**COMPANIES' OPINION ON CREDIT RATING AGENCIES' SERVICES** 

(With special reference to selected companies in Tamil Nadu)

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Abstract: Credit rating agencies (CRAs) play a key role in financial markets by helping to reduce the informative asymmetry between lenders and investors, on one side, and issuers on the other side, about the credit worthiness of companies or countries. CRAs' role has expanded with financial globalization and has received an additional boost from Based which incorporates the ratings of CRAs into the rules for setting weights for credit risk. Ratings trend to be sticky, lagging markets, and overreact when they do change. This overreaction may have aggravated financial crises in the recent past, contributing to financial instability and cross-country contagion. Promotion of competition may require policy action at national and international level to encourage the establishment of new agencies and to channel business generated by new regulatory requirements in their direction. Finally, we zoom in on the question of whether and how CRAs should be regulated given their function, focusing on recent trends and opinion, awareness, factors of selected companies and debt instrument holders in Tamil Nadu.

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## **INTRODUCTION**

Generally companies start with equity capital which are contributed by the owners and is sine quo none of every form of business. But an equity fund always does not suffice to meet all the financial requirements of business. As a result, corporate concerns usually resort to borrowings. Moreover, for growth, modernization, expansion and diversification a company has to borrow funds from the external sources. Hence to meet vast and varied financial needs, the corporate undertakings always look upon borrowings, otherwise known as debt, a potent source of finance.

In recent times, debt funds occupy an overwhelming position in the total financial structure of corporate units, specifically in case of public limited companies in the private corporate sector. Various studies have also corroborated that borrowings have been playing an important role in the financing of the private corporate sector in India. Thus, the role of debt funds can hardly be over emphasized as a major source of finance for the private sector companies in India. A debt fund in its broadest sense encompasses debentures which are raised from debentures holders, funds raised from commercial banks, specialized financial institutions and in the form of public deposits.

Finance plays a vital role in every type and form of business it helps in conversion of accumulated funds in the productive manner. Moreover, it constituted the very base upon which the superstructure of modem corporate enterprise is erected. Adequate and timely finance is necessary for the success of business enterprises starting from promotion and commencement to growth and modernization. Hence, to operate successfully and efficiently a company should choose the appropriated source of finance and acquire adequate funds simultaneously.

Funds sources for the corporate sector are numerous. Each corporation raises its funds taking into account its level and nature of business and condition of capital and money market. Generally industries employ two types of capital fixed and current. The funds which are required to invest in fixed as well as current assets are obtained by issue of shares and debentures to public, by creating reverse through pouching back of profits, borrowing from commercial banks commercial banks in the form of loans, raising deposits from the public, receiving term loans from the financial institutions like IFCI, IDBI, SFC's, IDCs, ICICI, IRBI, etc. Again, accumulation of accounts payable in respect of current liability, accrued taxes and credit obtained from supplier of raw materials and stores which is otherwise known as trade credit, contemplates main sources of short term funds.

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Generally the fund sources stated above are divided into two, (a) internal, and (b) external. Internal finance represents:

- Paid-up capital
- Reserve and surpluses
- Provisions for depreciation
- Investment allowance reserve
- Sale of assets, etc.
- The external finance includes:
- Funds obtained through new capital issues like stocks and debentures
- Public deposits
- Borrowings from banks
- Borrowing from national and state level financial institutions
- Government assistance
- Trade dues and other current liabilities.

Taking into account their needs and accessibility to capital market, corporations choose their sources of capital. Some may draw from a few sources whereas some may draw from all the above sources. However, this depends upon various factors such as nature of industry, status of the specific firms, age, size and geographical coverage, conditions of capital market, Government policies, etc. However, under Indian conditions the availability of finance from a particular source plays an overriding role.

The, external source may be long term and short term. The long term sources include owners' fund and debt funds whereas the short term sources are only outsiders' funds. Ownership funds can be obtained from the issue of equity and preference shares. Equity shareholders are residual owners whose claims of income arises only after the claims of creditors and preference share holders. Preference share is a combination of an ordinary share and a debenture.

The debt finance may be long term or short term. The long term debt funds include debentures, term finances from financial institutions and public deposits. Debenture is an acknowledgement of debt which company may issue specifying the terms of repayment. Debentures finance has an important and significant role in the Indian capital market. However, until recently, it was quite unpopular as an instrument of long term source. Public deposits as a source also have played an important role though there is certain statutory restriction or using this source.

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Finance is the life blood of industry without which the wheels of modern industrial system cannot be greased. Generally, companies come into being with owners' funds. However, with the passage of time these funds ultimately do not suffice to meet the vast and varied needs of the company sector since there has been radical change in the investment pattern of modern businesses as compared to the earlier set up. As a result, corporate sector have to resort to borrowing for its growth of modernization, expansion and diversification. However, the private corporate sector used to have thick equity in earlier years indicating more dependence on owner's fund. But since late 1970s, this sector increased the borrowing realizing the necessity for increasing the debt portion. No doubt, it is good to raise more debt to meet the financial need, but the corporate sector need to take utmost care in using it. Otherwise, heavy burden of debt may lead to financial risk and ultimately bring in disaster.

Debt as source of finance may be long term and short term. The long term sources include debentures, public deposits, term finance by commercial banks, and institutional finance and the short term sources include trade credit, short term finance by commercial banks, accruals, accounts receivables and funds from miscellaneous sources. However, there is no clear cut demarcation between the two sources in the Indian environment. As the short term sources are renewed again and again and kept for a long period, they qualify themselves to be termed as long term source.

Corporate firms generally use debt funds extensively as the owner's fund does not suffice to meet their needs. Debt has played an important role in the Indian corporate sector more specifically in the private sector. Both financial and non financial point of view debt is advantageous to business concerns. Debt is financially better because it is cheaper and non-financially it does not disturb controlling power and provide flexibility.

Corporations generally raise debt funds in the forms of debentures, public deposits, finance from commercial banks and financial institutions and as trade credit and accruals. Debenture is an important source of debt finance, It has played a vital role in the Indian economy. Until recently this was quite an unpopular source. However, in very recent years this is gaining popularity.

A public deposit is a significant source of finance for the corporate sector in India. After mid-70s, it has gained much popularity. Companies are attracted on such deposits because of its easy availability and other financial and non-financial benefits. However, of late, the

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popularity of public deposits has declined due to statutory restrictions regarding company deposits.

The credit rating helps the corporate to mobilize their debt at cheaper cost within a short period of time. The corporate also gain the advantage of popularizing their name with the help of credit rating agencies services.

Funds mobilization is one of the important activities for the incorporation and growth of companies. Of the decisions of the board of directors, financial decisions relating to fund mobilization are most crucial decisions. Since these decisions involve huge inflow of funds, the management has to take into account a number of factors which affect these decisions. Obtaining credit rating from reputed agencies is one of the important activities in the process of funds mobilisation. It is the most important activity which affects both the procurement and utilization function of finance.

Credit ratings' impact on funds mobilization cannot be ruled out because the investing public gauges the efficiency of investments only based on credit ratings and the securities made by the company. The decisions for obtaining credit rating are the managerial decision taken by the top level management. In order to identify the credit rating agencies services the researcher has administered, two interview schedule, one for the company and the other for the debt instrument holders. The researcher surveyed 59 companies grouped under seven categories namely automobile, cement, chemical, engineering, finance, textiles, and miscellaneous industries. The researcher was directed by the MDs of the companies surveyed to contact the company finance directors/company secretaries for getting the necessary data on credit rating.

## **OBJECTIVES OF THE STUDY**

The Study has been undertaken with the following objectives.

- To identify the major factors influencing rating of debt instruments and highlights the services of Indian Credit Rating Agencies.
- To analyze the opinion of respondents companies to services of credit rating agencies.

## **HYPOTHESES**

- 1. Opinion on credit rating does not influence the debt instrument holders in their investment pattern.
- 2. There is no association between highly rated instruments and safety on investments.

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## **METHODOLOGY**

In view of considerable data - from sample survey and secondary sources - collected and presented in this research report, descriptive research is considered to be the most appropriate for the present study. The study has been based on sample survey method. Hence, it has been found to be descriptive and analytical. The research problem and interview schedules have been formulated and framed accordingly. The suggestions of the study emerge from the inferences drawn form the sample survey of manufacturing companies and NBFCs registered with RBI in Tamil Nadu State and the opinion of sample debt instrument holders.

#### PRIMARY DATA

The present study is an empirical one based on sample survey method. First hand data were collected from the field through two different interview schedules and observation. While one interview schedule was administered to manufacturing companies and NBFCs about their opinion on credit rating and other information, the other interview schedule was administered to debt instrument holders of manufacturing companies and NBFCs to gather their opinion and benefits derived from credit rating. Discussions were held with knowledgeable persons such as experts in financial services, office bearers of RBI and company secretaries and other officials in the company and academicians for designing the interview schedule

#### **SECONDARY DATA**

The study depended also on the secondary data available on credit rating. The secondary data were collected from standard text books, of related topic, journals of repute, published documents, reports, records and booklet issued and maintained by Indian credit rating agencies and RBI Chennai.

### **SAMPLING DESIGN**

To obtain Primary Data, two surveys were undertaken in the study area. In first, complete survey of 59 companies were contacted. Among the 59 respondent units, 43 respondent units are manufacturing companies and the remaining 16 units are non-banking financial companies. All the 43 manufacturing units are listed with any one of the Recognized Stock Exchanges in India. And all the 16 NBFCs are registered with Reserve Bank of India. In another sample survey, 400 debt instruments holders and depositors of NBFC's were contacted. Both the surveys were conducted during December 2002 to February 2004.ssThe

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present chapter, namely, companies' opinion on the credit rating agencies' services-analysis I presents the opinion of all the 59 companies financial executives which are discussed below. Ghe interview schedule administered to the company executives is divided in to three sections. While Section A elicits information about the company like name, date of incorporation, capital structure products, capital issues and the major credit rating objectives, Section B deals with the credit rating agencies' formalities taken by the companies. Section C conducts an opinion survey about the credit rating. It contains 16 Questions about the executives' opinion on various statements relating to credit rating on a Five point rating scale. The data relating to the company profile is presented in the following paragraphs. The data have been compiled, classified, tabulated and analyzed with the help of SPSS package.

Different categories of companies have been considered for the purpose of study. The following table depicts the various categories of companies from which the data have been obtained.

**TABLE - 7.1 CATEGORIES OF SAMPLE UNITS** 

Sample Units	No. of Units
1. Automobile	8
2. Cement	5
3. Chemicals	9
4. Engineering	4
5. Finance	16
6. Textiles	6
7. Miscellaneous	11

**Source**: Primary Data

The above table has brought to light that among 59 sample units, 43 are manufacturing companies and 16 are non-banking financial companies. Among the 43 industries, 19% belong to automobile industries, 12% belong to cement industries, 21% belong to chemicals, 9% to Engineering, 14% belong to textiles and the remaining 25% belong to other industries. However, all the 43 companies are public limited companies and listed with any one of the recognised stock exchanges in India. All the 16 non banking financial companies are registered with Reserve Bank of India.

An important factor for every corporate entity is authorised share capital. It represents maximum amount of capital that can be raised by the company. It indicates the fund raising capacity of a company. It is one of the important information to be mentioned in all legal

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documents and forms to be submitted to Registrar of Companies and Governments. The authorized share capital of the sample companies are portrayed in the following Table.

### MODEL FOR THE CREDIT RATING

Various rating agencies are awarding credit ratings for instruments taking into account certain factors. The objective of the present chapter is to develop a model for testing the efficiency of the credit rating done by those agencies. This model is developed by considering ten factors which are taken into account to categories the rating classes.

The sample consists of 59 companies rated by various agencies namely, CRISIL, ICRA, and CARE. The data about these companies for different facts have been collected through secondary sources. Among the sampled companies, 16 are Non- Banking Financial Companies and others, are manufacturing companies. Hence, for the purpose of building up a model, all the 59 companies are classified into NBFC and manufacturing units.

#### **Industries**

For the debentures of a company credit rating from AAA to A are given by the agency. In this study, for the 43 manufacturing companies, three different rating classes are given. For the purpose of analysis, a code (numeric) is allotted for each rating code. The following Table shows the rating class, rating code, and the number of companies come under each class.

**TABLE - 7.9 RATING CODES AND DISTRIBUTION OF COMPANIES** 

Rating Class	Rating Code	No. of Companies
AAA	3	15
AA	2	16
А	1	12
Total		43

**Source:** Primary Data

In order to fit a model and check the efficiency of the credit rating appropriate financial ratios are considered. These factors influence changes in ratings. They are,

X <sub>1</sub>	Return on capital employed	
$X_2$	Operating profit margin	
<b>X</b> <sub>3</sub>	Operating profit to total profit	
X <sub>4</sub>	Cash actual ratio	
<b>X</b> <sub>5</sub>	Financial/ Interest coverage ratio	
<b>X</b> <sub>6</sub>	Industry growth rate	
X <sub>7</sub>	Normalised current ratio	
X <sub>8</sub>	Debt equity ratio	
<b>X</b> <sub>9</sub>	Owners fund as percentage to total source	
X <sub>10</sub>	Long term debt/ equity	

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The credit rating codes are taken as y.

The above mentioned measures are obtained using specific formula. They are

$$x_{1} = \frac{\text{Pr ofit before interest and taxes}}{(\text{Total Debt} + \text{Net Worth})} \times 100$$

$$x_{2} = \frac{\text{Operating Pr ofit}}{\text{Net Sales}}$$

$$x_{3} = \frac{\text{Operating Pr ofit}}{\text{Pr ofit after Tax}}$$

$$x_{4} = \frac{\text{Net Cash accounts}}{\text{Net Sales}}$$

$$x_{5} = \frac{\text{Operating Profit before Interest at Tax}}{\text{Interest and Finance charges}}$$

$$x_{6} = \frac{\text{Total Growth rates of all Industries}}{\text{No. of such Industries}}$$

$$x_{7} = \text{Current ratio of the company } \times \text{Current ratio of Industry}$$

$$x_{8} = \text{Debt Equity ratio of the company } \times \text{Debt Equity ratio of industry}$$

$$x_{9} = \frac{\text{Assets}}{\text{Liabilities}}$$

$$x_{10} = \frac{\text{External Equities}}{\text{Internal Equities}}$$

To study the effect of one ratio on the each of the other, the Karl Pearson's coefficient of correlation is used and computed pairwise. Then the inter correlation table has been prepared that reveals the coefficient of correlation.

TABLE-7.10 INTER CORRELATION CO- EFFICIENT FOR MANUFACTURING COMPANIES

	X <sub>1</sub>	X <sub>2</sub>	X <sub>3</sub>	X <sub>4</sub>	<b>X</b> <sub>5</sub>	<b>X</b> <sub>6</sub>	X <sub>7</sub>	<b>X</b> <sub>8</sub>	<b>X</b> <sub>9</sub>	X <sub>10</sub>	Υ
$X_1$	1										
$X_2$	.178	1									
$X_3$	.053	.293	1								
$X_4$	225	153	.034	1							
<b>X</b> <sub>5</sub>	.484"	.353*	.194	449"	1						
$X_6$	.056	052	.074	.011	.075	1					
X <sub>7</sub>	095	.161	.265	162	.055	104	1				
X <sub>8</sub>	297	104	.001	.454"	591"	099	.145	1			
<b>X</b> <sub>9</sub>	.136	.072	.150	331"	.699"	.101	003	744"	1		
X <sub>10</sub>	281	.054	.006	.483"	583"	053	.002	.880"	749"	1	
Υ	.177	109	.390	.124	110	037	.036	142	023	075	1

<sup>\*\*</sup> Correlation is significant at the 0.01 level (2-tailed).

Source: Computed Data

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<sup>\*</sup> Correlation is significant at the 0.05 level (2-tailed).

The above table reveals that the interest coverage ratio (x<sub>5</sub>) is highly significantly correlated with return on capital employed  $(x_1)$  positively, cash accrual ratio  $(x_4)$  negatively, Debit equity ratio (x<sub>8</sub>) negatively, owner's funds as percentage to total ratio (x<sub>9</sub>) positively, Long term debt  $(x_{10})$  negatively and operating profit margin  $(x_2)$  positively. This means the interest coverage is a significant financial ratio since six of other financial factors are influenced or those six factors influence interest coverage ratio. The Interest coverage ratio and return on capital move in the same direction i.e. both factors increase or decrease when interest coverage ratio move in the same direction the operating profit margins also moves in the same direction with interest coverage ratio.

The cash accrual ratio (x<sub>4</sub>) negatively is another financial measure highly significantly correlated with debt equity ratio (x<sub>8</sub>) positively owners fund as % to total source (x<sub>9</sub>) negatively and long term debt  $(x_{10})$  positively. This is the cash accrual ratio increases are decreases along with debt ratio as well as long term debt but owner's fund has percentage to total source moves in opposite direction with cash accrual.

The debt equity ratio (x<sub>8</sub>) is positively correlated and highly significant with owner's fund as % to total source (x<sub>9</sub>) as well as and long term debt (x10). Similarly the owners fund as % to total source  $(x_9)$  is highly negatively significant with long term debt  $(x_{10})$ . The financial factors' debt equity ratio increases or decreases as and when long term debt increases or decreases both factors move in the same direction. Similarly, the financial factors debt equity ratio and owners fund as % to total source move in the same direction but the long term debt negatively correlated with owners fund and percentage to total source.

# **CREDIT RATING MODEL**

To develop a model for the relationship connecting the measures of  $x_1 ..., x_{10}$ , the factory is taken as the dependent variable and other variables as independent. Such a model is formulated and checked its validity whether the actual credit ratings match with the expected (estimated) credit ratings due to the model. In such a case, the model can be used as a tool to evolve and estimate the credit rating in future.

A linear model is assumed since most of the factors are linearly and significantly correlated with one another.

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The linear model is taken as

$$Y = a_0 + a_1 x_1 + a_2 x_2 + ... + a_{10} x_{10}$$
 ......(1)

Where  $a_0$ ,  $a_1$ , ...  $a_{10}$  are unknown coefficients to be obtained.

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For the above model; Fisher's discriminant functions are obtained since y takes 1, 2 or 3. Thus, considering three different populations with the same variance covariance matrix, three linear equations are obtained with the help of SPSS package. The values of the coefficients for the respective variables are given in the following table.

TABLE No. 7.11 COEFFICIENTS OF FISHER'S LINEAR DISCRIMINANT FUNCTIONS FOR MANUFACTURING COMPANIES

	Υ				
	1.00	2.00	3.00		
X <sub>1</sub>	0.447	0.519	0.580		
X <sub>2</sub>	0.451	0.331	0.288		
X <sub>3</sub>	-0.01697	-0.01262	-0.003202		
X <sub>4</sub>	0.135	0.344	0.339		
X <sub>5</sub>	-1.251	-1.854	-2.035		
X <sub>6</sub>	0.160	0.164	0.144		
X <sub>7</sub>	3.172	3.793	3.786		
X <sub>8</sub>	8.285	6.563	4.791		
<b>X</b> <sub>9</sub>	0.671	0.660	0.632		
X <sub>10</sub>	6.035	5.039	7.498		
(Constant)	-42.821	-40.341	-39.980		

**Source:** Computed Data

Using the above model, the expected rating for each company is estimated. The linear equation for rating 1 is used for 12 companies which were rated 1, the equation for rating 2 is used for 16 companies which were actually rated 2 and for the other 15 companies the linear equation for rating 3 is used. The classified companies are tabulated with their actual ratings and estimated ratings and given in the appendix. Out of 43 sample companies, 13 do not match between actual rating and estimated rating. That is, 70% of the rating cases by the various agencies match with the expected rating of the linear model. Only in three cases, the difference is 2 rating codes either way. The expected ratings of ten companies vary by 1 either way. Generally, 80% or more of matching is considered to be a high discriminatory power of the rating model. Here, the percentage of cases matching with the actual rating is 70%.

In order to increase the efficiency of the model, an improved model is constructed by dropping some of the highly correlated variables. It is already seen from the Table No.... that the variables >c», xs and x\$ are highly significantly correlated with other variables. The new Fisher's discriminant functions are obtained and presented their coefficients in the following table

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TABLE - 7.12 COEFFICIENTS FOR FISHER'S DISCRIMINANT FUNCTION

	Υ	Υ				
	1.00	2.00	3.00			
$X_1$	0.350	0.363	0.408			
X <sub>2</sub>	0.164	0.0465	0.04045			
X <sub>3</sub>	-0.01245	-0.0097	-0.001746			
X <sub>6</sub>	0.144	0.151	0.134			
X <sub>7</sub>	4.271	4.388	4.075			
<b>X</b> <sub>9</sub>	0.505	0.477	0.456			
X <sub>10</sub>	15.912	13.987	14.595			
(constant)	-37.149	-34.244	-34.793			

**Source:** Secondary Data

The expected credit ratings are estimated for each company using the above discriminant functions. Now it is observed that only 7 cases do not match with the actual ratings given by various agencies. Thus, the actual ratings of 84% of the industries coincide with the expected ratings of linear models. This multi-discriminant credit rating model seems to be reliable and reasonable in assigning ratings. Further, financial ratios (xl x2, x3, x6, x/, x9 and xio) specified in the above model may be considered for rating survey.

### **CREDIT RATING FOR NBFCs**

From the 59 sample units, 16 companies are non-banking financial companies. Their activities, business strategy, volume of business etc., are different from that of the manufacturing industries discussed in the previous sections. Hence, it is appropriate to study the rating pattern for these companies separately.

The codes are given to the three ratings and the number of companies in each class are as follows:

**TABLE-7.13 DISTRIBUTION OF NBFCs** 

Rating class	Rating code	No. of companies
AM	3	4
AA	2	6
Α	1	6
Total		16

**Source:** Primary Data

To build up a model, the following financial factors are considered.

X<sub>1</sub> - Return on capital employed

X<sub>2</sub> - Operating profit margin

X<sub>3</sub> - Operating profit to total profit

X<sub>4</sub> - Cash accrual ratio

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X<sub>5</sub> - Interest coverage ratio

X<sub>6</sub> - Normalised current ratio

X<sub>7</sub> - Debt equity ratio

X<sub>8</sub> - Long term debt

The inter-correlation coefficients due to Karl Pearson are obtained for the above variables with the help of SPSS package and exhibited in the following table.

**TABLE - 7.14 CORRELATION FOR NBFC COMPANIES** 

	X <sub>1</sub>	X <sub>2</sub>	<b>X</b> <sub>3</sub>	X <sub>4</sub>	<b>X</b> <sub>5</sub>	X <sub>6</sub>	X <sub>7</sub>	X <sub>8</sub>
$X_1$	1							
X <sub>2</sub>	0.698"	1						
<b>X</b> <sub>3</sub>	0.318	0.707**	1					
$X_4$	0.207	0.388	0.160	1				
<b>X</b> <sub>5</sub>	0.753**	0.483*	0.439	-0.151	1			
<b>X</b> <sub>6</sub>	0.491*	0.616**	0.352	0.398	0.156	1		
X <sub>7</sub>	0.280	0.465	0.348	0.693**	-0.109	0.536*	1	
<b>X</b> 9	0.381	0.441	0.242	0.522*	-0.085	0.595*	0.922**	1

<sup>\*\*</sup> Correlation is significant at the 0.01 level (2-tailed).

Source: Secondary Data

From the above table, it is observed that Return on capital employed  $(x_1)$  is highly significantly and positively correlated with operating profit margin  $(x_2)$ , Interest coverage ratio  $(x_5)$  and normalised current ratio  $(x_6)$ . The financial factor  $x_2$  (operating profit margin) is positively and highly significantly correlated with each factor  $x_1$ ,  $x_3$  (operating profit to total profit),  $x_5$  (Interest coverage ratio) and  $x_6$  (Normalised current ratio). The variable  $x_4$  (cash accrual ratio) is highly positive and significantly correlated with each  $x_7$  (Debt equity ratio), and  $x_8$  (Long term debt ratio).

The variable  $x_6$  (Normalised current ratio) is positively and significantly correlated with  $x_1$   $x_2$ ,  $x_7$  and  $x_8$ . Similarly the variables  $x_7$  and  $x_8$  are also highly positive and significantly correlated. Altogether, three variables  $x_2$ ,  $x_6$  and  $x_8$  are dominating with some of the other variables.

The credit ratings for all the 16 NBFCs varied from A to AAA. Thus the respective codes for the rating are taken 1, 2 and 3 and denoted by y. The Fisher's multi-discriminant model is assumed as the same in (1). The coefficients for the discriminant function by Fisher's method are given in the following table.

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

TABLE-7.15 CLASSIFICATION FUNCTION COEFFICIENTS OF NBFCs

	Υ				
	1.00	2.00	3.00		
$X_1$	0.773	1.267	1.052		
X <sub>2</sub>	-0.167	-0.09516	-0.0688		
X <sub>3</sub>	0.02725	0.0224	0.02378		
X <sub>4</sub>	-0.078	0.197	0.392		
X <sub>5</sub>	-2.833	-2.325	-1.750		
X <sub>6</sub>	1.742	-1.131	-1.692		
X <sub>7</sub>	1.597	0.086	-1.130		
X <sub>8</sub>	-3.427	-0.0693	1.885		
Constant)	-9.602	-11.962	-12.655		

**Source:** Computed Data

Thus three linear functions are obtained for the rating codes 1, 2 and 3. Using the respective discriminant function, expected rating is estimated for each NBFC. The actual rating, expected rating and difference between the two ratings for all the 16 companies are given in the appendix.

Using the expected ratings, the number of companies matching with the actual ratings is obtained. Actually, six NBFCs have been assigned credit rating 1, six companies with rating 2, and four companies with rating 3. It is seen from the expected ratings, only 7 companies are found identical with the actual ratings. That is, only 43% of the cases match with the actual ratings. Hence, the rating model is modified by dropping three discriminatory variables namely  $x_2$  (Operating profit margin),  $X_6$  (Normalised current ratio) and  $x_8$  (Long term debt) to avoid multi collectively situation. The coefficients for the linear model are computed as follows.

TABLE-7.16 CLASSIFICATION FUNCTION COEFFICIENTS OF NBFCs AFTER DROPPING x<sub>2</sub>, x<sub>6</sub>, x<sub>8</sub>

	Υ				
	1.00	2.00	3.00		
X <sub>1</sub>	0.258	0.488	0370		
X <sub>3</sub>	0.00754	0.00531	0.00845		
X <sub>4</sub>	0.0306	0.0666	0.152		
X <sub>5</sub>	-0.940	-0.688	-0.619		
X <sub>7</sub>	0.00358	0,04795	0.126		
(Constant)	-3.503	-7.031	-7.634		

**Source :** Computed Data

The expected ratings are estimated for all the 16 companies with the suitable discriminant function. Now only 9 cases match with the actual ratings. That is, only 56% of the cases coincide with the actual ratings. Thus, even the modified rating model does not exhibit any

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improved predicting power. So, the model cannot be taken as a tool to predict the rating in future.

### **CONCLUSION**

Credit rating agencies play a very vital role in the debt market of the Indian economy. They act as independent agencies which provide independent and unbiased details in respect of debt instrument issued by the companies./The credit rating information is necessary in places where there is no active secondary market for debt instruments. The credit rating helps the investors to identify the right price for the bonds. The rating helps the investors to calculate the yield!) In India there is no active secondary market for the debt instrument. Due to insufficient data, about the companies, credit rating helps in developing active secondary market for the debt instruments to the investors. Credit rating provides wider opportunities to the companies. The corporate must voluntarily obtain credit ratings. The concept of credit rating can be maintained only by continuous use by companies and investors. The issue with a good credit rating has a better opportunity of getting subscribed than that of the one without a credit rating. In the developed capital market, in addition to being used as a tool of investor protection, credit ratings are critical inputs in the determination of the investment portfolio.

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