

CASH LESS ECONOMY

1).Efforts towards promoting cashless economy (digital banking)

i) Unified Payment Interface (UPI)

Introduction:

- UPI is a payment system that allows money transfer between any two bank accounts by using a mobile device.
- UPI allows a customer to pay directly from a bank account to different merchants, both online and offline, without the hassle of typing credit card details, IFSC code or net banking/wallet password.



How Safe is UPI?

- 1).The UPI is as much secure as internet banking or mobile banking. .-
- 2).A two-step authentication is used -
To open the UPI app, you have to give a pin
To transfer the money, again you have to enter the MPIN or UPI PIN
- 3).It is safe as customers only share a virtual address and provide no other sensitive information.
Receiver won't get your bank account details.
- 4).Only while connecting your bank account to UPI, you have to authenticate it through the card details and OTP.

TRANSACTION LIMIT: is 1 lakh

Benefits of UPI

UPI is revolutionary. It will make the banking transaction a breeze. Former RBI governor Rajan considered the launch of UPI as the Whatsapp moment.

i) 24X7 Immediate transfer

No restriction of holiday or working hours. The bank strikes also doesn't affect UPI
No need to wait for 24 hours to send money to new recipient



ii) Simple

No need of bank account number and IFSC code of the recipient

iii) Less costly

A transaction through UPI would be much cheaper than the other methods.

iv) Many bank accounts can be connected to one VPA

However, the BHIM app only links one account at a time

v) Enabled many apps

UPI is how apps like PhonePe -built in less than a year -help make the inter-banking experience as simple as email for customers.

vi) Benefits of UPI over IMPS

No need of bank account details and IFSC code (both required in IMPS)

Can't pay for online shopping through IMPS, but UPI provides such options

vii) Benefits over other mobile wallets

No need of transfer of money into wallet, so always getting interest on the money.

Mobile wallets generally allow transfer between wallets, here the transfer can be between different banks.

Other key terms associated with UPI

- Virtual Payment Address (VPA)

- The UPI system does not use the bank account details of the recipient. But, there should be an accurate identification of the money recipient. Ultimately, all this convenience is fruitful if the money goes in right hands.

- So, every user of the UPI app must have a unique ID. This unique ID is called the Virtual Payment Address (VPA).

- This VPA would be something similar to sanket@icici, anshu@bob etc. So very easy to remember.

- The app provider bank would allot the VPA to each user. You can choose the VPA similar to the mail address.

- You can give this VPA to anyone to receive money. This app would itself keep storing the VPAs of the person to whom you have transferred the money. It is like saving contact in Gmail.

▫ About NPCI (National Payments Corporation of India)

Introduction

▫ It is an umbrella organization set up in 2006 at the behest of RBI for all retail payments in India.

▫ It was set up in 2008 as a non-profit organization registered under section 8 of the companies

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▫ The organization is owned by consortium of major banks and has been promoted by RBI.



Important projects taken by it

▫ **RuPay**

- RuPay is an Indian domestic card scheme conceived and launched by the National Payments Corporation of India (NPCI).[1] It was created to fulfill the Reserve Bank of India's desire to have a domestic, open loop, and multilateral system of payments in India. In India, 90 per cent of credit card transactions and almost all debit card transactions are domestic; however, the cost of transactions was high due to monopoly of foreign gateways like Visa and MasterCard. RuPay facilitates electronic payment at all Indian banks and financial institutions.[2] NPCI maintains ties with Discover Financial to enable the card scheme to gain international acceptance.

▫ **UPI**

- NPCI has recently developed UPI which aims to move India to a cashless society with only digital transaction.

▫ **BHIM App**

(Detailed analysis given below)

ii) BHIM (Bharat Interface for Money) App



– Introduction

▫ BHIM is a digital payment mobile app developed by National Payments Corporation of India (NPCI), based on unified payment Interface (UPI). It is an aggregator for all-UPI based services offered by banks.

▫ It has been named after Bhim Rao Ambedkar and is intended to facilitate e-payment directly, through banks as part of drive towards cashless transactions.



▫ This UPI app supports all Indian banks which use the UPI platform, which is built over the Immediate Payment System infrastructure and allows the user to instantly transfer money between the bank accounts of the two parties. It can be used on all mobile devices.

– How is BHIM different from other mobile wallet like Paytm or MobiKwik?

▫ **Limitations of other apps**

- We can store a limited amount of money in a mobile wallet like Paytm or MobiKwik
- Sometimes money can only be send to someone who is using the same wallet.

▫ **Advantages of BHIM APP**

1) **All in one account for all bank accounts**

- It works across all banks and users don't need to use separate apps in case they have multiple accounts in different banks.
- BHIM is UPI based and thus directly linked to bank accounts. If this account is UPI activated, you can just ask for the payee's VPA or virtual payment address, and make the payment to the account.
- Otherwise there is an option of IFSC or MMID for sending or receiving money.

2) **Interoperable with other UPI application and bank accounts**

3) **No need of transferring money to the app like in Paytm**

- Thus getting interest savings

4) **No Internet Connection required**

- The BHIM app can transfer money even without internet connection.
- Other apps have also introduced such features, but still for transferring money from bank to the apps, internet connection is required.

5) **Reliability**

- Since it is a government endorsed app, people would be able to rely on it more.

6) **Authentication and Security**

- Three levels of authentication are provided for BHIM app

▫ **Other facilities which BHIM provides and other Apps don't**

- BHIM allows users to check balance in their bank accounts and to choose which bank account to use for doing transactions, although only one can be active at any time.

– Some steps that further needs to be taken to ensure BHIM achieves its full potential

▫ **Access to Internet**

- From an infrastructure point of view, there's a long way to go before BHIM becomes India's default payment app.
- The internet is spotty or non-existent across vast swathes of land.

▫ **Digital literacy**

- A big chunk of population doesn't yet use internet
- People are still not comfortable in using online transaction and prefer hard money
- People are still not comfortable in using online transaction and prefer hard money transaction.

▫ **Make an app for iOS also**



- Apple devices are generally used by affluent users who are often likely to do a lot of digital transactions.

- **Enable Aadhaar enabled transactions soon**

– News

- **[Dec 2016] : BHIM was launched by PM Modi at Talkatora stadium in New Delhi.**
- **[28th Jan 2017] : UID debuts on BHIM app, Aadhar Pay launch soon**
 - The government has enabled the BHIM app with Aadhar and plans to launch the biometric-based Aadhar Pay Payment module in the coming weeks, seeking to accelerate the drive towards digital-money transactions in the country.
 - Aadhaar Pay Service will enable people to make and receive payments using their Aadhar number and biometric technology, obviating the need to carry mobile phones for payments.
 - Aadhaar has already given unique numbers to 1.11 billion people in the country, and about 390 million bank accounts are linked to the 12-digit Aadhaar number.
 - There are five payment options on the BHIM app, including the mobile number, bank account and the IFSC code. The Aadhaar number will be sixth such plan.
- **[Budget 2017-18] : Government announced two new schemes to promote BHIM app**
 - Referral payments for individuals
 - Cashback for merchants who accept payments for BHIM
- **[Feb 2017]: BHIM is currently being used by more than 1.25 crore Indian citizens.**

[April 14, Ambedkar jayanti]: PM Modi launches Aadhaar-linked BHIM App on Ambedkar's birth anniversary

The BHIM-Aadhaar app will pave the way for making digital payments using the Aadhaar platform. This will enable every Indian citizen to pay digitally using their biometric data like a thumb

imprint on a merchant's biometric enabled device which could be smartphone connected with a biometric reader.

Any citizen without access to smartphones, internet, debit or credit cards will be able to transact digitally through the BHIM Aadhaar platform. Already, 27 major banks are now on board with three lakh merchants to facilitate payments using the BHIM Aadhaar app.

Modi also launched two new incentive schemes for the BHIM app users – Cashback and Referral bonus – with an outlay of Rs 495 crore for a period of six months.

[May 26] NPCI says UPI now offered by 50 banks in India

National Payments Corporation of India (NPCI) said that its Unified Payments Interface (UPI) is currently offered by more than 50 banks in the country; with the most recent banks to go live being Thane Bharat Sahakari Bank, Apna Sahakari Bank, Janata Sahakari Bank, Mehsana Urban Co. Op. Bank and Vasai Vikas Sahakari Bank.

Small finance banks, including Equitas Small Finance Bank will also be shortly joining the platform. The UPI ecosystem now covers all PSUs and major private banks. NPCI in the process of extending the service for co-operative bank customers and increase UPI's growing merchant base.



[July 10] Uber, Amazon on UPI soon; Google, WhatsApp also in pipeline

Uber and Amazon will be the latest global players to adopt the unified payment interface (UPI), with the global cab-booking company expected to go live this month through integration with the BHIM app, according to the National Payment Corporation of India. NPCI is also set to launch multi-bank UPI partnerships for global players such as Google and WhatsApp soon.

Other Steps towards Cashless Economy:

1. 0.75 per cent discount on digital payments at State-run petrol pumps from December 13

The Central Government Petroleum PSUs shall give incentive by offering a discount at the rate of 0.75% of the sale price to consumers on purchase of petrol/diesel if payment is made through digital means. Nearly 4.5 crore customers buy petrol or diesel at such petrol pumps per day who can take benefit of this incentive scheme. It is estimated that petrol/diesel worth Rs.1800 crore is sold per day to the customers out of which nearly 20% was being paid through digital means.

2. Nabard to extend ₹120 cr to banks for deploying PoS units in villages :

To expand digital payment infrastructure in rural areas, the Central Government through NABARD will extend financial support to eligible banks for deployment of 2 POS devices each in 1 Lakh villages with population of less than 10,000. These POS machines are intended to be deployed at primary cooperative societies/milk societies/agricultural input dealers to facilitate agri-related transactions through digital means. This will benefit farmers of one lakh village covering a total population of nearly 75 crore who will have facility to transact cashlessly in their villages for their agri needs.

3. Licensing of Payment banks

[Aug 2015]RBI gives license for 11 payments banks

This includes telecom companies Vodafone and Airtel; non-banking financial company Cholamandalam Distribution Services Ltd; large conglomerates Reliance Industries and Aditya Birla Nuvo; and individuals Vijay Shekhar Sharma, founder of Paytm, and Dilip Shanghvi, Managing Director of Sun Pharmaceuticals. The Department of Posts, Fino Paytech, Tech Mahindra and National Securities Depository Ltd also made the cut.

Payments banks differ from conventional banks as they are not allowed to lend to customers or issue credit cards. They can, however, accept deposits of up to ₹1 lakh and can offer current and savings account deposits. They can also issue debit cards and offer internet banking.

[Jan 2017] India Post becomes 3rd entity to receive licence to start payment bank operations

IndiaPost has become the third entity to receive a final license last week from the Central Bank to start its payment bank operations. Country's largest telecom service provider Bharti Airtel and digital payments firm Paytm are the other two to have received the license while only Airtel has started operations so far.

4. The Central Government through NABARD will also support Rural Regional Banks and Cooperative Banks to issue “Rupay Kisan Cards” to 4.32 crore Kisan Credit Card holders to enable them to make digital transactions at POS machines/Micro ATMs/ATMs.
5. Suburban railway network shall provide an incentive by way of giving a discount of up to 0.5% to customers for monthly or seasonal tickets from January 1, 2017, if payment is made through digital means.
6. Buying general, life insurance policies and renewal premiums from PSU insurers’ websites will attract 10 per cent and 8 per cent discount, respectively.
7. No service tax will be charged on all digital transaction upto Rs. 2000.
8. No service tax will be charged on all digital transaction upto Rs. 2000.
9. For payments at toll plazas on national highways using RFID card/Fast Tags, a discount of 10% per cent will be available to users in the year 2016-17.
10. Passengers buying railway tickets online shall be given free accident insurance cover of up to Rs. 10 lakh.
11. Central government departments and PSUs will not charge transaction fees for payments made through digital means. The State governments have also been advised to follow it.
12. Public sector banks are advised that merchant should not be required to pay more than Rs. 100 per month as monthly rental for PoS terminals/Micro ATMs/mobile POS from the merchants to bring small merchant on board the digital payment eco system.
13. Introduction of Bharat QR Code:

What Is Bharat QR Code?

Introduction:



Since demonetization of old currency notes the Government of India has been making a big push for digital payments. To encourage cashless transactions and to promote Digital India initiative, the Government of India has launched Unified Payments Interface (UPI) for smartphones and for basic and feature phones it has introduced Unstructured Supplementary Service Data (USSD). The Government has also introduced BHIM (Bharat Interface for Money) app which is a unified UPI app. Another introduction by the Government is the Aadhaar Pay that enables the people to make cashless money transactions using Aadhaar Card and their fingerprint for biometric authentication. To make the payments process easier the Government of India has now launched the Bharat QR Code payments transfer mechanism for cashless electronics payments.



Over the past few years a lot of people have moved on to the cashless payment methods using debit and credit cards. However, this method of cashless electronic payment transaction has strings attached in terms of cost of owning and running the card swipe machines and transaction fees. The Government of India has taken another step to encourage digital payments and has simplified things for merchants and for the customers by launching the Bharat QR Code.

Bharat QR Code will make use of QR codes system for payments across merchant outlets. QR code or Quick Response code is a two-dimensional machine-readable code that is made up of black and white squares. It is used to store URLs and other information. These can be read by the camera of a smartphone.

According to RBI, the Bharat QR Code is the world's first inter-operable payment acceptance solution. Bharat QR code aims at standardizing the QR code payment method through the country. Payment networks such as MasterCard, American Express and Visa have collaborated with National Payment Corporation of India (NPCI) to launch and promote the Bharat QR payment method. However, different merchant outlets across the country use different QR codes.

The Bharat QR is a more streamlined system which will reduce the technological problems and people will not suffer from card loss or card expiry problems. It is the easiest method of payment for users. Scanning the QR code through your mobile will help in transferring money from one source to another. Payments made through QR code will directly get transferred to the bank accounts unlike other digital wallet where payments are received from e-mails. Even though various banks and private companies already have this facility in their mobile app, what makes the QR code different from others is that it is interoperable with all the banks and it is not a closed-loop system. This Bharat QR code is expected to be convenient for those who are into mobile banking and who don't want to use debit or credit cards for small payments. The physical Point-of-Sale (PoS) machines involves capital costs and therefore Bharat QR code is seen as a better alternative.

Current QR Code-based payments:

The QR code based payments are accepted by most of the merchants across India but they are largely closed systems.

Visa is a developer of QR Code payments and has already launched mVisa in India about a year-and-a-half ago. In fact, mVisa is widely accepted payment option across the globe. About a year ago, DTH operator TataSky had partnered with Visa to accept QR code-based payments from its subscribers. Since demonetization, e-wallet apps such as Paytm, Freecharge and Mobikwik have seen a surge in usage.

While these wallet apps allow QR code-based payments, both parties also need to have the app. For example: if you are transferring money using Paytm, the receiver needs to have Paytm app installed and an account in their smartphone.



How To Generate Bharat QR Code

Retailers or shopkeepers, can easily generate Bharat QR code and start accepting payments using following steps:

First, make sure that one need to have a bank account.
Link his/her bank account with BHIM App.
Generate his/her unique Bharat QR Code from BHIM App.
Print the QR code and stick it to the wall of payment counter.
That's it. Customers can easily pay money by scanning that QR code.

How to make payment using Bharat QR Code

Currently, Bharat QR is integrated into ICICI Bank's Pockets app and HDFC Bank's PayZapp with more banks expected to update their apps with support for the same. For making payment, one need his bank app or BHIM app installed in his phone. At the store of the merchant, one have to open the app and tap on Scan QR Code or Scan & Pay (the options may differ from bank to bank) and scan the Bharat QR Code.

Once the code is scanned, the amount that has to be paid needs to be entered along with a remark and a four-digit passcode. As soon as the authentication gets completed, the money will get transferred to the merchant's bank account.

Benefits of Bharat QR Code

Bharat QR Code will allow all the merchants to receive digital payments without the use of Point-of-Sale (POS) swiping machine. It will allow the customers of any bank to use their smartphone app to make payment using their debit card. The benefit for the merchants would be that they don't have to invest in buying the PoS machine which would also mean that the merchants will be able to do away with the transaction fees charged by the banks for using the PoS terminal.

All that they have to do is, they will have to generate the Bharat QR Code and take a print out of it and stick it at their payment desk. The payment will take place via IMPS (Immediate Payment Services) and the money will get credited into their bank account instantly. Also that the merchants will not face the problems with regard to limits on the amount of money that they can accept every month through Bharat QR Code unlike Paytm, Freecharge and Mobikwik. The hassle of transferring money from wallet to bank account will be eliminated as well further making it easier to accept digital money.

The Bharat QR Code also comes with security benefits. At present, when we swipe our debit or credit card, there are negligible possibilities that someone can capture our crucial details such as card number, expiry date or CVV. While OTP option is permitted for two-step-verification before the transaction gets authenticated, the risk of exposing of the card details still remains. In case of Bharat QR Code, the transaction is completed with boosted security and the card details remains under the control of the customer which is a great advantage.



Facts about Bharat QR Code

Following are few interesting facts about Bharat QR Code payment system which every debit or credit card holder should know.

1) Open Payment Interface

There are quite many QR-code based payment interfaces available right now. The most prominent one is Visa's mVisa and MasterPass QR code by Mastercard. But there is an issue with these existing QR code based payment gateways and it is their closed system. It implies that mVisa will only work with Visa card holders and MasterPass will only work with MasterCard holders. But with Bharat QR Code all users can smoothly make and accept payments.

2) Integration Of UPI

UPI-based payments are also supported by Bharat QR Code. Therefore, BHIM app can be used effectively for making payments. It would be interoperable with various accounts since BHIM app can include bank account details of various banks.

3) Banks offering Bharat QR Code

14 banks are a part of Bharat QR Code platform as of now. The 14 banks are: State Bank of India, Yes Bank, Axis Bank, Bank of Baroda, Bank of India, Citi Union Bank, HDFC Bank, IDBI Bank, ICICI Bank, Union Bank of India, RBL Bank, Development Credit Bank, Karur Vysya Bank and Vijaya Bank. Soon, more banks are expected to join the forum.

4) Process of making payment using Bharat QR Code

The static form of making payment is as given. Say, you are a customer of HDFC Bank whose official payment app is PayZapp. You will have to open PayZapp and scan the Bharat QR Code from within the app and you will have to enter the amount to be paid. Then you will receive an authorization request by the bank. Once your identity is verified you will receive a PIN from the bank which needs to be entered in order to complete the process of payment. Hence, the official app of the bank you have an account with has to be installed for using Bharat QR Code based payments.

5) Dynamism in making Payments

Dynamic Payment mode is another form of payment. Under this method, for every new transaction the merchant will generate a new QR Code every time. The customer, here, will not have to feed in the amount but will simply have to scan the QR Code and enter the authorization code for the completion of the process of payment.



6) Lower transaction cost of Bharat QR

The requirement of PoS machines for swiping card has gone away with the introduction of Bharat QR Code. This makes it cheaper, more secure and less time consuming. For both the customer and the merchant, the total costs involved goes down as no transaction cost is involved in going cashless via Bharat QR Code.

7) Massive Teamwork

It's for the first time that all major payment gateways operating in India such as Visa, Mastercard, American Express and NPCI have come together to develop a common payment processing platform. Therefore it will not matter whether you are paying via Visa enabled debit card or the merchant is accepting via a Mastercard enabled bank account. The QR code shall be the common gateway for receiving and making payments from any bank and by using any payment gateway.

8) Secure Payment

Payment with Bharat QR code is more secure because customer is not sharing any details with the merchant. There is a certain amount of risk with PoS terminals as card details can be copied using skimming technology. This risk is eliminated in case of Bharat QR as all you need to do is scan and pay.

Conclusion:

What more can the government do?

While the government is all gung-ho about this new revolution. It needs to maintain the momentum of making it reach all levels of the society, and this can only be done by educating the people.

The competition is expected to get tougher as PayTM, the leader in this space has announced that it will spend R600 crore to get more merchants on its QR platform. If this turns out to be the same thing as BHIM, where there are 14 million downloads but only 4 million actual users, this may not yield the results that the government wants. In such a scenario, what banks can do is try enrolling merchants by doing a door-to-door education exercise and also generate these for offline merchants, with the facility of SMS intimation for transactions for feature phones.

Given that it saves cost of banks and the government to deploy PoS machines, it may be much more beneficial for them to promote this mode.

RBI will also have to shed some of its conservatism, part of which is because it has often seen itself as the protector of banking interests rather than overall financial development.

Making Electronic payment infrastructure completely safe and secure so that incidents of Cyber crimes could be minimized and people develop faith in electronic payment system.



The regulators also need to keep a sharp eye on any potential restrictive practices that banks may indulge in to maintain their current dominance over the lucrative payments business.

News:

[May24, 2017] Bharat QR code now enabled on POS machines for 12,000 merchants; Bijlipay targets another 50,000

Bharat QR Code is the world's first interoperable payment acceptance solution, and Bijlipay has become the first Indian Point-of-Sale (PoS) devices providing company to enable it on the screens of PoS machines. Bijlipay, an end to end digital payment solutions company, has enabled the QR code for 12,000 merchants and targets to make the facility available to another 50,000 merchants by the end of 2017. According to Bijlipay, just providing digital payments devices cannot raise awareness about cashlessness among Indians. It said that there is a requirement of handholding, education and awareness to see the actual conversions to digital payments in Tier II-III cities.