A STUDY OF AUDITING AND CREDIT RATING PRACTICES IN INDIA AND THEIR IMPACT ON DEEPENING THE CORPORATE DEBT MARKET

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ABSTRACT

While India boasts of a world-class equity market, its bond market is still relatively underdeveloped and is dominated by the Government bond market. Retail participation remains low due to a lack of understanding and knowledge of bonds as an asset class. Factors such as the dominance of banks in lending, the risk appetite of investors limited to higher ratings, regulatory arbitrage between loans and bonds, and prescriptive regulatory limits on investments are hindering the growth of the corporate bond market in India. A study was undertaken to explore the possibility of convergence of and auditing and credit rating process for the rating of corporate debt. Experts like Chartered Accountants, Bankers, etc. were surveyed through a questionnaire and their opinion was taken on different dimensions of the proposed convergence. Before the full-fledged study was undertaken, a pilot study was conducted with a sample size of 40 respondents. This article presents the details of this study.

***Keywords**: Auditing, Credit Rating, Corporate Debt Rating, Convergence*

1. Introduction

Recent surge in Indian corporate debt collapses has been a hot topic of discussion and debate among finance professionals. The discussion deepened when in 2019, SEBI, for the 1st time in Corporate history slapped a fine of Rs.25 lakh each on three of India's leading credit rating agencies, namely, India Ratings and Research Private Limited, CARE and ICRA (SEBI, 2019). Eminent debt names like Amtek Auto, Essel group, Reliance Com, Dewan Housing Finance, JP Morgan Debt Fund, and IF&LS have defaulted in recent years shaking the faith of the bond market investors to the core. The defaults happened despite strong performance ratings from the leading Credit Rating agencies. In the light of this debacle in the debt market, a study was undertaken to test the idea of supplementing the existing credit rating mechanism for corporate debt with audit opinion as an additional safeguard mechanism. Objectives set for the research included i) understanding the nexus between a)existing credit rating mechanism for bonds in India, b)the audit opinion and their performance, ii) studying the usefulness of accounting information and ratios as an alternate credit risk assessment mechanism, iii) devising a comparative audit opinion and rating mechanism by auditors and credit rating agencies, iv) exploring the possibility of a converged audit-credit rating mechanism and v) ascertaining if such a converged rating can be useful in improving retail participation in the corporate debt market in India. Experts like Chartered Accountants, Bankers, etc. were surveyed through a questionnaire and their opinion was taken on different dimensions of the proposed convergence. Before the full-fledged study was undertaken, a pilot study was conducted with a sample size of 40 respondents. This article presents the details of the pilot study. The conceptual model set for the study was as under –

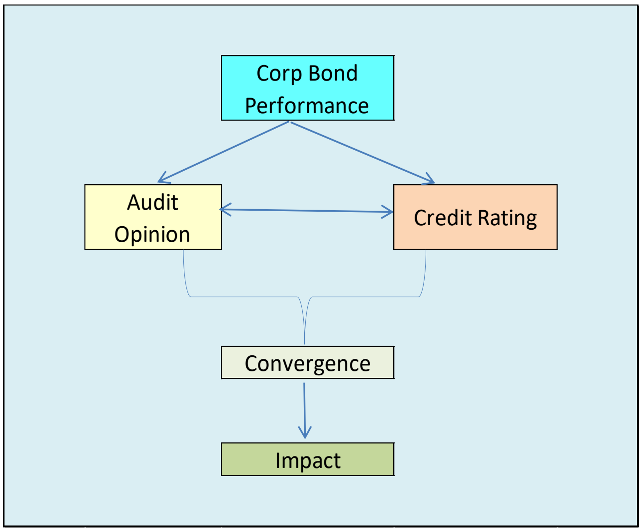

Figure 1: Conceptual model for convergence of audit opinion and credit rating

The relationship between the two services, audit and credit rating was also examined. It was tested if these two compare with each other so that they are compatible enough to get converged.

2. Literature Review

Pan et.al (2020) stated that their paper predominantly portrays the function of credit rating agencies and their effect on the capital market, along with the role of credit rating agencies in the financial crisis. The paper makes a progression of investigations on the failure of credit rating agencies to utilize the early warning function of credit rating and advances 3 issues of credit rating agencies, including improper handling of irreconcilable circumstances for rating business, poor rating quality, and absence of transparency in the operation of credit rating agencies. The absence of transparency in the internal process and content of rating, the absence of comparable data between the rating of traditional goods and undifferentiated structured goods, and the absence of comparable data on the operation performance of credit rating agencies are the causes for the absence of transparency in the operation of credit rating agencies, as well as the significant reasons for the financial storm. Ghosh (2017) stated that credit rating agencies assess the creditworthiness of specific debt instruments. To decide a bond's rating, a credit rating agency investigates the accounts of the issuer and the legal agreements connected to it, to produce the chance of default, anticipated misfortune or a similar metric. The metrics fluctuate between agencies. The downgrade and upgrade of ratings are known as notching. The probability of single and multiple notching is signified by a matrix of transition probabilities. The matrix is defined to depict the probability of change in an underlying rating. Rating migration alludes to a change from an initial rating to a new rating category. The transition matrix signifies the possibility of a company moving from one credit rating to another i.e. the chance of credit quality of a firm improving or intensifying. It signifies moving possibilities from one rating level to all other ratings, including default for a given rating and time horizon. It shows the total possible states that a rating can take over a given time horizon and consequently gives detailed information on rating movements. When credit quality of corporate bonds exacerbates, the possibility of future default also increases. The researcher has estimated transition matrix for companies rated by ICRA utilizing 2 estimation procedures based on historical transitions - Cohort approach & Hazard approach - utilizing 5 years' data from Bloomberg between 2012 & 2017. DeHaan (2017) stated that credit ratings on numerous financial instruments failed to precisely depict default risk before the global financial crisis. The researcher finds no decrease in the performance of *corporate* credit ratings during or after the crisis, showing that the failures of ratings on financial instruments were because of conditions unique to the rating agencies' financial instruments divisions. Or maybe, the preponderance of tests show that corporate credit rating performance improves after the crisis, steady with the rating agencies positively reacting to public criticism and regulatory pressures. Simultaneously, the researcher finds evidence of sophisticated market participants diminishing their reliance on corporate credit ratings after the crisis. Steady with theoretical models of reputation cyclicality; a likely explanation is that the rating agencies experience spillover reputation damage from their failed ratings on financial instruments. The researcher examination informs regulators, practitioners, and academics about the exhibition of corporate credit ratings during and after the crisis, and furnishes novel empirical evidence consistent with reputation concerns influencing credit rating usage decisions. Ligeti etal. (2016) stated that credit rating agencies formulate publicly accessible opinions on the capacity and willingness of debtors to repay debts. Thus, they lessen the information asymmetry between creditors and borrowers. Owing to regulatory endeavors started in recent years, credit rating processes have become progressively more transparent as credit rating agencies publish their methodology and make accessible the values calculated for the most significant key variables. This study is expected to inspect the extent to which the indicative rating range resulting from the methodology at the current level of transparency clarifies the experimentally observed credit rating of sovereigns. The authors determined a rating range of 3 notches and found that in the case of S&P, a higher ratio of observed credit ratings fell within this range and permitted for the reconstruction of individual steps, while Moody's and Fitch's presently accessible methodologies proved to be less suited for such a reconstruction.

Not many studies are available on the failure of the credit rating mechanism in the Indian corporate debt market. Researchers, therefore, decided to explore the possibility of strengthening the existing rating mechanism with support from audit opinion.

3. The Pilot Study (n = 40)

3.1 Objectives of the pilot study

Following objectives were set for the pilot study -

1. To understand the issues encountered in data collection
2. To test the usage of the questionnaire
3. To test the hypotheses as per research methodology
4. To test the validity and reliability of the questionnaire prepared for primary data collection

3.2 Methodology

Sample– For the pilot study a sample size of 10% of the main study sample size of 400 was taken. Experts like Chartered Accountants, Bankers, Rating Agency employees, and Mutual Fund employees were surveyed.

The instrument for the survey – A questionnaire was designed for this purpose. It was modified as per the suggestions given by the guide. Each of the constructs had 10 sub-constructs in the questionnaire. As suggested by Menold and Bogner (2016), a "Don't Know" (DK) filter was provided to the respondents by keeping the 1st option of response as No Response.

The response to the key variable questions was taken on a 5-point agree/disagree Likert scale as under –

Table 1: Scales used and values assigned to responses for analysis

Section No.	Title	Scale	Values for data analysis
I	Accounting information and ratios as an alternate credit risk assessment mechanism	No response, Somewhat agree, Completely agree, Somewhat Disagree, Completely Disagree	0 1 2 -1 -2
II	Audit opinion compared with credit rating	No response, Somewhat agree, Completely agree, Somewhat Disagree, Completely Disagree	0 1 2 -1 -2
III	The convergence of audit and credit rating	No response, Somewhat agree, Completely agree, Somewhat Disagree, Completely Disagree	0 1 2 -1 -2
IV	Impact of convergence on retail participation	No response, Somewhat agree, Completely agree, Somewhat Disagree, Completely Disagree	0 1 2 -1 -2

The questionnaire was tested for validity and reliability as under –

Test of validity –The hypotheses, hypotheses testing method, questionnaire, etc. were validated by the Guide and other experts in the field to ensure that the measurement was adequate and accurate in terms of the desired direction.

A check-list as prescribed by Collingridge et al. (2015) was applied for validation as under –

Table 2: Application of Collingridge check-list for validation

Step No.	Step	Action
1	Establish Face Validity	The questionnaire has been validated for face validity by guide and group of experts.
2	Clean Collected Data	The mechanism of collecting data ensured that there is no invalid entry because there is no manual entry only. Response selection was based on a range of options provided through a pop-up list.
3	Use Principal Components Analysis (PCA)	Too many variables not being under consideration, PCA was not used.
4	Check Internal Consistency	This was done through Cronbach's Alpha

Test of reliability – Cronbach's Alpha and other tests were applied to the questionnaire using "Siegle Reliability Calculator" an excel program. The Cronbach's Alpha score was 0.88. As the Cronbach's alpha score was more than 0.70, the questionnaire was considered as reliable.

Hypotheses formulation-

The hypotheses formulation is presented below –

Table 3: Hypotheses formulation

Sr. No.	Area of study	Null Hypotheses (Ho)	Alternate Hypotheses (Ha)
1	Relationship between a)credit rating and b)audit opinion and bonds performance	There is no negative relationship between a)credit rating and b)audit opinion and bonds performance	There is a negative relationship between a)credit rating and b)audit opinion and bonds performance
2	Accounting information and ratios as credit risk assessment mechanism	Accounting information and ratios as credit risk assessment mechanism will not be different from credit rating	Accounting information and ratios as credit risk assessment mechanism will be significantly different from credit rating
3	Audit opinion and credit rating mechanism in comparison	Audit opinion and credit rating mechanism do not compare with each other	Audit opinion and credit rating mechanism do compare with each other
4	The convergence of audit opinion and credit rating	Audit opinion and credit rating cannot converge	Audit opinion and credit rating can converge
5	Impact of convergence	There will be no impact of convergence on retail participation	There will be a positive impact of convergence on retail participation

Scheme formed for testing of hypotheses

- The 1st hypothesis was to be tested based on secondary data collating the audit opinion and credit rating of select debt instrument failures in India.
- In the case of the other hypotheses, the scheme formulated was as under -
  - ➢ The responses under each of the sections of the survey questionnaire would be aggregated under two groups – agree and disagree,
  - ➢ While doing so for each of the completely agree/disagree responses, would be assigned a weight of 2 each to distinguish them from the somewhat agree/disagree responses,
  - ➢ For each of the question, an average agree and disagree count will be calculated,
  - ➢ Agree percentages to questions under one particular section of the questionnaire will be averaged to get a single agreement/disagreement percentage for that section,
  - ➢ The average agreement percentage will be compared with a hypothesized mean of the population of 50% agreement connoting an agreement by chance and not due to statistical significance,

- P-values will be calculated and the null hypotheses were checked for rejection or non-rejection. These calculations would be done at a 95% confidence level using a t-test since the standard deviation (SD) of the population is not known.

4. Data analysis

a. Descriptive features of the sample of 40 respondents

The distribution of *age* was 4 of 20 -29 years group; 17 of 30-39 years group; 5 of 40-49 years group; and 14 of >=50 years group. 22 respondents were from the Post-Graduate *education* group; 16 were from theprofessional group; and 2 for PG + professional group. The distribution of *category* was 8 of Chartered Accountant group; 10 of Banker group; 15 of Rating Professional group; and 7 of the MF Managers group. The distribution of *work experience* was 4 of 5-10 years group; 19 of 10-15 years group; and 17 of>15 years group.

b. Inferential analysis (Testing of hypotheses)

For testing the 1st hypothesis following secondary data was compiled regarding one recent but major debt failure as under –

Table 4: Rating and Audit opinion of select debt failures

Debt	Default	CRA	Date of Rating	Rating #	Audit Opinion		
IL& FS	**Sep'18**	India Ratings	1-Mar-18	AAA assigned to proposed NCDs	Mar-18	Mar-17	Mar-16
			24-Aug-18	Downgraded from AAA to AA+.	Clean	Clean	Clean
			11-Sep-18	Downgraded from AA+ to BB.	BSR & Co.	Delloitte	Delloitte
			18-Sep-18	Downgraded from BB to D.			
		ICRA	27-Mar-18	Reaffirmed at AAA			
			6-Aug-18	Downgraded from AAA to AA+.			
			8-Sep-18	Downgraded from AA+ to BB.			
			17-Sep-18	Downgraded from BB to D.			
		CARE	9-May-18	AAA assigned to proposed NCDs			
			16-Aug-18	Downgraded from AAA to AA+.			
			9-Sep-18	Downgraded from AA+ to BB.			
			17-Sep-18	Downgraded from BB to D.			

Source – SEBI Orders dated 26th December 2019

IL&FS has been rated with grades like AAA and AA+. All the three previous year audit reports had given an unqualified opinion. Despite this, the debt defaulted in September 2018. The null hypothesis that there is an absence of a negative relationship between a)credit rating and b)audit opinion and bonds performance is rejected in favor of the alternate.

Table set 5: Summary of responsesto the 4sections of the questionnaire

Qstn.	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	1.10	Average
Agree %	78%	73%	83%	87%	72%	86%	69%	73%	78%	80%	78%

Qstn.	2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9	2.10	Average
Agree %	96%	87%	87%	85%	86%	86%	85%	93%	87%	87%	88%

Qstn.	3.1	3.2	3.3	3.4	3.5	3.6	3.7	3.8	3.9	3.10	Average
Agree %	83%	83%	86%	78%	75%	79%	81%	81%	83%	82%	81%

Qstn.	4.1	4.2	4.3	4.4	4.5	4.6	4.7	4.8	4.9	4.10	Average
Agree %	91%	95%	95%	95%	95%	91%	91%	85%	96%	89%	92%

The average agreement for each section was compared with a hypothesized population mean of 50% (connoting, an event by chance), and it was ascertained if the difference is statistically significant or not @ 95% confidence level.

Table 6:Hypotheses testing @95% confidence level

Sr. No.	Parameter	H2	H3	H4	H5
1	Average	78%	88%	81%	92%
2	SD	0.94711	0.78472	0.92831	0.71511
3	H1	50%	50%	50%	50%
4	Ho	0.78	0.88	0.81	0.92
5	n	40	40	40	40
6	t-value	1.87	3.05	2.12	3.74
7	p-value	0.034399	0.002037	0.020172	0.000292
8	Decision	Reject Null	Reject Null	Reject Null	Reject Null

All the four null hypotheses from H2 to H5 were rejected given p-values <0.05.

Summary of inferential analysis

Summary of the testing of all the five hypotheses along with their interpretation is given below –

Table 7:Summary of inferential analysis

Sr. No.	Null Hypotheses	p-value	Decision	Interpretation
1	There is an absence of a negative relationship between a)credit rating and b)audit opinion and bonds performance	--	Reject Null	There is a negative relationship between a)credit rating and b)audit opinion and bonds performance
2	Accounting information and ratios as credit risk assessment mechanism will not be different from credit rating	0.034399	Reject Null	Accounting information and ratios as credit risk assessment mechanism will be different from credit rating
3	Audit opinion and credit rating mechanism do not compare with each other	0.002037	Reject Null	Audit opinion and credit rating mechanism compare with each other
4	Audit opinion and credit rating cannot converge	0.020172	Reject Null	Audit opinion and credit rating can converge
5	There will be no impact of convergence on retail participation in the bond market	0.000292	Reject Null	There will be a positive impact of convergence on retail participation in the bond market

5. Conclusions

As regards the pilot study following conclusions were reached –

a) Data collection is possible with reasonable comfort

b) Processing of the data into variables required for inferential data analysis can be done

c) The hypotheses can be duly tested as per research methodology

d) The questionnaire prepared for primary data collection tests well for validity and reliability. However, respondents demanded confidentiality.

There is a negative relationship between a)credit rating & b)audit opinion and bonds performance as can be seen from the IL & FS case. 78% of the respondents agreed that accounting information and ratios as a credit risk assessment mechanism will be different from credit rating. 88% of the respondents agreed that audit opinion and credit rating mechanism compare with each other. Further, 81% were in agreement that audit opinion and credit rating can converge. 92% of the respondents agreed that there can be a positive impact of convergence on retail participation in the bond market. Thus, there is a wide agreement among experts that the two practices can converge and this can encourage retail participation in the debt market.

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