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A Study on Bank Digital Payment Methods and ATM Cards

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Abstract: *The banking system in India is facing challenges with stiff competition and advancement of technology. Now a day's Banks are providing more and more ATMs servicing as transaction device. ATMs can be used as an advertising channel for business companies to advertise their own products or third-party products and services. In the present research paper attempt is made to study the no. of ATMs in India and also various modes for digital payments used in commercial banks. ATM card, popularly known as a bank card, enables a customer to perform banking tasks at ATMs and make point-of-sale transactions. In some countries still cash is highly used but instead of this trend towards digital payment methods are increased. Cash is preferred due to zero cost on transactions and because it is the first preference of some customers', although the retaining, collecting, transporting and processing of cash by banks and other financial institutions have become increasingly costly. All traders who accepting digital payment methods, all of them accept debit cards, online payments and many also accept mobile payments. The advantages of digital payment methods for merchants/ traders are instant payment, quick transactions and reliability, simple of use for both customer and dealers. It is easily also providing a traceable proof of payment for both of them.*

Keywords: ATM, RBI, traders, digital modes.

I. INTRODUCTION

Technology helps banks to reduce transaction cost and time. The banks, in turn, pass the benefit on to customers. All the private sector banks have adopted up-to-date technology in banking operations devised by the leading software and hardware developers. With the aid of this technology, the banks are in a position to render innovative customer service virtually in a matter of minutes. The salient features of technology-driven banking include Automated Teller Machines (ATM), tele-banking facilities and banking through interconnected branches, all fully computerized. All this is achieved by way of core banking solutions (CBS). A core banking solution helps in centralizing the transactions of branches and different banking channels and the customer starts banking with the bank instead of at different branches. This way the banks are able to offer services their services at different other branches, the internet, the telephone and automated teller machines on a real time basis. The private banks were the ones who initiated this and therefore they have a first mover advantage. However, many PSU have also started recognizing the benefits of technology. In order to compete with the private banks, they have also started implementing credit base services.

ATM cards initially enabled consumers to simply withdraw cash from ATM machines. Now with the help of ATM customer can do every banking function which traditionally manually done through bank. This service is provided for 24 hours.

In preset time digital payments have increased popular and merchants expressed a readiness and willingness to provide for this system in order to serve their customers best. Younger customers demand more digital payment methods. They would expect more innovations in these trends. But the importance of cash keeping cannot be ignored. Still most customers prefer cash payments in spite of digital payments because of security issues.

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II. FUNCTIONS OF ATM MACHINES

The ATM bank card can be used in a variety of ways such as withdrawing cash at an ATM machine, payment for goods and services purchased at stores and restaurants, payment for goods and services purchased online, checking your account balances at an ATM machine, depositing cash, checks, paychecks at an ATM machine and withdrawing local currency at a foreign bank's ATM machine at a fair exchange rate. Detailed functions of ATM machines include the following:

Withdrawals

Perhaps the most common function of the modern ATM, withdrawals is usually allowed from a user's savings or current account.

Deposits

Similarly, most (but not all) ATMs allow deposits to be made to both current and savings accounts. These deposit functions usually require cash or checks in envelopes, and can sometimes be accomplished by credit card.

Balance Inquiries

Another common function of the ATM is the ability to check account balance, for savings or checking, and to print out that balance for future reference.

Account Transfers

Account transfer is a popular function for those who carefully manage the funds in more than one account, and can be used to move funds from one account to another banks or similar bank account.

Stamp Purchases

An increasingly popular function of modern ATMs is the ability to buy stamps. Although this functionality is not available at all ATMs, its popularity has been sufficient for its availability to expand.

However, banks gradually started to promote ATM cards as debit cards. All ATM cards issued in India offered debit card functionality, enabling a wide range of applications such as POS purchases and the payment of utility bills, in addition to cash withdrawals. Bank card, client card, key card or cash card are also the name of ATM card. It can be issued by a bank, credit union or building society. Through interbank networks ATM cards can be used for deposits, withdrawals, account information, and other types of transactions.

Some ATM cards can also be used:

- at a branch, as identification for in-person transactions
- at merchants, for EFTPOS (point of sale) purchases

The size of ATM card is 86 × 54 mm, i.e. ISO/IEC 7810 ID-1 size. A debit card, in-store purchases or refunds with an ATM card can generally be made in person only, as they require authentication through a personal identification number or PIN. In other words, ATM cards cannot be used at merchants that only accept credit cards. However, other types of transactions through telephone or online banking may be performed with an ATM card without in-person authentication. This includes account balance inquiries, electronic bill payments or in some cases, online purchases. In some countries, the two functions of ATM cards and debit cards are combined into a single card called a debit card or also commonly called a bank card. These are able to perform banking tasks at ATMs and also make point-of- sale transactions, both functions using a PIN.

III. THE ADVANTAGES AND DISADVANTAGES OF USING ATM CARD

With almost every bank account you are issued an ATM/debit card. This card electronically transfers funds from your bank account to the store you are making a purchase from. This can eliminate the need to carry cash. So, which is better, the ATM card or the cash? The advantages and disadvantages of using an ATM card are as follow:

Advantages

- No need to carry cash. Just about every merchant accepts the debit card including the dollar store and some thrift shops. Bank accountholders didn't require worrying about losing cash or misplacing it in a pair of jeans only to find it two months later. If their purse or wallet is stolen his/her money is safe since the perpetrator would need your PIN number to access his/her funds.

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- Customer doesn't need to make a trip to the bank every time he/she needs to withdrawal money. Customer can use his/her card just about anywhere he/she goes, and if he/she required the cash they can access their money at an ATM machine any time of day or night.
- ATM card is a very small size plastic chip card. It is very easy to carry or store than paper money.

Disadvantages

- With a debit card customer must keep accurate records. They must record each transaction so they will know what his/her account balance is at all times. If they do not keep records, they will be in risk of overdrawing his/her account which will result in bank fees. Not to mention the embarrassment they will suffer at the checkout line when his/her card is denied.
- If cardholder's child needs lunch money they can't just hand them the debit card. They have to drive to the nearest ATM machine to access a few dollars to send to school with his/her child.
- Some ATM machines charge a fee for their use and then their bank adds another foreign ATM charges. Know ahead of time what the fees are and where cardholder can access your money for free if possible.

IV. FEATURES OF DIGITAL PAYMENT SYSTEM

The following features, in order of importance, were considered to be the most critical by participants in this respect:

- Universal acceptance was considered the most important feature – ideally, across the euro area, all merchants in physical and online stores would need to accept it, regardless of the size of the purchase.
- Instant, contactless and open person-to- person payments – instant, easy, contactless Payments came up as a very important selling point. (Even more appealing would be a digital wallet that allowed these payments regardless of the platform or device used by the payers and payees.
- A one-stop-solution was envisioned by participants, allowing them to combine multiple payment methods into one, reducing the need for multiple cards and personal identification numbers (PINs), streamlining financial management) and giving them access to a range of payment options on one device. Some participants would also welcome accounting and financial reporting functions, with customizable spending reports or enabling them to set spending limits.
- Easy to use, secure, reliable and fast: biometric authentication. Security not only encompasses privacy of personal data and protection from fraud and hacking, but also secure and reliable authentication for payment. Biometric verification, including fingerprint, face or iris scans, is indicated as being highly desirable. For younger respondents in particular, a higher level of convenience compared to their already competitive current payment methods would be a strong motive to adopt a new payment method.
- Economical: The cost of digital wallet should be nominal so that it is affordable for its users.

V. REVIEW OF LITERATURE

Rakesh H M & Ramya T J (2014) they tried to examine the factors that influence internet banking adoption. It is found that internet banking is influenced by its perceived reliability, Perceived ease of use and Perceived usefulness. In the process of internet banking services expert should emphasize the benefits its adoption provides and awareness can also be improved to attract consumer's attention to internet banking services.

Balazs Vinnai (2016) explained that it is critical for banks to adopt new digital modes as part of an incorporated strategy and progress from first to second gener- ation digital banking, shifting digital from a sustaining role, to the primary sales and communication channel for banks". He says "Reengineering processes around the customer is not easy, but banks must embrace digital banking to remain competitive and relevant."

K. Suma Vally and K.Hema Divya (2018) reveal that demonetization resulted in tremendous growth in digital payments. Government of India taken initiative for this such as Digital India and increased use of mobile and internet are means to exponential growth in use of digital payment. It helps the economy through transformation towards digital payments. In current period many changes took place in the payment system like digital wallets, UPI and BHIM apps

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for smooth move to digital payments. The objective of this research paper is to study the positive impact that Digitization of payment system. The present paper focuses on the analysis of the acceptance level of these digital payment systems by customers.

Singhal Rashi (2021) studied that Digital Banking is the new face of everyone's life. It provides everywhere, every time quick and prompt banking services 24*7. It is refined by utilizing condition of the workmanship modernization base to get changes in internal as well as external. In previous time when individuals used to remain in long queues of bank trusting that their turn will withdraw money or to deposit cash in banks. Now, customers can move toward bank without remaining in long queues according to their need without painful over the working hours. In the time of demonetization, customers feel uncertain to change their exchange with digital payment system due to less knowledge. Increasing utilization of internet banking, flexible entrance and government activity, for example, Digital India are going about as a drive which increased the use of digital payment modes. The research study titled, "Impact and importance of digital payment in India", highlights the present usage and significance of digital payment services in India.

VI. OBJECTIVES OF THE STUDY

- To study the number of ATMs installed in India.
- To analyze the various modes of digital payments
- Study the trends of digital payments through various digital channels.

VII. RESEARCH METHODOLOGY

The present research paper mainly depends on secondary data. The relevant data are collected from various annual reports of RBI and various banking websites. The data collected were analyzed with the help of statistical techniques like percentages, averages, ratio methods. In this paper ATM cards in Indian commercial banks and overall review and trends of digital payments modes are studied. The period of the study is 2018-19 to 2021-22.

VIII. MODES OF DIGITAL PAYMENTS

In recent time, the Reserve Bank has been encouraging wider adoption of digital modes of payments and strengthening of the required infrastructure. Due to Covid-19 banks adopted quick retail digital payment systems. From December 2019 banks provided 24x7x365 availability of Centralized Payment Systems (CPS) i.e., National Electronic Funds Transfer (NEFT) and from December 2020, Real Time Gross Settlement (RTGS). These systems reduced the risks and improved the efficiency of the entire payments ecosystem of the banks.

Unified Payments Interface (UPI)

Unified Payments Interface (UPI) is a system that powers multiple bank accounts into a single mobile application, merging several banking features, seamless fund routing & merchant payments into one hood. It also caters to the "Peer to Peer" (P2P) collect request which can be scheduled and paid as per requirement and convenience.

Bharat Interface for Money (BHIM)

This is a mobile app for quick payments using UPI. Bharat Interface for Money (BHIM) app is used for immediate bank-to-bank payments and pays and collects money. For the use of this mobile app user need a Mobile number, Bank a/c and IFSC code, Aadhaar number etc. It has also the option of scan & pay through QR code. BHIM mobile app is available in 20 regional languages for the help of its users.

UPI 123PAY

This system is developed for feature phone users. It is very secure system. In this system four technologies are used such as calling an interactive voice response number, app functionality in feature phones, missed call-based approach and proximity sound-based payments.

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UPI Lite

"UPI LITE" is a digital wallet app available on smart phones for an amount of up to Rs. 2,000. It also eliminating the need for the user to first obtain electronic authorisation from his/her bank while making the payment, offering the user better experience in terms of improved speed and transaction success rate.

RuPay Debit Cards

Debit Cards, one of the many payment modes, are issued by banks that allow individuals to purchase items at physical stores through e-commerce platforms. This card is produced by National Payments Corporation of India was launched by the Indian Government to allow users to make payments digitally.

Immediate Payment Services (IMPS)

IMPS are a real-time interbank electronic fund transfer service competent of working out person to person (P2P), person to account (P2A) and person to merchant (P2M) transactions. Individuals can make payments 24x7 using their mobile number, Aadhaar number, bank account and IFSC code. With the use of mobile, internet, ATM and SMS customers can access this service.

Aadhaar Enabled Payment System (AePS)

It is a bank own system which allows online financial transaction at Point of sale through the Business correspondent of any bank using the Aadhaar verification. For the use of this system customer needs Bank Name, Aadhaar Number, Fingerprint captured during enrolment. Six types of services are available in this app such as Aadhaar to Aadhaar Fund Transfer, Cash Deposit, Cash Withdrawal, Balance Enquiry, Mini Statement, and verification of transactions.

BHIM Aadhaar Pay

It allowed traders to accept digital payments from buyers through Aadhaar verification. With biometrics authentication every Merchant associated allowed to acquiring bank live on BHIM Aadhaar Pay to accept payment from customer of any bank. For using this app merchant should have an Android mobile with BHIM Aadhaar app and certified biometric scanner. For this bank account should be Adhaar linked both for

Customer and Merchant.

Bharat Bill Payment System (BBPS)

Bharat Bill Payment System (BBPS) is a one-stop platform that It serves as interoperable and easily accessible recurring and bill payment service for the users with multiple channels like Internet Banking, Mobile Banking, Mobile Apps, UPI, etc. This mode is suitable for bill payments including water bills, electricity bills, gas bills, telecom, DTH, etc.

National Electronic Toll Collection (NETC) FASTAG

With the use of Radio Frequency Identification technology, it provides a simple and convenient digital payment method for toll payments. This is service is available to individuals nationwide.

E-RUPI

It is a cashless and contactless digital payment mode for its users. Under this system a prepaid QR code or SMS based electronic voucher is issued which can be used by the Government/Private organizations for delivery of a specific subsidy or welfare benefit to the selected persons. The users will be able to redeem e- RUPI voucher without a card, digital payments app or internet banking access, at the merchants accepting e-RUPI, simply by showing SMS or QR code. This mode of payment is easy, secure, and safe as it keeps the details of the beneficiaries completely confidential. The required amount is already stored in the voucher so the entire transaction process through this voucher is relatively faster and reliable.

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Unstructured Supplementary Service Data (USSD) / *99#

By dialing *99# customer can avail digital payment and banking services. This is a Common number across all Telecom Service Providers (TSPs). This service is currently offered by almost all major banks & all GSM service providers and can be accessed available in 13 different languages. (This service offered under Interbank account to account fund transfer, balance enquiry and mini statement.)

DATA STUDY ON ATMs

ATMs of Scheduled Commercial Banks: An Automatic or Automated Teller Machine or ATM card is a magnetic-stripped bank card that was primarily introduced to allow customers to withdraw cash from their account without human intervention. Ever since its introduction in the late 1960s, ATM cards are rapidly gaining popularity. During the recent years, the pace and quality of banking was changed by the technological advancements made in this area. Computerization as well as the adoption of core banking solutions was one of the major steps in improving the efficiency of banking services. The new private sector banks and most of the foreign banks, which started their operations in the mid-nineties followed by liberalization, were the front runners in adopting technology. For old private sector banks and public sector banks adoption of technology was a hard job because of the historical records and practices. However, it is important to note that presently almost 98 per cent of the branches of public sector banks are fully computerized, and within which almost 90 per cent of the branches are on core banking platform. Further, introduction of automated teller machines (ATMs) enabled customers to do banking without visiting the bank branch.

TABLE 1: NUMBER OF ATMS OF SCHEDULED COMMERCIAL BANKS (As at end-March 2022)

Sr. No.	Bank group	On-site ATMs	Off-site ATMs	Total number of ATMs
I	Public sector banks	78,540	59,516	1,38,056
II	Private sector banks	38,254	37,289	75,543
III	Foreign banks	716	1,081	1,797
	All SCBs (I+II+III)	117,510	97886	

Source: report on Trend and Progress of Banking in India 2021-22

Table 1 reveals that in 2021-22 the total number of ATMs in all scheduled commercial banks are 117,510 witnessed a growth of modern technology in Indian banks. However, the percentage of off-site ATMs to total ATMs witnessed a marginal decline in the study period. More than 66 per cent of the total ATMs belonged to the public sector banks as at end March 2022.

IX. DATA STUDY ON DIGITAL MODES

TABLE 2: TRENDS OF DIGITAL PAYMENTS MODES IN INDIAN COMMERCIAL BANKS (Amount in Rs. Crore)

Digital Mode/ Years->	2018-19	2019-20	2020-21	2021-22
RTGS	13,56,88,187	13,11,56,475	10,55,99,849	12,86,57,516
AePS (Fund Transfers)	501	469	623	575
APBS	86,226	99,048	1,11,001	1,33,345
ECS Cr	13,235	5,146	0	0
IMPS	15,90,257	23,37,541	29,41,500	41,71,037
NACH	7,29,673	10,37,079	12,16,535	12,81,685
NEFT	2,27,93,608	2,29,45,580	2,51,30,910	2,87,25,463
UPI	8,76,971	21,31,730	41,03,658	84,15,900
BHIM Aadhaar Pay	815	1,303	2,580	6,113
ECS Dr	1,260	38.607	0	0
NACH	5,22,461	6,04,397	8,62,027	10,26,641
NETC	20	200	913	1,689
Credit Cards	6,03,413	7,30,894	6,30,414	9,71,638

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Debit Cards	5,93,475	7,03,920	6,61,385	7,30,213
Prepaid Payment Instruments	2,13,323	2,14,860	1,97,095	2,79,416
Total Digital Payments	**16,37,13,425**	**16,19,68,681**	**14,14,58,488**	**17,44,01,233**

Source: Report on Trend and Progress of Banking in India 2018-19 to 2021-22

Table 2 shows the trends of digital payments modes. In COVID-19 period GDP declined due to restrictions and lockdowns on public movement. As a result of reduction in GDP the negative impact on the growth of both value and volume of payment instruments in the study period. The amount of total payments during 2021-22 increased to 63.8 per cent from previous year that is 26.6 per cent. Almost, 99 % of the total payments are done through digital payments modes. Due to

23.1 per cent growth in total payments the economic activities are up. Mostly all the digital modes successful but RTGS transactions are still chasing. For the advancement digitization of payments in the country the Reserve Bank started a composite Digital Payments Index (DPI) in the first month of 2021. Digital Payments Index is based on five major parameters – 1. Payment enablers; 2. Payment infrastructure 3. Payment performance, 4. Consumer centricity and, computed semi- annually base. In present time this Index has established significant growth representing the quick adoption and deepening of various digital payments modes across the country. In the study period total digital payments through various modes shows a fluctuating trend. In the year 2021-22 total digital payments are Rs. 17, 44, 01,233 crore shows increasing trend from the previous year.

X. CONCLUSION

The speed and quality of banking was changed by the technological advancements made in this area. Computerization as well as the adoption of core banking solutions was one of the major steps in improving the efficiency of banking services. Introduction of automated teller machines (ATMs) enabled customers to do banking without visiting the bank branch. In the present research paper attempt is made to study the no. of ATMs in India and various modes of Digital Payments used by commercial banks. ATM cards initially enabled consumers to simply withdraw cash from ATM machines. However, banks gradually started to promote ATM cards as debit cards. In addition to cash withdrawals all ATM cards issued in India offered debit functionality, enabling an extensive range of applications such as POS purchases and the payment of service bills. The Reserve Bank strives to ensure bank Customer protection through an efficient and effective complaint sort- out device. With the up-gradation of technology-based banking products and growing usage of these products by the society, financial literacy, consumer protec- tion and awareness assume vital importance. Indian government starts on November 12, 2021 of the Reserve Bank - Integrated Ombudsman Scheme (RBIOS), aims at developing a stress-free grievance setup instrument for customers of the entities regulated by the Reserve Bank of India. In present time younger customers demand more advanced digital payment modes. These help them saving time and cost. Government of India lunched Digital India schemes for permitting digital payment modes

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