

# Use of Mobile Financial Management Information System (MFMIS) to increase customer base by leading private banks

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**Abstract-** Mobile Financial management information system is not a new phenomenon. The recording of financial information is the oldest known form of keeping records, dating back thousands of years. Financial information yet has long presented problems, specially since the invention of money. Governments in developing countries are increasingly exploring methods and systems to modernize and improve public financial management. In India, majority of PSU's and private sector banks are faced by several obstacles in their managerial systems and as a result are launching Mobile Financial Management Information Systems (MFMIS) in form of different mobile Applications. Now mobile phones are not only a medium of voice communication but also widely used for mobile services. Mobile based services or M-services are defined as electronic services that are delivered to the consumers via mobile technologies using mobile devices. MFMIS are able to provide services anywhere at any time. Due to this reason this concept becoming popular among people. Frequency tables and graphs were used to present the data for easy comparison. This study found that internal control mechanism facilitated by MFMIS affects the customer base. After launch of Mobile application by particular bank its customer base significantly increased which ultimately increased the credit score of bank.

**Index Terms-** MFMIS, Graph, PSU's, Mobile, Credit Score etc.

## I. INTRODUCTION

Technology plays a very crucial part in delivering quality in banking services. Like other technological innovations e-banking has also been adopted quickly by various banks and their customers. Smart phones and E-banking has caused a big shift from traditional banking habits to mobile app banking.

Mobile Financial Management Information Systems (MFMIS) refers to availing of banking services through some specific application on a mobile telecommunication gadget. Use of Mobile phones is increasing day by day and has now become a necessity. With the smart phone and tablet use and trend towards advanced technology in mobile communications, Mobile Financial Management Information Systems (MFMIS) has gained lot of importance and popularity. MFMIS is done for account transactions, checking account balance, sending requests for cheque books, payments, checking other account information and fund transfers. Mobile Financial Management Information Systems traditionally included banking through SMS but there has been a significant shift in MFMIS from SMS to application based banking through gadgets and smart phones.

As per the RBI report, In India, most of the banks including PSU's, Private sector banks, Co-operative Banks, Gramin banks, Sahkari banks (out of 316 allowed banks) have commenced mobile banking operations and there are 400 million active MFMIS users as of October 2016.

However, enrollment related issues for customer like mobile number registration, M-PIN generation process, bank-staff education, security-related concerns, and customer awareness and education, and technical issues faced by banks including access channels for transaction, cumbersome transaction process and coordinating with Mobile Network Operators (MNOs) in mobile-banking eco-system are inhibiting the adoption of mobile banking.

As per data released by Prime Minister Narendra Modi on his website, cashless transactions have picked up ever since demonetization had come to effect and initiatives were being taken by various wings of the government, encouraging people to go cashless. In the financial year of 2016-17, there were a total of 865.9 crore digital transactions across all banking platforms. This is a significant rise from the 2013-14 number of 254.5 crore digital transactions. Within a period of 3 years, the amount of digital transactions has more than tripled. Recently, Niti Aayog principal advisor Ratan Watal shared similar statistics, stating that digital payments grew 55 per cent in volume and 24.2 per cent in value in 2016-17 over 2015-16.

The study further analyses the effect of various demographic factors of the private bank account holders on the style and attitude towards using MFMS. Thus this study shows an empirical view of the perceptions and mind-sets private bank customers have about using mobile banking services.

Safety and security issues have discouraged the customers from resorting to online and MFMS facilities. Furthermore, customers using MFMS find that the advantages are in time-effectiveness and time saving services, convenience, safety, technical or operational simplicity and ease of use. These help in enriching their mobile-banking experience and have the potential to increase adoption of mobile banking.

## II. OBJECTIVE AND RESEARCH METHODOLOGY

To study the level of adoption of MFMS services by private bank customers. To understand how different demographic characteristics of persons affects their behavior and adoption of MFMS services. To understand how MFMS has been adopted with respect to banking mobile applications and consumer's attitudes towards MFMS. Understanding the adoption of SMS based banking and mobile app based banking technology.

The study was conducted with 200 respondents categorized as customers already using mobile banking, customers using mobile apps for banking and customers currently not using mobile banking with age groups, using random sampling technique. The customers were surveyed with help of a structured questionnaire. All the respondents were private bank customers of banks including Kotak

Mahindra Bank, ICICI, HDFC, Axis-Bank. By random sampling technique, data was collected through personal contacts. With the help of a questionnaire, the data was collected which was structured on the basis of five-point scale ranging from strongly-agree to strongly-disagree options.

## III. LITERATURE SURVEY

Mobile Banking, popularly known as MFMS, can perform various functions like mini statement viewing, account and balance checking, SMS banking and alert texts, access to debit and credit card statements, credit-card online payment, mobile recharge etc. via mobile phones (Vinayagamorthy and Sankar, 2012). First MFMS transaction services in India were offered by ICICI bank in January 2008 (Mr. V. Vaidyanathan, 2008) where as SMS banking alert services started in 2005-06 (Alpesh Patel, 2013). India's mobile phone subscribers rose up to the 1 billion user's mark, as per the information released by the country's telecom regulator. Mobile banking users in India account for more than 50% of the total population (KPMG, UBS study 2015). Mobile banking has seen an upward shift of 88.75% in a year, going up from 8.89 million transactions as of December 2013 to 16.78 million in December 2014. There were transactions worth Rs 22.61 billion in December 2013 that went up to Rs 113.23 billion, it was a dynamic rise of 400 times more than the previous year (BFSI report, Consumer Voice April 2015) According to RBI's bank-wise MFMS transactions data, State Bank of India was on the top of the list in volumes while HDFC bank had topped the list in terms of value. (BFSI report, Consumer Voice April 2015). It is also found that people have less trust in the mobile banking services and personal disposition to trust played a positive and essential role in developing initial usage in mobile banking services. To some extent the success of acceptance of MFMS transactions depends on the customer as well as vendor's or bank's trust (Singh, Srivastava, & Srivastav, 2010). According to Devadenan's survey conducted on 65 respondents, it was found that 84.6% of the respondents that were surveyed had tested the MFMS facility while the remaining were not aware of it. (Devadenan V 2013).

IV. POTENTIAL OF MFMIS IN INDIA

Vyas (2009) concluded that banks in India will focus and target on non online or traditional banking users who may lack regular access to desktop internet but are very likely to own a smart mobile device, thus reporting great potential of MFMIS in India. Karjaluoto (2002) revealed that there is enormous market potential for MFMIS due to its on-the-go functionality and the option of access to banking technically anytime and anywhere. Increasing smart phone and other smart gadgets adoption and initiatives like media promotions and customer education and training programs for mobile banking have led to this MFMIS fashion. For customers, MFMIS is convenient while banks benefit a lot as it's a low-cost channel. (Kiran 2013). According to the RBI report by technical committee of 2014, the total number of bank account holders was a good number of 589 Million out of which 182 million were account holders using ICT based banking channels. The total number of MFMIS users was 22 million. It is quite evident that there is enormous scope of MFMIS in a country like India.

V. IMPACT OF DEMOGRAPHICS ON MFMIS SERVICES ADOPTION

Demographic factors affect is essential to be studied while understanding the adoption and acceptance of MFMIS services in India. It is concluded that younger customers prioritize convenience and time-saving factors more than older consumers. Mobile-savvy college students, who are using their mobile devices for services beyond voice, will drive adoption of innovative mobility services, including MFMIS (Goswami D, Raghavendran S 2009).Capgemini also found that younger customers, who are more tech-savvy, are placing greater importance on MFMIS than older customers. The best model that explains this relationship between different perceived factors and technology adoption is TAM (Technology Acceptance Model) (Davis, Bagozzi and Warshaw 1989) TAM explains the 2 external variables that effect the level of acceptance of technology further explained in Fig. 1.

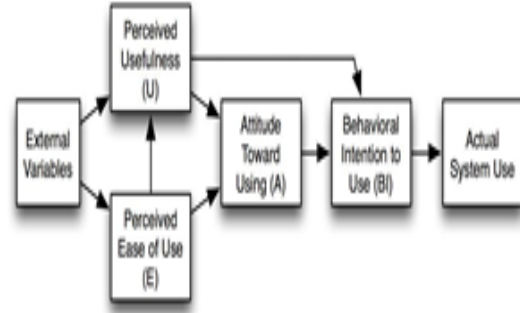


Fig.1

TAM was further extended including acceptance behaviour towards e-commerce, popularly known as TAM3 (Venkatesh and Bala 2008) Many further researches have been done with regard to this model to understand the acceptance behavior of users with respect to technology. 13 factors which effect m-commerce claimed by Bhatti (2007) and Noordin(2011) are Perceived Usefulness, Self-Efficacy, Perceived ease of use, Personal Innovativeness, Perceived Trust, Perceived Cost, Subjective Norm, Social Influence, Self-Control, Perceived Behavioural Control, Facilitating condition, Attitude towards use, and Intention to use M-commerce are statistically significant and by using exploratory factor analysis they concluded that the mere introduction of M-commerce is not sufficient but focus should be laid on the improvement of attributes that effect the M-Commerce adoption. These authors used two more models to study the customer's banking behavior, TPB (Theory Planned Behaviour), IDT (Innovation Diffusion Model).According to the study conducted by Bhatti, who used all the three models concluded that the perceived ease of use, perceived usefulness, subjective norm, innovativeness and perceived behavioral control are strong factors which determine the intention of adopting M-commerce.

VI. DATA ANALYSIS AND INTERPRETATION

Table I. No. of Users and Non Users of MIMFS

Sr. No.	Total Respondents	Users of MFMIS	Non-users
1	200	154	46

Table II. Demographics of Respondent

Demograph indicator	Values	No. of respondents	Percent %	M-Banking Users	Percentage	Non- Users	Percent %
Age	21-25	41	20.0%	20	13.0%	20	43.5%
	26-30	80	40.0%	72	46.8%	8	17.4%
	31-36	61	30.0%	55	35.7%	5	10.9%
	36-40	11	5.0%	4	2.6%	6	13.0%
	Above 40	10	5.0%	3	1.9%	7	15.2%
Gender	Male	110	55.0%	86	55.8%	24	51.2%
	Female	90	45.0%	68	44.2%	22	47.8%
Education	Under-graduate	31	15.0%	10	6.5%	20	43.5%
	Graduate	70	35.0%	55	35.7%	15	31.6%
	Post-graduate	100	50.0%	89	57.8%	11	23.9%
Occupation	Govt.	10	5.0%	7	4.5%	3	6.5%
	Private	95	47.5%	87	56.5%	8	17.4%
	Business	20	10.0%	17	11.0%	3	6.5%
	Student	61	30.0%	30	19.5%	30	65.2%
	House-wife	15	7.5%	13	8.4%	2	4.3%
Monthly income	Below 10000	51	25.0%	20	13.0%	30	65.2%
	10000-40000	70	35.0%	59	38.3%	11	23.9%
	40000-60000	70	35.0%	67	43.5%	3	6.5%
	Above 60,000	10	5.0%	8	5.2%	2	4.3%
Marital Status	Married	80	40.0%	70	45.5%	10	21.7%
	Unmarried	110	60.0%	84	54.5%	26	78.3%

VII. FINDINGS AND OBSERVATIONS

The respondents were asked to prioritize the factors which are most important in adopting MFMS services. There were four factors Convenience, Ease of use of MFMS, security and risk factor and time-saving or time-efficiency.

It was found that 32% of respondents using MFMS strongly agreed that convenience is most important where as only 11% of non-users also strongly agreed that convenience is most important.

32% of the total users of MFMS strongly agreed that security and risk is most important where as the non-users were a huge amount of 54% who were reluctant to use MFMS as they prioritized security and risk as the most important factor.

It is revealed in this study that users prioritize both convenience and security equally but it does not abstain them from adopting MFMS.

Table III. Prioritization of Factors Affecting Adoption of MFMS

Factors	No of Percentage respondents			
	MFMS users	Non-Users	Users	Non-Users
Convenience	50	5	32%	11%
Ease of use	40	10	26%	22%
Security and Risk	50	25	32%	54%
Time-saving	14	6	9%	13%
<b>Total</b>	<b>154</b>	<b>46</b>		

It was observed that all the respondents were aware of MFMS facilities and services provided by the banks.

77% respondents (154/200) were already using MFMS services.

Out of all the respondents (154) using MFMS 100% were aware of banking mobile applications.

100 people out of 154 persons which use MFMS services have done and NEFT (National Electronic Fund Transfer) transaction with their smart-phone MFMS application which constitutes to a good amount of 64.93% of all the persons using MFMS.

90% of respondents of age 26-30 years (72 out of 80) were using MFMS apps where as only 30% of respondents of age above 40 Years (3 out of 10) were using MFMS apps. According this data it can be revealed that age is one of the most impactful demographic factors in case of MFMS adoption.

It was seen that 55.8% male respondents were using MFMS and 44.2% female respondents were using MFMS. This concludes that gender does not have a big impact on the use and adoption of MFMS services.

Highest number of persons using MFMS was in private service as it was also observed that they had their salary accounts in one of the private banks it was 56.5% of the total respondents.

Respondents using HDFC bank mobile app found it to be the most convenient and easy to use app.

57% respondents also strongly believed that private bank mobile apps are better than public bank apps. This study also revealed that very less percentage of respondents using mobile apps and other MFMS services were comfortable in taking loans online. This accounted for only 2% of the entire MFMS users surveyed.

### VIII. CONCLUSION

It was observed that the respondents who used MFMS mostly used it for checking account balance and statements, credit card payments, request for cheque books and NEFT transactions. All the respondents in the age group 21-35 were well versed with usage of MFMS apps. According to this study it can be concluded that the younger respondents are more aware of the usage of mobile apps and SMS banking and prefer MFMS as it is faster and convenient than traditional banking techniques. The older respondents were more concerned about the risk and security of money as compared to the time-saving advantage of customers. They also strongly agreed that mobile apps for banking are complicated and they were reluctant to use smart gadgets for money related issues. With the increase in popularity and adoption of smart gadgets, MFMS is the most growing area in the environment currently. Education and age are the most impactful demographic factor affecting the use and adoption of MFMS by private bank customers in New Delhi area. M- Banking is surely the best and most convenient method which makes all the basic banking techniques automated and just at a click on smart phone or tablet everything related to the bank account can be accessed. This study also shows that with the rapidly advancing technology and increased use of internet SMS banking will also be soon replaced by app based banking. India having the youngest population in the world has a bright future in the country as it has been revealed by many researchers that the youth has faster adoption of technology than the older generations.

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