin, 1972; Ohlson, 1980; Taffler, 1982; Boritz, Efrim, Kennedy, & Sun, 2007).A variety of models have been developed in the academic literature using techniques, such as multiple discriminant analysis (MDA), logit, probit, recursive partitioning, hazard models, and neural networks. Summaries of the literature are provided by Zavgren, 1983; Jones, 1987; O'Leary, 1998; Boritz, Efrim, Kennedy, & Sun, 2007; Agarwal & Taffler , 2008. Despite the variety of models available, both the business community and researchers often rely on the models developed by Altman E. I., 1968; Ohlson, 1980; Boritz, Efrim, Kennedy, & Sun, 2007. A survey of the literature shows that the majority of international failure prediction studies employ MDA ((Altman E. I., Financial ratios, discriminant analysis and the prediction of corporation bankruptcy., 1968; Charitou, Neophytou, Evi, & Charalambous, 2004)

STATEMENT OF THE PROBLEM

Bankruptcy is a situation where the liabilities exceed the assets in the company, generally it happens due to under capitalization, not maintain sufficient cash, sources are not utilize properly, inefficient management in all activities, sales decline and market situation etc. Predicting bankruptcy is a dire vital for taking curative and corrective measures for better financial planning, profitability, liquidity and solvency efficiency of the firm. In this study an attempt have been made know the financial performance and also to predict the risk of bankruptcy for selected FMCG companies. To achieve these objectives a few financial ratios are calculated viz.,Liquidity Ratios; Working Capital Ratios, Solvency Ratios and Altman Z-Score Analysis was made to diagnose the problem of bankruptcy. Many researchers have identified various ratios as predictors of financial health. But sometimes a single ratio or set of ratios do not examine the financial insolvency. But there are models of financial distress commonly referred to as bankruptcy prediction model which helps in analysing the financial viability of the companies and helps to prevent financial solvency. The most popular model of financial distress or health is the Edward Altman Z score analysis where the author used a linear function of set of variables to predict the possibilities of bankruptcy.

SCOPE OF THE STUDY

The study showed the benefits of mergers and acquisitions. This study will become the basis for suggesting acquisition in the case of other companies.

OBJECTIVE OF THE STUDY

To examine the existence of financial distress among se-

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lected FMCG companies using Altman's z score model.

RESEARCH METHODOLOGY
DATA COLLECTION
The study is based on the secondary data mobilized from the annual reports of selected units and CMIE Prowess Data base.

SELECTION OF THE SAMPLE
Data on operating performance ratios upto three years prior and three years after the acquisition for each acquiring company in the sample was extracted from Prowess database of CMIE. The final sample included 3 cases of mergers, in the defined period of study. The selected companies are 1. Colgate-Palmolive (I) Ltd. 2.Dabur India Ltd. 3.DCM Shriram Industries Ltd. 4.Dhampur Sugar Mills Ltd. 5.Dhunseri Petrochem Ltd. 6.Dollex Industries Ltd. 7.Gayatri Sugars Ltd. 8.Godrej Consumer Products Ltd. 9. Gujarat Ambuja Exports Ltd. 10. Hindustan Unilever Ltd. 11.J H S Svendgaard Laboratories Ltd. 12.Jay Shree Tea &Industries Ltd. 13.Joonktollee Tea & Industries Ltd. 14.K L R F Ltd. 15.Lotte India Corporation Ltd. 16.Mcleod Russel India Ltd. 17.Orient Beverages Ltd. 18.Parrys Sugar Industries Ltd. 19. Rajshree Sugars & Chemicals Ltd. 20.Ruchi Soya Industries Ltd. 21.Tata Coffee Ltd. 22.Vijay Solvex Ltd.

PERIOD OF THE STUDY
The pre-merger and post-merger averages for a set of key financial ratios were computed for 3 years prior to, and 3 years after, the year of merger completion (or the year of approval when the time of merger completion is not available). The merger completion year was denoted as year 0.

TOOLS FOR ANALYSIS
Altman's z score model is used to identify the existence of financial distress in selected companies.

ALTMAN Z SCORE – A DISCRIMINATE ANALYSIS
Edward Altman (1968) used multiple discriminate analysis (MDA) to build a bankruptcy prediction model. Altman made use of five ratios to develop a Z score which helped in the prediction of the financial health of a company.

The 5 ratios used in his 'z' score model

$$Z=1.2X1+1.4X2+3.3X3+0.6X4+1.0X5$$

Where,

X1=Working capital / Total asset, X2=Retained earnings/ total asset, X3=Earnings before Interest and Tax/total assets, X4=Market value of equity / Total liabilities, X5= Sales / total asset and Z=discriminate Score

Altman concludes that firms can be classified as non bankrupt, bankrupt, or in the grey area "based on their scores:

SITUATION	Z SCORE	INFERENCE
I	<1.81	High probability of bankruptcy (certain to fail)
II	1.81-2.99	Gray or ambiguous area (uncertain to fail)
III	>2.99	Low probability of bankruptcy (healthy zone)

ANALYSIS AND INTERPRETATIONS
Table 1

Z score of selected FMCG companies during Pre-merger period

S.No	FMCG Companies	Z score model Financial Health	Zone of Discrimination
1	Colgate-Palmolive (I) Ltd.	3.34	Safe Zone
2	Dabur India Ltd.	2.07	Grey Zone
3	DCM Shriram Industries Ltd.	1.38	Distress Zone
4	Dhampur Sugar Mills Ltd.	1.75	Distress Zone
5	Dhunseri Petrochem Ltd.	0.96	Distress Zone
6	Dollex Industries Ltd.	0.84	Distress Zone
7	Gayatri Sugars Ltd.	0.63	Distress Zone
8	Godrej Consumer Products Ltd.	2.42	Grey Zone
9	Gujarat Ambuja Exports Ltd.	2.32	Grey Zone
10	Hindustan Unilever Ltd.	3.21	Safe Zone
11	J H S Svendgaard Laboratories Ltd.	0.82	Distress Zone
12	Jay Shree Tea &Industries Ltd.	1.06	Distress Zone
13	Joonktollee Tea & Industries Ltd.	0.77	Distress Zone
14	K L R F Ltd.	2.40	Grey Zone
15	Lotte India Corporation Ltd.	0.91	Distress Zone
16	Mcleod Russel India Ltd.	0.32	Distress Zone
17	Orient Beverages Ltd.	0.03	Distress Zone
18	Parrys Sugar Industries Ltd.	1.13	Distress Zone
19	Rajshree Sugars & Chemicals Ltd.	1.43	Distress Zone
20	Ruchi Soya Industries Ltd.	2.24	Grey Zone
21	Tata Coffee Ltd.	1.29	Distress Zone
22	Vijay Solvex Ltd.	4.07	Safe Zone

Source: Compiled and calculated from the data published in CMIE

Table

Z score of selected FMCG companies during pre-merger period

Z Category	Number of Companies	Percentage	Remarks
Z < 1.81	14	64	Distress Zone
Z between 1.81 – 2.99	05	23	Grey Zone
Z > 2.99	03	14	Safe Zone
Total	22	100	

The above table indicates that the Vijay Solvex Ltd. reported the highest average ratio of 4.07 and the Orient Beverages Ltd. reported the lowest average ratio of 0.03. Out of 24 FMCG companies selected, 14 companies i.e., DCM Shriram Industries Ltd., Dhampur Sugar Mills Ltd., Dhunseri Petrochem Ltd., Dollex Industries Ltd., Gayatri Sugars Ltd., J H S Svendgaard Laboratories Ltd., Jay Shree Tea &Industries Ltd., Joonktollee Tea & Industries Ltd., Lotte India Corporation Ltd., Mcleod Russel India Ltd., Orient Beverages Ltd., Parrys Sugar Industries Ltd., Rajshree Sugars & Chemicals Ltd., and Tata Coffee Ltd.are in financial distress and they have to take necessary steps so that unforeseen conditions can be avoided in future. 05 companies i.e., Dabur India Ltd., Godrej Consumer Products Ltd., Gujarat Ambuja Exports Ltd., K L R F Ltd. and Ruchi Soya Industries Ltd. are in gray zone and it is uncertain to predict the bankruptcy. Only 3 companies i.e., Colgate-Palmolive (I) Ltd., Hindustan Unilever Ltd. and Vijay Solvex Ltd. have a good status. Hence, the Z score table clearly resulted that FMCG companies, 14 in munbers have an unhealthy finan-

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cial position in pre-merger period because Z score is much below the cut off score.

Table 2
Z score of selected FMCG companies in the post-merger period

S.No	FMCG Companies	Z score model Financial Health	Zone of Discrimination
1	Colgate-Palmolive (I) Ltd.	6.29	Safe Zone
2	Dabur India Ltd.	2.40	Grey Zone
3	DCM Shriram Industries Ltd.	1.94	Grey Zone
4	Dhampur Sugar Mills Ltd.	0.57	Distress Zone
5	Dhunseri Petrochem Ltd.	1.56	Distress Zone
6	Dollex Industries Ltd.	0.52	Distress Zone
7	Gayatri Sugars Ltd.	0.52	Distress Zone
8	Godrej Consumer Products Ltd.	1.33	Distress Zone
9	Gujarat Ambuja Exports Ltd.	3.48	Safe Zone
10	Hindustan Unilever Ltd.	3.24	Safe Zone
11	J H S Svendgaard Laboratories Ltd.	0.29	Distress Zone
12	Jay Shree Tea &Industries Ltd.	1.19	Distress Zone
13	Joonktollee Tea & Industries Ltd.	0.71	Distress Zone
14	K L R F Ltd.	2.03	Grey Zone
15	Lotte India Corporation Ltd.	1.82	Grey Zone
16	Mcleod Russel India Ltd.	1.04	Distress Zone
17	Orient Beverages Ltd.	0.18	Distress Zone
18	Parrys Sugar Industries Ltd.	0.17	Distress Zone
19	Rajshree Sugars & Chemicals Ltd.	1.50	Distress Zone
20	Ruchi Soya Industries Ltd.	2.32	Grey Zone
21	Tata Coffee Ltd.	0.87	Distress Zone
24	Vijay Solvex Ltd.	4.37	Safe Zone

Source: Compiled and calculated from the data published in CMIE

Table
Z score of selected FMCG companies in the post-merger period

Z Category	Number of Companies	Percentage	Remarks
Z < 1.81	13	59	Distress Zone
Z between 1.81 – 2.99	05	23	Grey Zone
Z > 2.99	04	18	Safe Zone
Total	22	100	

The above table indicates that the Colgate Palmolive India Ltd. reported the highest average ratio of 6.29 and the Parrys Sugars Ltd. reported the lowest average ratio of 0.17. Out of 24 FMCG companies selected, 13 companies i.e., Dhampur Sugar Mills Ltd., Dhunseri Petrochem Ltd., Dollex Industries Ltd., Gayatri Sugars Ltd., Godrej Consumer Products Ltd., J H S Svendgaard Laboratories Ltd., Jay Shree Tea &Industries Ltd., Joonktollee Tea & Industries Ltd., Mcleod Russel India Ltd., Orient Beverages Ltd., Parrys Sugar Industries Ltd. and Rajshree Sugars & Chemicals Ltd. and Tata Coffee ltd. are in financial distress and they have to take necessary steps so that unforeseen conditions can be avoided in future. 5 companies i.e., Dabur India Ltd., DCM Shriram Industries Ltd., K L R F Ltd., Lotte India Corporation Ltd. and Ruchi Soya Industries Ltd. are in gray zone and it is uncertain to predict the bankruptcy. Only 4 companies i.e., Colgate-Palmolive (I) Ltd., Gujarat Ambuja Exports Ltd., Hindustan Unilever Ltd. and Vijay Solvex Ltd. have a very good status. Hence, the Altman Z score of the companies under study in the selected FMCG sector shows that the financial health of these companies is not good.

FINDINGS

Pre merger period

Out of the 22 companies selected, 64 percent of the companies are in gray zone. It is uncertain to predict the bankruptcy. 23 percent of the companies are in financial distress and they have to take necessary steps so that unforeseen conditions can be avoided in future. Only 14 percent of companies i.e, three companies have a very good status.

Post merger period

Out of the 22 companies selected, 59 percent of the companies are in gray zone. It is uncertain to predict the bankruptcy. 23 percent of the companies are in financial distress and they have to take necessary steps so that unforeseen conditions can be avoided in future. Only 18 percent of companies i.e, four companies have a very good status.

CONCLUSION

The power and resilience of the Altman Z-Score has been demonstrated for over four decades. A major reason for the durability and relevance of the Z-Score is that it incorporates within a single measure five measures representing business Profitability, Liquidity, Efficiency, Productivity and Leverage or Coverage. Financial ratios can be used to predict potential distress. Study of financial ratios and observing trends will help the management in evaluating the performance of the company and initiate steps to avoid financial distress and bankruptcy. There is a need for predicting financial failure on-time for taking curative and corrective measures in relating to financial investments, lending and borrowings. The prediction of business failure is important for taking timely remedial measures for protecting the business from the problem of bankruptcy.

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