

The Indian payments
handbook – 2023–2028

Preface

Dear readers,

We are pleased to bring out the half-yearly edition of 'The Indian payments handbook' for the period 2023–2028. Like the previous three editions, this half-yearly publication focuses on the latest trends in India's fast evolving digital payments industry.

We have analysed the trends of different digital payment instruments during the first quarter of FY 2023–2024.

We have also looked into some of the existing challenges faced by different stakeholders – customers and payment service providers (PSPs) – and the potential mitigants.

Our handbook draws inspiration from the Government's and the RBI's vision for the growth of digital payments in India. We have tried to analyse the different initiatives taken by the Reserve Bank of India (RBI) and their possible outcomes. We have also looked into the latest innovations in India's digital payments industry and shared our views on how they are redefining this industry and laying the foundation for Payments 3.0.

We have also talked about some of the major challenges that the ecosystem stakeholders in India currently face and tried to explore ways in which those can be resolved.

We hope you will find this report to be a useful and insightful read.

Regards,

Mihir Gandhi

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Executive summary

Digital payments in India have seen unparalleled growth in the last decade. In ‘The Indian Payments Handbook – 2022 - 2027’,¹ we analysed how different payment instruments are evolving and identified some of the developments in the payments space which have the potential to act as a catalyst for the future growth of this sector. We also examined changes in consumer preferences and the shift to digital modes for various transaction types.

This publication is a half-yearly update on ‘The Indian Payments Handbook 2022 - 2027’ edition. In it, we have analysed the various payment instruments – key trends, growth and impediments. We also look at the innovations and trends that are likely to transform the digital payments industry in India and the opportunities for various ecosystem participants in the future.

Digital payments in India continued to have a healthy YoY growth rate of 58% in FY 2022 - 2023 compared to FY 2021 - 2022. UPI continues to be the flag bearer of this growth story, accounting for over 75% of retail digital payments in India. Amongst cards, credit card transaction volumes saw a YoY increase of 30% in FY 2022 - 2023 compared to FY 2021 - 2022, while debit card transaction volumes saw a YoY decline of 13% in the same time period.

India has taken an approach to regulate and innovate, strengthen the current payment rails, and look out for opportunities which will boost future growth in the industry. Financial institutions have invested heavily to migrate to asset-light infrastructure by moving towards cloud-based storage and services. In addition, they have placed fraud detection and mitigation at their core to provide a safe and secure transaction experience to customers. India has also invested in modern payment systems like Central Bank Digital Currency (CBDC) and plans to set up emergency payment systems like a lightweight payment and settlement system (LPSS). While the digital payments industry in India is growing, it also faces certain challenges such as an increase in frauds, limited access to customers in the hinterlands, stress on stakeholder profitability and need to increase customer awareness. The RBI, along with PSPs, has been working to address these issues by introducing innovative solutions. The LPSS payment rail conceptualised by the RBI in its annual report 2022–23 seeks to deal with unforeseen natural calamities or any other form of disruption. The RBI has also recently envisaged a digital public tech platform for frictionless credit and conversational payments in UPI in its latest statement on development and regulatory policies.

With their technical expertise, FinTechs play a crucial role in the overall development of the digital payments industry in India and are building solutions to address the existing challenges faced by different stakeholders. With the help of artificial intelligence (AI) and machine learning (ML), they are building solutions to better protect consumers from frauds and money laundering. To promote and grow the FinTech industry in India, the RBI has shared its intent to regulate the sector and adopt a more focused approach.

Adoption of CBDC has the potential to change the way people transact and pave the way for the evolution of digital payments for specific use cases in both wholesale and retail. Amongst other benefits, CBDC helps in reducing the cost involved in transactions as there are fewer stakeholders involved. This is going to be critical for cross-border payments, especially for low-value transactions, as CBDC transactions will have a lower transaction cost and enable faster realisation of payments by recipients. India is amongst the few countries performing a pilot on retail and wholesale CBDC. Going forward, there are still a few considerations from the design, technology and regulatory perspective, with many potential use cases to be explored.

We are at an exciting time in the Indian digital payments space – while much has already been done by various stakeholders, with the right focus and approach as well as supportive policies and innovation, India’s leadership position on the global stage can be secured in the years to come.

1. <https://www.pwc.in/assets/pdfs/the-indian-payments-handbook-2022-2027.pdf>

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Introduction

To achieve the nation's vision of transforming into a developed country by 2047, it is imperative that all citizens be brought under an organised financial ecosystem. Digital payments in India have been successful in making India a more financially inclusive country. With digital payments seeing rising adoption, India is becoming a less cash-dependent country.

Digital payments are helping the growth of other industry sectors (both B2B and B2C) by eliminating the challenges involved in cash transactions. This has made it easier and faster to realise the transactions in the recipient's financial books. As a result, digital payments have been able to reduce the cost of funds required in these industries. Innovations in the payments lifecycle are resulting in sustainable growth in industries such as education, transportation, healthcare, insurance, automobile, manufacturing, banking, e-commerce and aviation. The benefits of digital payments are enjoyed right from a small neighbourhood kirana shop to a large conglomerate handling high-value complex receivables and payouts.

Over the last five to seven years, as digital payments adoption increased with the introduction of new use cases and innovative products by payment service providers (PSPs), we have seen huge growth in most of the digital payment instruments. The growth of UPI payments has driven the overall growth story of digital payments in India and is expected to maintain its high growth trajectory, given the Reserve Bank of India (RBI) and National Payments Corporation of India's (NPCI's) sustained efforts to introduce innovative features. Acceptance of UPI has grown not only in India but across the globe, with various partnerships being forged. National Electronic Toll Collection (NETC) and credit cards also continue to grow at a significant rate. Debit card transactions have seen degrowth in FY 2022–2023 compared to FY 2021–2022. The same trend is also observed in the first half of FY 2023–2024. This can be attributed mainly to customers' preference to pay through UPI or credit cards over debit cards.

To ensure that the industry has sustainable growth, it is important to address some of the challenges that it currently faces, such as an increase in frauds, a need to increase customer touchpoints and awareness, and stress on profitability for industry players. The industry has seen a rise in the number of small-value transaction frauds. In addition, the nature of fraudulent activities has evolved over the last five to seven years. While the numbers are still low compared to global figures, appropriate steps need to be taken to reduce these frauds. Customer awareness becomes paramount so that necessary steps can be taken to avoid fraudulent incidents and enable victims to promptly report such incidents through relevant channels. Additionally, a robust fraud management solution needs to be implemented across the industry to better identify, avoid and report such incidents.

Further, the industry is evolving with modern payment systems such as CBDC, and also plans for to set up emergency payment systems such as a lightweight payment and settlement system (LPSS). In its annual report for 2022–23,² the RBI conceptualised the LPSS payment rail to deal with unforeseen natural calamities or any other form of disruption. The RBI also recently envisaged a digital public tech platform for frictionless credit and conversational payments in UPI in its latest statement on development and regulatory policies.

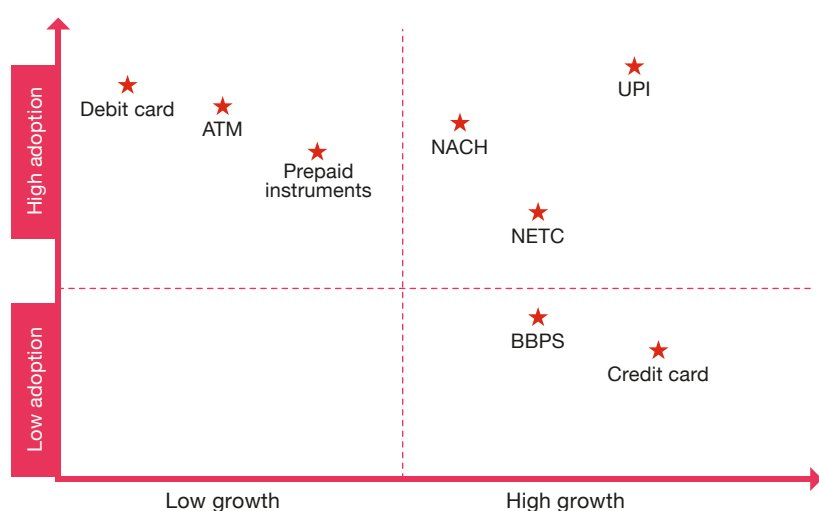
The adoption of Central Bank Digital Currency (CBDC) is another disruptive solution that has the potential to change the way people perform both retail and wholesale transactions. Amongst other benefits, CBDC helps in reducing the cost involved in transactions due to the involvement of fewer stakeholders. Cross-border transactions on CBDC, especially those of low value, will have lower transaction costs and result in faster realisation of payments by recipients. India is amongst the few countries performing a pilot on retail and wholesale CBDC. Moving forward, there are still a few considerations from the design, technology and regulatory perspectives, with many potential use cases to be explored.

2. <https://www.rbi.org.in/Scripts/AnnualReportPublications.aspx?year=2023>

Indian payments industry in FY 2023–24 (half-yearly)

India has become a leader in digital payments in recent years because of the creation of an environment that makes it easier to embrace and use digital payment modes. It has a very high rate of digital payment adoption as compared to other nations, and as a result, many other nations want to learn from the country and leverage its learnings and design choices. The value of digital payment transactions increased by 58% in a single year, from INR 71.97 billion in FY 2021–22 to INR 113.94 billion in FY 2022–23.³

Mapping of payment instruments with respect to growth and adoption







New-age products like Unified Payments Interface (UPI), National Electronic Toll Collection (NETC) and National Automated Clearing House (NACH) have been received well by consumers and are expected to see further growth in the next five years.

³ <https://www.rbi.org.in/Scripts/PSIUserView.aspx?Id=21>

The RBI's and the NPCI's blended focus on continuous innovation and stabilising the existing framework has resulted in the widespread adoption of UPI, with around 260 million users currently in India.⁷ NPCI's focus on building a strong technology stack and a huge network of PSPs has helped in making UPI amongst the safest and most secure payment methods across the globe. With UPI now going global, the growth is expected to further increase in the coming years. While the Government of India continues to engage with other countries for the expansion of UPI, other key participants in the ecosystem should focus on faster implementation and integration of the payment rails of these countries with UPI. This will be key to providing a seamless customer experience and uptake in terms of transaction volumes. With a recent tie-up with France, UPI has expanded its presence outside Indian shores. This is in addition to existing tie-ups with nations such as Singapore, the United States, Australia, Canada, Hong Kong, Oman, Qatar, Saudi Arabia, the United Arab Emirates and the United Kingdom. The Indian government aspires to get the support of all G20 countries to facilitate worldwide UPI-based payments. In February 2023, the RBI announced that eligible travellers from G20 nations could access UPI in India as they will be issued with prepaid instrument (PPI) wallets to use UPI service at merchant outlets. This will be extended to all countries in the future. Currently, wallets can be obtained at three international airports: Mumbai, Delhi and Bangalore. To support this, two banks and two non-banks are issuing wallet-based services to travellers. This will be further explored by other partners in the future.

Moving forward, we believe that the following will be key considerations for sustaining UPI's growth:

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| <p>1 </p> | <p>Increase the number of use cases to increase adoption from 30% of the population base to over 50% of the population.</p> | <p>2 </p> | <p>Reduce UPI frauds by enhancing the fraud monitoring system and increasing awareness amongst UPI users.</p> |
| <p>3 </p> | <p>Pivot from a compensation-based approach to a revenue-based approach.</p> | <p>4 </p> | <p>Enhance the technology architecture to reduce payment failures across the entire ecosystem (not just NPCI).</p> |



7. <https://www.forbes.com/sites/zennonkapron/2023/04/10/is-indias-upi-real-time-payments-system-ready-to-go-global/?sh=57c429104d14>

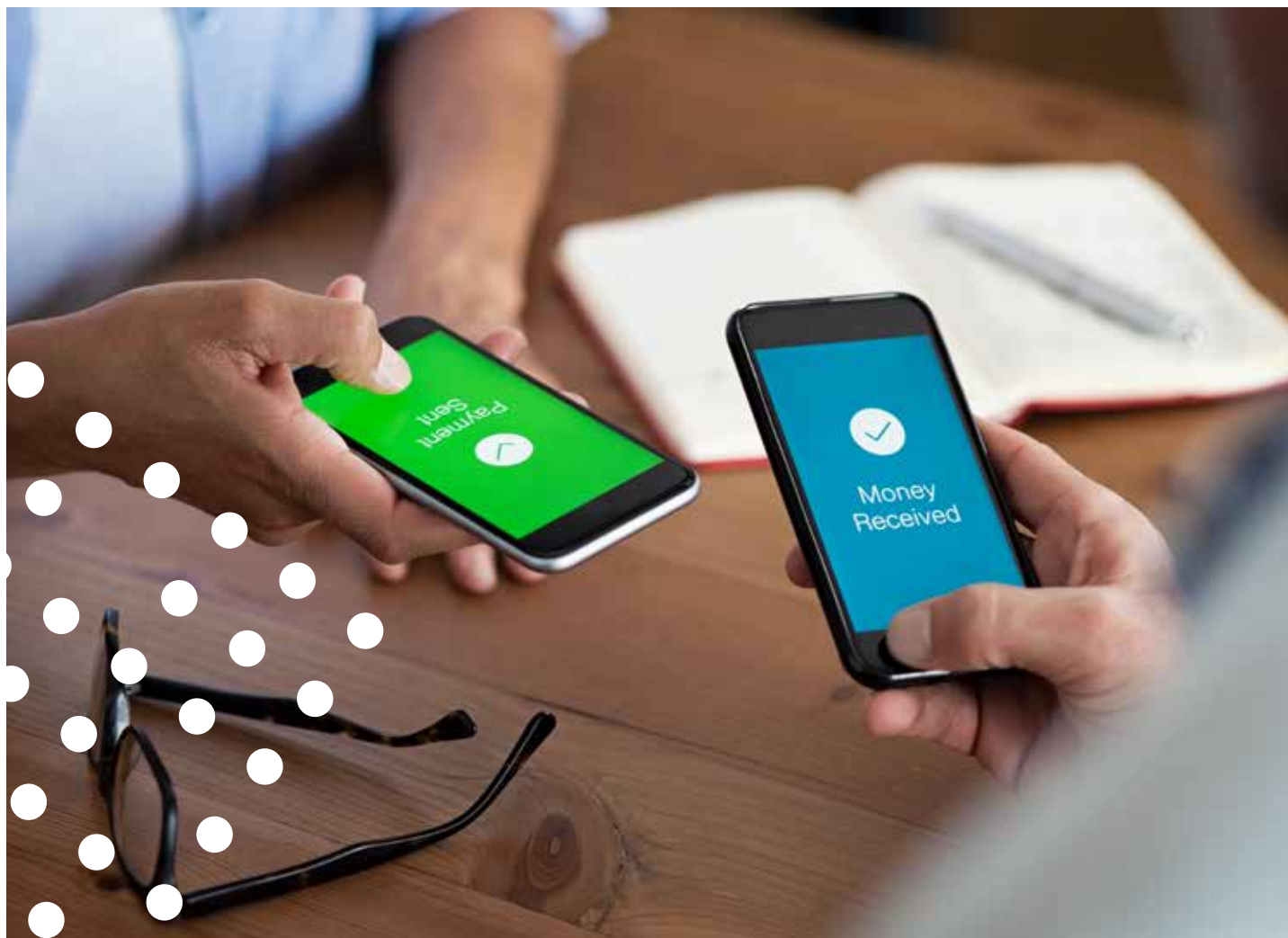
Freedom in card network selection

The RBI has released a draft guideline giving consumers the ability to change their card network not only while opting for a card, but also at any time while holding it. This guideline will come into effect from 1 October 2023. This move will propel issuers to offer multiple card networks. Another idea is to eliminate the exclusivity contract provisions used by card networks to prevent issuers from providing cards on other networks.

This move would have a significant impact on card networks, which gave incentives to banks and non-banking financial companies (NBFCs) to issue cards on their networks. However, with the new rule, card networks must now give issuers and customers appealing propositions with respect to discounts, exchange rates and offers. This move would also have an impact on issuers since they will lose out on exclusive contracts and issuance milestones defined by card networks. Views on this proposal were sought from stakeholders by 4 August 2023. However substantial changes to this regulation are unlikely.





UPI on credit cards

UPI payments and credit cards have picked up pace, and the combination of the two payment rails is creating a buzz in the market. Currently, only one network provider has the authority to issue cards linked with UPI. Other network schemes will be launched in later stages of deployment. This move has provided more flexibility to customers and also enabled users to use UPI in rural areas, where credit cards were not accepted by merchants because of merchant discount rate (MDR) rates and point of sale (PoS) machine unavailability. Unlike debit card payments, UPI payments will attract reward points and cashback. In addition, there will be no fuel surcharge on UPI payments. This will ensure that the customer spends more and saves more as well.



Developments in digital payments and future growth potential

Digital payments have seen rapid adoption by consumers in India. Initiatives by various partners such as the RBI, the government and financial institutions have been crucial to reducing transaction times and providing customers with a better overall experience both before and after making a transaction. Efforts are being made to improve traditional systems by exploring the latest technologies such as cloud to speed up response times. In addition, new payment systems such as CBDC are being developed to boost future growth and catch up with other countries using these payment rails.

Current	Future		
 <p>Retail payments</p> <p>CBDC is used for P2P and P2M payments in the current retail CBDC pilot.</p> <p>It offers instant settlement, and lowers the risk in clearing and settlement of retail payments.</p>	 <p>Automatic micropayments</p> <p>Programmable money feature of CBDC allows pay as per use of digital subscriptions and changes the all-or-nothing model of digital platforms today.</p> <p>Pay on delivery in e-commerce could be enabled using CBDC.</p>	 <p>Offline payments</p> <p>Payments in areas with limited or no network could be enabled using offline CBDC payments.</p> <p>Last-mile adoption can only be solved through offline channels like village self-help groups and Street-plays.</p>	 <p>Remittance</p> <p>Linking of CBDC networks across countries could enable cross-border and real-time remittance of CBDC with reduced cost.</p>

4. LPSS: An alternative payment rail

In its annual report 2022 - 23, the RBI has conceptualised an LPSS, a payment rail to deal with natural calamities or any form of disruption. LPSS will be designed to operate with minimum staff and will be independent of traditional payment rails such as real-time gross settlement (RTGS), National Electronic Fund Transfer (NEFT) and UPI. The payment system will be activated only when required and can process economic transactions, such as those of the Government and the market, that are essential to maintaining the stability of the economy. This system will maintain a near 100% uptime for payments and settlements.

Advantages of the system

Lightweight infrastructure

The payment rail is planned to be operated only for the government to ensure the balance in the economy, so the infrastructure required will be less

High end

The plan is to use the best-in-class technology for the system which will allow a high level of safety and secure transactions.

Backbone during the emergency period

The transaction and communication infrastructure will be separate from the traditional payment systems which ensures the collapse of all the traditional systems will not affect the functioning of LPSS

However, in order to enjoy these benefits, a clear plan, including thorough testing and validation of operations under a variety of scenarios, will be required. In addition, there is a need for a policy that defines the scenarios and limitations in which LPSS can be operated.

FinTechs: A close look

India's start-up ecosystem is booming at a massive rate, especially in the FinTech sector. New players continue to enter the market, creating an overwhelming FinTech ecosystem and a thriving industry. At the same time, this results in intense competition and price wars.

The most prominent factors impacting the overall growth of FinTech and other financial Institutions are discussed below.

Funding and market acquisition: New players and entrants that aim to disrupt the market ignite price wars and increase promotional expenditure, leading to thinning profit margins. Continuous and multiple business and tech initiatives are required to maintain market value and increase the overall market share for players. In such conditions, capital plays a crucial role in ensuring the relevance of a FinTech company compared to its peers.

There is a substantial decrease in funding in the last year. Some of the reasons for this drop in funding are as follows:











1. Escalating inflation and macroeconomic tensions which are obstructing investors' ability to make substantial investment choices
2. Decline in the valuation of technology stocks and the disappointing financial performance of both established and emerging start-ups, which has reduced investor confidence
3. The RBI's enforcement actions against FinTech companies and its advocating for more stringent regulations impacting their operating and revenue model
4. FinTechs lacking a clearly defined strategy for growth and a path to becoming profitable.

While venture capitalists are a popular choice for funding among many FinTechs, others depend on various financial alternatives to self-finance their companies.



Effective governance and conscious adherence to regulations: Governance forms the backbone of any successful organisation, ensuring accountability, transparency and ethical conduct in an environment where innovations often outpace regulations. Having effective governance and consciously complying with regulations helps foster trust in the organisation, attract investors, safeguard customers and maintain financial stability.

Reasons for governance failure and non-compliance with regulations and their impact

Reasons for governance failure and non-compliance with regulations	Impact of governance failure and non-compliance with regulations
 Lack of oversight	 Financial instability
 Complex regulations	 Regulatory actions and fines
 Incentive misalignment	 Loss of investor confidence and customer trust
 Lack of transparency	 Reputational damage
 Poor risk management	 Systemic risks

Well-defined and enacted governance, while complying with regulatory requirements, is vital in the constantly changing and dynamic world of FinTech's. It requires a comprehensive and proactive approach that involves establishing clear policies, processes, governance frameworks and structures along with the required expertise to guide decision making and operations.

Operational excellence: In the quest to be market first or revolutionise the market in the absence of clearly defined regulations, most financial institutions embark on a journey without focusing on future operations. They end up with missing SOPs, inefficient reconciliation processes and systems, undefined roles and responsibilities of personnel, etc.

The most common reasons for non-compliance with standardised policies and processes are as below:

- prioritising scaling of products and services over establishing standardised policies and procedures
- lack of resources, people or time for creating, documenting, and implementing rules and procedures
- FinTechs' reliance on external vendors for a range of services and products poses a challenge in terms of implementation of consistent policies and procedures
- inability to adopt standardised processes due to agility and an innovative spirit.

Operational excellence isn't a one-size-fits-all metric for FinTech companies. It's a multifaceted journey that requires consistent focus on customer experience, productivity, compliance, accurate financial records and streamlined processes. Reconciliation helps to identify inconsistent or inefficient processes, as well as ensure data integrity, comply with regulatory requirements and foster customer confidence. This makes it an important factor for achieving operational excellence.

Conclusion

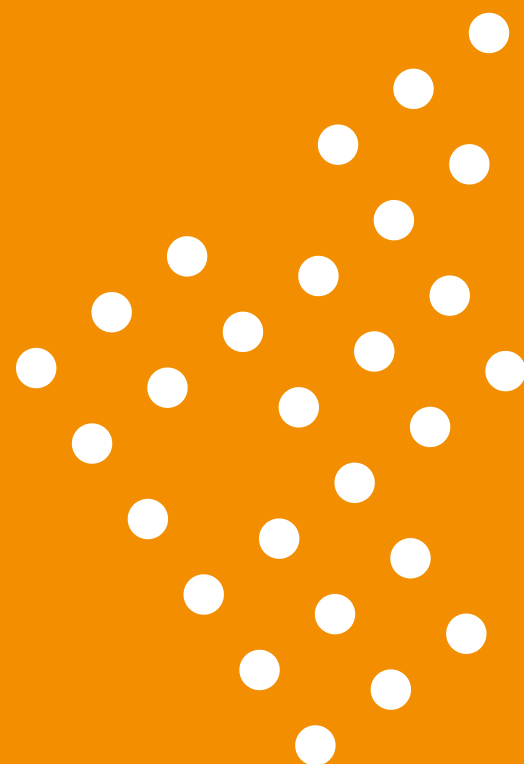
The growth trajectory of digital payments in India in the past six to eight years has been remarkable, and it is regarded as a global case study. This expansion has aided the country's transition from a cash-dependent to a less cash-dependent economy, with digital-first transactions being concentrated in metros, tier 1–4 cities and rural regions. Digital payments are likely to significantly permeate the Indian economy across all customer groups in the coming years, covering innovative use cases and strengthening current enterprises. Transaction volumes in retail digital payments across multiple instruments are estimated to double by FY 2026–27.

UPI will continue to grow as a national payments rail. The recent announcement by the RBI on the use of conversational AI and offline payments will reinforce the importance of UPI. Linkage of UPI with credit cards will further increase its use in retail payments, with small-value payments gradually shifting to credit cards.

Retail CBDC is a key focus area for the RBI. The addition of acceptance points and the onboarding of new customers will increase transaction volumes. Financial institutions and corporates will look forward to use cases in wholesale CBDC and their impact on revenue streams and cost elements.

The account aggregator framework and the recent RBI framework on frictionless credit will further streamline the process of credit appraisal. This will lead to the dissemination of credit to untapped market segments (i.e. people with no credit history) and business cards to micro enterprises where demand for credit is high. The impact of the initiative will be visible in tier-3 and below cities in the coming years.

We look forward to the next phase of this industry – with new product launches and changes, technology innovations, enabling policies and regulations, and customer safety measures that will help increase penetration and growth in the digital payments industry – and are excited to be part of this journey.



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