

## **Borrowing Behavior of Retail Customers in Indian Bank-An Analysis**

B. Sumathisri and G.R. Gayathri

Department of Commerce and Management Studies, Srinivasa Ramanujan Centre,  
Sastra University, Kumbakonam, India

---

**Abstract:** Commercial banks extend financial assistance or the credit facilities in different ways. Although, all credit facilities are basically a loan, different methods of financing are adopted depending upon the period of finance, purpose of finance, Quantum of balance, etc. In this context, the study was undertaken to analyze the retail borrower's behavior in Indian bank. The objectives were analyzed with the help of primary data and tools like correlation, regression and factor analysis have been explored to interpret the data. The study concludes that by enhancing and developing Indian bank on the basis of facilities and proper loan sanctioning system will enable retail borrowers to pay their dues on time. The said objectives were analyzed with the help of primary data which was collected from 160 respondents who have availed the various loans from the Indian bank. The data were limited at micro level. The regression model has no significant prediction for the dependent variable. It has been inferred from the study that the overall satisfaction level of the Indian bank was conferred an attitude of bank employee's mode of payment towards loan and qualify amount which were highly appreciable among the borrowers.

**Key words:** Creditworthiness, borrower's behavior, satisfaction level, equated monthly installment, trustworthiness, non-banking asset, micro finance

---

### **INTRODUCTION**

Liberalization and deregulation of the financial sector, the use of technology and the changing nature of customers who are time, quality and price conscious as well as demanding in a number of other ways has ushered in a new era in the banking sector. The traditional face of banking which concentrated on deposits and loans now has to cater to a whole range of services-personal loans for education, housing or automobiles, equipment financing, remittances from abroad, international letters of credit, loan syndication and insurance to new a few. Modern banking in India has traverse a long way, since independence (Sethi and Bhatia, 2012).

Indian banking system developed enormously over the years. Commercial banks extend financial assistance or the credit facilities in different ways. Although, all credit facilities are basically a loan, different methods of financing are adopted depending upon the period of finance, purpose of finance, Quantum of balance, etc. Similarly, the repayment of loan is also arranged in specific ways to suit customers/borrowers requirements (Natarajan and Parameswaran, 2012).

Investment in and sale of commercial properties are recently gaining popularity in India thanks to real estate

prices hitting an all-time low and attractive schemes being offered by various housing finance companies and banks. Of late, housing finance has not only become popular but the procedure for obtaining a loan has become so, simplified that housing loans are easily available. Housing finance has received a boost through a combination of growing demand and rising affordability. In other words, enhanced affordability has spurred an increase in the demand for housing loan. The main factor responsible is budgetary support, i.e., tax benefits, a low interest rate regime and high salary levels among certain sections are chiefly responsible for fuelling fast growth in the housing finance sector. Also, RBI maintains a soft interest rate regime. The bank rate of interest is constantly being slashed so that, it acts as a stimulant for housing demand (Gurusamy, 2013).

**Changing profile of customers:** At the outset, a gradual change in the behavioral profile of the customers is quite natural as change in the environmental conditions. The increasing rate of literacy, the changing level of income, the significant developments in the field of transportation and communications, the domination of corporate sector in activating the process of development influence the customers behavior vis-a-vis the needs and

requirements and the lifestyles. In this regard, the customer's decision making process may be simple or elaborate, static or dynamic, gregarious or distinct or a combined endeavor of all (Jha, 2003). An ever-increasing middle class with more disposable income, higher education and a desire for higher standard of living have fuelled the demand for retail banking services. More and more people seemed to have embraced the credit culture and are demanding consumer goods, holidays, education and a host of other value added banking services (Sethi and Bhatia, 2012).

**Evaluate the credit worthiness of borrower:** When a customer approaches a bank for loan, the bank will not only judge the credit worthiness of the borrower but also weigh the soundness of security from various angles. While appraising the credit worthiness of a borrower, the bank relies on 3C's viz.), capital: the amount of funds contributed by the borrower towards the purpose of loan is sought), capacity: the borrower must have the a sound knowledge and experience of project or business, etc. for which loan is sought), credit worthiness (securities): the basic objective of obtaining securities is to recover the unpaid amount of loan if any, through the sale of these securities. Hence, the securities should be clearly identifiable (in physical form as well as in value terms) be easily marketable have stability (price should not be subjected to high fluctuations) and their title should be clear and easily transferable (Santhanam, 2007).

In India an individual's or company's credit history is evaluated to generate a Credit Information Report (CIR) from which is derived a credit score known as the CIBIL TransUnion score. This report and score form an integral part of a lender's credit approval process. Credit scores range between 300 and 900. The higher the score, the more creditworthy the borrower is which translates to quick approvals and better interest rates. CIBIL provides credit reports and scores to those who inquire for them. This includes individuals, institutions and lenders. When an application for a loan or credit card is submitted, lenders check the applicant's credit scores to ascertain whether it satisfies eligibility criteria. CIBIL which stands for Credit Information Bureau (India) Limited is an ISO 27001: 2005 company. A first of its kind it is India's premier Credit Information Company (CIC). CIBIL works in association with TransUnion International Inc. and Dun and Bradstreet. It has two major segments viz. the consumer bureau and the commercial bureau. The consumer bureau maintains credit records of individuals while the commercial bureau maintains credit records of institutions/companies. <https://www.bankbazaar.com/cibil.html>. In USA a borrower should obtain credit

rating from two different credit rating companies. If the credit rating differs, then credit rating from a third credit rating company has to be obtained. The 3R's are reliability which is the counterpart of creditworthiness; resourcefulness which is the counterpart of capital and responsibility which is the counterpart of capacity (Shekhar and Shekhar, 2013).

#### **Profile of the study area**

**Global presence:** The modest beginning made by the Indian bank has come a long way, since then with 1642 branches located nationwide within India and overseas branches in Singapore and Colombo as of April 2009. The bank also has 40 overseas correspondent banks in 70 countries, giving a strong presence internationally. A 22,000 strong workforce of dedicated employee's takes pride in serving the Indian bank.

**Banking activities:** Indian bank offers a wide variety of banking products and services to its customers including various deposit schemes, loan options, financial services, stock investment services and a number of specialized services such as remittance, collection, 7 day banking branches, cash management and electronic funds transfer. As of April 2009, the bank has Core Banking Solution (CBS) implemented in its 1642 branches and 66 extension counters. The bank has 755 connected Automatic Teller Machines (ATMs) installed in 225 locations nationwide.

**Literature review:** Ramasundaram and Aiswarya (2011) highlights about the life cycle which is an appropriate basis for segmenting retail banking consumers, since availing of type of retail credit differs while people pass through various stages of family life cycle. The relationship between borrowing motives for loan and consumer's family life cycle have been analyzed and the finding reveals that there were significant associations of motives with life cycle stage. Follain and Dunskey (1997) shows that the investment motive of borrowing was a kind of financial leverage adopted by households for the purpose of maximizing their return on household investments. As per the study, prices of properties or assets in which they plan to invest was expected to rise in the near future and credit was available at a cheap rate comparatively as when assets were purchased with borrowed money in addition to own money. Recent increase in household debt has been due to the factor like favorable borrowing conditions, the need for own housing, expectations for a future rise of housing prices, increased income per family and income tax concession (Barnes and Young, 2003). A study conducted in Japan by Horioka and Watanabe (1997) identified in

their research that there were seven motives for individual's borrowing such as for illness, disasters and other unforeseen expenses for one's children educational expenses for one's children marriage expenses for the acquisition of housing for the purchase of consumer durables for leisure expenses and for others (Makorere, 2014), the results of the study was based on the uttermost factors like interest rate, grace period, profitability, moral hazard, electricity rationing and economic stability have strong effects in stimulating loan repayment behavior and concluded that government intervention is important. Appropriate policy on the institution framework was recommended to improve loan repayment behavior by Karamagi (2011) the researcher examine the relationship between borrower behaviour, lending and credit repayment performance in Centenary bank. The findings revealed that there were significant positive correlations between borrower behaviour, relationship lending and credit repayment performance which implied that the way borrowers behaved during credit accessibility or after acquiring credit from the bank had a lot of effect on determining the relationship that was formed during the lending process which affect effectiveness and efficiency of credit repayment. Olumuyiwad *et al.* (2012), the study undertook to investigates the level of commercial banks loan advances in Nigeria and also to examine those various determinants of commercial banks lending behavior in Nigerian. The model used is estimated using Nigerian commercial bank Loan and Advances (LOA) and other determinants such as Volume of deposits (Vd), annual average exchange rate of the naira to dollar (Fx) for the period of 37 years, Investment portfolio (Ip), Interest rate (lending rate) (Ir), Gross domestic product at current market price (Gdp) and cash reserve Requirement ratio (Rr). The result showed that there was a long run relationship between loan and advances and all the explanatory variables in the model.

Akram *et al.* (2012) focused on the borrowing behavior of the farmers towards financial institutions and identifies credit constraints faced by the farmers for the accessibility of institutional credit and given suggestion to make efficient use of agricultural credit schemes. This study estimated demand for borrowing and considered the source of loan, size of land holding, predict interest rate, education level, previous year's income and value of farm implements were the most important factors affecting household's credit activities. Luca (2013) discussed the financial crises and impact on lending activities. The global financial crisis determined the transition of the

Romanian banking system from excess of liquidity to deficit, namely from an aggressive lending activity to a significant reduction of credit growth rate. The high indebtedness rate, especially in Foreign currencies is the main vulnerable spot of the population sector. The main objective of this paperwork is to analyze factors that influence the customers in their decision to borrow in Foreign currencies or in Ron. In this matter, it was used a regional econometric model for panel data and analyzed Romania's customers borrowing preferences and changes due to the crises. Meier and Sprenger (2008) highlight the heterogeneity of time preferences and individual credit behavior. In a field study targeting individuals from low-to-moderate income households, elicit individual time preferences through incentivized choice experiments and then match resulting time preference measures to individual credit reports and annual tax returns. The study finds that, controlling for disposable income and other individual characteristics, individuals with present biased time preferences have higher debt levels on revolving accounts such as credit cards. While, borrowing is related to present bias, the result referred that the default is to a large degree, determined by overall impatience as measured by individual discount factors.

**Statement of the problem:** Changes in customer behavior have imposed changes in decisions related to offered services as these services need to be of high quality in order to satisfy today's demanding clients. The price must be proportional to the perceived value while distribution means should be used in order to achieve a high level of satisfaction with factors influencing effective loan repayment by the borrower. Before, granting a loan, every registered commercial bank and financial institution will exercise proper caution to ascertain that the borrower is capable of fulfilling his or her commitments. With this view, the bank will demand from the loan applicant the statements of his or her assets and liabilities as well as income and expenditures. Basically, the loan repayment process is the function of borrower's behavior, business characteristics, financial institution's characteristics and policy and regulatory issues. In this context, the study was undertaken to analyze the retail borrower's behavior in Indian bank.

## **MATERIALS AND METHODS**

In lieu of the study, the research intends to achieve the following objectives: to highlight the significance of credit system in India; to study the types of loan availed

by the borrowers; to analyze the factors determining the retail borrower's behavior in Indian bank and to evaluate the satisfaction level of the borrowers towards the loan availed. The said objectives were analyzed with the help of primary data which was collected from 160 respondents who have availed the various loans from the Indian bank. The data was limited with the selected loan of the borrowers of the bank at micro level. Tools like correlation, regression and factor analysis have been explored to interpret the data. The word 'customers' or 'borrowers' or 'respondents' of the study are the same.

Customer/borrower's behavior is a special need for banks to study and gain insights into the borrowing behavior of retail consumers in order to develop suitable policies and practices. Information search is an important phase of borrowing behavior that is playing a vital role in evaluation and selection of a bank for borrowing credit. An interested borrower who recognizes a need for retail credit will be inclined to search for more information. The arousal would be operated at many levels and sources of information. They include personal sources (family, friends, neighbors and acquaintances), commercial sources (advertising, web sites, sales persons, dealers, packaging and displays), public sources (mass media, consumer-rating organizations) and experiential sources (people who have examined and used the product).

Lending of funds to retail borrowers is one of the important activities of bank. The major part of the deposits received by banks is lent out and a large part of their income is earned from interest on such lending. There is a considerable difference between the rate of interest which the bank grants on deposits and the rate they charge on loans and advances. It is this difference which constitutes the main source of bank earnings. The last motive of borrowing retail credit is to make use of easy availability of credit and cheap credit. The competition among commercial banks to attract retail customers in recent past has influenced attitude of individuals towards credit. The demographic profile and its frequencies were presented in Table 1.

The demographic factors have a pertinent role in ensuring the objectives of the study. Factors like age, gender, educational qualification, occupations, monthly income, duration as a customer, tenure of loan, securities, loan amount and EMI from income were considered for the study (Table 1). Regarding gender, male respondents 63% have availed bank loan than the female respondents. It has been observed that age groups between 21-30 and 31-40 share 28% each, respectively, majority, i.e., 37% of the respondents are at school level, 40% of them are employee category and 65% of the

**Table 1: Demographical factors of the respondents**

Particulars	No. of respondents	Percentages
<b>Gender</b>		
Male	100	63
Female	60	37
<b>Age</b>		
21-30	45	28
31-40	45	28
41-50	41	26
51 and above	29	18
<b>Education</b>		
Below 12th	59	37
Under graduate	54	34
Post graduate	38	24
Others	9	5
<b>Occupation</b>		
Employee	63	40
Profession	15	9
Business	45	28
Others	37	23
<b>Monthly Inc.</b>		
Below Rs. 25,000	105	65
Rs. 26,000-50,000	43	27
Rs. 51,000-75,000	9	6
Rs. 76,000 and above	3	2
<b>Duration as a customer</b>		
0-5 years	55	34
5-10 years	66	41
10-15 years	15	10
15 years and above	24	15
<b>Tenure of loan</b>		
1-5 years	121	76
6-10 years	29	18
11-15 years	6	4
16 years and above	4	2
<b>Type of securities</b>		
Land and building	29	18
Jewels	51	32
Agriculture land	12	7
Securities	9	6
Others	59	37
<b>Loan Amt</b>		
Below Rs.3,00,000	112	70
Rs.4,00,000-8,00,000	29	18
Rs. 9,00,000-15,00,000	13	8
Rs. 16,00,000 and above	6	4
<b>EMI for loan</b>		
Below Rs. 5,000	117	73
Rs. 5,000-10,000	26	16
Rs. 10,000-20,000	11	7
Rs. 20,000 and above	6	4

borrower's income are below Rs. 25,000 p.m. Further, it has been found that 66 respondents are availing the services of the bank for past 10 years and most of them availed service of loan for the tenure of 1-5 years. Regarding non-banking asset that has been done against loan, 18% of the respondents are mortgaged land and building, 32% of the respondents are mortgaged jewels against loan and 37% under others category which may includes the salary slip, NRI deposits and pension certificate for personal loan. None of the mortgage asset for education loan, vehicle loan and micro finance. Among the borrowers, 70% of the borrower's availed loan amount for below 3 lakhs and borrowers paying EMI from their income below Rs. 5,000 are 73%.

**Table 2: Services availed by the respondents in Indian bank**

Particulars	No. of frequencies	Percentages	Ranks
Deposit	146	28	2
Loan	160	31	1
Remittance	34	7	4
Payment	32	6	5
Insurance	9	2	6
Cards	123	24	3
Technology	4	1	8
Other services	7	1	7
Total	515	100	

**Table 3: Type of loans availed by the respondents**

Particulars	No. of respondents	Percentages
Education loan	26	16
Housing loan	25	16
Micro finance	19	12
Vehicle loan	13	8
Jewel loan	51	32
Agriculture loan	8	5
Personal loan	18	11
Total	160	100

Primary data

Table 2 shows the frequency of various services that has been availed by the respondents in Indian bank as well as it depicts the ranking of frequency of using the services. As per the study, the most services availed by the respondents were loan and deposit which was followed by card usage. The primary functions of banks are getting different types of deposits from the public and out of these deposits money they are giving loans and advances to their own customers and general public for different purposes. Usually, majority of the portion of banker’s funds are used mainly for the purpose of giving loans in many ways. The main types of loans in Indian bank are education, home, micro finance, vehicles, jewel, agriculture and personal loan and under these loans nearly 45 schemes are executed for their customers (Gajendra, 2011).

Table 3 shows the types of loans availed by the respondents from Indian bank. The 32% of the respondents have availed jewel loan, followed by education loan and housing loan 16% each, respectively. The reasons for availing jewel loan by majority of the respondents might be processing and instant available of loan amount.

**Level of satisfaction with selected factors:** Keeping in view the problem and scope of the study, the researcher has determined related factors and attempted to measure the level of satisfaction among the borrowers for each loan with help of 5 points Likert’s scale measurement. Further, the Likert values of each loan have been ranked among the selected factors. The factors like qualify to apply for loan, qualify amount, duration of sanction of

loan, required documents, margin of loan, sufficient information from bank, processing fees, evaluation of non banking assets, rate of interest, mode of payment of loan, repayment of loan, penalty, recovering the non banking asset and response of the bank employee’s are selected for the study. The results in Table 4 show the ranking of end value of each level of satisfaction with respective factors.

Table 4 shows the ranks of each factor under selected loan which was based on level of satisfaction among the borrowers of the bank. As per the study, the level of satisfaction regarding the education loan of Indian bank, the primary satisfaction was the response given by the bank employee, qualify amount and sufficient information from bank; the pivotal satisfaction towards qualify amount, margin of loan and recovering the mortgaged asset at the prime level in housing loan; and with regard to microfinance the sequence of satisfactory level was response of the bank employees, mode of payment towards the loan and qualify to apply for loan. The satisfactory level with regard to vehicle loan was response of the bank employees, mode of payment towards loan and repayment of loan. Level of satisfaction regarding to jewel loan includes recovering the non banking asset, response of the bank employees and required documents as primary factors. As far as agriculture loan was concerned, the processing fee, rate of interest and mode of payment towards loan has been given much important by the respondents. According to the personal loan, satisfactory levels towards the response of the bank employees and qualify to apply for loan have been considered as primary among the borrowers.

Most of the respondents felt satisfied with the factor towards the response received from the bank employee’s during the course of action. This shows the bank is much concerned with customer’s needs. This has been confirmed in Table 5 which highlights the overall satisfaction level among the borrowers.

Table 5 focuses the overall satisfaction level of respondents. Response of the bank employees got 1st rank in the satisfaction level followed by mode of payment of loan and qualify amount hold the 3rd rank in the satisfaction level. Margin of loan and sufficient information from bank got 4th rank in the satisfaction level. Qualify to apply for loan and repayment of loan shares 6th rank in the satisfaction level. Other factors were sequenced as need of documents, rate of interest, duration for sanction of loan, processing fees, penalty, recovering the non banking assets and last evaluation

Table 4: Ranking the factor's with Likert' value of each loan

Particulars (factors)	Education loan	Housing loan	Micro finance	Vehicle loan	Jewel loan	Agriculture loan	Personal loan
Qualify to apply for loan	5	5	3	9	10	8	1
Qualify amount	2	1	4	6	8	10	3
Duration of sanction of loan	9	12	9	8	6	10	8
Required documents	9	10	9	11	3	14	8
Margin of loan	8	1	7	4	4	9	6
Sufficient information from bank	3	5	6	6	6	6	7
Processing fees	12	13	11	9	13	1	12
Evaluation of non-banking assets	13	11	14	14	11	6	14
Rate of interest	7	8	8	5	12	2	5
Mode of payment of loan	5	4	2	2	4	2	8
Repayment of loan	4	8	4	2	9	4	12
Penalty	11	14	12	12	14	10	14
Recovering the non banking asset	14	1	13	13	1	4	3
Response of the bank employees	1	7	1	1	2	10	1

Table 5: Overall satisfaction level

Particulars	1		3	4	5		Total	Likert values	Ranks
	Strongly dissatisfied	2 Dissatisfied			Strongly satisfied	Not applicable			
Qualify to apply for loan	6 (6)	9 (18)	27 (81)	57 (228)	61 (305)	0	160 (638)	0.923	6
Qualify amount	1 (1)	12 (24)	26 (78)	60 (240)	61 (305)	0	160 (648)	0.934	3
Duration of sanction of loan	3 (3)	15 (30)	42 (126)	40 (160)	60 (300)	0	160 (619)	0.896	10
Required documents	3 (3)	7 (14)	38 (114)	63 (252)	49 (245)	0	160 (628)	0.909	8
Margin of loan	1 (1)	7 (14)	38 (114)	57 (228)	57 (285)	0	160 (642)	0.929	4
Sufficient information from bank	2 (2)	10 (20)	30 (90)	60 (240)	58 (290)	0	160 (642)	0.929	4
Processing fees	6 (6)	22 (44)	40 (120)	56 (224)	36 (180)	0	160 (574)	0.831	11
Evaluation of non banking assets	2 (2)	8 (16)	29 (87)	44 (176)	34 (170)	43	160 (451)	0.653	14
Rate of interest	7 (7)	10 (20)	37 (111)	48 (192)	58 (290)	0	160 (620)	0.897	9
Mode of payment of loan	0 (0)	5 (10)	32 (96)	64 (256)	59 (295)	0	160 (657)	0.951	2
Repayment of loan	1 (1)	13 (26)	28 (84)	63 (252)	55 (275)	0	160 (638)	0.923	6
Penalty	19 (19)	23 (46)	33 (99)	47 (188)	38 (190)	0	160 (542)	0.784	12
Recovering the non banking asset	2 (2)	1 (2)	16 (48)	33 (132)	65 (325)	43	160 (509)	0.737	13
Response of the bank employees	8 (8)	6 (12)	15 (45)	29 (116)	102 (510)	0	160 (691)	1	1

Primary data

Table 6: Regression analysis along of ANOVA (backward stepwise multiple regressions by Bill Miller)

Variables	VAR1	VAR2	VAR3				
<b>Step 1 (variance-covariance matrix)</b>							
VAR1	57.333	238.667	217.333				
VAR2	238.667	2188.000	2247.333				
VAR3	217.333	2247.333	2396.667				
<b>Product-moment correlations matrix</b>							
VAR1	1.000	0.674	0.586				
VAR2	0.674	1.000	0.981				
VAR3	0.586	0.981	1.000				
Variances	57.333	2188.000	2396.667				
Standard deviations	7.572	46.776	48.956				
Determinant of correlation matrix = 0.0145							
Sources	df	SS	MS	F-value	Prob.>F		
Regression	2	6998.931	3499.465	18.315	0.163		
Residual	1	191.069	191.069				
Total	3	7190.000					
R	R <sup>2</sup>	F-value	Prob.>F	df1	df2		
<b>Dependent variable: VAR3</b>	0.987	18.315	0.163	2	1		
Adjusted R <sup>2</sup> = 0.920							
SE of estimate = 13.823							
Variables	β	B	SE	t-values	Prob.>t	VIF	TOL
VAR1	-0.137	-0.888	1.426	-0.623	0.645	1.832	0.546
VAR2	1.074	1.124	0.231	4.868	0.129	1.832	0.546
Constant = 30.574; Partial correlations (variables): VAR1 = -0.529; VAR2 = 0.980; Variable 1 (VAR1) eliminated							
Variables	VAR2		VAR3				
<b>Step 2 (variance-covariance matrix)</b>							
VAR2		2188.000	2247.333				
VAR3		2247.333	2396.667				

Table 6: Continue

Variables	VAR2		VAR3				
<b>Product-moment correlations matrix</b>							
VAR2		1.000		0.981			
VAR3		0.981		1.000			
Variances		2188.000		2396.667			
Standard deviations		46.776		48.956			
Source	df	SS	MS	F-value	Prob.>F		
<b>Determinant of correlation matrix = 0.0369</b>							
Regression	1	6924.827	6924.827	52.229	0.019		
Residual	2	265.173	132.587				
Total	3	7190.000					
R	R <sup>2</sup>	F-value	Prob.>F	df1	df2		
<b>Dependent variable: VAR3</b>							
0.981	0.963	52.22	9	0.01	912		
Adjusted R <sup>2</sup> = 0.945							
SE of estimate = 11.515							
Variable	$\beta$	B	SE	t-value	Prob.>t	VIF	TOL
VAR2	0.981	1.027	0.142	7.227	0.019	1.000	1.000
Constant = -1.085; Partial correlations (variables): VAR2 = 0.981							

of non-banking assets. It has been inferred from the study that the overall satisfaction level of the Indian bank was conferred an attitude of bank employees, mode of payment towards loan and qualify amount which were highly appreciable among the borrowers.

**Tools used:** In order to find out the significance between the various variables, statistical software was used. Karl Pearson’s co-efficient of correlation was executed in order to find the associations between occupations and loan borrowed, age and tenure of loan and EMI and monthly income of the borrower. The results shows that these three relationships are closely significant which they are perfectly positive, i.e., the correlation value shows 0.649, 0.568 and 0.975, respectively. Further, the researcher has extended to find the degree of relationship between the variables of age, income and the loan amount with help of multiple regressions analysis along with Anova, (Sharma, 2007). For this analysis, age and income are considered as independent variables and loan amount of the borrowers has been taken as dependent variable. Also, factor analysis has been applied in order find out the number of common factors as well as a factor which is unique to each variable.

**Testing of hypothesis on the significance of regression:**  
The related combination of hypothesis is:

- H<sub>0</sub>: loan amount does not dependent upon age and income
- H<sub>a</sub>: loan amount is dependent upon at least one of the variables, i.e., age or income

**Measures of performances of regression analysis:** To test the null hypothesis the regression analysis with ANOVA is shown in Table 6. The three measures of performance of a regression model were computed determinant of correlation; MS-Mean square error and adjusted coefficient of determination R<sup>2</sup> have been obtained from ANOVA table. Also the table shows the covariance analysis and partial correlation for the selected variables.

From the Table 6 in step 1, though the adjusted R<sup>2</sup> is 0.92, the correlation coefficient of between variables age and loan amount shows only 0.586 and partial correlation also negative and not perfect, so the significance of hypothesis is not taken for interpretation. In step 2, the correlation coefficient is perfectly positive between variables, i.e., 0.981 and the adjusted R<sup>2</sup> is 0.94. Regarding ‘F ratio’, the calculated value of F is 52.229. Table 6 value of F with df (2,1) at given significance level of 0.05 is 18.51. Since, the calculated value of F (52.229) is more than the table value of F (18.51), the null hypothesis is rejected and accepted the alternate hypothesis. Hence, it has been concluded that the regression model has no significant prediction for the dependent variable. In other words, rejection of H<sub>0</sub> implies that at least one of the independent variables (i.e., income) is adding significant prediction for dependent variable, i.e., income and loan amount.

## RESULTS AND DISCUSSION

**Factor analysis:** Table 7-9 show the factor analysis of the study. The variables have been described as the types of loan and number of valid cases has been taken as 10,

**Table 7: Correlation matrix factor analyzed**

Factors	VAR1	VAR2	VAR3	VAR4	VAR5	VAR6	VAR7
VAR1	1.000	0.666	0.894	0.908	0.684	0.362	0.600
VAR2	0.666	1.000	0.868	0.841	0.898	0.856	0.951
VAR3	0.894	0.868	1.000	0.920	0.807	0.597	0.803
VAR4	0.908	0.841	0.920	1.000	0.833	0.614	0.820
VAR5	0.684	0.898	0.807	0.833	1.000	0.865	0.924
VAR6	0.362	0.856	0.597	0.614	0.865	1.000	0.852
VAR7	0.600	0.951	0.803	0.820	0.924	0.852	1.000
Eigen values (%)	82.263	12.821	2.006	1.350	0.957	0.406	0.197
Communality estimates as percentages	64.749	92.307	86.389	87.691	90.070	66.016	88.619

Method: principal components analysis

**Table 8: Varimax rotated loadings and factor score results**

Factors	Varimax rotated loadings	Factor score results: regression coefficients
VAR1	0.805	0.140
VAR2	0.961	0.167
VAR3	0.929	0.161
VAR4	0.936	0.163
VAR5	0.949	0.165
VAR6	0.813	0.141
VAR7	0.941	0.163

Percent of variation in rotated factors; factor 1: 82.263, total percent of variance in factors: 82.263, standard error of factor scores; factor 1: 1.000

**Table 9: Factor's result**

Cases	Factor results
1	-0.3178
2	-0.2585
3	-0.6556
4	1.1355
5	-0.3243
6	-0.4079
7	0.0371
8	2.3583
9	-0.6234
10	-0.9434

i.e., factors determine in each loan for analysis. In order to test the suitability of data for principal component analysis, the correlation matrix was computed and enough correlations were found to go head factor analysis. Further, Kaiser-Meyer-Olkin measure of sample adequacy was calculated and value found to be 0.747 which supports that the sample was good enough for factor analysis (Rummel, 1970).

The data outlined in Table 7 were processed and by default, the program used standardized variables, the built-in criterion for determining the number of factors and the principal component method; the varimax rotation was requested. The estimated rotated loadings and factor score results are shown in Table 8. Contrary to the expectation only one factor has been identified. The percent of variance in factors shows 82%. Table 9 depicts the factor results of the cases, i.e., determined factors of each loan.

From the factor analysis, it can be interpreted that the factors have high loading for housing loan and Jewel loan. Further the results shows that the factors required documents, sufficient information from bank, evaluation of non banking assets, recovering the non banking asset,

rate of interest, mode of payment of loan and repayment of loan were assumed to be satisfied among the borrowers of the bank.

### CONCLUSION

This research explored the retail borrowers, behavior of Indian bank, a public sector bank in India. The study was limited with 160 respondents/borrowers of the bank. In this study, it was aimed to find out the borrower's satisfaction with factors determinate and level of satisfaction with these selected factors. There is wide agreement that the satisfaction is a person's feeling of pleasure or disappointment resulting from comparing a product's perceived performance (or outcome) in relation to his or her expectations, Santouridis and Trivellas (2010). Therefore, satisfaction is closely related to borrower's expectations. The study reveals that the overall satisfaction level of the Indian bank was conferred an attitude of bank employees, mode of payment towards loan and qualify amount which were highly appreciable among the borrowers. The associations between occupations and loan borrowed, age and tenure of loan and EMI and monthly income of the borrower are closely significant. By enhancing and developing Indian bank on the basis of facilities and proper loan sanctioning system would thereby help the retail borrowers for expanding their horizons which will enable retail borrowers to pay their dues on time that will add up to the trustworthiness of the borrowers towards Indian bank and vice versa and in turn it will improve the economic status of the country in total.

### ACKNOWLEDGEMENT

I acknowledge with thanks to Ms.K. Anu Bharathi for bottomless support in collecting data.

### REFERENCES

- Akram, W., S. Munir, M.H. Hashmi and R. Saleem, 2012. Borrowing behavior towards institutional credit in Punjab: A case study of Faisalabad district. Intl. J. Acad. Res. Econ. Manage. Sci., 1: 36-47.



- Barnes, S. and G. Young, 2003. The rise in US household debt: Assessing its causes and sustainability. Master Thesis, Bank of England, England, UK.
- Follain, J.R. and R.M. Dunskey, 1997. The demand for mortgage debt and the income tax. *J. Hous. Res.*, 8: 155-199.
- Gajendran, A., 2011. *A Text on Banking Theory Law and Practice*. Vrinda Publications (P) Ltd, Delhi, India, Pages: 278.
- Gurusamy, S., 2013. *Finance Services*. 7th Edn., McGraw Hill Education, New Delhi, India, ISBN-13:978-1-25-902686-7,.
- Horioka, C.Y. and W. Watanabe, 1997. Why do people save? A micro-analysis of motives for household saving in Japan. *Econ. J.*, 107: 537-552.
- Jha, S.M., 2003. *Services Marketing*. Himalaya Publishing House, New Delhi, India,.
- Karamagi, O., 2011. Borrower behaviour, relationship lending and credit repayment performance in centenary bank. cPanel, Inc., Houston, Texas.
- Luca, A., 2013. The customers borrowing behavior during the financial crisis. *Theor. Appl. Econ.*, 18: 115-124.
- Makorere, R.F., 2014. Factors affecting loan repayment behaviour in Tanzania: Empirical evidence from Dar es Salaam and Morogoro regions. *Intl. J. Dev. Sustainability*, 3: 481-492.
- Meier, S. and C. Sprenger, 2008. Impatience and credit behavior: Using choice experiments to explain borrowing and defaulting. Master Thesis, Federal Reserve Bank of Boston, Boston, Massachusetts.
- Natarajan, S. and R. Parameswaran, 2012. *Indian Banking*. S. Chand Group, Delhi, India,.
- Olumuyiwal, O.S., O.A. Oluwatosin and O.E. Chukwuemeka, 2012. Determinants of lending behaviour of commercial banks: Evidence from Nigeria, a co-integration analysis (1975-2010). *J. Human. Soc. Sci.*, 5: 71-80.
- Ramasundaram, G. and B. Aiswarya, 2011. The borrowing motives: A study among retail credit customers of different life cycle segments in India. *Manage. Insight*, 7: 101-110.
- Rummel, R.J., 1970. *Applied Factor Analysis*. Northwestern University Press, Evanston, Illinois, USA,.
- Santhanam, B., 2007. *Banking Theory, Law and Practice*. Margham Publications, Chennai, India,.
- Santouridis, I. and P. Trivellas, 2010. Investigating the impact of service quality and customer satisfaction on customer loyalty in mobile telephony in Greece. *TQM. J.*, 22: 330-343.
- Sethi, J. and N. Bhatia, 2012. *Elements of Banking and Insurance*. 2nd Edn., PHI Learning, Delhi, India, ISBN: 978-81-203-4657-4, Pages: 473.
- Sharma, J.K., 2007. *Business Statistics*. Pearson, New Delhi, India,.
- Shekhar K.C. and L. Shekhar, 2013. *Banking Theory and Practice*. Vikas Publishing House Private Limited, Noida, India,.