Credit Rating in India: A Study of Rating Methodology of Rating Agencies

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Abstract

Credit rating is the symbolic indicator of the current opinion of rating agencies regarding the relative capability of issuer of debt instrument, to service the debt obligations as per contract. The corporations with specialized functions namely, assessment of the likelihood of the timely payments by an issuer on a financial obligation is known as Credit Rating Agencies. The main objective of the paper is to assess the consistency in rating methodology of each individual rating agency by taking companies belonging to same rating class (within group) including AAA, AA, A and BBB as sample. It has been assessed that all the rating agencies use consistent methodology while assigning a particular rating grade as there is no significant difference in the values of all the ratios which belong to different sets of similarly rated companies in maximum cases.

Index terms— Credit Rating, Credit rating agencies, Methodology, Consistency, Solvency ratios, Profitability ratios.

1 INTRODUCTION

redit rating is the symbolic indicator of the current opinion of rating agencies regarding the relative capability of issuer of debt instrument, to service the debt obligations as per contract. Credit Rating essentially indicates the credit worthiness of the borrowers and the probability that the borrowers will pay the interest and principal on due dates. A rated security is placed higher in the estimation of investors than an unrated security irrespective of better financial standing or reputation of the Issuer or Sponsor Company. Credit rating provides indicative guidance to the prospective investors on the degree of risk involved in the timely repayment of principal and interest. Thus 'credit rating' is essentially the task of determining the strength and prospects of a security/instrument offered in the market by differentiating it from other securities/instruments with the help of predetermined standards called 'grades' (typically these grades are symbolically represented, viz. A, AA, AAA etc). Credit rating is a source of reliable information for many users as rated instruments speak themselves about the soundness of the company and the strength of the instrument rated by the credit rating agency. Rating helps investors compare the issues by providing them a short and clear guide. Credit Rating gives superior information about the rated product and that too at low cost, which the investor otherwise would not be able to get so easily. Thus the investor can easily recognize the risk involved and the expected advantage in the instrument by looking at the symbols. The rationale of rating service is to restore confidence in the minds of investors.

Credit Rating Agencies are thus essentially the corporations with specialized functions namely, assessment of the likelihood of the timely payments by an issuer on a financial obligation. In India the rating activities started with the incorporation of the Credit Rating Information Services of India Ltd. (CRISIL) in 1987 which commenced its operations of rating of companies in ??1987] ??1988]

2 OBJECTIVE OF THE PAPER

The main objective of the paper is to assess the consistency in rating methodology of rating agencies by verifying some of the common factors which determine the bond ratings. Consistency in rating methodology of each individual rating agency is assessed by taking companies belonging to same rating class (within group) including AAA, AA, A and BBB as sample.

3 III.

4 METHODOLOGY AND DATA COLLECTION

The paper is based on the secondary data. It is a study of four old SEBI recognized rating agencies including CRISIL, ICRA, CARE and FITCH. The time period of the study is from April 2001 to March 2006. Bond rating methodology has been analyzed corresponding to eight variables, viz. four liquidity as well as solvency ratios and four profitability ratios. The short-term liquidity ratios considered are Current ratio and Quick ratio whereas long-term solvency ratios include Debt-equity ratio and Interest Coverage ratio. Further the profitability ratios selected include Return on Capital Employed, Return on Net Worth, Profit after tax/Total Income (PAT/TI), and Profit before depreciation, interest and tax/Total Income (PBDITA/TI). These financial ratios are selected as these are commonly used by all the credit rating agencies and some of the previous studies also support these ratios.

The data regarding various rating grades has been collected from the reports of the rating agencies including various issues of CRISIL Rating Scan, ICRA Rating Profile and CARE Rating View, websites of these rating agencies and PROWESS database of CMIE. Further, the data relating to various financial ratios relating to the given period has also been collected from PROWESS database of CMIE.

All the agencies use similar basic symbols from AAA to D to rate long-term bonds and debentures, but in order to differentiate their symbols from one another, the agencies use various prefixes/ suffixes. In the present study only the basic symbols have been used for the sake of simplicity.

For all the rating grades F-values using Analysis of Variance (ANOVA) is calculated for all the eight financial ratios selected. 25 per cent of the total number of manufacturing and trading companies whose debentures and bonds are rated by each rating agency during the time period 2001-02 to 2005-06 are taken as sample. Companies selected for each rating agency are further divided into four groups viz. AAA, AA, A and BBB. These rating categories have been chosen in the light of the fact that majority of rated companies fall under these rating classes. The main core of the analysis is that in case of within group sample companies, variance in mean values of ratios should be minimum. All calculations are done with the help of Statistical Package for Social Sciences (SPSS) version 16.

IV.

5 RESULTS AND DISCUSSION

The analysis bring to fore the following results: a) Comparison of AAA Rated Companies 'AAA' ratings denote the highest credit quality. The rated instrument carries the lowest expectation of credit risk.

The Table 1 mentions the F-values of eight financial ratios of different companies which were assigned AAA rating grade by CRISIL, ICRA, CARE and FITCH respectively. It is clear from the table that as far as companies rated by CRISIL are concerned, none of the financial ratios have significant F-values. Thus, the methodology adopted by CRISIL while assigning AAA rating grade was consistent as similar ratios were considered while assigning equivalent rating grade.

Further the table highlights that the F-values of all the ratios of companies which were assigned AAA rating by ICRA are not significant. This means that that there is no significant difference between the similar ratios of similar AAA rated companies by ICRA. This highlights that ICRA has used consistent methodology while assigning AAA grade to different companies during the period of the study. Moreover, as far as companies rated by CARE are concerned, the table highlights that the F-value for Profit after tax/Total income is significant while F-values for all other ratios are not significant. It implies that the Profit after tax/Total income ratio of various companies which were assigned AAA rating by CARE significantly differ from each other whereas all other ratios do not vary significantly from each other. Thus, it can be implied that in maximum cases, the methodology adopted by CARE while assigning AAA rating grade was consistent over the period of the study.

The table further highlights the F-values of AAA rated companies by FITCH. None of the F-values of companies rated by FITCH are significant, i.e., there is no significant difference between the values of all these ratios of different sets of companies which are assigned AAA by FITCH. Thus, there was consistency in methodology adopted by FITCH while assigning AAA rating grade.

6 b) Comparison of AA Rated Companies

The Table 2 depicts the F-values of the eight financial ratios of the companies which were assigned AA rating by all the rating agencies. It is clear from the table that in case of CRISIL, only quick ratio has significant F-value. It means that the quick ratio of rating grade by CRISIL is different from each other, while as far as all other ratios are concerned CRISIL had considered similar ratios while assigning AA rating.

The table further highlights that none of the Fvalues of the eight financial ratios of the companies which were assigned AA rating by ICRA are significant. It implies that there is no significant difference between the values of various ratios of the companies which were assigned LAA rating by ICRA, thus there was consistency in rating methodology of ICRA while assigning AA rating grade to different companies during the given period.

The table further depicts that none of the ratios of AA rated companies by CARE, have significant Fvalues. This means that the companies which belong to similar AA rating class by CARE have similar ratios thus showing the consistency in rating methodology of CARE over the period of study.

Table also highlights that in case of FITCH, the F-values of the ratios of companies belonging to AA rating class are not significant. This highlights that during the period of the study the financial ratios of the companies belonging to AA rating grade by FITCH were not significantly different from each other. This depicts the consistency in rating methodology of FITCH. The Table 3 points out that the F-values of all the ratios are not significant in case of A rated companies by CRISIL, which means that there is no significant difference in the similar ratios of A rated companies. This highlights that during the period of study CRISIL has used similar methodology while assigning A grade to different companies.

The table also highlights that none of the Fvalues are significant for any of the ratio of companies which were assigned A rating by ICRA. It implies that there is no significant difference between the F-values of ratios which belong to the sets of companies which were assigned A rating by ICRA. Thus, ICRA has used consistent methodology while assigning A rating grade during the period under the study.

The table further clarifies that none of the values are significant for the companies which were assigned A rating grade by CARE. It implies that there is no significant difference in the value of each individual ratio which belongs to the sets of similar rated companies. Thus, the methodology adopted by CARE while assigning A rating grade was consistent as similar ratios were considered while assigning similar rating grade.

7 d) Comparison of BBB Rated Companies

Table 4 depicts the F-values of eight financial ratios of the companies which were assigned BBB rating by CRISIL, ICRA, CARE and FITCH. The table highlights that in case of CRISIL, all the ratios did not have significant F values. This means that the companies which belong similar BBB rating grade by CRISIL have similar ratios thus showing the consistency in rating methodology of CRISIL, over the period of the study.

Moreover, the F-values are not significant for any of the ratios belonging to BBB rated companies by ICRA. This highlights that during the period of study, the financial ratios of the companies belonging to similar BBB rating by ICRA are not significantly different from each other. This depicts the consistency in rating methodology of ICRA during the period under study.

As far as the F-values of different ratios of various A rated companies by FITCH are concerned, it is visible from the table that all the ratios have in-significant F-values. Thus it is clear that methodology used by FITCH to assign rating grade A is consistent over the period of the study. Further, the table exhibits that none of the Fvalues are significant for companies which were assigned BBB rating by FITCH. It implies that there is no significant difference in the values of various ratios of the companies which were assigned BBB rating. This analysis highlights that during the period of study there was consistency in rating methodology of FITCH while assigning BBB rating.

V.

8 CONCLUSION

It has been assessed from the above analysis that all the rating agencies use consistent methodology while assigning a particular rating grade as there is no significant difference in the value of all the ratios which belong to different sets of similarly rated companies. The only exception to this is PAT/TI ratio of AAA rated companies by CARE and quick ratio of AA rated companies by CRISIL as there is significant difference in these ratios.

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II.

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C rating agency Investment Information and Credit rating Agency of India Ltd. (ICRA) was incorporated in 1991 and was jointly sponsored by Industrial Finance Corporation of India (IFCI) and other financial institutions and banks. The other rating agency, Credit Analysis and Research Ltd. (CARE), incorporated in April 1993, is a credit rating information and advisory services company promoted by Industrial Development Bank of India (IDBI) jointly with Canara Bank, Unit Trust of India (UTI), private sector banks and financial services companies. Another rating agency Onicra Credit Rating Agency of India Ltd., which was incorporated in 1993, is recognized as the pioneer of the concept of individual credit rating in India. Further Duff and Phelps Credit Rating (India) Private Ltd. (DCR) was established in 1996, which is presently known as Fitch Ratings India Private Ltd. One more rating agency SME Rating Agency of India Limited (SMERA), which was a joint venture of SIDBI, Dun & Bradstreet Information Services (D&B), Credit Information Bureau of India Limited (CIBIL), and 11 other leading banks in the country, was established in 2005. A new rating agency, Brickwork Ratings (BWR) which is based in Bangalore was incorporated in 2007. Besides CRISIL (Standard & Poor), ICRA (Moody's), CARE and Fitch, Brickwork Ratings is the fifth Credit Rating Agency to be recognized by SEBI.

Figure 1:

1

S. No.	Ratio	CRISIL F Values	Sig.	ICRA F Values	Sig.	CARE F Values	Sig.	FITCH F Values	Sig.
1	Current Ratio	1.14	0.35	0.17	0.85	0.94	0.48	1.81	0.31
2	Quick Ratio	0.52	0.61	0.67	0.55	1.73	0.32	0.90	0.50
3	Debt Equity Ratio	1.32	0.30	1.29	0.34	0.80	0.53	0.51	0.64
4	Interest Coverage Ratio	1.52	0.26	1.07	0.40	0.39	0.71	0.95	0.48
5	Return on Capital Employed	1.31	0.31	1.11	0.39	0.80	0.53	0.41	0.69

*[Note: ***Significant at 1 per cent level.]*

Figure 2: Table 1 :

2

CRISIL F Values Sig. F Values ICRA 3.43 0.07 0.68 5.144** 0.02 0.27 1.55 0.25 0.12 different sets of compa

4	Interest Coverage Ratio	2.00	0.18 1.04
5	Return on Capital Employed	2.85	0.10 1.16
6	Return on Net Worth	2.28	0.15 0.07
7	Profit after tax/Total Income	1.73	0.22 1.71

Figure 3: Table 2 :

3

S No.	Ratio	CRISIL F Values	Sig.	ICRA F Values	Sig.	CARE F Values	Sig.	FITCH F Values	Sig.
1	Current Ratio	0.56	0.59	1.22	0.36	1.02	0.46	0.56	0.62
2	Quick Ratio	1.01	0.39	2.03	0.21	1.09	0.44	0.44	0.68
3	Debt Equity Ratio	0.90	0.43	0.19	0.83	0.59	0.61	0.11	0.90
4	Interest Coverage Ratio	1.36	0.30	1.52	0.29	3.11	0.19	1.21	0.41
5	Return on Capital Employed	1.09	0.37	1.27	0.35	3.33	0.17	0.57	0.62
6	Return on Net Worth	0.74	0.50	0.69	0.54	3.77	0.15	0.52	0.64
7	Profit after tax/Total Income	0.97	0.41	1.16	0.37	3.85	0.15	0.73	0.55
8	PBDITA/Total Income	0.17	0.85	1.73	0.26	2.39	0.24	7.34	0.07

Figure 4: Table 3 :

4

S. No.	Ratio	CRISIL F Values	Sig.	ICRA F Values	Sig.	CARE F Values	Sig.	FITCH F Values	Sig.
1	Current Ratio	1.63	0.24	0.26	0.78	2.42	0.24	0.40	0.70
2	Quick Ratio	2.05	0.17	0.26	0.78	3.60	0.16	0.32	0.75
3	Debt Equity Ratio	0.26	0.77	0.44	0.67	1.61	0.34	1.06	0.45
4	Interest Coverage Ratio	3.24	0.08	0.95	0.44	1.07	0.45	2.67	0.22
5	Return on Capital Employed	3.31	0.07	2.13	0.20	1.21	0.41	2.44	0.24
6	Return on Net Worth	3.33	0.07	2.22	0.19	1.53	0.35	4.40	0.13
7	Profit after tax/Total Income	2.07	0.17	3.00	0.13	0.97	0.47	1.67	0.33
8	PBDITA/Total Income	1.30	0.31	0.72	0.53	0.74	0.55	6.55	0.08

Figure 5: Table 4 :

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[Rao (1999)] 'Credit Rating'. P M Rao . *The Management Accountant* October. 1999. 34 (10) p. .

[Rao et al. ()] 'Credit Rating Agencies in India'. K V Rao , M M Naidu , C H R Rao . *Management of Financial Institutions and Markets*, G S Batra (ed.) (New Delhi) 1996. Deep & Deep Publications Pvt. Ltd. p. .

[Verma ()] *Credit Rating Concepts: Practices and Procedures*, J C Verma . 2000. New Delhi: Bharat Publishing House. 14 p. 297.

[Arora ()] 'Credit Rating in India -Institutions'. M Arora . *Methods and Evaluation* 2003. New Century Publications.

[Sarkar (1994)] 'Credit Rating in India: A New Feather in the Capital Market's Cap'. A K Sarkar . *The Management Accountant* July. 1994. 29 (7) p. .

[Vepa ()] 'Credit Rating of Corporate Debentures in India'. S Vepa . *The Business Review Cambridge* 2006. 5 (2) p. .

[Shankar et al. (1992)] 'Credit Rating: A New Concept in Security Analysis in India'. T L Shankar , R K Mishra , R Nandagopal . *Chartered Secretary* May. 1992. 22 (5) p. .

[Singh ()] 'Credit Rating: An Innovative Financial Service'. J Singh . *Management of Financial Institutions and Markets*, G S Batra (ed.) (New Delhi) 1996. Deep & Deep Publications Pvt. Ltd. p. .

[Reddy (2000)] 'Credit Rating: Changing Perspectives'. Y V Reddy . *RBI Bulletin* May (2000.

[Galil (2003)] *The Quality of Corporate Credit Rating: An Empirical Investigation*, K Galil . October, EFMA 2003. 2003. (Helinski Meetings, ssrn abstract id 406681. available at www.ssrn.com)