

“AADHAAR BASED PAYMENT SYSTEMS”

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Presently, 118 public and private bank's subscriber can use ABPS.

Abstract: Aadhaar Based Payment System (ABPS) allows Bank to bank transaction at PoS (Micro ATM) with the help of Bank Correspondent (BC). Various services like cash deposit, Balance enquiry, Aadhaar to Aadhaar funds transfer, cash withdrawal can be easily done with the help of ABPS. There is no need to carry any Debit card or credit card, no need to remember any PINs, MPINs and password. This is the easiest and cheapest way of making payments.

Keywords: Aadhaar card, Mobile based Payment, Integrated Payment Solution, Unified Payment Solution, e-Commerce, Biometric Payment, e-Payment, Payment Solution

I. INTRODUCTION

In order to convert India into a Cashless Economy, Government is providing Aadhaar enabled services for financial transactions through mobile phones. After demonetization efforts are being implemented for making cashless payments. ABPS are cash less and pin less. To increase the use of Biometric authentication, the Unique Identification Authority of India has planned to increase the capacity of Aadhaar from 10 crore to 40 crore, a step towards realizing a cashless society.

Our Government is currently working to develop a mobile phone app for receiving Aadhaar-Based payments (ABPS) instead of using debit and credit cards, pins and password that can be used by shopkeepers and merchants. About 99 per cent of adults and 1.08 crore people are using 12-digit number. People have already linked their Aadhaar cards with their bank accounts and are using Aadhaar Based Payment System (ABPS) for funds transfer, cash deposits, withdrawals or balance enquiry and inter-banking transactions.

Presently the capacity of Biometric authentication through ABPS is 10 crore, which will go to 40 crore. ABPS helps users to make payments to merchants or shopkeepers using their Aadhaar number and biometric authentication without credit or debit cards. All they need is Aadhaar and biometric authentication and money will be transferred directly from the customer's bank account to the merchant's bank account.

ABPS model allows online inter-operational financial transactions at PoS (MicroATM) through any Bank's Business correspondent using the Aadhaar authentication.

Following are the four basic types of banking transactions Aadhaar enabled:-

- 1) Cash Deposit
- 2) Balance Enquiry
- 3) Cash Withdrawal
- 4) Aadhaar to Aadhaar Funds Transfer

Under ABPS, the customer requires the following inputs to perform a transaction are:-

- 1) Identifying the Bank the customer is associated with known as IIN.
- 2) Aadhaar Card Number.
- 3) Fingerprint captured during his enrollment.

II. OBJECTIVE

- 1) Empowering a bank customer to access their respective Aadhaar enabled bank account using Aadhaar as his identification so as to perform the basic banking transactions like balance enquiry, deposit, Cash, cash withdrawal, remittances that are intrabank or interbank in nature, through a BC (Business Correspondent).
- 2) In electronification of retail payments.
- 3) To facilitate the GOI (Government of India) and RBI (Reserve Bank of India) in furthering Financial Inclusion.
- 4) A Centralized electronic benefit transfer system that enable banks to route the Aadhaar initiated interbank transactions.
- 5) To facilitate disbursements Central or State Government Schemes like Social Security pension, subsidies, NREGA, Handicapped and Old Age Pension etc. using Aadhaar and authenticated with the support of UIDAI.

- 6) To utilize full range of Aadhaar enabled Banking services.
- 7) It facilitates safe and secured interoperability across banks.

Indian financial landscape expected to change with the adoption of Aadhaar and Aadhaar Authentication in Indian Banking. This provides the banking agent more power to operate on the field, doing transactions for their customer in an effective manner. AADHAAR Payment Bridge Solution (APBS) is also used to transfer direct benefits to Citizens. National Payments Corporation of India (NPCI) has set up APBS and implemented on 1- Jan-2013. It is a platform to link the Government with their banks on one side and beneficiary and their banks on other side. Nelito providing ABPS and AEPS systems to the banks. It is already working for 12 banks for these projects and more banks are going to connect soon.

Unique Identification Authority of India (UIDAI) develop two key platforms in the partnership of various stakeholders including NPCI, RBI, IBA and banks:

A) APB (Aadhaar Payments Bridge)

It is a system used to facilitates transfer of all welfare scheme payments to beneficiary residents' AEBA (Aadhaar Enabled Bank Account)

B) AEPS (Aadhaar Enabled Payment System)

This system is used to facilitate online authentication of Aadhaar and enables anytime-anywhere banking mode of Banking Agents through microATMs by the marginalized the financially excluded segments of society.

A) APB (Aadhaar Payments Bridge): It is a repository of residents' Aadhaar number and their bank account number to which their Aadhaar card number is attached. It is used for receiving entitlement payments and all social security from various government agencies.

Aadhaar number is used as the primary key for receiving all entitlement payments. This would prevent the money of intended beneficiaries direct into their accounts results in removing all fakes and ghosts from the system .

This provides a greater benefit as more and more social security programs are moving from in-kind to in-cash subsidies.

Process Steps of APB

The steps are as follows:

- 1) Service agency make payments to its beneficiaries like LPG subsidy, MGNREGA wages, , old age pension ,

scholarships disbursement etc. It provides APB File that contains Aadhaar number details, reference number of welfare scheme and the amount to be paid to its bank known as sponsor bank.

- 2) Sponsor bank then adds bank's Institute Identification Number (IIN) provided by National Payments Corporation of India (NPCI) to participant banks to the APB file. It uploads onto NPCI server.
- 3) The uploaded files are processed by NPCI. It prepares beneficiary bank files and generates settlement file.
- 4) RBI posted the generated settlement file is posted to bank accounts.
- 5) The incoming files for credit processing after processing of settlement file can be downloaded by the Destination banks.

*B. Aadhaar Enabled Payment Services (AEPS)
C.*

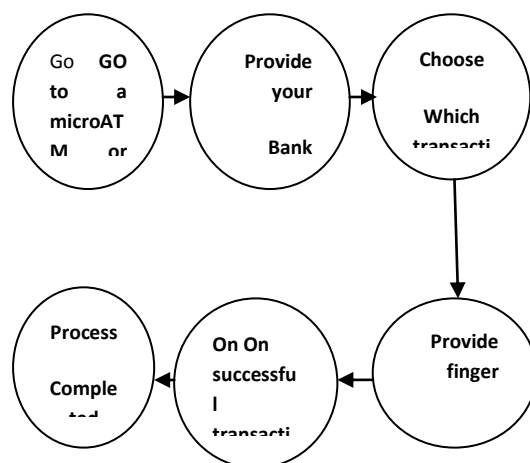


fig.1. AEPS Process

AEPS Process Steps:

The steps for making transactions using AEPS are:

- 1) User provides: Aadhaar number, details of financial transaction and fingerprint impression attached at the microATM device.
- 2) Digitally signed and encrypted data is transferred to UIDAI via Bank Switch to NPCI.
- 3) UIDAI provides the result in form of Yes/No after authenticating user request.
- 4) If the authentication is Valid, bank carries out the required authorization process and advises microATM on suitable next steps



Fig.2. AEPS Process

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