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DIMENSION OF FINANCIAL PERFORMANCE OF CEMENT UNITS IN SOUTH INDIA - AN EMPHIRICAL STUDY (Z SCORE ANALYSIS)

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ABSTRACT

The industrial growth of industrial output for the year 2010-11 is found to be 8.6 percent and that of the manufacturing sector registers a growth of 9.1 percent. The cement industry is one of the key industries in India. The production and consumption of cement to a large extent indicate country's progress. It is a capital-intensive industry, which means that competition is confined mainly to a small group of large industrial houses. The economic progress can be achieved by increasing the production coupled with improvement in the ways and means of productivity. This industry has recorded continuous growth since planning began. The government has a complete control over the Production, distribution and price of cement and this has dampened the Growth of the cement industry. The involvement of corporate managers, executives in decision making process would augment financial performance of the cement sectors in south India. Managers in cement industries have a variety of tools at their disposal to analyze the impact of alternative courses of action on costs, revenues, and profits. In this study, the Z-score uses multiple corporate income and balance sheet values is used to measure the financial health of Fourteen south Indian Cement industries. Three modes (Altman, Springate and Fulmer Model) of z-score are used in the present study in order to Measure the 'Fiscal-Fitness' of these companies. According to all three methods, few companies that are rated as failure from the sample of fourteen south Indian companies are: Rain Commodities Ltd.and Zuari Cement Ltd.

KEYWORDS
Cement sector, corporate failure, financial distress, financial health, productivity, Z-score.

INTRODUCTION

The considerations involved in the economic performance and achievement of the nation are wealth of the country, Gross Domestic Product (GDP), national income, percapita income and standard of living. Corporate sector play a vital role in contributing GDP. It is evinced that, the recent data on industrial production shows an improvement in the industrial growth over the previous year. Growth in the industrial sector was buoyant during the first two quarters (April- June, July-September) of 2010. The manufacturing sector, in particular, showed a remarkable robustness, growing at rates of 12.6 percent and 9.9 percent respectively, during these two quarters. Thereafter industrial output growth has begun to moderate. This compares with global trends as global manufacturing continued to rebound post crisis till the first half of 2010 and has thereafter moderated. India's post recovery industrial output growth has been largely driven by a few sectors such as the automotive sector along with a revival in cotton textiles, leather, food products, and metal products. A higher base effect had adverse impact on the industrial growth rate in the Q3 (October-December 2010) and accordingly may moderate the industrial sector's contribution to the gross domestic product (GDP) in Q3 of the current financial year.

Manufacturing growth rate declined to 5.1 per cent in Q1 (October-December) of 2010. This is a moderate performance compared to the peak growth of 16.8 per cent achieved during Q4 (January-March) of the last financial year. Within the manufacturing sector, the capital goods segment has been the main driver of growth though it has shown extreme volatility as it registered a growth of 3.5 percent in Q1 of 2009-10 and surged up to 45.7 per cent during Q4 of the last financial year and continued to be in double digit till Q2 and moderated further to 3.8 per cent during Q3 of the current financial year. The manufacturing sector, which has a weight of 79.36 per cent in the IIP, is its key driver. Manufacturing output growth has dipped from a peak of 18 per cent in April 2010 to 1.0 per cent in December 2010, as a result of which IIP growth has also come down from 16.6 per cent in April 2010 to 1.6 per cent in December 2010. However, this slowdown is in a large part driven by the base effect. Despite wide fluctuations, the April–December 2010 cumulative growth rate has remained at a robust 9.1 per cent for the manufacturing sector and 8.6 per cent for the industrial sector , investment intentions indicated in the Industrial Entrepreneur Memorandums (IEMs) filed are lead indicators of likely investment flow to industry and of entrepreneurs' perception. The investment intentions also provide the sectoral preferences of investors and shifts in these preferences over time. During 2001-09, overall investment indicated in the IEMs filed increased at an average annual rate of 35.5 per cent. There was, as expected, a decline in investment intentions in 2009, but investment intentions in 2010 (January-November) indicate revival of business sentiment and an improvement in entrepreneurs' perception. Metals, machinery, cement, chemicals, and the auto sector continue to dominate as the preferred industries. This is consistent with the growth of these industries

In line with the above, The Indian cement industry is number two in the world behind China and has left behind developed markets such as the US and Japan. With just a meager per capita consumption of 28 kg in the 1980's, now it has risen to 99 kg in the 2000's and further in 2010 it has reached to 164kg. This sounds like an impressive growth but in terms of per capita consumption, India is still well behind the global average and this process of catching up with international averages will drive future growth in the Indian cement industry.

With huge investments planned in the Indian Infrastructure both by government and private sector, booming housing construction and expansion in corporate production facilities is likely to fast forward the growth in the Indian cement industry. For cement companies based in India, South-East Asia and the Middle East there are potential and lucrative export markets. Low cost technology and extensive restructuring have made some of the Indian cement companies the most efficient across global majors. Despite some consolidation, the industry remains somewhat fragmented and merger and acquisition possibilities are strong. Investment norms including guidelines for foreign direct investment (FDI) are investor-friendly. All these factors present a strong case for investing in the Indian market.

Of all the other sectors, the production growth slowed down compared to growth logged in last year. There was a strong slippage in the production of crude petroleum during these four months. Manufacturing inflation so far has been benign compared to overall inflation. Point to point manufactured products inflation rate for the month of December 2010 was 4.46 per cent as compared to 3.61 per cent a year ago. But the domestic prices of minerals, mineral oil, electricity, and other inputs (except coal) are on the rise partly due to the hardening of international commodity prices. Persistent high inflation is also leading to rise in average wages and this may impact labour-intensive industries such as textiles and leather etc. In the short to medium term, rising input costs may undermine the competitiveness of some sectors and also dampen domestic and foreign demand. Overall production of the six core industries, namely crude oil,

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petroleum refinery products, coal, electricity, cement, and finished steel, has marginally gone up so far during this financial year but there is a huge gap in terms of the required capacity addition needed to catch up with the projected demand in some sectors. While this is the general state of the economy in India in the pre and post global melt-down, the Indian cement industry accounts for approximately 1.3 per cent of GDP and employs over 0.15 million people.

From the glowing picture of India's current trends in various sectors, it is clear that corporate India should make use of the resources effectively in order to manage the situation without any difficulty. No doubt, economic affluence largely depends on the efficiency of the corporate sector. Hence it is imperative to evaluate the performance of corporate sector. The performance of a company can be analyzed in many ways. It can be judged in respect to market place, technology adoption, competitiveness, environmental protection and strategic positioning. The performance of a company in the above area would naturally reflect the financial stability and growth of the respective company. Financial statements are the summary of various financial activities which provide information in convenient form. By analyzing these financial statements and evaluating the relationship between the various components, a firm's financial position and performance could be easily interpreted. Financial performance is the operating efficiency of a company in terms of the financial parameter. The financial efficiency of a corporation can be measured in terms of solvency, stability, liquidity, capitalization, turnover ability, coverage ability, profitability, leverages, cost of capital and operating cycle. Being cement industry one of the core manufacturing sectors, it is essential to know the extent to which the sector was affected by the global financial crisis. If the financial stability is not significantly affected, then it is equally important to know the various attributes that account for the cement sector withstanding ability amidst this global recession.

STATEMENT OF THE PROBLEM

In terms of distribution of industries in manufacturing sector, the cement industry is one of the most significant industries. It is the third highest contributor in terms of excise duty over Rs.4000 crores in a year. Sales taxes yield around Rs. 3500 crores to state governments. Royalties, Octroi and other Cesses add another Rs.1800 crores. The industry employs a work force of over 2 lakh persons and supports a further compliment of 12 lakh people engaged indirectly. The cement industry is selected for research due to several important reasons. Cement is a basic core product, essential for building our nation and its growth is intrinsically linked with the overall growth of the economy and more importantly with the growth of the infrastructure sector. The lack of adequate roads, port, power, and other infrastructure could prove to be a big hindrance to the rapid growth of the country.

The profitability of the business depends on the cost incurred for the production of goods. If the cost increases, the profit of the business is reduced and ultimately the business may go to the liquidation stage. Moreover the future development programme of the company can be designed according to the expenses and investment level. Future budgeting planning is based on the cost aspect of the companies. Therefore, the analysis of the cost structure of the selected cement companies in India gets importance in the present day context.

The efficiency of the business is measured by the amount of profit generated during the particular financial year. The profit of a business may be measured by the studying the profitability of investment in it. Hence, an attempt has been made to study the profitability of cement companies in India. Corporate liability is a vital factor in business. If sufficient liability is not maintained, the enterprise is technically involved and at least faces the financial embarrassment of renegotiating its obligations to creditors. The present study also aims to analyze the liquidity position of the selected cement companies.

In the company form of organization the real owners are the equity shareholders. They invest their money in equity shares of a company with the primary motive of achieving good capital appreciation and regular and stable return, (i.e., dividend.) The investor's objectives are purely based on the profitability and financial performance of the company. So, investors before taking their investment decisions consider several factors which influence the corporate performance. For measuring the corporate financial performance, accounting profitability measures and shareholders' value based measures are to be considered. Accounting profitability measures include Return on Investment (ROI), Return on Equity (ROE), Earning per Share EPS), Return on Capital Employed (ROCE) and Dividend per Share (DPS) and shareholders' value based measures include Economic Value Added (EVA) and Market Value Added (MVA). Hence an attempt has been made to study the value creation of selected cement companies in India to its shareholders.

The sample companies will be selected on the basis of size of the company. Several variables can be used as the measure the firm's size. Some of them are net profit, total assets, gross profit, total share capital and net sales. Each variable cannot represent the exact firm size in isolation to other variables. That is each variable has its own limitations. The great advantage of the total assets as a measure of the firm size is that this variable can represent the overall size of the firm compared to other variables. Moreover, figures for total assets are readily available from company's balance sheets, which the entire firms have to publish. Based on this, the size has been determined on the basis of the investment in total assets of a company during the end of the study period. **Those companies which have invested more than Rs.1000 crore in total assets during the last year of the study period have been selected for the present study.**

The Z-score analysis is used in many fields to predict corporate defaults and an easy-to-calculate control measure for the financial distress status of companies in academic studies. One specific case study by M. SelvamW et.al., (2004) was done to study the financial health on cement industry. The study predicts the financial health of India Cements Ltd using 'Z' score - the altman model for a period of five years. Another case study by Mansur.A.Mulla (2002) uses the Z score analysis for Evaluation of Financial Health of Textile Mills. On the above background, this paper is employed to evaluate the financial health of 14 south Indian cement industries. The rest of the paper is organized as follows: - Section 2 presents the methodology of the study. Empirical results and discussion are presented in Section 3. Finally, the concluding remarks are presented in Section 4.

METHODOLOGY

This study is mainly based on the secondary data. The required data was collected from PROWESS database of Centre for Monitoring Indian Economy (CMIE). Companies having Assets greater than 1000 Crores as on 2009, is chosen as the sample size. For the period 2005 to 2009 fourteen companies are chosen as samples they are: A C C Ltd., Chettinad Cement Corpn. Ltd., Dalmia Bharat Sugar & Inds. Ltd., Heidelberg Cement India Ltd., India Cements Ltd., Jaiprakash Associates Ltd., Kesoram Industries Ltd., Madras Cements Ltd., My Home Inds. Ltd., Orient Paper & Inds. Ltd., Penna Cement Inds. Ltd., Rain Commodities Ltd., Ultratech Cement Ltd., and Zuari Cement Ltd. The Financial Health of Cement industry in South India is analysed using the Z-Score Financial Analysis Tool.

Z-SCORE FINANCIAL ANALYSIS TOOL

A common statistical way of standardizing data on one scale so a comparison can take place is using a z-score. The z-score is like a common yard stick for all types of data. Each z-score corresponds to a point in a normal distribution and as such is sometimes called a normal deviate since a z-score will describe how much a point deviates from a mean or specification point. Z-score means statistical measure that quantifies the distance a data point is from the mean of a data set. In a more financial sense, Z-score is the output from a credit-strength test that gauges the likelihood of bankruptcy. The formula may be used to predict the probability that a firm will go into bankruptcy within two years. Z-scores are used to predict corporate defaults and an easy-to-calculate control measure for the financial distress status of companies in academic studies. The Z-score uses multiple corporate income and balance sheet values to measure the financial health of a company.

The z-score represents a point in time. As such, the z-scores should be examined over time. Consistently low scores each year are more of a concern than a onetime low score. The Z score has proven successful in the real world. It correctly predicted 72% of bankruptcies two years prior to the event. Z score profiles for failing businesses often indicate a consistent downward trend as they approach bankruptcy.

ESTIMATION OF THE FORMULA

The Z-score is a linear combination of four or five common business ratios, weighted by coefficients. The coefficients were estimated by identifying a set of firms which had declared bankruptcy and then collecting a matched sample of firms which had survived, with matching by industry and approximate size (assets). Altman applied the statistical method of discriminant analysis to a dataset of publicly held manufacturers. The estimation was originally based on data from

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publicly held manufacturers, but has since been re-estimated based on other datasets for private manufacturing, non-manufacturing and service companies. From about 1985 onwards, the Z-scores gained wide acceptance by auditors, management accountants, courts, and database systems used for loan evaluation (Eidleman). The formula's approach has been used in a variety of contexts and countries, although it was designed originally for publicly held manufacturing companies with assets of more than $1 million. Later variations by Altman were designed to be applicable to privately held companies (the Altman Z'-Score) and non-manufacturing companies (the Altman Z''-Score).All developers of prediction models warn that the technique should be considered as just another tool of the analyst and that it is not intended to replace experienced and informed personal evaluation. Perhaps the best use of any of these models is as a "filter" to identify companies requiring further review or to establish a trend for a company over a number of years. If, for example, the trend for a company over a number of years is downward then that company has problems, that if caught in time, could be corrected to allow the company to survive. Three modes of this z-score are used in the present study in order to Measure the 'Fiscal-Fitness' of a company. They are: Altman Model, Springate Model and Fulmer Model.

1.   ALTMAN MODEL (U.S. - 1968)

The Z-score formula for predicting bankruptcy was published in 1968 by Edward I. Altman, who was, at the time, an Assistant Professor of Finance at New York University. He is the dean of insolvency predictors. He was the first person to successfully use step-wise multiple discriminate analyses to develop a prediction model with a high degree of accuracy. This can also be called as a company failure or bankruptcy prediction method. A company's Z score is a positive function of five factors:

(net working capital) / (total assets) (retained earnings) / (total assets) (EBIT) / (total assets) (market value of common and preferred) / (book value of debt) (sales) / (total assets).

Although the weights are not equal, the higher each ratio, the higher the Z score and the lower the probability of bankruptcy. Also called Zeta. Using the sample of 66 companies, 33 failed and 33 successful, Altman's model achieved an accuracy rate of 95.0%. Altman's model takes the following form -:

$Z = 1.2A + 1.4B + 3.3C + 0.6D + .999E$ ………………(1)

Where,   A = Working Capital/Total Assets

B = Retained Earnings/Total Assets

C = Earnings before Interest and Taxes/Total Assets

D = Market Value of Equity/Book Value of Total Debt

E = Sales/Total Assets

if   Z < 2.675; then the firm is classified as "failed"

PRECEDENTS

Altman's work built upon research by accounting researcher William Beaver and others. In the 1930s and on, Mervyn and others had collected matched samples and assessed that various accounting ratios appeared to be valuable in predicting bankruptcy.William Beaver's work, published in 1966 and 1968, was the first to apply a statistical method, t-tests to predict bankruptcy for a pair-matched sample of firms. Beaver applied this method to evaluate the importance of each of several accounting ratios based on univariate analysis, using each accounting ratio one at a time. Altman's primary improvement was to apply a statistical method, discriminant analysis, which could take into account multiple variables simultaneously.

2.   SPRINGATE (CANADIAN - 1978)

This model was developed in 1978 at S.F.U. by Gordon L.V. Springate, following procedures developed by Altman in the U.S. Springate used step-wise multiple discriminate analyses to select four out of 19 popular financial ratios that best distinguished between sound business and those that actually failed. The Springate model takes the following form -:

$Z = 1.03A + 3.07B + 0.66C + 0.4D$…………………………(2)

Where,   A = Working Capital/Total Assets

B = Net Profit before Interest and Taxes/Total Assets

C = Net Profit before Taxes/Current Liabilities

D = Sales/Total Assets

If Z < 0.862; then the firm is classified as "failed"

This model achieved an accuracy rate of 92.5% using the 40 companies tested by Springate. Botheras (1979) tested the Springate Model on 50 companies with an average asset size of $2.5 million and found an 88.0% accuracy rate. Sands (1980) tested the Springate Model on 24 companies with an average asset size of $63.4 million and found an accuracy rate of 83.3%.

3.   FULMER MODEL (U.S. - 1984)

Fulmer (1984) used step-wise multiple discriminate analysis to evaluate 40 financial ratios applied to a sample of 60 companies -30 failed and 30 successful. The average asset size of these firms was $455,000.

The model takes the following form -:

$H = 5.528 (V1) + 0.212 (V2) + 0.073 (V3) + 1.270 (V4) - 0.120 (V5) + 2.335 (V6) + 0.575 (V7) + 1.083 (V8) + 0.894 (V9) - 6.075$…………………(3)

Where,   V1 = Retained Earning/Total Assets

V2 = Sales/Total Assets

V3 = EBT/Equity

V4 = Cash Flow/Total Debt

V5 = Debt/Total Assets

V6 = Current Liabilities/Total Assets

V7 = Log Tangible Total Assets

V8 = Working Capital/Total Debt

V9 = Log EBIT/Interest

if H < 0; then the firm is classified as "failed"

Fulmer reported a 98% accuracy rate in classifying the test companies one year prior to failure and an 81% accuracy rate more than one year prior to bankruptcy.

EMPIRICAL RESULTS AND DISCUSSION

1.   ALTMAN MODEL (U.S. - 1968)

The Altman Z-Score has become one of the most accepted and tested predictors of bankruptcy potential for a firm. The result of the Financial Health of Cement industry in fourteen South Indian companies using the Z-Score Financial Analysis Tool is presented in table 1.

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TABLE 1: ALTMAN Z-SCORE ANALYSIS FOR 14 SOUTH INDIAN CEMENT INDUSTRIES

Company Name	2005	2006	2007	2008	2009
A C C Ltd.	1.63	2.39	2.28	1.81	1.73
Chettinad Cement Corpn. Ltd.	2.68	2.53	2.72	2.43	2.65
Dalmia Bharat Sugar & Inds. Ltd.	1.98	2.14	2.04	2.10	2.03
Heidelberg Cement India Ltd.	-5.79	1.93	2.68	1.97	2.00
India Cements Ltd.	4.07	1.86	2.13	1.70	1.52
Jaiprakash Associates Ltd.	2.59	2.29	2.09	2.00	1.96
Kesoram Industries Ltd.	2.57	2.70	3.05	2.84	2.73
Madras Cements Ltd.	2.29	2.24	2.67	2.66	2.50
My Home Inds. Ltd.	2.51	2.32	2.79	3.51	2.71
Orient Paper & Inds. Ltd.	15.11	8.14	4.39	3.45	2.65
Penna Cement Inds. Ltd.	2.70	2.93	3.26	2.92	2.63
Rain Commodities Ltd.	-0.07	1.92	1.38	2.18	1.95
Ultratech Cement Ltd.	1.83	2.36	2.66	2.43	2.08
Zuari Cement Ltd.	0.82	1.11	0.86	1.62	1.41

Source: computed from PROWESS

A firm is considered to be financially safe if the Z-score is greater than 2.99 and a firm can be said to perform marginally if the Z-score lies between 2.71 and 2.98. The chance of bankruptcy is expected in next two years for the firms which has the Z-score to lie between 1.8 and 2.70 and a firm is graded as financially weak if the Z-score falls below 1. Hence, from the above table the following result can be inferred: i.e., for the companies like the Kesoram Industries Ltd., My Home Inds. Ltd., Orient Paper & Inds. Ltd. and Penna Cement Inds. Ltd., performs better than other companies.

And the companies which are considered to perform slightly better are the Ultratech Cement Ltd. and A C C Ltd. The companies which have the chance of bankruptcy in next two years are listed below: Dalmia Bharat Sugar & Inds. Ltd., Heidelberg Cement India Ltd., India Cements Ltd.,(from 2006 onwards) Jaiprakash Associates Ltd., Madras Cements Ltd., and Chettinad Cement Corpn. Ltd. Finally, the companies which are graded as financially weak are the Rain Commodities Ltd. and Zuari Cement Ltd.

2.   SPRINGATE (CANADIAN - 1978)

The result of the Springate model for the fourteen South Indian companies is presented in table 2.

TABLE 2: SPRINGATE MODEL FOR 14 SOUTH INDIAN CEMENT INDUSTRIES

Company Name	2005	2006	2007	2008	2009
A C C Ltd.	1.09	1.95	1.75	1.43	1.46
Chettinad Cement Corpn. Ltd.	1.13	1.29	1.72	1.50	0.51
Dalmia Bharat Sugar & Inds. Ltd.	0.62	0.87	1.01	1.28	0.77
Heidelberg Cement India Ltd.	0.40	1.31	1.92	1.39	1.53
India Cements Ltd.	0.34	0.53	1.47	1.39	1.05
Jaiprakash Associates Ltd.	0.84	1.03	0.65	0.59	0.63
Kesoram Industries Ltd.	1.05	1.18	1.71	1.73	1.32
Madras Cements Ltd.	0.84	1.06	1.76	2.02	1.63
My Home Inds. Ltd.	2.49	1.11	1.57	4.03	3.52
Orient Paper & Inds. Ltd.	0.92	1.19	2.29	2.90	2.04
Penna Cement Inds. Ltd.	1.00	1.19	1.94	2.11	1.94
Rain Commodities Ltd.	-0.49	1.20	0.55	1.29	1.50
Ultratech Cement Ltd.	0.41	1.13	2.02	1.96	1.69
Zuari Cement Ltd.	-0.01	0.68	0.15	1.27	1.00

Source: computed from PROWESS

According to the Z- score model the companies which are considered to be failed are listed below: Dalmia Bharat Sugar & Inds. Ltd., Jaiprakash Associates Ltd.(for most of the years),Rain Commodities Ltd.and Zuari Cement Ltd.(for first few years).

3.   FULMER MODEL (U.S. - 1984)

The result of the Fulmer model for the fourteen South Indian companies is presented in table 3.

TABLE 3: FULMER MODEL FOR 14 SOUTH INDIAN CEMENT INDUSTRIES

Company Name	2005	2006	2007	2008	2009
A C C Ltd.	14.31	1.43	1.09	0.93	1.09
Chettinad Cement Corpn. Ltd.	0	1.39	1.38	0.11	-0.58
Dalmia Bharat Sugar & Inds. Ltd.	26.67	-0.62	-0.16	-0.17	-0.37
Heidelberg Cement India Ltd.	26.86	-1.19	3.86	1.49	1.45
India Cements Ltd.	10.24	-0.64	-0.04	0.29	0.16
Jaiprakash Associates Ltd.	22.80	0.31	0.58	0.64	1.24
Kesoram Industries Ltd.	54.35	0.29	1.17	1.77	0.17
Madras Cements Ltd.	31.92	-0.56	0.33	0.10	-0.01
My Home Inds. Ltd.	20.04	-1.21	-0.37	0.09	0.04
Orient Paper & Inds. Ltd.	60.16	0.72	0.08	0.45	0.00
Penna Cement Inds. Ltd.	15.70	-0.87	0.99	1.60	0.48
Rain Commodities Ltd.	0	0	-1.28	-1.01	-0.47
Ultratech Cement Ltd.	16.70	0.09	0.81	1.01	0.72
Zuari Cement Ltd.	0	0	0	0	0

Source: computed from PROWESS

The companies which have negative score are considered to be failure firms. Accordingly, Dalmia Bharat Sugar & Inds. Ltd., Rain Commodities Ltd.and Zuari Cement Ltd is considered to be failure firms. Also, it can be noted that few companies for at least one or two year have negative score.

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CONCLUDING REMARKS

Insolvency prediction has long been confined to academics, with most of the published material restricted to business and accounting journals specializing in esoteric and complicated subjects. A possible reason why insolvency prediction models have not gained greater use in the business community is because it has been difficult to calculate the results. With the wide spread use of personal computers and the internet, the utilization of an insolvency prediction model is now practical and available to all. All the three models reviewed here gives weights to financial ratios used to best differentiate or discriminate between failed and successful companies. Fourteen south Indian Cement industries are taken as the sample size to compute this methodology. According to all three methods, few companies that are rated as failure from the sample of fourteen south Indian companies are: Rain Commodities Ltd.and Zuari Cement Ltd.

The possible reasons for a company to be rated as failure may be excess debt and excess working capital, that may weaken the financial health of that particular company.

Based on the above results few suggestions may be (i) avoid excess working capital which may help to improve the operating profit. (ii) the target must be fixed, and the sales must be achieved accordingly. And (iii) maximum utilization of the available capacity. All these may help to keep a company (or the entire cement industry) financial fit.

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