# Introduction
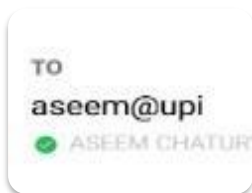## Unified Payments Interface

Unified Payments Interface (UPI) is a system that powers multiple bank accounts/PPI account into a single mobile application (of any participating member), merging several banking features, seamless fund routing & merchant payments into one hood. It also caters to the "Peer to Peer" collect request which can be scheduled and paid as per requirement and convenience
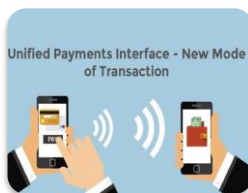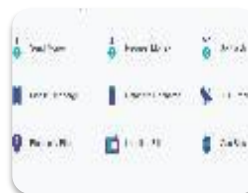
## UPI Features
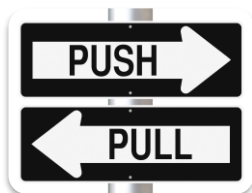


| Push and Pull Payments | UPI ID ('Username@P SPName') (No need to share Bank account details) | Transfer using Single identifier like Virtual Address or UPI Number | Payment Service Provider will provide App to customers of any bank | One App for all transaction needs | Single Click 2 Factor Authentication |

Merchant or Customer's bank
(account relationship)

PSPs are banks
who provides Apps

NPCI provides UPI
Interface

Aggregator connects
with bank and provide
UPI service to merchant

Merchant enables UPI
option by connecting
with Banks or
aggregators

PAYMENT
SERVICE
PROVIDER
(PSP)

BANKS

NPCI

Aggregator

TPAPs

Merchant

TPAPs are Apps
providers other
than Bank
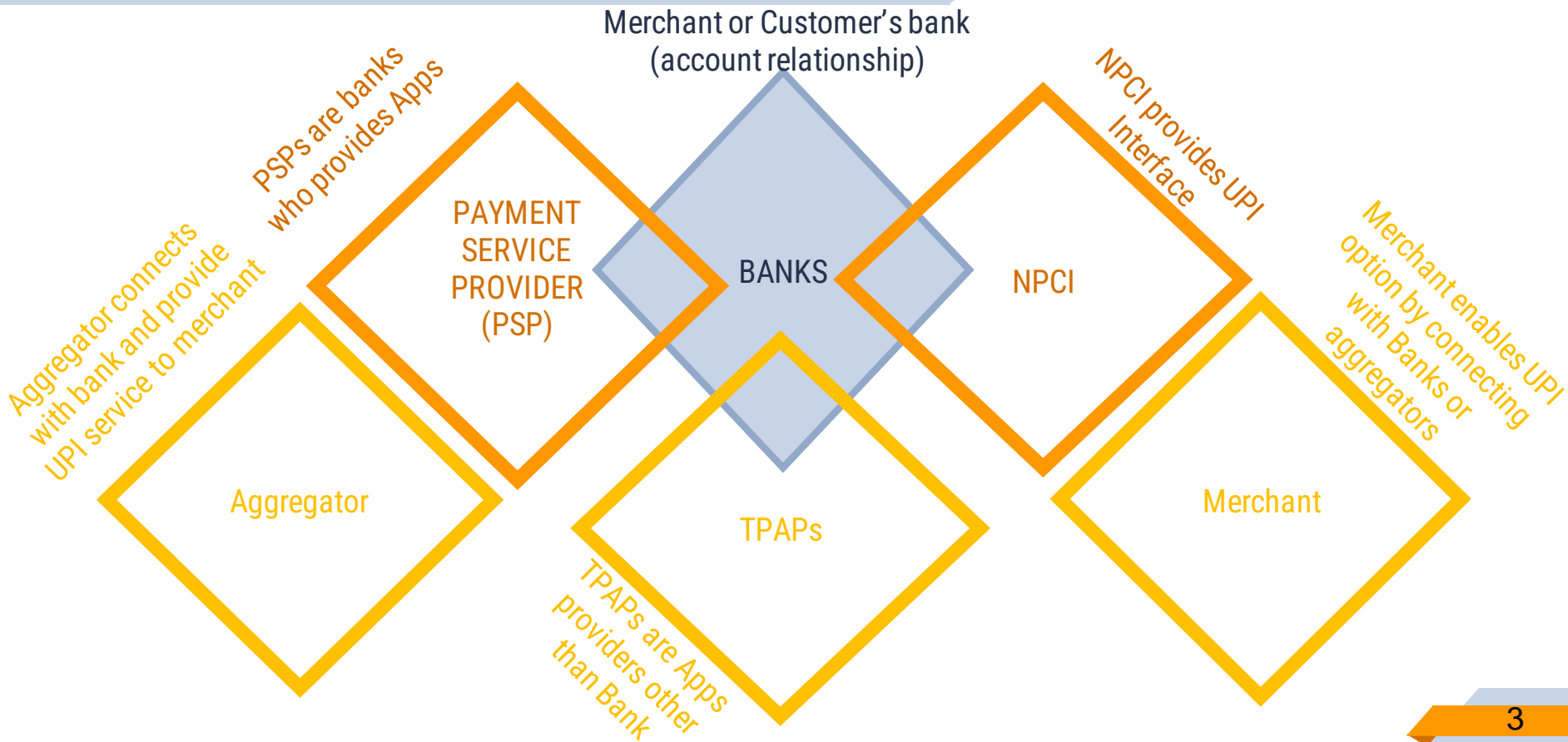
# NPCI - transformed the payments landscape in India

| 1.8 mn average daily ATM transactions | 37 member banks | No real time payments solution |
| --- | --- | --- |

NPCI
भारतीय राष्ट्रीय भुगतान निगम
NATIONAL PAYMENTS CORPORATION OF INDIA

| **300mn average daily transactions** | **100+ member banks. 1000+ banks enabled** | **UPI, IMPS, NETC (Fastag), AePS** |
| --- | --- | --- |

## Volume of Digital Transactions (Billions)

CAGR of 45 %

■ Others
■ NPCI Product

| | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Total | 4.7 | 7 | 10.9 | 14.5 | 23.3 | 34.1 | 43.7 |
| Others | 1 | 1.6 | 3.8 | 4.7 | 6.5 | 7.6 | 6.2 |
| NPCI Product | 3.7 | 5.4 | 7.1 | 9.8 | 16.8 | 26.5 | 37.5 |
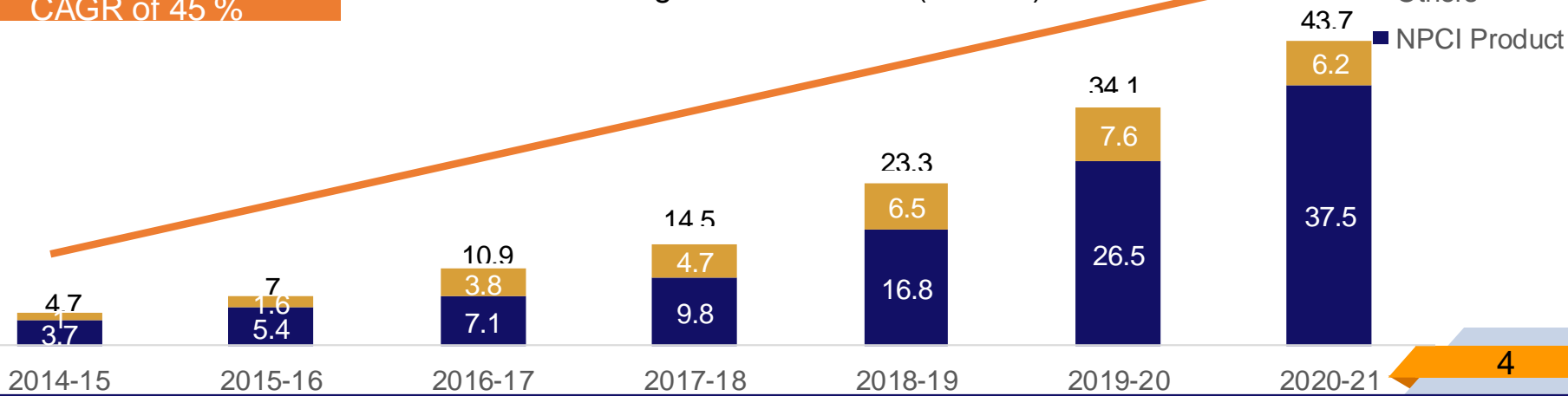
# UPI CORE

| AWARENESS | TPAP/BANK APP | Registration | Transaction | Features | Dispute Resolution |
|---|---|---|---|---|---|

**FY 2023-24**

- **AWARENESS:** UPI Safety & awareness campaign
  - Adoption(100 Mn)
  - Safety & Security(10%) Brand Awareness
  - 10 % increase in base

- **TPAP/BANK APP:** One unique feature for new TPAPs Reduce concentration risk

- **Registration:** Risk based authentication Alternative authentication Face Auth based Aadhaar onboarding
  - 1 Mn new users estimated

- **Transaction:** Secondary Market Foreign Inward remittance PPI for foreign nationals QR 2.0

- **Features:** UPI Lite-Offline & autopay Credit Card on UPI – II IoT based payments Voice based payments Merchant SDK Mapper
  - P2M enablement Autopay – BBPS, Online retail checkout

- **Dispute Resolution:** Merchant UDIR UDIR Support for all UPI features UDIR for Fraud & onus txn.

**FY 2022-23**

- **AWARENESS:** UPI Chalega Campaign
  - Appx 100 Mn new users UPI Safety Awareness
  - Safety parameters (~15% increase)

- **TPAP/BANK APP:** 23 TPAPs Live TPAP market share ~97 %

- **Registration:** Aadhaar OTP based UPI onboarding
  - 47K new UPI users
  - 4.8 Lakh new users

- **Transaction:** E -Rupi 2.0 VMS UPI 123 Pay

- **Features:** Credit Card on UPI Autopay UPI Lite Mapper
  - 322 Mn unique user
  - 1.2 Mn txn/day
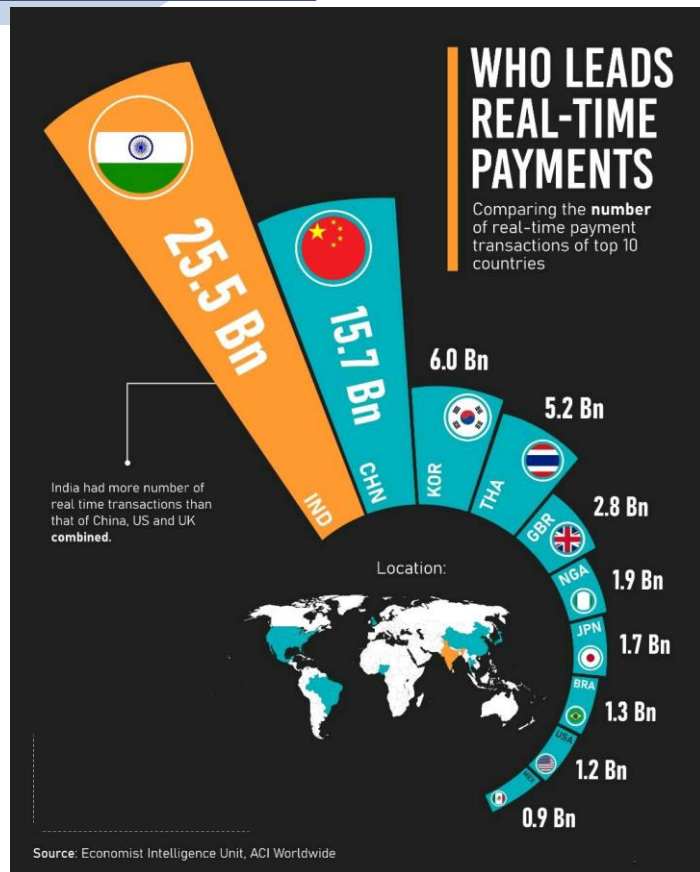  - 98% ecosystem enablement (Value & Volm)

- **Dispute Resolution:** UDIR
  - 96% issuers coverage

Not just Google, the world is watching India's UPI

Why did Google recommend India's Unified Payment Interface, (UPI) to the Federal Reserve System of the US?

India launches on-the-go contactless payments solution

India and Singapore to link their Fast Payment Systems



WHO LEADS REAL-TIME PAYMENTS

Comparing the **number** of real-time payment transactions of top 10 countries

IND 25.5 Bn
CHN 15.7 Bn
KOR 6.0 Bn
THA 5.2 Bn
GBR 2.8 Bn
NGA 1.9 Bn
JPN 1.7 Bn
BRA 1.3 Bn
USA 1.2 Bn
0.9 Bn

India had more number of real time transactions than that of China, US and UK **combined.**

Location:

**Source:** Economist Intelligence Unit, ACI Worldwide

## India's UPI And Digital Payments: A Quick Look At The Key Numbers

**260 Mn+ digital payments** are daily processed in India.

More than **500% rise** in the number of merchants accepting digital payments*

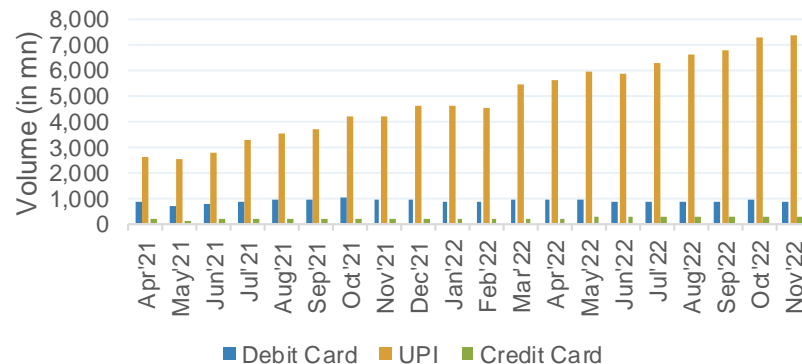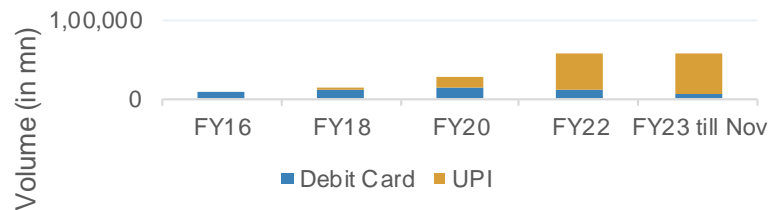UPI accounts for **68% of digital payment systems** transactions.

More than **260 Mn unique users** and **50 Mn merchants** have been onboarded on the UPI platform.

Rise in unique users of mobile and internet banking by **99% and 18%**, respectively*

Usage of **paper instruments** in retail payments has declined from **3.83% to 0.88%** in volume and from **19.62% to 11.47%** in value.*

Note: *During April-September 2021 compared to October-March 2019
Source: RBI

## Debit Card vs UPI - Volumetric Comparison



Volume (in mn) — bar chart comparing Debit Card and UPI across FY16, FY18, FY20, FY22, FY23 till Nov.

Legend: ■ Debit Card ■ UPI



Volume (in mn) — monthly bar chart (Apr'21 to Nov'22) comparing Debit Card, UPI, and Credit Card.

Legend: ■ Debit Card ■ UPI ■ Credit Card

Source: RBI & NPCI

One Time Mandate (with block)

Using Overdraft Account

Invoice In the Inbox

FIR / FOR

# Driving Financial Inclusion through Continuous Innovation

**Mapper & UPI 123Pay**
- **550+ Mn feature phone**
- Mapper- Numeric UPI ID – 32 crore users
- UPI 123Pay- voice/missed callbased payments
- **Conversional Payments**

**UPI AutoPay**
- Mandate for recurring payments
- Subscriptions, OTT, lending, utility payments etc.
- Potential **to create 1 Bn mandate**

**UPI Lite (< Rs 200 per/txn)**
- **On-Device Wallet**
- **Reduce** technical declines & **load** of Core Banking System
- **Frictionless** offline payments

**e-Rupi**
- Multiple use cases (Scholarship, subsidies etc.)
- Only mobile phone and e-voucher required

**UPI RuPay Credit Card,**
- Instant credit on demand to **boast Credit**
- Enable **over 23+ crore UPI QR** for Credit acceptance
- **Onboard 10 crore new credit customers**

**UPI Safety Awareness**
- Syndicated Campaign **"UPI Chalega"**
- **Focus on Fraud & Safety** awareness
- Multilingual **Campaigns**

10

# UPI Current Launches….(1)

## UPI AutoPay
- User can make his recurring payments easy and instantaneous

## UPI Number - Numeric ID Mapper
- Interoperability for mobile number based payments

## UPI Feature Phone and Voice based Payments
- Voice based Payments through pre-defined IVR number

## e-Rupi
- Single & Multiple time use with defined validity. Person & Purpose specific through Voucher Management System

## Aadhaar Onboarding
- Onboarding using Aadhaar thereby increasing digital footprint

## UPI Global - International Merchant acceptance
- Indian travelers can now Scan the International Merchants QR code and make a payment using any UPI Apps

## UPI Lite
- Small Value Payments – reducing infra load, single click payment, improved success rate & cost reduction for banks

# UPI Current Launches….(2)

### RuPay Credit Card on UPI
- UPI transaction from RuPay Credit card Account (& not a card transaction)

### UPI Plug In
- Plug-in UPI services to the Partners (Merchants/ App Providers)

### UPI One World
- PPI on UPI experience crafted for inbound travelers

### NRE / NRO accounts
- UPI with International Mobile no.

### PayNow (Singapore)

### Secondary Market
- Single Block Multiple Debit

### UPI Success Rate
- Risk based Authentication; Alternate mechanism for device binding; Drive Intent

# IOT and Payments

- The IoT is expected to generate $13 trillion by 2025 worldwide

## Some example of IOT based payments

| | | | |
|---|---|---|---|
| **Amazon Alexa** | **Smart Fridge** | **Wearables** | **Connected cars** |
| "Hey Alexa, order me a pizza" | "A smart fridge could identify when you need to buy milk, make the order, and have it delivered, all without you never having to lift a finger" | "UPI ON Wrist" | "In car payments" |

# UPI – 3 Year Roadmap

**Launch:**
- Alternate Device binding
- Risk Based Authentication
- Credit Card on UPI –II
- Foreign Inward Remittance
- Secondary Market
- PPI on UPI for Foreign Countries
- IoT based UPI Payments
- UPI QR 2.0
- Merchant UDIR
- UPI lite- Offline

**Scale:**
- Credit Card on UPI enablement
- UPI Lite enablement
- Voice based Payments & platform building
- Aadhar OTP
- Merchant Plug in

**Launch:**
- Digital Lending
- P2P Lending through UPI
- Stack for Voice@Bhashini

**Scale:**
- Credit Card on UPI –II
- Merchant UDIR
- Foreign Inward Remittance through UPI
- Mandate with Multiple debit
- PPI on UPI for Foreign Countries
- IoT based UPI Payments

**Launch:**

**Scale:**
- Offline Lite
- Digital Lending
- P2P Lending through UPI
- Stack for Voice@Bhashini

| FY 23-24 | FY 24-25 | FY 25-26 |
|---|---|---|

# UPI- 2023/24

NPCI

## Hygiene
- AI-ML & Data Visibility
- Compliance
- UPI Safety Shield
- Awareness

## Acquisition
- IPO
- Secondary Market
- Online Payments
- UPI QR
- E-RUPI / VMS
- 123Pay
- Aadhar OTP
- BNPL*
- Validation Services
- PPIs
- UPI Lite (Offline)
- UPI Global
- Higher UPI Limits

## Launchpad
- PhonePe
- GPay
- Paytm
- Amazon Pay
- BHIM
- WhatsApp
- Yono
- Payzapp/iMobile
- BoB World
- Tata/Bajaj/Slice/Jupiter

### Banks (450+)

Aggregators / Merchants (~100%)

Credit

UPI — UNIFIED PAYMENTS INTERFACE

Prepaid

Bank/PPI Apps ?(75)

TPAPs (30)

CASA

TSP/ Fintechs (Dominant)

Government (Dominant)

## Retention
- Autopay
- UPI Help
- GST
- Mapper
- UPI Lite (Online)
- Biometric / FaceAuth

## Modes
- Smartphone
- Feature Phone
- AI backed conversational payments
- IOT / Connected Cars
- Platform Integration

# In A Nutshell



**Aggregators**

**Banks**

**TPAPS**

**Merchants**

THANK YOU