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CREDITWORTHINESS MEASURES THE EFFICIENCY OF CASH MANAGEMENT-A STUDY ON IT SECTOR

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Abstract *We live in a competitive age of environment. Sound credit management approach can ensure success in this environment. Credit analysis is nothing but risk analysis. Today's competitive environment and changing scenario, every business organization tries to overcome such situation. To cope with malfunctioning in competition, market share and economies in business, many small businesses walk in the path of mergers and acquisitions, and giant organisations take advantage. Now the companies are diversified into variety of products and services. So, to make the organisation profitable, some objective information is required. Now a days as business firm grows or is taken over by large organisation, therefore, the decision making process becomes more complex and centralised and the old traditional methods of credit analysis become misleading. So in this paper we tried to give importance to the effect of creditworthiness on cash management.*

Keyword: *Liquidity, Cash Management, Creditworthiness, Credit Score, Risk Description Model and Efficiency of Cash Management*

INTRODUCTION

Today we live in the age of credit. Nothing can be possible in the world of business, without the liberal extension of credit. It is an indispensable convenience or a necessity in our scheme of living. Use of credit is a complex phenomenon. It is not a recent phenomenon like the disaster of Uttarakhand (India). Use of credit can be found as early as 1300 B.C. in the civilisation of Babylon, Assyria, or Egypt. Today's credit system is the destiny of past's way path of credit system. But, we have wrong conception or negative idea about uses and application of credit. 'Buy now-pay later' or promise to pay in future for immediate goods existed in the earlier agricultural societies.

Credit makes the transaction possible. At present we are using credit for every aspect of our livelihood and also for smooth running of the business. Giving credit means you are taking risk. In order to compete in today's competitive market, credit management helps the organization in its success. Credit analysis is nothing but the risk analysis. So importance should be given to the credit management because today's business world is very complex and the scenario is changing frequently.

In order to cope with the situation like competition, protecting the market share, and securing economized business, increasing numbers of mergers, buy-ones and acquisitions has been witnessed that convert small business into divisions of large corporations and need credit management. The credit analysis of an organisation taken over by another big organization does not match with that of the second one and is also not feasible as well as cost efficient. Practically these problems insist to generate the necessity of credit management.

In most of the cases it is seen that information pertinent to the credit decision making is not available from the credit applicant. Then the companies take decision on the basis of past experience or on the basis of general impression of the customer. Proper evaluation of risk regarding credit granting decision becomes very important before the commencement of sales because once the credit is accepted by creditor organisation of its credit applicant, servicing and loss mitigation technique can control the future losses only to a limited extent. The pros and cons of the situation can affect the decision.

Therefore, the credit analyst must consider the nature and type of the business as well as the applicant in his personal judgement. Now, on what basis the creditor organisation should asses the creditworthiness of its credit applicant? A survey conducted in this respect shows that there is no such fixed or particular or sophisticated basis of credit evaluation, whatever may be the size of the organisation. Some organisations depend on past experience. Some follow the behaviour or impression of customer. The next most popular methods are LAPP method and four 'C's of credit. Whatever may be the basis of evaluation the two major considerations in credit analysis are the applicant's ability to business and his general financial position. Thus, it implies to both financial and non-financial sides of the applicant. The non-financial side of the applicant in credit analysis includes managerial capabilities of the applicant or the activity to

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operate business. In financial aspects, the credit analysts generally judge the liquidity and debt paying ability of the credit applicant. We also know that the data represented by the financial statement do not measure the ability of the manager regarding its business i.e. the soundness or weakness of its financial position.

So, the data required for the credit analysis must be changed or adjusted subject to the requirement. The next step is application of some analytical procedure to the financial figure for judging creditworthiness of applicant. Development of the financial as well as statistical technique is fairly recent and still in process. The generally used financial tools are ratio analysis, sources and application of fund analysis, trend analysis, common size statement, and other analyses determining the financial position of the applicant.

Analysis of credit from financial statement is a complex process. It helps in taking credit decision. Absolute data presented in the financial statement provide 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. In early 1870s mercantile agencies were able to obtain some neatly arranged financial statement from customer/ credit applicants. From that with the pressure of those agencies, the practice of issuing financial statement as a basis for credit extension is developed through the 1870's and 1880's mercantile agencies. It should be remembered that when the seller submits its financial statement first time then it is not possible to determine credit decision. In USA the National Association of Credit from its very inception insisted that credit manager should ask for financial statement of their customer and for this purpose, in 1898 they published standard 'property statement' (blank balance sheet) form for the use of its members. The practice of requesting financial statement from the customer was prevalent but it was not widespread. The credit managers realised the need of their customer's financial statement which is useful for collecting credit information and the customers realised the fact that their suppliers are entitled to ask and receive their financial statement at the time of granting credit. Invaluable information from financial statement can create problems if financial statement is used as source of information. So credit manager demanded accounting data only. But, it is costly for small business. Audited information is also questionable as in small business auditors get much information supplied by the manager 'on trust'. In that way, some concerns are still reluctant to submit copies of their financial statement and reveal the bare minimum only.

REVIEW OF LITERATURE

(1) Alexander Bathory (1986) in his book, 'The Analysis of Credit', developed ratio based models of credit analysis. He opined that the greater the quality and quantity of data at the analyst's disposal, the better the credit opinion. For credit analysis he also suggested eight different ratios. These ratios are profitability, capital adequacy, liquidity, comfort margin, debt capacity, and priority debt service ability. He developed the model in such a way that the accuracy and relevance of the model's findings are directly proportional to the age and quality of the historical data. He argued that the model is also intended as a general diagnostic tool and it can be used by any commercial or industrial sector with the exception of banks, insurance companies or finance sectors.

(2) Nilsen (2002) shows that the percentage is high in accounts payable to the total liability, in particular, for U.S. manufacturing firms, it is about 13%. In this paper it is found that the share of accounts payable in the total liability is about 25% among Taiwan's firms (with the exclusion of financial industry). Such widespread trade credit warrants deeply analyse both its nature and its effects on the economy.

(3) Admati & Pfleiderer (1986) show that a non-discriminating monopolistic seller of information is reluctant to invest in gathering information. Moreover, he will also tend to produce noisy information since the more accurate the information, the faster it is reflected in the securities prices and therefore the less valuable it is for the buyer.

(4) Lizzeri (1999) shows that a monopolistic certifier does not reveal any information since it wishes to attract even the lowest types of firms. In such a case any firm refusing to pay the certifier discloses its low quality. Lizzeri also shows that competition among certifiers can lead to full information revelation.

(5) Amitava Basu (2011) made a study on eight cement companies using the Bathory's risk description model. The model is developed using four years data. In this study data have been collected from secondary sources i.e. The Stock Exchange official Directory of Bombay Stock Exchange and Capitaline data base. In this study the main focus is given to the liquidity, profitability, and capital adequacy. The model also showed that these three ratios influenced the score of individual companies. He also showed that where these factors are good, they obtained high score.

OBJECTIVES OF THE STUDY

Analysis of Credit score is some extent different from other analysis and also difficult. For determining credit analysis we always have to consider the nature and type of business as well as the judgement of the manager. We know that Credit analysis is risk analysis. Traditional methods of credit

analysis are not feasible and its cost is very high. Generally, credit granting decision is based on past experience and behaviour of a customer. But, proper evaluation of risk in case of credit granting decision is very much important before the commencement of sales because if sales are made then nothing can be done by the credit firm other than applying loss mitigation technique for controlling future losses. Good credit rating increases the market share value of the companies. It helps the company to collect funds very cheaply. I also helps the company to manage their cash properly so that excess/unused cash should be utilised in some profitable project/s to enhence profitability of the company. More specifically the objectives of the study are as under,

(1) To calculate the total average score with the help of eight different ratios concentrating on company's liquidity, profitability, and capital adequacy. Such ratios are a) Net profit to Capital employed ratio, b) Net tangible assets (Shareholders fund) to total liabilities (long term + short term debt) ratio, c) Net profit to current liabilities ratio, d) normalised working capital to credit exposure ratio, e) equity to current liability and credit exposure ratio, f) Net assets to credit exposure ratio, g) Net profit and Depreciation to Current Debt ratio.

(2) To compute the credit score (CS) of the selected companies to quantify the efficiency of Cash Management.

(3) To grade the companies on the basis of Credit Scores (CS) so that efficient company regarding to creditworthiness can be judged.

(4) To examine the liquidity or Cash position of the selected companies with the help of Bathory's-'risk description model' so that inefficient companies are traced out.

(5) To assess the degree of relationship between cash as a percentage of current assets and liquidity ratio by using Pearson's simple correlation technique for achieving the level of efficiency of Cash Management.

METHODOLOGY OF THE STUDY

Our study is based on IT sector and for simplicity of the study only five companies have been selected. The data of the selected companies for the period 2002 to 2011 used in this study have been taken from the secondary sources i.e. Capitaline Corporate Database of Capital Market Publishers (I) Ltd. Mumbai.

We used the Bathory's 'risk description model' to evaluate the financial statement of the selected companies during the study period. In actual model the main influencing factors are accumulated profitability and inventory but for our purpose we use the cash flow instead of inventory. Eight different ratios are calculated from the financial statement as stated above. In determination of ratios, emphasis has been given on the firms' liquidity, profitability and capital adequacy. For the purpose of our study five companies, each from five different sectors, are selected, as stated earlier, with the help of purposive sampling procedure. The model is prepared on the basis of ten years data; it will be more predictive and reveals the appropriate creditworthiness of the companies.

For analyzing the date statistical tools like arithmetic mean, percentage etc. and statistical technique like Pearson's simple correlation analysis and statistical test like 't' test have been applied at appropriate places.

Bathory's 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 = Capital Adequacy.
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 find out the ratio showing profitability. It is also known as return on capital employed. Here, net profit means profit after tax but before interest. In this ratio net profit is placed on capital employed for the measurement of profitability of the current year. Second ratio is calculated by placing the net tangible assets on total liabilities. Here, net tangible assets signify the shareholders fund and total liabilities is equal to the long-term debt plus total short-term debt. The second ratio reveals the measurement of cumulative profitability. In this model we consider both the profitability for current year as well as profitability for accumulated periods. In the previous two chapters we used the current ratio and quick ratio as the measure of liquidity so we have not used these in this chapter. These ratios are less impressive in respect of creditworthiness of an organisation. Here, we use the net profit to current liabilities ratio as the indicator of liquidity. Net profit of an organisation generally includes some items additional to current assets such as surplus after accounting for depreciation and extra ordinary items. For current liabilities, we consider the items which are payable within a particular accounting period. Another liquidity ratio i.e. fourth ratio is computed by placing normalized working capital to over credit exposure. And normalised working capital is calculated by deducting the stock from net current

assets (i.e. net working capital).

Usually, in case of quick ratio, we place the current assets less stock over current liabilities. In this case we have already deducted current liabilities from current assets for calculating net current assets. If we place the normalised working capital over current liabilities plus credit exposure, it will portray a wrong picture. So we placed the normalised working capital over credit exposure. This would show how much cover a hard measure of latest liquidity can afford. Normalised working capital can be calculated by deducting hundred percent of stock or less liquid stock like raw materials and WIP in case of a manufacturing company. In case of retail companies the deductable portion may be 25 percent. But in this study we develop the model by deducting 50 percent of stock from net current assets. The amount of credit asked by the customer is termed as credit exposure. In preparing the model we have taken 25 percent of current assets as credit exposure. The third and fourth ratio indicates the short-term debt paying capability of the organisation.

Capital adequacy of the companies is measured by fifth ratio. Capital adequacy of the organisation measures the long-term capital or permanent capital. Generally, long-term capital is not used to meet the short-term obligations of the organisation. Fifth ratio in this model is used in respect of equity stake. In many situations such equity stake can provide the organisation further borrowing powers. Very roughly speaking, if equity is greater than 50 percent of capital employed, further borrowing might reasonably be represented by the difference between actual level of equity to capital employed and 50 percent. In calculating the ratio, credit exposure is added with current liabilities to provide the most serve total of firm's obligation. In the sixth ratio net assets are placed over credit exposure. In the model it is termed as comfort margin. In the fourth ratio, normalised working capital is placed over credit exposure. In most of the cases, it produces comparatively high values and probably negative. As we know that stock is a very substantial part of current assets and we deduct stock from net current assets, there is a very high probability of a negative figure. It is expected that net assets will provide a significantly large amount of cover for small credit exposure. The resulting ratio, therefore, should provide high positive scores and it affects the scores in our model to compensate for the high negative value provide by the normalised working capital to credit exposure ratio.

Total assets are placed over total liability plus credit exposure in the seventh ratio. It signifies the debt capacity of the organisation. Here total liabilities include both short-term liabilities and long-term liabilities. In the ratio, total liability also includes the credit exposure. It indicates the safety margin taking into consideration all known obligations including the credit asked by the customer. Such a measurement would give a rough idea of break-up value of the company where all obligations, including our original exposure to crystallize simultaneously. The ratio then gives an indication of safety margin and debt capacity both of which are functions of liquidity, capital adequacy and profitability.

Finally, in the eighth ratio the treatment of priority debt items is measured by contrasting current debt with financial flow that will be servicing it. Computing gross cash flow from modified accounting information will be difficult without a detailed profit and loss account showing depreciation. So, gross cash flow is obtained by adding the depreciation with net profits. Simply, the ratio is calculated by placing the financial flow (gross cash flow) over current debt. Earlier we discussed how to calculate gross cash flow. Generally, from experience it is observed that all the current liabilities are not paid at a time, so in calculating current debt in this model we consider only 20 percent of company's current liabilities. It shows the treatment of priority debt items and it is matched with that amount which will be used to servicing it.

In our model eight ratios are taken into consideration by giving equal weight to them.

The resulting formula would be denoted as –

$CS = L^* \sum xi$

CS = Credit Scores

Xi = Variables (I = 1 to 8)

L = Constant Multiplier = 100/8 = 0.125

The developed model is thus = $0.125^*\sum xi$

Risk Description Model

Here, NWC = Normalised Working Capital, NTA = Net Tangible Assets,

E = Equity Shareholders fund, CL = Current Liabilities, TL = Total Liabilities

CR. EXPOSU = Credit Exposure (0.25% of CA), CD = Current Debt

D = Depreciation, NP = Net Profit, NA = Net Assets, CE = Capital Employed. In this study we measures the effectiveness of Cash Management with the help of Credit Score or Creditworthiness.

FINDINGS OF THE STUDY

From the ratios calculated in this study we can easily judge the firm's liquidity, profitability, and capital adequacy. From the 'risk description model', credit scores are calculated individually for each of the selected companies under study. Tables are prepared consisting of different ratios to calculate scores. The model clearly showed that how the liquidity,

profitability, and capital adequacy factors influenced the scores of individual companies. From the companies selected in this study, where all the factors are good, they obtained high score. Contrary, the companies where two factors are good, the impact of one or two bad factor/factors outweighed the influence of good factors.

Earlier we con-faced that we used the Barthory's risk description model which is self-explanatory in nature. In this case our objective is to gives an idea to the credit analyst, about extracting best result of using financial statement.

From Table 1 it is observed that in IT sector the average score of ratio x_1, x_2, x_3, x_4, x_5, x_6, x_7, and $x_8$in Philips India Ltd. (Philips)are 0.1879, 0.9567, 0.229, 65.607, 1.1326, 259.22, 2.0051, and 1.7122 respectively, out of which ratio x_6 registered the highest score i.e. 259.22 and ratio x_1 is the lowest which is 0.1879 score. The total of average score is 331.05. The credit score of Philips India Ltd. is 41.382.

It is found from Table 2 that the average score of ratios x_1, x_2, x_3, x_4, x_5, x_6, x_7 and x_8 in Asian Electronics Ltd.(Asian) are 0.0425, 4.1337, 0.4173, 262.02, 4.6422, 268.64, 7.56 and 3.4261 respectively,out of which ratio x_6 is the highest, whosescore is 268.64 whereas ratio x_1 is the lowest by scoring 0.0425. The total of average score is 550.9. The credit score of Asian Electronics Ltd. is 68.86.

It is revealed from Table 3 that the average score of ratio x_1, x_2, x_3, x_4, x_5, x_6, x_7 and x_8 in Wipro Ltd. (Wipro) are 0.2553, 2.8177, 1.5202, 182.82, 5.1936, 550.28, 4.1129 and 1.7369 respectively. The highest score is registered by ratio x_6 (550.28) while ratio x_1 (0.2553) is the lowest in Wipro. The total of average score is 748.73. The credit score of Wipro is 93.592.

From Table 4 it is depicted that the average score of ratio x_1, x_2, x_3, x_4, x_5, x_6, x_7 and x_8 in CMC Ltd. (CMC) are 0.2345, 0.8938, 0.3456, 120.74, 1.2437, 236.33, 2.0051 and 1.9353 respectively. Out of which ratio x_6 (236.33) is the highest and ratio x_1 (0.2345) is the lowest. The total average score is 363.73. The credit score of CMC Ltd is 45.466.

Table 5 showed that the average scores of ratio x_1, x_2, x_3, x_4, x_5, x_6, x_7 and x_8 in Videocon Group (Videocon) are 0.0913, 2.8602, 0.5376, 210.54, 2.9976, 347.39, 6.4592 and 3.4714 respectively. The highest score is revealed by ratio x_6 which is 347.39 and the lowest score is registered by ratio x_1 which is 0.0913. The total average score is 574.35. The credit score of Videocon is 71.794.

Hence, in IT sector from Tables 1, 2, 3, 4 and 5 we can conclude that the cumulative profitability condition is good in Asian whereas regarding current profitability condition Wipro is the best. On the other hand, from the view point of debt paying capacity of Asian is the best. The score revealed that the companies selected in this study, highest credit score obtained by Wipro and it followed by Videocon, Asian, CMC and Philips in that order. The score plotted in Fig. 1 revealed that under IT sector highest credit score obtained by Wipro and it followed by Videocon, Asian, CMC and Philips in that order.

Ranking on the basis of Credit score has been done in Table 6. In ranking Wipro captured the first position in IT sector, followed by Videocon Group, Asian Electronics Ltd. CMC Ltd. and Philips India Ltd.

From the vigorous analysis of the individual company's credit performance on the basis of credit score table indicates that liquidity ratio (x_4) i.e. the ratio of Normalised Working Capital to Credit Exposure is highly affected by percentage of Current Liabilities to Current Assets and percentage of Cash to Current Assets.

It is observed from Table 7 that in IT sector the liquidity ratio (x_4) as per our model in Philips India Ltd. is 66.547 whereas its current liabilities consist 60.31 % of current assets and at the same time cash covers 25.61% of current assets.

The liquidity ratio of Asian Electronics Ltd. is 262.01 whereas its current liabilities consist only 17.90% of current assets and at the same time cash occupied only 2.41% of current assets.

The liquidity ratio (x_4) in Wipro Ltd. is 182.81 while its current liabilities consist of 30.58% of current assets and at the same time cash occupied 22.06 % of current assets.

The liquidity ratio (x_4) in CMC Ltd. is 120.74 while its current liabilities consist of 47.12 % of current assets and at the same time cash holds 16.75% of current assets.

The liquidity ratio (x_4) in Videocon Group is 210.54 whereas its current liabilities consist of only 30.90% current assets and at the same time cash occupied only 10.25% of current assets.

Hence, Table7 revealed that the liquidity ratio of Asian Electronics Ltd. and Videocon Group is good due to the reason that in these companies' current liabilities consist less percent of current assets and also cash occupied very nominal portion.

The Correlation Coefficient is the measurement of degree of association between two variables. A positive value of 'r' indicated high values of one variable are generally associated with the high values of other variables and low values with low values. In this study multiple correlation technique among Cash as a % of CA, CL as a % of CA and NWC/ Credit Exposure has been applied. To test the significance of such coefficient, 't' test has been used.

Table 8 depicted that in IT sector the correlation coefficient between cash as a percent of current assets and liquidity ratio (x_4) revealed the negative correlation which is (-) 0.858, statistically not significant. On the other hand the correlation coefficient between current liabilities as a percent of current

assets and liquidity ratio (x_4) signified very high negative relation (-) 0.990 and it is statistically significant at 1% level.

It follows the theoretical proposition that higher the portion of current liabilities consist of current assets, lower the liquidity position of the concern and vice-versa. The correlation analysis in Table 8 shows that cash as a percent of current assets and current liabilities as a percent of current assets has a high positive correlation (0.796) which is statistically insignificant.

CONCLUSION

Liquidity, profitability and Capital adequacy is our prime focus in this study along with measurement of efficiency of Cash Management. With the help of risk description model we find out the scores individually for each of the selected companies under study. The model clearly revealed that how the liquidity, profitability and capital adequacy factors influenced the score of individual companies. The companies, for which all the factors are good, obtained the high score. On the other hand, the companies where two factors are good but one bad factor outweighed the influence of good factors.

The credit granting company collects different types of information to make credit analysis of the applicant and determine whether the credit applicant fall above or below the minimum quality standard. The prime objective of credit analysis is to judge the creditworthiness of the credit applicant.

Creditworthiness indicates the positive and negative acceptance of granting credit to the applicant. Generally, creditor companies are very much interested to know the liquidity position of the applicant and also the short term debt paying capability of the company. Therefore, risk description model is developed in such a way that profitability, capital adequacy, liquidity are taken together with credit exposure from different stands point.

Creditworthiness of the company is measured by its credit score and creditworthiness indicates the level of efficiency maintained by the Cash Management / liquidity management of the company. Higher CS signifies better creditworthiness and vice-versa. Higher creditworthiness gives the opportunity to the company for late payment and late payment increases the deferral period. It again decreases the cash conversion cycle. Lower CCC represents less requirement of working capital.

So liquid cash are not blocked in other types of current assets, it can invest in some profitable project to enhance profit. Hence good creditworthiness indirectly increases the profitability of the organisation. From another view point, creditworthiness helps the company in achieving higher debtors' turnover. As the credit manager takes the decision of granting credit before the commencement of sales then it helps the organisation to take decision regarding its future investment projects. It helps the management to know how and when money should be collected and such information protect the company to borrow funds for investing future profitable projects. It also minimises the CCC of the organisation which indirectly increases the profit of the organisation.

So we can conclude that ratio x_4 and ratio x_6 helped Wipro Ltd. to increase its credit score. It also shows that the liquidity position and comfort margin of Wipro is best among other companies selected in this study. We can also conclude that Wipro Ltd. managed its cash position in a better way than the other companies in this sector. This signifies that the need of working capital of Wipro Ltd. is lower than that of other companies. From overall point of view correlation between current liabilities and liquidity supported the theoretical proposition, whereas cash as % of current assets, negatively related with current liabilities as % of current assets.

Table 1: Bathory's Risk Description Model with Ratio Measurement(Philips India Ltd.)

RATIOS	DESCRIPTION	AVG. SCORES
Ratio X1	NP/CE	0.1879
Ratio X2	NTA/TL	0.9567
Ratio X3	NP/CL	0.229
Ratio X4	NWC/CR.EXPOSU	65.607
Ratio X5	E/CL+CR.EXPOSU	1.1326
Ratio X6	NA/CR.EXPOSU	259.22
Ratio X7	TA/TL+CR.EXPOSU	2.0051
Ratio X8	NP+D/CD	1.7122
TOTAL AVG SCORES		331.05
CREDIT SCORES(CS)		41.382

Table 2: Bathory's Risk Description Model with Ratio Measurement(Asian Electronics Ltd.)

RATIOS	DESCRIPTION	AVG SCORES
Ratio X1	NP/CE	0.042
Ratio X2	NTA/TL	4.134
Ratio X3	NP/CL	0.417
Ratio X4	NWC/CR.EXPOSU	262
Ratio X5	E/CL+CR.EXPOSU	4.642
Ratio X6	NA/CR.EXPOSU	268.6
Ratio X7	TA/TL+CR.EXPOSU	7.56
X8	NP+D/CD	3.426
TOTAL AVG SCORES		550.9
CREDIT SCORES(CS)		68.86

Table 3: Bathory's Risk Description Model with Ratio Measurement(CMC Ltd.)

RATIOS	DESCRIPTION	AVG SCORES
Ratio X1	NP/CE	0.2553
Ratio X2	NTA/TL	2.8177
Ratio X3	NP/CL	1.5202
Ratio X4	NWC/CR.EXPOSU	182.82
Ratio X5	E/CL+CR.EXPOSU	5.1936
Ratio X6	NA/CR.EXPOSU	550.28
Ratio X7	TA/TL+CR.EXPOSU	4.1129
Ratio X8	NP+D/CD	1.7369
TOTAL AVG SCORES		748.73
CREDIT SCORES(CS)		93.592

Table 4: Bathory's Risk Description Model with Ratio Measurement(Videocon Group)

RATIOS	DESCRIPTION	AVG SCORES
Ratio X1	NP/CE	0.2345
Ratio X2	NTA/TL	0.8938
Ratio X3	NP/CL	0.3456
Ratio X4	NWC/CR.EXPOSU	120.74
Ratio X5	E/CL+CR.EXPOSU	1.2437
Ratio X6	NA/CR.EXPOSU	236.33
Ratio X7	TA/TL+CR.EXPOSU	2.0051
Ratio X8	NP+D/CD	1.9353
TOTAL AVG SCORES		363.73
CREDIT SCORES(CS)		45.466

Table 5: Risk Description Model-Ratio Measurement(Videocon)

RATIOS	DESCRIPTION	AVG SCORES
Ratio X1	NP/CE	0.0913
Ratio X2	NTA/TL	2.8602
Ratio X3	NP/CL	0.5376
Ratio X4	NWC/CR.EXPOSU	210.54
Ratio X5	E/CL+CR.EXPOSU	2.9976
Ratio X6	NA/CR.EXPOSU	347.39
Ratio X7	TA/TL+CR.EXPOSU	6.4592
Ratio X8	NP+D/CD	3.4714
TOTAL AVG SCORES		574.35
CREDIT SCORES(CS)		71.794

Table 6: Table Showing Ranking on the basis of Credit Score(CS) of the Selected Companies of IT Sector

RATIO/COMPANIES	Philips India Ltd.	Asian Electronics Ltd.	Wipro Ltd.	CMC Ltd.	Videocon Group
Ratio X1	0.188	0.042	0.255	0.234	0.091
Ratio X2	0.957	4.134	2.818	0.894	2.86
Ratio X3	0.229	0.417	1.52	0.346	0.538
Ratio X4	65.61	262	182.8	120.7	210.5
Ratio X5	1.133	4.642	5.194	1.244	2.998
Ratio X6	259.2	268.6	550.3	236.3	347.4
Ratio X7	2.005	7.56	4.113	2.005	6.459
Ratio X8	1.712	3.426	1.737	1.935	3.471
TOTAL AVG SCORES	331.1	550.9	748.7	363.7	574.4
CREDIT SCORES(CS)	41.38	68.86	93.59	45.47	71.79
RANK	5	3	1	4	2

Source: Compiled and computed from 'Capitaline Corporate Database' of Capital Market Publishers (I) Ltd., Mumbai.

Table 7: Table Showing Analysis of Liquidity Position of IT Sector

Companies	CA	CL	AVG CASH % OF CA	CL % OF CA	NWC/CREDIT EXPOSURE
Philips India Ltd.	970.02	536.43	0.256094	0.603069318	66.54718374
Asian Electronics Ltd.	299.914	61.914	0.024133	0.179036782	262.0151972
Wipro Ltd.	7958.161	2515.2	0.220652	0.305813811	182.8154209
CMC Ltd.	474.209	221.34	0.167573	0.471227196	120.7437469
Videocon Group	1732.431	566.69	0.10255	0.309079718	210.5429216

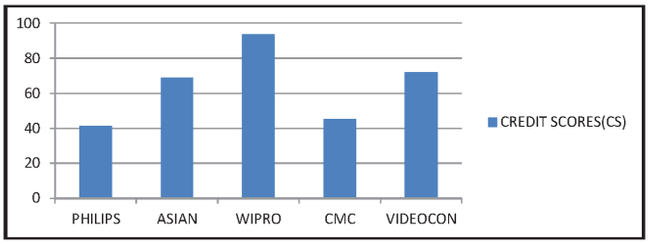
Table 8: Table Showing Analysis of Correlation of the Selected Companies of IT Sector

		CASH OF CA	CL OF CA	NWC OF
CASH OF CA	Pearson Correlation	1	.796	-.858
	Sig. (2-tailed)		.107	.063
	N	5	5	5
CL OF CA	Pearson Correlation	.796	1	-.990
	Sig. (2-tailed)	.107		.001
	N	5	5	5
NWC OF CREXP	Pearson Correlation	–.858	-.990	1
	Sig. (2-tailed)	.063	.001	5
	N	5	5	

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

RISK DESCRIPTION MODEL OF THE SELECTED COMPANIES OF IT SECTOR

Fig. 1: Credit Scores(CS)



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According to Sec. 211 of the Indian Income Tax Act, 1961, *Advance tax is payable in three equal installments on June 15, Sept, 15 and December 15* of the financial year.

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