

A photograph of a woman wearing a red floral shawl, looking down at a smartphone in her right hand. She is also holding a metal pot with a handle in her left hand. The background is a warm, reddish-brown color. The image is partially obscured by a white diagonal shape on the left and a blue and orange shape on the right.

Analysis of India's payment system indicators in Q2 2020

02nd August, 2020

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Abbreviations and acronyms

ABPS	<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



Executive summary

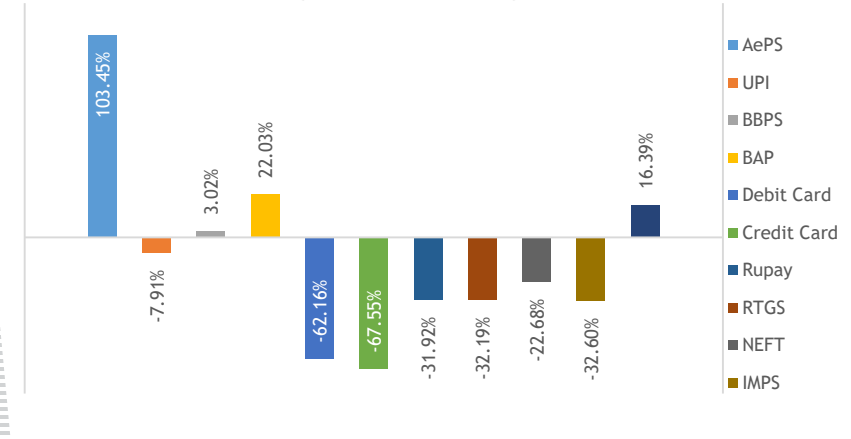
Executive summary: Quarter-wise analysis*

The COVID-19 pandemic has acted as a second wave of behavioral shift that will push many users to adopt digital payments due to its convenience and adherence to safety precautions

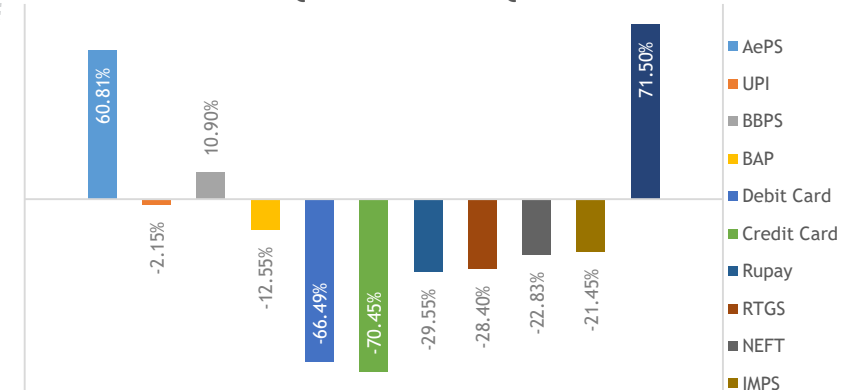
Key trends and insights

- India imposed a nationwide lockdown in the last week of March, 2020. This led to severe curbs in consumer spending due to restricted mobility, shutdown of shops and e-commerce operations, travel bans, and reduced discretionary spending on non-essential items. Consequently, digital payments, which were on a rise till Q1 2020, witnessed a significant contraction in volume and value in Q2 2020.
- Currency with the public witnessed a historic average fortnightly rise of around INR 355.2 billion (~USD 4.71 billion**) in Q2 2020 as people started accumulating cash ahead of the lockdown and during it. The demand for cash as a “safe asset” continues to rise, particularly among low- and moderate-income communities as they prepare to weather the difficult days ahead.
- AePS emerged as a critical cash-out medium for migrants, daily wagers, and workers from other informal sectors who suffered severe setbacks to their livelihoods due to the ongoing COVID-19 pandemic. AePS transactions, driven by cash transfer programs of governments, grew considerably during the lockdown and the subsequent unlock phases in Q2 2020.
- Contactless payments, such as UPI, BBPS, and BAP have made a near v-shaped recovery in Q2 2020 and are back to pre-COVID-19 levels with the relaxation in lockdown restrictions announced in May, 2020. UPI outstripped all other payment channels and systems with volumes at an all-time high of 1.34 billion in June, 2020.
- As consumer spending shifted, the purchase of daily essentials and groceries through both online and offline card transactions witnessed a record decline. Card payments are looking at a strong recovery backed by the improvement in consumer spending in consumption base categories.
- While transfers and high-value payments witnessed a sharp contraction, both in volume and value, APBS remained an exception, owing to the emergency cash support transfers and other government programs.

Movement in volume
In Q2 2020 over Q1 2020



Movement in value
in Q2 2020 over Q1 2020



*Q2 2020 transaction data for BAP, debit card, and credit card comprises April and May, 2020

5 as RBI is expected to release the transaction data for June, 2020 in August, 2020. Rights reserved. This document is proprietary and confidential. INR exchange rate of 75.29 for all conversions in this report

**We have used a three-month average (Apr '20-Jun '20) of the USD



Executive summary: Category-wise analysis (1/2)

Payment system indicators

Where are we at the end of Q2 2020?

Outlook for Q3 2020

Currency with the public

- As people started accumulating cash ahead of the lockdown phase, the currency with the public witnessed an average fortnightly rise of almost INR 355.2 billion (~USD 4.71 billion) while demand deposits with banks saw an average fortnightly decline of around INR 274.56 billion (~USD 3.64 billion).
- Withdrawals at ATMs and Micro ATMs to support the currency demand seems to have now stabilized, as people continue to hoard cash as a “safe-asset.”

- With the partial lockdowns still in effect, people’s reliance on cash is expected to rise further in the next one to two months.

Contactless payments

- With relaxations in lockdown restrictions coming into play in May and June, 2020, UPI transactions have bounced back to pre-COVID-19 levels. The payments in June, 2020 hit an all-time high of 1.34 billion in volume and INR 2,618.35 billion (~USD 34.73 billion) in value—a month-on-month (m-o-m) increase of 8% in volume and 20% in value.
- BBPS transactions made a strong recovery in May, 2020 and June, 2020 backed by relaxations in the lockdown restrictions. The payments in June, 2020 hit an all-time high of 17.64 million in volume and INR 29.70 billion (~USD 0.39 billion) in value—an m-o-m increase of 7% in volume and 36% in value.
- BAP transactions hit an all-time high of 2.07 million in volume and INR 2.17 billion (~USD 0.03 billion) in value in April, 2020 as merchants in rural locations pushed customers to transact through BAP. Though this number dropped again in May, 2020, it is still substantially higher—around 40% more than average in Q1 2020.

- The integration of UPI in Jio’s basic phones is likely to spur the growth of UPI transactions for its 388 million users in tier 2, 3, and 4 cities in India.
- Partnerships with institutions, such as MFIs and NBFCs can help BBPS digitize the recurring payments of the 600 million customers in the low- and moderate-income segments.

Aadhaar Enabled Payment System (AePS)

- AePS transactions, driven by Micro ATM transactions at BC agents and retailers, grew considerably during the lockdown and the subsequent unlock phases in Q2 2020. This was mostly due to cash transfer programs of the government to support vulnerable citizens during the COVID-19 pandemic. Consequently, this created a massive demand for withdrawal.
- NPCI processed 1.21 billion transactions through AePS in Q2 2020—the highest so far. Of this, 0.29 billion were financial transactions worth INR 528.21 billion (~USD 7.01 billion)—an increase of almost 151% in volume and 61% in value for financial transactions over Q1 2020.

- AePS has provided a fillip to in-cash DBT through agent network across rural India. However, delivery issues at the ground level restrict its uptake among the 400 million* ultra-poor.

Executive summary: Category-wise analysis (2/2)

Payment system indicators

Where are we at the end of Q2 2020?

Outlook for Q3 2020

Card-based payments and transactions

- Overall, both debit and credit card payments witnessed a sharp m-o-m decline. The volume of card payments declined by 47% while the value dropped by 57% in April, 2020. The average ticket size also fell by almost 21% for debit cards and 12% for credit cards in April.
- RuPay transactions also bore the brunt of the pandemic. NPCI processed 264.61 million RuPay transactions worth INR 326.69 billion (~USD 4.33 billion) in Q2 2020, which indicates a decline of almost 32% in volume and 30% in value over Q1 2020.
- As relaxations in lockdown restrictions came into effect in May, card payments made a strong recovery backed by the revival of commercial activities and improvement in consumer spending in consumption base categories.

- Concerns over the transmission of the virus through the exchange of physical currency are likely to boost online card transactions as commercial activities pick up with the relaxation in restrictions.

Remittances and money transfers

- The nationwide lockdown resulted in a sharp contraction in the volume and value of remittances and money transfers in Q2 2020 over the previous quarter. RTGS transactions witnessed a decline of almost 32% in volume and 28% in value while NEFT transactions declined by 23% in both volume and value.
- Transactions through IMPS, commonly used for low-ticket sized remittances, declined by 33% in volume and 21% in value in Q2 2020 over the previous quarter.
- APBS was an exception as it was used by the government to transfer funds or subsidies under various heads directly into the *Aadhaar*-enabled accounts of beneficiaries. NPCI processed 483.08 million transactions worth INR 449.34 billion (~USD 5.96 billion) through APBS.

- Backed by the revival in economic and commercial activities across the board, RTGS, NEFT, and IMPS transactions are on the path to a v-shaped recovery.

A close-up portrait of a woman wearing a bright yellow headscarf with a decorative border. She has a serious expression and is looking directly at the camera. The background is blurred, showing what appears to be an outdoor market or public space. The image is framed by a white diagonal shape on the left and a blue and orange curved shape on the right.

A detailed analysis of select payment system indicators

Cash (currency with the public)

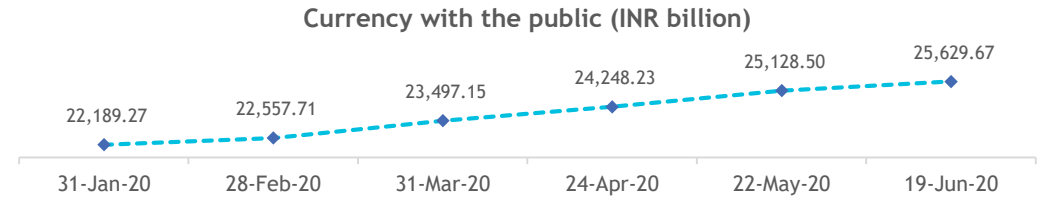
Despite the lockdowns, the demand for cash as a “safe asset” continues to rise, particularly among low- and moderate-income communities as they prepare to weather difficult days ahead

Key trends and insights

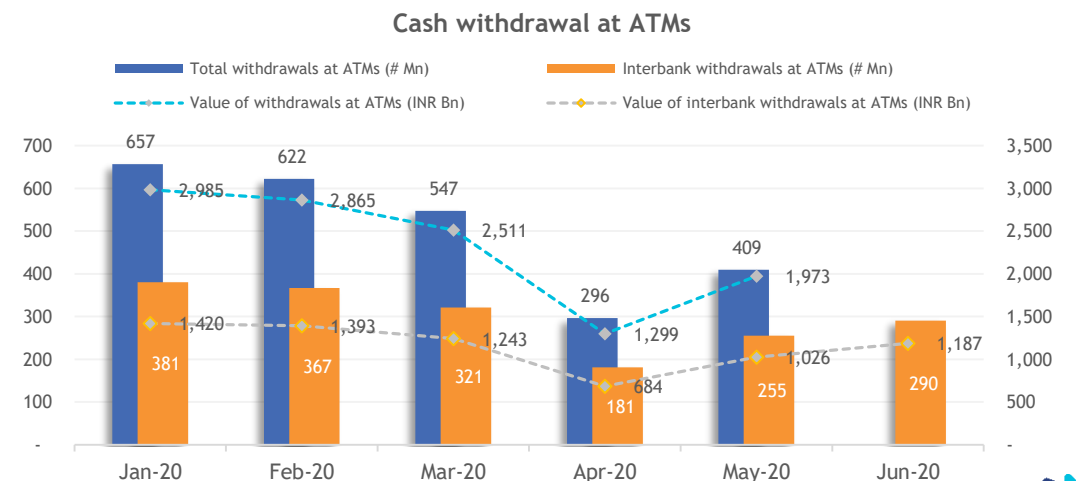
- Since March, 2020, currency with the public witnessed an average fortnightly rise of approximately INR 355.2 billion (~USD 4.71 billion) as people started accumulating cash ahead of and during the lockdown. The rise in cash with the public indicates a greater usage of cash for transactional purposes.
- Cash withdrawals at ATMs have come down. Typically, urban users have more access to ATMs and are also more comfortable in conducting digital transactions.
- Cash withdrawals at micro ATMs (supported by AePS), witnessed a sharp rise of around 153% in volume and 61% in value in Q1 2020 over the previous quarter. This was due to the cash transfer programs of the governments to support vulnerable citizens during the COVID-19 pandemic.
- Since March, 2020, demand deposits with banks witnessed an average fortnightly decline of around INR 274.56 billion (~USD 3.64 billion) while time deposits witnessed an average fortnightly increase of almost INR 777.85 billion (~USD 10.32 billion). The largest contribution of demand deposits worth approximately INR 2,849 billion (~USD 37.8 billion) was received in the first two weeks of April, 2020. This can be attributed to the announcement of the lockdown and, in part, to the credit risk in the debt market and volatile equity market.



Cash and digital payments continued to co-exist and grow during the lockdown and the subsequent unlock phases in Q2 2020. A fresh rise in the number of infections and extension in partial lockdowns is expected increase people’s reliance on cash in the next one to two months.



Date	Variation in currency with the public (INR Bn)	Variation in demand deposits (INR Bn)	Variation in time deposits (INR Bn)
10 Apr '20	415.83	(1,357.45)	2,849.38
24 Apr '20	335.24	(120.77)	85.77
08 May '20	492.08	(100.23)	1,503.99
22 May '20	388.19	(127.81)	(77.90)
05 Jun '20	315.56	307.74	949.13
19 Jun '20	185.61	(248.83)	(643.28)



Contactless payments: Unified Payments Interface (UPI)

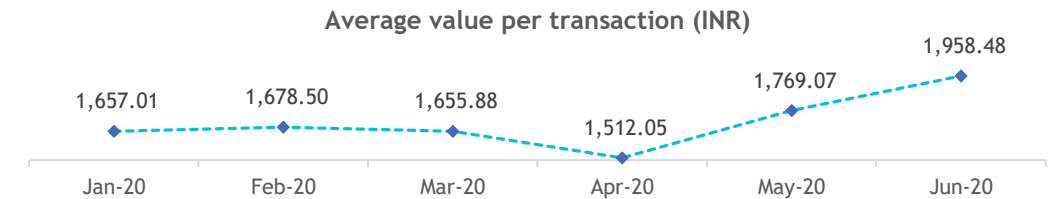
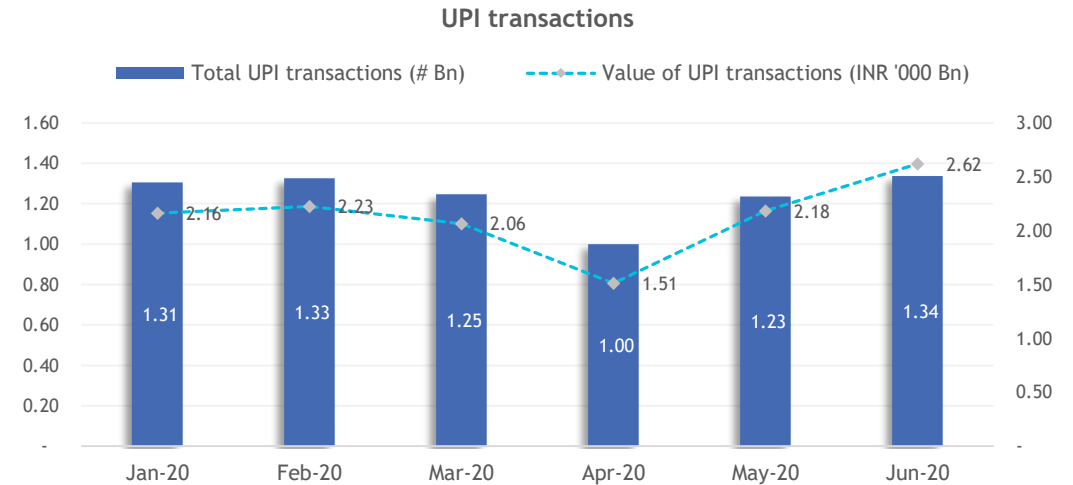
UPI transactions made a near v-shaped recovery in Q2 2020 and bounced back to pre-COVID-19 levels as several states in India eased the lockdown restrictions

Key trends and insights

- Set-up as a comparatively open and interoperable payment platform, UPI has grown by 270% in volume and 341% in value from March, 2018 till March, 2020.
- NPCI processed 3.57 billion payments worth INR 6,313,67 billion (~USD 83.75 billion) through UPI in Q2 2020. This amounts to a decline of around 8% in volume and 2% in value over Q1 2020.
- The drop in transactions in the last week of March and throughout April, 2020 may be attributed to the nationwide lockdown that severely curbed consumer spending due to restricted mobility, shut down shops and e-commerce operations, imposed travel bans, and reduced discretionary spending on non-essential items.
- The relaxations in lockdown restrictions came into play in May and June, 2020. Since then, UPI transactions have bounced back to pre-COVID-19 levels. Payments in June hit an all-time high of 1.34 billion in volume and INR 2,618.35 billion (~USD 34.73 billion) in value—m-o-m increase of 8% in volume and 20% in value.
- Google Pay, PhonePe, and Paytm continue to lead UPI adoption and usage for P2P and P2M payments during restricted mobility and social distancing. 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.



Contactless payments, such as UPI have become a necessity in these times. The integration of UPI in Jio's basic phones is likely to spur the growth of UPI transactions for its 388 million users across tier 2, 3, and 4 cities in India

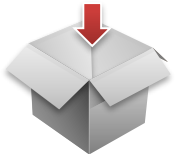


Contactless payments: Bharat Bill Payment System (BBPS)

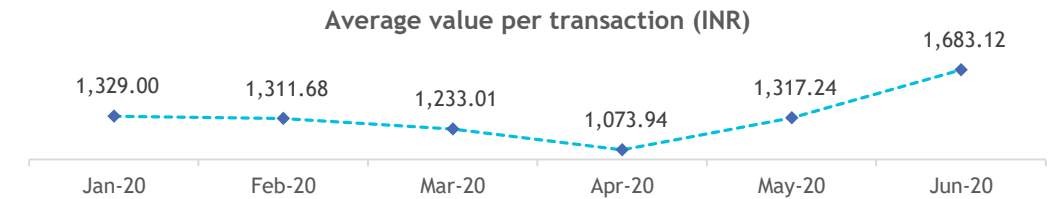
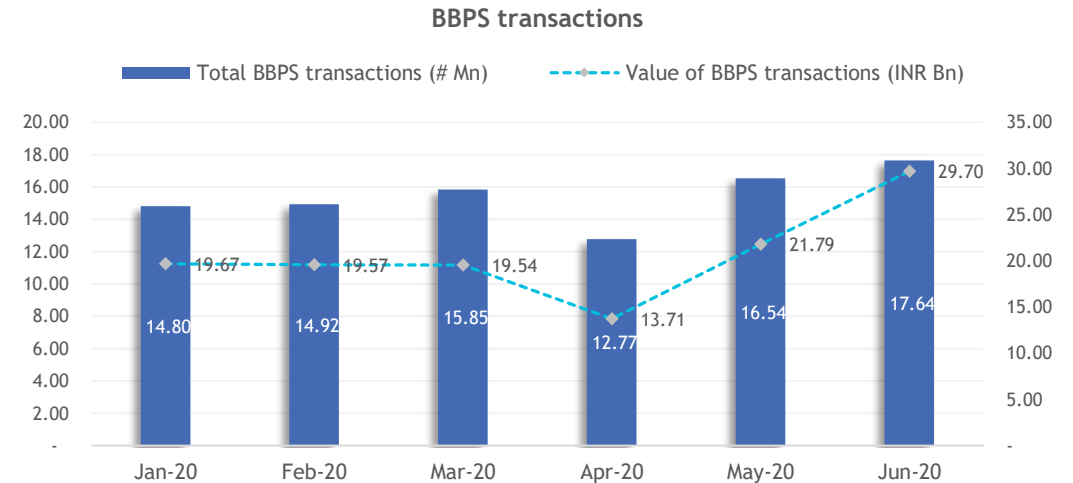
BBPS transactions made a strong recovery in Q2 2020, backed by the ongoing consolidation of the recurring bill payments industry under one payment system

Key trends and insights

- Owing to the convenience it offers of round-the-clock bill payments to multiple billers from a single platform, BBPS saw a 271% increase in volume and 344% in value, from March, 2018 to March, 2020.
- By integrating recurring payments, apart from five utility payments,* mandated by the RBI, BBPS has added 85 unique billers across 15 additional categories since January, 2020. These payments include education fees, loan repayments, insurance, booking of cooking gas, municipality taxes, subscription fees, etc.
- Consequently, NPCI processed 46.95 million payments worth INR 65.20 billion (~USD 0.86 billion) through BBPS in Q2 2020—an increase of almost 3% in volume and 11% in value over Q1 2020.
- After a drop in April, BBPS transactions made a strong recovery in May and June, 2020, backed by relaxations in the lockdown restrictions. The payments in June hit an all-time high of 17.64 million in volume and INR 29.70 billion (~USD 0.39 billion) in value—an m-o-m increase of 7% in volume and 36% in value.
- The revival of commercial activities, improvement in consumer spending in consumption base categories, and the addition of new biller categories have added to this recovery.



Partnerships with institutions, such as MFIs and NBFCs can help BBPS digitize the recurring payments of the 600 million customers in the low- and moderate-income segments, spread across India's rural and semi-urban areas.



Contactless payments: BHIM Aadhaar Pay (BAP)

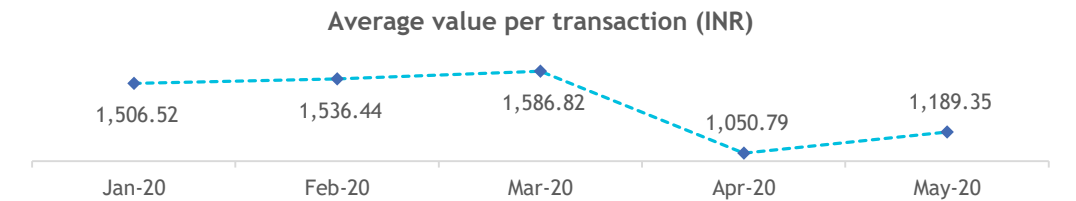
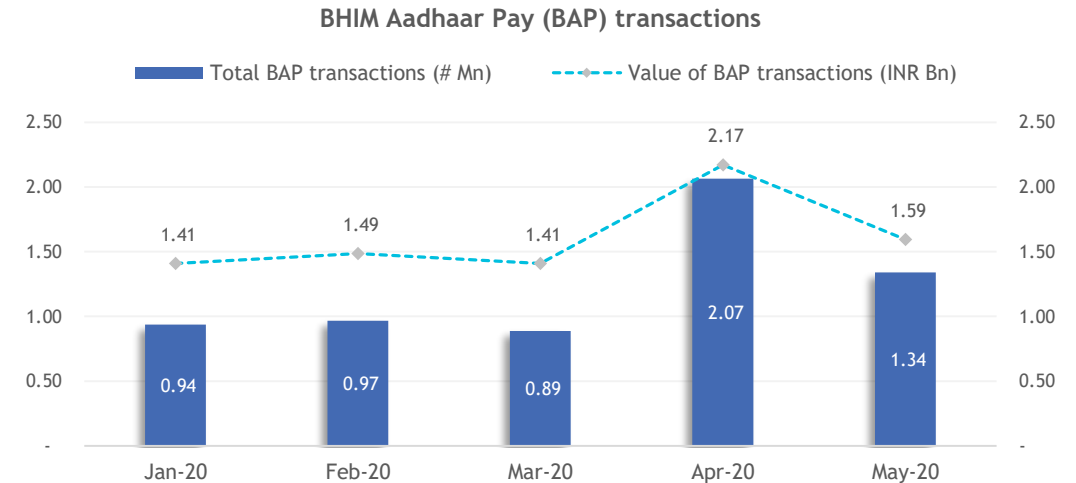
BHIM Aadhaar Pay (BAP) can revolutionize merchant payments in rural India targeting specific market segments. However, concerns around product fit and awareness inhibit the merchants from using BAP.

Key trends and insights

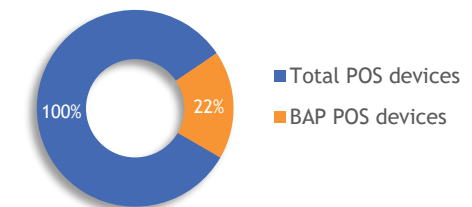
- ▶ NPCI processed 3.41 million payments worth INR 3.76 billion through BAP in the first two months of Q2 2020*. The trend suggests that the volume and values in Q2 2020 would be substantially higher as compared to the previous quarter.
- ▶ A drop in transactions in the last week of March, 2020—an m-o-m decrease of 8% in volume and 5% in value—may be attributed to the restricted mobility and closed merchant outlets due to the nationwide lockdown.
- ▶ Backed by the cash transfer programs of governments to support the vulnerable during the pandemic, BAP transactions hit an all-time high of 2.07 million in volume and INR 2.17 billion (~USD 0.03 billion) in value in April, 2020. This was due to the push from merchants in rural locations for customers to use BAP.
- ▶ While cash-backs and incentives continue to create a positive impact and pull for both customers and merchants, push from the acquiring banks has been one of the major drivers in the adoption of BAP.
- ▶ As relaxations in lockdown restrictions came into effect in May, 2020, BAP transactions also saw a decrease during the month. However, the transactions are still substantially higher (~40% more) than the average in Q1 2020.



A lukewarm push from banks, latent awareness, and demand among the customers, lengthy transaction process, non-compatibility of biometric scanners, and issues around data privacy and protection continue to slow the progress of BAP.



The share of BAP POS devices



Aadhaar Enabled Payment System (AePS)

AePS has emerged as a critical cash-out medium for migrants, daily wagers, and other workers in the informal sector who suffered severe setbacks to their livelihoods due to the ongoing COVID-19 pandemic

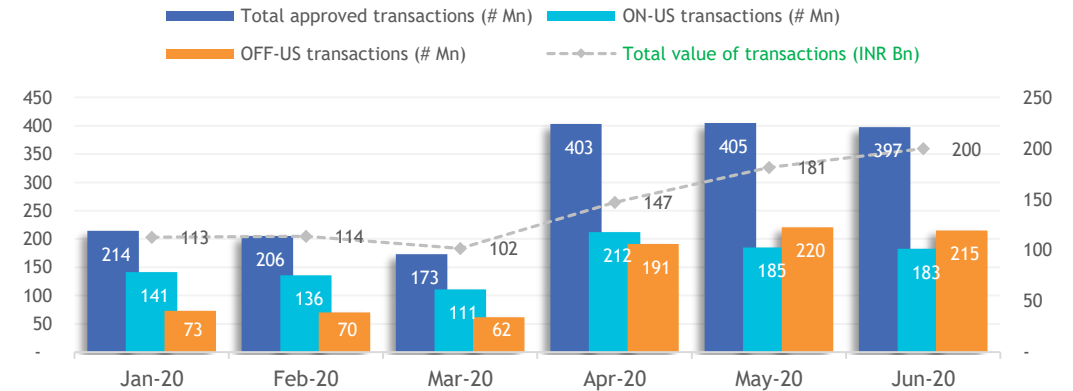
Key trends and insights

- AePS is popular in rural geographies for CICO and domestic remittances, especially for those who lack financial literacy or hardware, such as smartphones. It has grown by 82% in volume and 271% in value from March, 2017 to March, 2020.
- AePS transactions, driven by Micro ATM transactions at BC agents and retailers, grew considerably during the lockdown and the subsequent unlock phases in Q2 2020. This was due to cash transfer programs of the governments to support the vulnerable during the pandemic, which created a massive demand for withdrawal.
- NPCI processed 1.21 billion transactions through AePS in Q2 2020, of which 0.29 billion were financial transactions worth INR 528.21 billion (~USD 7.01 billion). This amounts to an increase of almost 151% in volume and 61% in value for financial transactions over Q1 2020.
- Non-financial transactions, such as balance inquiry, mini statement, and UIDAI authentication also witnessed a similar surge.
- However, reports indicate a spike in the failure rates of AePS transactions. The average failure rate was 39% in April, 2020 across four financial institutions that operate in India.

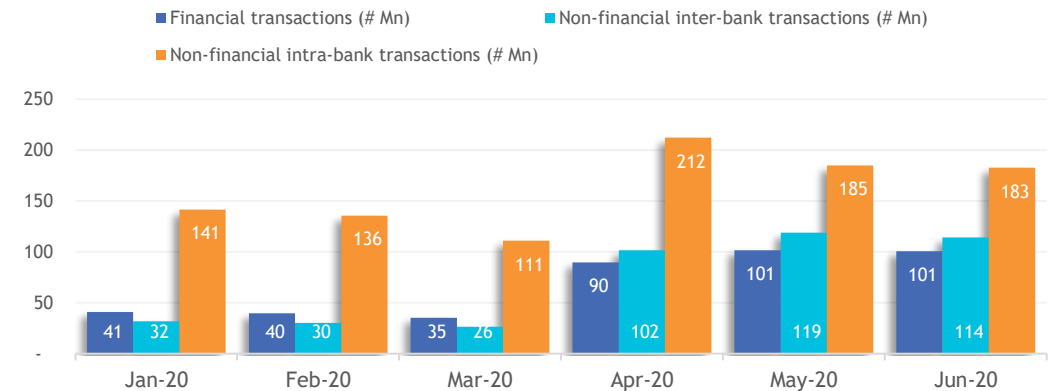


AePS has provided a fillip to in-cash DBT through agent network across rural India. However, delivery issues at the ground level restrict its uptake among the 400 million* ultra-poor. These issues may include recurring transaction failures, especially for OFF-US transactions, issues in the reconciliation of failed transactions, etc.

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



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



Card-based payments and transactions

Card payments are on the path to strong recovery after the pandemic dealt a blow to both online and offline transactions in April, 2020

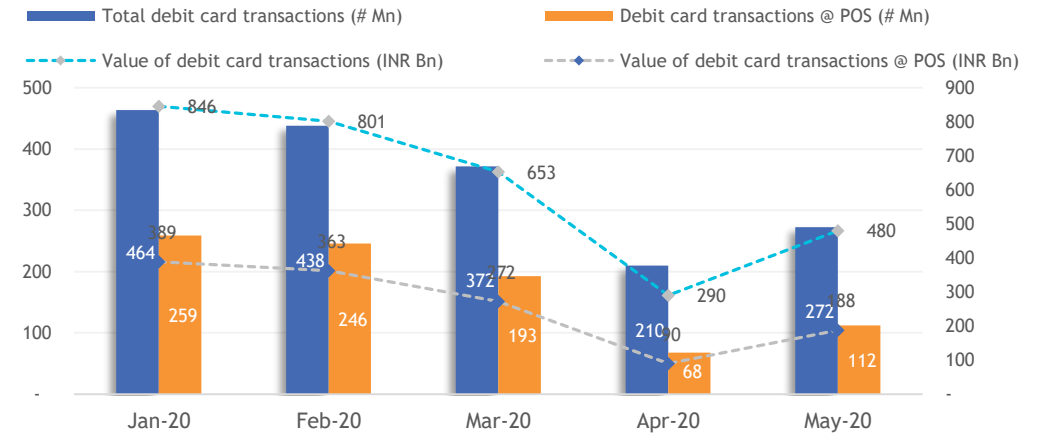
Key trends and insights

- Restricted mobility, the shutdown of shops and non-essential e-commerce operations, travel bans, and reduced discretionary spending adversely affected online and offline card payments made through debit and credit cards. The overall card payments witnessed a sharp m-o-m decline of 47% in volume and 57% in value during April, 2020.
- As consumer spending shifted from discretionary purchases to the purchase of daily essentials and groceries, the average ticket size also declined by around 21% for debit cards and 12% for credit cards in April, 2020.
- As relaxations in lockdown restrictions came into effect in May, 2020, card payments made a strong recovery backed by the revival of commercial activities and improvement in consumer spending in consumption base categories.
- RuPay transactions also bore the brunt of the pandemic. NPCI processed 264.61 million RuPay transactions worth INR 326.69 billion (~USD 4.33 billion) in Q2 2020—a decline of around 32% in volume and 30% in value over Q1 2020.
- Much of the recovery in RuPay transactions may be attributed to the emergency cash transfers from governments to support vulnerable citizens during the COVID-19 pandemic.

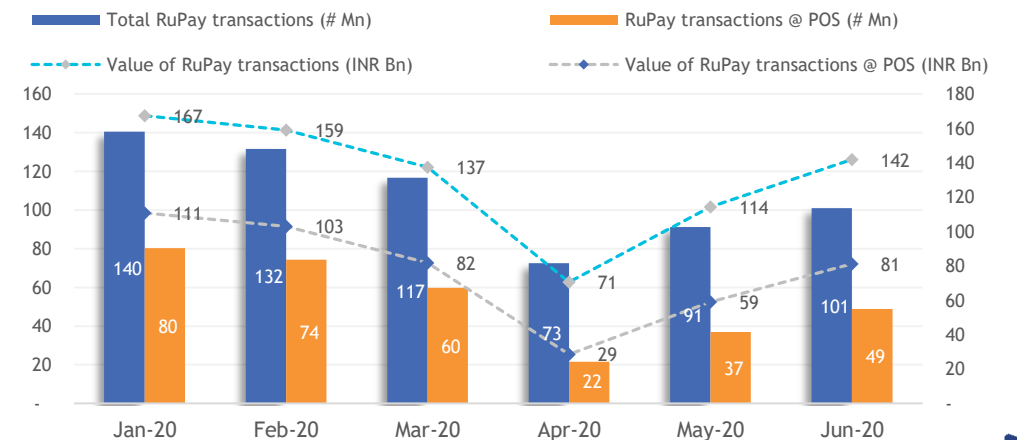


Concerns over the transmission of the virus through the exchange of physical currency will likely boost online card transactions as commercial activities pick up with the relaxation in restrictions.

Debit card transactions



RuPay transactions



Transfers and high-value payments

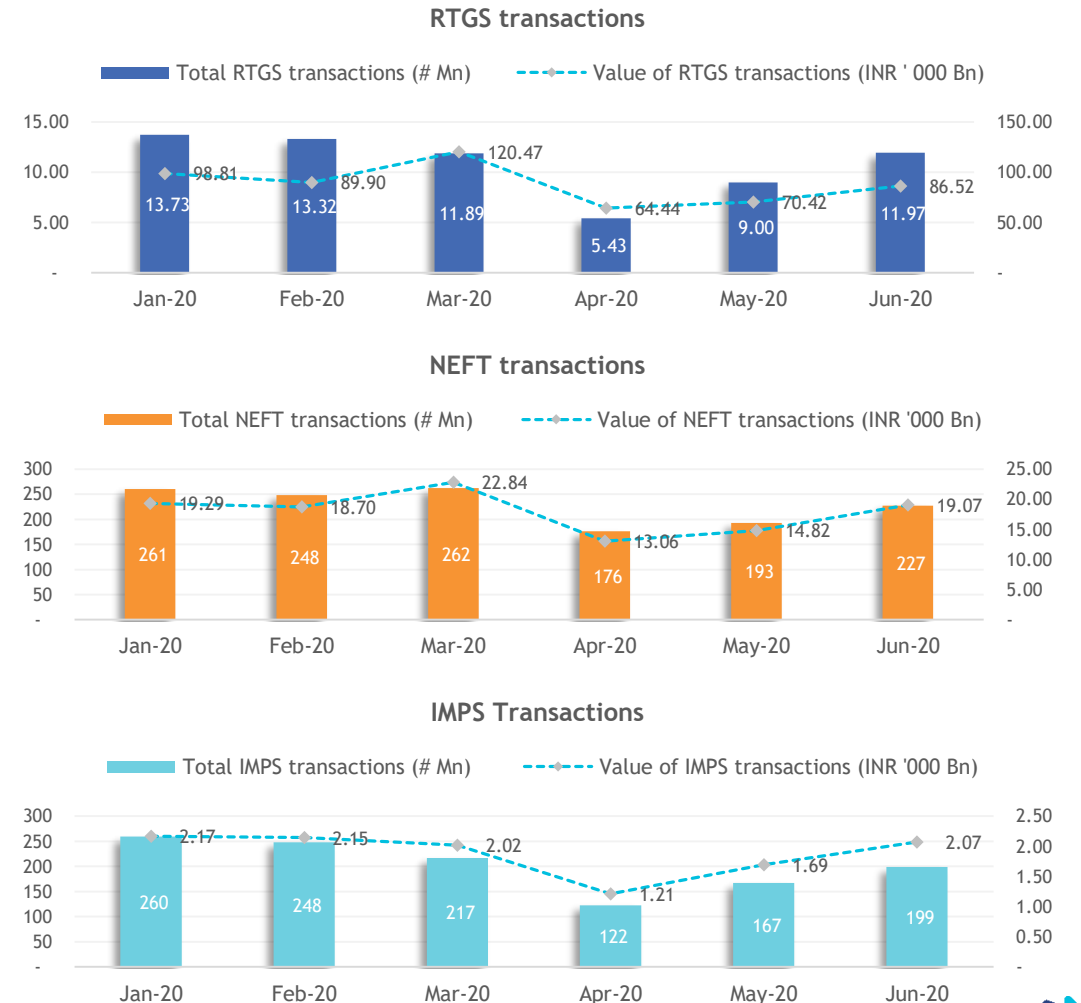
While transfers and high-value payments witnessed a sharp contraction in both volume and value, APBS remained an exception owing to emergency cash support transfers and other government programs

Key trends and insights

- Together, RTGS and NEFT account for a little over 90% of total payments in the country. The nationwide lockdown led to a sharp contraction of volume and value of these transactions in Q2 2020 over the previous quarter. RTGS transactions witnessed a decline of almost 32% in volume and 28% in value while NEFT transactions declined by 23% in both volume and value.
- Domestic money transfer services took a severe hit as migrants moved back to their native places in rural areas after non-essential economic activities shut down in urban and semi-urban areas. These activities included building and road construction works, among others.
- Subsequently, transactions through IMPS, commonly used for low-ticket sized remittances, declined by 33% in volume and 21% in value in Q2 2020, over the previous quarter.
- APBS was an exception as it was used by the government to transfer funds and subsidies under various heads directly into the *Aadhaar*-enabled accounts of beneficiaries. NPCI processed 483.08 million transactions worth INR 449.34 billion (~USD 5.96 billion) through APBS—an increase of almost 16% in volume and 71% in value over Q1 2020.



Backed by the revival of economic and commercial activities across the board, RTGS, NEFT, and IMPS transactions are on the path to a v-shaped recovery.





Annexes



Annex 1: NPCI's key payments systems and channels

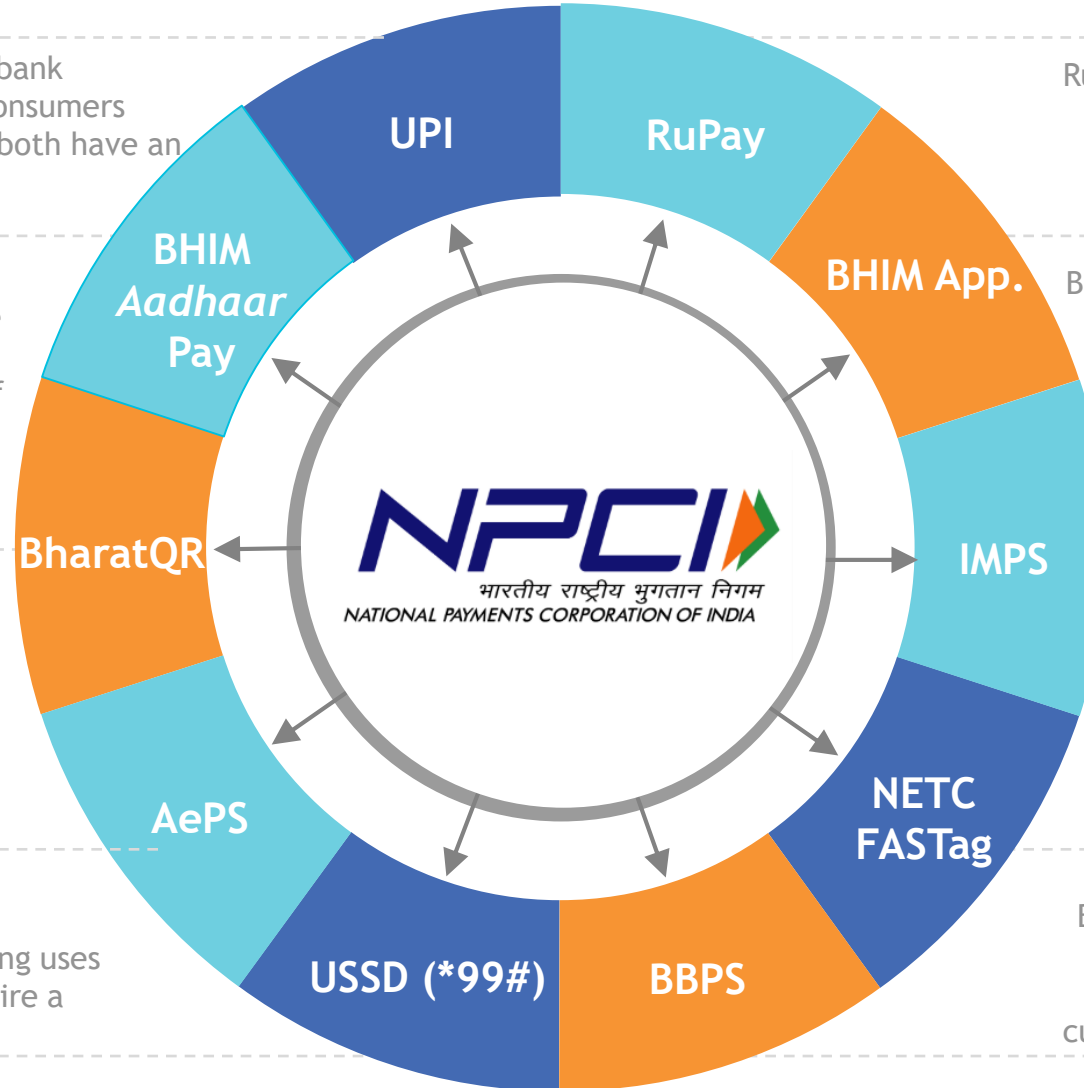
Unified Payments Interface is a real-time interbank payment system to send and receive money. Consumers can participate in P2P transfer as long as they both have an account in one of the registered banks.

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 (MicroATMs) 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 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.

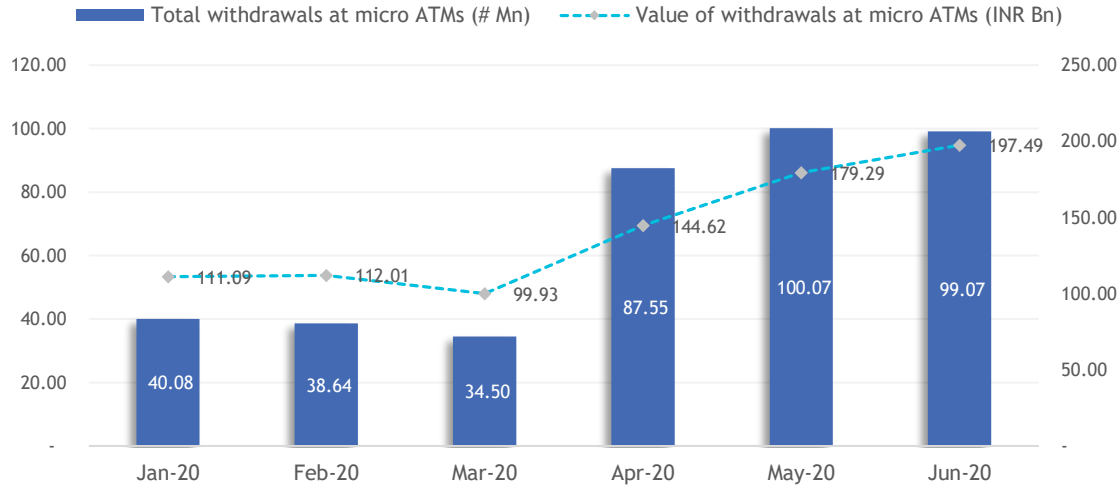
The National Payments Corporation of India (NPCI) is an umbrella organization that operates retail payments and settlement systems in India. It was established in 2008 by the Reserve Bank of India (RBI) and Indian Banks' Association (IBA) to create a robust payment and settlement infrastructure in India.

Annex 2: Status of India's payments infrastructure

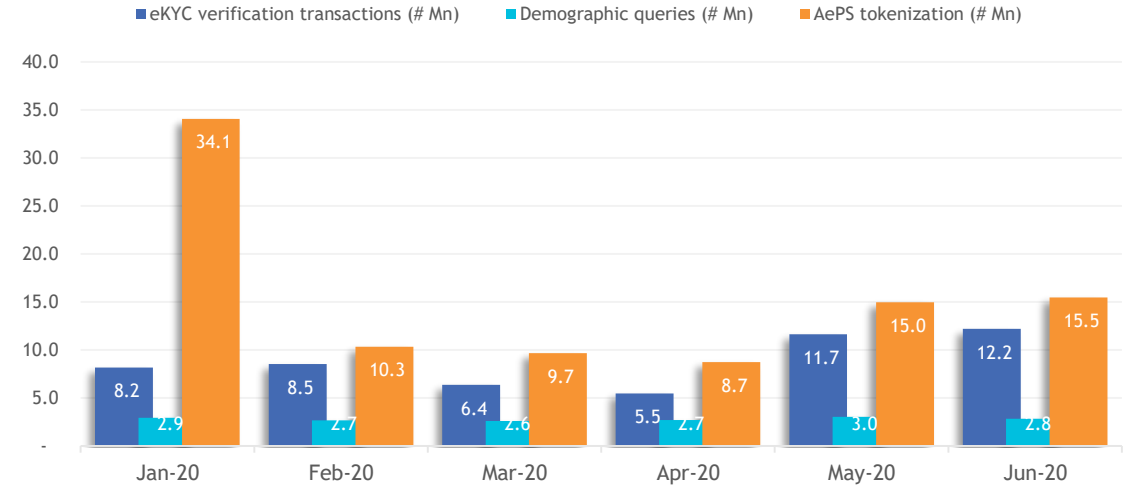
#	Parameters	As on	Data (# million)
1	PMJDY beneficiaries	July, 2020	397.20
2	Aadhaar assigned	May, 2020	1,214.57
3	Smartphone users	January, 2020	500.00
4	Active internet users	November, 2019	504.00
	Rural internet users	November, 2019	227.00
	Urban internet users	November, 2019	205.00
5	Cards	May, 2020	892.53
	Credit cards	May, 2020	57.18
	Debit cards	May, 2020	835.35
6	RuPay cards	July, 2020	294.60
7	Pre-paid Payment Instruments (PPIs)	May, 2020	1,868.94
	Wallets	May, 2020	1,730.23
	Cards	May, 2020	138.71
8	ATMs	May, 2020	0.23
	Bank-owned ATMs	May, 2020	0.21
	White-label ATMs	May, 2020	0.02
9	Micro ATMs	May, 2020	0.28
10	POS	May, 2020	5.02
11	BHIM Aadhaar Pay POS	February, 2020	1.09
12	Bharat QR	May, 2020	2.06
13	Banking outlets in villages	March, 2019	0.60
	Branches	March, 2019	0.05
	BC agents	March, 2019	0.54

Annex 3: Additional payment system indicators

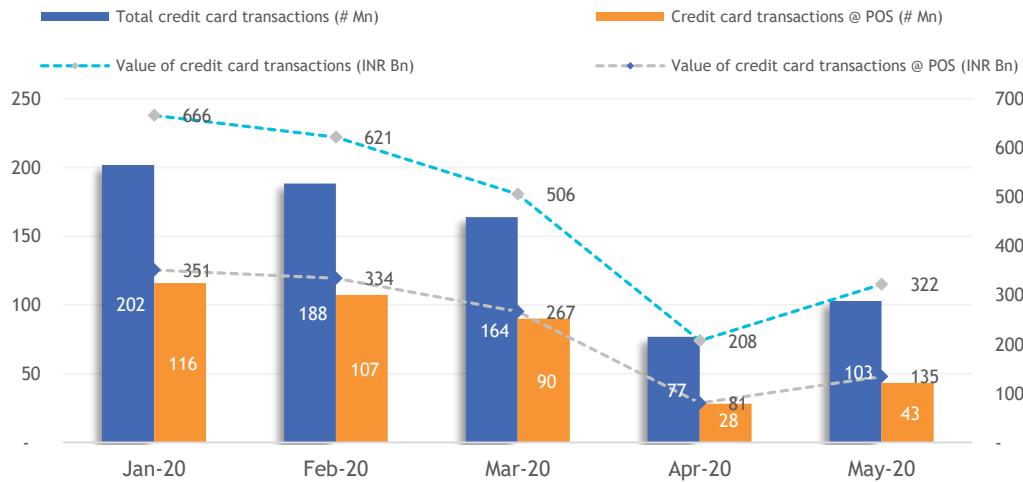
Cash withdrawals at Micro ATMs



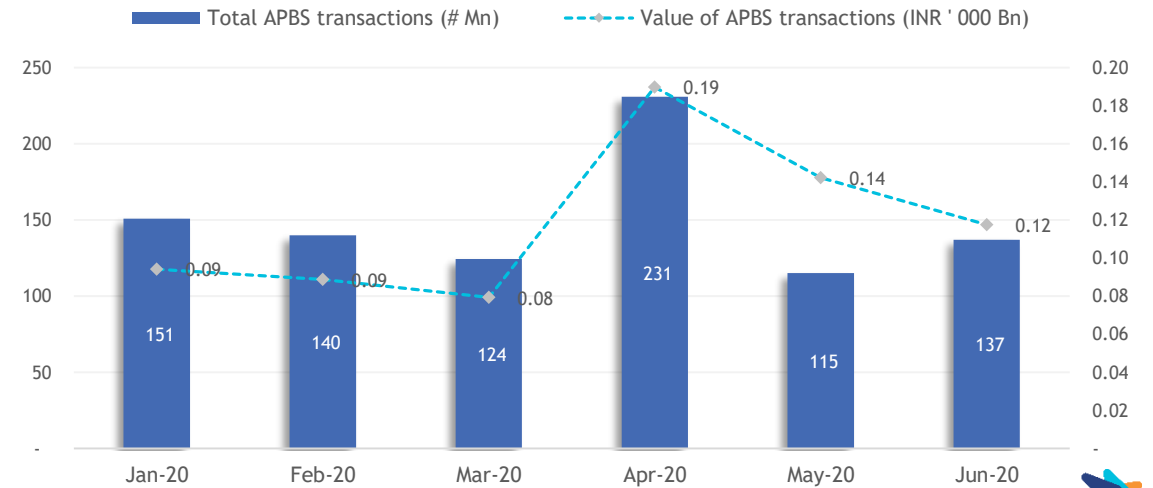
AePS transactions: Additional non-financial transactions



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

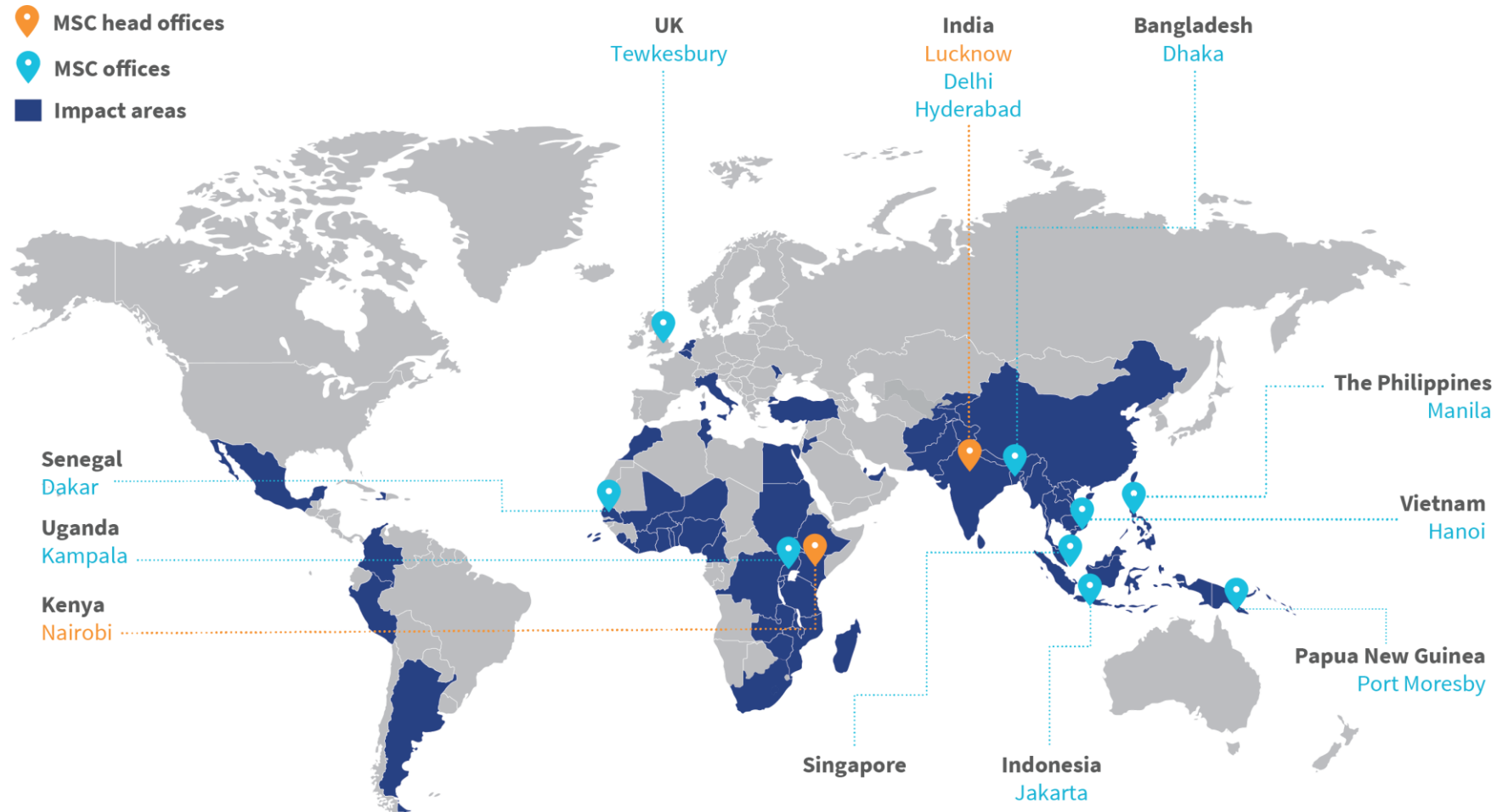
Implemented **>850 DFS** projects

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

Trained **9,000+** leading FI specialists globally

Some of our partners and clients





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