

Ease Of Using Payment Banks In India With Suitable Application Of Software Technology

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Abstract: In the current era which can be termed as a Digital epoch, the use of technology to reduce the burden of money transfers and ensuring authentic transactions enhances the mode of business operations by Mobile banking. With the advent of payment banks, the complexity of transfer and transaction of money has reduced drastically. Banking sector cut edge technology and proliferation in the number of users of the internet to their advantage by enabling customers to perform wide number of financial transactions. The main objective of payment banks is to facilitate people; especially the new users of internet and regular salaried employees utilize the facility of formal banking. Performing bank transactions through payment bank will reduce the burden on the Commercial banks and encourage digitalization. It also prevents evading of taxes. Every individual performs financial transactions several times a day in which 'Payment' is the main objective. For this, payment banks are very useful. Existing system of operating payment banks necessitates transfer of money through any commercial bank account into payment bank account. This is preventing the majority of population comprising of daily wage employees from using payment bank as they are not accustomed to digital bank transactions and have only currency cash in their possession. In this paper, a new model is proposed in which directly depositing cash in payment bank account of a customer is possible.

Keywords- *Payment banks, Mobile banking*

I. INTRODUCTION

A large proportion of India's economy sustains on the emerging market of E-commerce. E-commerce which is the confluence of technology and commercial transactions has completely transformed the process of buying and selling of products and transfer of funds electronically which occurs predominantly over the internet. The government of India in the year 2016, took a big step to demonetize currency notes of Rupees 500 and 1000. This decision marked a revolution in the usage of E-commerce with payment bank as a mode of payment which thereby contributed to the escalation of a digital transactions. Many business stores and outlets have adopted the concept of "bricks and clicks" which employs both offline (presence of retail outlets at a particular location) and online (through web-sites and apps) for selling their product. The primary objective of payment banks lies in this notion.

There are a tremendous number of transactions that take place each day. A person is likely to perform two to four transactions on an average per day. For this purpose, Payment banks are essential to reduce the complexities involved in these frequently performed activities. Payment banks are similar to the traditional banks but serve a different purpose on the whole. It performs only restricted functions allowed as per The Banking Regulation Act of 1949 in India. There are only a

limited number of banks that have been granted the license to function as a payment bank by the Reserve Bank Of India (RBI). There are eleven companies that have been provided this grant. Few of them are Aditya Birla Nuvo, Airtel M Commerce Services, Reliance Industries, etc.

II. MOBILE BANKING

A smart phone that was once upon a time considered a luxury is now a basic need as many day to day activities can be performed on it, banking operations being one of the main activities. One of the greatest advancements in the modern electronic banking that has redefined the banking sector is the advent of Mobile banking. With the introduction of wireless technology, one does not need to visit the bank on a regular basis and can perform financial transactions through a smart phone.

The Mobile banking system allows customers to perform banking transactions through a mobile application that is installed in the device during the manufacturing phases, or is available in the app store that is available in most mobile phones. Payment Banks may also be available as websites created with the help of JavaScript on the client and server-side. The communication between the client and the server

takes place over the Internet. The back-end system is based on the Service Oriented Architecture (SOA) which helps in the communication of various components that provide services. However, the architecture for online banking services might vary from one case to another depending upon the operations performed by the customer. Mobile banking through SMS which stands for Short Message Service and WAP which is Wireless Application protocol has attracted customers with its qualities of providing ease and comfort of performing banking operations on a smart phone. For instance, a customer can get to know his or her bank account balance, bank statements which provide information on recent activities performed on the account and other details with the help of an SMS. SMS and WAP are highly vulnerable to breach of security. SMS does not involve any encryption coding and WAP involves only translation and compression of contents, giving room for external threats. Hence, a system by the name Intrusion Detection System (IDS) for ensuring security and safety for the online internet banking transactions was introduced. IDS records and analyses all the activities that take place on the networks making sure that the content has not been disturbed in any way. By placing IDS in the online banking architecture, security from sabotage and attacks of hackers who might misuse the content obtained can be ensured.

III.USABILITY OF PAYMENT BANKS

The main objective of payment banks is to enable banking transactions by large number of lower class people and those who draw low incomes. Mobile phones with internet facility can be used for transfers and remittances through a payment bank account. With reduction of transactions using liquid cash, the country moves towards becoming a cashless economy. The advantages of this kind of economy reduces the need of holding onto wads of cash and various kinds of cards such as debits cards, credit cards, etc. It also eliminates the tedious effort of queuing up at an ATM for cash withdrawals. The expense incurred towards maintaining ATMs is also dispensed with. In emergency cases like in hospitals, one might require huge amounts immediately. There is a limitation on the maximum amount one can draw from a savings bank account. In such situations payment banks come to the rescue allowing the transfer of the amount present in one's account without any restriction.

IV. FEW OF THE GUIDELINES PROVIDED BY RBI TO PAYMENT BANKS

- To be approved of a license, a minimum capital of 1 lakh rupees is required.
- The promoter's contribution should be atleast 40% of the investment for the first five years.
- The shareholdings of the promoters can be decreased to 40% by the end of the fifth year, 30% by the end of the tenth year and 12% by the end of the twelfth year from the date of commencement.

- 25% of the branches of payment banks should be located in rural areas that do not consist of banks.
- Apart from the promoters of the business, other parties will not be allowed to hold more than 10% of the shareholdings.
- The payment banks should be fully integrated and be technology dependent to expedite the processes and carry out its functions systematically.
- The term "payment banks" must be used in order to differentiate them from other kinds of banks.
- They must be registered as a public limited company under the Companies Act of 2013.
- They must consist of a "Customer Grievance Cell" to interact with the customers and to administer their concerns.

V.FUNCTIONS OF PAYMENT BANKS IN INDIA

A number of e-commerce applications are possible with the use of payment banks in India. RBI is also welcoming the establishment of payment banks. RBI has already issued license to a number of payment banks such as "Paytm Payment Bank Ltd., Airtel payment banks, India Post Payment Bank, etc.

The major functions that are carried out by payment banks in India are:

- Perform the payment of electricity bills.
- Payment of DTH and broadband bills.
- Recharge mobile phones instantly.
- Book tickets to fly by air or hire taxis.
- Payment of fuel at certain petrol pumps.
- Book movie tickets.

VI.TECHNOLOGY USED TO IMPLEMENT PROPOSED SYSTEM

ATMs make use of the modern operating system versions of Microsoft Windows, which mainly include Windows XP Professional or Windows XP Embedded and other programming environments.

In order to address the new capabilities, the common application layer transaction protocols such as Diebold 91x (911 or 912) and NCR NDC or NDC+ provide an imitation of the older versions of hardware on newer platforms with additional extensions made over time. Most of the major ATM manufacturers provide in-built software packages that help in implementing the required protocols. With high dependency on standardized software base, financial institutions increasingly focus on the application programs that drive their equipment. WOSA/XFS, now known as CEN XFS (or simply XFS), provides a common API for accessing and manipulating the various devices of an ATM. J/XFS is a Java

implementation of the CEN XFS API. As XFS uses the concept of “Write once, run anywhere” similar to that of JAVA, the interpretation of the XFS standards differ from vendor to vendor. The combination of Windows OS and XFS, the software applications function efficiently and more intelligently. This has formed a new type of ATM applications which is commonly referred to as programmable applications. Notable ATM software that operates on XFS platforms include Triton PRISM, Diebold Agilis EmPower, NCR APTRA Edge, Absolute Systems AbsoluteINTERACT, KAL Kalignite Software Platform, Phoenix Interactive VISTAatm, Wincor Nixdorf ProTopas, Euronet EFTS and Intertech inter-ATM. These softwares can be used for direct deposit of cash into the payment banks.

VII. PROPOSED SYSTEM

Figure 1 depicts the current system of using the payment banks. It can be observed from the figure that the amount in the payment bank is deposited through transfer of amount from a commercial bank to payment bank.

Figure 2 depicts the direct deposit of cash into the payment bank account through the proposed cash deposit machine so that it can be used instantly for online banking.

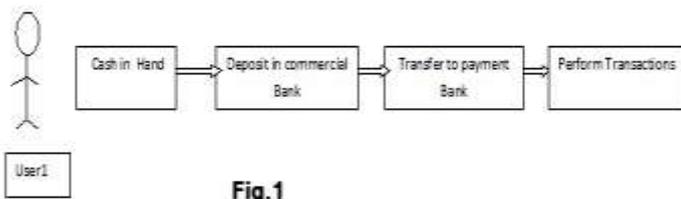


Fig.1

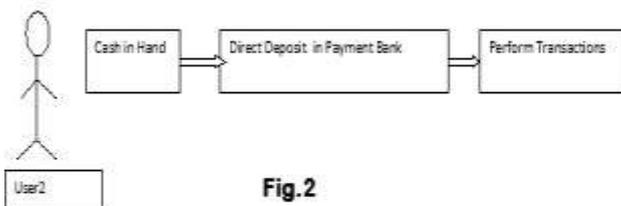


Fig.2

VIII. CASH DEPOSIT MACHINE

A cash deposit machine looks exactly like an ATM machine and can be found in any leading bank’s branch these days. Cash deposit machine performs operation similar to that of an ATM machine, and is used to deposit cash in any bank account.

The existing Cash deposit machine can be modified to incorporate a Finger Print scanner. This finger print scanner shall scan the finger print of the person desiring to deposit the

money and compare it with the finger print database. The Adhaar Number shall be extracted from the available database.

VIII.I FUNCTIONALITY OF CASH DEPOSIT MACHINE IN OUR PROPOSED SYSTEM

To deposit money in payment bank account through a cash deposit machine, the following shall be needed:

- Adhaar Card Number of the individual, or
- Finger Print of the person depositing the amount into the payment bank.

VIII.II STEPS OF DEPOSITING MONEY IN PAYMENT BANK USING AADHAR CARD

- Finger Print Scanning: the Finger Print of the person depositing the amount shall be registered on the cash depositing machine.
- Adhaar Number: The Adhaar Number of the person depositing the amount into the payment bank shall be entered.
- Payment Bank: Select the payment bank into which the amount needs to be deposited.
- Amount: Enter the amount to deposit in the payment bank account.
- Cash Deposit: Place the cash in deposit slot and let the machine take in the cash. As the machine receives the cash it displays the currency denominations, and deposits the amount in payment bank account.
- Amount is directly deposited into the payment bank and is ready for use for online banking.

IX. CHARACTERISTICS OF USABILITY OF PROPOSED SYSTEM

- **Ease of use:** As the main purpose of the proposed system is to make it convenient for the people holding accounts in payment banks to deposit small or large amounts through a system without having to travel diurnally, this characteristic is served. The system may not involve complex operations to deposit or withdraw money which contributes to the quality of ease of use of the system.
- **Efficiency and Effectiveness:** The efficiency of the proposed system can improve with the advancement of the technology which would attract a large number of customers. As this system aims at reducing time

and effort which in-turn increases comfort, many people would like to use this system effectively.

- **Satisfaction:** This model has been proposed keeping in mind the major aspect of satisfaction of the customers. The services provided by this system should focus at completing the tasks of the customer without any hassles.
- **Safety:** As the money deposited in this proposed system can be used through smart phone applications and websites, there are high chances of breach of security. Viruses such as TrojanZeus Trojan, virus Zitmo and virus Zeus have targeted internet banking users by accessing their mobile transaction authentication number or their password.
- **Performance:** The proposed system would increase the performance of the payment banks as many people would want to open their accounts in the same due to the factor of convenience. Various online businesses that include buying and selling of products would also benefit in-turn raising their performance rates.
- **Compatibility:** Due to the progress in technology, arrival of various operating systems and schemes of providing smart phones at subsidized rates by companies has drastically increased the number of people, mainly the daily wage earners using smart devices and performing online banking operations. Hence, to completely digitalize the society, this model has been proposed.

X. ADVANTAGES OF PROPOSED SYSTEM OVER EXISTING SYSTEM OF OPERATION OF PAYMENT BANKS

- Amount can be deposited directly into the payment bank through a cash deposit machine that is close to the person.
- Person desiring to use the facility bank need not first deposit the amount into the commercial bank. As such work is reduced.
- Expenditure for travelling to the bank to deposit the amount can be avoided.
- Plenty of time is saved as the person need not stand in queue for depositing amount in the commercial bank.
- The amount needed for transportation to travel to the commercial bank can be avoided.
- The number of customers to the payment bank will increase drastically.

- Recording of small transactions too becomes possible thereby preventing tax evaders from escaping.
- The fruits of technology can be reaped even by the lower class people.
- Online banking and online shopping will increase.
- Day to day bill payments such as gas bills, electricity bills, mobile phone recharge, etc. can be done with the little cash that may be available in hand.
- Separate planning to visit the commercial bank and then pay the bills will not be necessary. As such, bill payments will take place in time by majority of people.

XI. CONCLUSION

A study on utilization of payment banks by the people in India was carried out. It was found that majority of the lowly paid employees, daily wage employees, laborers, etc. are not using the payment banks for their day to day bill payments, mobile recharging, etc. even though they have the necessity of such banking. It is found that the primary reason for not using of payment banks by these people is lack of time to visit the commercial bank to deposit money into their account and then transfer it into the payment bank.

Thus, the proposed system facilitates deposit of cash directly into the payment banks through cash deposit machines. This saves abundant of time and the overhead of performing the payment bank transactions is reduced drastically. Future research can be carried out in this area to study the commercials and the proposed system can be implemented for the benefit of both the customer and the payment banks. Another future development can be collaboration between the mobile phone companies and the payment banks so that the payment bank transactions can be carried out with the availability of mobile signals only and avoiding the need of internet which may not be used by the lowly paid or daily wage earners.

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