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AN ANALYTICAL STUDY OF INVESTMENT MANAGERS' PERCEPTION TOWARDS QUALITY DIMENSIONS OF CREDIT RATING SERVICE

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Abstract
This study aims to analyze the level of satisfaction of investment managers regarding credit rating services by various rating agencies. Data were collected from 120 investment managers of Delhi-NCR using a semi-structured questionnaire. Their opinions about Credit Rating services were measured using a five-point Likert scale. The exploratory Factor Analysis technique was applied, and all the statements were loaded into two factors: effectiveness of Credit Rating and Assessment Quality of Credit Rating Agencies. Factors affecting the satisfaction of investment managers with these two dimensions were identified by applying discriminant analysis technique using IBM SPSS 26. The findings of the study highlighted that the volume of investment and the general investment horizon play the most significant role in discriminating the satisfaction level of investment managers. Although a majority of investment managers involved in long-term investment practices are highly satisfied with the credit rating service, the managers with a long experience in the field and making huge investments for the short term are comparatively less satisfied with credit rating. As experienced investors in the field are less satisfied with the credibility of ratings, these are the post-rating facilities such as rating surveillance, rating review, and rating outlooks services that lack their intended quality. Therefore the rating agencies should work on short-term creditworthiness analysis and their post-rating appraisal procedures.

Keywords: *Assessment Quality, Credit Rating, Credit Rating Agency, Financial Markets, Investment Horizon, Investment Managers*.
JEL Classification Codes: G24, G11, G14, G32, G33

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Introduction

Credit rating is a process of providing rating grades by specialized bodies to debt securities or issuers based on their creditworthiness; their ability and the willingness to serve the security contract. The specific bodies entrusted with the responsibility of providing these rating grades are known as Credit Rating Agencies (CRAs). Rating grades impart information about the risks inherent in various types of securities and help investors design their portfolios (Siddiqui et al., 2021). Credit rating plays a pivotal role in financial markets as it leads to market efficiency and also offers market access to securities issuers (Akdemir & Karslı, 2012). "There are two superpowers in the world... the United States and Moody's Bond Rating Service... and believe me, it's not clear sometimes who is more powerful" Tom Friedman (1996) went to this extent while discussing the importance of credit rating for security issuers (Lieberman, 2002). Credit rating also plays a prominent role in the economic development of a country as the higher market efficiency brings down the information asymmetry, which further accounts for better market returns and the overall GDP of the country (Sunitha & Sanjeev, 2018). Having such immense importance for the issuers, investors, financial markets, and the overall economy as well, it is always expected that the rating agencies should give credence services to their users (Bhushan, 2013).

To check the credibility of any service, the perception of its users plays an important role; customers are the common users of services, but in the case of any audit firm or rating agency, one segment of their users is different from the one who pays service charges (Sumathy & Nichlavose, 2015). The security issuer firms get themselves rated by these CRAs and pay a fee to them in return. However, credit rating is used by investors while making an investment decision or by lending banks while granting loans. So the perception of investors or the lending banks contributes significantly to the assessment of credit rating quality. Investment managers constitute a significant segment of regular users of credit rating as these are the persons who are professionals in the field and making massive investments on behalf of their clients. Therefore their perceptions are crucial in analyzing the effectiveness of credit ratings in fundamental markets and determining the aspects where rating agencies and market regulators need to work upon. Various past studies have covered the perceptions of individual investors, security issuers, regulators, etc., and some studies about the perception of professional investors are undertaken abroad and in South India; but no study has been conducted till date in Delhi NCR where a substantial number of professionals reside since many AMCs are having their head/regional offices in this region contributing significantly in policy framing, not only by corporate or AMCs but also by the government of India. This study bridges the gap by analyzing the opinions of investment managers regarding various dimensions of credit rating services. In addition, the study also identifies the factors affecting the opinions of investment managers regarding the credit rating service of CRAs.

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Review of Literature

A significant amount of studies have been conducted so far regarding various aspects of credit rating agencies including credit rating agencies' performance and reliability. Bhushan (2013) exposed certain loopholes in the regulations of rating agencies and suggested that regulatory bodies should affix the liability of rating agencies for reckless rating. Sharma & Madhukar (2015) evaluated the workings of rating agencies through a case study and revealed that in India, ratings are issuer-biased. The increase in competition among rating agencies leads to a deterioration in rating quality. Park & Lee (2018) investigated the effect of competition among rating agencies in Korea and highlighted that higher competition increases the chances of rating upgradation due to the opportunistic behavior of bond issuers and rating agencies. While evaluating the working of international Credit Rating Agencies, Yalta & Yalta (2018) explored the regional biases of these agencies by examining sovereign ratings of 99 countries, categorized into eight regions, and manifested that global rating agencies have a sort of home biasness while country-specific biasness was not found.

Having doubts regarding the quality of rating services at national and international levels, several researchers investigated the perception of various users of credit rating agencies. Duff & Einig (2009) surveyed critical stakeholders of the corporate bond rating process in the U.K. and revealed the fact that to ensure the quality of rating service, the independence, the competence of rating agencies, transparency in the rating process, and effective communication with stakeholders are essential. Ndlovu et al. (2018) exerted a study to analyze the perception of U.K. market participants regarding CRAs' regulations provided by the European Commission (E.U.) and revealed that market participants perceived these regulations to fall short to prevent the quality issues of rating agencies and to prevent any financial crises in future. (Siddiqui et al., 2021) exerted a study to analyze the factors affecting the satisfaction level of entrepreneurs in Saudi Arabia in getting their credit ratings and exposed that five elements, viz. credibility, clarity, competence, communication, and customer services of rating agencies are contributing the most and rating agencies should look forward to improving these factors.

In India, Venkatesh & Goswami (1999) undertook a study to analyze the awareness level and perception regarding the reliability and timeliness of credit rating agencies with a sample of 85 individual and 15 institutional investors and exposed that there is significant dissatisfaction among all the users about reliability and timeliness of credit rating; and the institutional investors are more aware of credit rating agencies in comparison to individual investors. Kaur & Kaur (2010) conducted a research study regarding investors' satisfaction with credit rating in Punjab and revealed that most of the investors were satisfied with the information provided by rating grades, the transparency in the rating process, timeliness of rating upgrades and downgrades, rating quality, and quality analysts are the critical factors that affect the satisfaction level of investors. Sinha & Arpana (2013) undertook a questionnaire-based survey of individual and institutional investors of Ranchi City to analyze their perception regarding credit rating and found that individual investors were not much aware of credit rating, and rating agencies should

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look forward to improving the understanding level of individual investors. Sumathy & Nichlavose (2015) surveyed clients of credit rating agencies to analyze their perception about various quality attributes of rating agencies. The companies listed on CNX500 of NSE were taken as the sample of the study which concluded that the significant factors contributing to the lack of satisfaction among client companies are the conflict of interest and lack of transparency in the rating decision. Kumar (2019) executed a survey of individual investors in the Gurugram district to examine the level of awareness among them about credit rating agencies and exposed that a significant portion of sample investors are less aware of credit rating agencies and their services. But investors who are well aware of these agencies consider the rating grades as an essential input while taking their investment decision and minimizing the risk of their investment portfolio. Tiwari & Samuel (2020) surveyed the perception of 200 individual investors regarding credit rating agencies and confirmed that highly educated investors were more satisfied with the credibility and reliability of rating agencies leading to the fact that the rating agencies need to enhance the awareness level of lesser educated investors.

After going through the literature available on various dimensions of credit rating, it is confirmed that the perception of multiple types of users of CRAs, such as individual investors, security issuers, regulators, etc., have been investigated so far, but no study have been conducted regarding the perception of investment managers in Delhi NCR about credit rating service and hence this study attempts to bridge this gap by analyzing the level of satisfaction with credit rating services.

Objectives

This study aims to examine the level of satisfaction of investment managers towards various aspects of Credit Rating Agencies and to identify the factors affecting their level of satisfaction.

Research Methodology

This is a descriptive cum experimental study to analyze the level of satisfaction of investment managers towards various attributes of credit rating. As investment managers are the regular users of investment information provided by credit rating agencies, their perception contributes significantly in assessing the quality of CRAs working. Therefore, a sample of 120 investment managers from Delhi NCR was selected for the study applying a convenient sampling technique. Primary data is collected through a semi-structured questionnaire containing two portions. The first portion includes some open-ended questions regarding respondents' demographic background and investment behavior, and the second portion comprises ten statements regarding their satisfaction with credit rating. These statements about various aspects of Credit Rating Services which are best suited for the objectives of the current study are derived from the questionnaires used in previous studies undertaken by Kaur & Kaur (2010), Sinha & Arpana (2013), Sumathy & Nichlavose (2015), Kumar (2019), etc.

Perceptions were measured using a five-point Likert scale, citing 5 as highly satisfied and 1 as highly dissatisfied. Respondents' level of satisfaction regarding various dimensions of CRAs'

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working constitutes the dependent variable, while, their demographics and investment pattern are taken as independent variables of the study.

First, Exploratory Factor Analysis is applied to all the items of the questionnaires to ensure the validity of the instrument for further multivariate analysis (Ndubisi & Wah, 2005). High communality values are recorded for all the items of the questionnaire using Exploratory Factor Analysis and the Varimax rotation technique. Based on these values, related statements were loaded into single factors (Yong & Pearce, 2013). Two factors were constructed; one depicts the effectiveness of credit rating, and the second represents the assessment quality of Credit Rating Agencies. Reliability analysis is undertaken to ensure the reliability of each factor (Hair et al., 1998).

Further, the discriminant analysis technique has been applied so that the difference in respondents' satisfaction levels can be analyzed, and various factors affecting the satisfaction level of investment managers are identified. Here, the discriminant analysis technique is preferred over the t-test because it estimates the interaction among variables, not only the significant difference among them (Ndubisi & Wah, 2005). But for the application of discriminant analysis, dependent variables need to be categorical (Ayinla & Kehinde Adekunle, n.d.). For this purpose, the underlying factors were categorized using the method given by Moschis and Moore (1979) and Carlson et al. (1990), as cited in Ndubisi & Wah (2005). Factors are summed and split up at the median to classify all the respondents as having high or low levels of each underlying factor. Below, the median turns out to be low level, and over the median is on a high level. Then respective discriminating powers of various independent variables are identified. The collected information is analyzed using IBM SPSS 26.

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Analysis and Discussion

Table 1

Descriptive Statistics and Investment Pattern of Respondents

S. N.	Profile	Description	Responses	Percentage
1.	Number of Years of Experience in Investment Management	0- 10	74	61.7
		11-20	42	35.0
		21-30	04	3.3
2.	Educational Qualification	Graduate	24	20.0
		Post-Graduate	64	53.3
		Professional Degree	32	26.7
3.	Average Annual Income of Organization	Up to 10 Lac	68	56.7
		More than 10 Lac to 20 Lac	22	18.3
		More than 20 Lac	30	25.0
4.	Average Annual Investment on Behalf of Customers	Less than 50 Lac	28	23.3
		50 Lac to 1 Crore	50	41.7
		1 Crore to 5 Crores	15	12.5
		5 Crores and above	27	22.5
5.	General Investment Horizon	Short Term	50	41.7
		Long Term	70	58.3

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Figure 1

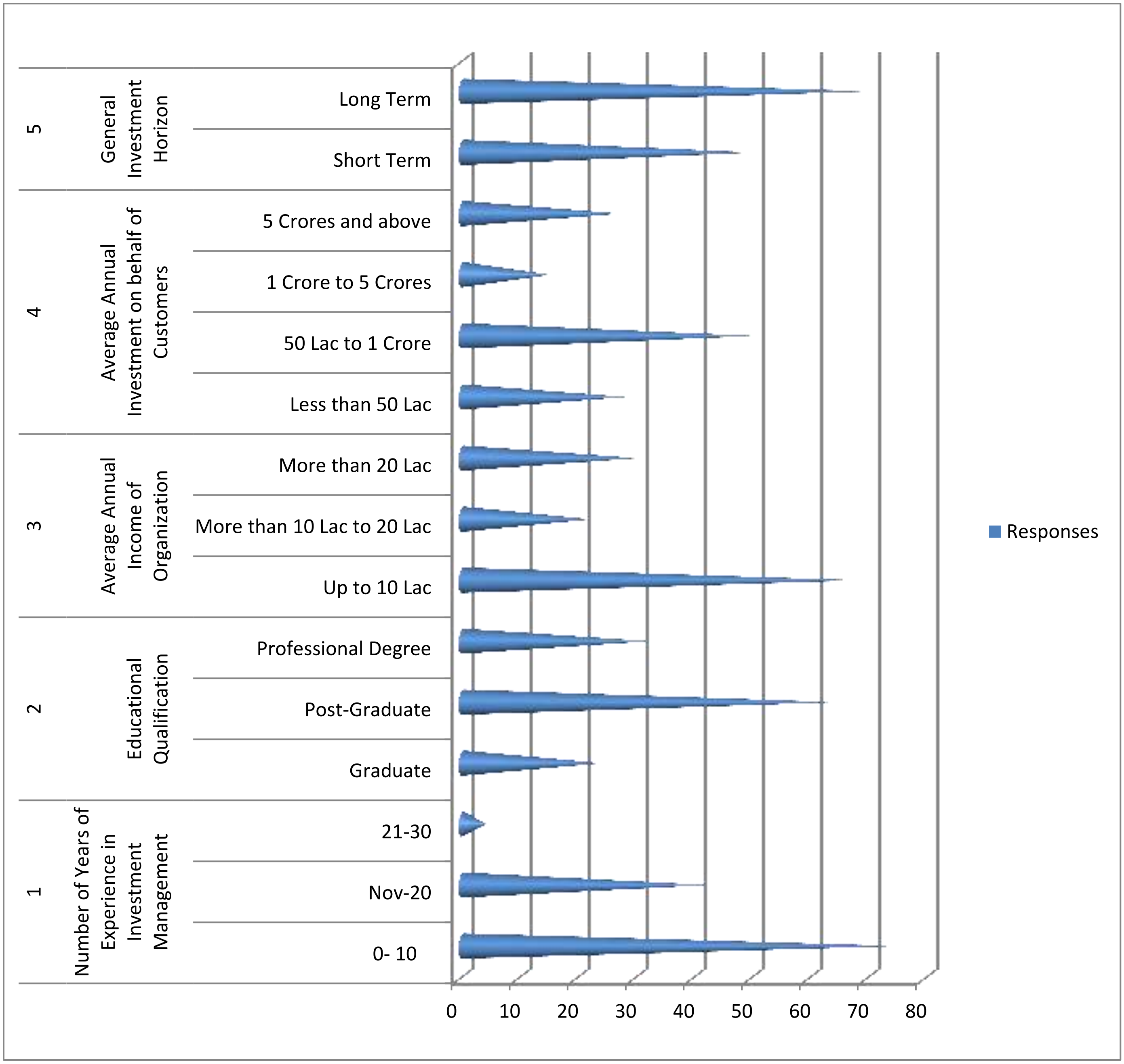

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Table 2
Factor Analysis

Key Dimensions & Items	**Loadings**	**Communalities**
Factor 1: Effectiveness of Credit Rating		
Credit Rating Leads to Markets Efficiency.	.477	.316
Credit Rating provides Adequate Information for Portfolio Decision Making at a Low Cost.	.658	.492
The investment made on the basis of rating grades performs better.	.781	.661
Credit Rating is highly important in the time of uncertainty.	.759	.583
Credit Rating protects against bankruptcy.	.618	.506
Eigen Value: 4.081 **Factor Mean: 3.54** **Variance Explained: 34.770** **Factor Reliability: 0.734 (Cronbach's Alpha)**		
Factor 2: Assessment Quality of Credit Rating Agencies		
Rating Agencies consider all the Financial Information of the Company while assigning Rating Grades.	.573	.434
Rating grades determine the accurate extent of credit risk relating to securities and alert the investors about risk in their investment.	.552	.586
Rating Agencies undertake quality analysis to assign rating grades.	.584	.379
Rating decisions and updates are publicly available in time.	.798	.648
The information provided by Rating Agencies is sound in content of information and clear enough.	.672	.630
Eigen Value: 1.153 **Factor Mean: 3.67** **Variance Explained: 27.574** **Factor Reliability: 0.722 (Cronbach's Alpha)**		
Total Variance: 62.343 **KMO Value: 0.839** **Overall Reliability: 0.829 (Cronbach's Alpha)**		

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Source: *Compilation of Primary Data by Researcher*

Table 2 demonstrates the results of Exploratory Factor Analysis applied to the questionnaire's statements regarding the satisfaction level of respondents with CRAs' working. To ensure the sample adequacy and factor analysis' validity, the Kaiser-Meyer-Olkin measure and Bartlett's Sphericity test are undertaken. As the KMO Value turns out to be greater than 0.5 and the p-value is less than 0.05, the analysis confirms that the sample size for the study is adequate and the analysis is significant (Yong & Pearce, 2013).

Based on high communality values and factor loadings, constructs/factors are created. The first underlying construct (F1) is the E**ffectiveness** of Credit Rating, which consists of five items, viz. Credit Rating leads to Markets Efficiency; Credit Rating provides Adequate Information for Portfolio Decision Making at Low Cost; investment made on the basis of rating grades performs better; credit Rating is highly important in the time of uncertainty; credit Rating protects against bankruptcy; contributing a variance of 34.770.

The second construct (F2) of factor analysis consists of items related to the **Assessment Quality** of Credit Rating Agencies. The items loaded on this factor are: Rating Agencies consider all the Financial Information of the Company while assigning Rating Grades; rating grades determine the accurate extent of credit risk relating to securities and alert the investors about risk in their investment; rating Agencies undertake quality analysis to assign rating grades; Rating decisions and updates are publically available in time; Information provided by Rating Agencies is sound in the content of information and clear enough; contributing to a variance of 27.574.

Thus, all the statements regarding the satisfaction of respondents have loaded into two factors: Effectiveness of credit rating and Assessment quality of Credit Rating Agencies. Both factors explain a significant amount of variance (62.343) collectively. Factors' mean scores are higher than 3, indicating that the majority of the respondents are satisfied with the credit rating. On comparing mean values of both the factor/dimensions, it is exhibited that investment managers are more satisfied with the assessment quality of rating agencies in comparison to the effectiveness or reliability of credit rating, which further highlights the fact that rating agencies are making an accurate assessment of risk inherent in securities; still, their service is comparatively lesser effective in protecting the investors at the time of uncertainty.

The analysis is also found internally consistent as the Cronbach Alpha value greater than 0.60 are considered valid (Hair et al., 1998), and the results of reliability analysis here are fulfilling the condition; Cronbach Alpha for F1 is 0.734, F2 is 0.722, and Overall value is 0.829.

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Table 3
Discriminant Analysis for Level of Effectiveness of Credit Rating

Key Dimensions	Standardized Canonical Coefficients	Unstandardized Coefficients
General Investment Horizon	.880	1.855
Number of Years of Experience in Investment Management	-.467	-.080
Average Annual Income of Organization	.134	.157
Average Annual Investment on Behalf of Customers	-.110	-.103
Educational Qualification	.067	.098
Eigen Value	.125	
Canonical Correlation	.334	
Wilks' Lambda	.889	
Chi-Square	13.645	
Significance	**.018**	

Source: *Compilation of Primary Data by Researcher*

Table 3 exhibits the discriminant model of demographics and investment patterns of respondents with the Effectiveness of Credit Rating. Five key dimensions of respondents' demographics and investment patterns are introduced in the model, viz. Educational Qualification, Number of Years of Experience in Investment Management, Average Annual Income of Organization, Average Annual Investment on behalf of Customers, and the General Investment Horizon. Respondents' level of satisfaction with the effectiveness of credit rating is taken as a categorical dependent variable having two categories, viz. high level and low level of satisfaction. The model is found significant (p=0.018), which establishes that these five dimensions significantly discriminate between the high and low levels of satisfaction of respondents regarding the effectiveness of credit rating.

Further, it is manifested that the general investment horizon and the level of experience in investment management of the respondents have the highest discriminating power, followed by the average annual income of the organization in which the manager is working and the average annual investment made by them on behalf of their clients. The Educational Qualification of respondents has the least discriminating power, which signifies that the investment pattern of these managers plays a more significant role in discriminating their perception regarding credit rating in comparison to their demographics.

Moreover, the analysis demonstrates that the general investment horizon, average annual income of the organization, and educational qualification have a positive correlation with the satisfaction level of respondents, confirming that investment managers who have higher academic

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qualifications, work in higher-income organizations, and are involved in long term investment are more satisfied with the effectiveness of credit rating. Also, there is a negative correlation of the satisfaction level of respondents with average annual investment and experience in investment management, which depicts that investment managers who have been working for a long time in the field and are making a vast investment are less satisfied with the effectiveness of credit rating. The results are consistent with Duff & Einig (2009), Kaur & Kaur (2010), Kumar (2019), and Tiwari & Samuel (2020).

Table 4

Discriminant Analysis for Quality of Assessment by Credit Rating Agencies

Key Dimensions	Standardized Canonical Coefficients	Unstandardized Coefficients
General Investment Horizon	1.004	2.117
Number of Years of Experience in Investment Management	-.231	-0.017
Average Annual Investment on Behalf of Customers	.168	-0.086
Educational Qualification	-.123	-.215
Average Annual Income of Organization	.114	0.005
Eigen Value	.104	
Canonical Correlation	.307	
Wilks' Lambda	.906	
Chi-Square	11.452	
Significance	**.043**	

Source: *Compilation of Primary Data by Researcher*

Table 4 demonstrates the discriminant model of Assessment Quality of Credit Rating Agencies with the demographics and investment patterns of respondents. In the model, Educational Qualification, Number of Years of Experience in Investment Management, Average Annual Income of Organization, Average Annual Investment on behalf of Customers, and the General Investment Horizon are introduced as independent variables, and respondents' level of satisfaction with the assessment quality of credit rating is taken as a categorical dependent variable having two categories, viz. high level and low level of satisfaction. The significance of the model is checked and it was confirmed that the model is significant (p=0.043) and the five dimensions introduced as independent variables in the model have significantly discriminating power between the high and low levels of satisfaction of respondents regarding the assessment quality of credit rating agencies.

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Further, it is manifested that the general investment horizon and the level of experience in investment management of the respondents have the highest discriminating power, followed by the average annual investment made by them on behalf of their clients and the educational qualification of investment managers. The average annual income of the organization where the manager works has the least discriminating power, which signifies that the investment pattern of these managers and their experience play a more significant role in discriminating their perception regarding credit rating in comparison to their demographics and the income of the organization.

Moreover, the analysis demonstrates that the general investment horizon and average annual income of the organization have a positive correlation with the satisfaction level of respondents, confirming that investment managers who work in higher-income organizations and are involved in long-term investment are more satisfied with the effectiveness of credit rating. Also, there is a negative correlation of the satisfaction level of respondents with average annual investment, experience in investment management, and educational qualification, which further depicts that investment managers who are highly educated, working for a long time in the field, and are making a colossal investment are less satisfied with the assessment quality of credit rating agencies. The results are consistent with Duff & Einig (2009), Kaur & Kaur (2010), Kumar (2019), and Tiwari & Samuel (2020).

Conclusion

The results of the study highlight that most of the professional users of credit rating services are satisfied with the effectiveness and assessment quality of rating agencies. It is also spotlighted that investment managers are comparatively more satisfied with the assessment quality of rating agencies compared to their effectiveness. The study revealed that investors dealing in long-term investments are more satisfied than those involved in a tremendous amount of investment for the short term. The findings of the study are consistent with Duff & Einig (2009), Kaur & Kaur (2010), Kumar (2019), and Tiwari & Samuel (2020). Also, the professionals with long experience of using rating grades are less satisfied compared to newly added members of this field. The lack of satisfaction among experienced investors is because post-rating facilities of rating agencies such as rating surveillance, rating review, and rating outlooks are not found effective. Rating agencies should effectively map out the policies regarding post-rating services and their short-term analysis techniques. To enhance the effectiveness of rating services, regulators should also work upon the timeliness of detecting any default and disseminating the information to investors by rating agencies within the stipulated time.

Managerial Implications

The study results provide valuable insights to rating agencies and market regulators worldwide. The findings are suggestive for the credit rating agencies in their policy formulation regarding improvement in their level of quality, communication, understandability, timeliness, credibility,

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and post-rating appraisal process. Also, the regulatory bodies can use these results as inputs while identifying the loopholes in the existing regulatory framework and formulating further regulatory measures for the working of credit rating agencies which can further lead to quality services of CRAs and market efficiency at the global level. Furthermore, the study furnishes various financial intermediaries with information about aspects where the rating agencies are doing good along with the aspects where these agencies are legging behind so that their reliance on ratings can be managed in financial markets. It is further suggested that the findings of the study bearing experts' views can also be adopted by the financial institutions, business associations (FICCI, ASSOCHAM, etc.), and stock markets for framing policies which may further help in consolidation of their own ventures and the economic system of the country as a whole.

Limitations and Future Scope of Research

The study is based on primary data, so the limitations of primary data prevail here. Also, the sample of the study constitutes the investment managers of Delhi NCR only. A more comprehensive sample can also be taken from a larger geographical area. Also, there are various other segments of users of CRAs' services such as financial institutions, business associations (ASSOCHAM, FICCI, etc.), and stock market intermediaries, etc. Perceptions of these users can also be analyzed for further studies. In addition, a comparative study at the national or international level can also be undertaken in the future. Apart from this, a comparative study of perceptions of individual and institutional investors can be undertaken. Investigation of various reasons for the lack of timeliness and effective communication by rating agencies is also possible in further studies.

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