A STUDY ON CUSTOMERS PERCEPTION TOWARDS ATM'S AND M-BANKING

(Risk,problems,Security and Overall comparison)
(With Specific reference to customers of IOB, Chennai, Tamilnadu)

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Abstract: Technology plays a key role in banking today all over the world. Customers in today's technological world prefer to use banking services through the means of modern Technology. India is no exception as Technology has begun to have a firm grip in India as well. Automatic Teller Machine also called as ATM is considered one of the most reliable source for liquid cash and is also a source to get liquid cash in times of emergency. ATM's can rightly be called as an evergreen source of gaining liquid cash through the modern banking technology. Closely followed after ATM's is Mobile banking also called as mobile banking. While todays technological world every person considers a mobile a basic necessity more than a luxury its use for banking services plays a key role to study how Technology has managed to capture the banking sector as well. While Technology is considered a boon, it is also considered a bane in some aspects. Risk, problems and security are aspects were most people have their reservations. The study is an attempt to analyse customer's perception towards risk, problems and security and an overall comparison of both ATM's and M-Banking with customers of Indian Overseas Bank (IOB) in Chennai Tamilnadu. A structured questionnaire was used to collect data from the respondents. There have been many studies conducted separately for ATM and Mobile banking. My study is an attempt to study two major technological aspects of banking together.

IndexTerms - **Technology, Customers perception, ATM, M-Banking, Liquid cash, Mobiles, Necessity, Risk, Security, Problems and Comparison.**

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I. INTRODUCTION

Customers preference towards the technology in banking is an essential aspect which can help identify how banking is linked to technology. While Automatic Teller Machine is one of the first introductions of technology in banking. Mobile Banking also called in short as M-Banking is one of the latest introduction of technology in Banking. When technology is involved it does not come without out risks and problems, same is the case with ATM's and M-Banking. Risks, problems and security are all part of ATM's and Mobile banking. Customers shy away from technology due to these problems. While it is important in understanding the customers perception towards Risk, Security and problems it is also important to have a comparison of what the customers perceive today of ATM and Mobile banking and their perception towards overall satisfaction of the two forms of banking related technology.

ABOUT THE BANK

India overseas bank (IOB) has travelled a long way over the last 75 years to becoming one of the prime banks with its business spread all over India. While it continues to have a major share in the banking business in Tamil Nadu, its home state, it has sizeable presence in other states in the south. India Overseas Bank completed its platinum jubilee in 2012.It has now emerged as an all India Bank. Indian overseas bank rightly goes with its slogans:

"TOUCHING HEARTS AND SPREADING SMILES"&"GOOD PEOPLE TO GROW WITH"

II. REVIEW OF LITERATURE

1. Prerna Sharma Bamoriya and Preeti Singh (2011) in their research paper "Issues & Challenges In Mobile Banking In India: A Customers Perspective" have concluded that from customers perspective mobile handset operability, security/privacy and standardization of service are critical issues. Majority of customers were indifferent to the common man towards utility of mobile banking in comparison to retail banking and online banking.
2. Pijush Chattopadhyay and Dr. (Smt.) S Saralelimath (2012) in their research paper "Customers Preference Towards Use Of ATM Services In Pune City" have concluded that ATM has not only transformed traditional banking but has also brought a paradigm shift in the attitude of banks to banking operations. They also concluded that majority of customers were highly satisfied with the ATM services.

3. Archana Sharma and Dr. Vineet Kansal (2012) in their research paper "Mobile banking as Technology Adoption And Challenges : A Case Of M-Banking In India" have concluded that for inclusive growth the benefits of mobile banking should reach to the common man at the remotest location in the country.

4. R Melba Kani and Dr.A.Merlin Thanga Joy (2013) in their research paper "Issues And Challenges Facecd by ATM Customers Of State Bank Of India In South TamilNadu" have concluded that considerable number of customers have access to the machine and are consequently utilizing them for multi-purpose transactions, despite its challenges and shortcomings.

5. Susheel Kumar (2014) in his research paper "Analysis Of ATM Issues Through Student Response: A Survey Of Himachal Pradesh" has concluded that majority of the students are satisfied with ATM services and view them as essential services. The students prefer ATM's with time and cost utility which provides essential services.

6. Amit Shankar and Pooja Kumari (2016) in their research paper " Factors Affecting Mobile Banking Adoption Behaviour In India", have identified eight factors which affect M-banking adoption in India and Usefulness has been found to be making the most impact and social influence the least impact.

III. RESEARCH OBJECTIVES

- To study the customers perception towards risk and problem aspect of ATM's
- To find the dimensions of Risk and problem Aspect of ATM.
- To identify the number of customers using M -Banking and if there is any association between Age and use of mobile banking
- To study customers perception towards risk aspects of Mobile banking.
- To compare the overall customers perception with regard to ATM's and Mobile Banking.

IV. RESEARCH METHODOLOGY

➢ The study is conducted in Chennai. The sample taken is 100 customers of Indian Overseas bank, which is representative of the population.
➢ The research design is descriptive and analytical in nature.
➢ Non probability convenient sampling is to be used. The sample unit consists of customers i.e. From IOB Chennai.
➢ The statistical instrument which is to be used to collect primary data is a structured questionnaire with 16 questions and 38 variables. The pattern of questionnaire is given below.

SL.NO	DIMENSION	NO OF ITEMS
1 TO 5	BASIC PROFILE	5
6 TO 10	GENERAL ATM DETAILS	5
11 &12	RISK AND PROBLEMS OF ATMS	11
13 &14	SECURITY PRIVACY & FINANCIAL RISK OF MBANKING	8
15&16	COMPARISION ATM AND MBANKING	9

➢ SPSS Version 21 will be used to analyze data.
➢ The statistical techniques which are to be used to be used include
- Reliability test
- Percentage analysis
- Chi square test
- Factor analysis

V. ANALYSIS AND INTERPRETATION

TABLE: 1

GENDER					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	MALE	66	66.0	66.0	66.0
	FEMALE	34	34.0	34.0	100.0
	Total	100	100.0	100.0	

From the above table we can infer that the percentage of male IOB customers were 66 and that of female were 34.

TABLE: 2

AGE		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	20-30	41	41.0	41.0	41.0
	31-40	28	28.0	28.0	69.0
	41-50	10	10.0	10.0	79.0
	51-60	13	13.0	13.0	92.0
	ABOVE 60	8	8.0	8.0	100.0
	Total	100	100.0	100.0	

The percentage of customers within the age group of 20-30 were 41 percentage, while percentage of customers within the age group of 31-40 were 28. The least percentage of customers were found in the age group of above 60 years which is 8 percentage.

TABLE: 3

OCCUPATION		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	STUDYING	3	3.0	3.0	3.0
	PRIVATE SECTOR	71	71.0	71.0	74.0
	PUBLIC SECTOR	14	14.0	14.0	88.0
	OWN BUSINESS	8	8.0	8.0	96.0
	HOUSEWIFE	4	4.0	4.0	100.0
	Total	100	100.0	100.0	

The percentage of customers working in the private sector were 71, while 8 percentage had their own business, 14 percentage were from the public sector, 3 were studying and 4 were housewives.

TABLE: 4

EDUCATIONAL LEVEL		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	PRIMARY	2	2.0	2.0	2.0
	SECONDARY	35	35.0	35.0	37.0
	UG	34	34.0	34.0	71.0
	PG	24	24.0	24.0	95.0
	PROFESSIONAL	5	5.0	5.0	100.0
	Total	100	100.0	100.0	

35 percentage of customers were qualified till secondary level. While 34 percentage of customers have completed under graduation. 24 % have a post graduate degree and only 5 % have professional degree.

TABLE: 5

INCOME		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0-10000	9	9.0	9.0	9.0
	10001-20000	47	47.0	47.0	56.0
	20001-30000	16	16.0	16.0	72.0
	30001-40000	6	6.0	6.0	78.0
	40001-50000	12	12.0	12.0	90.0
	50001-60000	4	4.0	4.0	94.0
	60001-70000	2	2.0	2.0	96.0
	70001-80000	3	3.0	3.0	99.0
	80001-90000	1	1.0	1.0	100.0
	Total	100	100.0	100.0	

The above table shows that 47 % of the customers have an income ranging between Rs.10,001 and Rs.20,000 and only 1 customer has an income ranging between 80,001 and 90,000. While 16% of customers have their income falling in the range of Rs.20,001 to 30,000, 12% in 40,001 to 50,000, 6 % in Rs.30,001 to 40,000 and 4 , 3 and 2 customers have their income in the rate of Rs.50,001 to 60,000 ; 70,001 to 80,000 and Rs.60,001 to 70,000 respectively.

CUSTOMERS PERCEPTION TOWARDS RISK AND PROBLEM ASPECTS OF ATM'S

TABLE: 6

RELIABILITY TEST

Case Processing Summary		N	%
	Valid	100	100.0
Cases	Excluded[a]	0	.0
	Total	100	100.0
a. Listwise deletion based on all variables in the procedure.			

Reliability Statistics	
Cronbach's Alpha	N of Items
.805	11

Reliability was checked for 11 variables of customer's perception towards risk and problem aspect of ATM's and the Cronbach Alpha revealed Values of 0.805 which is robust.

TABLE: 7

PERCENTAGE ANALYSIS OF CUSTOMER PERCEPTION TOWARDS RISK AND PROBLEM ASPECTS OF ATM'S

VARIABLE	NEVER	OCASIONALLY	CONSIDERABALLY	ALMOST ALWAYS	ALWAYS
ATM s do not function properly	1	30	51	14	4
Cash has not been available in ATMS	0	32	48	19	1
ATMs give old notes most of the time	11	29	33	25	2
ATM card has got stuck in the machine	18	37	25	16	4
Receipt not issued / Receipt printed illegible	9	31	38	15	7
Security features in the ATM are adequate or not	11	15	39	24	11
ATM system failure	3	33	34	25	5
ATM's waiting line is too long	11	37	28	14	10
size of ATM screen	26	17	29	22	6
Quality of swiping pad	21	21	37	6	5
ATM door always open	14	14	30	32	10
NEVER, OCASIONALLY,CONSIDERABALLY, ALMOST ALWAYS AND ALWAYS VALUES ARE GIVEN AS PERCENTAGE					

The above table shows that 51 % of customers perceive that ATM's do not function properly considerably, 30 % perceive ATM"s do not functional properly occasionally, 14 % feel that almost always ATM's do not function properly , while 4% of customers feel that ATM's do not function properly always.

48% of customers have felt that cash has not been available in ATM's considerably. 32 % customers perceive that occasionally cash has not been available in ATM's. 19% of the IOB customers perceive that almost always cash has not been available in ATM's.

33 % perceive that considerably ATM give old notes, 29% customers feel that occasionally ATM's give old notes while 25% perceive that almost always ATM's give old note. 11 % of customers perceive that never they have had the problem of ATM's giving old notes.

37 % customers perceive that occasionally ATM card has got stuck in the machine. 25 % felt that occasionally ATM has got stuck in the machine. 16 % perceive that almost always ATM has got stuck in the machine.

38% said that receipt has not been issued or illegibly printed while 31 % customers felt that occasionally receipt has not been issued or illegibly printed. 39 % felt that occasionally the security features of ATM are adequate. 24 % feel that almost always the security features of ATM are adequate.

34 % felt that considerably there are system failures in ATM's while 33 % feel that occasionally there are system failures in ATM's. 25 % felt that almost always there are system failures in ATM's.

37 % of customers perceived that the ATM waiting line is to long occasionally. 28 % of customers felt that considerably the ATM waiting line is long. 14 % of customers felt that almost always the ATM waiting line is too long.

Size of the ATM screen is a problem is felt considerably by 29 % of customers and 26% of customers perceive that never the size of ATM screen is a problem.

37 % of customers feel that considerably quality of swiping pad is a problem and 32 % of customers felt that almost always ATM door is left open while 30 % of customers felt that considerably the ATM door is left open.

DIMENSIONS OF RISK AND PROBLEM ASPECT OF ATM

TABLE: 8

FACTORISATION OF RISK AND PROBLEM ASPECT OF ATM

FACTOR NAMES	% of Variance Explained	Variables	Mean	Communalities	MSA	Rotated Factor Loading
Factor 1 Problem Factor	29.265	QUALITY OF SWIPPING PAD	2.616	.797	.723	.887
		SIZE OF ATM SCREEN	2.626	.722	.720	.844
		ATM CARD STUCK IN MACHINE	2.515	.544	.803	.705
		ATMS WAITING LINE IS TOO LONG	2.737	.593	.799	.653
		ATMS GIVE OLD NOTES	2.777	.402	.874	.507
Factor 2 Risk Factor	20.160	ATM SYSTEM FAILURE	2.969	.764	.631	.820
		ATM DO NOT FUNCTION PROPERLY	2.909	.667	.728	.806
		ATM CARD RECEIPT NOT ISSUED OR ILLEGIBLE PRINTING	2.808	.475	.675	.622
		CASH NOT AVAILABLE	2.899	.576	.793	.583
Factor 3 Security Factor	12.490	ATM DOOR ALWAYS OPEN	3.090	.652	.344	.752
		SECURITY FEATURES IN ATM ARE ADEQUATE	3.101	.619	.585	.736
KMO – MSA =.720 , Total % of Variance Explained = 61.915						
Bartlett's Test of Sphericity Chi-Square value of 391.741 with df of 55 and P value of .0000						

The above table shows that variables with their communality values ranging from **0.402 to 0.797**, have goodness of fit for factorization. **KMO-MSA value of 0.720** and **chi-square value of 391.741** with df of **55** and **P-value of 0.000** reveal that factor analysis can be applied for factorization of 11 variables. Three dominant independent factors explaining **61.915%** of total variance have been extracted out of 11 Variables. The three factors are Risk, Problem and security Factor.

NUMBER OF CUSTOMERS USING M –BANKING

TABLE: 9

NUMBER OF CUSTOMERS USING THE MOBILE BANKING SERVICE

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	YES	54	54.0	54.0	54.0
	NO	46	46.0	46.0	100.0
	Total	100	100.0	100.0	

The above table reveals that 54 % of IOB customers use mobile banking, while, 46% do not use mobile banking

ASSOCIATION BETWEEN AGE AND USE OF MOBILE BANKING

Null hypothesis (Ho): There is no association between age and use of mobile banking.

TABLE: 10

AGE * DO YOU USE MOBILE BANKING Crosstabulation				
Count				
		DO YOU USE MOBILE BANKING		Total
		YES	NO	
AGE	20-30	28	13	41
	31-40	18	10	28
	41-50	2	8	10
	51-60	4	9	13
	ABOVE 60	2	6	8
Total		54	46	100

TABLE: 11

Chi-Square Tests			
	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	14.751[a]	4	.005
Likelihood Ratio	15.216	4	.004
Linear-by-Linear Association	11.523	1	.001
N of Valid Cases	100		
a. 3 cells (30.0%) have expected count less than 5. The minimum expected count is 3.68.			

From table 10 it can be inferred that only 54 customers say that they use mobile banking and 28 customers are in the age group of 28-30 and 18 IOB customers are within the age group of 31-40.While 46 IOB customers do not use mobile banking and 13 of them are in the age group of 20 -30.Table 11, shows that the significance value is .005(Which is less than 0.05, which is the standard level of significance).Therefore the null hypothesis is rejected and we can say that there is association between Age of the customers of IOB and use of mobile banking.

CUSTOMERS PERCEPTION TOWARDS RISK ASPECTS OF MOBILE BANKING

TABLE: 12

RELIABILITY TEST

Case Processing Summary			
		N	%
Cases	Valid	54	54.0
	Excluded[a]	46	46.0
	Total	100	100.0
a. Listwise deletion based on all variables in the procedure.			

Reliability Statistics	
Cronbach's Alpha	N of Items
.685	7

Reliability was checked for 54 valid cases and 7 variables of customer's perception towards risk aspect of Mobile banking and the Cronbach's Alpha revealed Values of 0.685 which is robust.

TABLE: 13

PERCENTAGE ANALYSIS FOR CUSTOMERS PERCEPTION TOWARDS RISK ASPECTS OF MOBILE BANKING

VARIABLE	YES (%)	NO (%)
Password stolen	44	10
Account is hacked	43	11
Virus attacks in mobile	31	23
Risk with digital signature	26	28
SMS sent from anonymous people not your bank	39	15
Balance is transferred to another account not where you want to transfer.	41	13
Amount not credited or debited in time	43	11

44% perceive that password is stolen in Mobile banking, while 10% no password is not stolen.43% perceive that account is hacked and 11% said that account is not hacked. 31% IOB customers perceive that there are virus attacks in mobile and 23% say there are no virus attacks in mobiles. 28% perceive there is no risk with digital signature and 26 %perceive that there is risk with digital signature. 39% IOB customers perceive that SMS has been sent from anonymous people not their bank while 41% customers say that balance is transferred to another account not where they want to transfer and 43% of customers perceive that amount has not been credited or debited in time and 11% of customers say that amount has been credited and debited in time.

COMPARISION OF THE OVERALL CUSTOMERS PERCEPTION WITH REGARD TO ATM'S AND MOBILE BANKING

TABLE: 14

Reliability Statistics

Cronbach's Alpha	N of Items
.733	8

Case Processing Summary		N	%
Cases	Valid	100	100.0
	Excluded[a]	0	.0
	Total	100	100.0
a. Listwise deletion based on all variables in the procedure.			

Reliability was checked for 8 variables for the comparison of customer's perception towards ATM's and Mobile banking for 100 cases and the Cronbach Alpha revealed Values of 0.733 which is robust.

TABLE: 15

PREFERNCE FOR USING BANKING SERVICES TODAY		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	DIRECT VISIT TO BANK	12	12.0	12.0	12.0
	MOBILE BANKING	33	33.0	33.0	45.0
	INTERNET BANKING	55	55.0	55.0	100.0
	Total	100	100.0	100.0	

Table 15 revealed that 55% of the customers said that they prefer Internet Banking for using banking services today. 33% prefer mobile banking and only 12% prefer to directly visit the bank to use any banking service today.

TABLE: 16

PERCENTAGE ANALYSIS FOR THE CUSTOMER PERCEPTION TOWARDS COMPARISON OF ATM AND MOBILE BANKING

VARIABLE	SA	A	NA	D	SD
M-banking is more time saving than ATM	14	44	40	0	2
Awareness about ATM is more than M-banking	14	43	41	6	2
Usage is easy in ATM than M-banking	9	41	37	11	2
Problems are more in ATM's than in M-Banking	4	28	56	9	3
Risks are more in M-banking than in ATM's	6	49	35	6	4

Overall satisfaction is better in ATMs than in M-banking	9	32	33	24	2
Cost wise ATM is more economical than M-Banking	5	29	47	15	4
You would prefer mobile banking now than visiting the ATM	10	24	44	19	3

STRONGLY AGREE(SA), AGREE(A), NOT APPLICABLE(NA),DISAGREE(D), STRONGLY DISAGREE(SD) HAVE BEEN EXPRESSED AS PERCENTAGE VALUES

44 % agree that Mobile banking is more time saving than ATM. 40 % have said not applicable.14% strongly agree that mobile banking is more time saving than ATM only 2% have strongly disagreed that mobile banking is more time saving than ATM. 43% have agreed that awareness about ATM is more than Mobile banking., while 41 % have decided not to comment. 41 % of customers feel that usage is easy in ATM than in mobile banking while 37% of customers decided not to comment.56 % of customers felt that the question problems are more in ATM than in mobile banking is not applicable to them and 28 % agreed to the same. 49 % of customers agreed that risks are more in Mobile banking than in ATM's while 33% of customers decided not to comment on overall satisfaction is better in ATM's than in Mobile banking. For the last two questions relating to cost and preference majority of the customers decided not to comment

VI. FINDINGS

The Number of male customers (66%) outnumbered the female customers. The most number of customers were of the age group of 20-30 years (41%). Most of the customers were from the public sector (71%). Most of the IOB customers have secondary education (35%) closely followed by undergraduate qualification (34%). 47 % of customers have their income ranging between Rs.10,001 and Rs.20,000.

CUSTOMERS PERCEPTION TOWARDS RISK AND SECURITY ASPECTS OF ATM'S

Out of 11 questions asked it was found that with 8 questions customer's had considerably faced problems and risks ,which include ATM's do not function properly, cash is not available with ATM's, ATMs give old notes most of the time,Receipt not issued / Receipt printed illegible, ATM system failure and Quality of swiping Pad and with 2 questions customers occasionally faced risks and problems which include ATM card got stuck in the machine and Long waiting line outside ATM's.

DIMENSIONS OF RISK AND PROBLEM ASPECT OF ATM.

After factorisation 3 major factors were found and based on their dominance they are Problem Factor, Risk factor. Of them the most dominant factor are Problem factor followed by Risk factor and last being Security factor in the order of their dominance.

NUMBER OF CUSTOMERS USING MOBILE BANKING

54 % of customers are using mobile banking showing that customers of IOB have begun to use technology for banking services.

ASSOCIATION BETWEEN AGE AND USE OF MOBILE BANKING

Based on the test performed it can be proved that there is an association between age of the IOB customers and their use of Mobile banking.

CUSTOMERS PERCEPTION TOWARDS RISK ASPECTS OF MOBILE BANKING

Out of 7 questions asked on the customer's perception towards Risk aspect of Mobile Banking it was found that customers in a major number for 6 questions said that risk were more with Mobile banking. The highest percentage of customers perceived risk with mobile banking due to password being stolen, Account being Hacked and Balance transferred to another account not where they wanted it to be transferred.

COMPARISON OF THE OVERALL CUSTOMERS PERCEPTION WITH REGARD TO ATM'S AND MOBILE BANKING

It was not surprising to see that IOB customers have embraced technology but still majority percentage of customers preferred to use internet banking(55%) followed by mobile banking(33%).

Out of 8 questions asked in the comparison, only 4 questions gave clear indication that customers agreed on the following :M-banking is more time saving than ATM (44%) ; Awareness about ATM is more than M-banking (43%) ; Usage is easy in ATM than M-banking(41%) ; Risks are more in M-banking than in ATM's(49%).

VII. SUGGESTIONS
- Banks need to take adequate measures to see that customer's problems with regard to ATM's and mobile banking are solved at the earliest.
- Security issues are a major concern which can be solved by adequate steps taken by both Banks and the government.
- Customers need to be made aware that risk is a small part of any service availed whether with or without technology
- Banks need to spread awareness to the customers about the use of Mobile banking and the services that can be availed through it.

- Last but not the least both government and banks need to join together to form a system that makes not of customer complaints, solves it and also gets a feedback from the customers.

VIII. CONCLUSION

As technology has managed to have firm roots in every field banking has also got into the gambit of Technology. While ATM was one of the first to be introduced in the field of Banking in Technology, Mobile Banking is a latest introduction in the field of technology with regard to banking services. The study conducted has clearly revealed that the customers perceive that there are risk, problems and security issues with regard to ATM's. The three dimensions identified with this regard are given below
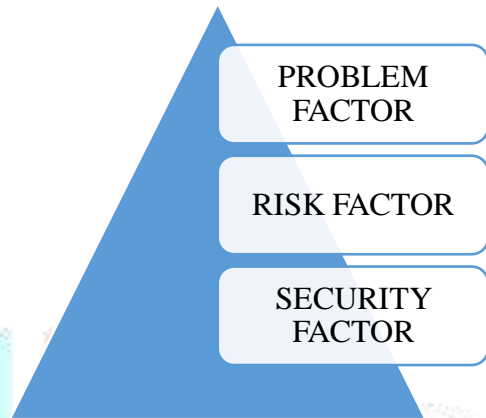
Out of 100 IOB customers from whom primary data was collected it clearly revealed that 54 customers used mobile banking service which clearly showed that customers are aware of Mobile banking and have started using the service but still it is yet to reach full momentum. While Age is associated with use of mobile banking and the younger generation have begun to use mobile banking service at a faster pace, customers still fell risks are still involved with mobile banking.

It was a little astonishing to see customers prefer internet banking to mobile and direct visit to bank. From the comparison of ATM and mobile banking the following can be concluded:
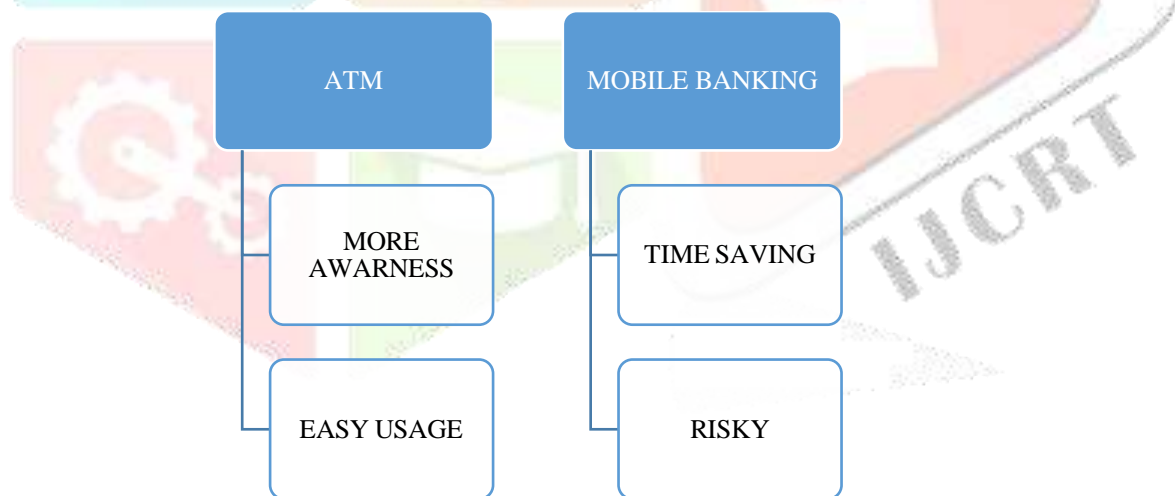
IX. ACKNOWLEDGEMENT

X. SCOPE FOR FURTHER STUDY

Technology in Banking is at its initial stages and has vast scope for study. The above study was only a small part there is still wide scope for further study given below is some of other aspects that can be studied:

- Usage, Promptness, Customer Grievance Redressal and Satisfaction and latest trends in ATM's.
- Awareness, Usage, satisfaction of Mobile banking
- Preference of customers towards internet banking.
- Modern Technological aspects of Banking.

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