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Books

- Bowersox, Donald J., Closs, David J., (1996), "Logistical Management." Tata McGraw, Hill, New Delhi.
- Hunker, H.L. and A.J. Wright (1963), "Factors of Industrial Location in Ohio," Ohio State University.

Contributions to books

- Sharma T., Kwatra, G. (2008) Effectiveness of Social Advertising: A Study of Selected Campaigns, Corporate Social Responsibility, Edited by David Crowther & Nicholas Capaldi, Ashgate Research Companion to Corporate Social Responsibility, Chapter 15, pp 287-303.

Journal and other articles

- Schemenner, R.W., Huber, J.C. and Cook, R.L. (1987), "Geographic Differences and the Location of New Manufacturing Facilities," Journal of Urban Economics, Vol. 21, No. 1, pp. 83-104.

Conference papers

- Chandel K.S. (2009): "Ethics in Commerce Education." Paper presented at the Annual International Conference for the All India Management Association, New Delhi, India, 19–22 June.

Unpublished dissertations and theses

- Kumar S. (2006): "Customer Value: A Comparative Study of Rural and Urban Customers," Thesis, Kurukshetra University, Kurukshetra.

Online resources

- Always indicate the date that the source was accessed, as online resources are frequently updated or removed.

Website

- Kelkar V. (2009): Towards a New Natural Gas Policy, Economic and Political Weekly, Viewed on February 17, 2011 http://epw.in/epw/user/viewabstract.jsp

RATIO BASED CREDIT EVALUATION MODEL

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ABSTRACT

Only application of sound credit management practices by experienced risk managers will ensure success in today's competitive environment. There are several reasons for using the new approaches to analysis and new approaches reflects the thought that credit analysis is actually risk analysis. One of the most important reasons of interest in and concern with risk management is escalating is that, in recent years the business world has become more and more competitive and the scenario is changing rapidly. Staying ahead in the competition, protecting market share and to secure economise business has witnessed increasing numbers of mergers, buy ones and acquisitions that converted small businesses into divisions of large corporations. This consists of many diversified entities that deal in a variety of products and services. This is reflected in the increasing demand for objective information to help make profitable decision. As organisation grows or is acquired by larger companies, the decision making process becomes more centralised and the traditional methods of credit analysis used by the credit managers are no longer feasible as well as cost efficient. This motivation has helped to stimulate intense credit management focus.

KEYWORDS

Credit Analysis, Credit Worthiness, Credit Information, Credit Decision

INTRODUCATION

The high standard of living enjoyed in this country today would not have been possible without the liberal extension of credit. Credit has become almost an indispensable convenience or a necessity in our scheme of living. It would be wrong to imagine that the use of credit in a complex and sophisticated form is only a recent phenomenon. Reference of credit can be found as early as 1300 B.C. in the civilization of Babylon, Assyria, Egypt. Credit management has come a long way over the years. Many individuals as well as firms have wrong conception or negative idea about uses and applications of credit. A number of years this kind negative of thinking led to a lacuna in fresh creative ideas, 'constructive imagination and positive leadership. The concept of "Buy now-pay later" or promise to pay in future in return for immediate goods must always have existed in the earlier agricultural societies, as the incidence of a man's need would seldom coincide with his ability to pay. Thus, credit helps in those transactions which would not have been otherwise possible. In modern society credit is widely used in every sphere of our activity. Only application of sound credit management practices by experienced risk managers will ensure success in today's competitive environment. There are several reasons for using the new approaches to analysis and new approaches reflect the thought that credit analysis is actually risk analysis. One of the most important reasons of escalating interest in and concern with risk management is that in recent years the business world has become more and more competitive and the scenario is changing rapidly. Staying ahead in the competition, protecting market share and securing economise business has witnessed increasing numbers of mergers, buy ones and acquisitions that convert small businesses into divisions of large corporations. This is reflected in the increasing demand for objective information to help make profitable decision. As organisation grows or is acquired by larger companies, the decision making process becomes more centralised and the traditional methods of credit analysis used by the credit managers are no longer feasible as well as cost efficient. This motivation has helped to stimulate intense credit management focus.

It is seen that, in most of the cases pertinent information regarding credit decision making is not available from the credit applicant and the companies take their credit decision exclusively on the merits of past experience with, and the general impression that they have about a customer. Thus, in such cases credit granting decision is based on past experience and general impression about a customer. Proper evaluation of risk involved in a credit granting decision becomes of fundamental importance before sales commence because once the credit is accepted by the creditor firm of its credit applicant, servicing and loss mitigation technique can control the future losses only to a limited extent. If the decision at the initial stage is taken after weighing pros and cons of the situation then transition to subsequent stages take places smoothly.

Whatever may be the procedure, credit analysts always consider the nature and type of the business as well as the applicant and their personal judgement. Now, we consider which basis of evaluation the creditor firm should follow to assess the credit worthiness of their credit applicants. A survey conducted in this respect shows that most of the credit granting firms even the big one also, do not follows sophisticated basis of credit evaluation. A major portion of the firm concentrates on the past experience with and general impression about the customers. The next most popular method is LAPP method and the next one is most widely known and age old method is four 'c's of credit. Whatever may be the basis of evaluation the two major considerations in credit analysis are the applicant's business ability and his general financial position. That means it concentrates on financial as well as non financial aspects of the applicant. The most important non-financial aspects of the applicant in credit analysis were and still are managerial capability of the applicant or the men who actively operate the applicant's business. In analysing financial factors, credit analysts generally judge the liquidity and debt paying ability of a credit applicant. We know the absolute figures presented in the financial statement do not measure the managerial ability applied to a business or the soundness or its weakness of its financial position. Thus, before determining what data is to be in the credit analysis – the figure presented in the financial statement have to be quantified and subject to adjustment as per requirement. After that the analyst must apply certain analytical procedure to the financial figures to judge the creditworthiness of the applicant. The development of different sophisticated financial as well as statistical are fairly recent and still in the process. At present widely used financial tools are, Ratio analysis, sources and uses of fund analysis, Trend analysis, common size statement and perhaps other analysis to determine the ability to pay and financial position of the applicant . Mercantile credit men soon realized that financial statement analysis provides them with element of knowledge about their customer. The scope of financial statement analysis is vast and the experienced credit analyst must be capable of appraising credit risk involved there, with a degree of accuracy.

Analysis of financial statement for credit purposes is a complex process. It is a major consideration in any credit decision. The absolute data presented in the financial statement provides the credit manager invaluable information that can be helpfully combined with the information derived from other sources. Use of financial statement for the purpose of credit extension is not a recent phenomenon. As early as 1870's mercantile credit agencies were able to obtain some neatly arranged financial statement from customers/ credit applicants. With the pressure from of those agencies the practice of issuing financial statement as a basis for credit extension was developed through the 1870's and 1880's[12]. In 1895 the executive council of New York State Banker Association adopted a resolution recommending that loan applicant be requested to submit financial statement[13]. It is not possible to determine exactly when individual seller first started asking their credit applicant for financial statement. In United States the National Association of credit men from its very inception, insisted that the credit manager should ask for the financial statement of their customers and for this purpose, in 1898, they published standard "Property Statement" (blanks balance sheet) form for the use of its members. The practice of requesting financial statement from the customer was prevalent from that time but it was not so wide spread. With the passage of time, the credit managers realized the necessity of their customer's financial statement which was supposed to be useful source of credit information and even many of the customers came to realize that their suppliers were entitled to ask for and receive their financial statement as a basis for granting credit to them.

Though invaluable information is available from the financial statement, still there are some problems arising in using financial statement as sources of information. At present credit managers like to consider audited accounting data only. But audit impose undue cost on small businesses. The level of cost is said to be a matter of concern for many firms. Audited information is held to be of questionable value, as in the case of small firms because the auditor has had to get much information supplied by the manager "on trust".
Secondly some concerns are still reluctant to submit copies of their financial statement and reveal the bare minimum only.
To sum up, we can say that, the credit executive must appraise or evaluate the position of the credit applicant to reach a credit granting decision. For the purpose of such appraisal credit department should possess pertinent credit information about their credit applicant. The evidence shows that a principal cause of credit losses is a decision based on inadequate credit information. Thus, credit management must recognize the basic importance of establishing effective method and procedures for obtaining, assimilating and analyzing essential credit information.

OBJECTIVE OF THE STUDY

At present most of the business houses make their credit standard lenient to retain the share of market and to expand their sales volume. When sales expand, there is a tendency to invest in receivables increases. Unless receivables are converted into cash in a minimum period of time, the business firm loses its liquidity, exhausts its credit and find its growth potential limited. Thus, Receivables play a strategic role in the management of a firm. Proper evaluation of risk involved in a credit granting decision becomes of fundamental importance before sales commence.
Firstly: - Once the credit is accepted by the creditors firm of its credit applicant servicing and loss mitigation technique can control the future losses only to a limited extent.
Secondly:- If the decision at the initial stage is taken after weighting pros and cons of the situations then transition to subsequent stages take places smoothly.

DATA SOURCE

To develop a credit evaluation model from the financial statement of the selected companies, we used Bathory's – 'risk description model'. For the purpose of our study cement companies are selected following purposive sampling procedure. The data of cement companies used in this study have been collected from secondary sources –

- The Stock Exchange official Directory of Bombay Stock Exchange.
- Capital line 2006, the official data base of Capital Market publishers limited, Mumbai.

METHODOLOGY

For this purpose we prepare a modified balance sheet of the selected. The model is prepared for one year as a sample. If the model is prepared on the basis of three to four years data, it will be more predictive in nature. At the time of selecting data, for the purpose of calculating Ratios, we mainly concentrate on firm's liquidity, profitability and capital adequacy. Eight Ratios selected to prepare the model .

RISK DESCRIPTION MODEL

1. Net profit/Capital employed = Profitability (annual).
2. Net Tangible assets (Shareholders Fund)/ Total Liabilities (Long Term+ Short term debt) = Profitability (cumulative).
3. Net profit / Current liabilities = liquidity.
4. Normalised working capital / Credit exposure = liquidity.
5. Equity / Current Liability + credit exposure = capital adequacy.
6. Net assets / credit exposure = comfort margin.
7. Total assets / Total Liability + Credit exposure = Debt capacity.
8. Net profit + Depreciation / Current debt = priority debt service ability.

In the first Ratio, we calculate return on capital employed. Net profit for this purpose is profit after tax but before interest. By placing net profit over capital employed, we have a measurement of profitability in the latest year. In the second ratio, we placed net tangible assets over total liabilities. Here total liability is equal to total long term debt plus total short-term debt i.e. current liabilities. First ratio measures the latest profitability and the second ratio is a measurement of cumulative profitability. As we want to look at the profitability from the latest as well as from accumulated periods, let us keep both measures for the model.
To measure the liquidity of the firm in most of the cases current ratio and quick ratio is widely used, but these ratios represent a less indicative measurement in our view. We place net profit over current liabilities, as net profit will include some items additional to current assets, such as surplus after accounting for depreciation and extra ordinary items. In the second ratio of liquidity measurement we placed Normalised-working capital over credit exposure. To calculate normalised working capital, we deduct stock from net current assets (net working capital), usually in case of quick ratio; we place current assets less stock over current liabilities. Now, in our case we have already deducted current liabilities from current Assets to calculate Net Current Assets. So, if we place normalised working capital over current liabilities plus credit exposure – This would give a wrong picture. Accordingly, we placed normalised working capital over credit exposure. This would show how much cover a hard measure of latest liquidity can afford. In calculating normalised working one can deduct hundred percent of stock or may be deducted less liquid stock like raw materials and WIP in case of manufacturing company. In case of retail companies the deductible portion may be twenty five percent. In preparing the model, here, we deduct 50% of stock from Net Current Assets. Credit exposure is equal to the amount of credit asked by the customer. Here, to prepare the model, .25% of the current assets are taken as credit exposure.
Third and Fourth Ratio indicates firm's short-term liquidity position. Now fifth one measures capital adequacy, which implies long term or permanent capital. We know company's permanent capital would not be used in normal circumstances to meet short-term obligation. Still the fifth ratio is consider in our model on the ground that the equity stake can, in many situations, provide firms with further borrowing powers. In calculating the ratios we include credit exposure with firm's current liabilities to show the most severe total of a firm's obligation.
We calculate the sixth ratio by placing net assets over credit exposure and it is called comfort margin. In most of the cases normalised working capital/credit exposure produce comparatively high numbers and probably negative. As we know, stock is a very substantial portion of current assets and when we deduct stock from Net Current Assets, there is a very high probability of a negative figure.
It is hoped that net assets will provide a significantly large amount of cover for the small credit exposure. The resulting ratio should thus throw high positive scores and its effect on the model should accordingly compensate for the high negative numbers shown by normalised working capital / credit exposure.
To assess the debt capacity of the firm, we calculate – Total Assets / Total Liabilities + credit exposure. Here total liabilities means all short term and long term obligations also included the amount of credit exposure. This would indicate safety margin taking into consideration all known obligations including the credit asked for by the customer. Such a measurement gives a rough idea of break up value of the company, where there are all obligations of the customer, including our original exposure to crystallise simultaneously. This ratio gives an indication of safety margin and debt capacity, both of which are the functions of liquidity, capital adequacy and profitability.
The eighth and the last ratio, we place financial flow (gross cash flow) over current debt. From our experience, it is seen all the current liabilities are not demanded at a time, since calculating current debt, here we take twenty per cent of firm's current liabilities. We can say it is a treatment of priority debt items and it is matched with that amount which will be used to servicing it.
For the purpose of our model, eight ratios are taken into consideration and we give them equal weight.
The resulting formula would be quickly expressed as –

CS= L*∑Xi
CS=Credit score
Xi=Variables (i=1to8)
L= Constant Multiplier = 100/8 = .125
The develop Model is thus =.125*∑Xi

RISK DESCRIPTION MODEL

Here,
NWC= Normalized Working Capital
NTA= Net Tangible Assets
E= Equity Shareholders fund
CL= Current Liabilities
TL= Total Assets
CR.EXPOSU. =Credit Exposure (.25% of CA)
CD= Current Debt (20% of current liabilities.)
D= Depreciation
NP= Net Profit
NA= Net Assets.
CE= Capital Employed.

TABLE:1 -RISK DESCRIPTION MODEL- RATIOS MEASUREMENT (ACC LTD)

Ratios	Description	Calculations	Scores
X1	NP/CE	375.25/3011.94	0.124
X2	NTA/TL	1835.77/1176.17	1.56
X3	NP/CL	375.25/1531.25	0.245
X4	NWC/CR. EXPOSU.	-110.185/3.5529	-31.013
X5	E/CL+CR.EXPOSU.	1835.77/1534.8	1.196
X6	NA/CR.EXPOSU.	1835.77/3.5529	516.696
X7	TA/TL+CR.EXPOSU.	4543.19/1179.72	3.851
X8	NP+D/CD	(375.25+164.37)/ 306.25	1.762
		Total Scores(∑Xi)	494.421
Credit Score(CS)= 409.874*.125=61.80263			

TABLE:2 -RISK DESCRIPTION MODEL- RATIOS MEASUREMENT (AMBUJA EASTERN

Ratios	Description	Calculations	Scores
X1	NP/CE	80.49/315.83	0.255
X2	NTA/TL	229.76/86.07	2.669
X3	NP/CL	80.49/83.14	0.968
X4	NWC/CR. EXPOSU.	-0.6/0.26573	-2.264
X5	E/CL+CR.EXPOSU.	229.76/83.4057	2.755
X6	NA/CR.EXPOSU.	229.76/0.26573	864.653
X7	TA/TL+CR.EXPOSU.	398.97/86.3357	4.621
X8	NP+D/CD	(80.49+40.78)/ 16.628	7.293
		Total Scores(∑Xi)	880.95
Credit Score(CS)= 882.086*.125=110.1188			

TABLE:3 -RISK DESCRIPTION MODEL- RATIOS MEASUREMENT (MADRAS CEMENT

Ratios	Description	Calculations	Scores
X1	NP/CE	115.79/903.76	0.128
X2	NTA/TL	301.32/602.44	0.5
X3	NP/CL	115.79/424.5	0.273
X4	NWC/CR. EXPOSU.	47.895/0.81768	58.575
X5	E/CL+CR.EXPOSU.	301.32/425.318	0.708
X6	NA/CR.EXPOSU.	301.32/0.81768	368.508
X7	TA/TL+CR.EXPOSU.	1328.26/603.258	2.202
X8	NP+D/CD	(115.79+65.19)/84.9	2.132
		Total Scores(∑Xi)	433.026
Credit Score(CS)= 433.026*.125=54.12825			

TABLE:4 -RISK DESCRIPTION MODEL- RATIOS MEASUREMENT (SHREE CEEMNT

Ratios	Description	Calculations	Scores
X1	NP/CE	32.23/723.73	0.045
X2	NTA/TL	350.99/372.74	0.942
X3	NP/CL	32.23/277.67	0.116
X4	NWC/CR. EXPOSU.	8.48/0.68413	12.395
X5	E/CL+CR.EXPOSU.	350.99/278.354	1.261
X6	NA/CR.EXPOSU.	350.99/0.68413	513.05
X7	TA/TL+CR.EXPOSU.	1001.4/373.424	2.682
X8	NP+D/CD	(18.1+163.97)/54.73	3.585
		Total Scores(∑Xi)	534.076
Credit Score(CS)= 534.076*.125=66.7595			

TABLE:5 -RISK DESCRIPTION MODEL- RATIOS MEASUREMENT (DALMIA CEMENT)

Ratios	Description	Calculations	Scores
X1	NP/CE	62.4/935.49	0.067
X2	NTA/TL	252.31/683.18	0.369
X3	NP/CL	62.4/456.28	0.202
X4	NWC/CR. EXPOSU.	124.06/1.1407	108.758
X5	E/CL+CR.EXPOSU.	252.31/310.521	0.813
X6	NA/CR.EXPOSU.	252.31/1.1407	221.189
X7	TA/TL+CR.EXPOSU.	1244.87/684.321	1.819
X8	NP+D/CD	(62.4+27.93)/61.876	1.46
		Total Scores(∑Xi)	334.677
Credit Score(CS)= 334.677*.125=41.8346			

TABLE:6 -RISK DESCRIPTION MODEL- RATIOS MEASUREMENT (INDIA CEMENT)

Ratios	Description	Calculations	Scores
X1	NP/CE	185.2/3191.71	0.058
X2	NTA/TL	1666.47/1525.24	1.093
X3	NP/CL	185.2/435.68	0.425
X4	NWC/CR. EXPOSU.	1018.46/3.78105	269.359
X5	E/CL+CR.EXPOSU.	1666.47/439.461	3.792
X6	NA/CR.EXPOSU.	1666.47/3.78105	440.743
X7	TA/TL+CR.EXPOSU.	3627.39/1529.02	2.372
X8	NP+D/CD	(185.2+78.87)/87.136	3.031
		Total Scores(∑Xi)	720.873
Credit Score(CS)= 720.873*.125=90.10913			

TABLE:7 -RISK DESCRIPTION MODEL- RATIOS MEASUREMENT (NARMADA CEMENT LTD)

Ratios	Description	Calculations	Scores
X1	NP/CE	21.65/66.56	0.325
X2	NTA/TL	-73.22/139.78	-0.524
X3	NP/CL	21.65/99.84	0.217
X4	NWC/CR. EXPOSU.	-40.625/0.21405	-189.792
X5	E/CL+CR.EXPOSU.	-73.22/100.054	-0.732
X6	NA/CR.EXPOSU.	-73.22/0.21405	-342.070
X7	TA/TL+CR.EXPOSU.	166.4/139.994	1.189
X8	NP+D/CD	(21.65+6.42)/19.968	1.406
		Total Scores(∑Xi)	(529.981)
Credit Score(CS)= (529.981)*.125=(66.2476)			

TABLE:8 -RISK DESCRIPTION MODEL- RATIOS MEASUREMENT (DECAN CEMENT LTD)

Ratios	Description	Calculations	Scores
X1	NP/CE	10.12/81.12	0.125
X2	NTA/TL	62.71/18.41	3.406
X3	NP/CL	10.12/25.17	0.402
X4	NWC/CR. EXPOSU.	25.81/0.10125	254.914
X5	E/CL+CR.EXPOSU.	62.71/25.2713	2.481
X6	NA/CR.EXPOSU.	62.71/0.10125	619.358
X7	TA/TL+CR.EXPOSU.	106.29/18.5113	5.742
X8	NP+D/CD	(10.12+5.07)/5.034	3.017
		Total Scores(∑Xi)	889.445
Credit Score(CS)= 889.445*.125= 111.1806			

TABLE:9-RISK DESCRIPTION MODEL- RATIOS MEASUREMENT (KAKATIYA CEMENT LTD)

Ratios	Description	Calculations	Scores
X1	NP/CE	18.88/136.91	0.138
X2	NTA/TL	74.8/62.11	1.204
X3	NP/CL	18.88/29.31	0.644
X4	NWC/CR. EXPOSU.	35.71/0.16343	218.51
X5	E/CL+CR.EXPOSU.	74.8/29.4734	2.538
X6	NA/CR.EXPOSU.	74.8/0.16343	457.702
X7	TA/TL+CR.EXPOSU.	166.22/62.2734	2.669
X8	NP+D/CD	(18.88+7.78)/5.862	4.548
		Total Scores(∑Xi)	687.953
Credit Score(CS)= 687.953*.125= 85.99413			

TABLE: 10

Ratio	ACC	AMBUJA	MADRAS	SHREE	DALMIA	INDIA	DECAN	KAKA.	AVG.
X1	0.124	0.255	0.128	0.045	0.067	0.058	0.125	0.138	0.117
X2	1.560	2.669	0.500	0.942	0.369	1.093	3.406	1.204	1.47
X3	0.245	0.968	0.273	0.116	0.202	0.425	0.402	0.644	0.41
X4	-31.013	-2.264	58.575	12.395	108.758	269.359	254.914	218.510	111.154
X5	1.196	2.755	0.708	1.261	0.813	3.792	2.481	2.538	1.94
X6	516.696	864.653	368.508	513.050	221.189	440.743	619.358	457.702	500.24
X7	3.851	4.621	2.202	2.682	1.819	2.372	5.742	2.669	3.24
X8	1.762	7.293	2.132	3.585	1.460	3.031	3.017	4.548	3.35
TOTAL SCORES	494.421	880.95	433.026	534.076	334.677	720.873	889.445	687.953	621.928
CREDIT SCORES	61.80263	110.1188	54.12825	66.7595	41.83463	90.10913	111.1806	85.99413	77.741

Source: Capital line 2006, the official data base of Capital Market publishers limited, Mumbai.

At the time of selecting data, for the purpose of calculating Ratios, we mainly concentrate on firm's liquidity, profitability and capital adequacy. From the 'risk description model', scores are calculated individually for each of the companies. The model clearly showed that how the profitability, liquidity and capital adequacy factors influenced the score of individual companies. In case of the companies, where all the factors were good, they obtained high score. On the other hand, the companies where two factors are good but the impact of one bad factor outweighed the influence of good factors.

This model is self explanatory in nature. Our objective in this case just gives an idea to the credit analyst, about extracting best result by using financial statement. The score revealed that highest score was obtained by the Decan (111.18) and lowest by Dalmiya (41.83). This Risk Description model showed that profitability and current debt paying capacity in most of the cases was more or less same. The main influencing factors in this model are the accumulated profitability and the inventory. If we further analyse the inventory status of the individual selected companies the picture will be clearer.

Elements	ACC	MADRAS	AMBUJA	SHREE	DECAN	KAKA	DALMIYA	INDIA
Inventories	600.95	100.95	46.9	112.94	5.58	28.58	191.68	213.82
Total Current Assets	1421.16	327.07	105.99	273.65	40.5	65.37	456.28	1512.42
Stock as a % of CA	0.423	0.309	0.442	0.413	0.138	0.437	0.420	0.141
CL as a% of CA	0.866	0.699	0.784	0.763	0.294	0.235	0.518	0.256

CORRELATIONS

		Stock as a % of CA	CL as a% of CA	NWC/Cr.Exp.
Stock as a % of CA	Pearson Correlation	1	.579	-.714(*)
	Sig. (2-tailed)	.	.132	.047
	N	8	8	8
CL as a % Of CA	Pearson Correlation	.579	1	-.984(**)
	Sig. (2-tailed)	.132	.	.000
	N	8	8	8
NWC/ Cr.exp.	Pearson Correlation	-.714(*)	-.984(**)	1
	Sig. (2-tailed)	.047	.000	.
	N	8	8	8

* Correlation is significant at the 0.05 level (2-tailed).

** Correlation is significant at the 0.01 level (2-tailed).

The correlation analysis in table shows that stock as a percent of current assets and Liquidity ratio(X4) has strong negative correlation (-.71)and it is statistically significant at a 5% level. On the other hand, current liabilities as percent of current assets and Liquidity ratio(X4) has very strong negative relations (-.984) and it is even statistically significant even at 1% level.

If we analyse the credit score table, it is revealed that the credit score of the selected companies is mainly influenced by two ratios. Liquidity ratio(X4) and Comfort margin (X6). In-depth analysis of the individual company's credit performance on the basis of above credit score table shows that in case of ACC, liquidity ratio (-31.01) is negative because its current liabilities consists of 86.6% of current assets and at the same time only inventory covers 42.3% of current assets. Another dominating factor of the score depends upon the cumulative profitability (X2) of the company which is moderate (X6=516.70) in case of ACC that helps to improve credit performance but not sufficient enough to get a good rating. Overall credit rating of ACC Company is below average as per our analysis because the positive impact of moderate cumulative profitability ratio is outweighed by the adverse inventory position as well as very high proportion of current liabilities (86.6%) as a percent of current assets. On the contrary in case of Ambuja its liquidity ratio (-2.264) is negative because its current liabilities consists of 78.4% of current assets and at the same time only inventory covers 44.2% of current assets. Still Ambuja managed to achieve nearly highest score (110.1188) due to its high cumulative profitability (X2) ratio (2.669) and capital adequacy ratio (X5) which leads to reach very high comfort margin (864.653). So in case of Ambuja negative impact of liquidity ratio is outweighed by the strong positive influence of profitability ratio. Again in case of Decan (111.18), India (90.109) and Kakatiya (85.99) cement companies; their credit score is very high. As we mentioned earlier, there is a high probability of negative score coming out in case of Liquidity ratio(X4) but current liabilities as a percent of current assets 29.4%, 25.6% and 23.5% respectively for those three companies. These proportions are genuinely low for those three companies in comparison to other companies selected in our study. This leads to very high positive Liquidity ratio(X4) for those three companies. As we see in the correlation table there is strong negative relation between current liabilities as a percent of current assets (-.984), naturally low proportion of current liabilities helps to achieve very high liquidity score for those companies. At the same time the profitability ratio for those companies is also quite impressive that make them good credit rated companies. The strong equity base of those companies leads to a very high comfort margin and helps to increase their credit rating. The same result shows in case of Shree cement also though the fourth ratio (-88.42) came out with strong negative balance as a substantial portion of its current assets consists inventory, still the company able to manage a gentle credit score only because of their strong equity base. . Dalmiya Cement (41.83) is the lowest credit scored Company in our study. Though the liquidity position of the company is not so bad but it's very poor equity base made it a poor credit rated company.

CONCLUSION

At the time of selecting data, for the purpose of calculating Ratios, we mainly concentrate on firm's liquidity, profitability and capital adequacy. From the 'risk description model', scores are calculated individually for each of the companies. The model clearly showed that how the profitability, liquidity and capital adequacy factors influenced the score of individual companies. In case of the companies, where all the factors were good, they obtained high score. On the other hand, the companies where two factors are good but the impact of one bad factor outweighed the influence of good factors.

After collecting information from different sources a creditor firm must make credit analysis of the applicant and determine whether the credit applicant fall above or below the minimum quality standard. The objective of credit analysis is to assess the credit worthiness of the credit applicant. Credit worthiness is concept related with to the positive and negative aspects of granting credit to the applicant. The creditors firm will be particularly interested in applicant's liquidity and ability to pay bill on time. Spreadsheet data for risk description model should thus be based upon profitability, capital adequacy and liquidity together with credit exposure from several standpoints.

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