



# RISE OF A NEW ERA IN DIGITAL PAYMENTS

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**BHIM** | **LPI**  
BHARAT INTERFACE FOR MONEY | UNIFIED PAYMENTS INTERFACE



“

*I dream of a Digital India where the world looks to India for the next Big Idea*

**Hon'ble Prime Minister Shri Narendra Modi inaugurated the 'Digital India Week' at the Indira Gandhi Indoor Stadium, New Delhi**

*1<sup>st</sup> July 2015*

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# Challenges faced by India before 2014

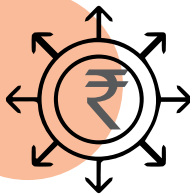
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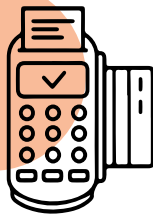
Cash Dependent Society



Deficiency of Trust in digital payments



Financial Inclusion



Inadequate Infrastructure -  
Acceptance and High Speed Network



Lack of participation - Start-ups,  
Fin-techs, Big-techs



Lack of Incentives for  
Digital Payments



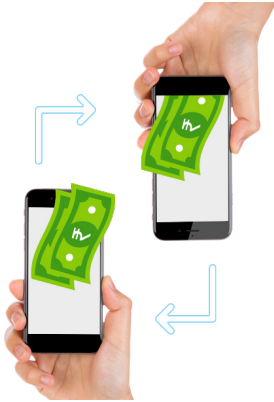
Simplified and affordable Pay-  
ment Products / Platforms

# Ushering in a Digital India



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November 2010



November 2010



March 2012



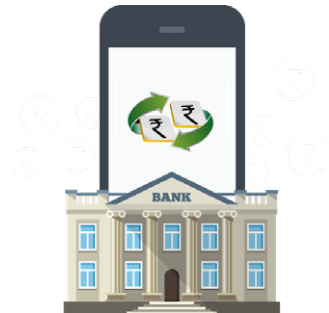
December 2012



August 2014



August 2016



December 2016



October 2017



NCCM

March 2019





# Introduction

- India's digital payments system -has evolved rapidly over the last few years. This has been encouraged by various developments in information and communication technology and by forward looking Regulatory and Government policies. The trinity of near universal account penetration, increasing smartphones penetration and low cost payments rails has led to a never-before boom in digital transactions. For instance, since April 2016, UPI has become synonymous to a rapid digital payment which has seen an exponential growth trajectory to cross over 730 Cr transactions in the month of Oct'22. This is further expected to grow 10x over the next 3 years.

## Digital India and Demonetization Drive

- During the inauguration of the 'DigiDhan Mela' on 31<sup>st</sup>December 2016, **Honorable Prime Minister, Shri Narendra Modi launched BHIM UPI App and urged people to make digital payments a habit to transform the country into a cashless economy.**
  - The Mela resulted in the 'Digital India' programme, which is a flagship programme of the Government of India with a vision to transform the nation into a digitally empowered society and a knowledge economy. **To achieve "Faceless, Paperless, Cashless" status is the goal of Digital India.**
  - The ambitious drive to shift from a cash-based to a digital economy saw a strong push in the form of demonetization in 2016, which accelerated this transition by 2-3 years. Since then, the Government of India has undertaken several initiatives for pushing India towards becoming a cashless economy.
- Firstly, Promotion of digital payments has been accorded highest priority by the Government of India to bring each and every segment of our country under the formal fold of digital payment services. **The vision is to provide facility of seamless digital payment to all citizens of India in a convenient, easy, affordable, quick and secured manner.**
  - Secondly, Government is also working on incentivizing digital transactions by providing various tax and non-tax benefits to customers and merchants.
  - Thirdly, Citizens have been provided multiple options to make digital transactions. A dedicated 'Digidhan Mission' has been set up for building strategies and approaches in collaboration with all stakeholders to promote digital payments and create awareness.
  - Some of the reforms undertaken in digital payments are:-
    - ✓ Banking from anywhere, expanding the base of financial inclusion
    - ✓ Subsidy to end beneficiary's account
    - ✓ Use of next-gen technologies
    - ✓ Scaling-up the merchant acceptance infrastructure
    - ✓ Incentive schemes for customers and merchants
    - ✓ UPI referral and cashback schemes
    - ✓ Digital literacy and awareness



# Continued Innovation

## Early Products

- There has been a continuum of innovation in the digital payments space since 1980's. Some of the important milestones attained in this overall process of development of the payments system include the introduction of:-
  - ✓ MICR clearing in the early 1980s
  - ✓ Electronic Clearing Service (ECS) and Electronic Funds Transfer (EFT) in the 1990s
  - ✓ Issuance of credit and debit cards by banks in the 1990s
  - ✓ ATMs, Mobile and Internet Banking in early 2000s
  - ✓ The National Financial Switch (NFS) in 2003
  - ✓ RTGS and NEFT in 2004
  - ✓ The Cheque Truncation System (CTS) in 2008

## Next Generation Payment Platforms

- The Government of India has played a pivotal role in driving the adoption of digital payments by taking a number of steps towards creating a cashless society. Post 2014, this drive has accelerated as can be witnessed in the significant initiatives taken to develop innovative next generation payment products and platforms including introduction of:-
  - ✓ National Unified USSD Platform (NUUP\*99#) in 2014
  - ✓ National Electronic Toll Collection (NETC) in 2016
  - ✓ Unified Payments Interface (UPI) and BHIM App in 2016

- ✓ Bharat Bill Payment System (BBPS) in 2017
- ✓ National Common Mobility Card (NCMC) – One Nation One Card in 2019

## NPCI Driving Digital Adoption

- To consolidate the innovation in the payments industry, the Government established the National Payments Corporation of India (NPCI), a not-for-profit umbrella organization was founded in 2009 to manage India's retail payment systems. **NPCI has sharply focussed on bringing innovations in retail payment systems through the use of technology for achieving greater efficiency in operations and widening the reach of payment systems.**
- NPCI has now been recognized internationally for its significant impact on retail payment systems in India. Many international organizations and government's are in active consultations with NPCI to translate the success of NPCI's payments systems in their context. Moreover, the NPCI has evolved into a strong collaborative platform, providing opportunities for not only banks, but also for FinTech players to participate in real-time payments system.
- **The Government's ambitious drive to shift from a cash-based to a digital economy saw a push in the form of demonetization in 2016.** Since then, the Government of India has under taken several initiatives for pushing India towards becoming a cashless economy.

# RuPay- An Indigenous Card Based Payment Solution

- During its journey of last eight years, RuPay has made a significant impact on the retail payment systems in the country. Dedicated to the nation by our Hon'ble President, Shri Pranab Mukherjee, endorsed by the Hon'ble Prime Minister, Shri Narendra Modi and later made the card of choice for the ambitious Pradhan Mantri Jan Dhan Yojana, RuPay is now a known name.
- Before RuPay, the access to card based payments was a privilege enjoyed by customer of top banks and the bottom line customer was left out because the immediate objective of business model at that time was to maximize uptake among the urban customers. However, with the launch of RuPay, this all was changed. Today, over 1,240 banks, including Private Sector Banks, Public Sector Banks, Small Finance Banks, Cooperative Banks and Regional Rural Banks, can issue RuPay Cards to its customer as a baseline product.
- In the last eight years, RuPay has launched catering to the different segments of the society. In addition to the Government scheme cards, RuPay Classic, Platinum & Select variant cards are designed for the masses and affluent customers. RuPay offers excellent privileges and benefits such as International Acceptance, Domestic and International Airport Lounge Access, free personal accidental death and permanent total disability insurance coverage, various merchant offers, different cashback scheme, health and wellness benefits to appeal to the mass and affluent customers.
- Keeping in pace with continuous development and innovation in the ecosystem, RuPay has developed a bouquet of new innovative products such as RuPay Contactless. With the vision of One Card for all Payment systems, RuPay Contactless has revolutionized payments by introducing offline wallet-based payment mechanisms and service area features for storing merchant/operator-specific applications. This product enables seamless payment across all use cases, including travel by different metros and other transport systems across the country, retail shopping, and purchases.

## RuPay Contactless

- Make payments more convenient and safer with no physical connection, just a tap of your RuPay Contactless card on the reader helps to make all your payments. An overarching vision for payment systems now needs greater adoption of electronic payments and migration towards a “less-cash” society. Contactless payments are the future of payment industry in India.

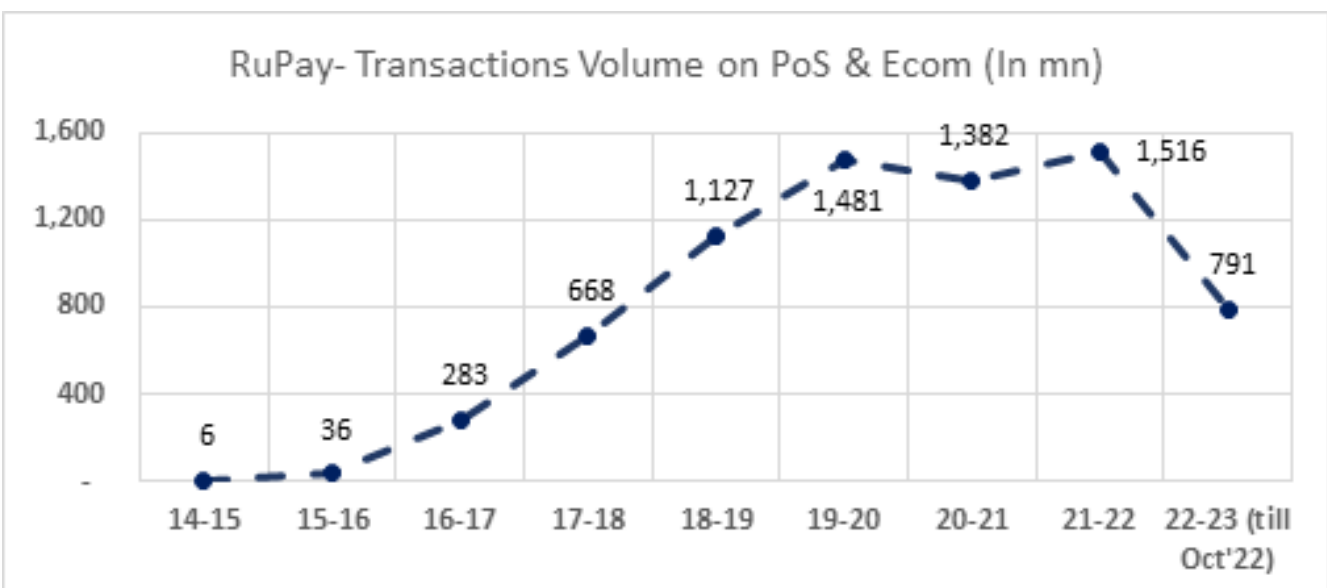


RuPay Contactless has revolutionized payments by not just providing contactless payment options to you, but also introducing wallet-based contactless payments (offline payments) and service area features for storing operator-specific passes. RuPay Contactless offers:

- Contactless payment options for all retail shopping and purchases

- Wallet based contactless Payments for travelling by different metros and other transport systems across the country and making toll/parking payments and other retail payments
- Service areas in the card to store monthly passes, seasonal tickets etc.

### RuPay Growth- Debit, Credit and Prepaid.



# Seamless Customer Experience leads to Explosive Growth



## Accelerating Growth

- It is noteworthy that total digital transactions which were 1,004 crores in FY 2016-17 have seen exponential growth post the launch of UPI. During FY 2017-18, 106% growth was witnessed taking the tally to 2,071 crore transactions.
- In FY 2018-19, UPI accounted for 17% of the total 31 billion digital transactions in the country. The next fiscal year saw UPI's share rising to more than 27% as it processed 12.5 billion transactions of the total 46 billion digital transactions. In FY 2021-22, UPI accounted for 52% of the total 88.4 billion financial digital transactions
- With UPI, customers can make payments instantly via their mobile devices. It has become a popular digital payment option owing to its unparalleled benefits superior customer experience features like :-
  - ✓ Simple to use functionality: Requires only Virtual Payment Address (VPA), i.e.: account no., IFSC code, etc. are not required
  - ✓ Interoperability – Customers can transfer money on a real-time basis (available 24x7) and across multiple bank accounts using any UPI App
  - ✓ Affordable merchant acceptance infrastructure both static UPI QR and dynamic UPI QR at the merchant locations
  - ✓ Cost-effective way of making/accepting payments
  - ✓ Enhanced security
  - ✓ UPI is a completely open and interoperable: Transaction can be initiated from any bank's UPI app
  - ✓ Works on Immediate Payment Service (IMPS) platform
  - ✓ Both payment and collection transactions are possible
  - ✓ No need of pre-addition/approval of beneficiary
- **As a result, as of Oct 2022, UPI has 30 Cr+ users who did 7.30 billion transaction in October-2022, totalling to a settlement value of ₹12.11 Bn crore.**

# Benefits Accrue Across the Payments Ecosystem

- UPI's rapid growth has once again demonstrated India's ability to build a world-class payments infrastructure from scratch. The UPI system has created a national open standard which has been adopted by more than over 360 banks.
- **The open systems has enabled global players like Google, WhatsApp, Walmart, True Caller, Amazon, Uber to provide UPI services.**
- Further, benefits of UPI accrue across the payments ecosystem:-
  - Person to Person (P2P) and Person to Merchant (P2M) payments give customers 100% coverage of payment transactions
  - Truly interoperable payment system running round the clock with participation from both banks and non-bank entities
  - UPI also allows for multiple methods for integrating merchants - QR based payments being the most popular. **In just 5 years, over 215 million UPI QRs have been deployed in the market for accepting merchant payments, from only 2.5 million devices that were accepting merchant payments prior to this.**
  - Support for all sources of funds viz. Bank Account, Pre-paid Wallets, Overdraft Account etc.
  - Fully digital on-boarding which does not require any brick and mortar branch visits
- Low cost QR code based physical acceptance aided by in-app, web and intent based payments
- Fully compliant with international security standards and certifications
- Payments are UPI ID based, providing higher security and confidentiality to the Users
- Enables contactless payments across all channels like mobile, ATM, internet and Mobile Banking
- In short, UPI's large number of benefits has truly transformed the country from a cash-dependent economy to a nation known for its digital payments landscape.



# UPI at the Forefront of Innovation

## Enhancing Trust for Customers and Businesses

- The benefits of UPI was observed in full glory during the COVID-19 pandemic when UPI served as critical lifeline especially for small and micro merchants. Further, UPI has processed 21 billion contactless merchants transactions with total value over ₹ 16.1 Lakh Crores in FY 2022-23 (till Oct'22)
- UPI has made buying and selling through fintech app solutions, easier for both e-commerce providers as well as consumers. This has created a huge demand in the FinTech industry. There is no lag which helps in the smooth flow of business.
- Moreover, UPI has opened a host of opportunities for start-ups and e-Commerce players to come up with innovative solutions that elevate the customer experience.
- UPI also changed the way merchants and

small businesses collect payments from their customers, which used to be manual, mostly cash-based. Using UPI, merchants can now remind customers to pay and even set up specific dates for the customer to pay by, simplifying the collection process.

## Tapping Use Cases

- UPI has also helped Banks to reduce cash requirements on channels like ATMs and Branches resulting in reduction in operational costs and improving customer experience. It can also anchor a broader suite of fintech applications like micro-pensions, digital insurance products, and flexible loans. These are custom solutions created by Indian technology companies, on the public infrastructure of UPI.
- Tech companies are increasingly leveraging the power of UPI to expand the digital ecosystem and this has led to a great acceleration in the pace of financial inclusion.





# Benefits of UPI for Merchants and Customers



## For Merchants:-

- Secure and convenient way to receive payment directly in bank account.
- Low cost infrastructure for receiving payment – QR Code
- No need to handle cash
- Zero MDR
- No risk of storing sensitive data
- Collect functionality
- Suitable for both online and offline merchants
- Integration into real-time payments
- Access to large database of customers using UPI payment mode
- No need of storing customers bank or financial details



## For Customers:-

- Round-the-clock availability
- No sharing of sensitive data
- Simple user interface including ease of raising complaints
- Convenience and affordability (no cost/ very low cost)
- Availability of apps with simpler interfaces
- Suitable for payments without exposing account details
- Convenient for high frequency low value merchant payments
- Multiple options (Apps) available for to the customer. Customers can choose from BHIM, individual bank as well as non-bank Apps
- Financial inclusion due to low cost and ease of operation
- Creates Digital financial footprint for users which enables access to credit and other financial services





**Divyansh** @divyanshraj020 1h  
 Replying to @valwagoneer @UPI\_NPCI  
 UPI is most Amazing Concept of Money Transfer that India 🇮🇳 has invented.  
 Other Countries should Also Adopt this.

1 2

**UPI** @UPI\_NPCI

Replying to @divyanshraj020  
 Thanks for your positive feedback.

**Tamal Bandyopadhyay** @TamalBandyo  
 Wow! @UPI\_NPCI breaks records, crosses 1 billion transactions in first 15 days of October. The platform could post more than 2 billion transactions by month end. Great going @NPCI\_BHIM

5:04pm · 20 Oct 2020 · Twitter Web App

2 Replies 7 Retweets 32 Likes

**Vanilla the goat** @padmakumarnair  
 Another success story.. this time from financial sector @UPI\_NPCI

**Is UPI the greatest innovation in digital banking?**  
 Monthly transaction amount on UPI (in ₹ Crores)

Month	Monthly transaction amount (in ₹ Crores)
Aug-17	4,157
Dec-17	51,843
Apr-18	1,02,595
Aug-18	1,52,449
Dec-18	2,02,521
Apr-19	2,61,835
Aug-19	2,98,308

7:03pm · 25 Nov 2020 · Twitter for Android

# Customer Speaks

**Gagan Thengane** @Kintu\_Parantu  
 Replying to @ETtech and @Ashwin\_ET  
 Kudos to @NPCI\_NPCI @UPI\_NPCI @RuPay\_npcic @dilipasbe & team 🙌

UPI & Rupay has become so popular & widespread that the world is envy and wants to adopt it.

9:15 AM · Feb 18, 2021 · Twitter for Android

**Naveen tadela** @naveenktadela1  
 @UPI\_NPCI changed face of Indian economy..

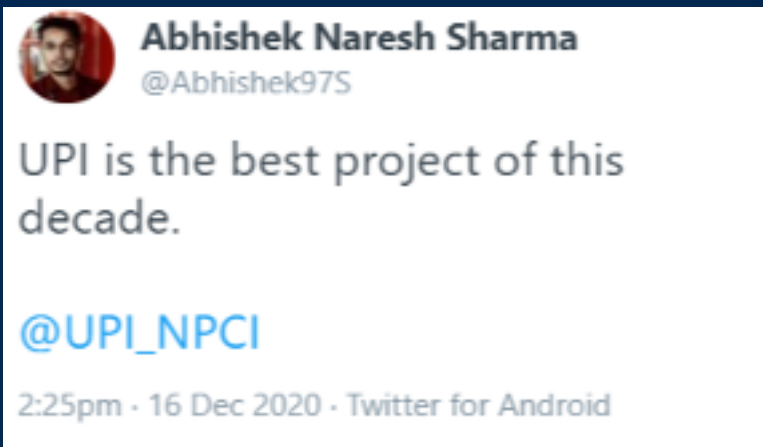
11:11pm · 16 Dec 2020 · Twitter for Android  
 © Barshi, India, India

**Sanghi Prince** @SanghiPrince  
 Replying to @NPCI\_NPCI  
 Your payment method is improved alot recently . Great going.

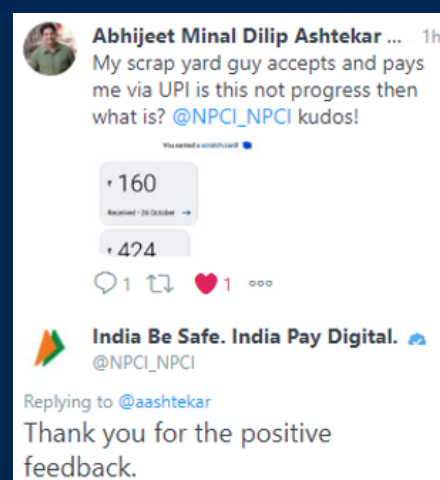
9:03 PM · Feb 24, 2021 · Twitter for Android

1 Like

**NPCI** @NPCI\_NPCI · 19s  
 Replying to @SanghiPrince  
 Hi, thank you for appreciation. We are extremely delighted by the love and support that we have received from you.



# Customer Speaks



# Benefits of UPI to the Banks & FinTech



## For Banks:-

- Low cost alternative to cash transactions
- Low merchant onboarding cost
- Data on transactions enables targeting customers for other financial services



## For Payment Service Providers & FinTech:-

- Open architecture fosters innovation and development of unique products
- Promotes partnerships with banks & FIs for development of customer centric solutions
- Opportunity to target UPI customers for credit and other financial services



The UPI Platform has been build on a open source stack which is one of the most advanced open source stacks which means that UPI is capable of scaling up to billions of transaction at very low cost.

**Shri Nandan Nilekani, Co-Founder, and Non-Executive Chairman, Infosys**



Ever since UPI launched is 2016, we have wintessed UPI's rapid adoption amongst the public. The success story of UPI has been acknowledged across the world with other countries trying to emulate similar solutions.

**Shri Rajnish Kumar (Formar Chairman, State Bank of India**



With many customers opting for contactless payments, UPI has become their preferred mode in the digital payments innovation in the country giving customers a truly world-class experience.

**Mr. Harshil Mathur, Razorpay**



UPI AUTOPAY gives customers and business the complete control of their payments. The feature helps businesses automate billing, improve cash flows, and offers better pricing.

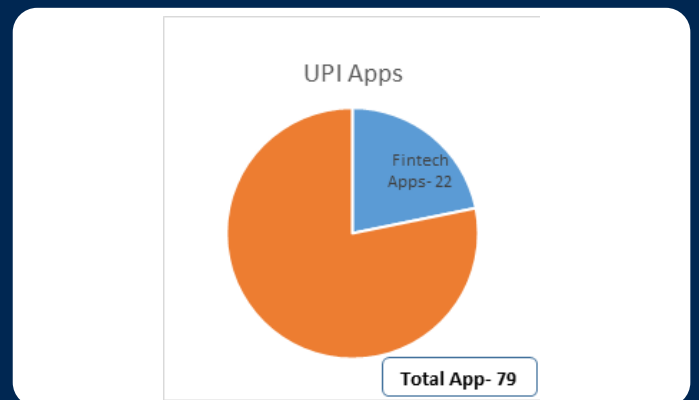
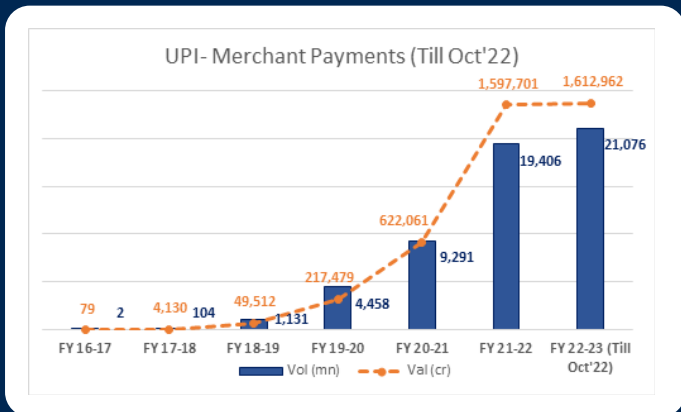
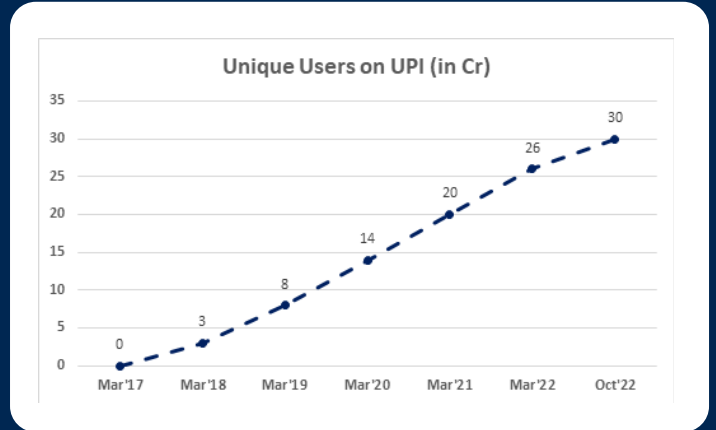
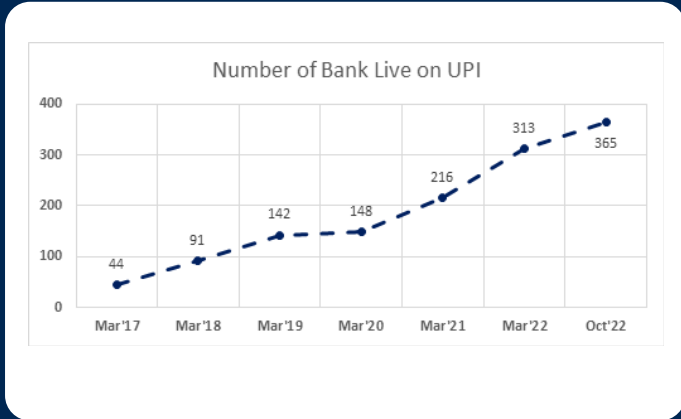
**Mr. Sudhir Sehgal - PayU**



UPI is a big step forward in customer convenience which offers significant customer of registering recurring payments one time without the fear of forgetting monthly payments.

**Mr. Parag Rao, HDFC Bank**

# Growth of UPI Ecosystem

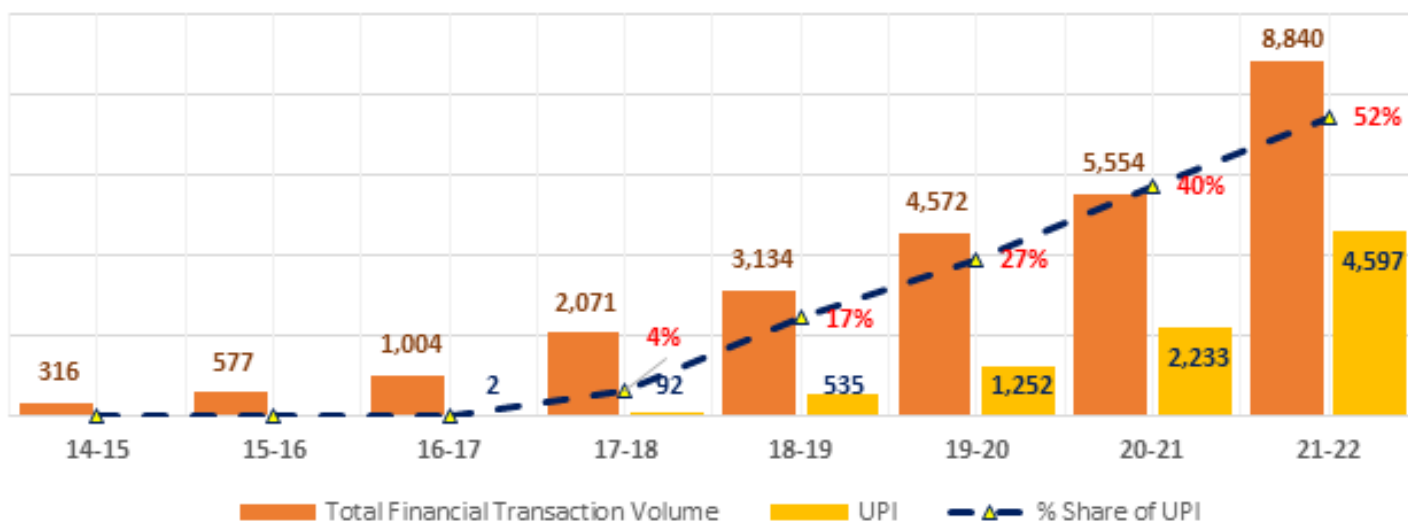


# Growth in UPI transactions

UPI has gained significant traction in the domestic market, and also recognition in international markets in a short span of time.

	FY-2016-17		FY-2017-18		FY-2018-19		FY-2019-20		FY-2020-21		FY-2021-22		FY-2022-23 (till Oct'22)	
Platform	Volume (in Lakh)	Value (₹ Cr)	Volume (in Lakh)	Value (₹ Cr)	Volume (in Lakh)	Value (₹ Cr)	Volume (in Lakh)	Value (₹ Cr)	Volume (in Lakh)	Value (₹ Cr)	Volume (in Lakh)	Value (₹ Cr)	Volume (in Lakh)	Value (₹ Cr)
UPI	179	6,947	9,152	1,09,832	53,534	8,76,970	1,25,186	21,31,730	2,23,307	41,03,653	4,59,675	84,17,572	4,43,553	75,03,014

Contribution of UPI Transaction in Total Digital Transactions (in Cr)





# UPI Goes Global

- Reserve Bank of India (RBI), in close collaboration with the Government and National Payments Corporation of India (NPCI), is working to expand the reach of Unified Payments Interface (UPI) globally. In this connection, RBI has approached other central banks highlighting the features of UPI as an efficient and secure system.
- To streamline the foray of UPI into international markets, National Payments Corporation of India (NPCI) has launched its dedicated international subsidiary 'NPCI International'.
- NPCI has achieved the pinnacle of success at developing an exemplary robust payments system that is cost effective, secure, convenient and instantaneous. Several nations have displayed an inclination towards establishing a 'real time payment system' or 'domestic card scheme' inspired by the exemplary innovations by NPCI in the country.
- For instance, UPI is now live in Singapore and in the UAE, work is under progress. NPCI is in discussions with more than 30 countries for enabling acceptance of remittances through the adoption of UPI.
- Further, many other institutions across different countries have reportedly been exploring setting up UPI like platforms.
- At global forums like the World Bank and Bank for International Settlements (BIS), there have been discussions around the need and importance of domestic real-time low-cost payment systems and also on the possibility of connecting payment systems of different countries to facilitate real-time, low cost cross border remittances.
- **UPI has immense potential to provide the basis for a stronger bilateral business and economic partnership with other jurisdictions, and helps buttress India's soft power.**



With UPI, India has created something 'truly special' and is opening up a world of opportunities for micro and small businesses that are the backbone of the Indian economy.

**Mark Zuckerberg, CEO-Facebook**



India has built an ambitious platform for digital payments, including a system for sending rupees between any bank or smartphone app.

**Bill Gates, Co-Founder-Microsoft**



Google has been a successful market participant in India's use of UPI, and Google Pay provides one of the three leading mobile applications that use UPI, as measured by transaction volume. Google wants the US government to follow a similar model of open-payments to build FedNow, a new interbank real-time gross settlement service (RTGS) for faster digital payments in the country.

**Mark Isakowitz, VP-Google**



UPI was thoughtfully planned and critical aspects of its design led to its success. It is an open system on which technology companies can build apps that help users to directly manage transfers into and out of their bank accounts.

**Sundar Pichai, CEO-Alphabet**



India's Unified Payments Interface allows both domestic and global players to develop mobile payment applications. As such, it lowers the barriers to entry, especially for smaller firms, thus levelling the playing field.

**Agustin Carstens, GM-BIS**



# UPI Chalega



Easy



Safe



Instant

[upichalega.com](http://upichalega.com)



**UPI**  
UNIFIED PAYMENTS INTERFACE

**chalega**

Easy. Safe. Instant.







Ministry of Information and Broadcasting  
Government of India