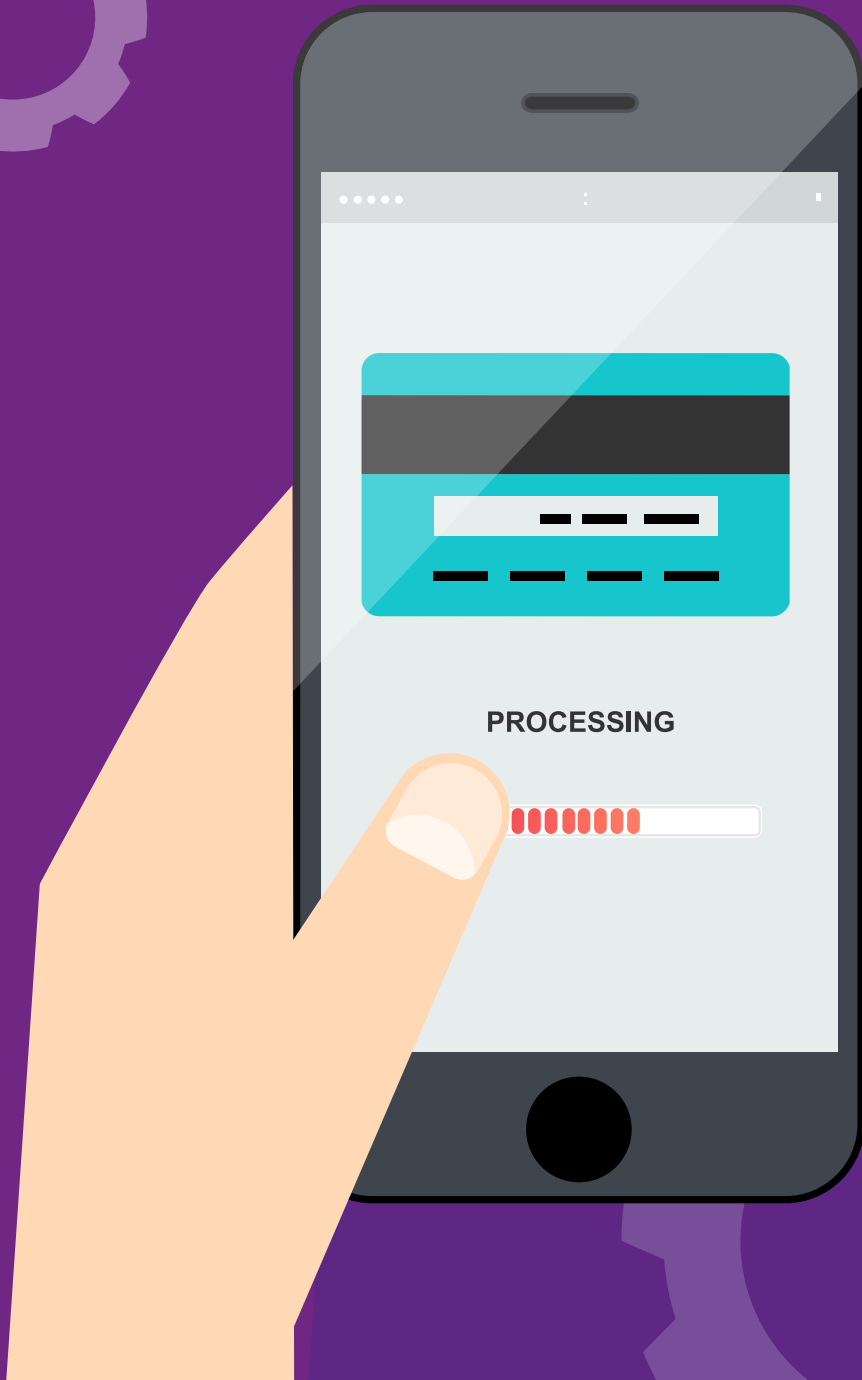


# Impact of COVID-19 on digital payments in India

August 2020

[home.kpmg/in/COVID-19](https://home.kpmg/in/COVID-19)





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# Introduction

**The digital payment space in India has witnessed a steady transformation since the 90's with the liberalisation of the Banking industry and introduction of new technologies such as Magnetic Ink Character Recognition (MICR), Automated Teller Machine (ATM), etc. Thereafter, in 2010, various payments products (stored value cards, wallets, recharge vouchers) and service providers were launched. India is experiencing a growth trajectory in digital payments that is more prolific than many advanced less-cash economies.**

Demonetization in November 2016 and constant push by Government and regulators for less cash economy have propelled the growth trajectory. The digital payments market in India was valued at INR1,638.49 trillion in FY 2019 and is expected to reach INR4,323.63 trillion by FY 2024, expanding at a compound annual growth rate (CAGR) of ~22 per cent during the FY 2020 -FY 2024 period.<sup>1</sup>

The industry has been equally supported by technological innovations. In the last 10 years, the country has seen many unique and state of the art product innovations in the digital payment industry. The advent of a younger population who has grown up with mobiles and data, has enabled faster adoption of technological advancements in digital payments. According to a survey<sup>2</sup> conducted on parameters such as round-the-clock availability of the services, adoption, and immediacy of payments, India is considered to have a more evolved digital payment ecosystem compared to 25 other countries including the U.K., China and Japan.

The industry has also seen continued involvement from the government by way of its targeted regulatory policies

in the payments space. While, demonetization indirectly pushed forward the digital transformation of the Indian payments ecosystem, other initiatives like the Digital India program (under the Ministry of Electronics and Information Technology or MeitY), Jan Dhan Yojna, mandating electronic payments for businesses having turnover over INR50 Cr and several other incentive and awareness programs have directly contributed to the industry's growth. A number of remarkable innovations and initiatives have changed the way India transacts. For instance, push towards digital payments with initiatives such as United payments interface (UPI), Bharat interface for money (BHIM), RuPay cards, FASTags, introduction of interoperability on wallets, cash recyclers, or innovations by FinTech players like radio frequency identification (RFID) based fuelling apps, all-in-one quick response (QR) code for merchants and, QR-based cash withdrawals on ATMs; digital India clearly holds an extremely promising future. However, consumer awareness and security concerns continue to be amongst the biggest hurdles faced by the industry, and needs continuation of

sustained collaborative drive from banks, payment providers, regulators and government.

In the current COVID-19 situation, the digital payments sector witnessed a decline of ~30 per cent in the transaction value, and recent data made available from National Payments Corporation of India (NPCI) attest to a sharp decline observed in the months when lockdowns were initiated<sup>3</sup> (primarily due to the impact on the travel, hospitality and retail sectors). However, Government and regulator have pushed digital payments in such times by means of National electronic funds transfer (NEFT), Immediate payment service (IMPS), UPI, BHIM etc. so as to avoid usage of physical cash which has higher risk element of COVID-19 transmission. Such efforts along with opening of economy are further reflected in the recoveries observed in various digital payment platforms on NPCI in a relatively short period of time. This clearly indicates that the detrimental impact of COVID-19 on digital payments, although significant, is not lingering and digital payment ecosystem in India is expected to evolve rapidly to help shape the post-COVID-19 era growth.

1. E-payment Solutions Market in India 2020 (Part-I), Netscribes, January 2020.

2. Digital Payment Industry in India, IBEF, January 2019

3. NPCI payments database (accessed in June 2020)



# Impact of COVID-19 on the payments industry

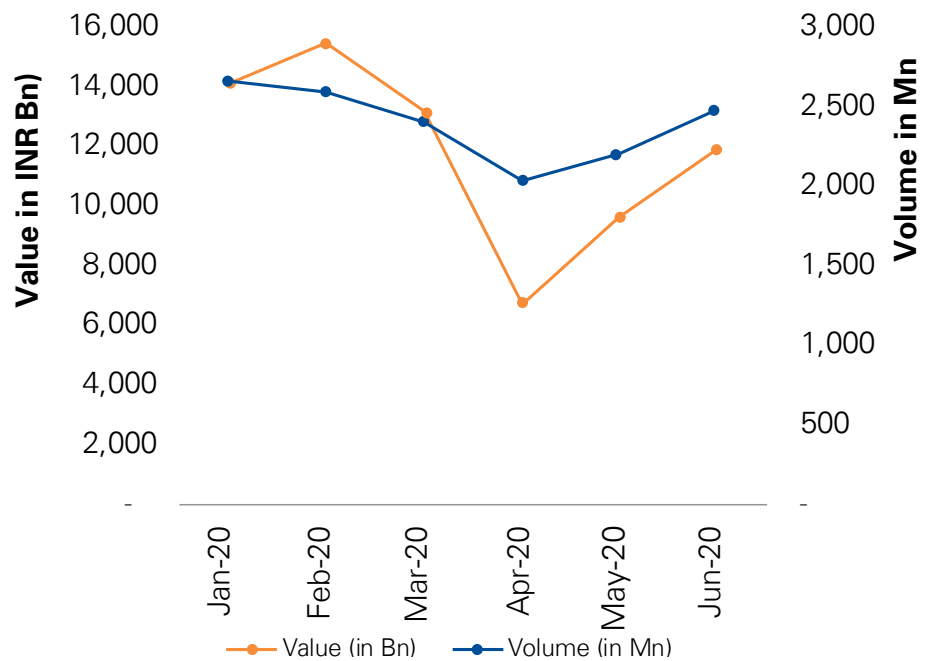
## 2.1. Analysis of payments products in times of COVID-19<sup>1</sup>

### 2.1.1. Payments done through NPCI

NPCI is an umbrella organization set up by banks under guidance of the Reserve Bank of India and is de-facto responsible for all retail payments done in India. It acts as an intermediary for processing of a multiple modes of digital payments such as IMPS, UPI, Bharat BillPay, among others. A review of the value and volume of such transactions from January 2020 to June 2020 has depicted a decline in payments in India in lieu of COVID-19 and accompanying containment measures but has later shown a quick recovery in subsequent months across various modes.

The lockdown period was the period of significant limitation in spending among consumers, along with deferral of multiple routine monthly payments. Lockdowns caused significant uncertainty in decisions with respect to quantum and timing of spending and payments among consumers. This is reflected by a ~49 per cent decline in value of

Payments done through NPCI between Jan 20 to Jun 20



Source: NPCI payments database as accessed in July 2020

1. Datapoints for this section have been sourced from NPCI payments database (accessed on July 2020), unless otherwise specified

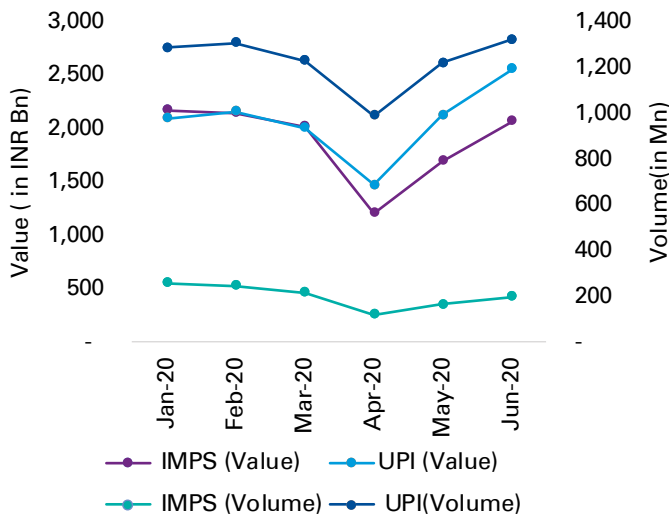
overall NPCI payment products observed across digital payment modes in April 2020, compared to March 2020 payments.

Subsequently, conditional relaxations were offered after 20 April 2020 for the regions where the spread had been contained or was minimal. Businesses as well as consumers found avenues to kick start business, using alternative payments (digital over cash) and safer procurement methods e.g. e-commerce. The first unlock phase of lockdown, which started from 1 June 2020, led to resumption of multiple businesses and overall consumption. This coupled with the cascading effects of scheduled payment deferrals done in April-May 2020, aversion towards cash payments, shutdown of small-scale cash operated businesses, led to significant digital payments being done in June 2020, by which time

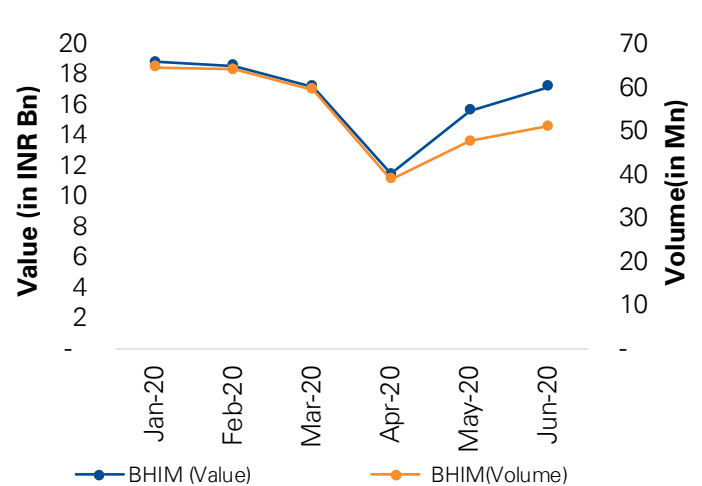
payments done through NPCI had resumed to ~91 per cent of what they were in March 2020. On average, value of payments grew at a faster rate as compared to their volume, since the ticket sizes of payments have increased by ~10 per cent to 20 per cent across procurement categories, primarily in an attempt to limit physical exposure as well as proclivity to stock inventories.

Growth trends observed in overall payments in June 2020 are expected to continue further, augmented primarily by prospects of digital payments for tapping into unpenetrated markets run primarily on cash and fulfilment of accumulated consumption needs as businesses build up the infrastructure to resume operations, safely and efficiently and as consumers find safer alternative means to satiate demand.

### 2.1.2. UPI, BHIM and IMPS



Source: NPCI payments database as accessed in July 2020



Source: NPCI payments database as accessed in July 2020

UPI and BHIM transaction values have both seen a decline of ~30 per cent and ~39 per cent in April 2020 respectively, as compared to January 2020, whereas IMPS transactions saw a decline of ~44 per cent. UPI and IMPS primarily cater to the peer to peer transactions at an individual level. Ergo, this decline is potentially

triggered by stringent lockdown regulations in April 2020, restricting expenditure to essential products and services, decrease in employment and manual labour, deferrals of routine fixed expenses such as rentals and maintenance and reduction of disposable income of the population.

A considerable reason for curtailment of these digital payments was a near standstill observed in transport, travel and allied leisure accommodations, most noteworthy of which being suspension of Indian Railway services, which holds considerable share in monthly UPI and IMPS transactions. Since, merchant shops and physical movement for purchase of commodities was restricted, individual consumers seem to have been encouraged to avail alternative online modes of purchase for essential as well as non-essential commodities. Further, considerable standstill during the lockdown resulted in suspension of payment of fixed routine expenses including employee benefits, rentals, etc. This, in turn, diminished the disposable income of the working population which curtailed per capita spending and subsequent individual UPI transactions. Retail outlets and malls, which attracted consumer spending were forced to shut down, which caused further reduction in retail BHIM UPI payments. Liquidity crises faced by small scale vendors catering to consumer needs were forced to dissolve, further limiting individual spending.

However, post easing of lockdown restrictions from mid-May 2020, value transacted via UPI and BHIM in June 2020 have regained to ~122 per cent and ~91 per cent of

their January 2020 levels respectively. IMPS transactions have also reached to ~95 per cent of its January 2020 transaction levels by June 2020. Consumers exploring e-commerce avenues for purchase needs, previously catered by brick and mortar stores, stocking of essentials, general resumption of routinely availed services and cascading payment of any personal dues and liabilities deferred are possible factors for the levels of recovery observed.

Such trends have highlighted the significance of UPI's versatility and reliability. NPCI has stated that the relevance of UPI is expected to grow, by combining the physical and digital space, in a post COVID-19 world, with increasing relaxations being witnessed in India's lockdown.<sup>2</sup> Additionally, NPCI has recently launched a campaign called 'UPI Chalega' with a dedicated microsite, which focuses on encouraging lockdown-related payments such as payments to grocers, supermarkets and salary payments through UPI. This campaign is estimated to have received nearly one billion impressions within its target audience, which further speaks towards increased awareness and acceptability of UPI as a payment method.<sup>3</sup>



2. DUPI to see growth in the 'phygital' space in a post-covid world: NPCI, Livemint, 20 May 2020

3. UPI Chalega, NPCI Press Release, 24 February 2020

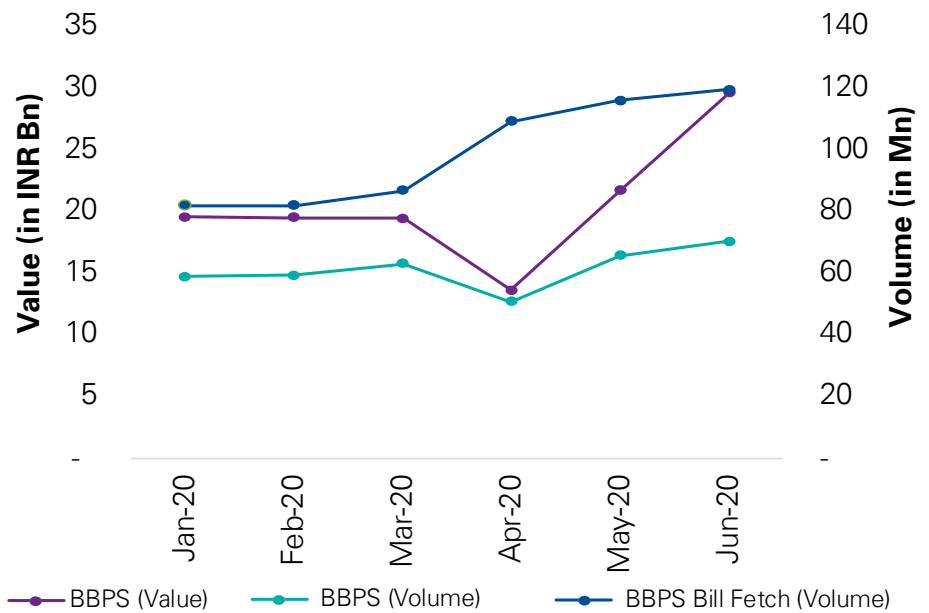


### 2.1.3. Bharat Bill Payment System (BBPS)

BBPS transactions have also seen a decline in transaction volumes, post lockdown, possibly due to non-payment of routine bills due to existent or anticipated cash crunches as well as significant deferrals in routine bill payments. A fall of ~30 per cent was observed in the bill payments in April 2020 compared to January 2020. Nonetheless, the amount of bill fetch requests in the NPCI ecosystem surged in April 2020 by ~26 per cent to 110 million, compared to 82 million requests in January 2020, potentially signifying enrolment of new billers and bill payers anticipating need for online settlement in lieu of cash payments options becoming inaccessible. This may have led to adoption of digital bill payments at end customer levels or even digital payment hubs by merchants who accept cash in return for indirect online payments.

The corresponding impact of the same is observed in May 2020, with an immediate rise observed in bill payments, marginally surpassing the bill values paid in each month of January to March 2020 by ~ INR2 bn. This is further supplemented by cascading impact of bill deferrals done in April 2020, along with inclusion of new payment merchants such as FASTag payments, school fees, loan repayments, etc.

In June 2020, ~7 per cent growth was observed compared to May

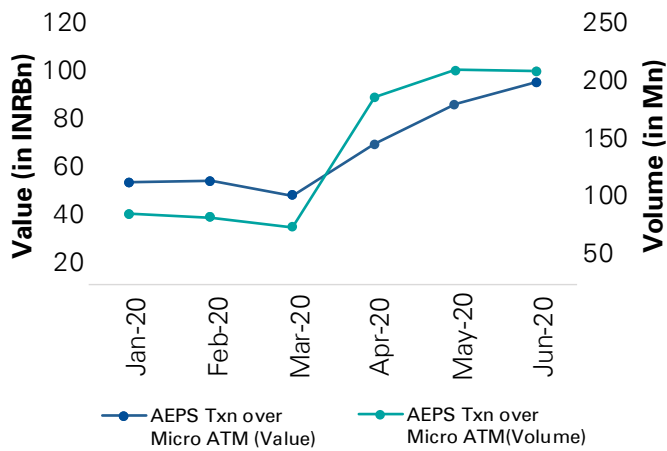


2020, signalling that the increase in bill payments were maintained, possibly explained by the aversion to cash payment of bill, primarily by the rural and middle class, attributable to transmission fears. Further, considerable proportion of working population, working from home, primarily in tier one and tier two cities may have resulted in increase in average consumption of utilities such as electricity, water, gas and internet as well as rise in over the top (OTT) payments for at-home entertainment such as direct-to-home (DTH) and streaming services, in presence of restrictions on outside entertainment avenues such as

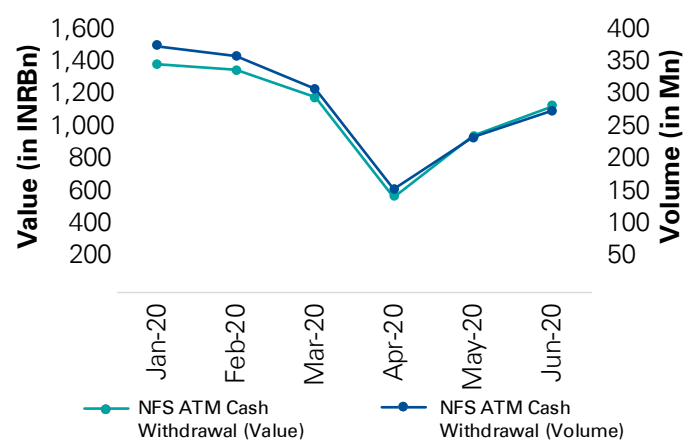
theatres and shopping malls. the beginning of the academic year post June 2020 has boosted payment of school fees, presently incorporated within the BillPay infrastructure.

Increased potential observed in bill payments in expected to be maintained, because new avenues for routine payments such as mutual fund payments, subscriptions, credit cards, housing society payments, recurring deposits, municipality taxes and services, etc. are slated to be covered by BillPay infrastructure.

**2.1.4. AePS Transactions over Micro ATMs**



**2.1.5. National Financial Switch (NFS) Cash Withdrawals**



Aadhaar enabled payment system (AePS) has seen an unprecedented and substantial surge in April 2020 in transactions handled. In April 2020 AePS transaction volumes and value increased by as much as ~118 per cent and ~30 per cent compared to January 2020. This is indicative that the outreach of the banking correspondent and micro ATMs payment mechanism spread widely during and post lockdown in the rural areas for the nation. Direct benefit transfer or DBT schemes announced by the central governments have encouraged rural populace to actively avail AePS services to retrieve cash supports transferred to their Aadhar linked bank accounts. Further, enhanced support from telecom operators for setup of strong AePS infrastructure, for last mile connectivity of business correspondents and micro ATMs boosted enrolment numbers.

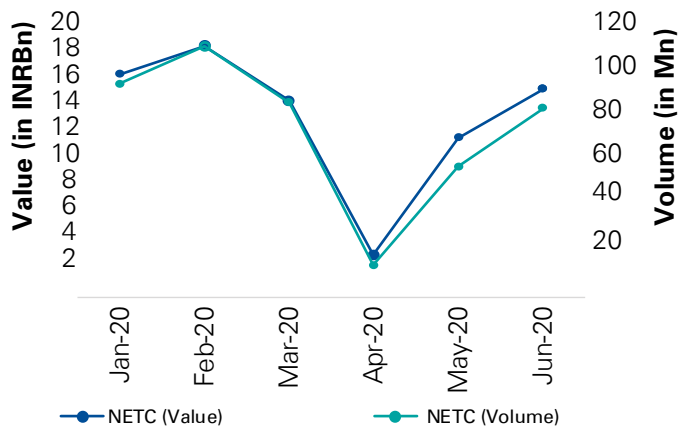
As of June 2020, AePS transaction values increased by ~9 per cent compared to April 2020 which denotes that the population enrolled in AePS ecosystem has continued to avail of their services in greater measure. Further, NPCI has indicated that the potential rollout of Aadhaar-linked face recognition enabled payments, in a measure to make AePS contactless, which when implemented, is further cause for acceptability, usage and growth.

Cash in general was treated with caution and reprehension once the lockdown was instituted primarily due to fear of transmission of the COVID-19 virus, lack of access to ATMs and challenges in the ATM replenishments due to restriction of physical movement. This is reflected as cash withdrawals in April 2020 via NFS ATMs seeing ~52 per cent decline as compared to January 2020 withdrawals. This is further aggravated by the unavailability of non-essential goods and services during lockdowns and cash on delivery not accepted as a mode of payment by most services delivering essential services.

Cash withdrawals did see an increase from May 2020 onwards and by June, they stood at ~84 per cent of January 2020 withdrawals. Demarcation policy of contamination zones as red, amber and green and substantial relaxation in the green and amber zones post May 2020 were implemented, allowing access to ATMs. Further, services delivering essential goods started accepting cash on delivery to boost declining sales (E.g. food aggregators, e-commerce players, etc.). Additionally, resumption of cash replenishment at offsite ATMs, which faced prolonged cash-outs during lockdown, reopening of bus and railway ticket booking, permission for resumption of liquor sales and general uncertainty over lockdown timelines further accelerated cash withdrawals.

From a macro outlook on the future of cash as a means of transacting post the pandemic, cash remains the preferred mode of payment for many people in India, more so in semi-urban and rural areas. Many of the small retailers, wholesalers and local vendors are not part of the digital ecosystem. They prefer cash as their transactions happen in this medium – both from their customers and to their suppliers. Also, because cash is convenient to use and universally accepted, and it does not require multitude of access to infrastructure and related support services, which is difficult to find in many areas, the usage of cash continues to remain high. With the COVID-19 situation continuing coupled with considerable levels of economic uncertainty, the reliance on cash is expected to be maintained.

## 2.1.6. National Electronic Toll Collection (NETC)



Owing to restricted movement of passenger vehicles across states (except for essential service providers), NETC saw sharp fall starting from March 2020. The movement of commercial vehicles was also limited to those carrying essential goods provided they have the permit from the respective authorities. In April 2020, NETC Collections had declined to ~15 per cent of their January collections levels.

However, post April 2020, collections witnessed a V-shaped recovery owing to the culmination of multiple factors such as demand for essential and personal protective equipment (PPE) increasing, e-commerce sites starting deliveries to amber and green designated zones, couriers starting logistics services, commercial vehicles availing the required permits to ply goods across borders. Additionally, the movement of migrant


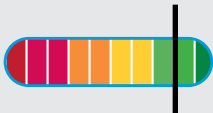
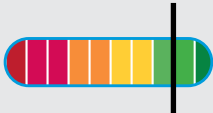

population from their location of employment to their hometowns/ base locations as well as re-opening of factories and offices at reduced capacity increased traffic of passenger vehicles across borders and highways, leading to rise in toll revenues and transaction values for NETC. By June 2020, toll collections reached ~93 per cent of the collection values in January 2020.


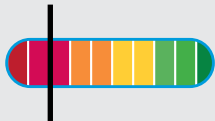


It was observed in June that the roads where more commercial traffic is plied upon, NETC collections have picked up faster, whereas passenger traffic are still a fraction of what they used to be before the lockdown. This is indicative that, as the economy eases up after lockdown, commercial traffic is expected to be a relatively significant contributor to anticipated NETC collections with reeling improvements in passenger traffic levels.



## 2.2. Product-level impact assessment








Various payment methods used in India have responded diversely and distinctly to the changes brought forth by the COVID-19 pandemic. The following table summarizes our view about the impact COVID-19 has had on various modes of payment:

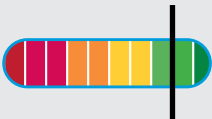






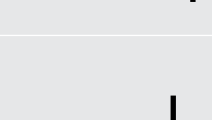
Payment mode	Impact (Red: Adverse Yellow: Moderate Green: Favourable)	Impact term	Remarks	Impacted sectors
Cards		Medium-term	The usage of cards for undertaking online transactions (due to limited opening of physical/ offline retail) is expected to increase significantly. From health and safety standpoint customers are expected to prefer the usage of contactless cards for payments.	<b>Positive:</b> Insurance, Essentials, Donation, online education, media / entertainment <b>Negative:</b> Travel and tourism, consumer durables, intra-city travel, apparel, restaurants
Wallets		Medium-term	This mode of payment is likely to witness a surge in the transaction volume and users due to the increase in payments being made online as a result of ease in usage, safer mode of payment. A significant shift in consumer behaviours and habits have been observed as they prefer use of wallets for small ticket payments which were primarily done through cash earlier.	<b>Positive:</b> Small merchants, Insurance, Essentials, Donation, online education, media / entertainment <b>Negative:</b> Travel and tourism, consumer durables, intra-city travel, apparel, restaurants
Payment gateway		Medium-term	As more and more cards and wallets transactions are expected to happen over online platforms, the usage of payment gateway for the purpose of processing transactions is expected to increase	<b>Positive:</b> E-commerce, Insurance, Essentials, Donation, online education, media / entertainment <b>Negative:</b> Travel and tourism, Hospitality
BBPS		Medium-term	The growth in this segment is expected to accelerate as in the current pandemic situation, individuals are expected to prefer to make payment of utility bills through online mediums to adhere to social distancing norms. Also considering, the biller base is increasing, and customer is adopting to the single ecosystem for the bill payment.	<b>Positive:</b> Utility bills such as electricity, telephone, broadband, gas, school fees, insurance, taxes etc.

Payment mode	Impact (Red: Adverse Yellow: Moderate Green: Favourable)	Impact term	Remarks	Impacted sectors
ATMs		Medium-term	Usage of ATMs has seen decline in April. However, it is starting to increase in light of relaxation in lockdown and opening of the various marketplaces. The fear of uncertainty over the current pandemic situation has fuelled the need to hoard cash to manage the unforeseen circumstances. However, going forward, the usage may be reduced due to the risk of transmission of virus via exchange of currency notes.	<b>Positive:</b> Essentials Travel, Hospitals <b>Negative:</b> Apparel, restaurants
Point of Sale (POS)		Medium-term	Due to limited access to offline stores, the usage of this medium may witness a decline. Further, modes of payment (such as QR code, Link based payments, etc.) may be preferred since they involve no transmission via physical contact.	<b>Positive:</b> Essentials <b>Negative:</b> Consumer durables, apparel, restaurants, jewellery
Toll collection related cards		Medium-term	This mode may witness a decline since overall tourism and travel sector is expected to witness a decline. Though movement of essential goods vehicles is expected to continue, personal travel is likely to continue seeing decline due to the risk of transmission of virus while in transit and hence, the usage of toll may reduce.	<b>Positive:</b> Essentials <b>Negative:</b> Travel and tourism
QR Code		Medium-term	There is an increase in small ticket payments, such as transactions at Kirana stores. Use of contactless mode of payment such as QR Code has seen a growth owing to convenience, speed, low maintenance and safety it offers.	<b>Positive:</b> Essentials <b>Negative:</b> Consumer durables

### 2.3 Sectoral impact assessment

Adaptability and agility in a business sector’s disruption mitigation measures have greatly influenced the degree and nature of COVID-19’s impact. The following table highlights impact of the pandemic on various sectors in India from a digital payments perspective.

Sector	Impact (Red: Adverse Yellow: Moderate Green: Favourable)	Impact term	Remarks
Travel		Medium-term	<p>Travel and hospitality sector contribute towards a significant portion of aggregate digital payments.</p> <p>Expected to degrow in the short to medium-term due to:</p> <ol style="list-style-type: none"> <li>Limited travel due to restrictions and fear amongst the commuters about virus spread.</li> <li>Limited corporate travels as work from home is new normal</li> <li>Only essential travel being preferred by the general public</li> <li>Uncertainty over the lockdown guidelines by different states</li> </ol>
Intra-city travel		Medium-term	Work from home norms and limited intra-city travel to avoid the spread of virus. Also, consumers are expected to prefer personal vehicles to avoid unnecessary contact with others
Apparel - offline retail		Medium-term	Overall economic condition, expected to result in GDP for FY20 remaining stagnant or contracting and loss of consumer earnings, which is expected to have a negative impact on this sector.
Apparel - online retail		Medium-term	Though offline apparel retail is expected to be impacted, online sales may witness an increase from certain sections of the society. Thus, there may not be a significant positive / negative impact
Media and Entertainment – offline		Medium-term	Avoidance of public places is expected to be a general consumer sentiment despite lifting up of lockdown restrictions unless cure is found.
Media and Entertainment – online		Medium-term	Restraints in forms of entertainment outside homes and avoiding public places may force public to look for various means of entertainment at home
Cross-border/ international payments		Medium-term	<p>Cross border payments are expected to be impacted as a result of near complete drop in tourism, trade barriers, supply uncertainties, etc.</p> <p>Further, international remittances is expected to also be impacted as a result of potential decrease in wages of Indians abroad.</p>

Sector	Impact (Red: Adverse Yellow: Moderate Green: Favourable)	Impact term	Remarks
Domestic transfers / remittances		Long-term	Domestic online remittances are expected to likely witness a positive impact as more customers are expected to use this facility to provide financial support to their families at base location.
Education – offline		Medium-term	The shutting down of various schools and colleges as a result of the virus and lock-down and lack of certainty with regard to their resumption may have an adverse impact.
Education – online		Medium-term	Due to the shutting down of schools and colleges, various institutions providing online courses have already witnessed a positive increase in business and the same is likely to continue going forward
Insurance (Health and Life)		Medium-term	As a result of the pandemic, both life and general insurance is expected to witness an increase in the business as a result of both renewals and new policies
Other insurance		Medium-term	As a result of the pandemic, this segment may or may not witness a positive impact as consumers might defer purchase of cars, houses etc. therefore, new customers on-boarding is expected to be very limited
Essentials - offline retail		Medium-term	Key innovations such as Soft PoS that enables merchants to accept payments via their smartphones, SMS link-based payments, digital onboarding of merchants, servicing the merchant payment-related requirements through mobile apps are further driving acceptance of digital payments in this segment.
Essentials - online retail		Long-term	From a safety and security standpoint, there is expected to be growing customer propensity towards online purchase and payments. As e-commerce companies are expected to offer various offers and cashbacks there is expected to be further increase in online shopping
Donations		Short-term	This sector has witnessed a positive impact due to the following transaction types: 1. Donations made to the funds established by the governments 2. Financial aid provided by the government through various reforms, etc.



Sector	Impact (Red: Adverse Yellow: Moderate Green: Favourable)	Impact term	Remarks
Telecom		Medium-term	Increase in the demand for broadband internet services is expected to result in a positive impact.
Utility bills		Long-term	Due to BBPS and digital infrastructure this segment was already on the rise in terms of digital payment, COVID-19 is expected to push for faster acceptance. This segment is expected to grow further as additional categories of billers are getting included in BBPS.
Hospitality / Tourism		Medium-term	Travel and hospitality sector contribute to 40 per cent of digital payments. Expected to degrow in the short to medium-term due to travel restrictions imposed by government as well as by individuals themselves
Consumer Durables		Medium-term	This segment is expected to witness a negative impact due to restrictions in the supply chain and delivery imposed as a result of social distancing, lockdown coupled with loss of consumer earnings
Restaurants		Short-term	Avoidance of public places for social distancing is expected to be general consumer sentiment despite lifting up of lockdown restrictions unless cure is found
Government related transactions		Short-term	This industry may witness a growth on account of higher DBT transfers and digital methods already used for considerable portion of municipal and other tax payments.





# Emerging trends

## 3.1. Regulatory Implications

In light of the potential growth expected in the digital payments backdrop due to COVID-19, regulation, compliance and vigilance around digital payments stands to gain further unequivocal relevance and importance, especially in a developing country like India. Even before the onslaught of the global pandemic, Indian government and regulators have focused greatly on enhancing penetration and acceptance of digital modes of payment. Consequently, regulations around digital payments are slated to be a growing need for the Indian digital economy.

**a) Global trends** – The United Kingdom's move to increase transaction limit on contactless card payments from GBP30 to GBP45<sup>1</sup> which is expected to

allow more customers to make payments without touching card terminals or handling cash has been supported by the large banks and payment card network. This is among the smaller initiatives that might be looked at by the Indian government, though there has not been any indication from the government or push from Indian card issuers on this aspect

### **b) Administrative regulations**

– Current initiative of NPCI to fast-track the merchant onboarding process for UPI and make it completely contactless may become a usual trend in the future if the pilot projects during the COVID-19 lockdown prove to be successful. This may also urge companies to look at know your

customers (KYC) system through video as a regular option for contactless customer onboarding. Ease of acquisition on both the customer and vendor front, is expected to contribute in long-term growth of the industry

**c) Emerging concepts** – With growing use of digital currency, many economies may consider accelerating their Central Bank Digital Currency (CBDC) testing and implementation initiatives. However, the product is in its nascent stages and it may be too early to comment on its implementation timelines in India

1. Contactless card payments limit increases to £45, Independent UK, April 2020

## Regulatory considerations during COVID-19 lockdown<sup>2</sup>

#	Summary of regulation/ development/ incentive	Expected impact
1	Introduction of charges to be levied on UPI transactions for peer-to-peer (P2P) payments (beyond 20 transactions)	Reduction in volume of transactions for banks that charge such fee. Few large banks are expected to begin to levy fees on UPI transfers beyond 20 transactions per month (at INR2.5 / INR5 per transaction, based on the value).
2	Restrictions imposed by state governments for using of cash to check the spread of virus - Gujarat government issued orders for all grocery stores (online/ offline/ home-delivery) to accept payments only through digital modes	Increase in adoption of digital payments amongst consumers and small merchants. Government push is expected to reduce resistance amongst small merchants and increase digital payment acceptance. Other state governments may follow suit.
3	Waive off third-party ATM withdrawal fees for three months starting 25 March 2020	May impact digital payments negatively in the short-term. ATM withdrawals witnessed a spike in transaction volumes and values since May 2020. <sup>3</sup> Cash in hand is expected to make people use the same instead of digital payments.
4	Fast-tracking merchant onboarding process and making it completely contactless	Increase in adoption of digital payments amongst micro, small, and medium size enterprises (MSMEs). Successful implementation during COVID-19 may positively impact long-term adoption of UPI and encourage small businesses to establish themselves online in a short span of time.
5	Enhancing public awareness on digital payments frauds and scams via campaigns through multiple channels	Should impact digital payments positively All authorized payment systems operators and participants are advised to undertake targeted multi-lingual campaigns by way of SMSs, advertisements in print and visual media, etc., to educate their users on safe and secure use of digital payments. This is expected to increase awareness and instil confidence amongst users regarding safety of digital payments.
6	RBI announces creation of Payments Infrastructure Development Fund	This should impact digital payments positively and increase acceptance and usage Payment Infrastructure Development Fund (PIDF) of Rs 500 crore has been created to encourage acquirers to deploy point of sale (PoS) infrastructure, both physical and digital, in tier-three to tier-six centres and north eastern states.
7	RBI Committee recommends to limit ATM cash withdrawals to Rs 5,000 <sup>4</sup>	This limit if implemented is expected to have a positive impact on digital payments RBI Committee recommends limiting ATM cash withdrawals to Rs 5,000 and levy charges on withdrawal of larger amounts. It also recommends increasing the charges on withdrawal in excess of free transactions allowed. This is expected to discourage users from withdrawing cash and encourage use of other digital modes allowing them to make larger transactions easily and without incurring any additional charges.

2. Compiled from various regulatory notifications issued by RBI and NPCI  
3. NPCI payments database (accessed in June 2020)

4. Report of the Committee to Review the ATM Interchange Fee Structure, RBI, 07 July 2020



## 3.2. Key growth factors going forward

### 3.2.1. Technology

#### 1. Product innovations

According to a monetary policy press release in 2019, RBI mentioned that it is in early stages of thinking about considering a sovereign digital currency for the country. Furthermore, a much needed boost to virtual card (open-loop) segment may come in, as RBI mandated tokenization of cards (currently only applicable on credit cards), thus, ushering in further growth for digitization. Removal of merchant discount rate (MDR) on RuPay cards and UPI transactions as well as creation of Payment Infrastructure Development Fund (PIDF) are among the government initiatives which are expected to provide required push for growth of merchant acceptance infrastructure and subsume more people within the digital ecosystem. Further, we also expect to see increased QR code usage across sectors which is expected to not only continue to aid the urban users but also empower the less digital-savvy sections of society due to the push provided for digital literacy beyond tier one and tier two cities.

Some of the key product innovations in the digital payments space in India include:

- a. QR Code:** Quick Response Code-based payments are gaining popularity because it can be used to pay for fuel, grocery, utility bills, food, travel and several other services as well as the fact that QR codes can be scanned from both paper and screen.
- b. UPI for Merchant transactions:** It is an instant payment system wherein the customer can scan a dynamic QR code generated on the POS screen using any mobile-based UPI app which may include contactless payment solutions as well
- c. Payment gateway:** Internet payment gateway enables merchants to accept payments through multiple payment channels via an e-commerce platform. This allows merchants to accept voluminous payments in a safe manner amid COVID-19 especially for online grocery, entertainment, food and other e-commerce merchants.

- d. Contactless payments:** The Near Field Communication (NFC) feature, coupled with magnetic secure transmission (MST) technology, allows customers to pay via their contactless credit or debit cards or through a 'Tap and Pay' feature on a mobile application by tapping them on the PoS terminal.
- e. SMS-based payments:** An SMS payment link sent by a merchant is used to pay for products or services especially for services preferring advance payments for booking or reservation such as restaurants and salons. The e-commerce companies are using this feature to migrate cash on delivery (COD) customer base to digital payments. SMS based payments have become less popular with the penetration of advanced smartphones and introduction of newer modes of payment. However, its scope remains high in the service sector.
- f. Prepaid cards:** Prepaid cards can be recharged or redeemed by using them on terminals, to serve as meal cards, transit cards or any such payment modes with designated purposes.

As digital payments increasingly become the preferred option in the future, there is a simultaneous need to tighten cybersecurity norms and evolve secured frameworks owing to the vulnerability of cashless to cyber threats.

#### 2. Infrastructure Innovations

It can be said that India has led the path to payments innovations, especially with the introduction of interoperable QR codes, one of the first of its kind in the world. While, this has increased ease of payments and made the user experience seamless, similar innovations/ initiatives are required to ramp-up the merchant acquiring pace.

For India's rural population, the key is minimal requirements for merchant onboarding and limited knowledge of operations. An Indian merchant in a tier three or tier four city may not be the most comfortable to use PoS machines because they may lack even minimal technical skill to operate it and not have

5. Edited Transcript of Reserve Bank of India's Fifth Bi-Monthly Monetary Policy Press Conference, RBI, December 2019

continual access to PoS machine support services. Apart from government initiatives to make merchant onboarding seamless, innovations in acceptance of local languages, wearable device based payments and biometric authorizations like fingerprints, face-recognition and voice-based payments are expected to be critical to use the COVID-19 situation to its advantage and increase acceptability of digital contactless payments, especially in tier one and tier two cities

### 3. Analytics-based solutions

The first wave for adoption of digital payments was supported by the ease of transacting, the seamless user experience that it offered and cashbacks. The next wave of growth may be led by fierce competition amongst existing players aiming to capture the market

share through value added services like payment reminders, automated debit instructions, individual cash management and analytics based on consumer spending and providing users with information on/ location of stores accepting digital payments

On the merchant front too, where the cash to digital switch is not compelling for the merchant, other value-added services can create a compelling value proposition for MSMEs. Aspects like customer relationship management, working capital management, access to credit, business intelligence based on sales data can assist small merchants with cash and inventory management by leveraging and organizing data that is generated as a part of everyday business activities

#### 3.2.2. Cybersecurity

To improve customer confidence in digital payments, it is of utmost importance to keep a control on the number of frauds that occur, and to ensure that customers are not impacted. Digital frauds and crimes are expected to be a persistent topic in future payment, especially as the global pandemic is considered in the equation. Balancing customer experience with cyber security is an ongoing challenge in the financial industry, and innovation in fraud prevention is a major focus that is expected to continue in the coming years. Identity imposters are evolving, and criminals are not only using stolen identification but also creating new, digital-only identities by knitting together real and fictitious information. These 'synthetic identities' exist only in the digital matrix. Existing fraud detection models are designed to prevent transaction fraud and cannot address these threats. Banks and payment companies must push to out-innovate fraudsters. Some are using new technologies such as geolocation, acoustic analysis and data analytics-based identification of abnormal events for digital applications and online, mobile and call centre servicing channels.

In light of such growing fraudulent deceits, Artificial intelligence is expected to become essential for successful payments fraud prevention strategies.

As India's dependence on digital payment systems deepens, particularly through the UPI and mobile wallets, these vulnerabilities are expanding the threat landscape for cyber-attacks, such as spoofing of identities, session hijacking, malware injection, 'Distributed Denial of Service' and 'Man in the Middle' attacks.





### 3.2.3. Potential growth in Payments Infrastructure

Despite the short-term and medium-term impact of COVID-19 on the economy and the digital payments space, the long-term prospects for the industry are promising and volumes are expected to continue growth momentum.

In order to support the growth, the government is taking several initiatives, including:

- **NCMC** - the Ministry of Urban Development has released the national common mobility card (NCMC) guidelines (based on open loop RuPay Contactless specifications) with the vision to have a nation-wide common mobility card that is expected to operate across all open loop payment infrastructure<sup>5</sup>
- **Payment Infrastructure Development Fund (PIDF)** - a bank and other payment intermediaries sponsored development fund with contributions from the regulators to improve payment infrastructure. PIDF should be used to expedite the acceptance infrastructure across Indian small towns and villages. Also, given the situation, the thrust on payments infrastructure must be on contactless payments from the start to increase acceptability<sup>6</sup>

A recent study<sup>7</sup> highlights that the usage of digital payments among Indian consumers (across age groups) in the current scenario was the highest at 75 per cent, followed by China (63 per cent) and Italy (49 per cent). The global average was at 45 per cent. Also, the usage of digital payments among Indian consumers is expected to be high (78 per cent) in the upcoming months, alongside China (63 per cent) and Italy (50 per cent). The global average of increase in usage of digital payments was at 46 per cent.

As growth in digital payments are observed, payment processors and aggregators are expected to evolve in tandem. Payment processors are expected to see opportunities in scaling up infrastructure and capacity owing to the expected increase in digital transactions going forward and are expected to be inclined to invest in consumer service quality. Considering the pressures of COVID-19 on profitability and even survival of payment processors who already operate on minimal margins, the trend of consolidation is also expected to pick up in the payment industry.

### 3.2.4. Variation in behavioural tendencies

#### a. Accessibility/awareness to all citizens:

The Indian government has taken several initiatives to boost the digital payments space in India which includes demonetization, the creation of India Stack (a collection of application program interfaces or APIs which leverage the Aadhaar biometrically verified identification programme to make digital transactions cheaper and more efficient)

Immediately post the lockdown, NPCI's priority was to ensure that infrastructure system supports enhanced digital payment access to all citizens of India. For the purpose of creating awareness and assurance about these modes, a campaign called 'UPI Chalega' was also launched. It is being supported by a microsite called UPIChalega.com to teach people how to make digital payments<sup>8</sup>

Digital literacy is key to ensure ease in using the various digital payment modes being made available to the users and to transform India into a cashless economy

#### b. Cash on delivery substitutes

Major e-commerce websites have already removed the option of cash on delivery (COD) on their orders to reduce contact on delivery. However, according to

a survey conducted,<sup>9</sup> about 83 per cent of shoppers in India favoured utilizing cash for all their online purchases

Though the virus has provided a push to digital payments in the e-commerce segment, it may be difficult to expect a behavioural shift from such a significant section of customers in the medium-term

This may increase sales of portable PoS machines to offer 'contact-less payment' on delivery or the e-commerce industry may even come out with innovative solution to collect cash in a contactless manner to capture customers without access to digital payments

#### c. Offline retailer penetration

Retail segment in malls and shopping complexes have been the most hit by lockdowns. With people wanting to avoid such places in the medium-term, digital payment processors with greater penetration at the 'kirana' store level is expected to benefit in terms of greater volume of transactions.





5. PM launches One Nation, One Card in Ahmedabad for Mobility Single Card, Ministry of Housing and Urban Affairs, 04 March 2019
6. RBI announces creation of Payments Infrastructure Development Fund, RBI, 05 June 2020
7. The consumer and COVID-19, Capterra Research Institute, April 2020.
8. UPI Chalega, NPCI Press Release, 24 February 2020
9. What's in your customer's digital wallet? article and Connected commerce survey, Nielsen's Global, 26 January 2016

# Survey insights

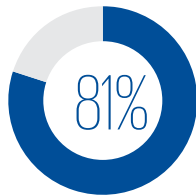


A recent poll conducted at a forum jointly hosted by KPMG in India and ET Edge for participants from payments space revealed the following insights.

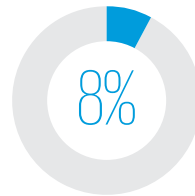
## A. What is the impact of COVID-19 on usage of digital payment?



**More cash, less digital payments**



**More digital, less cash payments**



**Only digital, no cash payments**

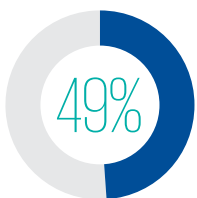


**Same as before COVID-19**

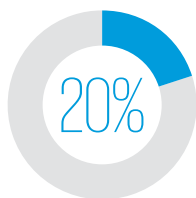
According to the results of poll survey on the impact of COVID-19 and its resultant lockdowns, a majority of 81 per cent respondents reported higher usage of digital payment methods than cash. The responses indicate a significant apprehension for cash payments, with a simultaneous transition to digital methods, primarily due to aspects of convenience, safety, security, and fear of transmission while allowing the consumers to maintain physical distancing. While, some participants (8 per cent) have responded that they'd be willing to use digital

payments exclusively. However, cash is still slated to be utilized possibly for small denomination transactions as well as at small scale vendors where possibly acceptance infrastructure is not present. Around 11 per cent per centage of the participants were of the view that the digital payments usage would be same as pre-COVID-19 levels. The higher inclination towards digital payments during this pandemic suggest that with proper infrastructure in place we could bring more and more population into digital payment ecosystem.

## B. Which according to you, is the key limiting factor for adoption of digital payments?



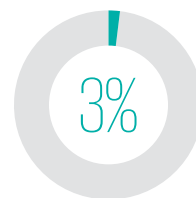
**Inadequate awareness of modes** (discomfort in use of technology)



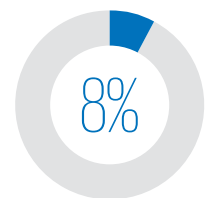
**Limited infrastructure**



**Set up cost and transaction charges involved**



**Security concerns**



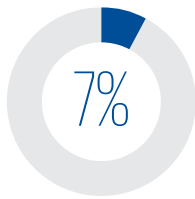
**Inadequate error/breakpoint/dispute handling**

The key hinderances highlighted by the participants in the adoption of digital payments in India include inadequate awareness and allied unease in use, lack of infrastructure and setup and transaction charges, accounting for around 89 per cent of the concerns voiced. Other considerations include inadequate dispute handling (8 per cent) and security concerns (3 per cent). Most participants have

indicated lack of awareness across various aspects such as ease of access and initiation, transaction mechanisms and costs as the primary reasons for avoiding adoption of digital payments. This might denote a simultaneous need for targeted advertising about the know-how of digital modes of payment as well as upgrading infrastructure to support payloads anticipated.



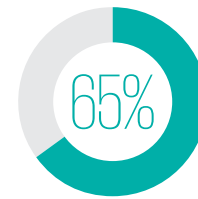
### C. How likely are you to move back to cash payments post COVID-19?



**Most likely, as I am concerned around security aspects of the digital payments**



**Somewhat likely, digital payments are convenient, but acceptability is low**

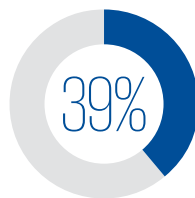


**Unlikely, digital payments are convenient and secure**

Majority of participants (65 per cent) were of the view that they would not move back to cash payments as they find digital payments safe and secure. However, nearly one-third of the participants have signalled that they might consider moving back to cash payments primarily citing low acceptability as a reason.

7 per cent participants cited security concerns as reason to considering reverting to cash which indicates a need to focus on fortifying existing infrastructure as well as awareness of available dispute and fraud redressal avenues to consumers. The participants views tend to denote that crossing the threshold of initial entry barriers in acceptance and use of digital payments is crucial to adding consistent end-customer base.

### D. Do you think increasing limit on contactless card payment from INR2,000 will help in increasing usage of contactless payments?



**Yes, the limit needs revision**



**Yes, but I have reservations about security and fraud**



**No, the current limit is sufficient**

Participants have expressed a general welcome on upgrade in upper limit of contactless cards, around half the population opining that they would welcome an increase in the limit but have shown worry around security and fraud which also plagues the existing contactless payments. 39 per cent of the respondents have stated that they welcome the upward revision in limit, which alternatively shows a certain confidence and acceptability in such cards and risks involved, coupled with a willingness to widen their usage. Nonetheless,

~11 per cent of the participants wished to restrict the limit to its present INR2000, possibly due to fears around fraud and disputes. This denotes that consumers tend to value security above convenience, in so far as they welcome ease of access and use but are also equally vigilant about protection of funds and restriction of loss by potential fraud, because contactless cards are more prone to such fears than one time password (OTP) based transactions.

# Conclusion


The downward impact of COVID-19 on the payment landscape has been profound and significant, yet not irreparable. Elements in the payment ecosystem are most adaptable to disruption and least dependent on physical infrastructure have been able to withstand, mitigate and even so far as capitalize the crisis, turning an imminent threat to their advantage. The pandemic has compelled individuals as well as organizations to re-evaluate their payment framework and infrastructure so as to incorporate considerations of disruption mitigation and continuity planning

Additionally, the pandemic has put a spotlight on inherent flaws brought forth by rigidity or inflexibility of being overly reliant on cash as a sole method of payment, for many legacy players in the industry as well

as individual consumers. The COVID-19 crises called into question the assumption of cash being the ultimate liquid asset, causing payers to evaluate its consideration as a sacrosanct payment method with the most access and convenience. Payers have displayed considerable apprehension to revert to cash payments once they have accepted digital modes of payment. That being said, cash is not expected to disappear anytime in the near future. Cash withdrawals in the NFS network have displayed signs of rebounding to pre-COVID-19 levels indicating that the Indian populace has a certain proclivity and propensity to transact in cash. Thus, COVID-19 may have given a sizable push in the endeavour to marginalize cash transactions, but not so far as to eradicate it completely.

Nevertheless, COVID-19 has been a silver lining, in many ways, for acceptability of digital payments in India. A key factor that served as a festering barrier towards the growth of digital was the impenetrability of existing payment infrastructure. However, the disruption caused by the pandemic allowed businesses the bandwidth to step back and reconsider their payment protocols for inclusion of digital from a streamlining and ease perspective. Also, individuals were inclined to consider digital payments in lieu of prevention to physical access to their funds

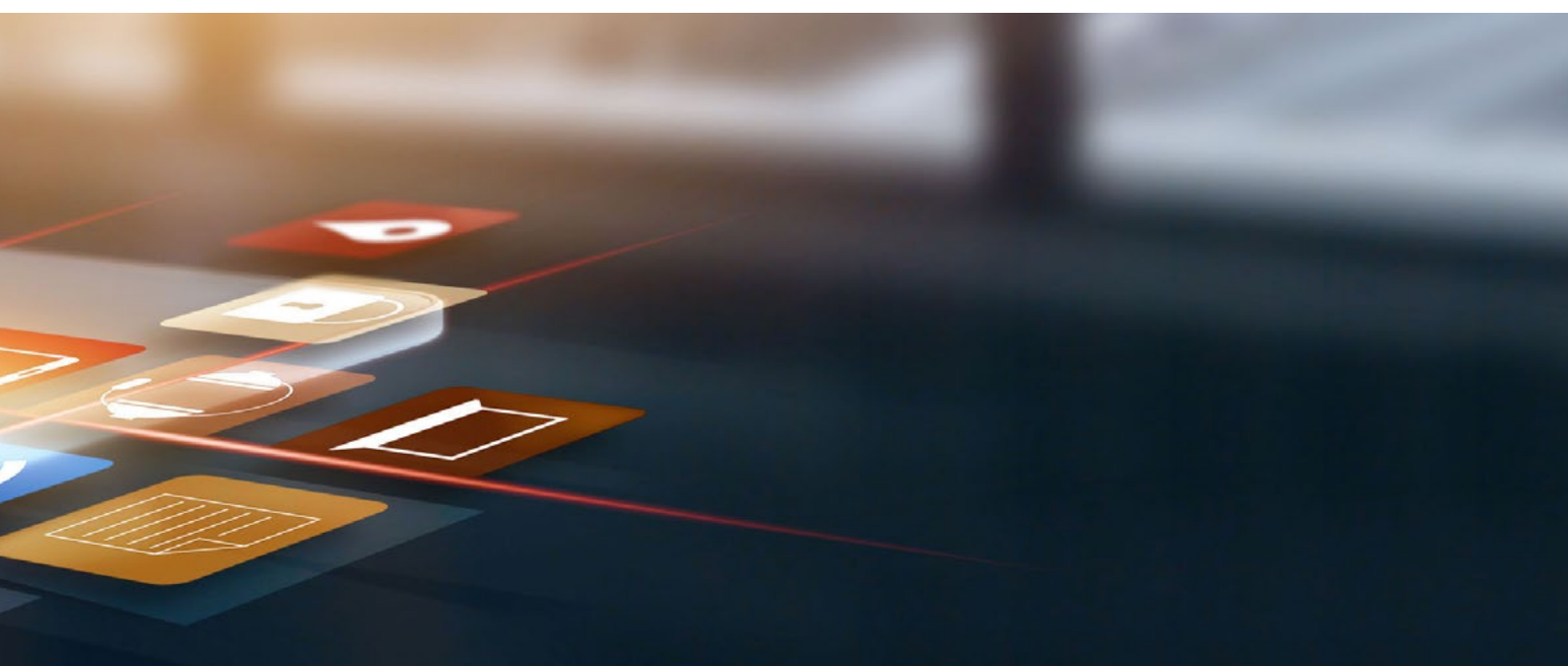
As highlighted by the polls conducted, apprehension towards digital payments, due to lack of awareness, infrastructure availability, technicality and costs involved played key reasons for non-adoption of digital payments



by individual payers. Whereas, in case of, business payments, the entire payments chain around a particular organization needed to accept digital payments, especially suppliers, for the organization itself to adopt digital payments. COVID-19 enabled a lot of this universal and engrained changes made necessary for digital inclusion, since it served as common ground for entire business payment systems to consider going digital at a common period of time. Further, individuals surpassed initial acceptability barriers to adopt digital because the epidemic and its restriction of movement served as the foremost incentive, to consider, in urban as well as rural areas. Rural economies were compelled to consider the AePS mechanism which led to an unprecedented rise in the transaction volumes post lockdowns.

Considerations around digital fraud and cybersecurity are geared to gain increased focus. Fraud security and vulnerability have been themes reflected in the surveys conducted to display apprehension towards contactless card transaction limit enhancements and wider usage of other digital payment methods. Also, with an increasing quotient of Indian populace, transacting digitally, spending behaviours and patterns are slated to become more accessible, which in turn, greatly highlights the already increasing value of business analytics to assess and understand payer behaviour. Banks and other payment agencies are expected to invest heavily in smart and efficient fraud detection and prevention architecture such as data analytics and artificial intelligence.

In summation, the impact of COVID-19 on the digital economy has been complex and multi-faceted. The increased adoption in the short term is likely to accelerate the sustained shift toward digital payments. Also, the pandemic has uncovered new perspectives and opportunities for Indian businesses and individuals, which can only be capitalized upon, by due agility and versatility to anticipated change.



# Glossary

<b>AePS</b>	Aadhaar Enabled Payment System
<b>API</b>	Application Program Interface
<b>ATM</b>	Automated Teller Machine
<b>BBPS</b>	Bharat Bill Payment System
<b>BHIM</b>	Bharat Interface for Money
<b>CAGR</b>	Compound Annual Growth Rate
<b>CBDC</b>	Central Bank Digital Currency
<b>COD</b>	Cash on Delivery
<b>DTH</b>	Direct-to-Home
<b>IMPS</b>	Immediate Payment Service
<b>KYC</b>	Know Your Customer
<b>MDR</b>	Merchant Discount Rate
<b>MeitY</b>	Ministry of Electronics and Information Technology
<b>MICR</b>	Magnetic Ink Character Recognition
<b>MSME</b>	Micro, Small, and Medium Enterprises
<b>MST</b>	Magnetic Secure Transmission
<b>NCMC</b>	National Common Mobility Card
<b>NEFT</b>	National Electronic Funds Transfer
<b>NETC</b>	National Electronic Toll Collection
<b>NFC</b>	The Near Field Communication
<b>NFS</b>	National Financial Switch
<b>NPCI</b>	National Payments Corporation of India
<b>OTP</b>	One Time Password
<b>OTT</b>	Over the Top
<b>P2P</b>	Peer to Peer
<b>PIDF</b>	Payment Infrastructure Development Fund
<b>PoS</b>	Point of Sales
<b>PPE</b>	Personal Protective Equipment
<b>QR Code</b>	Quick Response Code
<b>RFID</b>	Radio Frequency Identification
<b>RTGS</b>	Real Time Gross Settlement
<b>UPI</b>	Unified Payments Interface

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IN OUR SPIRIT OF UNDYING ENTHUSIASM  
OUR DRIVE TO ACHIEVE THE EXTRAORDINARY  
UNMOVED BY FEAR OR CONSTRAINT  
WE'RE DRIVEN BY JOSH AND IT SHOWS**

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