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Role of Information Technology in Indian Banking Sector Developments

S.V.N.M. Sastry, A.V.N. Murthy

Abstract*: *Since it is the era of internet, we cannot assume an activity belonging to any of the sectors (whether it is primary sector, secondary sector or territory sector and also whether it is public sector or private sector) without it is linked with information technology ie., internet. Even in the territory sector various activities like transportation, banking, insurance, science and technology, education, health care etc., a large number of technological advancements have arrived for the past two decades. The objective of this article is to study the advantages of some such technological innovations adapted by the Indian banking sector to banks themselves as well as to their customers.

Index Terms: ATMs, Debit Cards, Credit Cards, Online Banking.

I. INTRODUCTION

As a result of the reforms introduced by the then Prime Minister of India late Sri. P.V. Narasimha Rao's Government in the first half of 1990s in the economic sector which are called Liberalization, Privatization and Globalization we all aware that more number of banks were arrived particularly in private sector. Besides, the arrival of technological advancement (ie., the internet) first the private sector banks in our country rapidly introduced various online services subsequently the public sector banks were also started to provide various online services to their customers. Some of such services are Automated Teller Machines popularly known as ATMs, plastic money (ie., debit and credit cards), online banking etc., as result of these online services particularly as result of the arrival of internet the entire structure, business process and work culture of the banking sector has changed. As result, the efficiency, productivity and profitability of the banking sector in our country has increased to a large extent because of the reduced time per transaction, requirement of less efforts per transaction in banks and also reduction of frequent physical visits of customers to the bank etc., Similarly, these services are also highly useful to the customers of banks for example before the arrival of these internet or online services the customers were to carry their physical cash during their travels from one place to another place which might be very risky particularly during long journeys and they were to be very cautious while carrying their money in those days, of course, some customers having banking knowledge in those days they used to carry traveller cheques to avoid such risks in their long journeys.

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* Correspondence Author (s)
S.V.N.M. Sastry, Department of Commerce, Koneru Lakshmaiah Education Foundation, Vaddeswaram, A.P, India.
A.V.N. Murthy, Department of Commerce, Koneru Lakshmaiah Education Foundation, Vaddeswaram, A.P, India.

II. SUBMISSION

But such a situation has completely outdated now because of the arrival of the plastic money ie., debit cards or credit cards, now the people need not carry the physical cash in long journeys instead they can carry their debit cards or credit cards and as and when or wherever they need they can with draw the required money from ATMs of course a maximum limit of say Rs.30,000 to Rs.40,000 per day. Of course, this limit will be varied from bank to bank. Take another instance which is very advantageous to bank customers is say for example in those days where there were no online services, if the people have to send cash from one person to another person who are staying in different places, they used to depend on bank cheques or bank demand drafts or post office money orders etc., which are in one way time taking and in another way subjected to costs like DD commission to be paid to banks and postal charges to send the DDs or Cheques through post or courier etc., now this method of sending money to others is also completely outdated and hence people if they have physical cash, they can simply deposit in the bank account of the receiver in the place of sender through using the ATMs not even going to the bank. Alternatively, if the customer got an online account they can send through online either through quick transfer mode or NIFT or RTGS, ECS, EFT etc., within a short span of time in hours but not days like in earlier days. In the same way the people need not carry physical cash to the markets like in previous days to purchase various goods simply they can carry their debit cards or credit cards. Similarly, people can make the purchases of train tickets, air tickets, movie tickets etc., through online or through the usage of their debit or credit cards instead of cash payments. In the same way, various personal payments like payment of income tax, GST, payment of insurance premiums (whether general insurance or life insurance), booking of gas cylinders, electricity bills, telephone bills, house rents etc., all can be made either through online or through the usage of debit or credit cards instead of making through cash like in previous days. Employers can also make their salary payments through online to their employees unlike in case of earlier days in which some employers they used to pay salaries through physical cash or some they used to issue salary cheques to their employees and of course some employers they used to directly deposit the salary amount in employee's bank accounts.

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Company form of organizations can also now make their dividend payments or interest payments through online instead of issuing cheques or Demand Drafts like in olden days.

III. IMPORTANT INFORMATION

Following are some of the technological advancements in Indian banking sector:

1. Automated Teller Machines (ATMs)

These are the **electronic tele-communication devices** which allows the customers of a bank or any other financial institution to perform their financial transactions like cash with drawls, cash deposits, balance enquiry, obtaining mini statement, indent for cheque books, transfer balance from one account to another account etc., without taking the help of the bank's staff or the staff of the financial institution. According to the ATM Industry Association (ATMIA), there are now close to 3.5 million ATMs installed worldwide. On most modern ATMs, customers are identified by inserting a plastic ATM card (or some other acceptable payment card) into the ATM, with authentication being by the customer entering a personal identification number (PIN), which must match the PIN stored in the chip on the card (if the card is so equipped), or in the issuing financial institution's database. The advantages to customers through ATMs are they need not go frequently to banks for carrying out various financial transactions like withdrawal or deposit of money or checking the account balance or taking the mini statement of their account, or indenting for a cheque book or transferring money from one account to another account etc., such transactions can be done by customers of a bank at any time (through out the 24 hours x 7 days, and not only during bank working hours) on their own without taking the assistance of the bank's staff. Similarly, the rush in banks will also be reduced as a result the bank's efficiency in serving their customer's will also be increased. ATMs can be placed at any location but are most often placed near or inside banks, shopping centres /malls, airports, railway stations, metro stations, grocery stores, petrol/gas stations, restaurants, and other locations. ATMs are also found on cruise ships and on some US Navy ships, where sailors can draw out their pay. ATMs may be on- and off-premises. On-premises ATMs are typically more advanced, multi-function machines that complement a bank branch's capabilities, and are thus more expensive. Off-premises machines are deployed by financial institutions and Independent Sales Organisations (ISOs) where there is a simple need for cash, so they are generally cheaper single function devices.

2. Plastic money or electronic money ie., Debit cards and Credit cards

These are the electronic cards issued by the banks (both public sector and private sector banks) to their customers. All most all the banks issuing these cards to their customers. As the debit cards can be used by the bank customers who got a credit balance in their accounts, these can be used in ATMs to make various financial transactions like cash withdrawals, cash deposits, transfer of balance from one account to another account, for indenting to cheque books, to cheque the account balance, to take the mini statement etc., All the banks are issuing these cards to their existing customers. In case of new customers along with pass book, the banks are also issuing a debit card. Hence, the customers need not visit the banks more frequently for cash withdrawals or cash deposits or indenting cheques books or to know the balance in their accounts all they can do through their debit cards. They can also make payments for various purchases made by them in various shops, malls, in petrol bunks etc., and they can also make various online payments through their debit cards of course to the extent of the balance available in their account, the main disadvantage of the debit cards is they will become useless when the balance in account exhausts. To come out from such a difficulty, credit cards will help us. Through these cards bank customers can make various purchases or can make various on line payments even though they do not have any balance in their accounts of course to the extent of limit given by the banks to the individual customers on their individual credit cards. The payment to the bank has to be made within the time limit specified by the bank. Hence credit cards are the electronic cards given by the banks to their customers with limit prescribed. There are large varieties of credit cards issued by the banks to meet the needs of various types of customers. The limits also vary from card to card some cards gives a limit of say Rs.30,000, some cards gives up to Rs.70,000, some cards gives the limit up to Rs.1,00,000 or above. All these cards have various features which differs one from another. Some credit cards also allow the customers to with draw cash to some extent from the ATMs besides allowing the customers to make purchases. For example if the limit of a card is say Rs.90,000, the customer can with draw money from ATMs to the extent of say Rs.8,000 or Rs.9,000 some thing like that as the limit prescribed by the bank. But cash withdrawal through credit card involves more cost to the customer because, the banks will also charge processing fee for allowing the customer to withdraw cash by using the credit card. Hence it is advisable to the customers not to withdraw the cash from ATMs through their credit cards. The main advantages of credit cards to the customers is their credit needs will be satisfied immediately in those periods of money problems. And if they are in a position to pay their bills on or before the time period given by the bank no interest charges need to be born.

But if the customers are unable to pay the bill before the due date, the banks will charge a large rate of interest that is @3% per month. Hence, if the customers are unable to make the payment before due date, it is not advisable to use the credit cards. However, for issuing these credit cards some banks would charge annual maintenance charges and some of the private sector banks also offering to customers without any annual maintenance charges.

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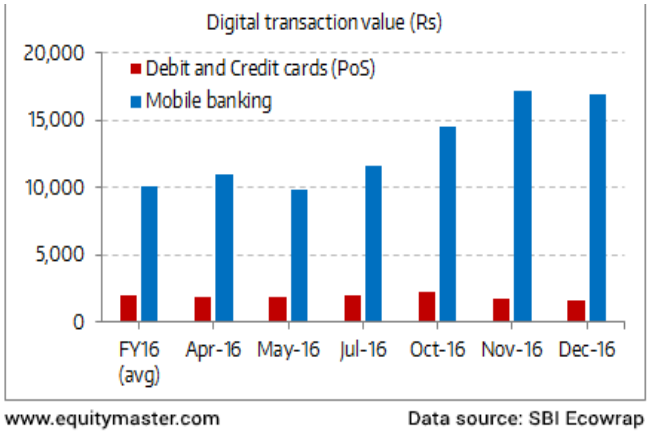
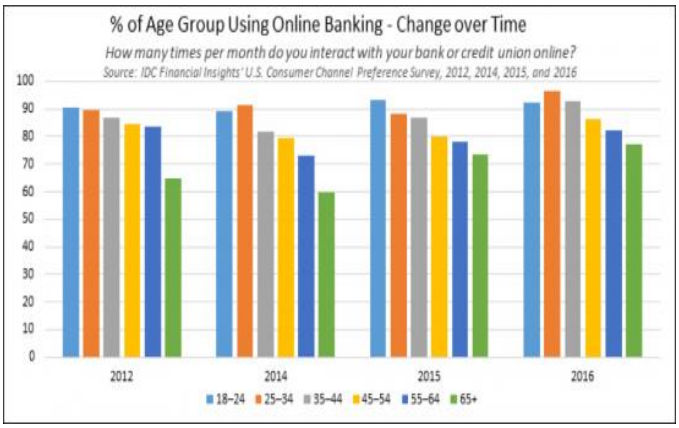
These debit and credit cards were saved the public to a large extent during the period of demonetization in our country by ensuring the public to make their purchases during the periods of shortage of physical cash circulation in our country at that time. Along with customers, the traders were also benefited during that period of demonetization to a large extent while processing their payments, as all of us faced huge problems for withdrawing limited cash from the ATMs by standing in large ques, this problem has extended to more number of days particularly in the rural areas of the country because of the limited number of ATMs in those areas.



3. Online Banking

Online banking which is also called as internet banking allows the customers of a bank to perform various financial transactions through the bank's website. It is a part of core banking. The online banking system will typically connect to or be part of the core banking system operated by a bank and is in contrast to branch banking which was the traditional way customers accessed banking services. Internet banking portal provides corporate banking and personal banking. Personal banking portal is generally meant for individuals, through this the individual customers can carry out various banking transactions in their house or office provided they have a computer with internet. They can watch directly their account on the screen, they can check the balance, last ten transactions, they can take down load the statement of their account, they can make various payments through online, they can order for check books, they themselves can create the demand drafts, they can make various online transfers of funds provided they have an online account with their bank. For getting an online account customers have to apply individually, this can also be done through internet. On processing the application, the bank will give the user name and password. Based on these the customer can operate his on line account. The advantages of online banking includes the following:

1. It is less time consuming and easy to use,
2. It very safe and secure,
3. Customers will have permanent access with the bank,
4. Help to transfer the money quickly and accurately,
5. Access to bank from any where either through a computer or even with a mobile phone,
6. Customer need not go to the bank for each and every transaction.



4. National Electronic Fund Transfer (NEFT)

National Electronic Funds Transfer (NEFT) is a nation-wide payment system facilitating one-to-one funds transfer. Under this Scheme, individuals can electronically transfer funds from any bank branch to any individual having an account with any other bank branch in the country participating in the Scheme . Use NEFT service to transfer funds anywhere using the following modes: Internet banking, I Mobile, m.dot, pockets and icicibankpay. For instance, the NEFT timings of ICICI bank(being one of the largest private sector banks of India) are Monday to Saturday 8.00AM to 6.30PM except second and fourth Saturdays. The transaction or service charges of NEFT transaction of ICICI bank are as under:

Transaction charges	NEFT
Amounts upto Rs 10,000	Rs 2.50 + Applicable GST
Amounts above Rs 10,000 and upto Rs 1 lakh	Rs 5 + Applicable GST
Amounts above Rs 1 lakh and upto Rs 2 lakh	Rs 15 + Applicable GST
Amounts above Rs 2 lakh and upto Rs 5 lakh	Rs 25 + Applicable GST
Amounts above Rs 5 lakh and upto Rs 10 lakh	Rs 25 + Applicable GST

Source:https://www.icicibank.com/Personal-Banking/online service/online-services/FundsTransfer/neft.page

Generally, the funds can be transferred only by those persons (individuals, firms or corporates) who got account in a particular bank's branch. However, even the persons who do not have an account in a particular NEFT enabled branch can also transfer upto a maximum of Rs.50,000 per transaction, but they need to provide their full details like name, address, telephone numbers etc., Hence, NEFT is a simple, safe, secure, fastest and cost effective way to transfer funds especially for retail remittances.

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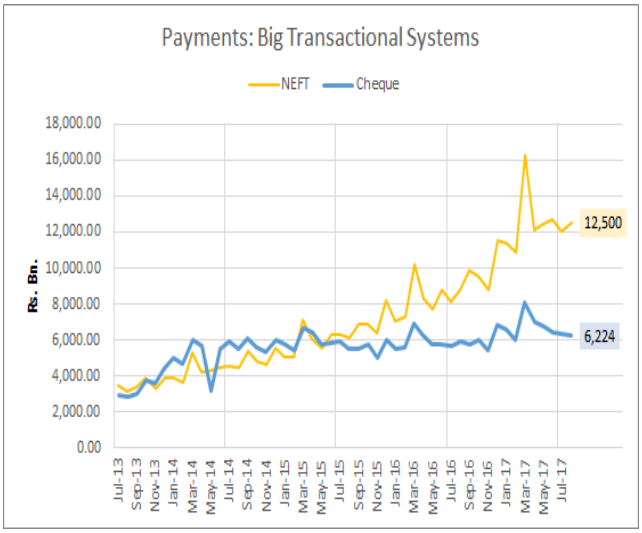
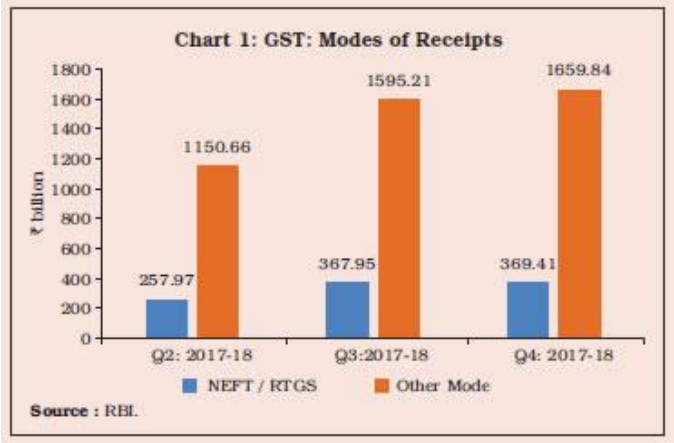


5. Real Time Gross Settlement (RTGS)

It is a system maintained and operated by the RBI in the year 2004 provides a means of efficient and faster funds transfer among banks facilitating their financial operations. Hence, it is an electronic system which the banks in our country can give electronic instructions to transfer funds from their account to the account of other banks. As the name suggests, funds transfer between banks takes place on a 'Real Time' basis. Therefore, money can reach the beneficiary instantaneously and the beneficiary's bank has the responsibility to credit the beneficiary's account within two hours. RTGS, primarily meant for large value money transfers, is a payment system that enables instant transfer of funds. Unlike NEFT, RTGS processes the instructions at the time they are received rather than at a later time. Currently, more than 1 lakh bank branches offer the RTGS facility, according to the RBI. Information on these branches can be accessed from the RBI website. RTGS transactions can be made from 9.00 am to 4.30 pm on weekdays and from 9:00 am to 2:00 pm on Saturdays for settlement at the RBI-end, according to the central bank. However, the timings that the banks follow may vary depending on the customer timings of the bank branches, it noted. The RTGS service window for customer's transactions is available to banks from 9:00 am to 4:30 pm on weekdays and from 9:00 am to 2:00 pm on Saturdays for settlement at the RBI-end. However, the timings that the banks follow may vary depending on the customer timings of the bank branches, the central bank noted. The minimum amount to be remitted through RTGS is Rs. 2 lakhs. There is no upper ceiling for RTGS transactions. Source:https://www.ndtv.com/business/neft-rtgs-imps-transactions-meaning-timings-funds-limit-reserve-bank-of-india-rbi-1879865.



6. Immediate Payment Service (IMPS)

It is another electronic payment service managed by the National Payments Corporation of India. Through this the individuals can transfer their funds immediately through banks across India and the RBI authorised Prepaid Payment Instrument Issuers. IMPS available through out the week (24 hours x 7 days)unlike the NEFT and RTGS. Currently, there are 53 commercial banks and 101 rural, district, urban and cooperative banks that support the IMPS service, according to the NPCI website. An IMPS transaction can be initiated from a mobile phone, through internet or an ATM, wherein confirmation of debit or credit is sent by an SMS. Source: Source:https://www.ndtv.com/business/neft-rtgs-imps-transactions-meaning-timings-funds-limit-reserve-bank-of-india-rbi-1879865.The charges for remitting money through IMPS using SBI Anywhere Personal:

Number	Amount	Charge
1	Upto Rs.1000/-	No Charges
2	Rs.1001 to Rs 10,000/-	Rs.1/- + GST
3	Rs.10,001 to Rs 1,00,000/-	Rs.2/- + GST
4	Rs 1,00,001 to 2,00,000/-	Rs.3/- + GST

Source: https://www.onlinesbi.com/sbijava/imps_faq.html

IV. CONCLUSION

Based on the above study, we can conclude that due to the implementation of various technological advancements particularly related to Information Technology in the Indian Banking sector, both the banks and their customers are benefited in several ways banks gave an autonomy of handling the accounts of their customers to customers themselves through online accounts or mobile banking services or ATMs or some other modes as a result, the customers can make their bank transactions themselves accurately and effectively without the intervention of the bank staff and not even visiting the bank premises as a result they can save their time, energy and transaction costs etc.,

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