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FINANCIAL HEALTH OF PUBLIC SECTOR CHEMICAL INDUSTRIES IN KERALA

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ABSTRACT

The present study is confined to and highlights the financial health of selected public sector chemical industries in Kerala through the data published in financial statements for the period from 2003-04 to 2012-13. It covers six chemical industries coming under the Industries & Commerce Department of the Government of Kerala. So this study is limited to the selected six chemical industrial units namely, The Kerala Minerals & Metals Ltd., Kerala State Drugs & Pharmaceuticals Ltd., Malabar Cements Ltd., The Travancore Cements Ltd., The Travancore-Cochin Chemicals Ltd. and Travancore Titanium Products Ltd.

To assess whether the chemical industrial units is financially fit or not, Altman Z-Score Model has been applied. The study espied that the financial health of public sector chemical industries in Kerala has not been satisfactory and most of the firms facing financial bankruptcy.

INTRODUCTION

Finance is the basic foundation of all kinds of economic activities. It is the master key which provides access to all the resources being employed in manufacturing as well as merchandising activities. Good financial status is the primary objective of each firm. Thus financial analysis is a powerful mechanism which helps in ascertaining the strength and weakness in the operations and finances of any enterprise.

Public Sector Enterprises plays a vital role in the economic as well as social wellbeing of the country. The Industrial Policy Resolution of 1956 gave the public sector a strategic role in economic development of India. State level PSEs are important institutions set up for the development of infrastructure in different States and for supply of goods and services to the public at large. They set up to undertake manufacturing activities. Kerala has the most number of public sector enterprises in the country.

The Indian chemical industry, estimated to be $ 108 billion, is at the threshold of accelerated growth. Indian chemical sector ranks 6th in the world and 3rd in Asia. It is also one of the largest industrial sectors in the India economy and an important employment generator.

The chemical industry in Kerala plays a significant role in the overall performance of the State PSEs. Chemical sector contributes 83% of the total profit of PSEs to the State of Kerala during the year 2012-13 and is the most profitable and fastest growing sector in the State now.

The object of the study is to analyse the financial health of selected public sector chemical industries in Kerala for the last ten years from 2003-04 to 2012-13 and also to find out whether there is any consistency in the financial status of these selected industries.

LITERATURE REVIEW

T. Mary Joseph (1984) in the study "The Economics of Chemical Industry in Kerala" observes that large increase in capital intensity has not resulted in any substantial increase in capital productivity. In fact, in the case of fertilizers and pesticides and miscellaneous group of chemical companies, capital productivity showed a decline.

S. L. N. Simha (1988) in a study entitled, "The Public Sector Enterprises Problem in India" brings out that a vast number of public sector industrial and commercial undertakings in India instead of contributing to dynamic growth of the economy have accounted for tremendous wastage of physical and human assets and they are a great burden on the exchequers which is already in poor shape an account of prolonged fiscal mismanagement.

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R. Narayanan (1989) in a study entitled "Performance and Development of State Level Public Enterprises in Kerala" concluded that the low profitability of State level public enterprises was due to labour problems and management failure, lack of corporate culture, poor marketing approaches, financial difficulties in the form of bearing interest payment on debt, and by and large, lack of professionalism in management.

P. Mohanan Pillai (1994) conducted a study on "The Performance of State Sector Enterprises in Kerala" concluded that among the profit making firm, the performance of the chemical industry appears to be relatively better. In the electrical and engineering industries, average material productivity registered a negative growth rate. A steeper decline was also registered in the case of engineering industry.

P. K. Ravi Varma Raja (1994) in a study on "Financial Management of Public Enterprises in Kerala" pointed out that the net margin and operating margin are not in conformity with the functional parameters like capacity utilization and turn over and financial parameter current ratio. It is also stated that a change of these variables will not lead to a corresponding change in net profit or operating profit values.

Varghese Mathew (1997) in a study on "Performance Evaluation of State Public Enterprises in the Manufacturing Sector of Kerala" discloses that majority of public enterprises are dealt with massive work force working with outdated plant and machinery in a climate of mismanagement.

Geevargheese (2002) conducted a study on "Financial Strengths, Profitability and Productivity of Public Sector Chemical Enterprises in Kerala" opined that the absence of proper market research and updating towards cost effective technology have resulted in the below par performance of Public Sector Chemical Units under the State Sector. Public Sector undertakings, posed with meeting simultaneously the twin objectives of social commitment and competing with other commercial operators, are being put under tremendous pressure. They are often required to choose a middle path, forced to compromise on the best commercial practices otherwise available to a private sector player. This has to be weighed in the context that Public Sector units of the present day are destined to operate neither with any budgetary support nor with the usual concessions and subsidies provided to them by the government as a reward for their social commitment. This has got immense relevance in the case of PSUs operating in industries where fierce competition, import duty cuts and dumping menace are in the superlative.

RESEARCH METHODOLOGY
The study is based on the published annual reports of the selected six chemical industrial units coming under the Industries & Commerce Dept. of the Govt. of Kerala for the last 10 years from 2003-04 to 2012-13. Hence a descriptive research design is used for the study.

ALTMAN Z-SCORE MODEL
"Z" score analysis has been established by Edward I. Altman (1968) to evaluate the general trend in the financial health of enterprises over a period. Many of the individual accounting ratios used frequently to predict the financial performance of an enterprise might only provide warning when it is too late to take a corrective action. Further single ratio does not convey much of the sense. There is no internationally accepted standard for financial ratios against which the results can be compared. Therefore, Edward Altman combined a number of accounting ratios such as liquidity, leverage, activity and profitability to form an index of the probability, which is an effective indicator of corporate performance in predicting bankruptcy. In this direction, the study has tried to evaluate the financial performance of selected six public sector chemical industries. That is the study tries to evaluate whether the selected chemical industries are solvent or bankrupt.

RATIO USED IN Z-SCORE ANALYSIS
The formula used to evaluate the "Z" score established by Altman is as follows:
$$Z = 1.2 X1 + 1.4 X2 + 3.3 X3 + 0.6 X4 + 0.999 X5$$
        Where, Z is the overall index.
1. X1 = Working Capital / Total Assets. This ratio measures liquid assets in relation to the size of the company.
2. X2 = Retained Earnings / Total Assets. This ratio measures profitability that reflects the company's age and earning power.
3. X3 = EBDIT / Total Assets. This ratio measures operating efficiency apart from tax and leveraging factors. It recognizes operating earnings as being important to long-term viability.

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4. X4 = Market Value of Equity / Total Debt. This ratio adds market dimension that can show up security price fluctuation as a possible red flag.
5. X5 = Net Sales / Total Assets. This ratio measures the ability of the company's assets to generate the sales.

MEASUREMENT OF FINANCIAL HEALTH
Altman established the following guidelines to be used to classify firms as either financially sound or bankrupt and he outlined following three different guidelines for Healthy Zone.
1. "Z" score value of below 1.86 – Bankrupt Zone. Firm's failure is certain and extremely likely and would occur within two years. That is the company is considered to be financially sick.
2. Between 1.86 to 2.66 – Healthy Zone. The firm is considered to be healthy, but the failure in this situation is uncertain to predict. That is the company is likely to become financially sick.
3. "Z" score value of 2.66 and above – Very Healthy Zone. Firm's financial health is very much viable and firm will not fail. That is, the company is said to be good in financial status.

DATA ANALYSIS AND INTERPRETATION
For the purpose of assessing the financial health, the Z-Score model has been applied. The relevant data has been obtained from the company's income statement and balance sheet. The Z-Score of the selected six chemical industries has been computed for the ten years from 2003-04 to 2012-13 are as follows.

Table 1
Z-Score of Selected Chemical Industries

Year	KMML	KSDPL	MCL	TCL	TCCL	TTPL
2003-04	2.148	-0.476	1.104	1.871	0.707	1.126
2004-05	1.439	-0.470	1.843	1.434	1.229	1.567
2005-06	1.418	-0.395	1.593	1.158	0.782	1.650
2006-07	1.364	-0.389	2.242	0.024	1.244	1.027
2007-08	1.295	-0.246	2.880	1.757	1.185	1.070
2008-09	1.092	-0.101	2.971	2.391	0.949	0.366
2009-10	1.669	0.061	2.902	2.051	1.098	-0.223
2010-11	1.970	0.256	2.362	1.815	0.977	1.097
2011-12	1.342	-0.126	2.933	1.058	0.985	1.449
2012-13	1.868	-0.054	2.918	-0.128	1.324	1.316

Source: Annual Reports of Selected Chemical Industries

The Z-Score value of KMML for the year 2004 is 2.15, which is in healthy zone, but later from 2005 to 2010 it is generally low. In 2011 the company is financially health, but in 2012 it fall in to bankruptcy. Now in 2013, KMML is in healthy zone (1.87).

The study espied that, KSDPL shows a negative trend from 2004 to 2009, later it slowly changed to positive side but still below the healthy zone.

From the table, it is clear that, the Z-Score value of MCL from 2004 to 2007 is below very healthy zone, but later from 2008 to 2010 it is in healthy zone. During the last two years, ie, 2012 and 2013 the company's financial health is very much viable.

TCL shows a healthy zone in 2004, but later from 2005 to 2008, the company is financially sick. From 2009 to 2011, TCL is in healthy zone. The company had not continued this financial status from 2012 onwards. Hence it is in danger zone.

The TCCL would not attain the minimum of healthy zone (1.86) in any of the year under study, ie, from 2004 to 2013. Thus it is said that, the financial status of the company is not in good condition.
Further, TTPL is failed to attain the minimum of healthy zone in any one of the years from 2004 to 2013. Thus, the financial status of the company is not at all satisfactory, but hopes that TTPL would attain the margin in future.

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As per the Z-Score analysis, it is clear that only MCL is financially sound and in healthy zone. Other industrial units except KMML are now passing through financial sluggishness. But the overall performance of KMML is not at all satisfactory.

Table 2
Consistency in Financial Status of Selected Chemical Industries

Chemical Industry	Mean	Standard Deviation (SD)	Coefficient of Variation (CV)
KMML	1.5605	0.338	21.68%
KSDPL	-0. 194	0.244	125.94%
MCL	2.375	0.669	28.15%
TCL	1.343	0.837	62.29%
TCCL	1.048	0.204	19.46%
TTPL	1.045	0.573	54.85%

Source: Econometrics, MegaStat

The consistency in financial status of KMML is not at all good for the entire period, but there is improvement in recent years. The mean of Z-Score is 1.56, which is below the healthy zone, while CV is 21.68%. This indicates below average financial status of the company. Hence, the firm should continue to maintain the improvement to be out of bankruptcy.

The table shows that, consistency in financial status of KSDPL is very low for the entire period and the firm is in bankrupt zone. The mean of Z-Score is in negative (-0.19) and CV is 21.68% indicating poor financial status of the company. Thus, the firm must take necessary measures to improve its financial status.

MCL's financial status is good for the entire period. There is an average of 2.38 Z-Score value and 28.15% CV. This indicates above average financial status of the company and the firm now is in healthy zone. Thus, the firm should continue this status.

The study observed that, TCL's financial status is not at all good for the entire period. The average of Z-Score shows, TCL is in below healthy zone (1.34) and its CV is 62.29%, showing a bushed financial status. Hence the firm must take proper actions against this bankruptcy.

From the study, it is clear that, the average Z-Score value of TCCL is 1.05, which is below the healthy zone. Its CV is 19.46%. This indicates firm's languorous financial status. Thus the firm should change its modus operandi. Otherwise it will fell into financial bankruptcy.

TTPL is not at all consistent in financial health during the period under study. The mean of Z-Score is 1.04 and CV is 57.29%. This pointed out that the financial status of the company is in feeble. Hence, the firm must apply proper yardstick to improve its financial status.

RESULTS AND DISCUSSION
From the Z-Score analysis, it is found that, only MCL is financially sound and the firm is in healthy zone. Other industrial units namely, KMML, KSDPL, TCL, TCCL and TTPL are passing through financial sluggishness. Thus the researcher can't say the financial status of selected chemical industrial units is in robust zone. Hence the null hypothesis is accepted and concluded that, the financial health of public sector chemical industry in Kerala has not been satisfactory and there is inconsistency in the financial status of the selected chemical industrial units.

CONCLUSION
This paper investigated the financial health of selected Public Sector Chemical Industries in Kerala through the data published in financial statements for the period from 2003-04 to 2012-13. To assess whether the chemical industrial units is financially fit or not, Altman Z-Score Model has been applied. The hypothesis test states that, the financial health of public sector chemical industry in Kerala has not been satisfactory and there is inconsistency in the selected chemical industrial units. Hence the study found that, the selected chemical industries are

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financially not viable due to poor financial status. Only MCL is financially sound and the firm is in healthy zone. Rest of them namely, KMML, KSDPL, TCL, TCCL and TTPL are passing through financial sluggishness. Thus the firms have to apply proper yardstick to improve its financial status. The researcher concluded that, the financial health of public sector chemical industries in Kerala is not in robust zone.

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