



The remarkable rise of UPI in 2020

December 2020



Foreword

Dear readers,

It is my pleasure to bring to you the latest edition of our Payments newsletter. In this edition, we have explored the growth of Unified Payments Interface (UPI) as a catalyst to enable digital payments in India and UPI's plans to enhance the volume of digital transactions exponentially, and add new and innovative use cases across India.

In addition to our views, we have captured the impact of new UPI regulations and analysed the recent infrastructural challenges faced by UPI.

I hope you will find this to be a good and insightful read.

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In this issue



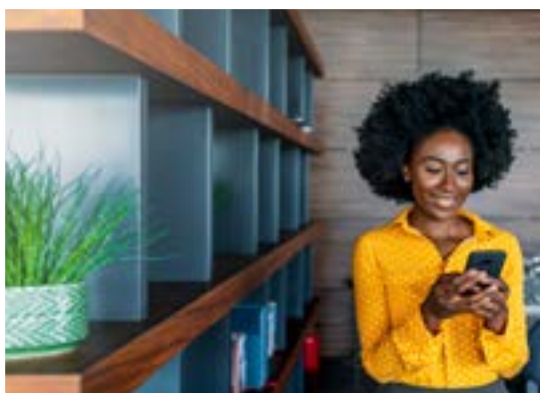
Performance of UPI in 20204



Capping the market share of UPI players8



Infrastructural challenges11



International developments14



New business areas for UPI16



Payments technology updates19



Performance of UPI in 2020

01



Performance of UPI in 2020

UPI is a digital payment platform in India that enables fast interbank transactions. Ever since its launch in 2016, UPI has achieved various milestones. In October 2019, it recorded one billion transactions in a month. UPI has continued with its success story in 2020 as well. Two billion UPI transactions were recorded in October 2020. We will further explore the growth of UPI in this newsletter.

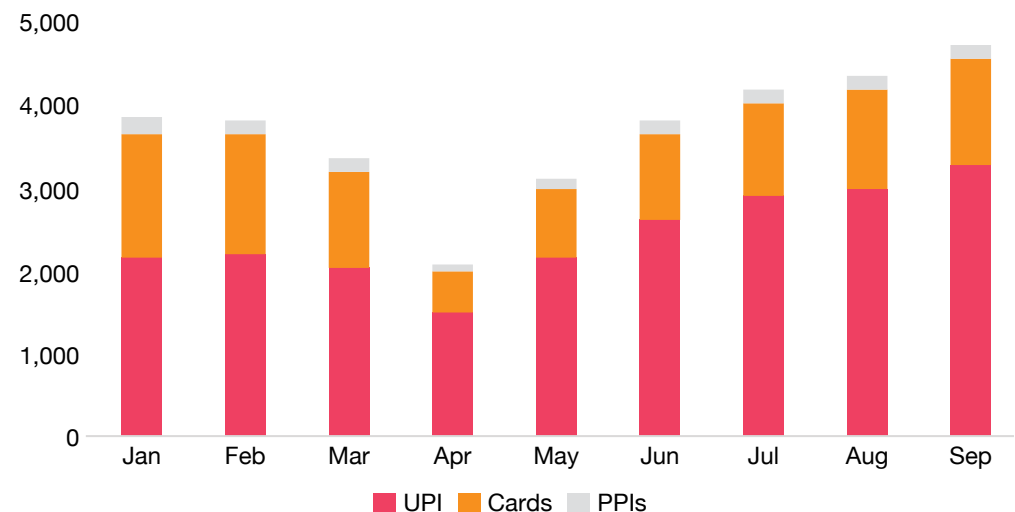


UPI's growth trajectory

UPI has become the preferred digital mode of payment among customers. As per the Reserve Bank of India (RBI),¹ the value of transactions via cards has dropped from INR 1,511 billion to INR 1,262 billion between January 2020 and September 2020. During the same period, the value of transactions via prepaid payment instruments (PPIs) also decreased from INR 183 billion to INR 166 billion. However, the value of UPI transactions during the same period increased from INR 2,162 billion to INR 3,290 billion.

The figure below shows the strong growth trajectory of UPI in 2020.

Digital payments in 2020 (in INR billion)



Source: RBI

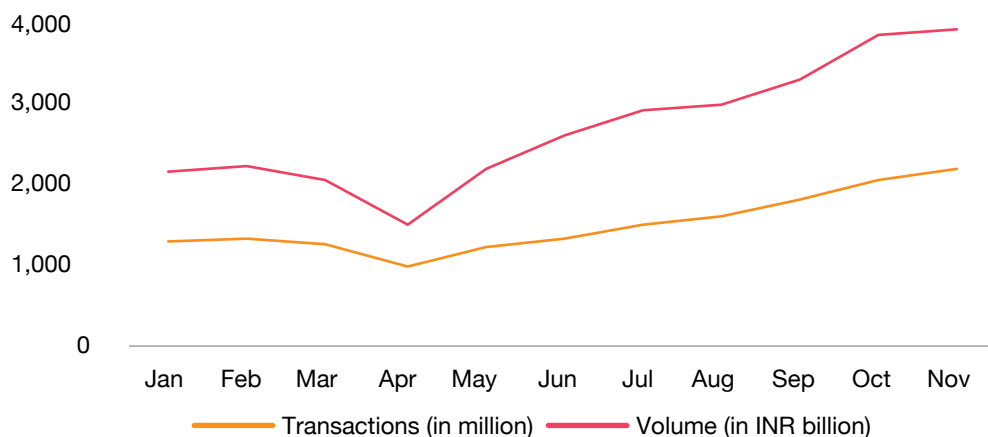
¹ <https://dbie.rbi.org.in/DBIE/dbie.rbi?site=home>



UPI crosses two billion transactions in October 2020

UPI completed another milestone to cross two billion monthly transactions in October 2020.² It had crossed the figure of one billion monthly transactions in October 2019.

UPI transactions in 2020 (in INR billion)



Source: RBI

The value of UPI transactions is nearing INR four trillion in a month. As of November 2020, there are 200 banks and 21 third-party players live on UPI.³

Regulators driving UPI adoption

Regulators are playing a key role in driving the growth of UPI adoption. They are expanding UPI acceptance in new payment areas as well as promoting adoption by removing charges and fees on UPI transactions.

1. Merchant transaction limits for UPI increased from INR one lakh to INR two lakh per day

The National Payments Corporation of India (NPCI) has doubled the transaction limit for certain UPI transactions from INR one lakh to INR two lakh per day for verified merchants.⁴ Users can now pay credit card bills and loan instalments, as well as make payments for mutual funds, brokerage, etc., using UPI.

The change also bridges the gap between real-time gross settlement (RTGS) payments, which has a cap of minimum INR two lakh, and UPI transactions.

2. Removing PSP fees and UPI charges for customers

Regulators in the recent past have removed transaction charges, merchant discount rate (MDR) and payment service provider (PSP) fees. A notice issued by the Central Board of Direct Taxes (CBDT) in August 2020⁵ directed all banks to stop charging for UPI transactions and refund the charges collected on and after January 2020. Banks were charging INR 2.5 for transactions worth below INR 1,000 and INR 5 for transactions worth above INR 1,000.

² <https://www.npci.org.in/what-we-do/upi/product-statistics>

³ <https://www.npci.org.in/what-we-do/upi/3rd-party-apps>

⁴ <https://www.npci.org.in/PDF/npci/upi/circular/2020/UPI%20OC%2082%20-%20Implementation%20of%20Rs%20%20%20Lakh%20limit%20per%20transaction%20for%20specific%20categories%20in%20UPI.pdf>

⁵ <https://www.incometaxindia.gov.in/communications/circular/circular-16-2020.pdf>



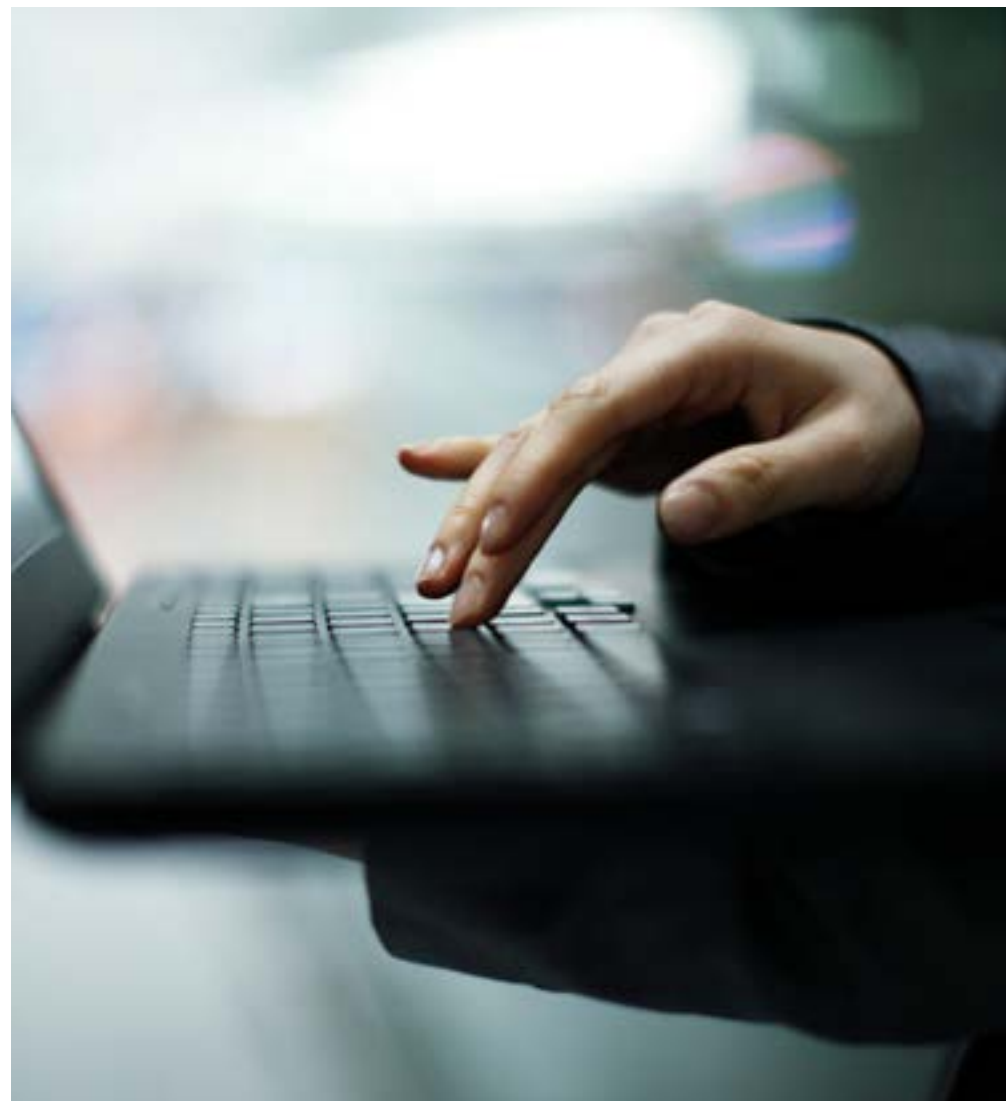
The NPCI also abolished PSP fees for person-to-merchant (P2M) UPI transactions from 1 January 2020, terminating one of the primary revenue streams of PSPs.⁶ These PSP apps were charging INR 0.25 for transactions worth below INR 1,000, INR 1 for transactions worth up to INR 25,000 and INR 5 for transactions worth up to INR 75,000. This move aims at increasing adoption of UPI by merchants.

Impact on industry players

While the abovementioned changes are increasing adoption of UPI at the customer level, they have resulted in loss of a major revenue stream for banks and PSPs (although, it doesn't apply to mandates, EMLs, overdraft accounts, B2B collection and payments as they still continue to generate revenue for industry players). However, PSPs are trying to figure out other sources of revenue generation apart from transaction-based revenue. Some of them have entered into agreements with partner banks to earn a percentage of the overall float/value of transactions handled by them. Some are leveraging payment data for developing insights that would enable them to operate in new areas like wealth management and digital lending. These companies are also collecting and aggregating payment data that is being sold in the form of specific insights to telcos and non-banking financial corporations (NBFCs).

While the volume of UPI transactions has been increasing, a free-market model is more suitable for market stability and continuing exponential growth, where pricing model and charges are determined by market forces. Regulators need to drive competition among players and ensure that customer interest is protected. Moreover, a market-driven cost structure also

encourages banks and third-party players to upgrade their infrastructure and keep it up to date for supporting the increasing volume of UPI transactions. Charges on UPI transactions were implemented for preventing low-value UPI transactions and unnecessary pressure on the platform.



⁶ <https://entrackr.com/2020/02/npci-abolish-psp-fee-upi/>

Capping the market share of UPI players

02





Capping the market share of UPI players

Regulators have been watchful of the UPI industry and are intervening on a regular basis to strike a balance between adoption amongst customers and acceptance by industry players. Recently, the NPCI capped the market share of UPI transactions on third-party apps at 30%.

Market cap of 30% on UPI transactions by third-party players

The NPCI released a circular in November 2020, putting a market cap of 30% on UPI transactions through third-party players from January 2021.

This step was taken to reduce the risk of the UPI ecosystem becoming monopolistic or duopolistic, as well as lower the overall systemic risk. It will also allow other FinTech players to enter the market and drive innovation by introducing new use cases.

This step also protects existing players with a significant market share from the potential threat of new entrants capturing a large part of the market share of UPI transactions.

Impact of new regulations on existing players and the digital payment ecosystem

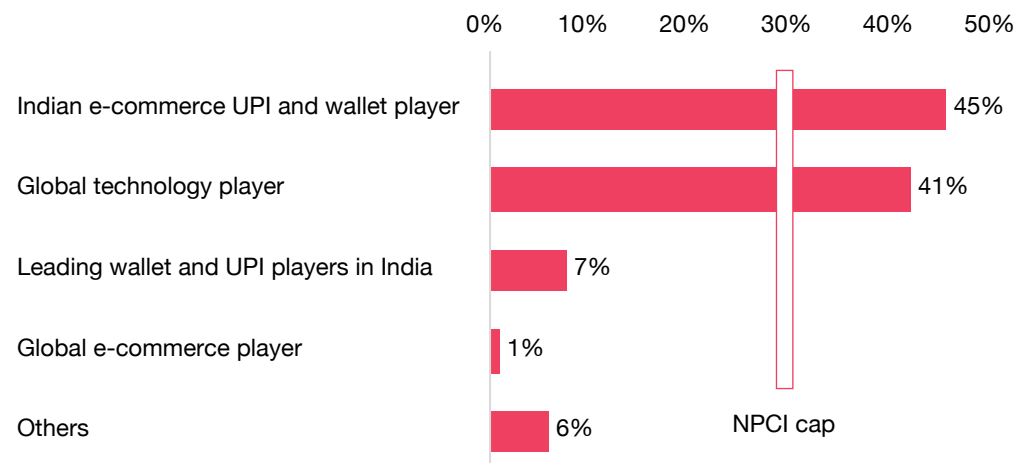
Two digital payment platforms account for more than 40% of UPI transactions in India.⁷ A reduction in the market share of the two players will ensure sustainability of existing players and the UPI industry itself. However,

the volume of UPI transactions is nearly doubling every year. Thus, it is expected that existing players will continue to grow despite lower market share as they have two years to implement the 30% cap guidelines. Hence, these players must continue to build strong infrastructure.

Banks and financial institutes need to build more partnerships within their payment platforms for niche categories with high-value transactions and explore new features such as voice payments. Another impact aspect is the success rate of the UPI platform and customer engagement. A continuous innovation model will determine UPI's market dynamics.

Market share of third-party apps in UPI transactions

November 2020



Source: RBI

⁷ <https://www.npci.org.in/what-we-do/upi/upi-ecosystem-statistics>



Other existing players are expected to find an opportunity to become alternatives to the two leading players. But it is critical for other players to strategise their next steps and acquire more market share since the digital payment landscape is highly competitive.

Impact on customers and society

Capping of market share will prevent the UPI market from becoming monopolistic or duopolistic and drive innovation for enhancing customer experience. However, given the capping guidelines, the NPCI will have to build a mechanism to protect customer experience.

The standard operating procedures (SOPs) after implementation of the newly formed regulations are yet to be released. But in case the 30% cap is breached, the NPCI is likely to route transactions through a different service provider. This is to ensure that capping doesn't affect the payment experience.





Infrastructural challenges

03





Infrastructural challenges

While the growth of UPI has been phenomenal, infrastructural issues have also increased in the recent past. Failure rates have risen sharply in UPI payments and customers have faced multiple issues while carrying out UPI transactions. Recently, digital payment platforms of a large private bank and a public-sector bank have faced technical glitches.

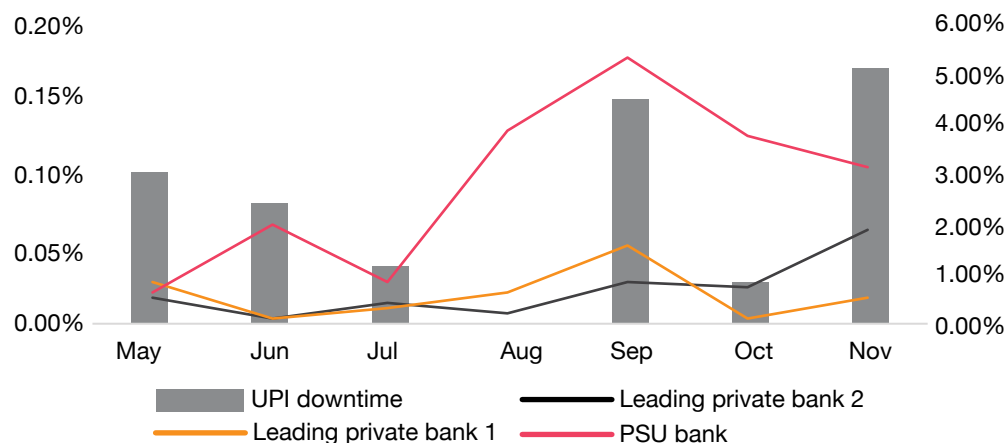
UPI failure rate and downtime

As per NPCI data, UPI downtime has significantly increased to 0.17%, while most banks faced high rates of technical failure in November 2020.⁸ Technical declines have also increased for more banks in the last three months. Outage at data centres is are officially quoted by banks as the reason behind increasing in failure rates.

The possible reasons for increasing technical failures are:

- 1. Sudden growth:** UPI transactions have grown unexpectedly in the recent past while infrastructure capability has remained the same. This triggers a platform risk of existing infrastructure to become incapable of handling such high volumes of transactions. Since UPI transactions are expected to grow in the future, there is a need for building adequate infrastructural capability for all stakeholders.
- 2. No incentives for investment:** UPI service does not add to top line (revenues) for banks and PSPs. Zero MDR and zero customer charges leave no incentives for banks to invest in infrastructure and human resources. Thus, customer experience is hampered due to high failure rates.

UPI ecosystem



Source: NPCI

- 3. Accountability for failed transactions:** There is no detailed data on failed transactions and their types. Since there are multiple players involved in a payment service, accountability for failure remains anonymous.
- 4. Complex structure and multiple failure points:** UPI transactions are carried out involving the core banking systems of both sender and receiver banks. The UPI payment architecture has a complex structure and multiple failure points. There are four participants (the PSP, sender bank, NPCI and receiver bank) involved in a transaction and a typical UPI transaction flow involves 18 steps, thus increasing the risk of potential failures.⁹

⁸ <https://www.npci.org.in/what-we-do/upi/upi-ecosystem-statistics>

⁹ <https://www.mygov.in/digidhan/pages/pdf/sbi/NPCI%20Unified%20Payment%20Interface.pdf>



Actions taken by regulators to improve failure rate

Regulators have acknowledged technical issues in UPI transactions and taken some steps to counter the failure rate:

- 1. Unified dispute and issue resolution:** RBI is planning to build a unified dispute and issue resolution (UDIR) management system for addressing the failure rate in UPI transactions.¹⁰ They have advised banks to implement the same to address payment disputes. This system will enable users to lodge complaints and check the status of transaction-related disputes. It would also proactively check the status of pending transactions and notify all parties involved.
- 2. Creation of a backup ID to improve customer experience:** To cater to the need of users, UPI has allowed large third-party application providers (TPAPs) to create a secondary ID for their multibank model, enabling them to handle the expected rate of 100 million transactions per day. This is going to address recent technical declines in UPI transactions across banks and TPAPs by allowing them to use the secondary ID in case the primary ID isn't available.¹¹
- 3. Direction to examine lapses:** The RBI has directed banks to examine lapses and be accountable for recent technical glitches. This will help the central bank find the root causes of technical glitches and fix them accordingly.

The regulators have implemented some key measures to put a check on increasing technical failures, but they would need support from industry players such as banks and PSPs to incorporate these measures and upgrade their technical infrastructure to smoothly function as traffic increases on the UPI platform.



¹⁰ <https://www.npci.org.in/PDF/npci/upi/circular/2020/Circular-98-UDIR-Enhancing-Complaint-handling-and-resolution.pdf>

¹¹ <https://www.npci.org.in/PDF/npci/upi/circular/2020/OC-94-Backup-UPI-ID.pdf>



International developments

04





International developments

New entity internationalises UPI

The NPCI has launched its wholly owned subsidiary NPCI International Payments Ltd. (NIPL)¹² to venture into international markets and co-create payment systems with participating nations.

The primary focus will be internationalisation of UPI and RuPay, which in turn will help the NPCI's technological acumen to reach other nations.

Countries from the Middle East and Southeast Asia have expressed interest in setting up domestic card schemes and real-time payment systems. The following use cases are examples of UPI's internationalisation:

Use cases and potential impact scenarios

a. UPI in Singapore and UAE

The Singapore and UAE market has already been tapped into by RuPay cards and UPI can be used for transactions across various points of interest, including airport terminals.

- People travelling to Singapore and UAE can use UPI as it is expected to solve the scarcity of payment options due to currency conversion issues and non-availability of international credit or debit cards.

- FICCI's agreement with Singapore FinTech Association will boost UPI's global usage with various FinTechs in multiple markets.¹³

b. Global partnerships and similar models

The NIPL and NPCI have already established partnerships with institutions like the Royal Monetary Authority (RMA) of Bhutan and Network for Electronic Transfers (NETS), Singapore, for QR-based payments through UPI.¹⁴

- These partnerships will allow international travellers to use RuPay and UPI for transactions.
- Products like FedNow by the Federal Reserve have taken inspiration from UPI for its real-time payments.¹⁵

The robustness of UPI in providing an interbank, open and real-time system that is secure and fast will help it in becoming a global player and bringing more technological innovation into the payments space. It will help the NIPL in becoming a major player and partnering with financial institutions in developing payments infrastructure, faster payment modes and real-time QR-based payment systems across these international markets.

NIPL will aim at building strong relationships with various countries and helping them build card schemes and real-time payment systems. This might also help businesses to leverage India's build platform for cross-border payments and enable international travellers to use domestic cards outside India.

¹² https://www.npci.org.in/PDF/npci/press-releases/2020/NPCI_press_release-NPCI_launches_its_subsidary_firm-NIPL.pdf

¹³ <http://www.ficci.in/ficci-in-news-page.asp?nid=19191>

¹⁴ <https://www.npci.org.in/who-we-are/group-companies/npci-international>

¹⁵ <https://www.livemint.com/news/india/google-wants-us-federal-reserve-to-follow-india-s-upi-example-and-build-fednow-11576335813947.html>



New updates for UPI

05





New updates for UPI

The NPCI has granted licence to a cross-platform messaging service to operate in India's digital payment space. It has also added Government, initial public offering (IPO), auto and recurring payments to UPI to promote its adoption. The new business areas for UPI are detailed below:

1. Licence granted to a messaging service

The NPCI has granted licence to a messaging service to roll out its payment services in a phased manner, starting with a maximum of 20 million customers. Currently, this player has a large user base of more than 400 million people in India.¹⁶

This application will allow users to send/receive money to and from their contacts who have enabled UPI on the messaging service. Users can also transfer money to those who are not in their contact list by scanning a QR code.

The messaging service can further venture into digital lending, wealth management and insurance, providing fast and convenient services to its customers. Moreover, the recent deal signed between a large telecom player and a social media player can help in building a partnership model to connect shops, businesses and customers, allowing customers to purchase products from a single integrated platform. The platform can also integrate services like online food ordering, bill splitting and invoice sharing.

2. Promoting Government payments

The Government is promoting the use of UPI within its departments. UPI can be used to pay for bills across major departments (electricity, water, e-tax filings, etc.). It is encouraging more departments to tie-up with banks and the NPCI to provide seamless UPI integration in QR-based payments.¹⁷

The incentives started by the Government since 2017 through PayGov India (under the Ministry of Electronics and Information Technology) for onboarding of agencies on BHIM/UPI and other e-payment methods have started showing signs of growth. As of 30 November 2020, 221 Government departments/agencies are live on the payment gateway and have recorded transactions worth over INR 18,200 crore till date.

3. UPI AutoPay: Recurring payment

The NPCI has introduced UPI AutoPay under UPI 2.0 updates. UPI AutoPay enables users to make recurring payments like mobile bills, electricity bills, EMIs, OTT subscription fees, insurance and mutual funds premiums.¹⁸

UPI AutoPay will not only make recurring payments more accessible and easier for users, but also help in the growth of businesses across multiple sectors. The RBI has also proposed increasing the limit of cashless payments through UPI AutoPay without using a personal identification number (PIN) from INR 2,000 to INR 5,000 from January 2021.

¹⁶ <https://tech.hindustantimes.com/tech/news/whatsapp-now-has-about-400-million-users-in-india-story-CT4v7JjYjmcB8YKIQiSkXJ.html>

¹⁷ <http://paygovindia.gov.in/>

¹⁸ <http://paygovindia.gov.in/>



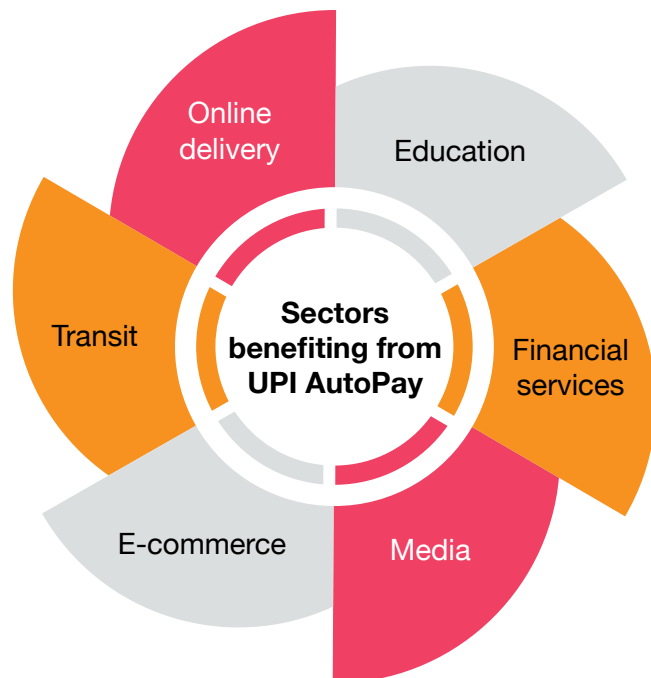
4. IPO subscriptions

UPI ID (VPA) can now be used while subscribing for IPO¹⁹ on the National Stock Exchange (NSE) and the Bombay Stock Exchange (BSE).

The amount to be paid gets automatically blocked in such cases. This is going to help investors pay using their UPI ID safely and easily. The advantages include:

- i. instant mandate creation, ensuring real-time submission of applications for IPO
- ii. instant fund transfer and customer support for UPI-based transactions.

Sectors benefitting from UPI AutoPay



¹⁹ <https://www.npci.org.in/what-we-do/upi/live-ipo>

Conclusion

The foray of UPI into multiple sectors in 2020 and the payment system recording two billion transactions in a month are phenomenal for the digital payment space. While there are new business areas that are adopting UPI, the payment system must also focus on building required infrastructure for absorbing such large-scale growth and minimising technical failures.

The phased approach of allowing new players will allow regulators and industry players to be aware of any fraudulent activities prevailing on the UPI platform and upgrade their infrastructure accordingly.





Payments technology updates

06





Payments technology updates

Paytm waives off all charges on merchant transactions

Livemint

Paytm is now taking payments revolution to the next level by enabling the merchant partners to accept payments from Paytm wallet, UPI apps and RuPay cards at zero charges.

[Read more.](#)

AGS Transact, Utimaco partner to provide cyber-defence technology for digital payments

Economic Times

Global IT security solutions provider Utimaco and AGS Transact Technologies, an end-to-end cash and digital payment solutions provider, have entered into a partnership to provide security solutions for payment and automation solutions.

[Read more.](#)

RBI to set digital payment security control rules

ETOnline

In the wake of jump in digital monetary transactions during the pandemic and also failures of and frauds involving these transactions, the Reserve Bank of India (RBI) will be issuing rules for digital payment security controls.

[Read more.](#)

RBI increases limit for contactless card transactions to Rs 5,000 from January 1

ETOnline

To ensure the adoption of digital payments in a safe and secure manner, the RBI has proposed to increase the limit for contactless card transactions to Rs 5,000 from Rs 2,000 per transaction from January 1, 2021.

[Read more.](#)

Iceland Central Bank Debuts Instant Payments

Pymnts

The **Central Bank of Iceland** (CBI) is debuting a new instant pay platform with partnership with **SIA**, a European company specializing in high-tech payment services and infrastructures.

[Read more.](#)

Cred raises \$80 million in Series B funding as valuation almost doubles

Economic Times

Credit card repayment platform Cred has raised \$80 million in a round led by existing investor DST Global. The round also saw the participation of other existing investors Ribbit Capital, Sequoia Capital and Tiger Global, said a person privy of the development

[Read more.](#)



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