



# <u>Unified Payments Interface (UPI)</u> <u>Explained in PDF</u>

National Payments Corporation of India (NPCI) after successfully launching the IMPS online payments system, has taken a step further in turning the Indian Economy into a "less-cash" and more "digital society". The launch of a Unified Payments Interface (UPI) adds a feather to its cap. UPI is set to completely revolutionise the financial sector for good.

## What is Unified Payments Interface (UPI)?

- The United Payments Interface is a system for instant, electronic payments through your smart phone.
- It authenticates the identity of the user like a debit card does using the phone as a tool instead of a separate card.
- It is an advanced version of Immediate Payment Service (IMPS) which was used to transfer money between bank accounts.
- Like IMPS, UPI will facilitate round-the-clock funds transfer service.
- It works 24x7, 365 days, unlike RTGS or NEFT services which have specific working hours.

#### **How does it work?**

- Let us assume a person named 'Ram' has to make payments using UPI (let's explain this with an example).
- To make UPI money transfer, Ram needs 2 basic things:
  - o A smartphone with UPI application (app),
  - A bank account.
- Ram has to download the UPI app and get a UPI ID by registering on the app with his bank details.









- UPI ID is a virtual identity (a payment identifier) like an email address.
- It can be a name or a mobile number along with the name of your bank. For example
  - o Ram@sbi or Ram@icici
  - o 9900000099@hdfc or 9900000099@axis
- The payment is verified instantly through the smart phone, without needing to rely on debit card payment or net banking.
- Ram has to buy a book online. He can initiate the e-commerce purchase by selecting UPI as the payment mode and providing his UPI ID Ram@sbi.
- He then receives a pop-up notification on his smartphone through the 'UPI
   App' requesting confirmation of the payment.
- He has to enter his secure pin on the app to authenticate the purchase transaction.
- He will then receive a confirmation of a successful online purchase from the merchant within seconds.

#### A simple 3 step process to make Online Transactions through UPI

Registeration

- Download a UPI app of your bank
- Register with your account details and create a virtual ID with your name or phone number
- One-time process

Online Purchase

- Add the item to be purached to your cart
- Go to payment options and select Payment through UPI
- Provide only your Virtual ID to the merchant.

Mobile Authentcation

- You will recieve a pop-up window on you phone's UPI app requesting your approval for online purchase
- Enter the secure pin
- A confirmation of successful payment will be sent on your phone.









#### Why is it better?

- UPI eliminates the need to share your name, your bank account number, IFSC code, or bank branch.
- UPI also eliminates the use of physical tools like debit cards.
- It also eliminates the need to use multi-step processes like net-banking, which are prone to phishing due to insecure frameworks.
- It is a very simple application and can be used by anyone.
- The authentication is instant and secure and can be initiated anywhere.
- It opens up the pathway for a completely cashless digital society.
- The UPI (as it stands now) is the foundation for future innovations to make all transactions more fluid, natural and secure.

## What are the other benefits?

- UPI can also be used to send a request for money, like an invoice.
- For example, Ram can become a merchant, and take payment for any goods or services he is providing from clients account to his account.
- All companies like *Uber*, *Ola*, *Big Basket*, *Zomato*, *BookMyShow*, etc. can register their virtual identifiers on the UPI system and receive funds from a customer's bank account through the UPI.
- Customers can also use UPI to make online payments of utility bills and school fees.

# Challenges that prompted the need for UPI

- The number of non-cash transactions per person per year is only 6. This is bad because cash transactions are often hard to trace. Cashless transactions can be tracked, eventually eliminating black money from society.
- Only a fraction of retailers (6 lakh) in India have card payment facilities. The
  biggest sufferers in these are local and small shops. However, the ubiquity and
  ever-falling prices of smart phones is making it an attractive and convenient
  option to facilitate transactions.









- Of the six lakh villages in the country, fewer than one lakh villages have banking services (as of May 2011). Financial inclusion has also been hard to achieve. It is only through recent innovations like Direct Benefits Transfer (DBT) and Pradhan Mantri Jan Dhan Yojana (PMJDY) that financial inclusion has become a reality.
- There are more than 150 million smartphone users in the country, a number set to more than triple within 5 years. Here was a readymade solution that wasn't being addressed.

#### **Future Innovations**

The present form of the app, while revolutionary, is not the end product. The document detailing technical specifications of the app details upcoming features that will merge the UPI and identification tools like Aadhaar for even smoother functioning. Some of these are:

- Aadhaar Enabled Payments System (AEPS) This will allow users to authenticate payments using biometric information like fingerprint that will be verified against the Aadhaar database and your linked bank account. This could eliminate the need to even use your smartphone for authentication.
- **Aadhaar Payments Bridge (APB)** Remittances can be made to an Aadhaar number without providing other details. This would help with direct remittances of government subsidies and direct benefits.
- **Micro-ATMS** Withdrawal of money without the use of a card.
- **Bill Splitting** Bills can be split between different parties instantly.

## Other important points about UPI

- Architecture of UPI is based around the IMPS framework.
- UPI is launched by NPCI with RBI's vision of migrating Indian economy towards a 'less-cash' and more digital society.
- Every consumer with a bank account can avail the benefits of this service.





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- UPI is expected to give now popular mobile wallets like *Mobikwik* and *PayTM* as well as instant mobile payment solutions like *Chiller* a run for their money.
- Around 29 banks have concurred to provide UPI service to their customers as payment service providers (PSPs).
- A.P. Hota is the Managing Director & CEO of NPCI, which also handles the RuPay Card. NCPI was set up in April 2009.
- After the launch of UPI, India is said to have one of the most sophisticated public payments infrastructure in the world.

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