The Indian Payments Handbook - 2024-2029

August 2024

pwc

GLOBAL FINTECH FEST

Preface

Dear readers,

We are delighted to present the fifth edition of 'The Indian Payments Handbook' for the period 2024-29. In line with the previous editions, this edition delves into the rapidly expanding landscape of India's digital payments industry. The report provides key insights, trends and update on the progress made by the Indian payments ecosystem over the years, along with the principal growth drivers and emerging opportunities.

This year's report focuses on the overall payments ecosystem in the country – innovation in products addressing the rapidly evolving customer needs, integration of technology throughout the customer lifecycle and the ever-changing regulatory landscape of the industry.

Based on the industry insights and our internal analysis, the report covers the latest developments in the payments space such as emerging regulations and its impact on the participants leading to:

- numerous product, process and technology changes in the industry
- innovations in Unified Payments Interface (UPI) to enhance penetration
- emergence of credit cards in the country as one of the fastest growing payment modes
- potential avenues for growth in the credit/lending industry
- future of National Electronic Toll Collection (NETC) and FASTag with infrastructure innovations like the global navigation satellite system (GNSS)
- push for the expansion of use cases through Bharat Bill Payment System (BBPS), providing opportunities for the ecosystem participants
- distribution strategies employed by merchant acquirers
- exploring business payments through digital and various technological innovations.

This analysis will enable stakeholders to understand and prepare for upcoming industry shifts and keep pace with the ever-changing competitive market, ensuring that their business model remains competitive.

India is at the forefront of digital payments innovations globally. With the concerted efforts and initiatives of key stakeholders, including regulators, banks, payment/FinTech companies, card networks and service providers, we are confident that the industry will witness significant growth and opportunities in the coming years.

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

Mihir Gandhi
Partner and Leader, Payments Transformation
PwC India

Executive summary

India's digital payments landscape has seen remarkable growth over the past decade, becoming a global model for digital adoption. Digital payments industry in India covers a broad spectrum from banking for the unbanked catalysing financial inclusion to enhancing customer experience for faster, convenient and safer payment options. Previous editions of this report have highlighted evolving revenue streams, use cases for new payment instruments and evolving nature of existing payment methods. Meanwhile, this edition aims to analyse the new and existing payment instruments, expected growth and revenue streams in the next five years and evolving regulatory landscape of the industry, while analysing future opportunities for key stakeholders.

Digital payments in India continue to surge, with a year-on-year (YoY) transactional volume growth of 42% in FY 2023–24, which is poised to grow by three times in FY 2028–29. This growth can be attributed to multiple factors including innovations by ecosystem participants, new business models and opportunities, changing technology and increasing customer awareness. The innovation in technology spreads over issuance and distribution strategies to penetrate deeper in the domestic market for various payments solutions, promotion and regulation by the Government and regulators, and the emergence of innovative technologies to enhance user experience and risk measures to safeguard customers.

UPI continues its remarkable growth trajectory with a YoY growth in transaction volume of 57%. In FY 2023–24, the total transaction volume was slightly over 131 billion and is expected to grow to 439 billion by FY 2028–29. UPI now accounts for over 80% of the overall retail digital payments in India and is expected to contribute to 91% by 2028-29.

Credit cards have witnessed a formidable growth in FY 2023-24 with the industry adding more than 16 million credit cards, crossing the well-anticipated milestone of 100 million cards in force. With the addition of new cards, the industry has also seen 22% and 28% surge in transactional volume and value respectively. Debit cards have seen a dip in both transactions volume and value owing to the shift in preferences by cardholders. Credit cards are expected to reach 200 million by FY 2028-29. Newer inventions, product propositions and customer segments are expected to contribute towards this growth.

The infrastructure for merchant acquiring, both online and offline, has been expanding not only in metros and tier 1 cities but also in tier 2, 3, and 4 cities. The YoY growth of QR codes is nearly 30%+ and 17%+ respectively in FY 2023–24. Innovations in this space, like soundbox, cross-sells to merchants and innovative activation strategies, have also promoted the use of digital payments by merchants. Also, efforts to promote via the Payments Infrastructure Development Fund (PIDF) have accelerated the growth of the payments infrastructure in the country.

In addition to the consumer payments, this edition covers the use cases and future of business payments through digital channels, including cross-border transfers. Emergence of new FinTech players and their partnerships with well-established issuers may prove to be pivotal for business and commercial payments.

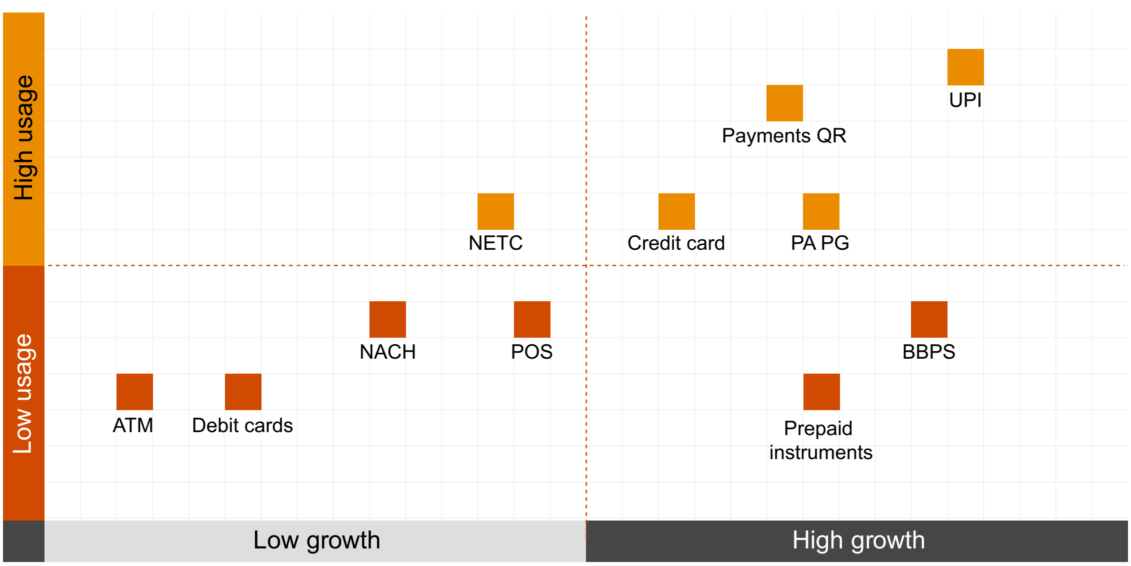
Contents

A look at the year gone by

India's digital payments landscape has witnessed remarkable growth over the past eight years. The industry is projected to expand more than three times in volume, from 159 billion transactions in FY 2023-24 to 481 billion by FY 2028-29. In terms of value of payment transactions, the market is expected to grow double, from INR 265 trillion to INR 593 trillion over the same period.

During FY 2023-24, Indian payment platforms experienced exponential growth. The most significant expansion has been observed in Unified Payments Interface (UPI), which recorded more than 50% growth. Merchant acquiring solutions – including offline and online options like QRs, payment aggregators and payment gateways – also saw substantial growth of more than 25% due to regulatory push, high QR penetration and inclusion of new players. Additionally, the use of credit cards grew by approximately 20% due to increased demand from Gen-Zs and population in Tier II and below locations. Bharat Bill Payments Solution (BBPS) has witnessed a growth of 25%, largely driven by addition of new billers and increased payment options for customers by virtue of third-party application provider (TPAPs). National Electronic Toll Collection (NETC) – due to continued adoption of toll tags for new vehicles – has grown by more than 10%. The surge in digital payments in India is also a resultant of the developing start-ups ecosystem in India which are creating innovative solutions that cater to diverse customer needs.

Mapping of payment instruments with respect to growth and adoption



Source: RBI; NPCI; PwC analysis

The popularity of Indian payment products is increasing considerably, driven by new industry use cases, increased participation from banks, non-banking financial companies (NBFCs), and FinTech companies, seamless integration with digital ecosystems and marketplaces, and advanced security features. Both consumers and businesses are increasingly preferring these products for their ease of use, reliability, efficiency and cost-effectiveness. Additionally, the regulatory initiatives to promote digital payments and financial inclusion have created a conducive environment for innovation, expansion and adoption.

Global payments landscape

The global payments landscape has undergone a significant transformation, driven by technological advancements and changing consumer behaviours. Once largely dependent on cash and checks, the focus has now shifted towards digital payment methods, including digital wallets with enhanced interoperability, cards featuring innovative integrations and use cases, and the increasing adoption of account-to-account (A2A) payments. This evolution not only promotes financial inclusion but also transforms the way businesses and consumers engage financially, creating a more connected and accessible payments ecosystem worldwide.

India's role in shaping global trends:

Digital wallets and UPI: Preferred payment method worldwide

Digital wallets and UPI have become a leading force in global payment methods. This rapid growth is driven by factors such as the penetration of UPI, seamless integration of wallet solutions into multiple platforms, the rise of FinTechs and superApps, and the widespread adoption of interoperable QR codes. Together, these elements are accelerating the global adoption of digital wallets.

Credit cards: Still thriving, alongside or without digital wallets

Credit cards maintain a robust presence in global payments, while transaction values for credit cards have gradually increased both online and in-store, there is a noticeable shift as more card-based transactions occur within digital wallets. Additionally, the growing integration of credit cards with UPI and different ecosystems offers new opportunities.

Cash: Losing ground to the digital payments revolution

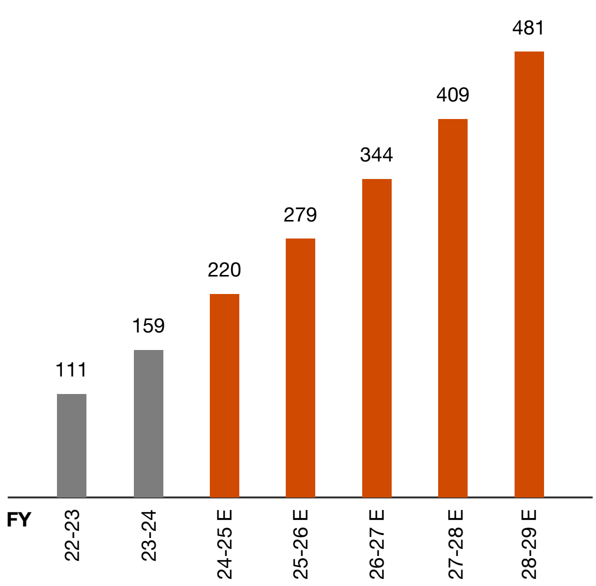
Cash is rapidly losing its share in global payments, this decline in cash usage in India over recent years is primarily due to the rapid adoption of digital payments. The Indian Government's strong emphasis on financial inclusion has played a crucial role in this shift, making digital transactions more accessible and convenient for users across both urban and rural areas.

An overview of the top payment instruments in India

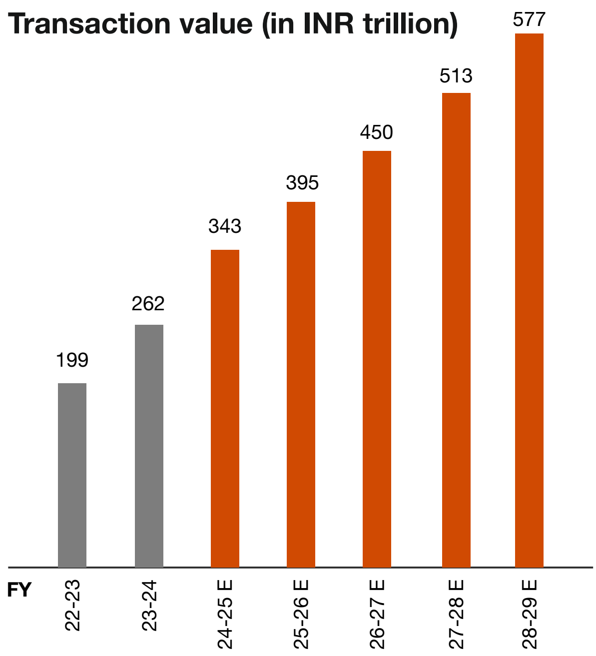
India's significant contribution to the global decline in cash usage can be attributed to the rapid growth of digital payments, As per the Reserve Bank of India (RBI), with the country now accounting for nearly 46% of the world's digital transactions, there has been a staggering 90-fold increase in retail digital payments over the past 12 years. Digital payments have been witnessing a remarkable compound annual growth rate (CAGR) of 40% in terms of transaction volume and 35% in transaction value. This growth has been driven by various factors such as the swift expansion of digital infrastructure, popularity of UPI and other digital instruments, changing consumer preferences towards digital payments and an expanding merchant acceptance network that enhances accessibility and convenience.

Overall digital payments market*

Transaction volume (in billion)



Transaction value (in INR trillion)



*Includes UPI, cards, BBPS, NETC and PPIs

Source: RBI; NPCI; PwC analysis

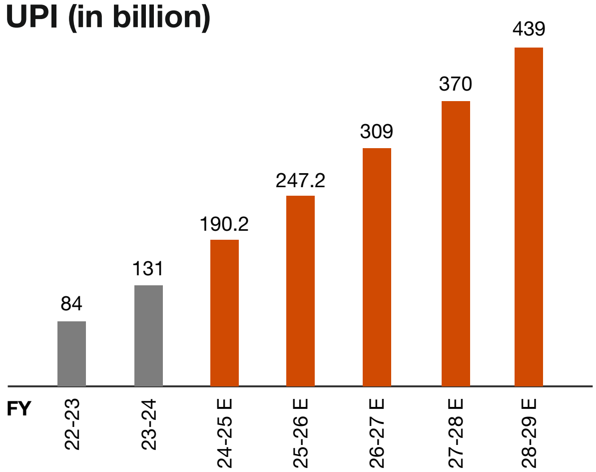
1 https://www.cnbctv18.com/finance/digital-payments-90-fold-rise-over-12-years-upi-rbi-new-system-for-net-banking-19193941.htm

Let us look at some of the major digital payment instruments in detail.

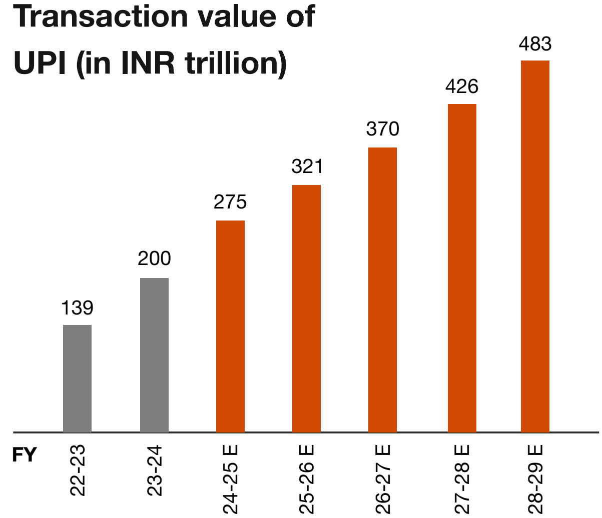
UPI

UPI transactions have continued to register significant growth, with a 57% and 44% increase in transaction volume and value respectively. These figures align closely with projections for the 2023-28 period. UPI has solidified its position as a dominant payment rail in India's retail digital payments landscape, accounting for over 75% of the total transaction volume in FY 2023. This trend continued into FY 2023-24, where the transaction volume reached 131.12 billion, and the transaction value reached INR 199.9 trillion.

Transaction volume of UPI (in billion)

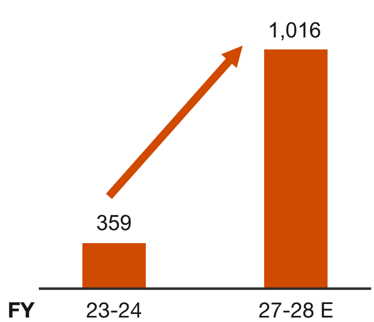


Transaction value of UPI (in INR trillion)

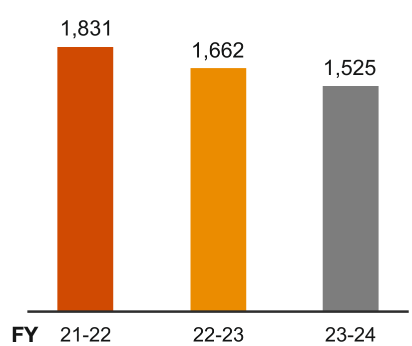


Source: RBI; NPCI; PwC analysis

UPI to reach 1 billion transactions per day in FY28

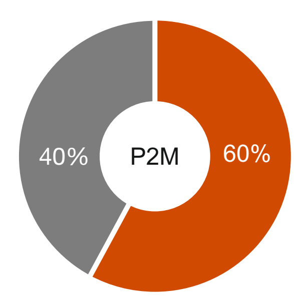


Gradually decreasing ATS



Overall UPI

P2M dominating UPI growth



Considering the current growth trend, market penetration of UPI use cases, global expansion of UPI, market dynamics and technological advancements, it's projected that the daily transaction volume may reach 1 billion during FY 2027-28. This is a shift from the earlier forecast of achieving this target in 2026-27. Furthermore, the daily transactions are expected to increase to 1.4 billion by the end of FY 2028-29.

Securing UPI transactions:
The transition to biometric/face ID verification

The RBI has recently begun exploring alternatives to traditional PINs and passwords for transaction authentication, considering the use of biometric data, such as fingerprints. This proposed system would enable users to authenticate UPI payments through fingerprint recognition on android devices and face ID on iOS, effectively phasing out the current UPI PIN. To ensure a smooth transition, initially both PIN and biometric authentication methods will be offered simultaneously, providing users with flexible options for transaction verification. This initiative, which started over three years ago, has gained momentum amid the RBI's growing concerns over UPI scams linked to PIN-related fraud. The introduction of biometric and face ID authentication is expected to enhance transaction security, reduce fraud, and improve the overall user experience, thereby encouraging wider adoption of UPI payments. However, it is crucial to address potential privacy risks and the misuse of biometric data. The rollout should be gradual, in alignment with the Digital Personal Data Protection Act, 2023, to mitigate data misuse risks. The lessons learned from this implementation will also serve as a foundation for future integrations of similar innovations into the UPI system.

Reassessing the UPI ecosystem architecture:
Preparing for growth and transaction management

As UPI continues to expand, it is crucial for stakeholders to reassess their architecture within the UPI ecosystem. The entry of new TPAPs and the emergence of innovative use cases, such as UPI integration with credit cards and credit lines, are likely to increase processing demands on core systems. To effectively manage the anticipated spikes in transaction volume, exploring the deployment of UPI infrastructure on cloud platforms for transaction processing is essential. Leveraging cloud technology can enhance scalability, flexibility and reliability, ensuring that the UPI ecosystem can accommodate future growth while maintaining optimal performance. By proactively addressing these challenges, stakeholders can strengthen the UPI framework and support its ongoing evolution in the digital payments landscape.

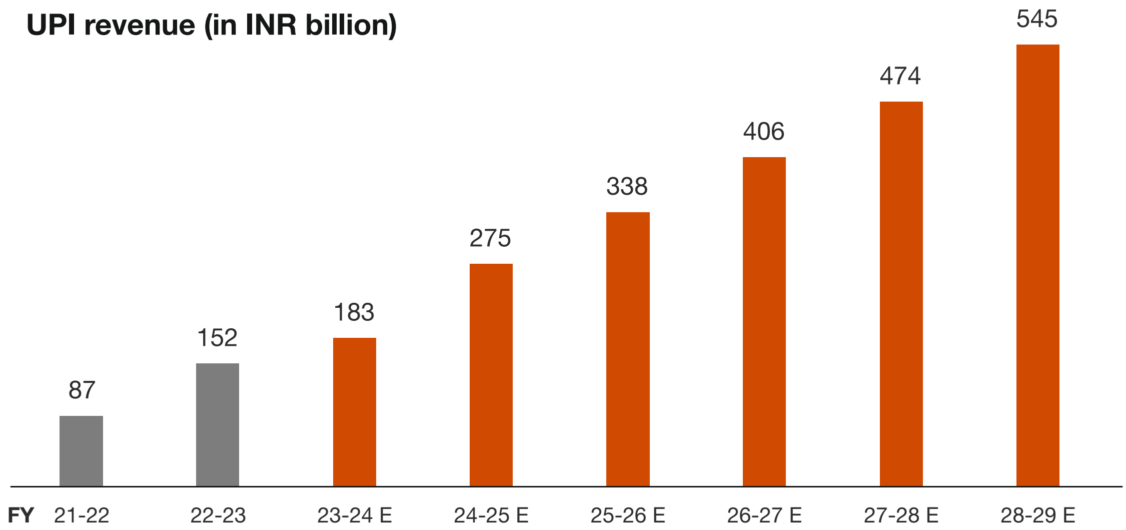
Revenue lines for UPI

MDR

Income interchange

Gradual enabling of interchange, especially for credit cards and credit line will provide the necessary incentives to the financial system. Lenders will be able to reduce the pricing and make small-ticket loans affordable for segments witnessing the maximum demand.

UPI revenue (in INR billion)



Source: RBI; NPCI; PwC analysis

Credit cards on UPI

Credit cards linked to UPI have emerged as the dominant payment method, with users spending over INR 22,000 per month. On average, credit card transactions via UPI occur 21 times per month, which is four times more frequent than traditional physical credit cards.[2] Credit cards on UPI have propelled the overall RuPay transaction volume and values in the past year, with the RuPay credit cards market share seeing a growth of almost 233%[3] during FY 2023-24. This can be attributed to the implementation of UPI on credit cards by leading issuers. The volume and value of transactions including RuPay cards in force are expected to increase over the next few years.

The average transaction value for RuPay credit cards on UPI stands at INR 1,125 which is significantly lower than overall credit card transactions which hovers around INR 5,100 and almost double of UPI P2M transactions which stand at INR 650. This shows that credit cards on UPI transactions have created their own place in this market.

Considering the payment mode is currently being used by early adopters, credit cards on UPI seems promising. UPI's ease of use and the technology already being well penetrated in the market at both ends of the spectrum (i.e. consumers and merchants) is attributed to the growth seen by this particular use case.

2 https://www.business-standard.com/finance/personal-finance/kiwi-s-report-reveals-surge-in-credit-card-adoption-on-upi-124052301392_1.html
3 https://www.thehindubusinessline.com/money-and-banking/rupay-credit-cards-see-10-market-share-surge-via-upi-integration-kiwi-report/article68208772.ece#:~:text=%E2%80%9CRupay%20credit%20cards'%20market%20share,Kiwi%20Co%2Dfounder%20Mohit%20Bedi

Global expansion of UPI

There is significant progress in the global expansion of the UPI system, and it will continue growing in a resolute manner in the coming years. The strategic partnership of RBI and NPCI International Payments with international organisations have enabled the integration of UPI in numerous countries, thereby enhancing the efficiency and ease of cross-border transactions.

As the Government of India persists in its efforts to collaborate with various nations for the global expansion of UPI, it's imperative for other stakeholders in the ecosystem to concentrate on expeditious implementation, seamless technical integration, robust security protocols and interoperability. Additionally, raising user awareness and adapting to local preferences are crucial for boosting UPI acceptance in these countries.

UPI One World

A prepaid wallet was tailored for foreign visitors from the G20 countries allowing them to experience the ease of P2M payments of UPI, garnering everyone's attention during the last G20 summit in India. Post the G20 launch, G20 country residents could use UPI. This is an important development for Indian tourism sector which is expected to contribute USD 250 billion to the country's GDP by 2030.[4]

Enabling UPI for international visitors will provide much needed convenience as it will obviate the need to locate ATMs in a foreign country. Implementing UPI One World can ensure a smooth and immaculate travel experience.

Credit on UPI

As the country has accepted UPI on all fronts – i.e. consumers, retailers and ecosystem participants – use of cash from smaller to medium expenses has reduced. Now, one ATM transaction is converted into 10+ UPI transactions. This has created a technical debt on the banks and ecosystem participants. One of the ways in which this liability can be leveraged by the asset side of banking is to aggressively penetrate the credit lines of UPI.

Due to UPI, numerous new customers have been linked with the payment ecosystem who were unserved earlier. Transaction data, coupled with basic underwriting checks through participants like account aggregators, can thus prove to be pivotal in bringing about this change.

4 https://economictimes.indiatimes.com/news/economy/indicators/tourism-sector-to-contribute-usd-250-billion-to-gdp-by-2030-centre/articleshow/94334362.cms?from=mdr

NETC

14
Live acquirer banks commercial knowledge

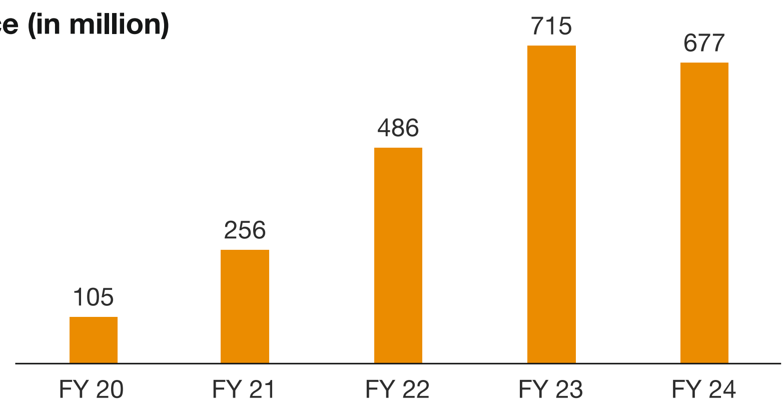
37
Live issuing banks

1,228+
Toll plazas accepting FASTag

The FASTag toll collection system has achieved notable success in India and continues to grow at a steady pace since its inception. FASTags have considerably reduced the wait time at toll plazas from 714 seconds to 47 seconds, improving travel experience, fuel efficiency and profitability of commercial fleets.[5] By making necessary infrastructure upgrades by toll operators, the waiting time at the toll gates can be reduced further. As published by the NPCI, as of 2024, NETC covers 1,228+ toll plazas. With over 69 million FASTags issued to end users by December 2023, the NETC boasts 97% penetration in the mobility payments.[6]

Live FASTags issued to customers have seen a CAGR of 45% – an exponential growth since FY19-20. However, in FY23-24,[7] active tags in the country have seen a 5% degrowth amid RBI's embargo on a few issuers and the NHAI's 'One Vehicle, One FASTag' rule.

FASTag issuance (in million)



Source: NPCI, PwC analysis

Moreover, NETC transactions have seen growth of 13% and 20% in terms of volume and value respectively, reaching 3.84 billion transactions and INR 648 billion during FY23-24. NETC has seen a muted growth in FY24 due to changing regulations coupled with high penetration. As the penetration reaches close to 100%, the major portion of new FASTag issuance is expected from the four-wheeler sales, which are expected to fall short of 10% in the next year.

It was expected that NETC would maintain the high transaction growth rate during FY23-24 by introducing new use cases in the market. While new use cases have been commercially launched, their adoption has been low due to the limited availability of tag reading infrastructure.

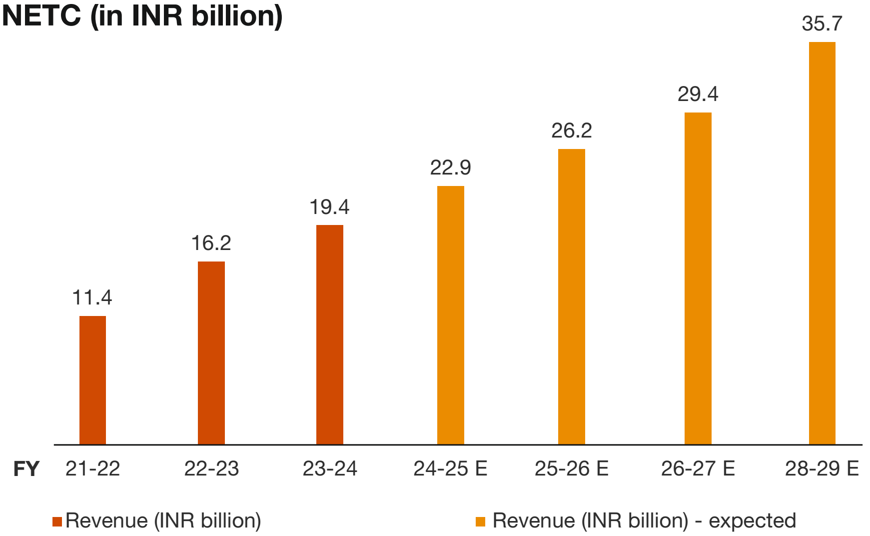
5 https://economictimes.indiatimes.com/industry/transportation/roadways/we-are-ending-toll-nitin-gadkari-on-new-toll-system/articleshow/108822535.cms?from=mdr
6 https://www.npci.org.in/what-we-do/netc-fastag/netc-ecosystem-statisticshttps://pib.gov.in/PressReleasePage.aspx?PRID=1921359#:~:text=With%20a%20penetration%20rate%20of,times%20at%20NH%20Fee%20Plazas
7 https://www.npci.org.in/what-we-do/netc-fastag/product-statistics

Revenue lines for NETC

Tag issuance

MDR

Revenue of NETC (in INR billion)

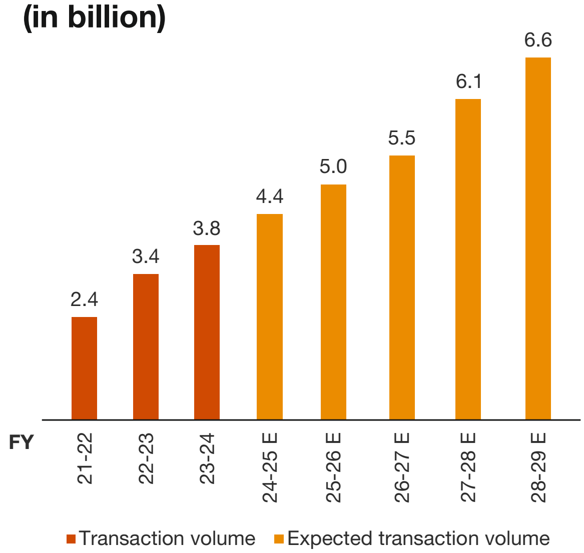


Source: NPCI, PwC analysis

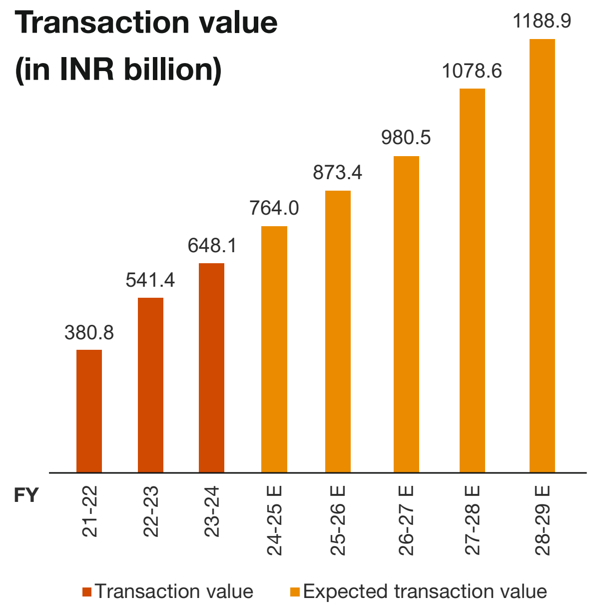
NETC transactions are exhibiting higher ticket size in FY24 owing to a wide network and length of expressways built by the Government of India, and newer use cases like airport parking and healthy growth of commercial vehicles since FY21-22 (15% in FY22, 28% in FY23 and 6.8% in FY24).[8]

8 https://www.siam.in/statistics.aspx?mpgid=8&pgidtrail=14

Transaction volume (in billion)



Transaction value (in INR billion)



Source: NPCI, PwC analysis

Global Navigation Satellite System (GNSS)

The Government of India is working to eliminate the 47-second wait time at toll plazas by implementing GNSS. This innovative system aims to transform roads into toll-free routes, positioning India alongside developed economies such as Switzerland and Germany, which adopted GNSS in 2001 and 2005, respectively. According to a press release from the Ministry of Road Transport and Highways in February 2024, a pilot implementation will commence at select electronic toll plazas before being rolled out nationwide. The GNSS will be integrated with the NETC infrastructure, allowing for seamless wallet recharging and toll fee deductions, ensuring a smooth experience for end consumers.

One Vehicle, One FASTag

This initiative will enhance the efficiency of the toll collection system by addressing the issue of incorrect FASTag deductions for vehicles that have not crossed toll plazas. The NHAI is continuously focusing on streamlining transaction processing to reduce delays and improve user experience. A key aspect of the initiative involves the removal of inactive or blacklisted FASTags, which will help decrease the total number of issued FASTags and ensure that only valid tags are in circulation. Furthermore, the initiative seeks to prevent unauthorised handling and misuse of FASTags, thereby enhancing system security. By minimising the chances of fraud and improving overall reliability, the 'One Vehicle, One FASTag' initiative is set to foster greater trust among users and create a more efficient toll collection framework in India.

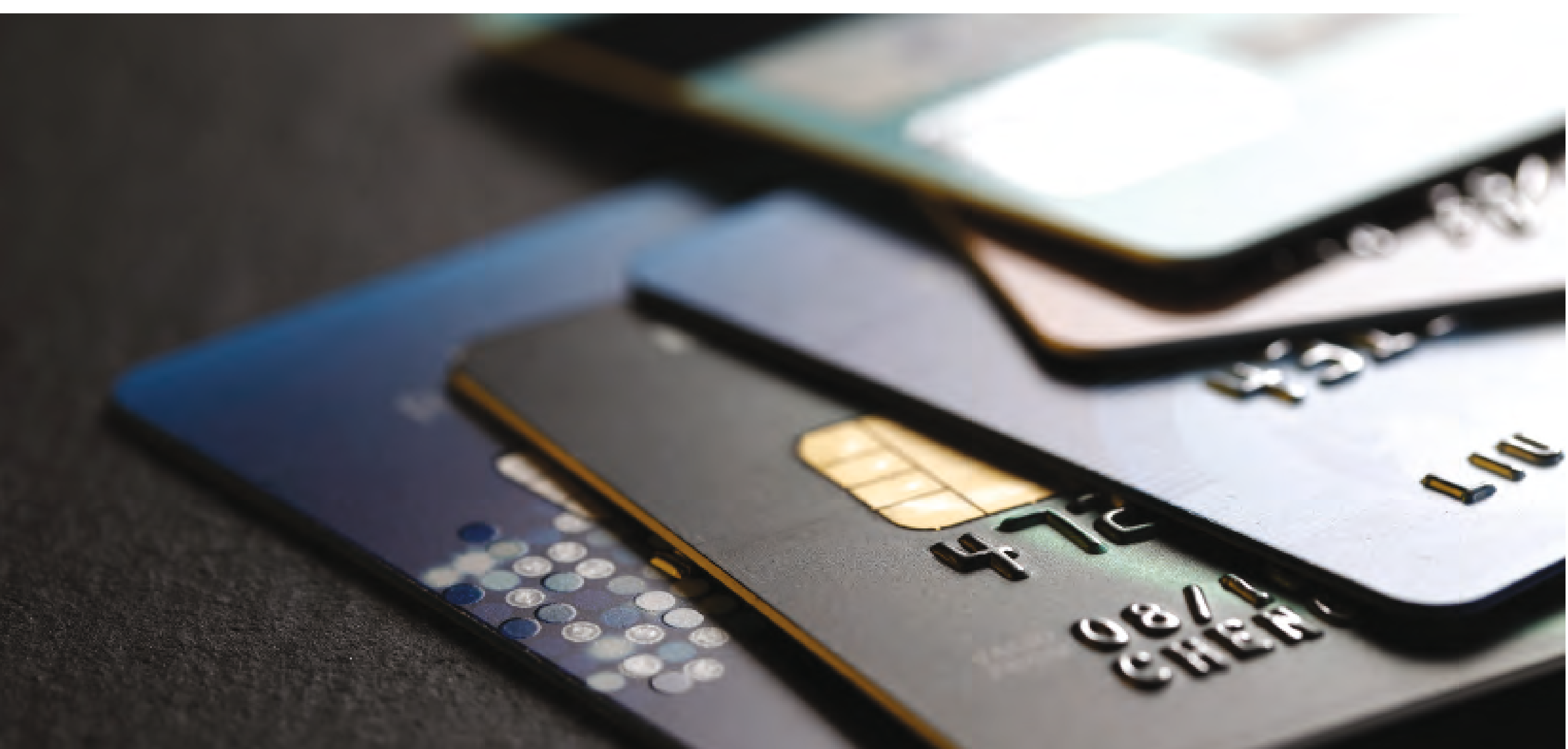
Cards

As per RBI data, PSU banks have been the primary issuers of debit cards while private banks emerged as the primary issuers of credit cards in recent years. This disparity can be attributed to the risk-taking capacity and ability shown by private banks who have been comfortable in issuing unsecured assets like credit cards. Meanwhile, PSU banks' contribution and focus has been towards opening new accounts and issuing debit cards under financial inclusion schemes like Pradhan Mantri Jan-Dhan Yojna (PMJDY).

The Indian credit card market has achieved a noteworthy milestone, exceeding 101 million cards in force by the close of the FY 2024-25. This achievement highlights the market's robust growth trajectory, with future expansion appearing inevitable.

According to PwC's market intelligence, the credit card market is expected to double its cards in force by FY28-29, reaching 200 million cards. This growth projection is supported by a CAGR of 15%. The industry, which has seen a 100% increase in issued cards over the past five years, is anticipated to replicate this growth within the next five financial years. In terms of transaction volume and value, the market is projected to witness substantial growth. Credit card transactions are expected to increase by 21% in volume and 18% in value, leading to an estimated 9 billion transactions and total spending of INR 40,000 billion by FY28-29. This continued expansion underscores the dynamic and rapidly evolving nature of the Indian credit card market.

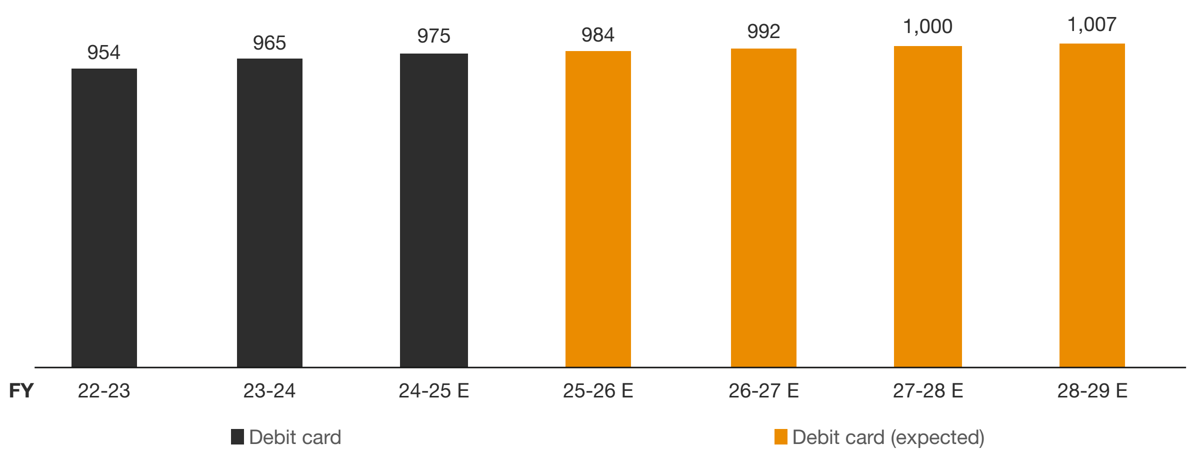
Debit cards in the country have seen a muted growth in terms of the number of cards issued in the year and the volume and value of the debit plastic took a significant hit during FY 23-24. The transaction volume in FY23-24 was down by 33% as compared to that in FY22-23, while spends on debit cards have reduced by 18% YoY. On an average, debit card usage has come down significantly. This degrowth can be attributed to the inclination towards UPI due to ease of use and small to medium merchants pushing for UPI due to 0% MDR. The degrowth is also fuelled due to a lack of a lucrative reward structure on debit cards as compared to credit cards and lower levels of awareness of existing reward structures.



Muted debit card growth

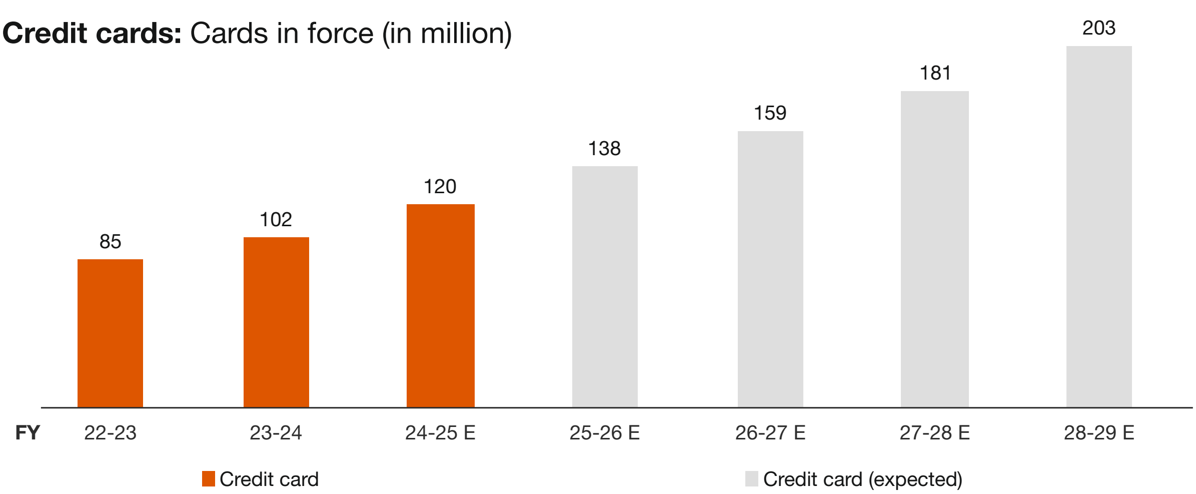
- **Customer convenience offered by UPI**
- **Merchants' preference of instant settlement**
- **Lack of lucrative reward structure & awarencess**

Debit cards: Cards in force (in million)

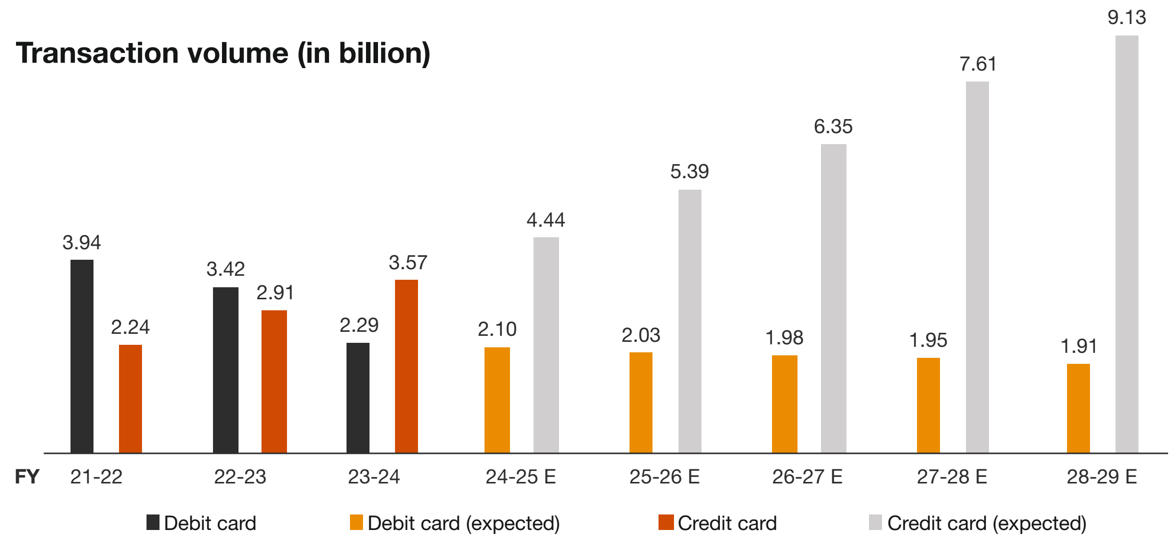


Source: RBI, PwC analysis

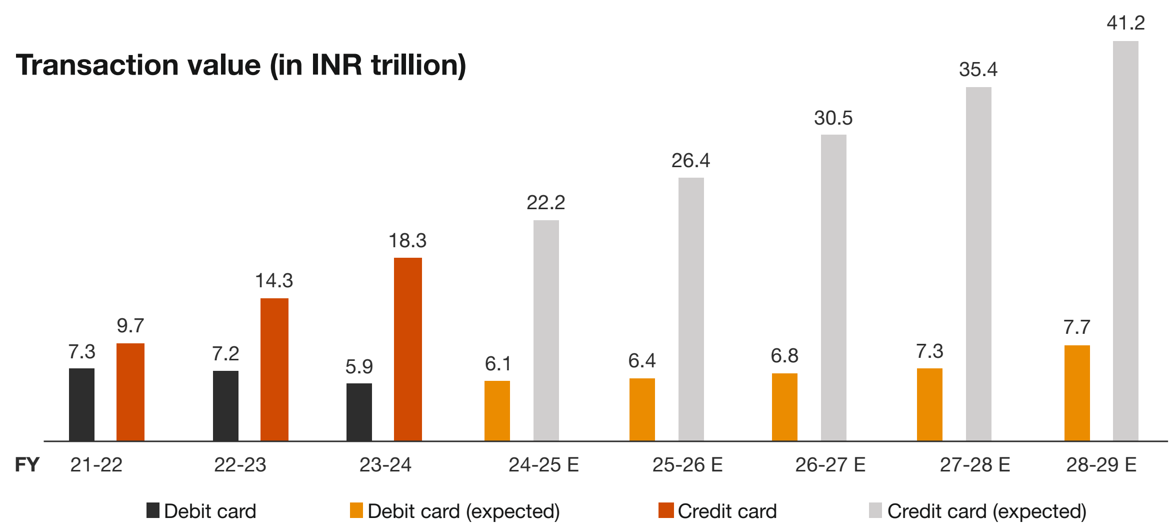
Credit cards: Cards in force (in million)



Source: RBI, PwC analysis



Source: RBI, PwC analysis



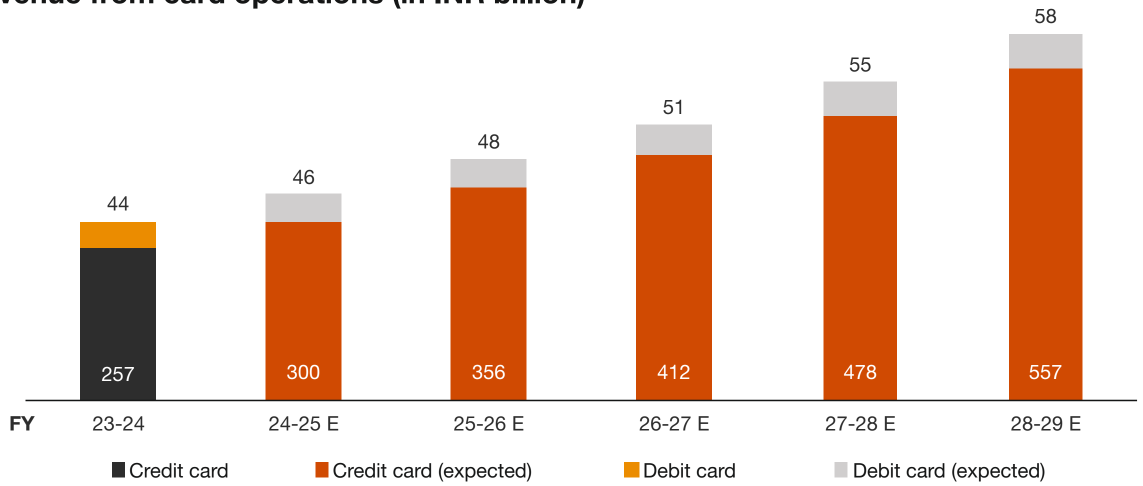
Source: RBI, PwC analysis

As for credit cards, the average transaction value has been significant over the years, from INR 3,422 in FY18-19 to INR 5,141 in FY23-24, gaining 50% in the last five years. The number of transactions per card per year during FY22-23 and FY23-24 saw a YoY growth of 12% and 3% respectively. With the introduction of credit cards on UPI, this number is expected to grow by at least 10 transactions per year per card (CAGR of 5%) till FY28-29, thus increasing customer-level transaction contributions to the payment mode. POS and e-commerce average transaction value seems to be consolidating itself at INR 3,400 and INR 6,300 respectively, with a slight degrowth of the same over the course of a year.

Revenue from cards operations:

Although the Indian market has one credit card for every nine debit cards, the revenues from card products are dominated by credit cards. Credit card revenue makes up to 85% of the overall card revenues generated by the payment industry.

Revenue from card operations (in INR billion)



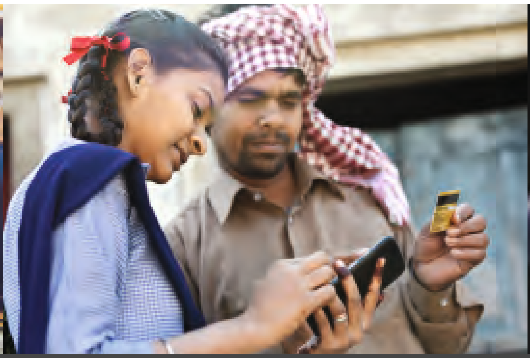
Source: RBI, PwC analysis

Revenue lines for cards

- Interest and float income
- Fee income
- Interchange income

Key trends in cards

Introduction of new issuers	Emergence new customer segments	Alternate underwriting
New to credit and card customers	Adoption of UPI on credit cards by top issuers	Adoption of cards in business payments



Introduction of new issuers, performances of top issuers and emerging issuers

The top 5 issuers of the industry have a consolidated market share of 75% of the overall cards in force. Average transaction values of these issuers provide a clear picture of the preferred transaction modes by their customers. The industry is also expecting new issuers to enter the market with homegrown, co-branded and co-badged credit cards which is a vote of confidence on the positive growth of the industry.

Inclusion of newer customer segments to the credit card portfolio

The Gen-Z population in the country is entering its peak spending age (22 to 30), and is expected to contribute to the formal economy at a much higher ratio than the other generations. According to market research, new to credit (NTC) and new to credit card (NTCC) segments are expected to contribute to more than 40% of the new issuance. As mass and mass affluent segments are underpenetrated and the affluent segments are relatively more penetrated, it is expected that the major sourcing (more than 80%) of the issuance is to be done for the customers having an income of INR 2.5 to 10 lakhs.

New products, NTC customers and the underwriting conundrum

While onboarding NTC customers seems to be a lucrative proposition for issuers yielding higher interest margins and higher credit revolvers, accurate underwriting of the NTC segment remains a challenge. To combat this, FinTechs and issuers will have to develop alternative underwriting mechanisms. New innovations like wearables and their popularity among younger generation has also helped credit card transactions. With regulators expecting issuers to add AFAs to the card-not-present (CNP) transactions, these easy-to-transact innovations are expected to become more secure.

Reward redemption avenues and rewards as a profit-making strategic business unit (SBU)

To improve engagement and spends on credit cards, many loyalty and rewards platforms are partnering with issuers, merchants and merchant aggregators to offer pay-by-points for the end customers. Through this approach, customers now can spend their earned reward points at the checkout page of e-commerce websites. This integration allows customers to see the price drop before the final payment, thereby increasing stickiness.

In addition to the redemption developments, banks and issuers are looking at rewards offering as profit-generating SBUs. Issuers are looking to add more layers to the rewarding structure to recognise and reward profitable customers, wherein certain standard features on cards are being converted to conditional features – activated only if the cardholder satisfies the conditions.

Merchant acquiring

In recent years, merchant acquisition in India has surged, propelled by the nation's swift digital transformation and the Government's strong push towards a cashless economy. These technologies empower businesses to onboard merchants quickly and in a cost-effective manner, opening doors to new markets and merchant demographics. Consequently, merchant networks are growing at an accelerated pace, bolstering the digital economy and promoting financial inclusion by integrating more businesses into the formal financial system.

Offline merchant acquisition

Online merchant acquisition

Offline merchant acquisition

Offline merchant acquiring is experiencing exponential growth, with over 352 million QR deployments, marking a 34% increase in FY24, and 8.9 million POS deployments, showing a 14% increase in the same period.

Key trends in offline merchant acquiring

Merchants shift from POS to QR

Merchants increasingly favour QR codes for their convenience, ease of use and zero MDR charges on UPI transactions, allowing for seamless payments without costly POS terminals or complex set-ups.

Increasing use of soundboxes

Soundboxes are gaining traction alongside QR codes, streamlining payments with voice confirmations, reducing errors and fraud while enhancing the overall merchant experience.

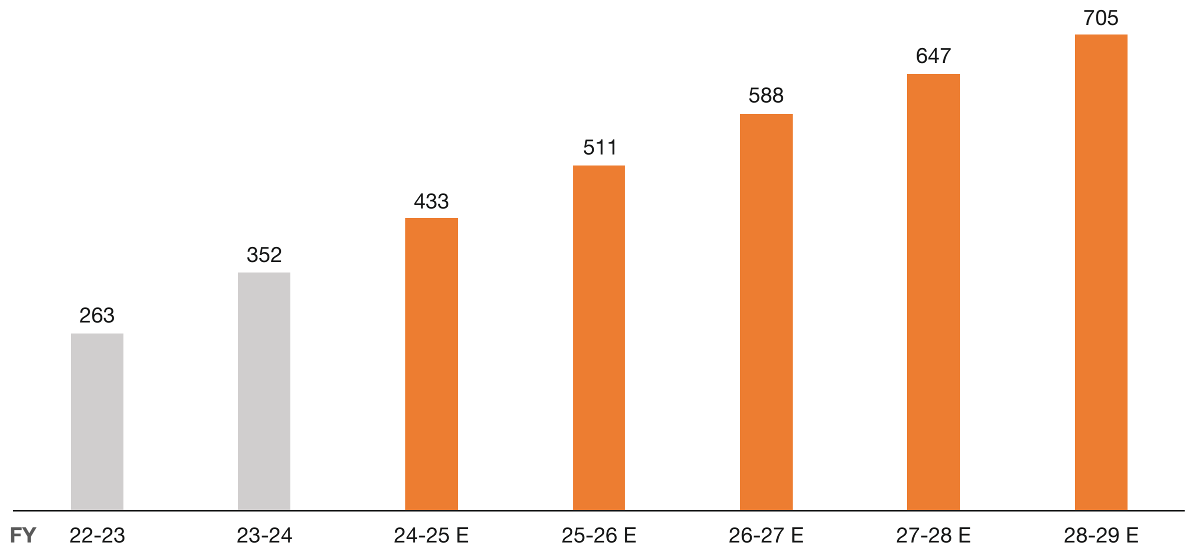
Lending and other cross-sell surge

Major merchant acquiring players are excelling in cross-selling financial services like lending and insurance to merchants using QR code payment systems. This strategy deepens merchant engagement, diversifies revenue streams and boosts merchant retention and loyalty.

Low QR activation hinders growth

QR merchant acquiring companies face challenges with low activation, weak ringfencing, and frequent merchant switching

Total QR codes (in million)



Source: RBI, PwC analysis

9 PwC analysis of RBI, NPCI data

The QR deployment has seen a remarkable 50%+ CAGR over the past three years.[9] We believe that the following factors are contributing to this growth:

New players in QR boom

A growing number of banks, NBFCs and FinTech firms are increasingly tapping into the QR code payment space due to its rapid scalability and cost-effective merchant acquisition. The simplicity of QR codes allows these institutions to onboard a vast network of merchants with minimal infrastructure, fueling competition to expand market share. This trend is also accelerating financial inclusion by providing accessible and efficient payment solutions to a broader audience.

Penetration in tier II and III cities

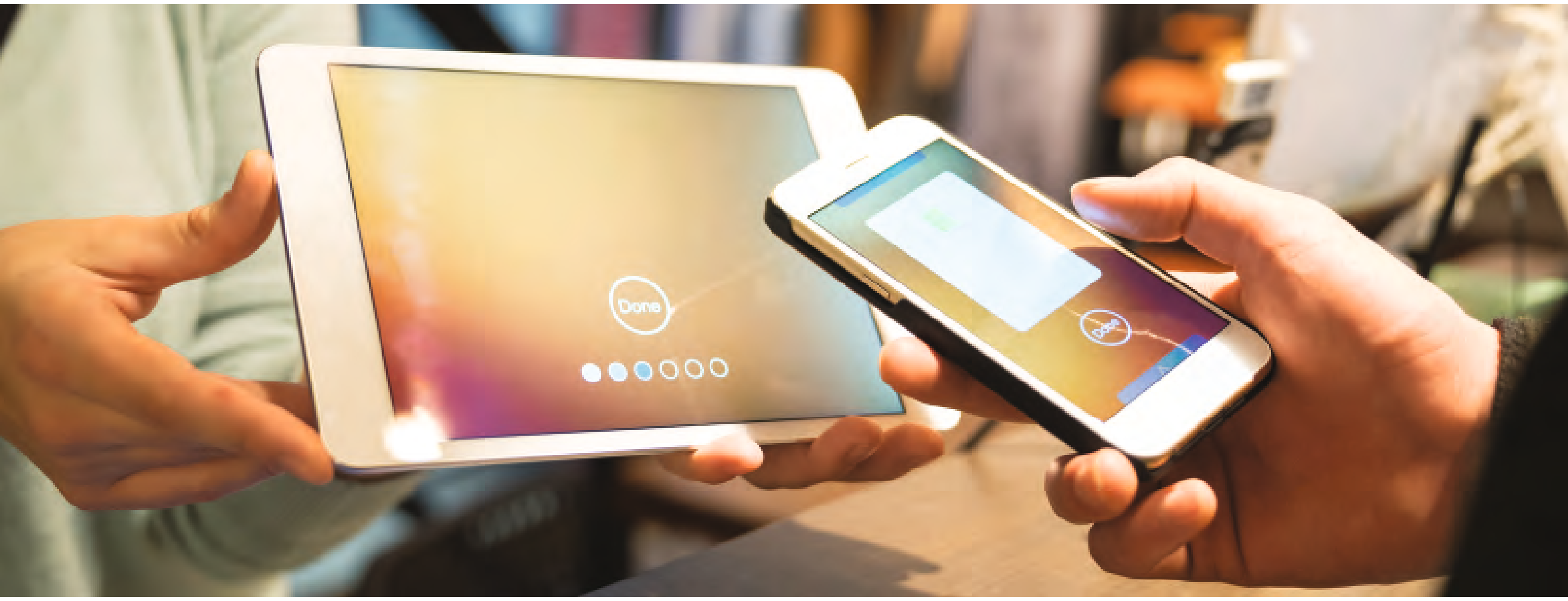
There has been significant penetration in merchant acquiring QR for markets in tier II and tier III cities in India, substantially contributing to financial inclusion initiatives. This expansion allows small businesses and local vendors in these regions to accept digital payments easily, bypassing the need for costly traditional banking infrastructure.

Merchant preferences

Merchants increasingly prefer QR codes due to their convenience. QR codes enable hassle-free payment acceptance without the need for expensive POS terminals or complex set ups. The widespread adoption of UPI has further fueled this preference, as it offers a seamless and instant payment experience for both merchants and customers.

Cross-selling opportunities

Companies are tapping into the potential of cross-selling by offering lending, insurance, and other financial services to merchants. This strategy not only boosts their revenue but also strengthens their relationships with merchants. By diversifying their offerings, they create more value for everyone involved. It's a win-win situation that enhances overall business growth.

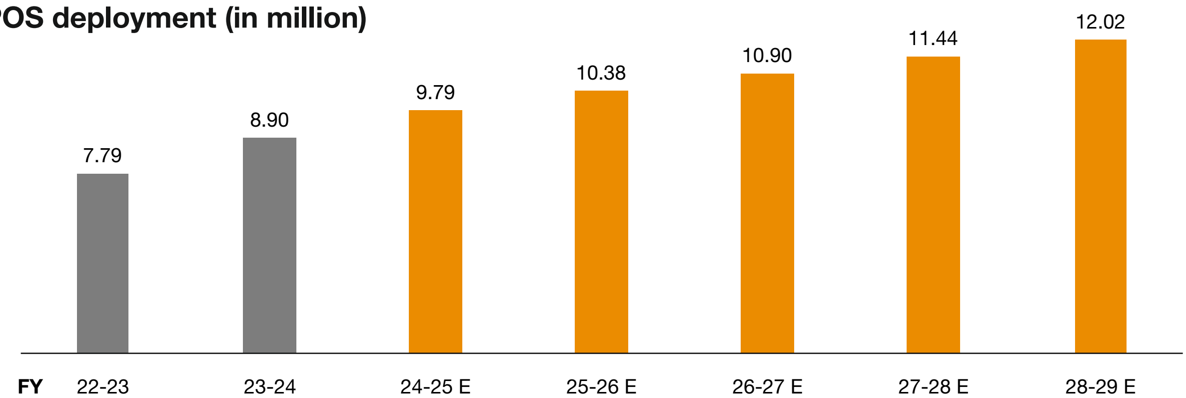


Major challenges in QR merchant acquisition: Merchants activation

QR merchant acquiring companies are facing issues with low activation and weak ringfencing with the current QR merchants. With increasing competition and minimal or no MDR being charged, merchants frequently switch between QR providers. It is observed that an average of four to five QRs are deployed per merchant by multiple companies, contributing to the total deployment of 352 million QR codes. These merchant acquiring companies are striving hard to boost overall merchant activation and offer unique and innovative use cases to improve ringfencing.

POS deployment

POS deployment (in million)

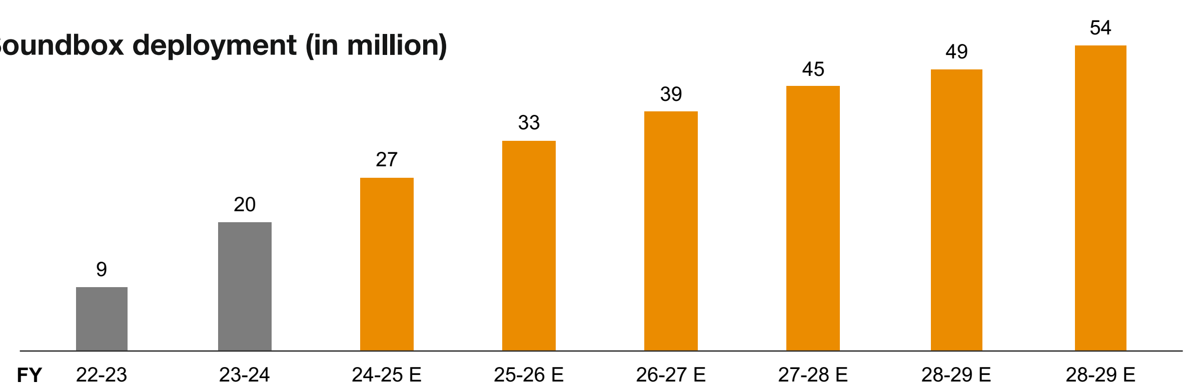


Source: RBI; PwC analysis

It is also observed that many merchants are even switching from POS to QR codes, as reflected in the decline of YoY POS deployment growth from 28% in FY23 to 14%3 in FY24, despite increased digital payment penetration. The complexities in setting up, MDR and the rental costs associated with POS machines are leading to a decline in growth and causing merchants to switch.

Soundbox deployment

Soundbox deployment (in million)



Source: RBI; PwC analysis

In addition to the widespread deployment of QR codes, soundboxes are rapidly gaining traction, especially among merchants with high foot traffic. These devices provide voice confirmations for transactions, which significantly streamline the payment process and enhance the overall merchant experience. The voice confirmation feature is particularly beneficial as it offers immediate confirmation which reduce errors and frauds along with ensuring that both merchants and customers are aware of successful transactions.

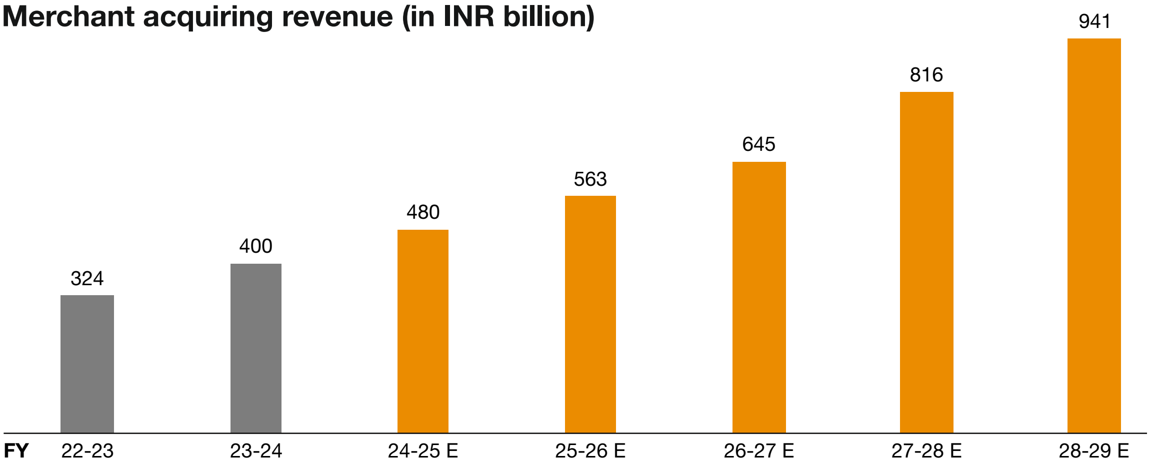
Expanding soundbox adoption: A strategy for ringfencing merchants

Soundbox, being an added layer of convenience, helps merchants manage their operations more efficiently and creates ring fencing by the companies to reduces the likelihood of merchants switching to competitors. Recognising these advantages, major players in the market are increasingly focusing on expanding the penetration of soundboxes. By doing so, they aim to foster greater merchant loyalty and create additional revenue opportunities by renting out these devices. This strategic push towards soundbox adoption is expected to solidify merchant relationships and drive sustained growth in the digital payment ecosystem.

Emergence of soft POS

In addition to the payer's convenience, device-based solutions for merchants are also emerging to bring traction to the digital payments space. Soft POS (software point of sale) are bringing in off-the-shelf device for the merchants to start accepting real-time payments. These solutions have reduced merchants's investment in the payment infrastructure reducing the barrier to entry and business.

Merchant acquiring revenue (in INR billion)



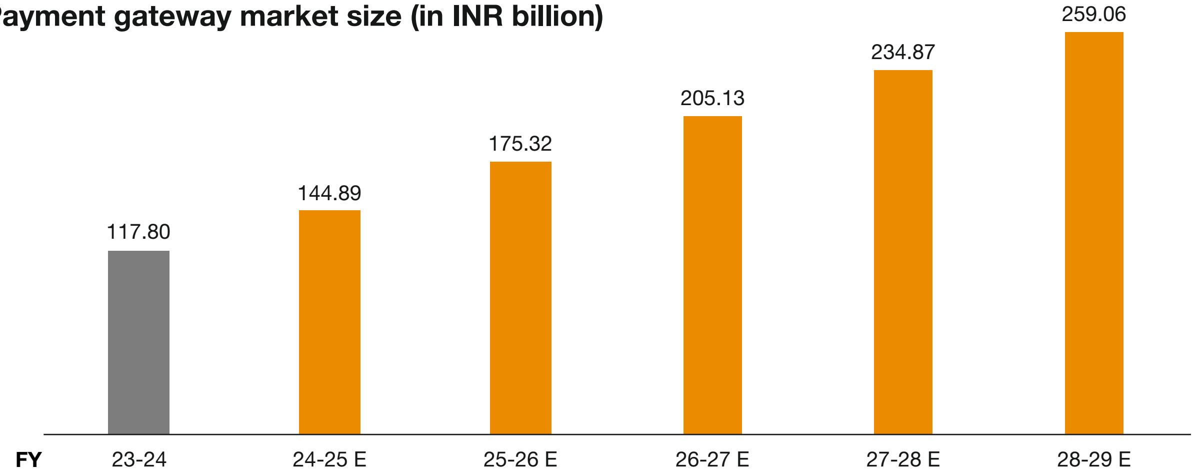
Source: RBI, NPCI, PwC analysis

The gross revenue in offline merchant acquiring is expected to double by FY28–29 as compared to FY23–24.

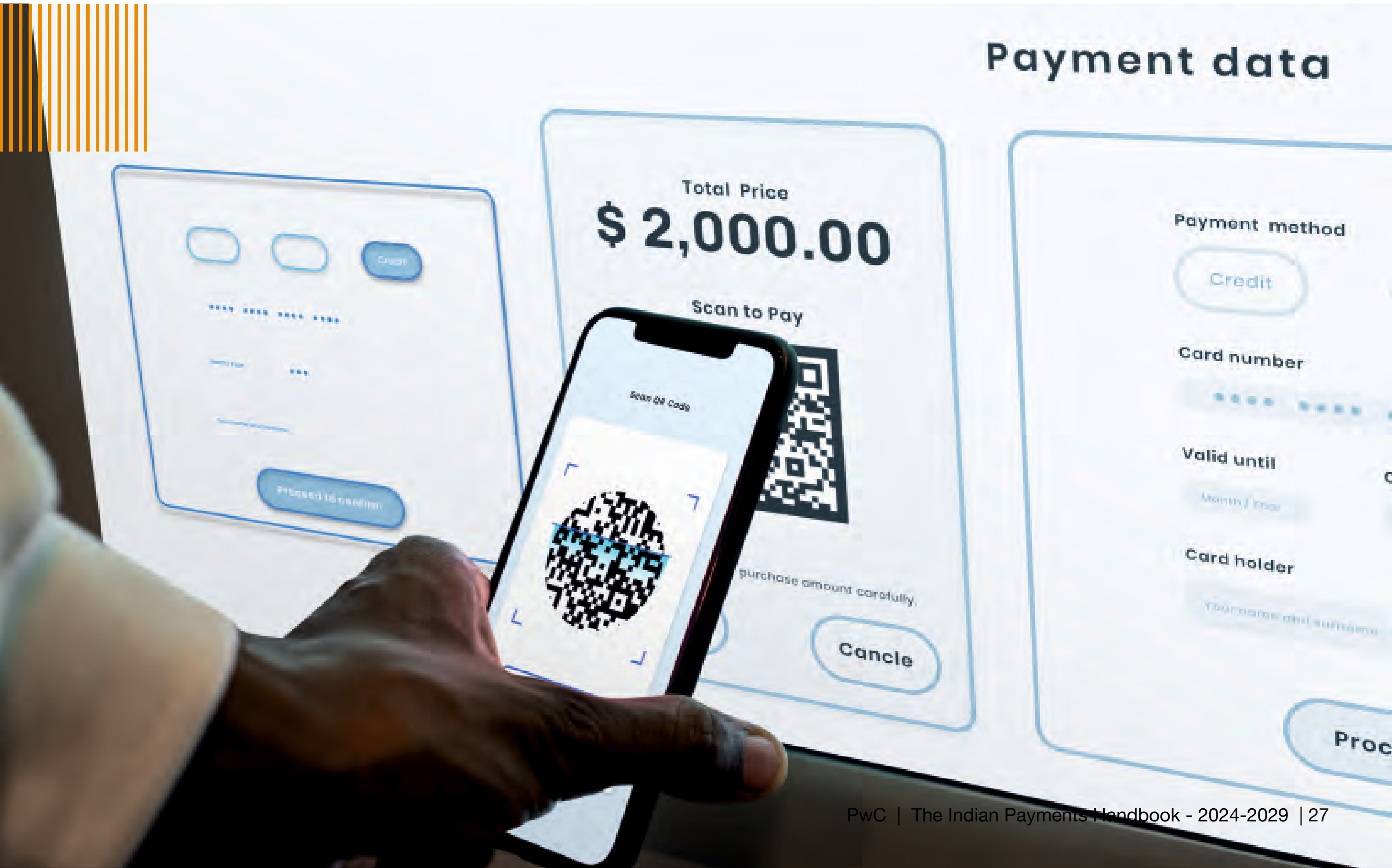
Online merchant acquisition

In recent years, online merchant acquisition in India has surged, propelled by the nation's swift digital transformation and the Government's strong push towards a cashless economy. These technologies empower businesses to onboard merchants quickly and in a cost-effective manner, opening doors to new markets and merchant demographics. Consequently, merchant networks are growing at an accelerated pace, bolstering the digital economy and promoting financial inclusion by integrating more businesses into the formal financial system.

Payment gateway market size (in INR billion)



Source: PwC analysis



Major growth factors

- Government initiatives
- Digital payments – UPI, PPI and BNPL
- White-label payment gateways
- E-commerce adoption

Government initiatives

The Digital India initiative driven by the Government is accelerating the payment gateway adoption. Online payment platforms and services are expanding nationwide, leading to the rapid emergence of numerous payment gateway vendors joining with innovative technologies which is leading to providing more compatible and affordable solutions in the market.

Digital payments penetration

The surge in online payment methods is fuelling the expansion of India's payment gateway market. This is primarily driven by customers' growing preference for UPI, digital wallets, cards, and buy now pay later (BNPL) options. The convenience and widespread adoption of these methods are transforming the way people in India handle transactions over payment gateways.

White-label payment gateways

Another key factor is the customisation of payment processing through white-label solutions. These gateways empower businesses to accept online payments via various methods, such as credit cards, digital wallets and bank transfers. This flexibility not only enhances the customer experience but also allows businesses to offer personalised payment options. Additionally, white-label gateways maintain brand consistency by seamlessly integrating with existing systems. This trend is transforming the way businesses manage online transactions, making the process smoother and more efficient.

E-commerce and ONDC

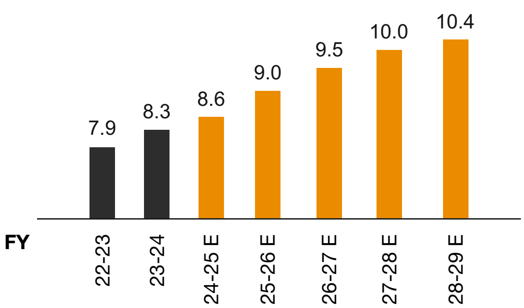
Growing e-commerce transactions in the Indian market are fuelled by several key factors – widespread internet access, affordable internet services and a significant increase in smartphone users. Payment gateways have become indispensable to e-commerce, providing a seamless and secure payment experience through easy-to-implement APIs. This integration ensures that customers enjoy a smooth and hassle-free shopping experience.

Prepaid payment instruments (PPIs)

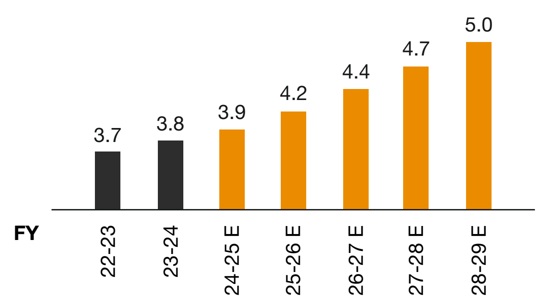
Domestically, PPIs have observed a slowdown. This is in contrast to the upward trend shown over the last few years. PPIs have experienced a slowdown in growth with a 5% increase in transaction volume and an 4% rise in transaction value in FY 2024. This growth is notably lower than anticipated, with the previous fiscal year showing expansion figures at just 50% of the expected targets. Contrary to prepaid cards, gift cards market in India has reached USD 75 billion with a steady growth of 18%.

While PPIs continue to offer a user-friendly payment solution, their growth was on a moderate side in the last financial year. In the last three years, primarily prepaid card growth was fuelled by BNPL. After recent interventions, financial institutions are now working on pivoting these products to offer better and compliant products. These interventions may initially affect the industry for some time but moving forward, more structured, innovative and robust solutions may play a pivotal role in achieving harmonisation between innovation and regulatory compliance. Furthermore, with some recent use cases, the upcoming years will be crucial in determining the trajectory of PPIs and their role in shaping India's digital economy.

Transaction volume of PPIs (in billion)

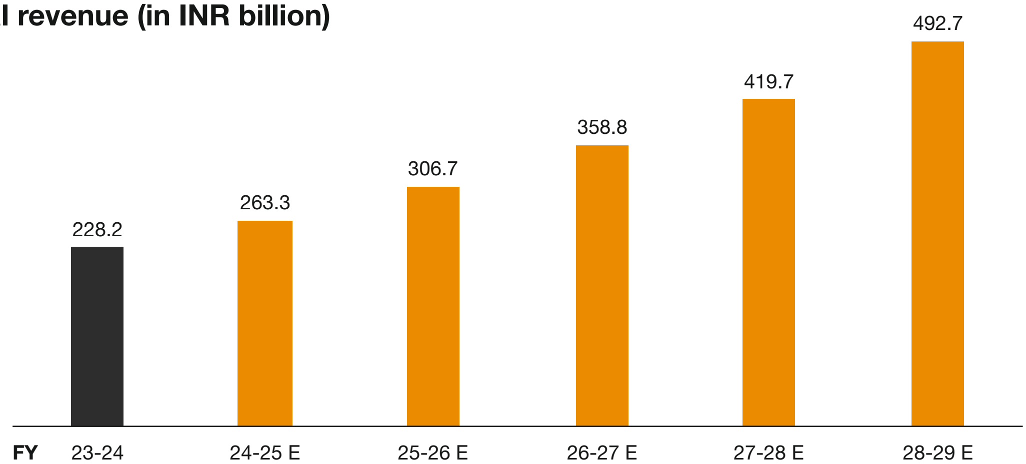


Transaction value of PPIs (in INR trillion)



Source: RBI; PwC analysis

PPI total revenue (in INR billion)



Source: PwC analysis

Income lines for PPIs

- Transaction charges/loading fee
- Float/breakage income
- Interchange income

PPIs on third-party UPI apps

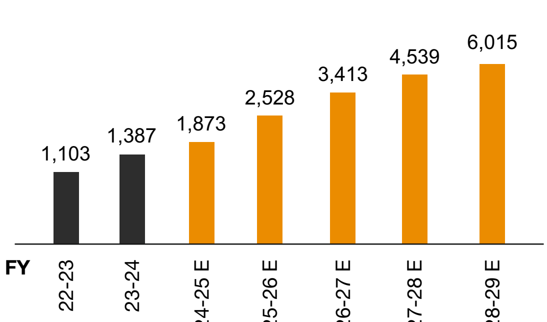
The RBI's recent approval for integrating PPIs with third-party UPI platforms is set to drive significant growth in the PPI sector. This strategic initiative is expected to open new avenues for transactional activities, creating a favourable environment for the expansion of the prepaid payments landscape. The implications of this development are profound – it simplifies the transaction process for end users and enhances the interoperability of payment instruments.

As a result, an increase in the adoption rate of PPIs is anticipated, which will positively impact the industry's growth metrics. This move by the RBI not only streamlines payment processes but also encourages broader usage of PPIs, reflecting a promising outlook for the sector. The integration with UPI platforms is likely to be a game-changer, fostering innovation and driving the next wave of growth in India's digital payments ecosystem.

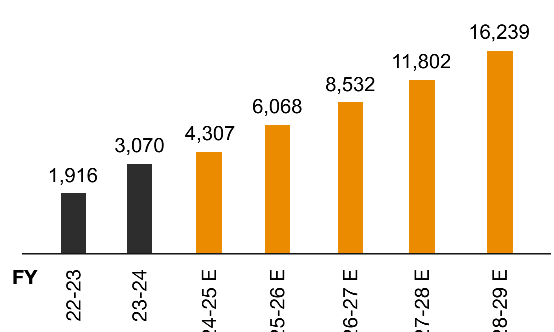
BBPS

BBPS has shown substantial growth in the fiscal year 2023-24. The transactional volume has increased by 26% YoY, while the transactional value has surged by 60% YoY.

Transaction volume of BBPS (in million)



Transaction value of BBPS (in INR trillion)



Source: Bharat BillPay; NPCI; PwC analysis

The RBI has introduced several measures for enhancing the BBPS penetration:

Net worth requirement reduction

The net worth requirement for entities wishing to implement BBPS has been reduced from INR 100 crore to INR 25 crore. This move aims to encourage more entities to participate in the BBPS ecosystem.

Penetration of cross-border payments

Cross-border BBPS will enhance the accessibility of the BBPS platform, enabling seamless payments from international locations. This expansion aims to facilitate smoother transactions for users making payments from abroad.

Scope expansion

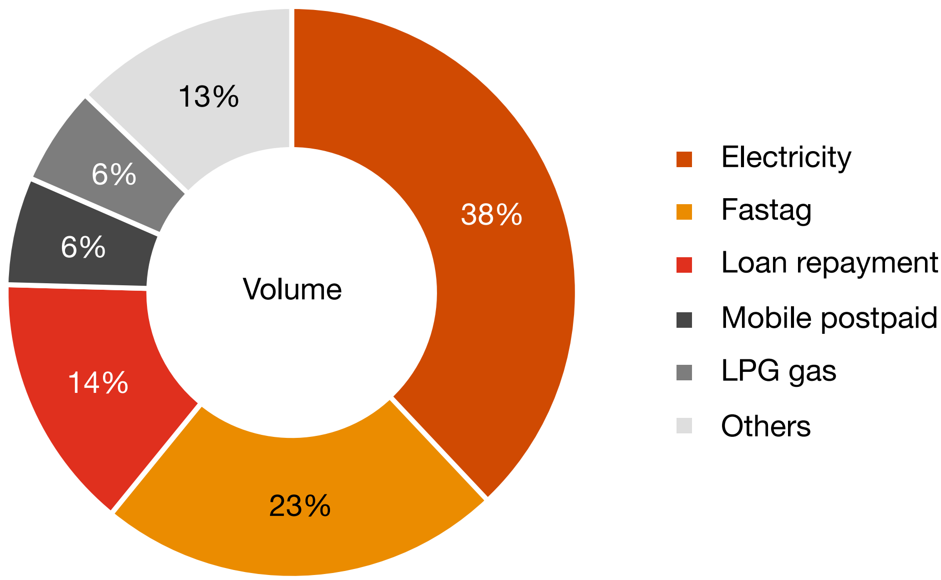
The RBI is working to broaden the scope of BBPS by including all categories of payments and collections, both recurring and non-recurring, which will attract more customers and make it a more comprehensive payment solution.

New directions for participation

New guidelines have been issued to increase participation in BBPS. These directions are expected to enhance penetration by new players such as banks, NBFCS and FinTechs joining in.

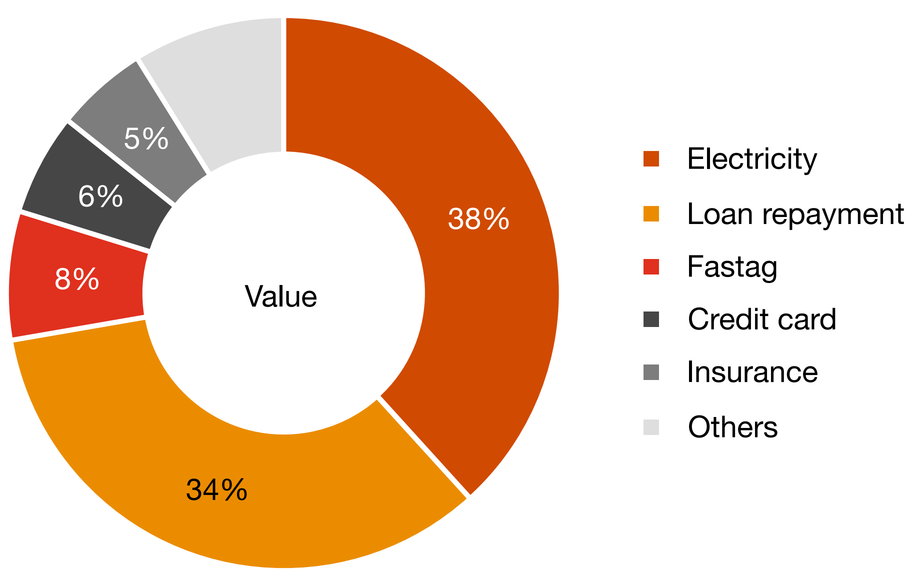
With these interventions, BBPS is expected to see increased penetration and adoption, particularly in areas that have been underutilised. The ongoing efforts to expand the scope and capabilities of BBPS will likely drive further growth and make it a more integral part of the payment ecosystem in India.

Major category-wise contribution of BBPS (volume)



Source: Bharat BillPay; NPCI; PwC analysis

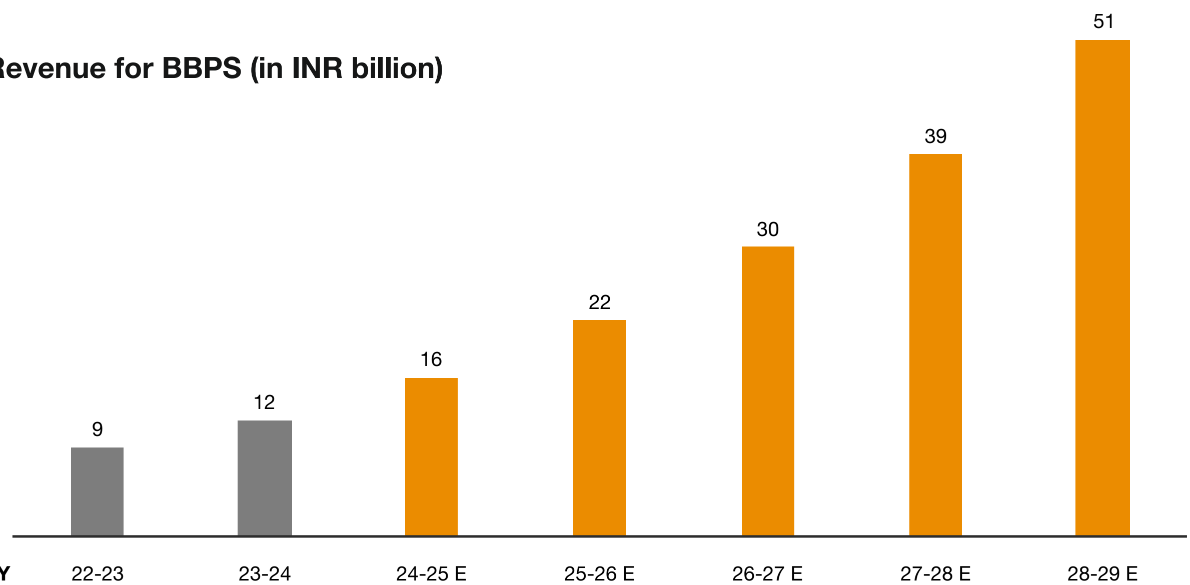
Major category-wise contribution of BBPS (value)



Source: Bharat BillPay; NPCI; PwC analysis

Utility payments and loan repayments remain the largest contributors to the BBPS ecosystem's transaction value. Meanwhile, the newly introduced credit card payments are gaining momentum, showing an impressive average month-on-month growth rate of 18%.

Revenue for BBPS (in INR billion)



Source: PwC analysis

BBPS revenue line

Interchange paid by biller operating unit (OU) to customer

- **Customer convenience fee**
- **Float income**
- **Interchange paid by biller OU to customer OU**

Key trends in BBPS

Regulatory support for boosting BBPS reach

The RBI has introduced several measures to enhance the BBPS penetration.

Surge in BBPS biller onboarding

More than 21k billers have been onboarded on BBPS.

Growing participation in cross-border BBPS

More participation has been seen from banks, non-banks and FinTechs for cross-border inward billing for NRIs.

Credit card BBPS payments boost ticket size

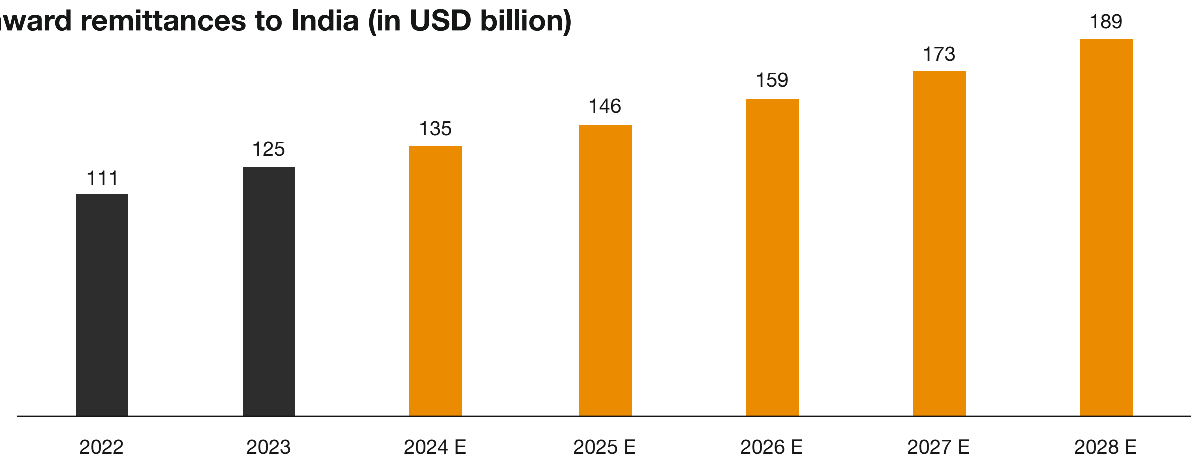
Credit card payments through BBPS are leading to a noticeable increase in the average ticket size.

Cross-border payments

According to the World Bank's latest Migration and Development Brief, low- to middle-income countries (LMIC) have seen a growth of 3.8% in inward remittances. While other countries have seen marginal growth, India has clinched the top spot with highest inward remittances worth USD 125 billion[10] in the year 2023, thus witnessing a growth of 12.3%. While the 12.3% growth is significant, it falls short of the historic peak of a 24.4% increase recorded in 2022. This growth increased India's contribution to the share in remittances in South Asia to 66% in 2023 which was at 63% in 2022.[11]

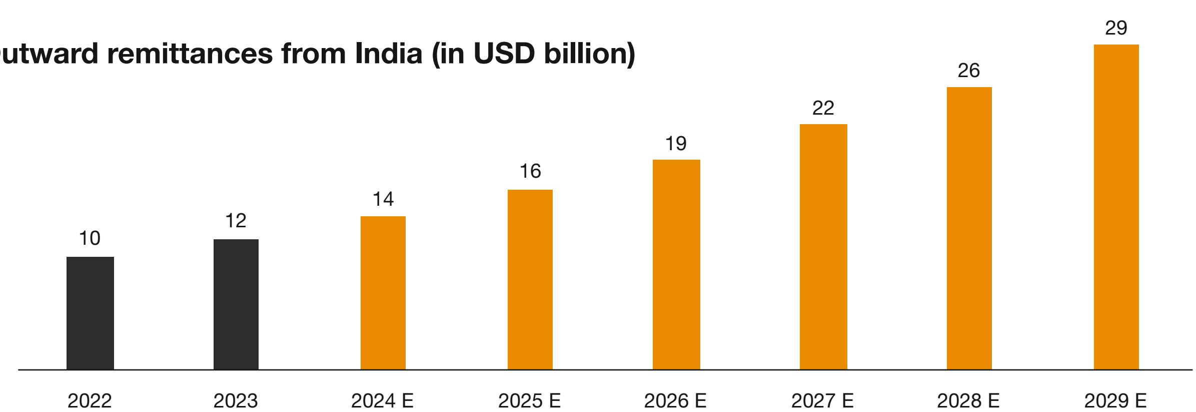
India could see a moderate growth in the inward remittances, which can be attributed to multiple factors including a slow-down in the high-income countries. The expected growth of the remittances from the high-income countries may see a reduction due to weaker job markets and troubled economies. As per the World Bank report, growth is expected to consolidate at 3.1% only.

Inward remittances to India (in USD billion)



Source: World Bank; PwC analysis

Outward remittances from India (in USD billion)



Source: World Bank; PwC analysis

In 2023, most of the remittances (78%)[12] are received in the LMICs. Lowering the costs will help the world in increasing the inclusivity as cross-border payments fulfil the last mile. Currently, cross-border payment costs are as high as 6.18% in 2024. By integrating technology in existing systems, the Indian Government proposed to reduce the costs to 3% to the World Trade Organization (WTO).

10 https://www.firstpost.com/business/with-125-billion-india-leads-global-remittance-charts-in-2023-world-bank-report-13516382.html
11 https://www.businesstoday.in/latest/economy/story/india-tops-remittance-flows-at-usd-125-bn-in-2023-world-bank-410145-2023-12-20
12 https://bfsi.economictimes.indiatimes.com/news/policy/rbi-npci-make-presentation-to-wto-members-on-reducing-cost-of-remittances-by-adopting-payment-system-like-upi/109054023

Regulations and policies fostering innovations in payments

The continuous surge in digital payments in India has underscored the need for both industry participants and the RBI to remain agile in adapting to the evolving terrain. This entails staying abreast of emerging technologies and adjusting regulatory frameworks to support their growth.

Key developments include the implementation of a licencing framework for online PAs, resulting in 140 applications to the RBI. By late 2023, the RBI granted final authorisation to nine PAs, with 52 more either having in-principle approval or being under review. Additionally, in April 2024, the RBI introduced draft guidelines to regulate offline PAs, aligning criteria for online and offline operations to ensure comprehensive and fair regulation. Further regulatory advancements include circular for payment aggregator cross-border (PA-CB) guidelines and extending the regulation of online cross-border payments to non-bank entities. Moreover, the RBI has mandated card-on-file tokenisation (CoFT), allowing cardholders to generate and control tokens through their bank platforms. The transaction limit for recurring payments was raised to INR 1,00,000, and pre-sanctioned credit lines were approved for UPI transactions. The adoption of the ISO 20022 standard for real-time gross settlement (RTGS) systems is in its advanced stages, aiming to enhance data structuring, analytics and global harmonisation.

To bolster the FinTech industry, the RBI has outlined several initiatives, including the promotion of RuPay cards and low-value BHIM-UPI transactions, setting year-wise digital payment targets, and improving payment acceptance infrastructure. Additionally, the fourth cohort of the regulatory sandbox focuses on fraud prevention, with six entities selected for testing. Collaborative efforts among regulators, industry stakeholders and consumers are crucial as the payment ecosystem continues to evolve, ensuring transparency, security and growth.

PA regulatory developments:

- **Update on PA licence:** The introduction of a licensing framework for online PAs (PA-O) in 2020 prompted approximately 140 applications to the RBI. These applications came from dedicated payment service providers as well as from different entities, facilitating PA services. By 19 December 2023, three years after the inception of the PA guidelines, the RBI had granted final authorisation to seven players – four existing PAs and three new entrants, later updated to nine players including one existing PA and one new PA. As of 1 January 2024, there are 32 existing PAs and 20 new ones with in-principle approval, while eight existing PAs and 13 new ones await final decisions from the RBI as their applications are under review.
- **Draft for offline PA (new circular expected in coming months):** On 16 April 2024, the RBI introduced draft guidelines designed to govern PAs facilitating offline transactions at physical point of sale (PA-P), supplementing the current framework overseeing PA-Os. These guidelines comprise two separate drafts – one outlining fresh regulations encompassing PA-P operations and the other suggesting amendments to the existing regulations governing PAs. The RBI's draft directive marks a significant step in regulating PAs, extending oversight to previously unregulated offline transactions. Aligning entry criteria for both online and offline PAs ensures fairness. Notably, the updated definition of PAs now covers both online and physical POS operations, ensuring comprehensive regulation. Overall, the draft directive offers a holistic framework for PA regulation, addressing regulatory gaps in offline transactions and enhancing transparency and security in payments. Collaborative efforts among regulators, industry stakeholders and consumers will be crucial as the payment landscape evolves.

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:

- Promotion of RuPay credit, debit cards and low-value BHIM-UPI transactions
- Year-wise digital payment transactions and merchant acquisition targets
- Promotion activities with digital payment stakeholders and law enforcement agencies
- Tracking of Indian payments ecosystem progress with different KPIs
- Improvement of payment acceptance infrastructure: Advisories have been issued by the Government of India to various stakeholders to improve the payment acceptance infrastructure.
- Prevention of cyber crimes

The future of digital payments in India

In line with the market predictions, digital payments in India have been up for an accelerated, sustained and robust growth since the last decade, fostering innovation in product propositions for end customers, solutions for merchants and ever-evolving regulations. The next phase of digital payments could see the introduction of new payment use cases, more focus on sustainable margins, opening of new markets and regulatory interventions.

Innovations in emerging payment modes and credit availability

Credit penetration and availability

India has seen a recent surge in credit penetration. Number of individuals availing of credit facilities has grown substantially, driven by an awareness of financial products and services. This uptick in credit usage has targeted various sectors including retail loans, SME financing and agricultural credit.

In the last year, bank and institutions saw higher growth in high-credit average ticket size (ATS), while low-credit ATS witnessed a slower growth, which is testament to the caution banks have shown while providing credit to consumers who are NTC or new to bank (NTB).

The overall loan value in the country has grown by 21%. The contribution to this growth came from across the geography types, with 25% growth in rural areas, 21% growth in semi-urban and 14% growth in the urban cities of the country.

Increasing credit awareness

Customers have increasingly become self-aware about tracking their debts and looking for available credit opportunities. Typically, credit monitoring is done to obtain new credit products, to better manage debts and to improve credit score. The increase in credit awareness and monitoring can lead to an efficient and growing lending market.

Payment aggregator for cross border (PA-CB)

On 31 October 2023, the RBI issued guidelines for cross-border payment aggregators thereby allowing non-bank entities to enter the payment aggregation business, expanding their scope to include the import of services. This allowed PA-CBs to operate independently, without the support of AD banks. Entities facilitating or planning to facilitate cross-border payments must revisit their services in compliance with the new PA guidelines and circular and initiate the authorisation process. It is expected that RBI will broaden the coverage of the guideline to include offline services, delivery vs payment transactions, and the value limit per unit of goods/ services.[13]

The issuance of the guidelines is a significant step towards integrating non-bank entities into the payment aggregation business. Further details from the RBI will help these entities to navigate the changes effectively. Constant evolution of the guidelines basis industry interactions will be beneficial for the ecosystem and evolve as per the market needs.

Interoperability of net banking

The RBI is set to introduce interoperability for internet banking transactions, with an expected rollout in the current year.[14,15] Currently, banks have to individually integrate with each PA used by different online merchants, which is a complex and cumbersome process given the numerous PAs in the market. Moreover, the absence of a unified payment system and standardised rules leads to delays in merchants receiving payments and increases settlement risks.

The initiative of interoperability in the net banking system will reduce integration requirements and enable faster go-to-market, streamline payment processes, resulting in faster settlements for merchants and enhancing user experience. It will reduce operational complexities for banks and PAs, fostering a more competitive and inclusive financial ecosystem. This move is expected to mitigate settlement risks, drive innovation in the payment sector and lower platform and usage charges.

Emerging financial ecosystem: The convergence of payments, insurance, wealth and lending

The integration of payments, insurance, wealth management and lending services is transforming the financial landscape, creating comprehensive ecosystems that cater to the evolving needs of customers. Many banks, NBFCs and FinTechs are now offering these services through superApps. These superApps, launched by existing platform players, provide a variety of financial and non-financial products and services under one product, making them increasingly popular. This all-in-one approach not only simplifies financial management for users but also enhances their overall experience.

13 https://www.pwc.in/assets/pdfs/cross-border-payment-aggregatorsregulations-and-business-use-cases.pdf
14 https://www.business-standard.com/industry/banking/interoperable-payment-system-for-internet-banking-in-2024-rbi-governor-124030400991_1.html
15 https://economictimes.indiatimes.com/industry/banking/finance/banking/india-to-launch-interoperability-of-digital-payment-systems-for-internet-banking-in-2024/articleshow/108205417.cms?from=mdr

Intersection of big data analytics for payments solutions

Big data and analytics are transforming the payment solutions landscape by driving innovation and enhancing operational efficiency. These tools enable payment companies to gain deep insights into customer behaviour, allowing for personalised services and improved customer experiences. Additionally, they help in identifying new market opportunities and optimising resource allocation. As the industry evolves, leveraging big data and analytics becomes essential for staying competitive and meeting customer expectations.

Major use cases of big data analytics for payment solutions:

Data-driven insights for new use cases

It enables payment companies to generate innovative insights from vast transaction data, identifying new revenue opportunities, demand trends and spending patterns. This helps pinpoint areas for improvement and optimise business strategies.

Real-time transactions settlement and monitoring

It automates repetitive payment tasks and optimises workflows using optical character recognition (OCR) and natural language processing (NLP) for touchless invoice processing and machine vision for cheque deposits. It also reduces settlement times by predicting the changes and requirements in real time, based on historical and current data

Fraud detection and prevention

It is revolutionising fraud prevention by analysing vast transaction data and detecting complex patterns indicative of fraud. Machine learning algorithms process real-time data points to flag suspicious transactions swiftly and prevent potential losses

Personalised payments and financial solutions

Big data analytics enhances credit risk assessment by analysing diverse data sources for real-time underwriting decisions and credit limit adjustments. It also promotes financial inclusion by using non-traditional data, approving more applicants while maintaining similar default rates.

Enhanced customer insights

It allows payment firms to gain a unified view of customer preferences across channels, enabling personalised recommendations and loyalty programmes. Machine learning analyses past purchases and online activity to tailor payment products, services and offers to individual needs.

Customer support service

Chatbots and virtual assistants using NLP are transforming customer interactions in the payments industry by addressing common queries instantly without human intervention. This innovation has reduced call centre volumes and enhanced 24/7 support accessibility.

Challenges in big data analytics for payments

Payments companies are poised to seize numerous opportunities using big data analytics. However, they still encounter significant challenges, as highlighted below.

1

First is the imperative to navigate stringent **data privacy regulations** and establish robust security protocols. This is crucial for safeguarding sensitive customer data against unauthorised access and potential breaches.

2

Additionally, **change in organisational structures** becomes essential, as it will replace certain roles, evolve operational models and introduce new positions in different fields. Without effectively hiring and nurturing talent in these crucial domains, FinTech firms risk falling short of fully exploiting the potential of big data capabilities.

3

Furthermore, **ensuring data accuracy, reliability and integrity** presents another formidable challenge. These factors are pivotal in leveraging analytics-driven insights for informed decision-making and underscoring the fundamental importance of meticulous data management practices within the industry.

Therefore, addressing these challenges adeptly will be instrumental in maintaining competitiveness and sustainable growth in the dynamic FinTech landscape.

Digitising Indian business payments

With the emergence of technology and its integration in consumer payments, B2B payments in recent years have also undergone significant growth and transformation. For digital payments to grow sustainably, businesses of all scales need to embrace digitisation in their account receivables and payables. Due to the technological adoption from accounts payables, receivables and petty cash expenses business are set to leverage automation throughout the supply chain (order to cash).

Connected finance (end-to-end business payment solutions)

Connected finance can make businesses agile by providing a one-stop solution which gives a consolidated view of multiple channels and accounts. Today, this can be achieved through small- to large-scale integrations with real-time business intelligence.

Businesses can stay connected with all the aspects of finances including tracking multiple current accounts, accounting software, vendor payments, budgeting and tax filing.

Banks are collaborating with SaaS companies to help SMEs and MSMEs with business software product purchases and subscriptions which connect and integrate with business accounts to provide real-time financial insights and business position.

Connected finance

- Efficiency through automation
- Agility and scalability
- Employee expenditure
- Real-time payment intelligence
- Integration with business accounts

Business credit cards

About 40% of Indian MSME and SME segments comprise businesses with a turnover of less than INR 10 lakhs, employ 1 to 100 employees and less than one-third of these businesses market and sell products online. These numbers, apart from providing the structure of the market, also provide an important insight into the business segment which tells us that these businesses are cash-strapped, require low- or interest-free credit, smooth vetting/credit approval process and would keep security and protection from payment frauds at the helm of the overall operations.

Unlike corporates, MSMEs/SMEs must manage their financials, keeping working capital as the primary focus while making business payments. To do this, small businesses, especially managed by sole proprietors, reach for their current or personal accounts or personal credit cards strapping their personal finances for the business use, which can cause setbacks. Most importantly, the reconciliation of business expenses for payables becomes tedious and may create reconciliation/settlement losses and personal credit cards does not provide any business-related rewards which can be used to redeem for any business expenses.

Commercial and business credit cards

- Cash flow management
- Employee cards, spends tracking & fraud protection
- Welcome benefits & spends rewards
- Miscellaneous standard benefits
- Business expenditure benefits

16 https://msme.gov.in/sites/default/files/MSMEANNUALREPORT2022-23ENGLISH.pdf

Commercial cards

Commercial cards can be beneficial for small businesses. With the top issuers entering this segment in the Indian market, the requirement for these cards has also increased. To mitigate the issue of working capital, commercial and business credit cards provide small businesses the freedom of providing interest-free loans for 45 to 55 days. Some business credit cards in India provide account payable and receivables tracking through partnerships with SaaS and BaaS platforms. These platforms provide connected finance solutions for the end-to-end tracking of funds, expenditures made by employees and precise financial positions of the business. This allows micro businesses and sole proprietors to separate their personal and business expenses. The global credit card market has seen small business credit cards grow through the recent years, providing annual percentage rate (APR) benefits, business expenditure rewards and tax payment solutions.

Adoption of virtual cards

Post the Covid-19 pandemic, the B2B payment landscape has evolved due to an increased adoption of virtual card payments. Virtual cards offer a unique proposition to businesses, allowing them to offer multiple or single use virtual cards based on the nature of business. Single-use virtual credit cards not only offer a secure way of doing business wherever third-party transactions are involved but also offer simplified reconciliation. Many Indian delivery start-ups within grocery and food delivery businesses make use of single-use virtual prepaid cards to avoid reconciliation and transactional issues.

Businesses can integrate virtual cards into their system to simplify accounts payable, corporate travel, payments related to shows/conferences, healthcare, insurance and fleet management. Virtual card market is expected to grow rapidly especially in the Asia-Pacific region.

Latest trends in driving loyalty in payments

Rewarding customers sustainably: Loyalty and reward programmes are shifting from merely offering recognition and gifts to a few high-value customers to adding value through enhanced customer insights, marketing automation, AI, payments and loyalty currency valuations. They now provide comprehensive marketing platforms, technology solutions and recognition applications. It is anticipated that innovation in loyalty programmes will continue as companies strive to attract new customers and encourage diverse interactions with their products and services. There is a growing trend towards offering more personalised experiences tailored to individual needs and behaviours through data analytics. This shift represents the next major development in the loyalty industry and is expected to significantly transform the landscape.

However, the growing maturity of the loyalty industry has heightened its complexity, necessitating professionals to improve programme success rates and address structural issues such as earnings, point valuations and transaction caps. This complexity demands expertise across various domains, including business strategy, data analysis, technology, finance, rewards and logistics.

While Indian consumers currently share data willingly, growing concerns over data misuse will require organisations to build and respect zero and first-party data, adhering to privacy rules that limit data monetisation. Companies must move beyond transactional loyalty to foster meaningful relationships through strong social connections and sustainable models.

Network level loyalty programmes: To go beyond the partnerships with issuers, payment networks are now directly reaching out to the customers to offer rewards and loyalty programmes to increase penetration in the Indian payments market. Vast payment processing data of the customers has allowed these networks to offer personalised and customer segment-driven loyalty programmes on their card offerings.

Newer innovations in card lifecycle

Underwriting 2.0

Even though lenders (banks, NBFCs, FinTechs) may want to tighten their credit criteria and decisioning, consumers are becoming accustomed to streamlined and end-to-end digital application processes and responses. Slow processes involving manual interventions could lead to customers dropping out. Alternative credit underwriting can help lenders to accurately assess the consumer's creditworthiness without any credit history. Lenders can leverage alternate, modern approaches to a risk-based credit approval strategy to achieve:

- a holistic view of the customer's creditworthiness
- enable agile and accurate credit decisioning
- promote financial inclusion by including new customers.

Many lending institutions in recent years have been overusing soft CIC scrubs. Thereby, bypassing the customer consent required access to credit ratings as per RBI's guidelines. This practice may get impacted if the regulators decide on cracking down or restricting soft scrub without the customer's consent. Banks and credit institutions (CIs) can be well prepared by building strong analytics and integrations with account aggregators for internal scoring of the existing to business (ETB) customers to create a base of customers to whom these products are offered.

16 https://msme.gov.in/sites/default/files/MSMEANNUALREPORT2022-23ENGLISH.pdf

Future of fraud detection and prevention

To deter fraudulent activity in 2024, businesses and consumers must approach their fraud mitigating strategies with tact. For businesses, the need for more sophisticated fraud prevention solutions leveraging data and technology is greater than ever before. In 2024, consumers and businesses need to be aware of various types of frauds owing to the next-gen technology and fraudsters. Domestic payment frauds have increased by 70.64% to INR 2,604 crore during the six-month period ended March 2024 from INR 1,526 crore in the same period of last year. The volume of frauds also rose to 15.51 lakh during the March 2024 period from 11.5 lakh in the previous six-month period, RBI data shows. Biometric for customer authentication and omnichannel enterprise-wide fraud prevention solution along with geolocation are the base requirements for fraud prevention in today's world. New technologies, including generative AI is proving to be a double-edged sword improving payment speed, efficiency and customer experience but also providing fuel to the payment frauds.

What does the payments industry expect from its regulators?

A new-age regulatory approach:

- Embrace market innovation by becoming an active participant. Technology-driven disruption and changes in consumer behaviours might require this approach from the regulators.
- Partnerships with the ecosystem involving banks, NBFCs, FinTechs and other regulators can become a noteworthy addition to today's regulatory framework.

Collaborative platform

- Facilitate collaboration among industry participants.
- Understand the industry expectations from the regulators.
- Involve regulated, unregulated entities including merchants and customers.

Pricing and fair competition

- Ensure customers are offered fairly priced products and services in the market with a clear and balanced approach.
- Apply a stronger mechanism to measure and promote fair competition in the payments industry.

Effective customer grievance redressal mechanisms

- Introduce transparent, robust, and process- and empathy-driven redressal mechanism.
- Enhance the end user's confidence in the technology and infrastructure of payment systems.

Ensure a level playing field

- Distrust in the system may create friction in the future, thereby hampering innovation.
- Regulators need to have a balanced view and approach while keeping compliance, customer needs/ preferences and regulations in place.

How can the Indian payment system and its learnings be adopted globally?

The Indian Government's leadership and push in promoting digital payments with a balanced regulatory approach has helped the country become a global leader in the adoption of digital payments. Various initiatives, including Digital India, the BharatNet project and India Stack, have significantly helped India's internet penetration and smartphone adoption.

Government's push:

The Digital India initiative – launched by the prime minister of India in 2015 – to make India's economy a digitally driven economy, was also helped by the RBI's vision of digital payments and policies which drove its growth in the early stages. The BharatNet project[17] has also contributed significantly to the same. The BharatNet project which re-imagined connectivity to all the gram panchayats in the country is expected to reach its conclusion by FY25.

Banking for the unbanked:

Along with the availability of digital goods and innovative products, financial inclusion and promotion have played a pivotal role in the digital economy journey. It is imperative to add the PMJDY to this list, which has added close to 520 million accounts, including many first-time introductions, to the formal economy. The PMJDY also helped the Government to efficiently execute the direct benefit transfer programme.

India Stack:

India Stack is a mere compilation of digital goods and APIs which helped the Indian payments ecosystem by providing identity data for financial institutions to meet crucial KYC compliance and AML norms. India Stack ensures financial inclusion, while streamlining identity verification with Aadhaar, reducing paperwork with e-KYC, and proffering secure digital document storage with digital locker.

Building digital public infrastructure can be a good learning for global economies that are aiming to propel their digital payments infrastructure by allowing institutions to access the digital goods of the consumers by integrating with the stack. This allows regulators to enforce digitally attainable and tech-driven e-KYC norms efficiently on the ecosystem participants.

17 https://usof.gov.in/en/bharatnet-project

Dynamic and proactive regulatory interventions:

RBI, SEBI and other regulatory bodies have always kept customers' interest at the forefront while balancing the innovation in digital payments, allowing space for new payment products. These regulatory bodies also ensure that these products, while being efficient, are compliant with the laws/regulations of the country. Regulators have introduced new regulations across the board, in addition to accountability and transparency, security, consumer protection and consumer awareness. Global ecosystems can therefore take notes from these interventions and timeliness of the regulators.

Draft regulations to undertake ecosystem participants' feedback:

The regulator keep updating the regulations and guidelines in a timely manner after due consultation with the stakeholders. It allows the payment ecosystem to stay relevant with the requirements of the present and as well continue to move towards the future. This also enables the regulator to balance innovation with the risks that may be present in the digital payment systems.

Robust customer communication:

The regulator has increased its efforts in sensitising customers about digital payments and secure ways of use. Regulators are relying on multiple modes of communication including newspaper columns, television ads and comic books to reach out to the masses. In addition to outlining secure ways to operate, the communication also highlights techniques used in fraudulent activities and offers potential remedies. This bodes well for the entire digital payment ecosystem as it increases customers' trust in the underlying payment systems.

Customer centricity to minimise financial, transactional and marketing frauds:

Balancing the growth of payments industry in the country, against financial and non-financial frauds, has also been one of the key areas of regulatory interventions undertaken by the Indian regulators. To do so, regulators have focused on multiple compliances by financial institutions and FinTechs, including internal and external compliances. In recent times, fraud prevention initiatives such as unique mobile number binding through IMEI numbers with transactions, blocking future authorisations for transactions initiated from mule bank accounts, banning of unregulated lending applications (BULA) have been highlighted. These initiatives are a testament to the efforts made by the Government of India and regulators in order to minimise digital transaction frauds. For non-financial transactions, regulators have enforced guidelines of unsolicited financial instruments issued to customers, CIC enquiries and explicit customer consent for multiple other non-financial transactions with the institutions.

Conclusion

In the last decade, India's digital payment ecosystem has witnessed remarkable growth, positioning the country as a global leader in this space. This evolution has been pivotal in transitioning from a cash-dominated economy to one that increasingly relies on digital transactions, with significant adoption across metropolitan areas, tier 1 to tier 4 cities, and even rural regions.

At the forefront of this revolution is UPI, which has driven deeper penetration of digital payments in India. Innovative use cases, including credit card linkages and international partnerships, are further propelling this momentum. Notably, there is a discernible shift towards person-to-merchant (P2M) transactions, enhancing the network effect as more customers engage with merchants. The expansion of the merchant acquiring network – both online and offline – has been supported by innovations such as soundboxes and effective cross-selling strategies, fostering greater merchant adoption of digital payments. This supporting network from the ecosystem is expected to propel UPI to achieve 1 billion transactions per day by the FY28 from 350+ million transactions per day in FY24. Credit card usage is also on the rise, surpassing the significant milestone of 100 million cards in circulation, with prospects for continued growth driven by new products and targeted customer segments. Credit cards are expected to reach double figures of 200 million cards in force by FY 29 and are set to reach 25 million transaction per day which is 2.5x of the transaction volume in FY24. BBPS is gaining traction as well, bolstered by Government support and the integration of new billers, which facilitates cross-border transactions and drives expansion.

Significant and notable trends this year have been implementation, adoption and growth of multiple use cases including UPI Lite, credit card on UPI, virtual credit cards, pay-by-points, business payments and merchant acquisition. These advancements encompass a wide range of strategies aimed at enhancing the issuance and distribution of payment solutions, alongside proactive promotion and regulation by Government bodies. The implementation of cutting-edge technologies aims to improve user experience across the entire customer lifecycle, from underwriting and onboarding to spending and grievance redressal. In addition to the experience, the approach bolsters risk mitigation efforts to safeguard customers.

Looking towards the future, we envision a dynamic new era for the digital payments industry, marked by groundbreaking product launches, cutting-edge technological advancements, supportive regulatory frameworks and heightened customer safety protocols. We are excited to be at the forefront of this transformative journey, ready to play an active role in driving the continued growth and widespread adoption of digital payments in India. Together, we will shape a more accessible, secure and innovative financial landscape for all.

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