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Awareness of Credit Score Mechanism in India: A Study with reference to Credit Information Bureau India Limited (CIBIL)

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Abstract

The subject of credit scoring has become an increasingly hot topic, and for good reason. For many years, the general public only associated the concept of credit scoring with the need to purchase high-ticket items such as a new car or a home. Today, credit scoring goes much further. The credit score can affect the ability to get a good rate on commodities such as car insurance, cell phones, or even determine whether or not one get the job or promotion that he / she want and deserve. A credit score is numerical expressions based on a level analysis of a person's credit files, to represent the creditworthiness of that person i.e. to say the diagnosis of financial fitness/discipline. In India, many people do not know about the credit scoring system and much less their credit score, until they attempt to buy a home, take out a loan to start a business or make a major purchase. This study intends to identify the degree of awareness among individuals regarding their very own credit score mechanism, simultaneously realizing its vital importance. It tries to scan that whether, there is a significant association between the monthly income and the respondents' understanding of credit score and also there is a significant association between credit score awareness and motivation to increase the credit score. The statistical tool used to test the hypothesis of the credit score awareness has been done by: Chi-Square Test. The study also reflects a proportional relation between the income of the respondents and their knowledge about their credit score. The survey showed that most consumers understood the basic concepts of credit reporting and had seen their credit reports but that many lacked knowledge of as to where exactly their credit is put for use and who actually uses it. It is suggested that financial literacy in terms of being 'Financially Fit' and 'Financially Disciplined' should be addressed to the consumers so that they are more aware about the worthiness of credit scoring mechanism. The essence of finance is the prediction of the risk, whether borrowers will keep their promises.

Key words: Credit Score, CIBIL, Financial Discipline, Financial Diagnosis, Credit Report

1. Introduction

The subject of credit scoring has become an increasingly hot topic, and for good reason. For many years, the general public only associated the concept of credit scoring with the need to purchase high-ticket items such as a new car or a home. Today, credit scoring goes much further. The credit score can affect the ability to get a good rate on commodities such as car insurance, cell phones, or even determine whether or not one get the job or promotion that he / she want and deserve. Indeed, the financial snapshot provided by the credit score has also become a gauge for many employers, especially those who seek to place employees in a position of management or financial responsibility. Lenders such as banks and credit card companies use credit scores to determine who qualifies for a loan, at what interest rate, and what credit limits. Lenders also use credit scores to determine which customers are likely to bring in the most revenue. The use of credit or identity scoring prior to authorizing access or granting credit is an implementation of a trusted system.

2. CIBIL's Credit Score:

A credit score is numerical expressions based on a level analysis of a person's credit files, to represent the creditworthiness of that person i.e. to say the diagnosis of financial fitness/discipline. A credit score is primarily based on credit report information typically from credit bureaus.

The Credit Information Bureau India Limited (CIBIL) credit score is a three-digit number that represents a summary of individuals' credit history and credit rating. This score ranges from 300 to 900, with 900 being the best score. Individuals with no credit history will have a score of -1. If the credit history is less than six months, the score will be 0. CIBIL credit score takes time to build up and usually it takes between 18 and 36 months of credit usage to obtain a satisfactory credit score.

3. Literature Review:

In their Working Paper titled 'a portfolio view of consumer credit', **David K. Musto and Nicholas S Souleles (2005)** have used a unique panel dataset of credit bureau records to measure the 'covariance risk' of individual consumers, i.e., the covariance of their default risk with aggregate consumer default rates, and more generally to analyze the cross-sectional distribution of credit, including the effects of credit scores. They obtain two key sets of results. First, there is significant systematic heterogeneity in covariance risk across consumers with different characteristics. Consumers with high covariance risk tend to also have low credit scores. Second, the amount of credit obtained by consumers significantly increases with their credit scores, and significantly decreases with their covariance risk, though the effect of covariance risk is smaller in magnitude.

Jappelli and Pagano (2002) have contributed the first empirical work relating to the existence of credit reporting activities in approximately forty countries around the world. They have also studied their impacts at the economy-wide level, including volume of credit, price of credit, quality of credit portfolios, and access to credit.

Galindo A. and Miller M.J. (2003) argues that the collection and maintenance of adequate positive data will significantly increase technical, personnel and financial requirements of credit bureaus, raising the cost for credit institutions, which will ultimately be reflected in the cost of loans for consumers. Thus, according to them consumer information, responsible lending practices and the legal environment should be balanced in any public policy strategy.

Avrey R.B., Calem P.S., and Canner G.B. (2004) are of the view that credit history offers benefits to lenders and the economy, failure to consider situational circumstances raises important statistical issues that affect the ability of scoring systems to accurately quantify an individual credit risk.

Smith, Brent C, (2011) has represented an extension of the expansive credit risk and credit migration literature, prominent in the corporate bond and securities risk pricing literature, to an analysis of the drift of consumer credit scores. The final results indicate that credit scores provide signals and information to investors and servicing agents in a fashion similar to credit ratings on commercial paper as to default potential.

Ashlyn Aiko Nelson (2010) has attempted to estimate the effects of credit scores on residential sorting behavior using a novel mortgage industry data set combining household demographic, credit, and financial data with property location information and detailed community attribute data. According to him, simulation results show that increases in credit score are associated with increases in the consumption of higher-priced homes in more expensive school districts, higher-quality public schools and proximity to urban metropolitan areas.

4. Statement of the Problem:

In India, many people do not know about the credit scoring system and much less their credit score, until they attempt to buy a home, take out a loan to start a business or make a major purchase. A credit score is usually a three-digit number that lenders use to help them decide whether you get a mortgage, a credit card or some other line of credit, and the interest rate you are charged for this credit. The score is a picture of you as a credit risk to the lender at the time of your application. This study intends to identify the degree of awareness among individuals regarding their very own credit score mechanism, simultaneously realizing its vital importance.

5. Objectives of the Study:

- To know the dimensions of credit score mechanism.
- To know the degree of awareness among individuals in respect to credit score.
- To study and know the practical aspects of credit scoring.
- To analyze the perception of individuals regarding credit score mechanism.

6. Hypotheses of the Study

H₀: There is no significant association between the monthly income and the respondents understanding of credit score.

H₁: There is a significant association between the monthly income and the respondents understanding of credit score.

H₀: There is no significant association between credit score awareness and motivation to increase the credit score

H₁: There is a significant association between credit score awareness and motivation to increase the credit score

7. Data Collection Methods:

Primary Data: Primary data is the data collected for the first time for the purpose to solve the problem at hand. In this study primary data is collected by survey research. Based upon the objective of the study and the approach, questionnaire development and sampling plan design has been undertaken.

- Questionnaires
- Discussions

Secondary Data: It is the data which has already been analyzed by some other agency for the first time and has been derived from that analysis for the benefit of the particular study.

- CIBIL official Website
- Journals
- Magazines
- Newspaper

8. Sampling Techniques:

The technique adopted for sampling will be Non-probability convenient & Judgmental sampling technique where the questionnaire would be distributed among the individuals and a relevant data would be obtained for the main purpose of basic analysis and interpretation.

9. Tools for Data Analysis:

The data representation has been done in the form of tables and bar graphs so as to make it more convenient to interpret. The tool used for testing the hypothesis was SPSS and the method used is Chi-Square Test and Anova.

10. Results & Discussion:

This section deals with the data analysis and discussion.

10.1 Profile of the Respondents:

The respondents were predominantly in the age group of 26-35 (41%), followed by 18-25 (35%), 36-45 (14%) and above 45 (10%). 35% of the sample respondents had an income range of Rs.21,000 to 35,000. The respondents who earn above Rs.50,000 was just 12 %.

10.2 Availing Loan Facility from Bank:

Table 1

	Percent	Cumulative Percent
Yes	53	53
No	47	100
Total	100	

From the Table 1, it is obvious that 53 % of the respondents have availed loan facility from the banks and the rest 47% have never availed any kind of loan facility from banks. Thus, we can conclude that most of the respondents have availed loan facility from bank and hence they might be aware of the credit scoring mechanism.

10.3 Loan Cancellation:

Table 2

	Percent	Cumulative Percent
Yes	16	16
No	84	100
Total	100	

From the above table it is clear that loan application of 84 % respondents has never been cancelled and for the rest 14% it has been cancelled. Thus, it is understood that mostly the loan applications of the respondents have never been cancelled which directly reflects that they would be having an acceptable (medium-high) credit score.

10.4 Timely Payment of Utility Bills:

Table 3

	Percent	Cumulative Percent
Yes	83	83
No	17	100
Total	100	

83% of the respondents pay their utility bills like electricity bills, EMI, phone bills etc. on time while rest 17 % delay or do not pay their bills on time. Thus it is clear that mostly all the respondents are sincere and regular in paying off their utility bills on time so as to maintain a good credit score.

10.5 Awareness on Credit Bureau:

Table 4

	Percent	Cumulative Percent
Yes	74	74
No	26	100
Total	100	

The above table shows that 74 % of the respondents are aware about Credit bureaus while the rest 26% are still unaware about it. Thus one can interpret that mostly majority of the respondents are aware about credit bureaus, their role and mechanism.

10.6 Awareness about Credit Report:

Table 5

	Percent	Cumulative Percent
Yes	76	76
No	24	100
Total	100	

The above table shows that 76% of the respondents have heard and they know about Credit Reports while the rest 24% are totally unaware. Thus we can interpret that most of the respondents are aware about the credit report and know its generation and purpose.

10.7 Awareness about CIBIL:

Table 6

	Percent	Cumulative Percent
Yes	56	56
No	44	100
Total	100	

The table above states that 56% of the respondents are aware of CIBIL (Credit Information Bureau of India Ltd) while the rest 44% of respondents are not at all aware. From the above analysis we can interpret that more than 50% of the respondents have heard and are aware about CIBIL on the whole.

10.8 Users of Credit Score: Respondents' Perception

Table 7

	Percent	Cumulative Percent
Mortgage lender	4	4
Home Insurer	3	7
Credit Card Companies	37	44
Banks	56	100
Total	100	

The above table states that 56% of the respondents have said banks use credit score, 37% have said that it is used by credit card companies and the rest 4% and 3% have said Mortgage lender and Home insurer respectively. Thus one can interpret that more than 50% of the respondents have answered correctly that credit score is mostly used by banks and hence the respondents seem to be aware of the credit score.

10.9 Credit Score Measurement: Respondents' Perception

Table 8

	Percent	Cumulative Percent
Knowledge of consumer credit	14	14
Attitude towards consumer credit	9	23
Amount of consumer debt	10	33
Risk of not repaying loan	38	71
Financial resources to pay back loans	29	100
Total	100	

The table above shows that the 38% of the respondents have answered as 'risk of not paying the loan, 29% say financial resources to pay loan, 14% consider it as 'knowledge of consumer credit, and the rest 10% and 9% consider it as amount of consumer debt and attitude towards consumer credit respectively. From the above analysis it is clear that the respondents are somewhat aware of the reason of measuring the credit score.

10.10 Factors Used To Measure A Credit Score:

The table below states that 65% of the respondents have chosen 'Payment details' as the most important factor of credit score while rest 18% and 17% considers high balance and personal details respectively. From the above analysis we can interpret that most of the respondents are aware that their 'Payment details' are the most important factor used to measure their credit score.

Table 9

	Percent	Cumulative Percent
Personal Details	17	17
Payment Details	65	82
High Balances & Bankruptcy	18	100
Total	100	

10.11 Factors to Maintain a Good Credit Score:

Table 10

	Percent	Cumulative Percent
Loan Payments On Time	67	67
Low Credit Balances	19	86
Avoid Using Several Credit Cards	14	100
Total	100	

The above table states that 67% of the respondents feel that 'making loan payments on time' helps them to maintain a good credit score while the rest 19% and 14% consider 'low credit balances' and 'avoiding several credit cards' respectively as the key of maintaining a good credit score. From the above analysis we can interpret that most of the respondents are aware of the fact that if they make their all payments on time, they can raise/maintain a good generic credit score.

10.12 Delayed Loan Payment:

Table 11

	Percent	Cumulative Percent
Yes	13	13
No	87	100
Total	100	

The above table shows that 87% of the respondents have never delayed their loan payments while the rest 13% have delayed it. From the above analysis we can interpret that mostly all the respondents are punctual and sincere in paying their Loans and EMI.

10.13 Rating on Credit Score Awareness:

Table 12

	Percent	Cumulative Percent
Low awareness	24	24
Medium Awareness	52	76
High Awareness	24	100
Total	100	

The above table states that 52% of the respondents are on a medium scale when it comes to awareness about credit score, 24% have high awareness while the rest 24% have really low awareness when it comes to credit score. From the above analysis we can interpret that half of the respondents have medium awareness in terms of credit score.

11. Hypotheses Testing:

The statistical tool used to test the hypothesis of the credit score awareness has been done by: Chi-Square Test.

The chi-square (I) test is used to determine whether there is a significant difference between the expected frequencies and the observed frequencies in one or more categories. Do the numbers of individuals or objects that fall in each category differ significantly from the number you would expect? Is this difference between the expected and observed due to sampling error, or is it a *real* difference?

11.1 Chi-Square Test Requirements

1. Quantitative data.
2. One or more categories.
3. Independent observations.
4. Adequate sample size (at least 10).
5. Simple random sample.
6. Data in frequency form.
7. All observations must be used.

The chi-square formula used on these data is:-

$$X^2 = \frac{(O - E)^2}{E} \quad \text{where: } O \text{ is the Observed Frequency in category}$$

E is the Expected Frequency in the corresponding

Categories sum of df is the "degree of freedom"

$(n-1)$ X^2 is Chi Square

11.2 Steps in using the Chi-Square Test:

- Write the observed frequencies in column O
- Figure the expected frequencies and write them in column E .
- Use the formula to find the chi-square value:
- Find the df . $(N-1)$
- Find the table value (consult the Chi Square Table.)
- If your chi-square value is *equal to or greater than* the table value, reject the null hypothesis.

H_0 : There is no significant association between the monthly income and the respondents understanding of credit score.

H_1 : There is a significant association between the monthly income and the respondents understanding of credit score.

Table 13
Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
New monthly income * Meaning of credit score	100	100.0%	0	0.0%	100	100.0%

Table 14

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	13.768 ^a	4	.008
Likelihood Ratio	13.323	4	.010
Linear-by-Linear Association	10.439	1	.001
N of Valid Cases	100		
a. 3 cells (33.3%) have expected count less than 5. The minimum expected count is 2.90.			

Table 15

New monthly income * Meaning of credit score Cross tabulation						
			Meaning of credit score			Total
			1.00	2.00	3.00	
New monthly income	1.00	Count	13	4	12	29
		Expected Count	6.7	2.9	19.4	29.0
		% within Meaning of credit score	56.5%	40.0%	17.9%	29.0%
	2.00	Count	5	4	26	35
		Expected Count	8.1	3.5	23.5	35.0
		% within Meaning of credit score	21.7%	40.0%	38.8%	35.0%
	3.00	Count	5	2	29	36
		Expected Count	8.3	3.6	24.1	36.0
		% within Meaning of credit score	21.7%	20.0%	43.3%	36.0%
Total		Count	23	10	67	100
		Expected Count	23.0	10.0	67.0	100.0
		% within Meaning of credit score	100.0%	100.0%	100.0%	100.0%

P-value (.008) <0.05 signifies that there is a significant association between the monthly income and the respondents understanding of credit score. Therefore we can reject the Null Hypothesis (H_0).

Chi – square test is giving significant result which in turn suggests rejecting the null hypothesis. By rejecting the null hypothesis we can conclude that **there is a significant relationship** between the income of the respondents and their knowledge about their credit score.

H_0 : There is no significant association between credit score awareness and motivation to increase the credit score

H_1 : There is a significant association between credit score awareness and motivation to increase the credit score

11.3 One-way ANOVA

Table 16

Descriptive

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Loan payments on time	67	2.21	0.64	0.078	2.05	2.37	1	3
low credit balances	19	1.53	0.697	0.16	1.19	1.86	1	3
Avoid using several credit cards	14	1.64	0.497	0.133	1.36	1.93	1	2
Total	100	2	0.696	0.07	1.86	2.14	1	3

Table 17

ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	8.974	2	4.487	11.153	0
Within Groups	39.026	97	0.402		
Total	48	99			

11.4 Post Hoc Tests:

Table 18

Multiple Comparisons

(I) How to get high credit score	(J) How to get high credit score	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Loan payments on time	low credit balances	.683*	0.165	0	0.36	1.01
	Avoid using several credit cards	.566*	0.186	0.003	0.2	0.94
low credit balances	Loan payments on time	-.683*	0.165	0	-1.01	-0.36
	Avoid using several credit cards	-0.117	0.223	0.603	-0.56	0.33
Avoid using several credit cards	Loan payments on time	-.566*	0.186	0.003	-0.94	-0.2
	low credit balances	0.117	0.223	0.603	-0.33	0.56

*. The mean difference is significant at the 0.05 level.

P-value (.000) <0.05 signifies that there is a significant association between credit score awareness and motivation among the respondents to increase the credit score. Therefore we can reject the Null Hypothesis (H_0). From the Post-hoc analysis table it is known that people who make Loan payments on time are more aware of their credit rating as compared to people who have low credit balances and people who avoid several credit cards.

12. Findings:

1. The research study and the analysis states that most of the respondents (76%) are aware about the Credit score.
2. It is clear that there is an association between the respondents' knowledge about credit reports and their motivation to raise and maintain a decent high credit score.
3. The analysis also reveals that people who make Loan payments on time are more aware of their credit rating as compared to people who have low credit balances and people who avoid several credit cards.
4. The study also reflects a proportional relation between the income of the respondents and their knowledge about their credit score.
5. Though the customers are very well about credit score and credit report but still their knowledge about CIBIL is still restricted
6. the survey showed that most consumers understood the basic concepts of credit reporting and had seen their credit reports but that many lacked knowledge of as to where exactly their credit is put for use and who actually uses it.

13. Suggestions:

1. CIBIL should provide a uniform basis for consumers' access to information in consumer's credit reports at a reasonable charge.
2. Financial literacy in terms of being 'Financially Fit' and 'Financially Disciplined' should be addressed to the consumers so that they are more aware about the worthiness of credit scoring mechanism.
3. Financial institutions and agencies who use the credit score in the process of loan approvals and other utility approvals must also consider a concession or a priority while they grant such services to consumers who have a high credit score.
4. Consumers having high credit score and who are disciplined in terms of paying off their utility bills and loan payments must be given a preference like high interest rates, discounts on bills, new offers etc.
5. If credit scoring coupled with credit bureaus providing in-depth databases is employed, promising results may be achieved in reducing transaction and risk costs, as lending decisions can be automated and as repayment is reinforced.
6. Setting up a scoring scheme to predict future repayment conduct or loyalty can only be undertaken if accurate information exists for large numbers of clients over several years.

14. Conclusion

The essence of finance is the prediction of the risk, whether borrowers will keep their promises. Risk estimates are based on information; and in microfinance, this information is usually qualitative and informal. It resides with group members or with loan officers. Credit scoring takes a different tack. It predicts risk based on quantitative information that resides in the management-information system of the lender. Credit scoring for microfinance can work.

Credit scoring has become an increasingly dominant factor in our economic lives. Credit scores dictate whether a person will be able to buy (and keep) a home by obtaining a reasonable mortgage. They determine access to other kinds of credit, such as credit cards, as well. It is not as powerful as scoring for credit card or mortgage lenders in wealthy countries, and it will not replace the judgments of loan officers or loan groups based on informal, qualitative knowledge, but scoring does have some power to predict risk (and thus to cut costs) even after the group or loan officer makes its best judgment. Thus, scoring complements, but does not replace, current microfinance technologies. Furthermore, scoring not only helps to predict risk, but also reveals how characteristics of the borrower, the loan, and the lender affect risk. This knowledge is useful whether a microfinance lender

uses risk predictions from scoring to inform daily decisions. If credit scoring coupled with credit bureaus providing in-depth databases is employed, promising results may be achieved in reducing transaction and risk costs, as lending decisions can be automated and as repayment is reinforced.

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