



Payments Newsletter

Powering digital
payments through
Aadhaar

October 2017

Foreword

Dear Readers,

In our previous newsletters we have discussed different digital payments modes and initiatives that have been taken up by the government to help our economy transition into a less-cash dependent one. It is my pleasure to bring to you the latest edition of our Payments newsletter, where we look at payments enabled through Aadhaar, specifically AEPS and Aadhaar Pay, and their evolving future as a means towards achieving the Digital India goal.

I hope you will find this to be a good and insightful read.

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AEPS- an introduction

The last few months have witnessed a huge shift in the way Indian consumers' pay, with people now becoming more cognizant of the importance of cashless payments and transactions. This change can be attributed to a conglomeration of factors that range from the increasing penetration of smartphones to FinTech startups entering the payments landscape as well as initiatives taken up by the Government. These factors have helped players, private and public alike, introduce various digital payment modes that have successfully led to a transformation of the pre-set inclination of consumers towards traditional means of payment.

However, even with the rapid uptake of digital payments, there is still a significant disparity in access and usage across geography and gender. There still remain sections of society highly dependent on cash due to the lack of means and infrastructure to transact digitally. Understanding these barriers to financial inclusion, the Government, banking on the high penetration of Aadhaar, introduced AEPS or the Aadhaar Enabled Payment System with a vision to extend financial services to the unbanked pockets of the country through Micro ATMs.

Understanding how AEPS works..

Aadhaar, with its repository of biometric, residential and banking data, is the backbone on which AEPS functions. A simple three step process of entering an Aadhaar number, selecting the Aadhaar linked bank account and authenticating the transaction via fingerprint enables banking or business

Correspondents (BC) to provide basic essential banking services to people through a Micro ATM. These transactions include cash deposits, cash withdrawal, fund transfers and balance enquiries for any Aadhaar linked Bank account. Additionally, with the Micro ATMs supporting digital payments, cashless payments at merchant locations and kirana stores are also made easier.

Performing financial & non-financial transactions for any bank, through a correspondent, without the need of a signature or debit card was an instant convenience for customers who often travelled large distances in search of a bank branch or ATM. As such, AEPS transactions have also shown an exponential growth from 0.36 million in 2015-16 to 6 million transactions every month in the current financial year.

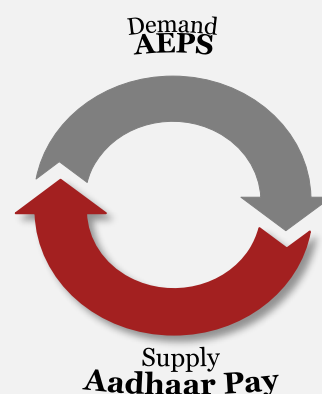
Through AEPS and the added customer convenience it brought, the government has been able to convert a largely untapped section of society to transact digitally, thereby creating a demand for digital payments.

However, even in markets today where consumer adoption of digital payments is high, the absence of available acceptance infrastructure prevents its widespread use. Therefore, it is imperative to feed this demand by overcoming barriers to developing infrastructure and providing merchants with an easy and cost effective means to accept digital payments. Aadhaar Pay, a system recently launched by the government, aims to bridge this very gap.

Aadhaar Pay- an overview

Aadhaar Pay is essentially the merchant version of AEPS. It enables merchants to accept digital transactions through the Aadhaar identity system via a simple smartphone app and a biometric device, with no additional need for any hardware or POS equipment. In order to leverage the solution, merchants would have to register with an associated bank by submitting e-KYC details and then download the app through the link sent to their smartphones. Once the infrastructure is in place, merchants can accept payments by sending a pull notification to the customer's bank account and consumers can make transactions through the same process as AEPS.

In order for a digital payments economy to thrive, it is important to create a balanced ecosystem where in customers have convenience of payments and merchants have access to asset light low cost payments infrastructure



The benefit to ..

1

Merchants

Even with government incentives to promote digital payments, accepting them still proves to be an expensive proposition for merchants. However, Aadhaar Pay removes the need of investing in expensive POS equipment, completing all transactional requirements with just a single app. From the fee perspective, while merchants would be charged a minimal MDR (~0.25) but also will also receive 0.5% of the transaction value (with a minimum of INR 0.5 to a maximum of INR 20), as an additional incentive provided by government for each transaction carried out using Aadhaar Pay.

2

Customers

With the popularization of digital payments, there has been an influx of payment apps in the market. However, Aadhaar Pay provides an additional benefit to customers, to make digital payments without having a mobile phone, internet connection, debit or credit card. A registered Aadhaar identity along with the app on the merchant's phone is all that is required to process digital payments via Aadhaar, thus removing the multiple layers of friction that merchants and customers otherwise encounter. Additionally, customers too will not be charged to avail of the service.

An insider's view of AEPS

Interview conducted at a leading private sector bank in India

1 Can you give us an overview of the AEPS payment process at the Bank

The most important pre-requisite for AEPS to work is that the customers Aadhaar number is seeded with his/her bank Account. When this is done, an Aadhaar based mapper is simultaneously updated and stored with NPCI. Now, if a customer wishes to make a payment at a micro ATM, -they would input the Aadhaar number, select the linked account and the type of transaction to be performed. Once this has been authenticated with their fingerprint, the transaction is completed.

2 Are non-banking players a part of the process?

Although there are currently about 23 players currently active in this space, non-banking entities can only perform non-financial transactions on behalf of other banking players, for example, conducting the e-KYC verification process or the provision of data to UIDAI. However, this is not profitable in the long run. These entities would have to look at a sponsor based model in partnership with banks to be able to get involved in the financial transactions.

3 What are the major challenges from a customer's standpoint for both AEPS and Aadhaar Pay?

One of the major challenges is that even with customers holding bank accounts, it is not linked to an Aadhaar number, which as mentioned before, is a pre-requisite for the system to work. Of course, with the government mandate to link all account to Aadhaar by the end of the year, this second problem will hopefully be eliminated

4 Can you elaborate on the USP created by your bank in the AEPS space?

Customized micro ATM facilities, card transactions and promotion of other cashless payment modes are major activities at our micro ATMs. Also, the infrastructure costs are cheaper as compared to the traditional micro ATM. Since we are well-spaced within the interiors of the country, we have our terminals/outlets set-up for conducting Aadhaar based transactions. Instant account opening facilities are provided at these terminals and the Aadhaar number can immediately be linked to the Bank account.

5 Any suggestions, to tackle the above mentioned challenges?

Biometric authentication is the essence behind Aadhaar based payments or remittances. Currently, merchants are required to install separate finger print scanners for customers to authenticate their transactions, which proves to be an expensive proposition. However, it is possible to link fingerprint and retina scanner features on new age mobile phones for payments, thereby easing the implementation process. On the security front, integrating a personal system and mobile phone with the UIDAI system using any of the approved ESPs (Esign Service providers) can eliminate security concerns.

Our Point of View

With government incentives aimed at pushing Aadhaar payments, we have seen AEPS transactions numbers increase over the past year with a steady growth rate ~30% quarter-on quarter. These rates although commendable, fare poorly against initiatives such as UPI or BHIM, which are processing three times higher volumes and transactions.

One reason for this could be the strategic aim of Aadhaar initiatives – propelling financial inclusion by catering to those individuals who were previously unable to avail of digital payment services, while initiatives such as UPI and BHIM attract individuals already familiar with the system. Another reason could be the nature of the services itself, with the former targeting Person-to-Merchant assisted transactions and the latter, Person-to-Person transactions that can be carried out independently by customers. Lastly, while overall transactions for AEPS have shown an increase, the success rate of these transactions is around 70%, which can be improved.

Quarter ending	Total Transactions	Success rate
Jun-16	26,190,010	77%
Sep-16	30,835,583	77%
Dec-16	55,497,981	67%
Mar-17	76,288,607	68%
Jun-17	101,962,503	74%

The points below talk about measures that can be taken to help boost the usage of both AEPS & Aadhaar pay



Improved Technology solutions

One of the key challenges consumers face are system errors due to a discrepancy between the biometric details taken at the time of transaction and the metrics stored in the database. This could happen due to an array of issues from false rejects to the substandard quality of biometric readers being manufactured or inaccuracy of data captured at the time of registration. To solve this, a fail proof system needs to be set in place, where the policy of Best Finger Detection (BFD) -wherein an individual's fingerprint scans are provided ranks of 1-10 on the basis of the best scan captured– is carried out thoroughly during registration. Merchants should also be provided access to scanners with robust technology to eliminate problems associated with system errors.



Initiatives from Banks

Banks should train their BCs in the correct functioning of their device and the process of capturing details. To further incentivize merchant acceptance, banks could also look at simplifying their onboarding procedures and an arrangement could be devised, wherein devices could be provided at a lower cost, provided the merchant generates a certain threshold of transactions. Additionally, merchants should be provided with interoperable micro ATMs, which allow customers to transact via any bank account on any device, thereby boosting the chance of successful transactions.

P Payment Technology Updates

Aadhaar Pay: The future of payments *ET Telecom*

Prime Minister Narendra Modi's most ambitious bet for turning India into a less-cash economy has to be Aadhaar Pay. The biometrics-based payment system is expected to enable millions of Indians anywhere in the country to pay for products and services electronically. All they will need to do is provide merchants their government-issued Aadhaar digital identification numbers that are linked to their bank accounts, and offer their fingerprints for biometric verification.
[\(Read more\)](#)

Aadhaar Pay yet to find base in country; BHIM, UPI preferred more *The Times of India*

Going beyond knowing your customer (KYC) application, have payments via Aadhaar taken off? According to recent figures, a majority of Indians are still using Aadhaar only for e-KYC verification and not day-to-day payments.
[\(Read more\)](#)

UPI, Aadhaar Pay, Bharat QR force Paytm, Mobikwik to step up their game *Live mint*

Electronic payment firms got a big boost when India abolished most of the country's banknotes last year, but rival state-sponsored e-payment services are forcing them to raise their game to hang on to their new customers.
[\(Read more\)](#)

Aadhaar enrolments up 60 % since demonetization

The Times of India

Demonetisation and the center's drive to push for a cashless economy has seen a sharp surge in the number of people enrolling for Aadhaar
[\(Read more\)](#)

IDFC launches Aadhaar Pay, becomes the first to launch biometric based payment system

The Economic Times

Bharat QR is an integrated payment system. It uses your mobile phone to pay through your debit or credit card by scanning a code at the merchant's place. It does away with the need to physically swipe debit or credit cards. As of now, RuPay, MasterCard, VISA and American Express cards can be linked to pay through Bharat QR.
[\(Read more\)](#)

Aadhaar Pay or BHIM: Which app suits you most for making payments *Live mint*

Are you considering using one of the mobile payment apps launched by the government recently? If so, you may be confused on whether you should use the Aadhaar Payment App or Bharat Interface for Money (BHIM)?
[\(Read more\)](#)

(With inputs from Mihir Gandhi, Neha Jaeel, Farah Irani, Mohit Singh and Namrata Kacholia)

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