



Analysis of India's payment system indicators in Q3 2020

November, 2020

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Abbreviations and acronyms

APBS	<i>Aadhaar</i> Payment Bridge System
AePS	<i>Aadhaar</i> -Enabled Payment System
AePS ON-US	Intra-bank AePS transaction
AePS OFF-US	Inter-bank AePS transaction
ATM	Automated Teller Machine
BBPS	Bharat Bill Payment System
BC	Business Correspondent Agent
BHIM	Bharat Interface for Money
BAP	BHIM <i>Aadhaar</i> Pay
IMPS	Immediate Payment Service
INR	Indian Rupee
NEFT	National Electronic Funds Transfer
RTGS	Real-time Gross Settlement
UIDAI	Unique Identification Authority of India
UPI	Unified Payments Interface

Section I

Executive summary



The COVID-19 pandemic has set off a second wave of behavioral shift after the Indian government's decision to demonetize high-value currency in 2016. Many users now seek digital payments as they look for convenience and wish to keep themselves safe from the risk of infection.

This “new normal” presents significant opportunities for institutions to make digital payments meaningful in the daily lives of 600 million low- and middle-income people in the country.

This second edition of MSC's analysis covers select payments system indicators in India during Q3 2020. It indicates that the country's payment systems are dependable, durable, and continue to command a high level of confidence in the mass market.

The study covers five categories of payment system indicators—currency with the public (cash), contactless payments (UPI, BBPS, BAP), Aadhaar-enabled Payment System (AePS), card-based payments and transactions (debit cards, credit cards, RuPay debit cards), and remittances and money transfers (RTGS, NEFT, IMPS, APBS).

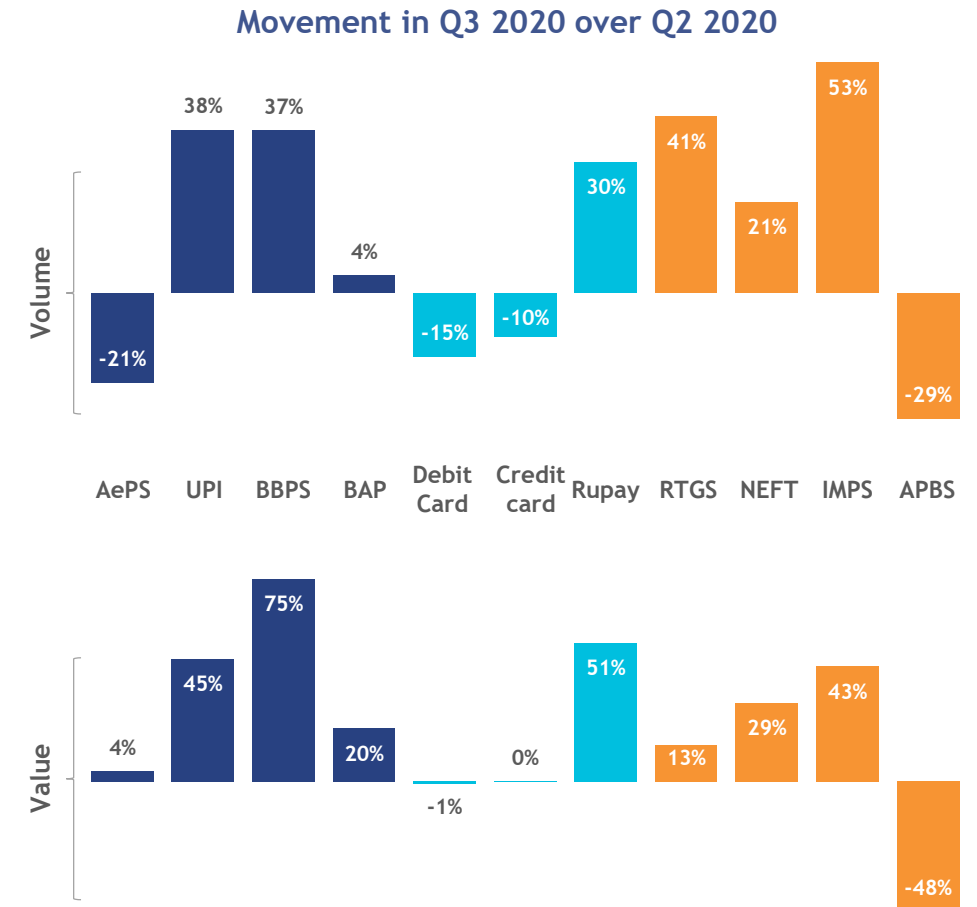


Analyzing trends from Q3 2020* (1/2)

As the COVID-19 pandemic continues to exact a toll on India's economy, digital pathways offer a hopeful sign in the country's payments landscape

Key trends and insights

- With most of the restrictions lifted in Q3 2020, economic and commercial activities continued to rise across the board. Opening businesses beyond essential services for offline and e-commerce alongside the revival of domestic travel led to improved consumer spending in consumption base categories.
- Consequently, digital payments continued on a path toward healthy recovery with a significant expansion in volume and value in Q3 2020. The pandemic has brought about a behavioral shift and has nudged users to adopt digital payments.
- Contactless payments, such as UPI and BBPS recorded significant growth in Q3 2020, mainly since economic activities revived and people's behavior shifted toward digital because it is convenient and allows customers to follow hygiene precautions.
 - UPI has outstripped all other payment channels and systems with volumes at an all-time high of 1.8 billion in September, 2020.
 - BBPS added 927 unique billers across 15 additional categories in Q3 2020 that cut across education fees, loan repayments, insurance, booking of cooking gas, municipality taxes, subscription fees, among others.
- After witnessing a record decline in Q2 2020, card transactions have since recovered and show a steady increase in the first two months of Q3 2020*. While conventional retail spending remains subdued, digital spending has picked up in smaller retail outlets in urban and semi-urban areas. Consumers prefer online card payments and contactless card payments (offline) from a standpoint of health safety.



*Q3 2020 transaction data for debit and credit card comprises July and August, 2020 as the RBI is expected to release the transaction data for September, 2020 in November, 2020

**We have used a three-month average (July, 2020 to September, 2020) of the USD to INR exchange rate of [74.40](#) for all conversions in this report

Analyzing trends from Q3 2020* (2/2)

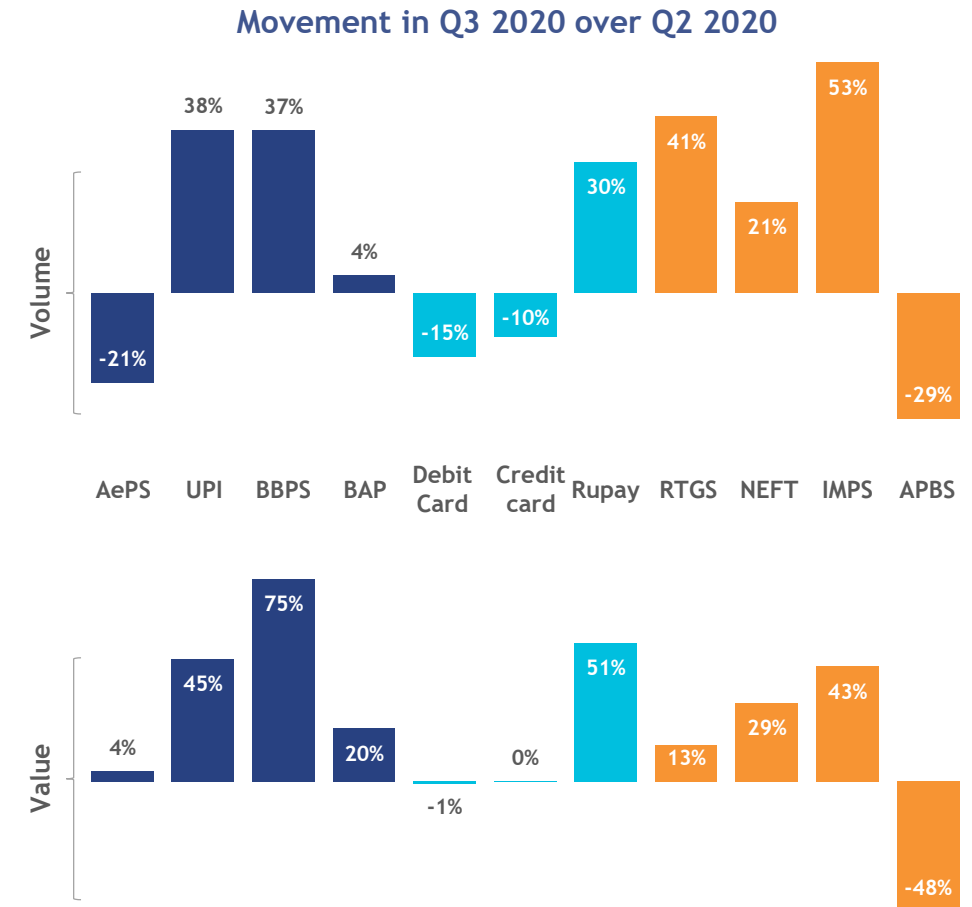
As the COVID-19 pandemic continues to exact a toll on India's economy, digital pathways offer a hopeful sign in the country's payments landscape

Key trends and insights

- ✦ In Q2 2020, AePS had emerged as a critical cash-out medium for migrants, daily wagers, and other informal sector workers who suffered severe setbacks to their livelihoods due to the pandemic. As the government phased out emergency cash transfer programs to support the vulnerable during the pandemic, AePS witnessed a sharp fall of around 21% in Q3 2020 volume over the previous quarter. However, these transactions volume are still higher than the pre-COVID levels as several payment banks offer AePS facilities to their customers.
- ✦ RTGS and NEFT cover around 90% of total payments in the country. After a significant contraction in Q2 2020, RTGS and NEFT payments have shown steady growth in both volume and value in Q3 2020, which points to increased economic activities.
- ✦ Transactions through IMPS, commonly used for low-ticket-sized remittances, increased in Q3 2020. Migrants, daily wagers, and informal sector workers moved back to urban and semi-urban areas to revive economic and commercial activities, including manufacturing, building, and road construction works, among others.
- ✦ Interestingly, the demand for cash as a "safe asset" continued to exist alongside the surge in digital payments in Q3 2020. While the growth rate seems to have receded, currency with the public is still up by 9.11% compared to the March 2020-end level. Cash withdrawals at ATMs to support the demand for currency seem to have stabilized at the time of writing.
- ✦ The reduction in interest rates on savings deposits has discouraged people from parking their excess money with banks in the savings account. Money in savings accounts are down by 2.38% since March, 2020. There is a clear shift in the public's preference to keep their money as cash in hand or invest it in other instruments, such as time deposits, which are up by 5.53% since March, 2020.

*Q3 2020 transaction data for debit and credit card comprises July and August, 2020 as RBI is expected to release the transaction data for September, 2020 in November, 2020

**We have used a three-month average (July, 2020 to September, 2020) of the USD to INR exchange rate of [74.40](#) for all conversions in this report



Section II

Detailed analysis



Cash (currency with the public)

Overall, economic uncertainties and volatilities in the capital market have pushed people toward bank deposits whereas low- and moderate-income communities continue to rely on cash as a “safe-asset”

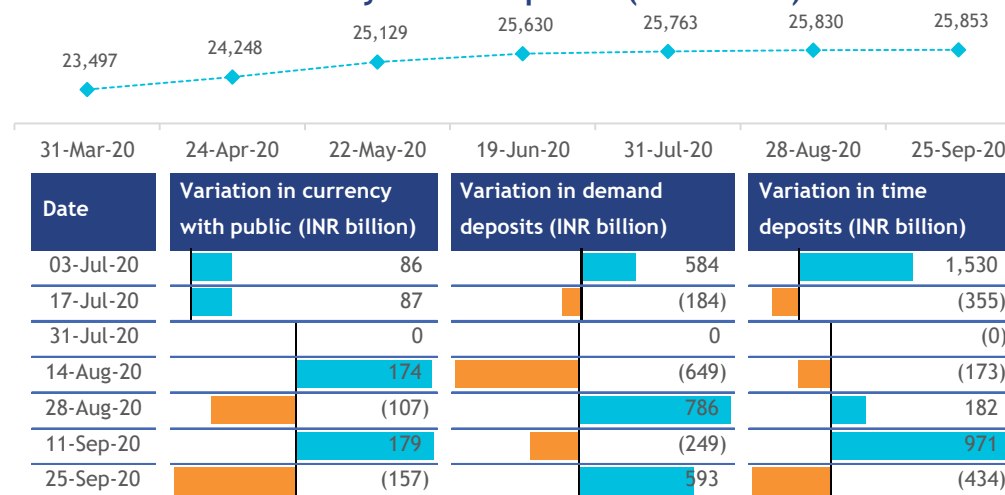
Key trends and insights

- ✦ The fortnightly rise in currency with the public reduced to INR 27.88 billion (~USD 0.37 billion) in Q3 2020 against INR 355.2 billion (~USD 4.78 billion) in Q2 2020.
- ✦ However, currency with the public is still up by 9.11% compared to the March 2020-end level, a behavior commonly seen in low- and middle-income communities.
- ✦ Although demand deposits with banks have grown at an average fortnightly rate of around INR 155.46 billion (~USD 2.09 billion) in Q3 2020, they are still down by 2.38% since March, 2020.
- ✦ The reduction in interest rates on saving deposits has discouraged people from parking their excess money with banks in savings accounts.
- ✦ The uncertain economic environment points to a shift in the public’s preference to keep their money as cash in hand or invest in “safe” but low-cost time deposits with banks, which are up by 5.53% since March, 2020.
- ✦ Cash withdrawals at ATMs to support the currency demand seem to have stabilized. Urban users have better access to ATMs and are also more comfortable in conducting digital transactions.

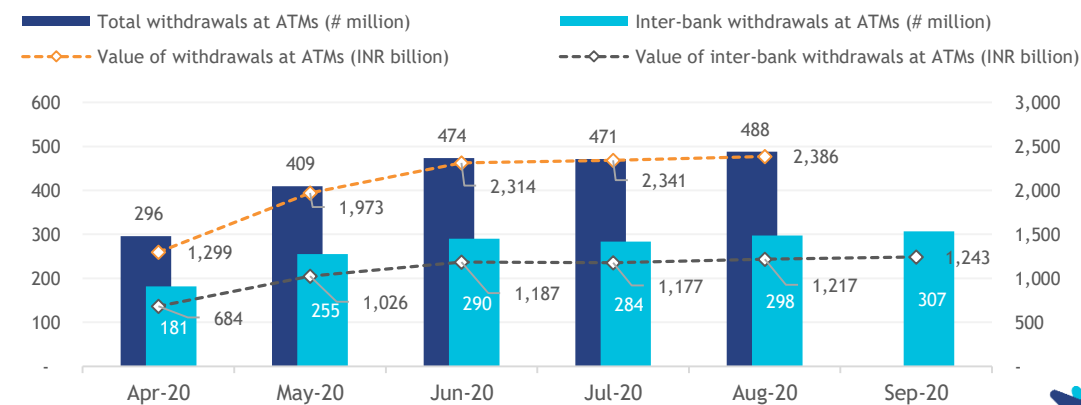


With most of the restrictions lifted, the demand for cash may ease but will take time before it comes down to pre-COVID levels. Planned spends during the festive season in Q4 2020 will ensure the growth of cash and digital payments. A fresh rise in the number of infections may increase people’s reliance on cash in the next one to two months.

Currency with the public (INR billion)



Cash withdrawal at ATMs



Contactless payments: Unified Payments Interface (UPI)

UPI is driving India's day-to-day digital payments and has become one of the safest modes of payments for P2P and P2M transfers

Key trends and insights

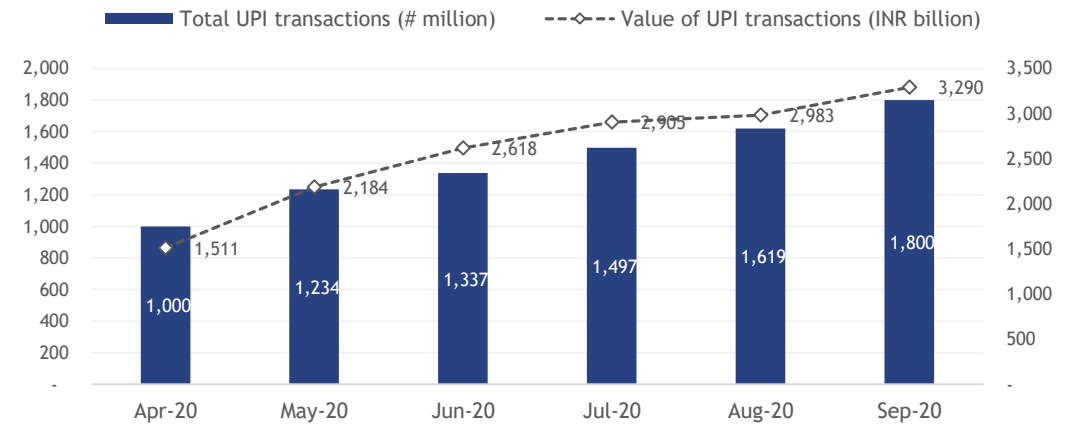
- UPI outstripped all other payment platforms in Q3 2020, with a 38% growth in volume and a 45% growth in value over the previous quarter as more and more people started shopping online for essentials to avoid stepping outside their homes. UPI also witnessed traction in offline payments.
- An average transaction value of INR 1,870 (~USD 25.13) in Q3 2020 indicates the rise in the number of users who prefer UPI for small ticket-size transactions.
- The new "AutoPay" feature will enable recurring e-mandates using any UPI application for periodic payments, such as recharges, utility bills, EMI payments, among others.
- At present, Google Pay and PhonePe continue to command 80% of the market, split almost evenly. Paytm comes in at a distant third position. The volumes of P2P transactions were the highest on Google Pay, followed by PhonePe and Paytm, while the volume of P2M transactions was the highest on PhonePe.
- With its 400 million monthly active users in India, Facebook's WhatsApp will intensify the competition with the graded roll-out of WhatsApp Pay in Q4 2020.
- To contain the risk of concentration, NPCI has capped the [market share at 30%](#) for third-party app providers.



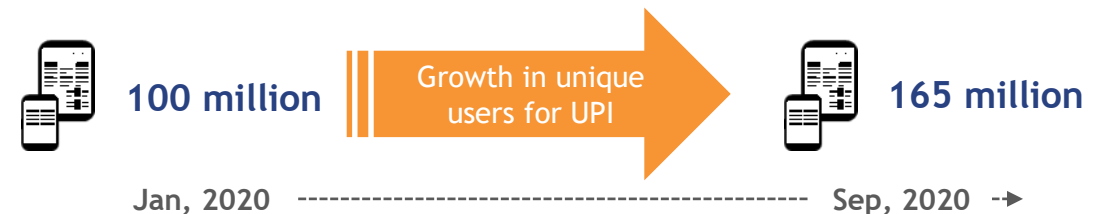
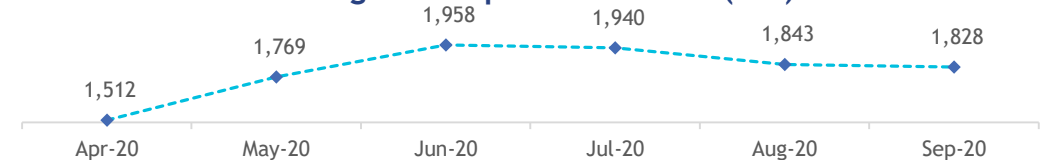
UPI will increase in relevance as it combines the physical and digital space in a post-COVID-19 world. The introduction of UPI AutoPay, integration of UPI in Jio's basic phones, and the arrival of WhatsApp Pay will spur the growth of UPI transactions in Q4 2020.

*Estimated number of customers in millions

UPI transactions



Average value per transaction (INR)



Contactless payments: Bharat Bill Payment System (BBPS)

With close to 1,200 billers on boarded, BBPS is consolidating India's recurring bill payments industry under one payment system

Key trends and insights

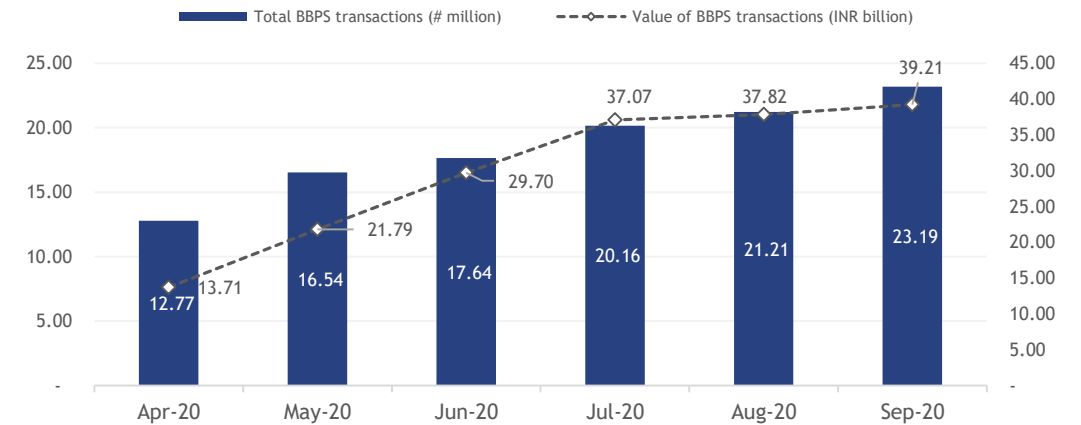
- By integrating recurring payments, in addition to the payments to five categories* of utility provider, BBPS added 927 unique billers across 15 additional categories in Q3 2020. These categories include education fees, loan repayments, insurance, booking of cooking gas, municipality taxes, subscription fees, etc.
- Subsequently, BBPS recorded a growth of 37% by volume and 75% in value in Q3 2020 over the previous quarter.
- For consumers, the primary drivers of adopting BBPS are the convenience of making round-the-clock bill payments to multiple billers from a single platform and growing concerns over cash and cards being potential vectors of COVID-19. For billers, the collection of payments through partner networks has lowered the cost.
- The revival of commercial activities, improvement in consumer spending in consumption base categories, and the beginning of a delayed academic year have also added to this growth in Q3 2020.
- Onboarding institutions like [Vakrangee](#) has helped NPCI to drive BBPS in rural and semi-urban areas. Vakrangee offers BBPS-enabled payment services at its 10,000-plus Nextgen Vakrangee Kendras (assisted digital convenience stores), of which 70% are in Tier V and VI cities.



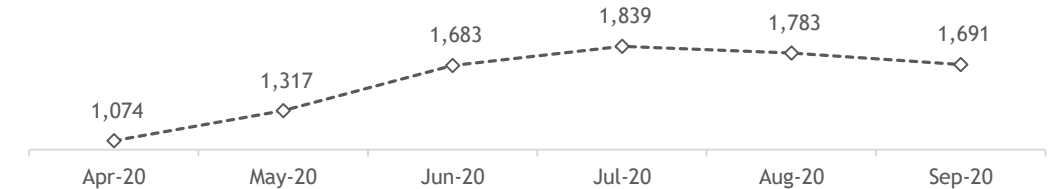
BBPS will continue to consolidate the recurring payments sector in the rural and semi-urban areas with the addition of new billers and partnerships with institutions, such as BCNMs, MFIs, and NBFCs.

*Bill segments include: Direct-to-home (DTH), electricity, gas, telecom, and water

BBPS transactions



Average value per transaction (INR)



*Number of billers

Contactless payments: BHIM Aadhaar Pay (BAP)

BAP is facilitating merchants to digitize small ticket-size purchases in India's rural and semi-urban areas, targeting specific market segments

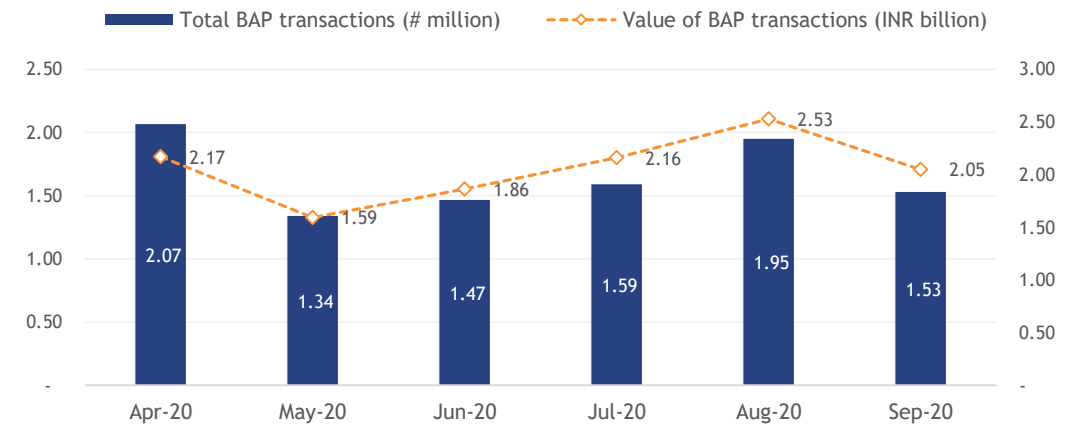
Key trends and insights

- ▶ BAP, the merchant version of AePS, has been instrumental in driving cashless purchases in a cost effective and scalable manner at merchant outlets across rural and semi-urban areas. Push from the acquiring banks has been one of the significant drivers for merchants in adopting BAP.
- ▶ BAP transactions continued to grow at 4% in volume and 20% in value in Q3 2020 over the previous quarter. Beneficiaries of government cash transfer programs, migrants, daily wagers, and other informal sector workers are some of the major user segments.
- ▶ The average transaction value has also increased to INR 1,332 (~USD 17.90) in Q3 2020. This indicates a rise in the users who prefer BAP for small to medium ticket-size purchases.
- ▶ Cash-backs and incentives continue to create a positive impact and pull for both customers and merchants, especially in rural and semi-urban areas.
- ▶ Lengthy transaction process, non-compatibility of biometric scanners, and issues around data privacy and protection continue to hinder BAP's progress. Also, UPI-based merchant applications are emerging as the prime competitors for BAP.

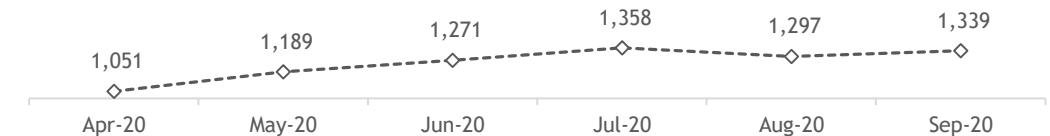


BAP can revolutionize merchant payments in rural and semi-urban areas India, targeting specific market segments. A holistic understanding of concerns around product fit and awareness will help acquiring banks to drive merchants to use BAP.

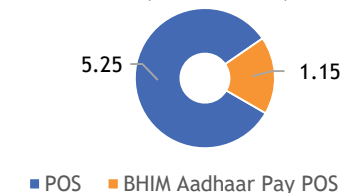
BAP transactions



Average value per transaction (INR)



Share of BAP PoS devices (# million)



Aadhaar-enabled Payment System (AePS)

AePS has increased in-cash DBT through agent networks across rural India; however, as the emergency cash transfer programs of the government ended in Q3 2020, transaction volumes have reduced substantially

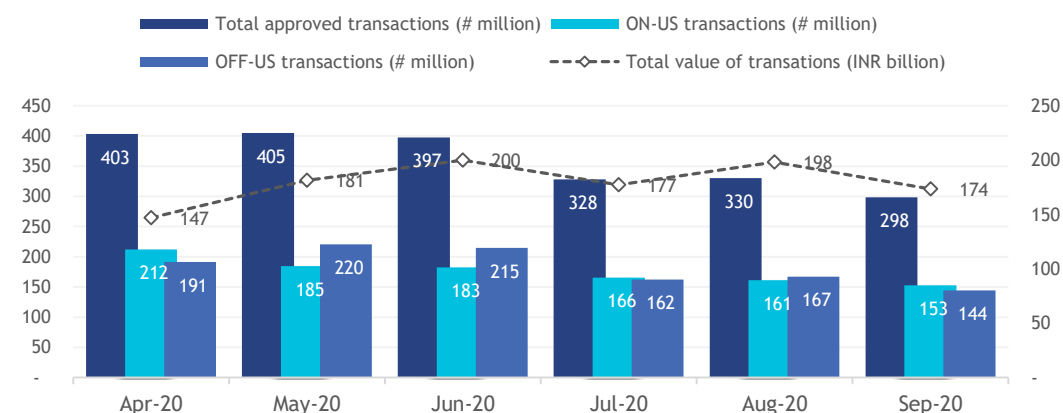
Key trends and insights

- ▶ AePS dominates rural geographies, riding on cash-in and cash-out (CICO) from bank accounts and domestic remittances, especially for those who lack financial literacy or hardware like smartphones. In Q2 2020, AePS emerged as a critical cash-out medium for migrants, daily wagers, and other informal sector workers who suffered severe setbacks to their livelihoods due to the ongoing COVID-19 pandemic.
- ▶ NPCI processed around 956 million transactions through AePS in Q3 2020, of which 233 million were financial transactions worth INR 548 billion (~USD 7.38 billion). As the government gradually phased out the cash transfer programs to support the vulnerable during the pandemic, AePS transactions fell by around 21% in volume over the previous quarter.
- ▶ Non-financial transactions, such as balance inquiry, mini statement, and UIDAI authentication also reduced in Q3 2020.
- ▶ Delivery issues at the ground level continue to restrict the uptake of AePS among the 400 million ultra-poor. These issues include recurring transaction failures, especially for OFF-US transactions, problems in the reconciliation of failed transactions, among others.

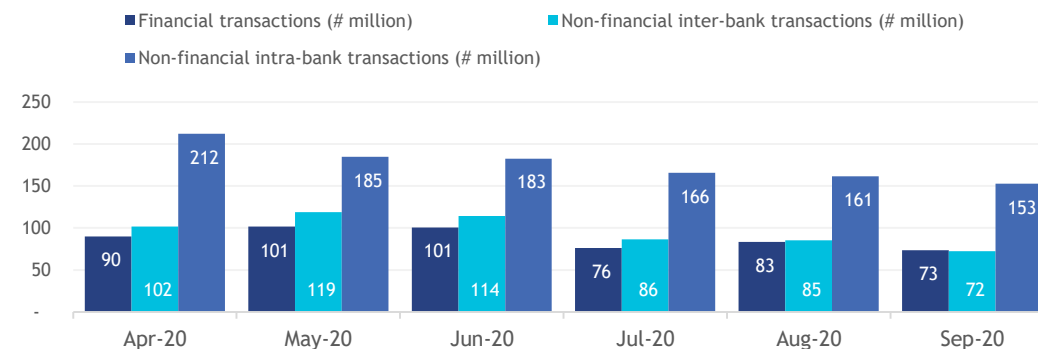


Without any prominent use-case other than DBT, the volume of AePS transactions will continue to contract or stagnate in Q4 2020. Iris-based authentication for AePS transactions will help NPCI and its member FIs curb transaction failures.

Break-up of AePS transactions: ON-US and OFF-US



Break-up of AePS transactions: Financial and non-financial



Card-based payments and transactions

After a record decline in Q2 2020, monthly card transactions have since recovered, with digital spending picking up in smaller retail outlets in urban and semi-urban areas

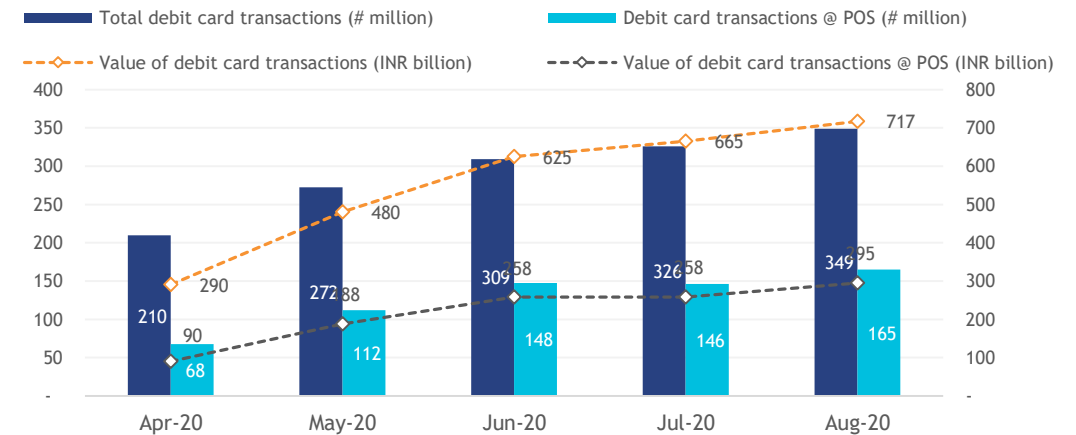
Key trends and insights

- A nation-wide lockdown during Q2 2020 saw a record decline in card transactions, both online and offline. With the gradual lifting of mobility restrictions and the start of non-essential businesses, card transactions have since recovered in Q3 2020. Concerns over transmission of the virus through the exchange of physical currency also contributed to increased online and contactless card transactions.
- As commercial activities resumed and consumer spending in consumption base categories increased, the average ticket size also improved by around 19% to INR 2,047 (~USD 27.51) for debit cards and by 13% for credit cards to INR 3,495 (~USD 46.98) in Q3 2020.
- RuPay transactions made a strong recovery in Q3 2020 and are nearly back to pre-COVID levels. NPCI processed 344.64 million RuPay transactions worth INR 494.35 billion (~USD 6.64 billion) in Q3 2020—an increase of around 30% in volume and 51% in value over Q2 2020.
- A wider distribution of RuPay helped people to use it extensively for both offline and online purchases. Accordingly, RuPay's share in e-commerce increased from 12% pre-COVID to 18%, as of now.

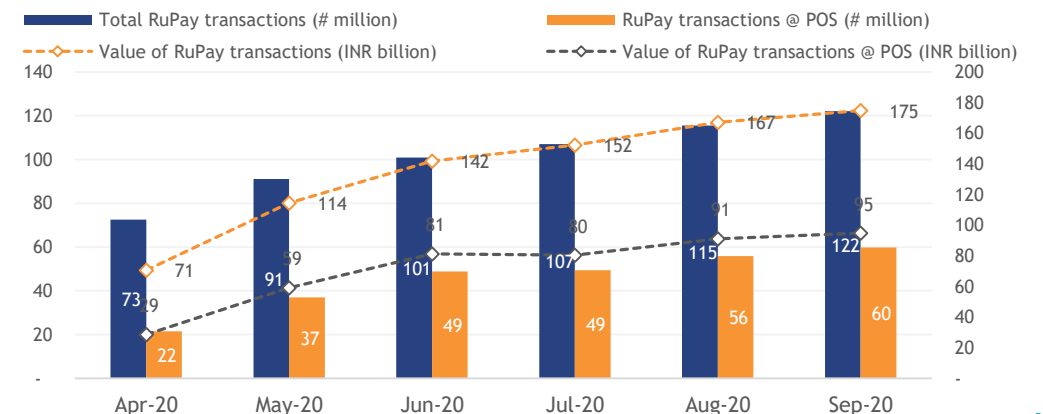


With most of the restrictions lifted and the upcoming festive season in Q4 2020, people's reliance on cards is likely to return to pre-COVID levels. Consumers may continue to prefer online card payments and contactless card payments (offline) from a standpoint of health safety. However, the surge in UPI transactions may affect the volumes of debit card-based transactions.

Debit card transactions



RuPay transactions



Transfers and high-value payments

After a significant contraction in Q2 2020, domestic money transfers and high-value payments are on the path to a strong “v-shaped” recovery

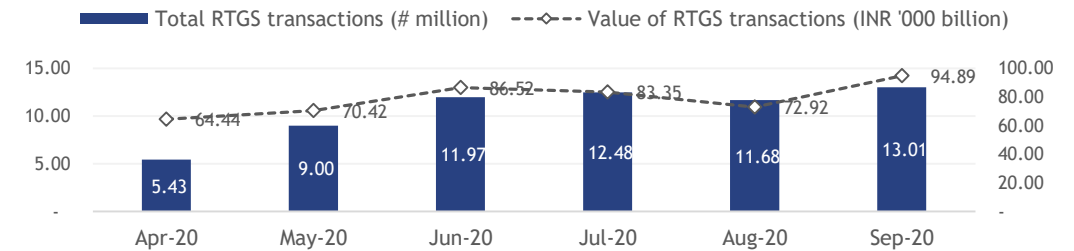
Key trends and insights

- Taken together, RTGS and NEFT cover around 90% of total payments in the country. After the lockdown restrictions were lifted, RTGS and NEFT transactions showed a steady rise in Q3 of 2020.
- Compared to Q2 2020, RTGS grew 41% in volume and 13% in value in Q3 2020. Similarly, NEFT grew 21% in volume and 29% in value in Q3 2020 compared to the previous quarter.
- As seen in the case of GST collection, a sharp recovery in economic activities brought migrants, daily wagers, and informal sector workers back to urban and semi-urban areas in Q3 2020.
- Subsequently, transactions through IMPS, commonly used for low-ticket sized remittances increased by 53% in volume and 43% in value in Q3 2020 over the previous quarter.
- Backed by the government’s emergency cash transfer programs to support the vulnerable during the pandemic, APBS transaction volumes shot up to an all-time high of 231 million in April. The emergency cash transfer program ended in June 2020, and subsequently, the volume and value of APBS transactions fell sharply in the following months.

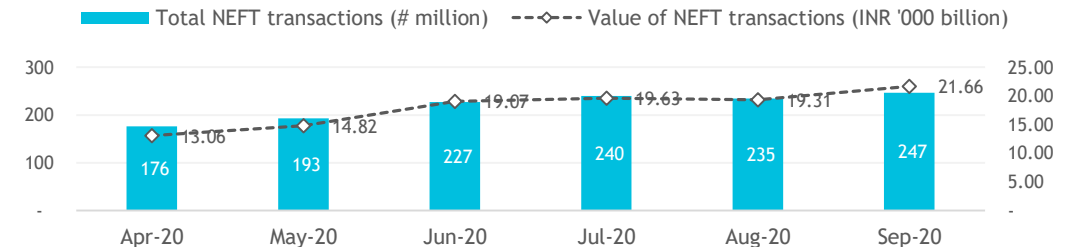


Economic and commercial activities will continue to revive across the board in Q4 2020. Consequently, we expect a “v-shaped” recovery is likely to bring RTGS, NEFT, and IMPS transactions back to pre-COVID levels.

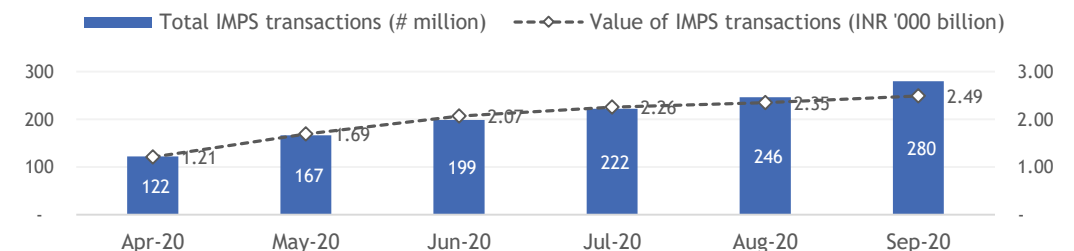
RTGS transactions



NEFT transactions



IMPS Transactions



Section III

Annexes



Annex 1: NPCI's key payments systems and channels

Unified Payments Interface is a real-time interbank payment system to send and receive money. Consumers can participate in P2P transfer as long as they have an account in one of the registered banks.

BHIM Aadhaar Pay is an Aadhaar or biometric-based payments interface. It enables real-time payments to merchants through biometric authentication by using the Aadhaar number of the customer.

BharatQR is a common QR code developed by the NPCI for the ease of payments and interoperability.

AePS is an interoperable instrument that allows banking transactions at POS (micro-ATMs) through business correspondents of any bank by using Aadhaar or biometric authentication.

The USSD channel service for UPI mobile banking uses quick codes for transactions and does not require a smartphone or access to the Internet.

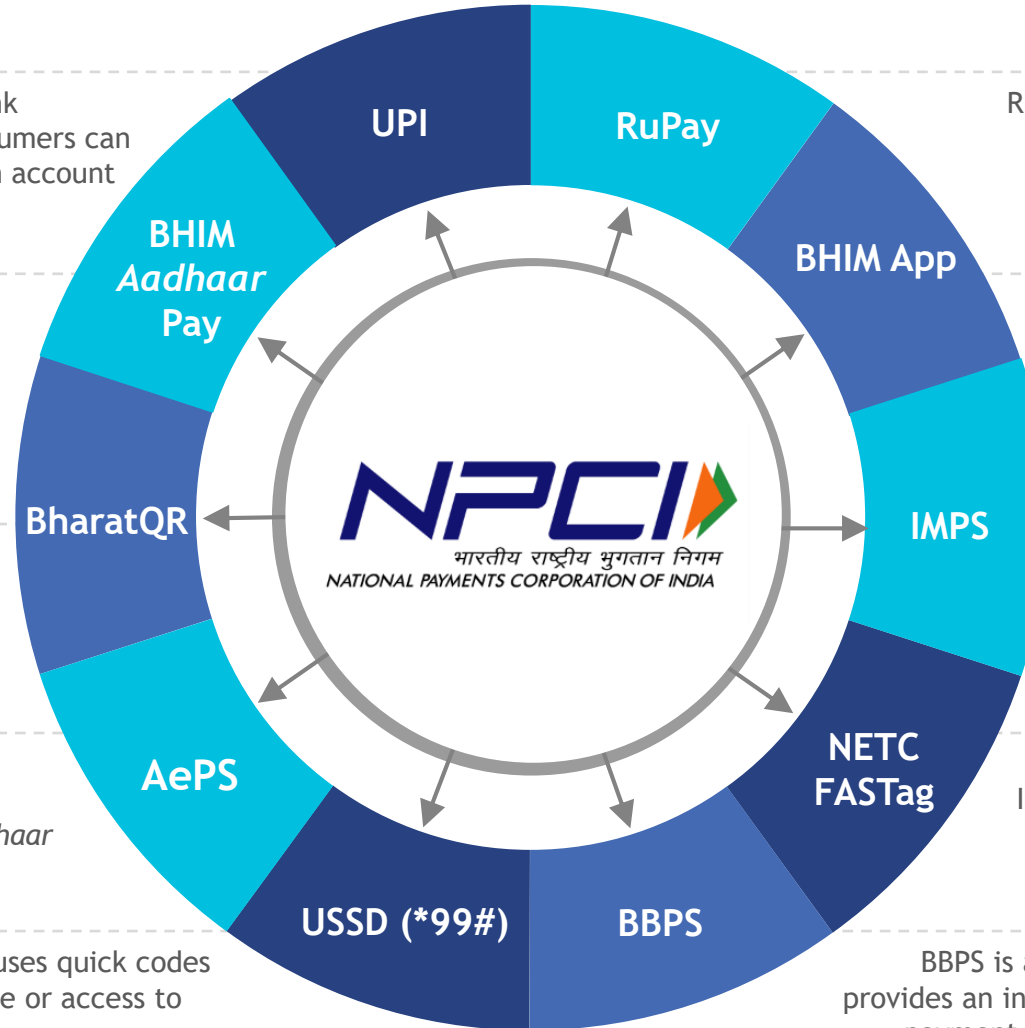
RuPay is a domestic card product of India, developed by the NPCI. The card has a magnetic stripe for backward compatibility and an EMV chip.

BHIM is a smartphone mobile application that acts as a client software for the Unified Payments Interface.

Immediate Payment Service is a real-time interbank payment system, widely used for money transfer in India.

FASTag is a device that employs Radio Frequency Identification (RFID) technology to enable direct toll payments while the vehicle is in motion.

BBPS is a one-stop ecosystem for the payment of all bills. It provides an interoperable and accessible "anytime-anywhere" bill payment service to all customers across India with certainty, reliability, and safety.



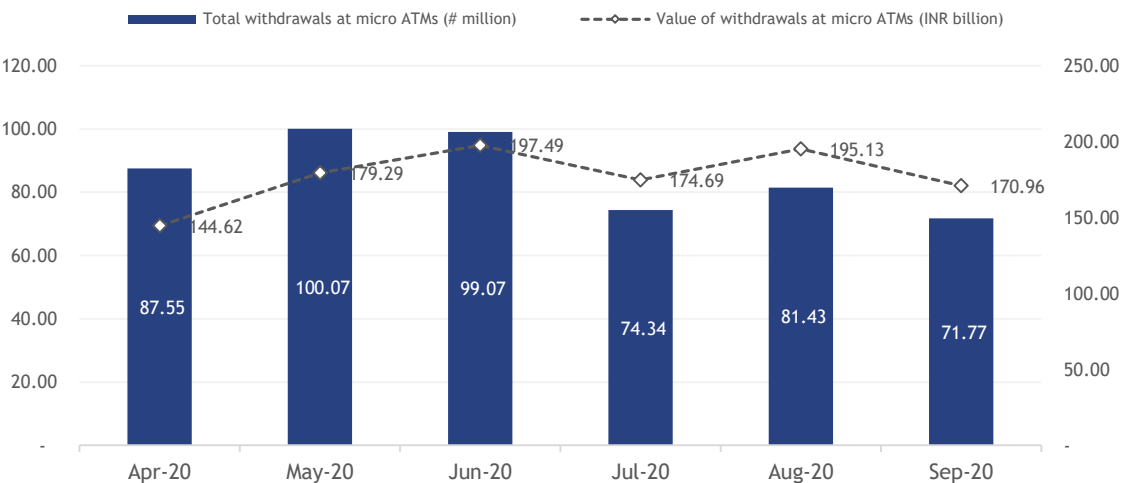
The National Payments Corporation of India (NPCI) is an umbrella organization that operates retail payments and settlement systems in India. It was established in 2008 by the Reserve Bank of India (RBI) and Indian Banks' Association (IBA) to create a robust payment and settlement infrastructure in India.

Annex 2: Status of India's payments infrastructure

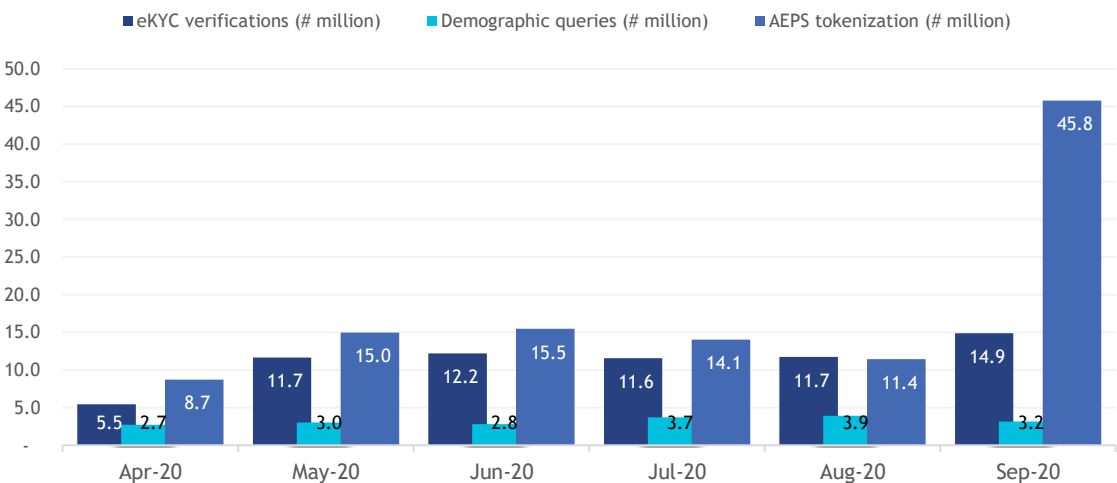
#	Parameters	As on	Data (# million)
1	PMJDY beneficiaries	September, 2020	409.09
2	Aadhaar assigned	May, 2020	1,214.57
3	Smartphone users	January, 2020	500
4	Active internet users	November, 2019	504.00
	• Rural internet users	November, 2019	227.00
	• Urban internet users	November, 2019	205.00
5	Cards	August, 2020	909.98
	• Credit cards	August, 2020	57.83
	• Debit cards	August, 2020	858.71
6	RuPay cards	September, 2020	300.15
7	Pre-paid Payment Instruments (PPIs)	August, 2020	2,013.41
	• Mobile Wallets	August, 2020	1,848.25
	• Pre-paid Cards	August, 2020	165.16
8	ATMs	August, 2020	0.23
	• Bank-owned ATMs	August, 2020	0.21
	• White-label ATMs	August, 2020	0.02
9	Micro-ATMs	August, 2020	0.31
10	POS	August, 2020	5.25
11	BHIM Aadhaar Pay POS	August, 2020	1.15
12	Bharat QR	August, 2020	2.30
13	Banking outlets in villages	March, 2020	0.60
	• Branches	March, 2020	0.05
	• BC agents	March, 2020	0.54

Annex 3: Additional payment system indicators

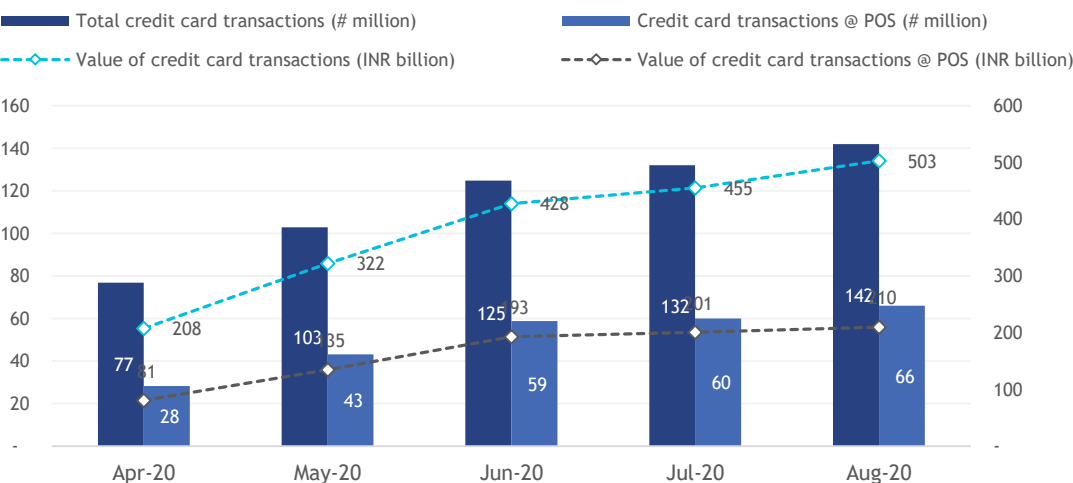
Cash withdrawals at micro-ATMs



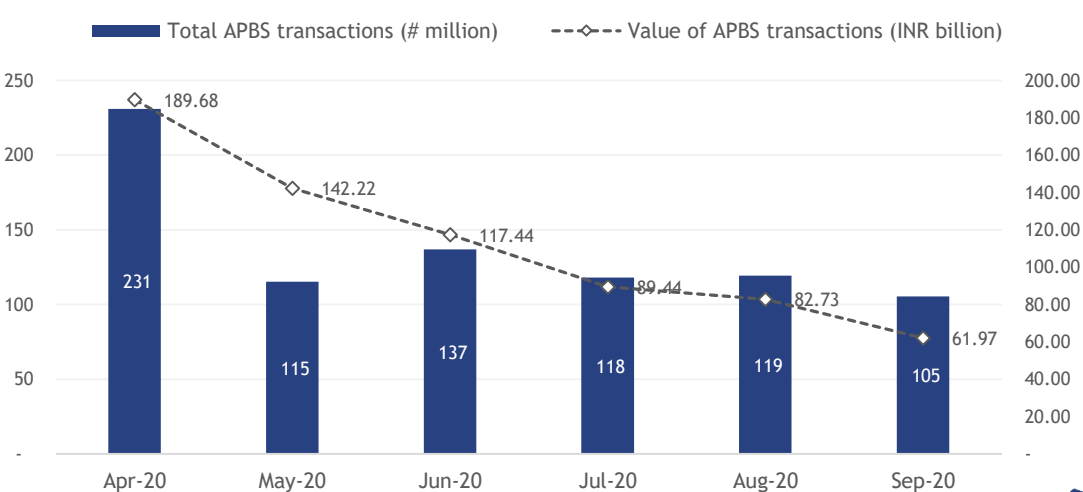
AePS transactions: Additional non-financial transactions



Credit card transactions



APBS transactions



MSC is recognized as the world's local expert in economic, social, and financial inclusion



International financial, social, and economic inclusion consulting firm with **20+** years of experience



180+ staff in **11** offices around the world



Projects in **~65** developing countries

Our impact so far

550+
clients

>850
publications

Assisted development of digital G2P services used by **875 million+** people

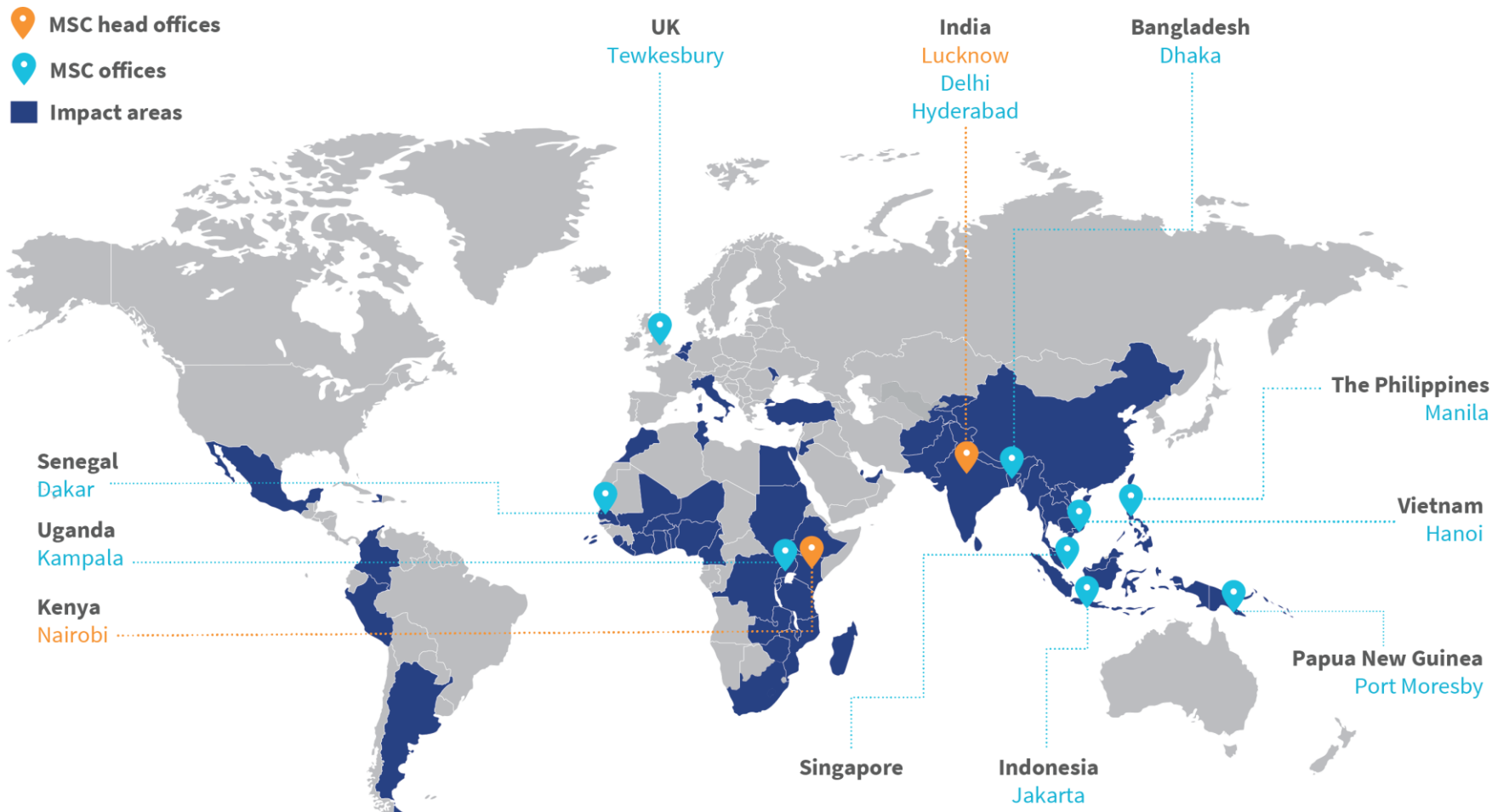
Implemented **>850 DFS** projects

Developed **275+ FI products** and channels now used by **55 million+** people

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