# ROLE OF CREDIT RATING AGENCIES IN INVESTMENT DECISION WITH REFERENCE TO INDIVIDUAL INVESTORS IN RANCHI CITY

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## Abstract

Credit rating, although a relatively new concept in the Indian financial market, has gained wide acceptance among investors. At the same time, casual and anecdotal evidence suggests that there are concerns among investors and regulators about the performance of rating agencies in India. This research paper examines investors' awareness, perception, understanding level and usage of credit rating through a questionnaire based sample survey covering individual as well as institutional investors. Safety and Risk are two sides of the same coin. Descriptions of rating symbols provided by the rating agencies use "safety" in the upper end of the scale and the term "certainty" (or lack thereof) in the lower end of the scale. When a rating agency describes a speculative grade instrument as one with "an inadequate degree of certainty regarding timely payment of financial obligation", the description offers no precise estimate of the risk involved except on a relative scale. A majority of our respondents believe that a speculative grade is one, for which there is a likelihood of default, while a majority of our individual investors believe that a Speculative grade instrument is risky. This paper discovers a high diffusion of rating usage among all class of investors, though there is a perceptible disenchantment with reliability of ratings, propensity of subsequent downgrading and timeliness of rating surveillance. The survey also reveals that the investors possess not so greater knowledge and understanding about ratings by the credit ratings agencies. Thus, the survey underlines the need for rating agencies to work on educating the common investors to propagate proper understanding and usage of credit rating.

**Keywords :-** Credit Rating , financial market , rating agencies, Speculation , certainty

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"There are two superpowers in the world today in my opinion. There's the United States and there's Moody's bond rating service. The United States can destroy you by dropping bombs, and Moody's can destroy you by downgrading your bonds. And believe me; it's not clear sometimes who's more powerful." –P JHONSON (economist)

## 1. Introduction:

Credit rating agencies provide an assessment of the creditworthiness of a corporation or security, based on the issuer's quality of assets, existing liabilities, borrowing history, and overall business performance. Investors depend on the ratings to predict the likelihood of default on financial obligations and the expected repayment in the event of default. Credit Rating Agencies (CRAs) play an important role in assessing risk and its location and distribution in the financial system. By facilitating investment decisions they can help investors in achieving a balance in the risk return profile and the same time assist firms in accessing capital at low cost. CRAs can thus potentially help to allocate capital efficiency across all sectors of the economy by pricing risk appropriately. However, in view of the fact that CRAs that rate capital market instruments are regulated by SEBI and that entities regulated by other regulators [IRDA: Insurance Regulatory and Development Authority, PFRDA: Pension Fund Regulatory and Development Authority, and RBI: Reserve Bank of India] predominantly use the ratings.

The major motivation for the exercise was to look at inter regulatory coordination so that all interested stake holders have an institutional mechanism for providing inputs-feed back to ensure realization of the objective behind the regulation of CRAs. Adding a further dimension to this enquiry, the subprime crisis has attracted considerable adverse attention worldwide on the role of CRAs enhancing the need for this review. Given that rating is only an opinion, albeit a very influential one, and regulation of gate keeper business model is a border line ethical - regulatory issues, the committee has examined wide ranging steps to improve the functioning and accountability of CRAs including the suggestion that in the medium run regulators move away from the mandatory rating practice at least in the capital market. Based on examination of the CRA business models, current regulatory activities, global experiments and the Indian context, this report aims to lay out a board framework for strengthening the existing regulatory architecture for CRAs in India and incorporates the Committees vision for new arrangements and practical steps required in this direction.

Investment in companies both in debt and equity is based on a large number of criteria's namely earnings of the company, profitability, liquidity, debt equity ratio and also the risk involved in investment. There are many tools for risk management, by planning the investment portfolio the investors can reduce the risk involved. Credit rating agencies help us to analyze the risk involved in the investment by providing ratings to the companies. The credit rating helps the investors to know the risk involved in the company and hence whether to invest not to invest in the companies.

Credit rating of any entity is the estimation of the ability of banks, financial, and non-financial institutions, and the corporate bodies to service their debt obligations effectively and on time. Moreover, the agencies do not reveal any details regarding the weights they attach to each of these indicators possibly making the process of quantitative analysis vulnerable to subjective biases. Such a rating estimates the future ability and willingness of the investment institutions to service their commercial and financial obligations in full and on time. It is a forward looking estimate of default probability of governments. In the context of the capital market, the credit ratings have a great significance. Hence the study has been taken up to know whether the investors are depending on the ratings provided by rating agency for their investment decision.

**2. Scope of the Study:**

Credit rating agencies assign ratings that seek to determine how creditworthy the issuer is, an entity with very strong finance will be given the highest rating, often describe as AAA, while the least creditworthy will receive the lowest rating, normally D. We know what type of credit rating in agencies health of financial system and regulation allow banks to use credit rating from certain approved rating agencies when calculating their capital reserve.

**3. Objectives of the Study:**

- To know the credit rating agencies and illustrate the rating methodology in India
- To describe the advances and limitations of credit rating.
- To provide some suggestion to improvise the working style of credit rating agencies.

**4. Testing Of Hypothesis:**

**H0**: Investors do not depend upon credit rating agencies for investment decision.

**H1**: Investors depend upon credit rating agencies for investment decision

**5. Statistical Procedure:**

To know whether the factors considered while credit rating agencies investment decision have any effect on the influence while investing, following statistical procedure was used to analyse the data -Descriptive statistics, Co-relation and T-test.

**6. Methodology of the Study:**

The present study is a survey based research, where the responses were collected from investors who have the experience in investments. The sampling technique used is adjustment sampling as experience in investment is criteria used for selecting the respondents. The number of respondents chosen for the study is 100 investors. Both open ended and close ended question was incorporated in framing the questionnaire to facilitate easy answering. The survey was carried out in different areas of Ranchi city in Jharkhand state.

**7. QUESTIONS ADDRESSED TO THE USERS OF RATINGS AND OTHERS INTERESTED PARTIES.**

Gender: Male [ ] Female [ ]

Age group- 1) 20-30 (2) 30-40 (3) 40-50 (4) 50-above

1. In what range do you invest? a) 10000-25000 (b) 26000-50000 (c) 51000-74000 d) 75000-100000 above

2. From how many years are you investing? (a) 1-3(b) 4-6 (c) 7-9 (d) 10 above.

3. How many credit rating agencies listed below are you aware of ? a) CRISIL (b) CARE (c) RCRA

4. Do you depend on the information given by CRAI? For your investment Decision? a) Yes (b) No

4(a). If yes which do you prefer for your investment? (a) AAA ( b) BBB(c) C ( d) D

5.Do you know about multiple credit rating system? (a) Yes (b) No

6. Do you think credit rating system is boon to the capital market? (a) Yes (b) No

7. Do you consider it safe for small investors upon rating given the Credit rating agencies for investment? (a) Very high (b) less Average (c) low

8. Which of the following services provided by CRAs? Do you prefer? a) Credit rating services. (b) Advisory services. (c) Equity research. (d) Information resistant to Govt

9. Do you think a good rating given to investment can help it shares sales easily in the Market? (a) High sale (b) Average sales (c) less sales

10. What is your opinion of CRAI as effective tool for Risk Management?

(a) Excellent (b) Good(c) Poor

11. Are you satisfied with the access to CRA? (a) Highly satisfied (b) Moderately satisfied (c)satisfied

12. Are you satisfied with the way CRAs disclose their methodologies of rating?(a) Highly satisfied(b) Moderately satisfied (c) Satisfied (d) Not satisfied

13. What are you views about the agencies using different analytical models to assess the portfolio credit risk? Are you satisfied with the way the rating agencies assess such risk? (a) Highly satisfied (b) Moderately satisfied(c) Satisfied (d) Not satisfied

14. Are you satisfied with the frequency and quality of the information provided by the Rating agencies to the market? (a) Highly satisfied (b) Moderately satisfied (c) Satisfied (d) Not satisfied

15. Are you satisfied with the way the rating agencies assess the structural risks of the deals financial transaction (i.e. legal risks, cash flow analysis, and third parties involvement in the transaction)? (a) Highly satisfied (b) Moderately satisfied (c) Satisfied (d) Not satisfied

16. Are you satisfied with the way the agencies communicated the measures they have adopted to manage those potential conflicts of interests?(a) Highly Satisfied( b) Moderately Satisfied(c) Satisfied(d)Notsatisfied

## 8. Descriptive Analysis

| | Gender | age | 1 | 2 | 3 | 4 | 4 (a) | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | | | | | |
| **Mean** | 1.04 | 2.55 | 2.4 | 2.4 | 1.3 | 1.3 | 1.9 | 1.3 | 1.4 | 1.6 | 1.5 | 1.9 | 1.4 | 2.3 | 2.4 | 2.3 | 2 | 2 | 2 |
| **Standard Error** | 0.0197 | 0.09 | 0.1 | 0.11 | 0 | 0 | 0.1 | 0.1 | 0 | 0.1 | 0.1 | 0.07 | 0 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| **Median** | 1 | 2 | 2 | 2 | 1 | 1 | 2 | 1 | 1 | 2 | 1 | 2 | 1 | 3 | 3 | 3 | 2 | 2 | 2 |
| **Mode** | 1 | 2 | 2 | 2 | 1 | 1 | 2 | 1 | 1 | 2 | 1 | 2 | 1 | 3 | 3 | 3 | 3 | 3 | 1 |
| **Standard Deviation** | 0.1969 | 0.93 | 1.1 | 1.08 | 0.5 | 0.5 | 0.7 | 0.5 | 0.5 | 0.6 | 0.9 | 0.7 | 0.5 | 1 | 1 | 1.1 | 0.9 | 0.9 | 0.9 |
| **Sample Variance** | 0.0388 | 0.86 | 1.2 | 1.17 | 0.2 | 0.2 | 0.5 | 0.3 | 0.2 | 0.3 | 0.8 | 0.49 | 0.2 | 0.9 | 1 | 1.1 | 0.8 | 0.8 | 0.9 |
| **Kurtosis** | 21.144 | -0.9 | -1 | -1.2 | -1.5 | -1 | -0.9 | 0.5 | -2 | -1 | -1 | -0.9 | -1.9 | -2 | -1 | -1 | -2 | -2 | -1 |
| **Skewness** | 4.7667 | 0.32 | 0.3 | 0.26 | 0.7 | 0.9 | 0.1 | 1.2 | 0.5 | 0.3 | 1.1 | 0.14 | 0.4 | -1 | -0 | -0 | -0 | -0 | 0.3 |
| **Range** | 1 | 3 | 3 | 3 | 1 | 1 | 2 | 2 | 1 | 2 | 2 | 2 | 1 | 2 | 3 | 3 | 2 | 2 | 3 |
| **Minimum** | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| **Maximum** | 2 | 4 | 4 | 4 | 2 | 2 | 3 | 3 | 2 | 3 | 3 | 3 | 2 | 3 | 4 | 4 | 3 | 3 | 4 |
| **Sum** | 104 | 255 | 237 | 240 | 133 | 130 | 190 | 132 | 137 | 162 | 154 | 190 | 140 | 226 | 236 | 226 | 203 | 203 | 203 |
| **Count** | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| **Confidence Level(95.0%)** | 0.0391 | 0.18 | 0.2 | 0.21 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.14 | 0.1 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |

**Analysis:** Most of the respondents are Male and age group is preferred 30-40.Respondents are investment range will be Rs 26000-50000. Investors invest money in to the different capital market 4-6 years they recognized CRISIL and prefer ratings of the BBB. The respondent's opinion is excellent of credit rating agencies in India is effective tool for risk management. Respondents are satisfied about credit rating process. And also satisfied credit rating agencies methodology of ratings. Respondents are highly satisfied while using different analytical models to assess the portfolio credit risk. Most of the respondents are moderately satisfied with the frequency and quality of the information provided by rating agencies. And Most of the respondents are satisfied the rating agencies assess the structural risks of the financial deals. Respondents are highly satisfied with the way the agencies communicated the measures they have adopted to manage those potential conflicts of interests.

**9. co-relation of data collected through questionnaire**

| | Gender | Age | q1 | q2 | q3 | q4 | *q4(a)* | *q5* | *q6* | *q7* | *q8* | *q9* | *q10* | *q11* | *q12* | *q13* | *q14* | *q15* | *q16* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Gender** | **1.00** | | | | | | | | | | | | | | | | | | |
| **Age** | **-0.12** | **1.00** | | | | | | | | | | | | | | | | | |
| **q1** | **-0.12** | **0.16** | **1.00** | | | | | | | | | | | | | | | | |
| **q2** | **0.02** | **-0.04** | **0.18** | **1.00** | | | | | | | | | | | | | | | |
| **q3** | **-0.03** | **0.07** | **-0.02** | ***-0.28*** | **1.00** | | | | | | | | | | | | | | |
| **q4** | **-0.02** | **0.08** | **0.12** | **0.16** | **-0.23** | **1.00** | | | | | | | | | | | | | |
| **q4(a)** | **0.10** | **-0.13** | **-0.03** | **-0.07** | **0.04** | **-0.03** | **1.00** | | | | | | | | | | | | |
| **q5** | **-0.03** | **0.03** | **-0.09** | **0.20** | **0.06** | **-0.03** | **-0.11** | **1.00** | | | | | | | | | | | |
| **q6** | **0.05** | **0.01** | **0.10** | **-0.03** | **-0.01** | **0.09** | **-0.04** | **-0.16** | **1.00** | | | | | | | | | | |
| **q7** | **-0.13** | **0.19** | **0.00** | **-0.08** | **0.06** | **0.20** | **0.20** | **0.01** | **-0.11** | **1.00** | | | | | | | | | |
| **q8** | **-0.12** | **0.10** | **0.08** | **-0.08** | **0.00** | **0.04** | **0.02** | **-0.03** | **0.14** | **-0.15** | **1.00** | | | | | | | | |
| **q9** | **-0.04** | **-0.13** | **0.02** | **0.04** | **-0.17** | **0.00** | **0.00** | **0.01** | **0.17** | **0.14** | **0.05** | **1.00** | | | | | | | |
| **q10** | **0.15** | **-0.07** | **0.10** | **0.06** | **-0.01** | **0.13** | **0.09** | **-0.03** | **0.18** | **-0.03** | **-0.04** | **0.09** | **1.00** | | | | | | |
| **q11** | **-0.16** | **-0.22** | **0.03** | **-0.08** | **-0.17** | **0.09** | **-0.08** | **-0.09** | **-0.10** | **0.03** | **0.23** | **-0.05** | ***-0.26*** | **1.00** | | | | | |
| **q12** | **-0.07** | **-0.12** | **-0.02** | **0.08** | **0.00** | **-0.19** | **-0.09** | **-0.05** | **-0.11** | **0.03** | **-0.06** | **-0.06** | **0.10** | **0.13** | **1.00** | | | | |
| **q13** | **0.09** | **0.06** | ***0.23*** | **0.01** | **-0.11** | **-0.04** | **0.05** | **0.01** | **-0.23** | **0.03** | **-0.09** | **-0.10** | **-0.24** | **0.17** | **0.07** | **1.00** | | | |
| **q14** | **0.11** | **0.12** | **0.06** | **-0.08** | **0.10** | **0.10** | **0.12** | **-0.11** | **0.19** | **0.10** | **0.24** | **-0.06** | **0.11** | **-0.04** | **-0.07** | **0.11** | **1.00** | | |
| **q15** | **-0.12** | **-0.03** | **0.02** | **0.02** | **0.07** | **-0.10** | **-0.04** | **0.00** | **-0.03** | **-0.06** | **-0.05** | **0.22** | **0.07** | **0.00** | **0.16** | **-0.12** | **-0.04** | **1.00** | |
| **q16** | **-0.12** | **-0.05** | **-0.08** | **0.09** | **0.00** | **0.03** | **-0.01** | ***0.24*** | **-0.02** | **0.00** | **-0.07** | **0.00** | **0.02** | **-0.06** | **-0.01** | **0.07** | **-0.11** | **-0.19** | **1.00** |

From the above Analytical format question 1 and 13, Question 2 and 3, question 5 and 16and question 10 and 11are highly co-related. So

**Q1and Q13**-(CRAs investment information different CRA) the range of investment will negative impact on the different analytical model to assess the portfolio credit risk.

**Q2 and Q3**-(Information depend by a CRA) A negative correlation between years of investing and credit rating agencies recognized by the respondents.

**Q5and Q16**-(CRA opinion and methodology, frequency and quality) There is a positive correlation between multiple credit ratings and satisfied with the way the agencies communicated the measures they have adopted to manage those potential conflicts of interests.

**Q10 and Q11** (Multiple CRA boon to capital market and satisfaction) There is negative correlation between opinion of CRAI as effective tool for Risk Management and satisfaction of the credit rating agencies.

## 10. T-test of tabulated data of investors (Factor 1- Information depend by a CRA)

| | | mean | Variance | Observations | Hypothesize- Mean Difference | df | t -Stat | P(T<=t) one-tail | P(T<=t) critical-tail | P(T<=t) two-tail | t- Critical two-tail | Remark |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Gender | M | 11.08 | 4.04 | 96.00 | 0.00 | 3.00 | -0.24 | 0.41 | 2.35 | 0.83 | 3.18 | t stat < t critical |
| | F | 11.50 | 12.33 | 4.00 | | | | | | | | |
| Age | 2 | 10.98 | 4.616578 | 48 | 0 | 41 | -0.61 | 0.271561179 | 1.682878003 | 0.543122359 | 2.019540948 | t stat < t critical |
| | 3 | 11.32 | 4.608225 | 22 | | | | | | | | |
| | 2 | 10.98 | 4.616578 | 48 | 0 | 44 | -0.7 | 0.245349092 | 1.680229977 | 0.490698184 | 2.015367547 | t stat < t critical |
| | 4 | 11.33 | 3.433333 | 21 | | | | | | | | |

## Factor 2- Information depend by a CRA

| | | Mean | Variance | Observations | Hypothesized Mean Difference | df | t Stat | P(T<=t) one-tail | t Critical one-tail | P(T<=t) two-tail | t Critical two-tail | Remark |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Gender | M | 6.354 | 1.873246 | 96 | 0 | 3 | 0.12 | 0.455893222 | 2.353363435 | 0.911786443 | 3.182446305 | t stat < t critical |
| | F | 6.25 | 2.916667 | 4 | | | | | | | | |
| Age | 2 | 6.313 | 1.708777 | 48 | 0 | 36 | -0.87 | 0.194142093 | 1.688297694 | 0.388284187 | 2.028093987 | t stat < t critical |
| | 3 | 6.636 | 2.242424 | 22 | | | | | | | | |
| | 2 | 6.313 | 1.708777 | 48 | 0 | 34 | 0.2 | 0.423036275 | 1.690924198 | 0.84607255 | 2.032244498 | t stat < t critical |
| | 4 | 6.238 | 2.290476 | 21 | | | | | | | | |

## Factor 3- CRA opinion and methodology, frequency and quality

| | | Mean | Variance | Observations | Hypothesized Mean Difference | df | t Stat | P(T<=t) one-tail | t Critical one-tail | P(T<=t) two-tail | t Critical two-tail | Remark |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Gender | M | 10.3 | 4.444627 | 96 | 0 | 3 | -0.13 | 0.452175911 | 2.353363435 | 0.904351822 | 3.182446305 | t stat < t critical |
| | F | 10.5 | 9 | 4 | | | | | | | | |
| Age | 2 | 10.46 | 4.97695 | 48 | 0 | 46 | 1.3 | 0.099406867 | 1.678660414 | 0.198813734 | 2.012895567 | t stat < t critical |
| | 3 | 9.773 | 3.80303 | 22 | | | | | | | | |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2 | 10.46 | 4.97695 | 48 | 0 | 44 | 0.33 | 0.373024272 | 1.680229977 | 0.746048544 | 2.015367547 | t stat < t critical |
| | 4 | 10.29 | 3.714286 | 21 | | | | | | | | |

**Factor 4-Multiple CRA boon to capital market and satisfaction**

| | | Mean | Variance | Observations | Hypothesized Mean Difference | df | t Stat | P(T<=t) one-tail | t Critical one-tail | P(T<=t) two-tail | t Critical two-tail | Remark |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Gender | M | 6.75 | 2.16842 | 96 | 0 | 3 | 0 | 0.5 | 2.353363435 | 1 | 3.182446305 | t stat < t critical |
| | F | 6.75 | 1.58333 | 4 | | | | | | | | |
| Age | 2 | 6.688 | 2.13431 | 48 | 0 | 41 | -0.35 | 0.365467961 | 1.682878003 | 0.730935921 | 2.019540948 | t stat < t critical |
| | 3 | 6.818 | 2.15584 | 22 | | | | | | | | |
| | 2 | 6.688 | 2.13431 | 48 | 0 | 35 | -0.41 | 0.341466993 | 1.68957244 | 0.682933987 | 2.030107915 | t stat < t critical |
| | 4 | 6.857 | 2.62857 | 21 | | | | | | | | |

**H0: There is t-critical value is more than t-stat value so accepting null hypothesis.**

**H1: There is t-critical value is more than t-stat value so rejecting alternative hypothesis.**

## 11. Conclusion and Suggestion

The survey shows that credit Ratings agencies has not played major role in investment decision. Rating helps the company to push their business very aggressively, appraises the financial quality, and also it's other performance. This gives to the company an upper edge by way of showing the rating to the other new customers and export also possible, but as this will not create confidence in the mind of the customer about their delivery capability and financial stability. Investors ensuring a common standard of measuring the creditworthiness. Credit rating agencies are engaged in the sale of opinions about creditworthiness in the form of an alphabetical letter or symbol, which represents a unique ranking. Their opinion is not a guarantee, but it largely dictates the costs and the profits in the financial markets. Looking back in history credit rating agencies often selected goal of making a profit at the cost of market regulation, therefore they have caused the collapse of the market, and founded themselves criticized by the Public.

Investment institution seeks the credit ratings so as to improve their access to the capital markets. The credit ratings are an important scale for determining the cost of borrowing from the market. The ratings provide a perception to the lenders about the level of credit risk of the different level of financial institutions. It analyses various factors or types of risks that affect the ability of these institutions to service their debts. These obligations involve interest and/or principal amount repayment of the various rated instruments such as bonds and deposits. The agencies do not reveal any details regarding the weights they attach to each of these indicators possibly making the process of quantitative analysis vulnerable to subjective biases. Apart from these institutions; credit rating is also not reveal some major information for their ratings which impact negative to the Investors. So Rating Agencies have to have not devotedly looking forward to improvise these areas and try to make ratings a very informative summary of credit –worthiness.

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