

India Digital Payments Report

Q3 2021



With 1.18 billion wireless telecom subscriptions, the world's second-largest internet population, nearly 1 billion cards, 2.25 billion PPIs, and a plethora of innovative digital payment modes, India is poised to be one the largest and fastest growing digital payments market in the world.



Despite the setbacks brought by Covid19 over the past two years, digital payments continued its growth even in the rural pockets across the country. The PIDF status update published by RBI states that over 5.6 million physical and digital devices have been deployed across tier 3-6 centers in addition to north-eastern states as at end of September 2021.

Owing to India's robust growth across diverse sectors such as Telecom, Healthcare, IT, Retail, Automobile, Agriculture among others, the need for sustainable, secure and inclusive payment methods is gaining momentum.

Worldline is at the forefront of this digital revolution and is shaping new ways of paying, living, doing business by forming creative collaborations with clients. We develop tailor-made solutions to meet the growing demands of banks, merchants and consumers alike. Our in-store and e-commerce solutions in India are powering small, medium and large merchant touchpoints across categories like groceries, restaurants, apparel, pharmacy, gaming, utility and financial services etc. We are excited about bringing a state-of-the-art cross-border solution for digital payments in the new year that will surely be a game changer in the business.

As we continue on our mission to offer a safe, efficient and trusted solutions to a forward-looking India, I am pleased to share the Q3 2021 Digital Payments Report covering an overview of Indian Digital transactions processed in July-Sept along with insights based on transactions that we processed in our network.

In addition, we give our perspective on the shift to the mobile that is happening at an unprecedented pace.

Deepak Chandnani
Managing Director, Worldline South Asia & Middle East

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The Great Mobile Shift

In terms of technology leapfrogging, nothing has quite matched the leapfrogging that the mobile phone has managed to achieve. Just a decade ago, the mobile phone was used primarily for making calls and messaging and listening to music. The progression then was to news, videos, e-commerce, banking, utility, travel, wallet apps among others. As far as payments was concerned, initially it was P2P as well as through a dongle that was connected to the phone.

Fast forward to some 3 years back and now, the mobile phone of yesteryears has become central to the digital payments movement globally. Two developments have been key to this; the re-jigging of the QR – which was initially developed for logistics purpose – for payment acceptance and the rise of NFC enabled phones. To be clear, this convergence of mobile phones (by itself and sans external dongles) to payments is an older story in East Asia and China; in China transactions, both P2P and P2M, have long been enabled through the 2 pre-dominant apps; Alipay and WeChat pay. For the rest of the world, it is a relatively newer convergence.

In India, it is safe to say a significant number of transactions are being done through the mobile phone thanks to the advent of UPI and the rollout of millions of QRs at physical merchant locations. E-commerce transactions that are being completed through UPI also have a mobile component to it. In April 2020, the number of transactions done through mobile apps was 1.12 billion; in June 2021 that number was 3.7 billion. Similarly, the value in April 2020 was INR 3.6 trillion while it was INR 11.4 trillion in June 2021.

In terms of payments made at physical merchants by mobile (also called proximity payments), China leads the way with 81% of smartphone users having made payments in the previous six months. Denmark comes a distant second with 41%. In terms of penetration of mobile payment adoption (which is also a decent indicator of the potential market size), China again dominates at 39.5% followed by South Korea at 29.9% and Vietnam at 29.1%. India is at 6th with 20.2% and the U.S. is at 17.7%. In terms of average annual transaction per user, the U.S. dominates at \$7961 while China is at \$2300, and India is at \$80.

If previous data is anything to go by, it is clear that mobile phone based transactions will easily grow well over 100% annually for the next few years to come. As mobile payment app penetration grows and there is still a significant way to go, the transactions tracker only points up.

Sunil Rongala
Vice President – Strategy, Innovation & Analytics

2021: Q3 in Review

We have analysed transactions available in public databases as well as transactions processed by us in Q3 2021 (July - September) and derived some unique insights.



Merchant Acquiring

The POS terminal count has seen an uptick through the year; it was 4.71 million in January 2021 and 4.97 million in September 2021. However, the number of asset-lite QR based acceptance solution is growing swiftly. As of September 2021, number of BQR was 5.2 million and UPI QR was 119.6 million, witnessing an increase of 116% and 98% respectively against same period of previous year.

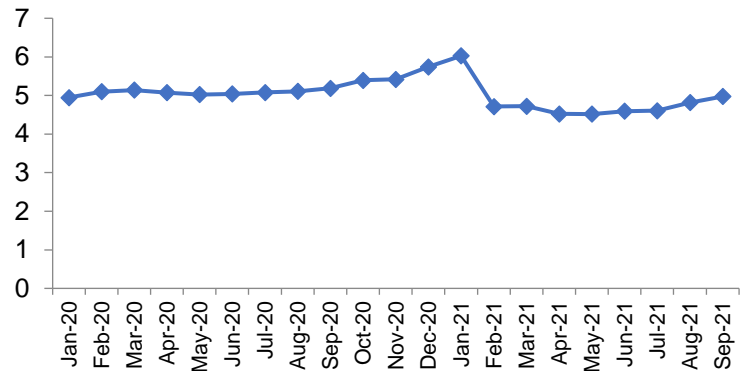
This growth can be attributed to operationalization of Payments Infrastructure Development Fund (PIDF) Scheme by the RBI which envisages creating about 3 million merchant touch points every year from Jan 1, 2021 for three years.

As of September 2021, the number of physical payment acceptance devices deployed under the PIDF Scheme were 0.245 million while digital devices were over 5.53 million.

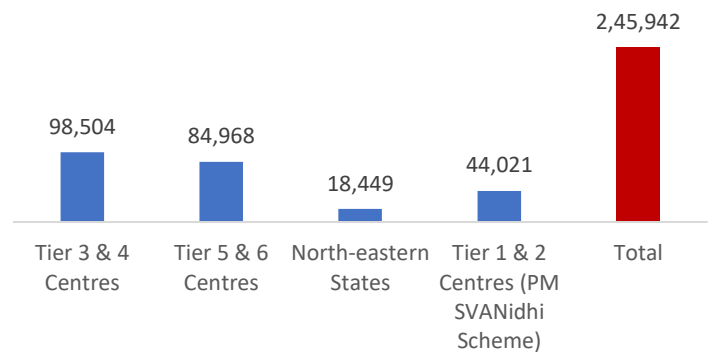
***Physical devices** include PoS, mPoS (mobile PoS), GPRS (General Packet Radio Service), PSTN (Public Switched Telephone Network), etc.

****Digital devices** include inter-operable QR code-based payments such as UPI QR, Bharat QR, etc.

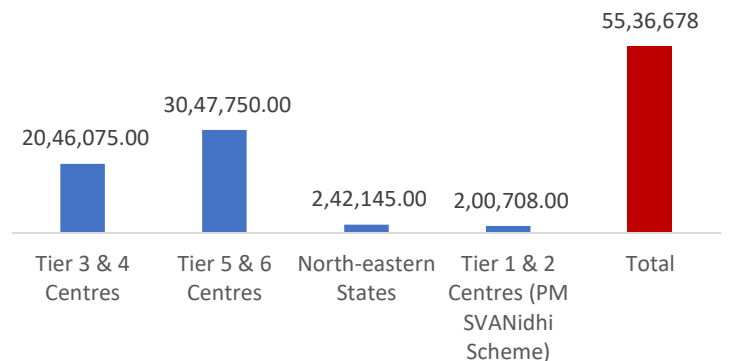
POS Terminals (million)



Physical Devices*



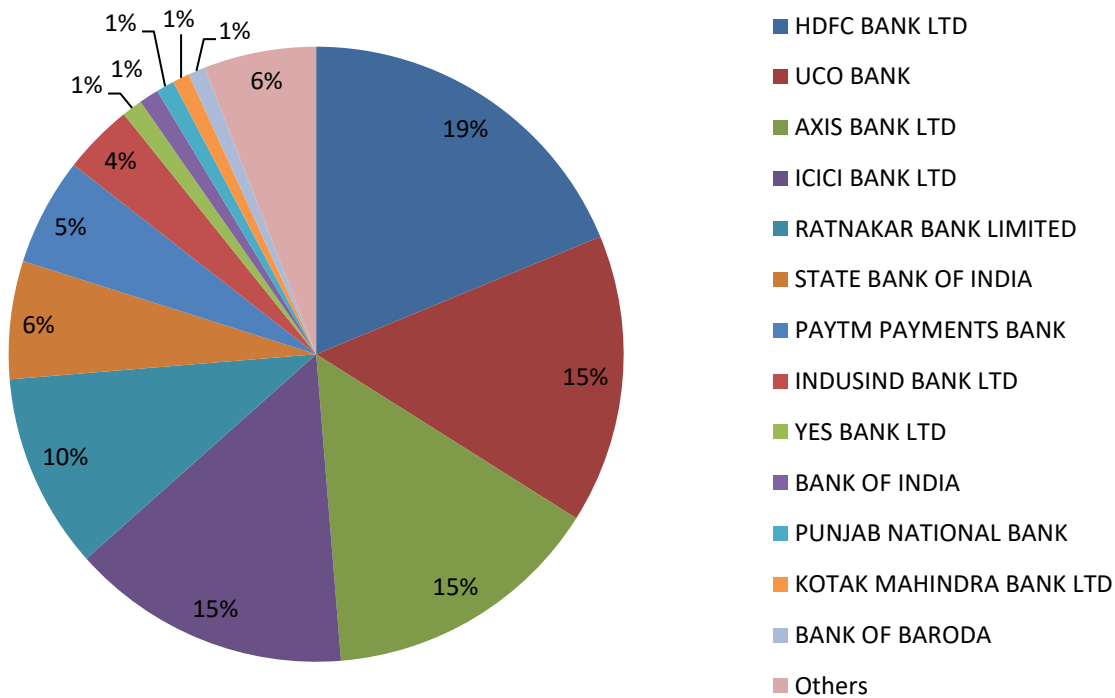
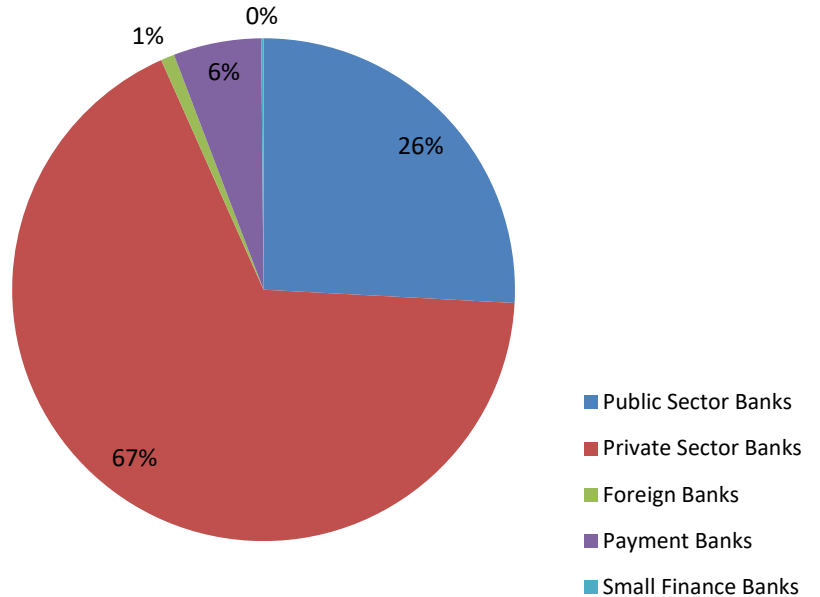
Digital Devices**



On August 26, The RBI included street vendors identified as part of the PM Street Vendor's AtmaNirbhar Nidhi (PM SVANidhi Scheme) in tier-1 and tier-2 centres as beneficiaries under the PIDF Scheme.

Merchant Acquiring

Overall, Private sector banks represent about 67% of the POS terminal market while public sector banks account for 26%. Payments banks accounted for 6% market share, and foreign banks continue to represent 1% share.



HDFC bank, UCO Bank, Axis Bank, ICICI Bank, RBL Bank, State Bank of India are the top acquiring banks to deploy POS terminals.

Worldline in India Insights

At physical merchant touch points, groceries, restaurants, clothing and apparel, pharmacy and medical, hotels, jewelry retail, specialty retail, household appliances and departmental stores together accounted for over 40% in terms of volume and about 50% in terms value in Q3 2021.

In the online space, e-commerce (shopping for goods and services), gaming, utility & financial services contributed to over 85% transaction in terms of volume and 41% in value in Q3 2021.

Top 10 states with the highest transactions at physical touch points in Q3 2021 for Worldline India:

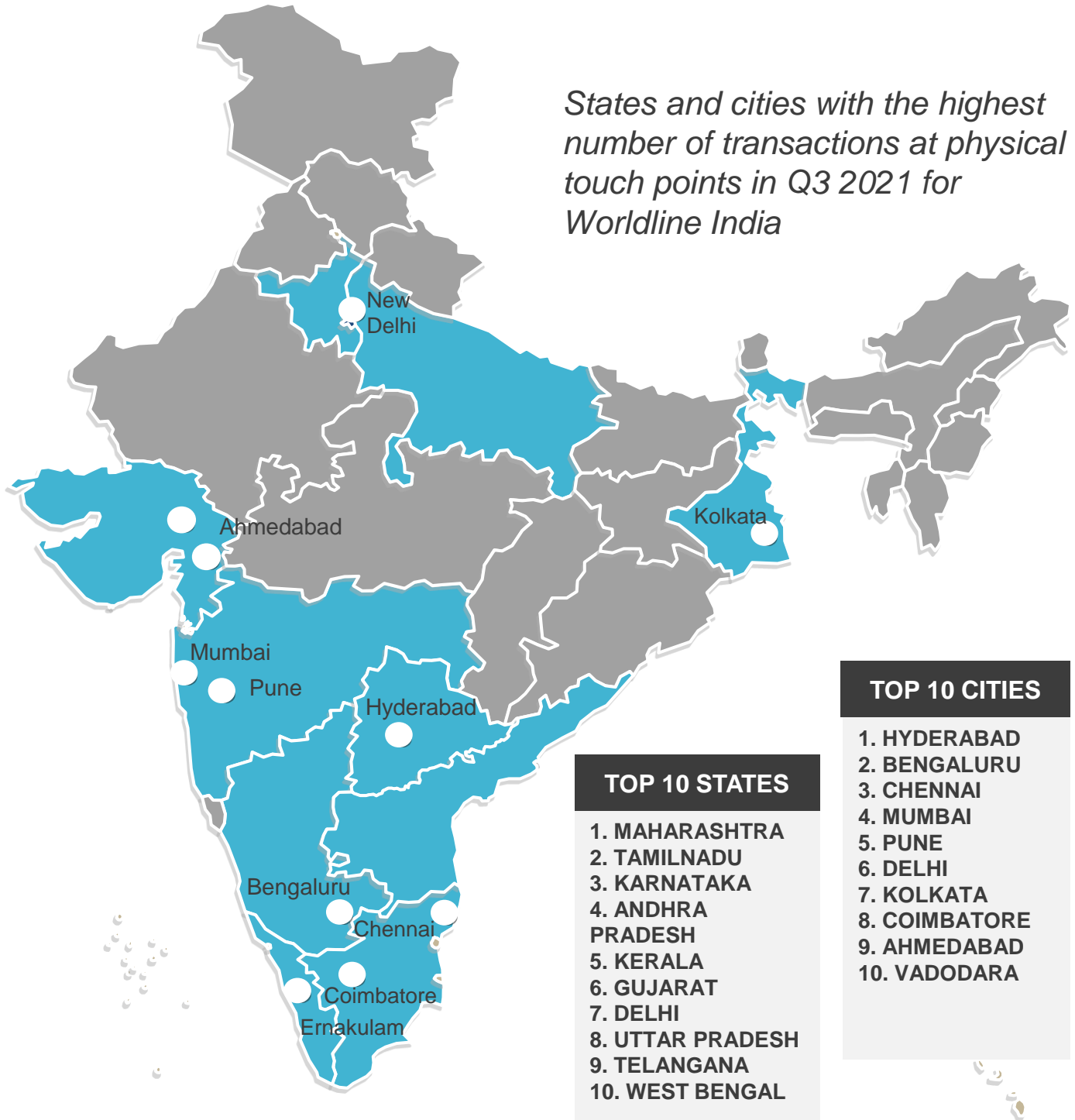
Maharashtra, Tamil Nadu, Karnataka, Andhra Pradesh, Kerala, Gujarat, Delhi, Uttar Pradesh, Telangana and West Bengal

Top 10 cities with the highest number of transactions at physical touch points in Q3 2021 for Worldline India:

Hyderabad, Bengaluru, Chennai, Mumbai, Pune, Delhi, Kolkata, Coimbatore, Ahmedabad and Vadodara.

Worldline in India Insights

States and cities with the highest number of transactions at physical touch points in Q3 2021 for Worldline India



Card Issuance

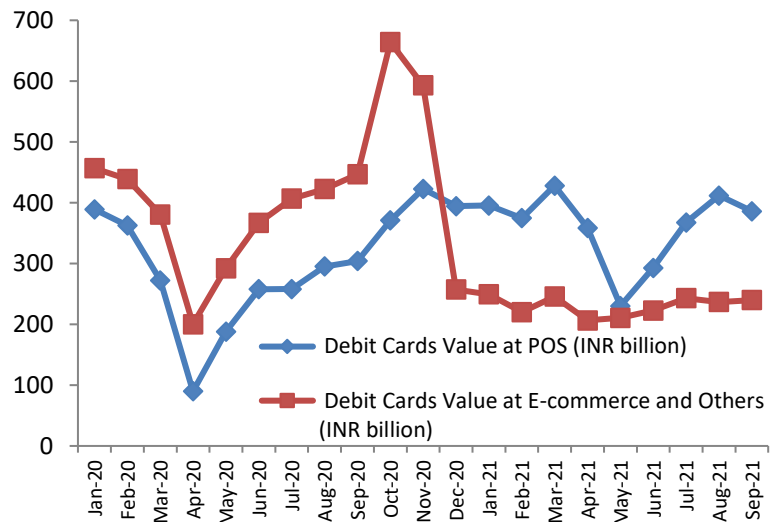
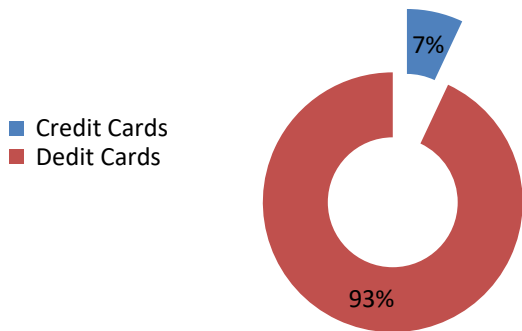
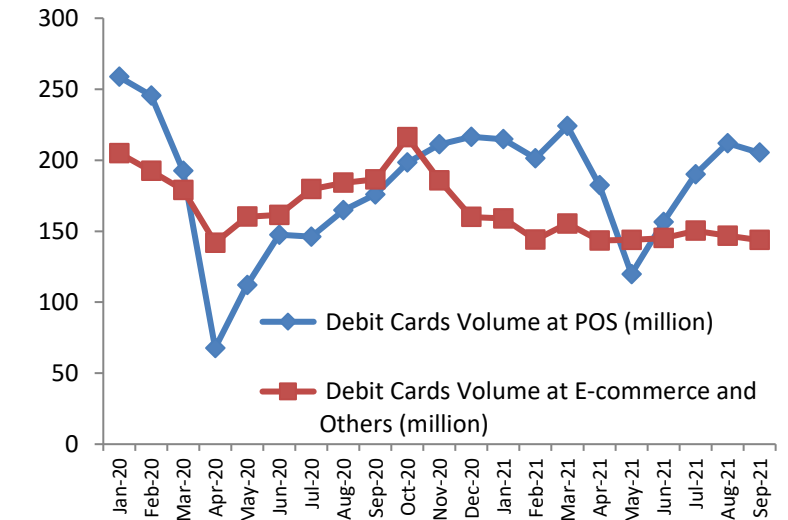
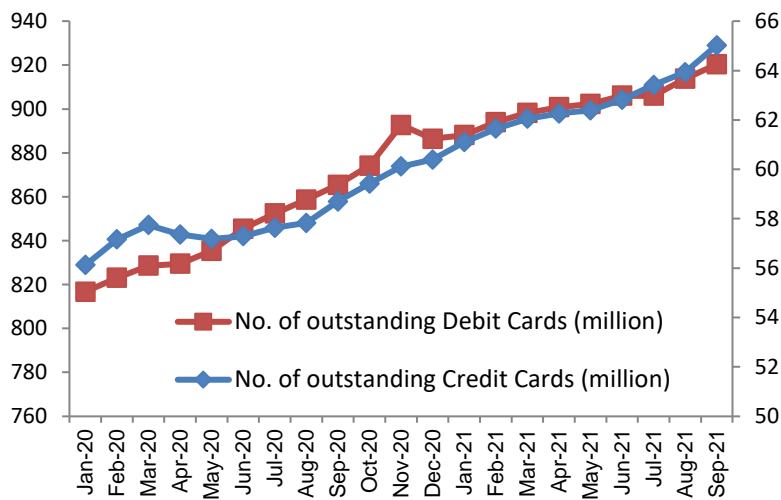
The total number of cards in circulation stood at 985.35 million as of September 2021. Out of which, 920.30 million were debit cards and 65.02 million were credit cards, up by 8.65% and 10.78% YOY respectively.

Over 14.27 million debit cards and about 2.21 million credit cards were added into the system in Q3 2021. Out of the total cards in circulation, debit cards accounted for 93% while credit cards represented a 7% market share.

Transaction analysis of Debit Cards

In Q3 2021, 1.48 billion transactions were processed through debit cards while the value stood at INR 1.88 trillion. It recorded 43% increase in terms of volume but marginal decline of 13% in terms of value against Q3 2020

The number of debit card transactions processed at POS terminals was 607.42 million while e-commerce transactions were 440.96 million. In terms of value, INR 1.16 trillion was processed at POS terminals while INR 720.12 billion was processed on ecommerce transactions.

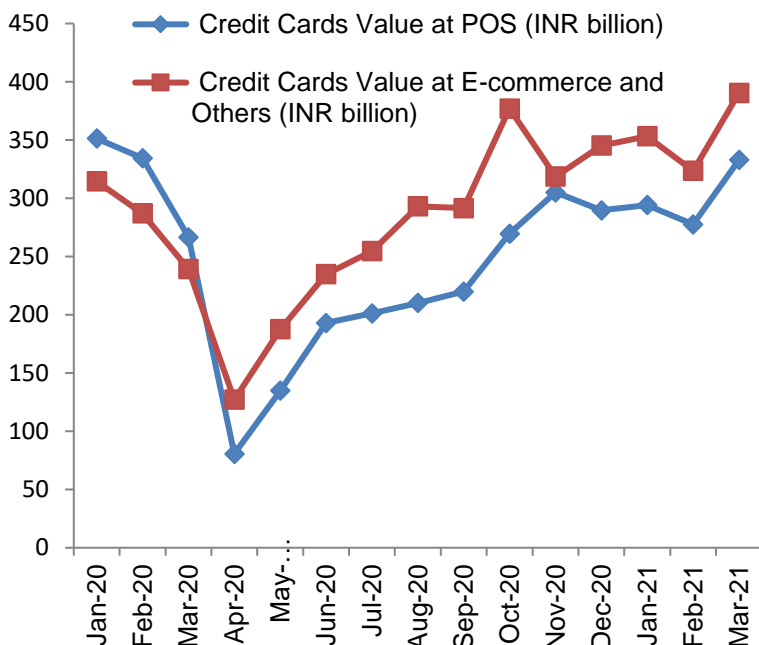
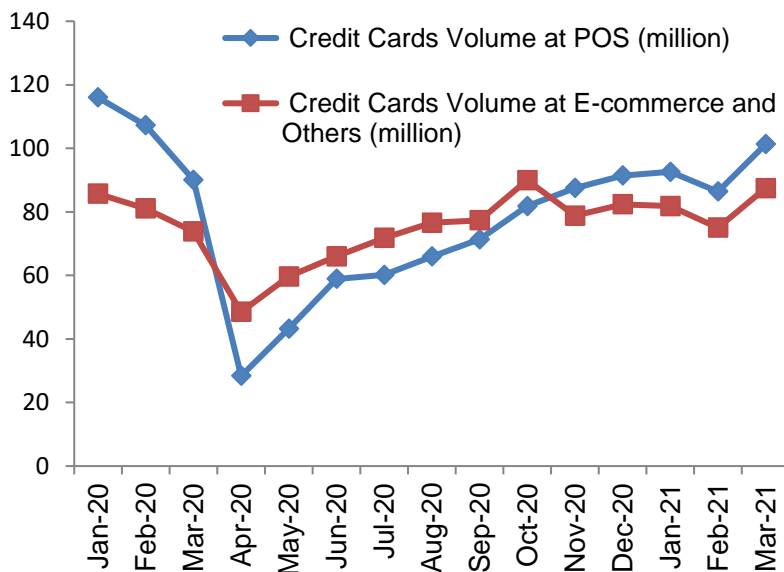


Source: RBI [Bank-wise ATM/POS/Card Statistics](#)

Card Issuance

Transaction analysis of Credit cards

Credit card transactions volume and value in Q3 2021 were 557.24 million and INR 2.32 trillion respectively.



The number of credit card transactions processed at POS terminals was 284.64 million while e-commerce transactions were 272.59 million. In terms of value, INR 952.10 billion was processed at POS terminals and INR 1.37 trillion was processed at e-commerce transactions.

In January 2019, RBI had permitted authorised card networks to offer card tokenisation services and initially, it was limited to mobile phones and tablets. On September 7, 2021, this facility was subsequently extended to laptops, desktops, wearables (wrist watches, bands, etc.), Internet of Things (IoT) devices, etc. In addition, there were following enhancements in the framework for permitting Card-on-File Tokenisation (CoFT) Services like permitting card issuers to offer card tokenisation services as Token Service Providers (TSPs)., Tokenisation of card data shall be done with explicit customer consent requiring Additional Factor of Authentication (AFA) validation by card issuer among others.

The RBI clarified that w.e.f. January 1, 2022, no entity in the card transaction / payment chain, other than the card issuers and / or card networks, shall store the actual card data. Any such data stored previously shall be purged.

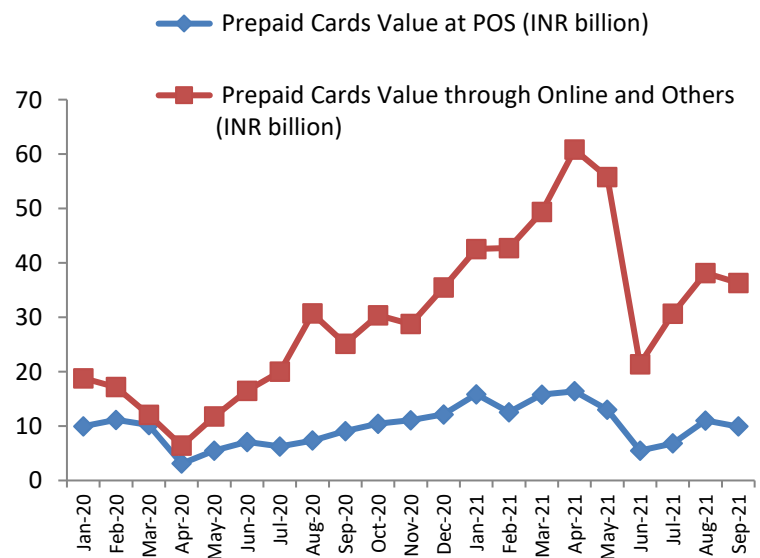
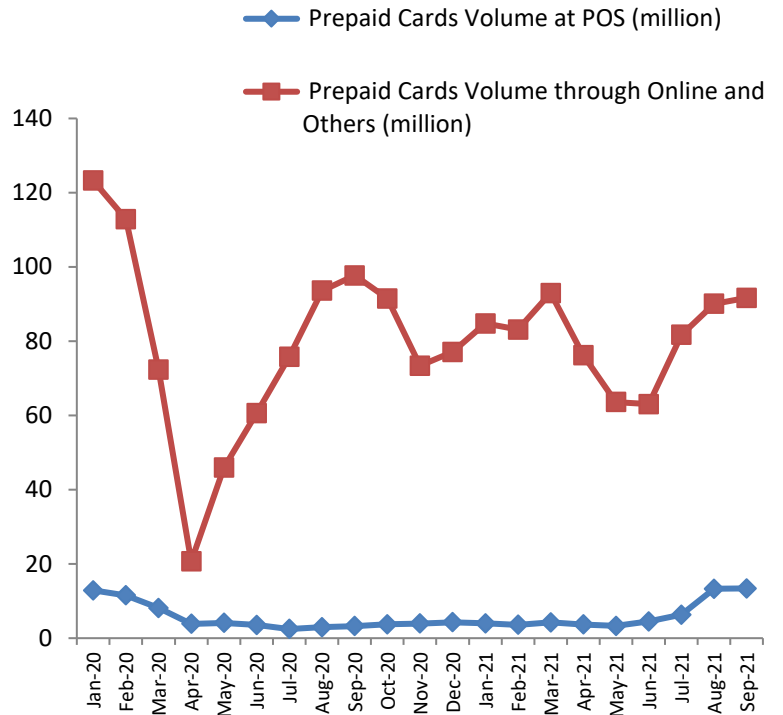
Prepaid Payment Instruments

As of September 2021, there were 2.24 billion Prepaid Payment Instruments (PPIs) in the country. Out of which, 225.87 million comprised of prepaid cards and over 2.02 billion comprised of mobile wallets.

Transaction analysis of Prepaid Cards

In Q3 2021, total prepaid card transactions volume and value were 296.30 million and INR 133.01 billion respectively. The number of prepaid card transactions processed at POS terminals was 32.96 million while e-commerce transactions, card to card transfers and digital bill payments through ATMs, etc. were 263.34 million. In terms of value, INR 27.82 billion was processed at POS terminals through PPI cards while INR 133.01 billion was processed for online transactions and other transactions.

Though the usage of prepaid cards at POS has increased, it is quite evident that prepaid cards are primarily used for online transactions rather than physical merchant places. This could also be because prepaid cards that have been issued of late have been digital rather than physical.



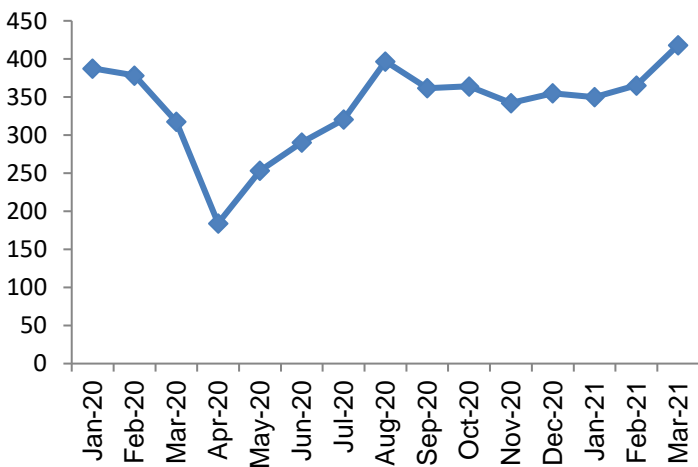
Prepaid Payment Instruments

Transaction analysis of Mobile Wallets

The number of transactions through mobile wallets in Q3 2021 was 1.21 billion and its value was INR 604.43 billion. This includes purchase of goods and services and fund transfer through wallets. Transactions through wallets are growing steadily.

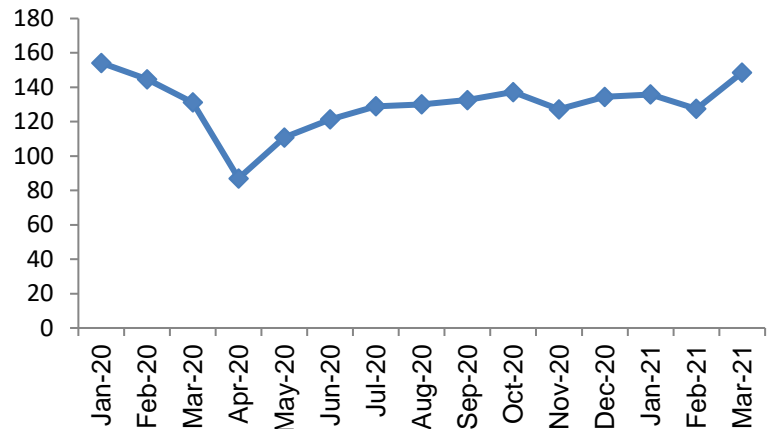
In Q3 2021, it recorded a 10% increase in volume over the previous quarter i.e. Q2 2021. The value of transactions grew by 34 % against Q2 2020.

m-Wallet Volume (million)



On August 27, 2021, the RBI issued Master Directions on Prepaid Payment Instruments (PPIs) and updated the same on November 12, 2021.

m-Wallet Value (INR billion)



PPIs that require RBI approval / authorisation prior to issuance are classified under two types viz. (i) Small PPIs, and (ii) Full-KYC PPIs.

- i. Small PPIs : Issued by banks and non-banks after obtaining minimum details of the PPI holder. They shall be used only for purchase of goods and services. Funds transfer or cash withdrawal from such PPIs shall not be permitted. Small PPIs can be used at a group of clearly identified merchant locations / establishments which have a specific contract with the issuer (or contract through a payment aggregator / payment gateway) to accept the PPIs as payment instruments.
- ii. Full-KYC PPIs : Issued by banks and non-banks after completing Know Your Customer (KYC) of the PPI holder. These PPIs shall be used for purchase of goods and services, funds transfer or cash withdrawal. The features of these instruments are explained in paragraph 9.2 of this MD.

Mobile and Internet Based Payments

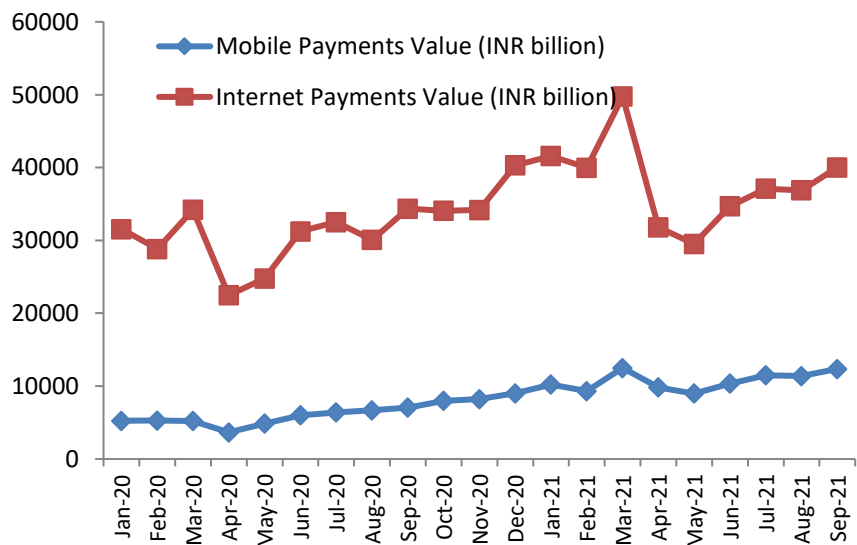
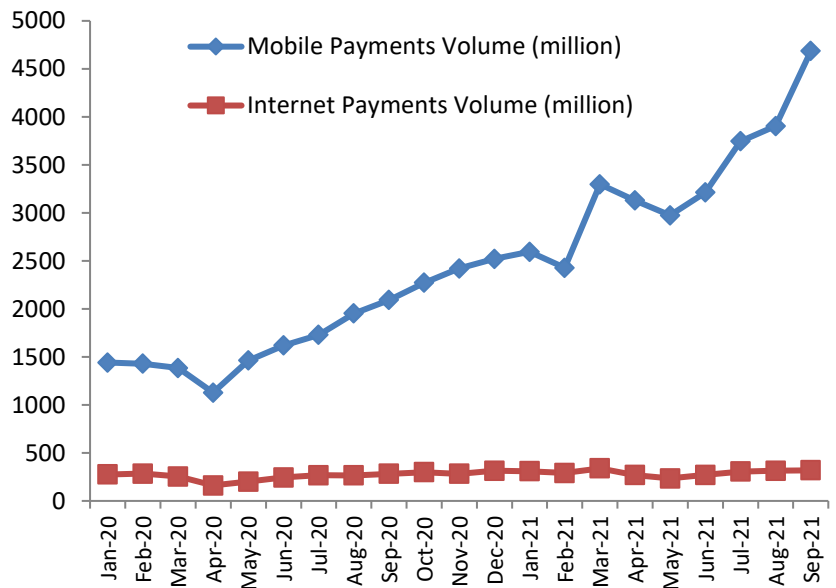
In Q3 2021, consumers made 12.33 billion mobile based payments whereas Net Banking / Internet browser based transactions were over 937.60 million. In terms of value, INR 35.18 trillion was transacted through mobile while INR 114.02 trillion was transacted through the internet.

Mobile payments

In Q3 2021, Mobile app based transactions recorded 32% growth in volume while its value witnessed over 21% jump against previous quarter i.e. Q2 2021. Interestingly, 91% of mobile transactions comprised of inter-bank transactions while 9% accounted for intrabank transactions. In terms of value, 80% of mobile transactions comprised of interbank transactions while 20% accounted for intra-bank transactions.

Internet payments

In Q3 2021, Net banking / internet based transactions witnessed over 21% increase in volume and 19% in value against the previous quarter i.e. Q2 2021. Inter-bank and intra-bank transactions volume of Internet Payments channels were 81% and 19% respectively while value of Inter-bank accounted for 56% and intra-bank transactions were 44%.



It is evident from the data that consumers prefer mobile apps frequently for small ticket size transactions and net banking / browser based channels for high ticket size transactions.

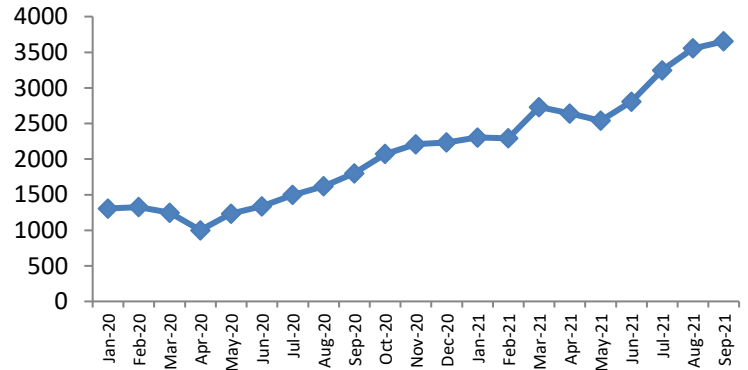
Unified Payments Interface

In September 2021, out of total UPI volumes, 54% transactions were P2P (Person-to Person) while 46% were P2M (Person-to Merchant). This clearly demonstrates UPI has managed to bridge the gap between P2P and P2M transactions.

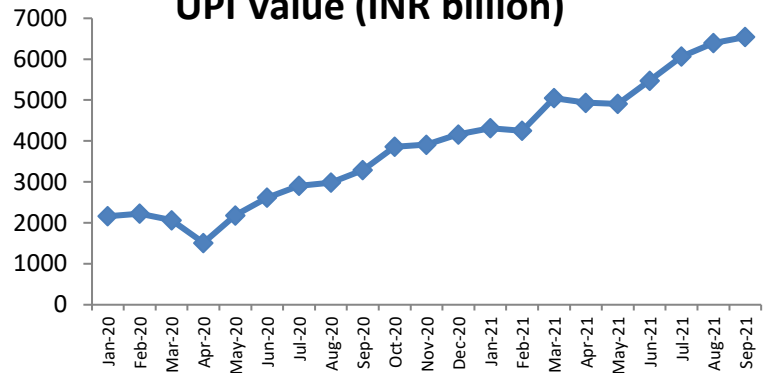
It clocked over 3.65 billion transactions in volume and breached INR 6.5 trillion in terms of value. In October, UPI volume and value achieved all time high transactions of 4 billion and INR 7.71 trillion respectively.

In Q3 2021, UPI recorded 103% increase in volume and close to 100% increase in value as compared with Q3 2020.

UPI Volume (million)

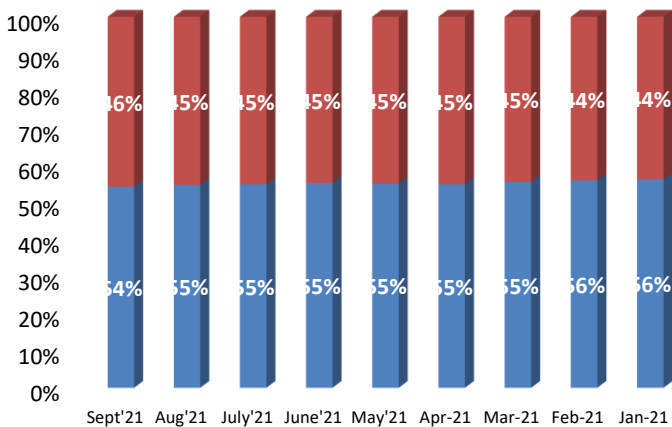


UPI Value (INR billion)



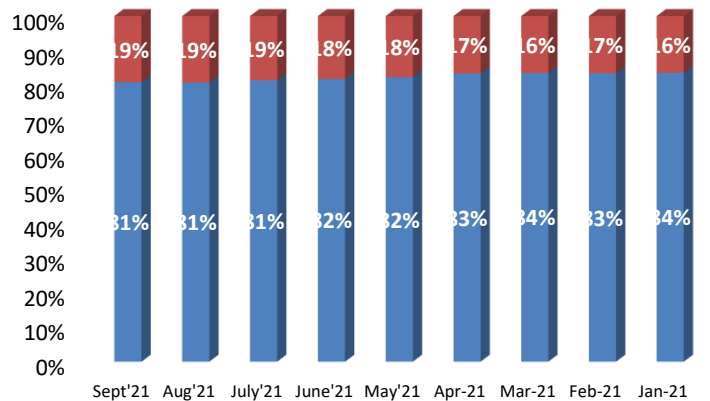
UPI Volume (Mn)

■ P2P Volume (Mn)
■ P2M Volume (Mn)



UPI Value (INR billion)

■ P2P Value (INR billion)
■ P2M Value (INR billion)



30 banks joined the UPI ecosystem in Q3 2021 bringing the total number of banks providing UPI services to 259 as of September 2021. Out of which NPCI's BHIM App was available for customers of 202 banks. The number of BHIM app downloads stood over 185 million as of October 29, 2021. State Bank of India, HDFC Bank, Bank of Baroda, ICICI Bank and Axis Bank were the top UPI Remitter banks in September 2021 while Paytm Payments Bank, State Bank of India, YES Bank, ICICI Bank and Axis Bank were the top beneficiary banks w.r.t UPI volumes.

National Electronic Toll Collection

In Q3 2021, NETC processed about 587.14 million transactions worth INR 90.62 billion.

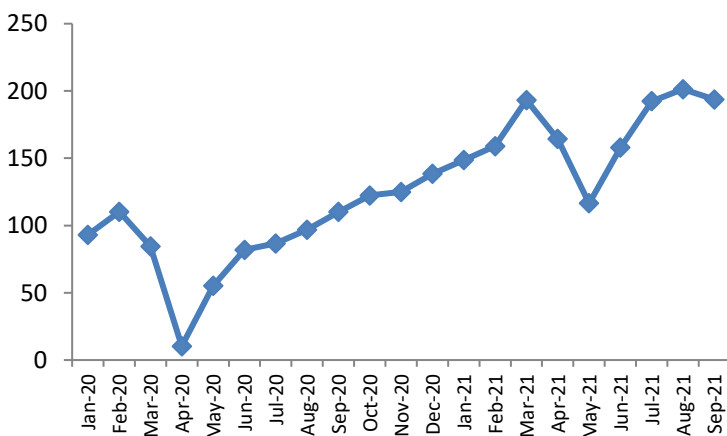
In September 2021, its transactions volume increased by 100% while value increased by 55% as compared with same period of previous year.

As of September 2021, 39.41 million FASTags have been issued since the inception of NETC program and over 4.67 million tags were issued in Q3 2021.

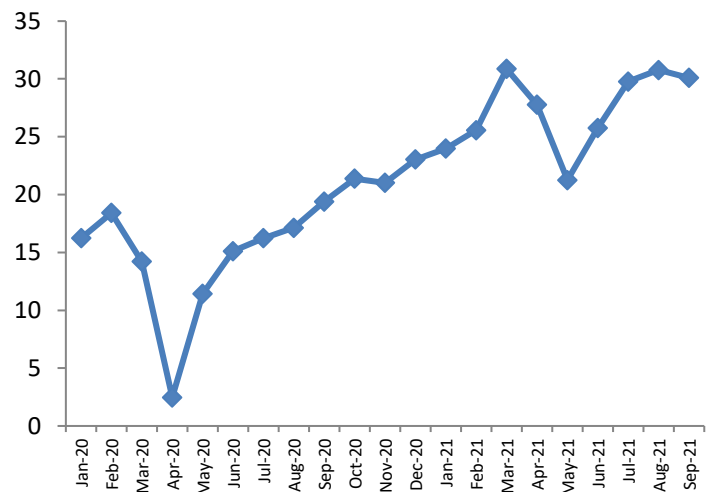
Currently the program is live with 35 banks and are being accepted across 720+ toll plazas in the country.



NETC Volume (million)



NETC Value (INR billion)

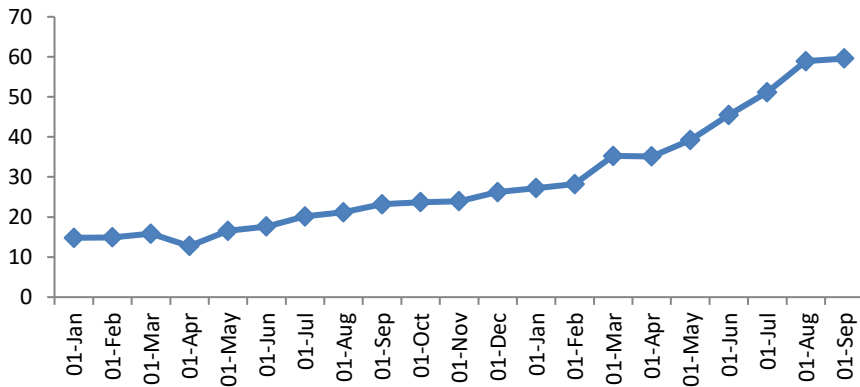


Bharat BillPay

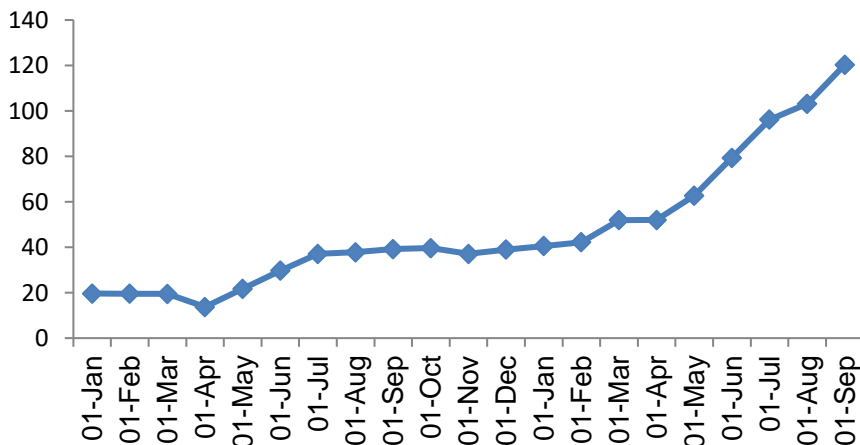
The transactions volume passing through Bharat Bill Payment Central Unit (BBPCU) in Q3 2021 stood at 169.56 million while the transactions value was INR 319.47 billion. It registered a growth rate of 163% and 180% in volume and value respectively against Q3 2020.

NPCI Bharat BillPay Ltd. is a wholly-owned subsidiary of National Payments Corporation of India. Came into effect from April 1, 2021, NBBL offers 20,000+ billers across multiple bank and non-bank channels.

Bharat BillPay Volume (million)



Bharat BillPay Value (INR billion)

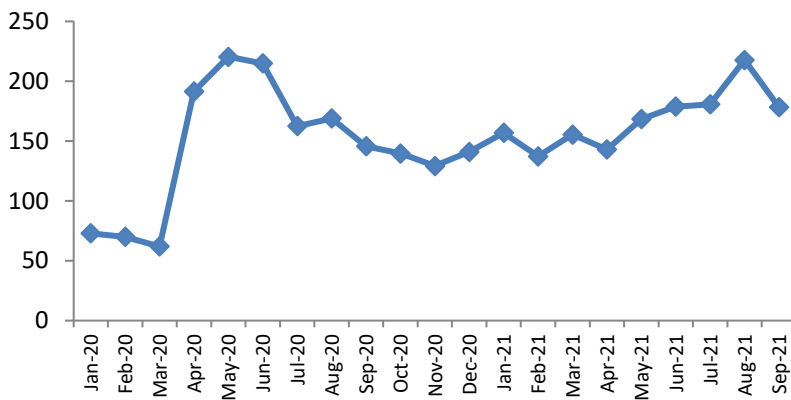


Aadhaar Enabled Payment Service

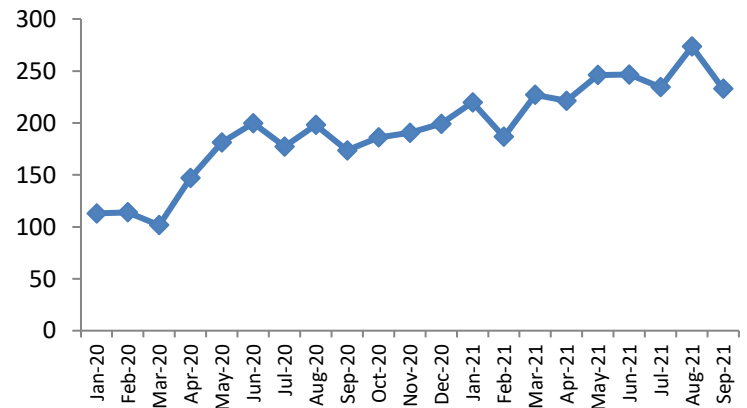
AePS transactions (Offus, BHIM Aadhaar Pay) in Q3 2021 recorded a substantial volume of over 576.7 million transactions, registering about 21% growth over Q3 2020. It processed transactions worth INR 740.98 billion, an increase of 35% over Q3 2020.

AePS continue to facilitate government Direct Benefit Transfers to beneficiaries during the quarter and several banks provided banking services at customer’s doorstep through Banking Correspondents.

AePS Volume (million)



AePS Value (INR billion)



About Worldline

Worldline [Euronext: WLN] is the European leader in the payments and transactional services industry and #4 player worldwide. With its global reach and its commitment to innovation, Worldline is the technology partner of choice for merchants, banks and third-party acquirers as well as public transport operators, government agencies and industrial companies in all sectors. Powered by over 20,000 employees in more than 50 countries, Worldline provides its clients with sustainable, trusted and secure solutions across the payment value chain, fostering their business growth wherever they are. Services offered by Worldline in the areas of Merchant Services; Terminals, Solutions & Services; Financial Services and Mobility & e-Transactional Services include domestic and cross-border commercial acquiring, both in-store and online, highly-secure payment transaction processing, a broad portfolio of payment terminals as well as e-ticketing and digital services in the industrial environment. In 2020 Worldline generated a proforma revenue of 4.8 billion euros. [worldline.com](https://www.worldline.com)

Worldline India is a transactions facilitator across the spectrum of the digital payments ecosystem and provides both products and services along the full length and breadth of the payments value chain. We are involved in Merchant Acquiring, Card Issuance, Loyalty solutions for petroleum companies, Internet Payment Gateway, National Electronic Toll Collection, Risk Mitigation, Reconciliation and Value-added services. Worldline is the partner of choice for merchants, banks, government agencies and industrial companies, delivering best-in-class digital transaction services.

Worldline's corporate purpose is to design and operate digital payment and transactional solutions that enable sustainable economic growth and reinforce trust and security. Worldline India is constantly investing in the latest technologies to increase efficiencies, drive innovation and deliver customer delight. We have a presence in over 50 countries and can leverage our access to global innovations to offer significant tech stack strength in our offerings. We have a dedicated workforce and service capabilities to ensure complete control on every aspect of the acquiring business – from the terminal to the switch – through ownership of all IP and source codes. We bring value to our customers by offering end-to-end solutions covering every aspect of the merchant acquiring value chain; terminals, platforms, processing, risk management, reconciliation, and helpdesk among others.



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