Aadhaar Enabled Payment System

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Abstract- *Aadhaar Enabled Payment System (AePS) is a type of payment system, based on the Unique Identification Number and allows Aadhaar card holders to make financial transactions with the Aadhaar-based authentication. The main aim of AePS is to empower all sections of the society by making financial and banking services available to all through Aadhaar.*

AePS allows customers to make transactions using their Aadhaar number and by providing Aadhaar verification at point of Sale (PoS) or micro ATMs. This is a safe, secure and user-friendly platform for financial transactions. This is another initiative started by the National Payments Corporation of India (NPCI) to encourage cashless in India. Customers can make all transactions through a Business Correspondent (BC) or bank agent through a micro ATM. Except fund transfer, where we need to go to the specific bank BC, for other transactions we can use any bank BC. In order to avail AEPS service, your bank account must be linked to Aadhaar.

UIDAI, 12-digit Aadhaar issuing authority, provides a number of facilities to empower the government to carry out tasks of the service delivery system efficiently and without much delay. Aadhaar-enabled payment system is one such system through which bank account holders can withdraw, deposit and transfer funds from their bank accounts with the help of Aadhaar biometric authentication. However, they first have to link their bank accounts with Aadhaar to avail of this facility.

I. INTRODUCTION

The India government reported the demonetization of Rs.500 and Rs.1000 banknotes of the Mahatma Gandhi series in November 2016. It also announced the issuance of new Rs.500 andRs.2000 banknotes in exchange for the demonetized banknotes. The prime minister of India Narendra Modi claimed that the process would curtail the shadow economy and curtail the use of illicit and counterfeit cash to fund illegal activity.

The announcement of demonetization was followed by prolonged cash shortages in the weeks that followed, which generated significant disruption throughout the economy. Then the digital payments, Aadhaar-enabled payment system (eKYC) results an exponential growth in India. Transactions in which both the payer and the payee use digital modes to send and receive money are referred to as digital or electronic payments.

Aadhaar-enabled Payment System:

Aadhaar-enabled Payment System developed by National Payments Corporations of India(NPCI), it is a banking system through which account holders can carry out banking transactions using just with their Aadhaar number. There is no requirement of the bank account details such as account number, IFSC, or any other details. It uses the biometric data stored in UIDAI's database to authenticate the account holder while making transactions.

When the account holder links his bank account with Aadhaar and registers for AePS, his bank account details are synchronized with UIDAI. The next time he visits an Aadhaar-enabled micro ATM or a BC, he can simply use his Aadhaar number to carry out the banking transaction. He simply has to authenticate the transaction using his biometric data (currently, only fingerprint authentication is allowed) and the transaction will be processed.

Aadhaar is used as authentication for AePS:

When Aadhaar was launched in India, all individuals were requested to provide their biometric data which includes your fingerprints and iris image. The biometric data collected is unique to every individual and thus cannot be duplicated. This is why Aadhaar is used for authentication as your Aadhaar number is unique and therefore acts as a confirmation for the banking transactions.

Government launched AePS in India:

The government has set a target of taking all citizens in the banking framework. However, it is not feasible to open bank branches in all remote villages. Thus the government has come up with AePS where people from far-off places will easily be able to send/receive money and avail other financial and non-financial banking facilities with the help of Micro ATMs and banking correspondents.

Services offered by AePS:

The services that can be done by AePS registrations are:

- Cash deposits
- Cash withdrawal
- Funds transfer(Aadhaar number to Aadhaar number)
- Balance enquiry
- Mini statement
- Best Finger Detection(BFD)

Working process of AePS:

The AePS machine works like a Point of Scale (PoS) machine. Instead of a debit/credit card pin, the merchant will have to key in the customers Aadhaar number and authentication the transaction using the customer's biometric data.

The required information to carry out an AePS transaction:

- Bank's issuer Identification Number(IIN) or name
- Aadhaar Number
- Fingerprint

The following steps for the process of using AePS are:

1. Visit a banking correspondent in your area.
2. Enter your 12-digit Aadhaar number in the PoS Machine.
3. Select the transaction type – cash deposit, withdrawal, mini statement, fund transfer, balance enquiry or eKYC.
4. Select the bank name.
5. Enter the amount for the transaction.
6. Authenticate the payment using your biometric (fingerprint or iris scan).
7. The transaction gets completed in seconds.
8. A receipt will be given by the banking correspondent.

Banks connected to AePS:

These are the key points that how banks connected/ linked to the AePS:

- The person bank account should be linked with Aadhaar if you want to avail this service.
- If the person has more than one account in one bank, only the primary account will be used under AePS.
- No OTP or PIN is needed for making transactions through AePS.
- AePS allows transactions between Aadhaar linked bank accounts only.
- Multiple bank accounts can be linked with Aadhaar to use AePS facility. But, only one account per bank can be used for availing this facility.
- The cutover of transactions done with AePS takes place at 11 pm every day. Transactions done before this time for the day are included in this settlement.
- RBI has set no limit for making transactions with AePS. Whereas some banks has set a daily limit of a maximum of Rs 50,000 on total transactions.
- However, various banks have capped the transactions made through AePS to reduce the misuse of the payment system, if any.

Advantages of AePS:

1. Easy to use.
2. Safe and secure payment method and can't be forged.
3. Interoperable across various banks.
4. Encourages financial inclusion and provide the under-banked sections of society.
5. With the AEPS, all bank account holders will be able to access their bank accounts through Aadhaar authentication.
6. Banking, as well as non-banking transactions, can be performed through a banking correspondent.
7. Banking correspondents of one bank can perform transactions of other banks as well.
8. People do not have to furnish their debit/credit card for making transactions through AePS.
9. Micro PoS machines can be taken to distant places enabling people in remote villages to make transactions instantly.

Disadvantages of AePS:

1. Misuse in banking details/ transactions.
2. An existing account number and IFSC code that uniquely identifies a branch of any bank are not sufficient to do a legitimate transaction.
3. An account not linked with an Aadhaar number lacks the KYC may be a fake account.
4. Audit ability of Aadhaar number to Aadhaar number bank transfer is identical to an account number to account number transfer.

II. CONCLUSION

The main reason behind the payment is their security and charges. The Aadhaar authentication makes it safe. The merchants used to charge upto 2-3% with the card payments.

Card companies like MasterCard and Visa generally charges 2% of the amount. whereas Aadhaar Payment app, you do not to worry about any charges. The payments with Aadhaar Payment app do not take any extra charges. Hence this method is supposed to be approved broadly by merchants as well as customers.

NPCI has also launched an advanced version of AePS in the form of BHIM Aadhaar Pay where even micro ATMs and PoS machines will not be required for fund transfer. In this system, transactions can be carried out using a secure mobile app and a certified biometric scanner itself.