Industry Report

Powering India's Digital Transaction Economy: The Evolution of Digital Payments and Issuing

Client: Pine Labs Limited

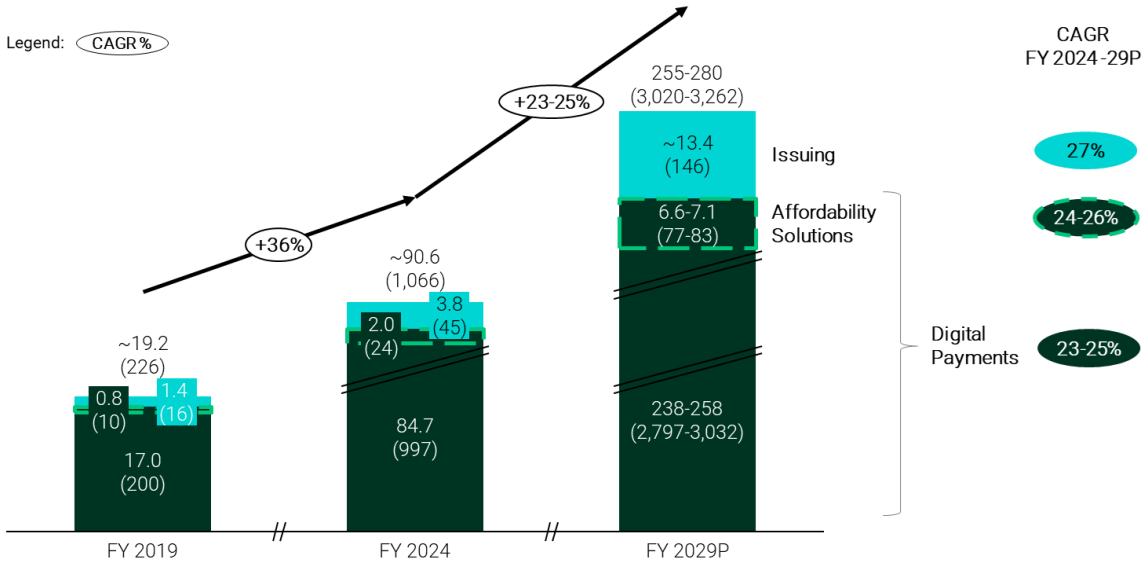
June 2025

INDUSTRY OVERVIEW

Chapter 1: The India Opportunity

The total market opportunity in terms of total payment value (TPV) for Pine Labs in India ~₹91 trillion (US$1.1 trillion) in FY 2024, having grown at a CAGR of 36% from ~₹19 trillion (US$226 billion) in FY 2019. It is projected to grow further to ₹255-280 trillion (US$3.0-3.3 trillion) by FY 2029 at a CAGR of 23-25% with increasing penetration of affordability solutions and cards usage as the digital payment ecosystem across in-store and online matures.

Figure 1: Total Market Size (TPV) – by segments
In ₹ trillion (US$ billion), FY 2019, FY 2024, FY 2029P



Note(s): 1. Digital Payments includes affordability solutions
Source(s): Redseer Research and Analysis

India's payments have evolved from cash-heavy transactions to AI-driven digital ecosystems. A decade ago, the initial shift saw POS terminals and credit cards replacing cash, driven by transaction banking and in-store innovations. Subsequently, about five years ago this was followed by a surge in digital wallets, UPI, and QR code adoption, fueled by fintechs and online commerce. Now, the focus is on AI, data-driven personalization and insights, and fintech infrastructure, moving beyond hardware dependency to create seamless and intelligent payment experiences through embedded journeys

The digital payment's foundation was built on fragmented systems that needed transformation. The transition to a digital-first ecosystem was essential due to:

- **Outdated and fragmented ecosystem**: Siloed systems, legacy, hardware led technology and a fragmented ecosystem across hardware, software, and payments created inefficiencies and operational friction, limiting scalability and user experience.
- **Lack of payment reliability –** Traditional payment systems struggled with unreliable network connectivity, inconsistent transaction success rates, and security vulnerabilities, leading to higher failure rates, increased fraud risks, and diminished consumer and merchant trust
- **Narrow revenue models**: Revenue models were heavily dependent on transaction fees, restricting the development of diversified value-added services.
- **Limited consumer finance**: Inadequate access to credit and flexible payment options constrained affordability and merchant growth.

Digitization has been pivotal in addressing these gaps, fostering a seamless, secure, integrated ecosystem that supports sustainable customer acquisition and retention, product launches and scalability, innovation, and financial inclusion. Traditional banks are still navigating the complexities of integrating legacy systems with modern technologies, ensuring platform stability, and managing evolving customer acquisition and retention strategies. This has led to innovation across value chains by new entrants, such as fintech players in digital payments and issuing.

Trends that are driving commerce and digital payments growth in India

India statistics	FY 2024	FY 2029P	CAGR FY 2024-29P
Nominal GDP[1]	₹303 trillion (US$3.6 trillion)	~₹486 trillion (US$5.7trillion)	10%
Consumption[2]	₹182 trillion (US$2.1 trillion)	₹298-306 trillion (US$3.5-3.6 trillion)	11%
Retail Market Size	₹79 trillion (~US$930 billion)	₹125 trillion (~US$1.5 trillion)	10%
P2M Digital Payments	~₹86.8 trillion (~US$1,021 billion)	₹244-265 trillion (US$2.9-3.1 trillion)	23-25%
Internet Penetration	56-59%	70-73%	4-6%
Digital Transactors Penetration	28-31%	53-57%	14%

Note(s): 1. Nominal GDP for FY 2024 and FY 2029P have been considered as CY 2023 and CY 2028P from IMF, 2. Represents Private Final Consumption Expenditure (PFCE) which is defined by the Government of India as the expenditure incurred by the resident households and non-profit institutions serving households (NPISH) on final consumption of goods and services, whether made within or outside the economic territory.
Source(s): Ministry of Statistics and Programme Implementation (MOSPI), IMF, Redseer Research and Analysis

- ***Favorable macro-economic conditions****:*
  India is projected to be the world's third largest economy by FY 2029P. India's nominal GDP stands at ₹303 trillion (US$3.6 trillion) in FY 2024 and is projected to grow at an annual rate of 10%, reaching ~₹486 trillion (US$5.7 trillion) by FY 2029. During this period, India is anticipated to be the fastest-growing major economy. Private Final Consumption Expenditure ("PFCE") is expected to grow at 11% CAGR during this period, to reach ₹298-306 trillion (US$3.5-3.6 trillion), outpacing nominal GDP growth, driven by rising income levels and favorable demographics.

- ***Rising income levels and favorable demographics:***
  Rising consumption with increasing disposable incomes is driving higher discretionary spending across sectors. There is also a considerable rise in the number of middle-income households in India from ~144 million in FY 2019 to ~174 million in FY 2024. It is projected to reach ~210 million by FY 2029. Rapid urbanization has been a key catalyst in expanding access to goods and services, fostering new consumption centers in emerging cities. Subsequently a young working population (~68% of the total population[1]) is bolstering the labour force as well as contributing to demand. Additionally, improved credit accessibility is enabling larger purchases and supporting evolving consumption patterns.

- ***Headroom for retail spending growth:***
  While India's retail market size is at ~₹79 trillion (~US$930 billion), it still remains under-penetrated compared to the global counterparts of USA and China. India's per capita retail spending was ~₹53,200 (~US$626) in FY 2024, markedly lower than that of USA at
  ~₹1,041,250 (~US$12,250) and China at ~₹224,400 (~US$2,640). This indicates a significant growth headroom for India.

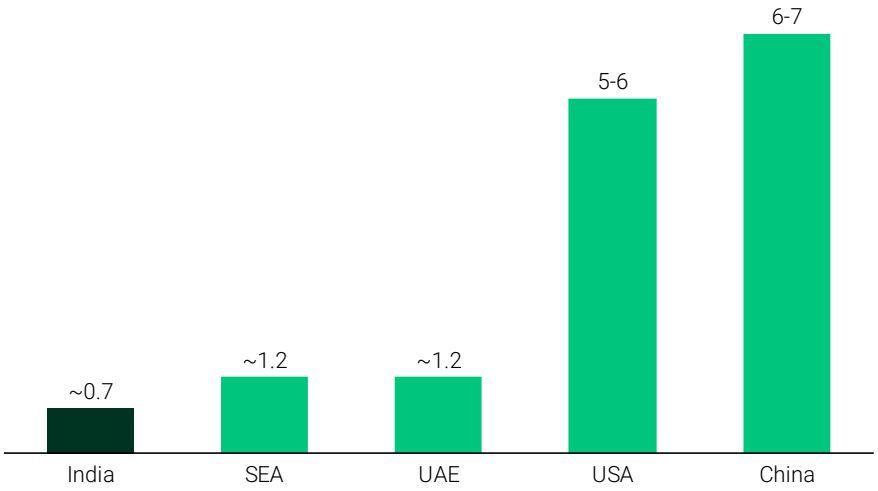
- ***Government-led initiatives****:*
  The Government of India, the Reserve Bank of India ("RBI"), the National Payments Corporation of India ("NPCI"), and Payment Infrastructure Development Fund ("PIDF") have played a pivotal role in driving the adoption of digital payments. Multiple initiatives, such as UPI, low-cost payments network, RuPay, and two-factor authentication (using PIN as well as OTP/biometric verification) have boosted digital transactions. A cornerstone of this transformation is development of the India Stack, an integrated framework of digital tools, including Aadhaar UID, e-KYC, UPI, e-RUPI, DigiLocker, and GSTN, enabling seamless identity verification, financial transactions, and regulatory compliance. This has led to the emergence of multiple form factors such as UPI, cards, mobile wallets, QR codes, and Digital Checkout Point (DCP) solutions have played a central role in driving digital transactions growth. The rising number of form factors have resulted in widespread merchant adoption of digital payments to offer convenience and flexibility in payment options to consumers.

  Additional government initiatives like the Account Aggregator framework, Bharat Connect, UPI Switch, and enhanced e-KYC, e-Sign, OTP-based Aadhar verification processes have further enabled the rise of fintech infrastructure, driving seamless integration and innovation in digital transactions.

- ***Underpenetrated market***:
  Despite the emergence of multiple digital payment form factors, India remains an underpenetrated digital payments market, characterized by high cash usage, low in-store digital checkout points and low credit cards penetration. For example, the number of cards (credit and debit cards) per capita in India is ~0.7 which is significantly lower as compared to USA and China with 5-6 and 6-7 cards per capita in 2023 respectively. This gap highlights the untapped potential of India's credit card market, driven by a combination of increasing financial literacy, expanding formal employment, and growing aspirations among a young and tech-savvy population.

[1] As per the United Nations, India has ~68% of its population in the working population age group (15 to 64 years) as of CY 2023

Figure 2: # of cards[1] per capita – Global comparison
In # FY 2024[2]



Note(s): 1. Includes debit and credit cards 2. CY 2023 for SEA, UAE, USA and China, SEA includes Indonesia, Singapore Thailand, Vietnam, Philippines, and Malaysia
Source(s): RBI, Redseer Research and Analysis

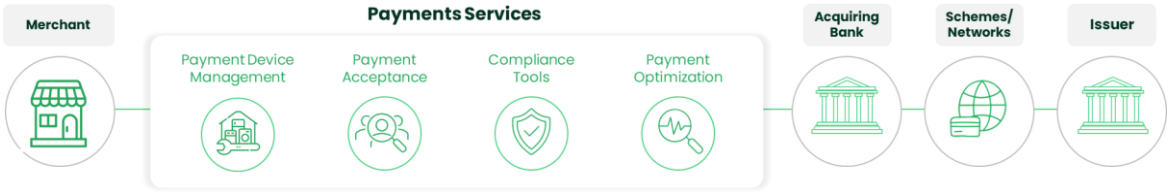
- ***Large merchant base, nascent in their digitization journey:***
  As merchants increasingly digitize, Digital Checkout Points (DCP), UPI soundboxes (devices that carry UPI QR codes and give instant voice notification for successful payments) UPI QR codes, and other payment channels are witnessing widespread adoption. The penetration of digitally enabled merchants (merchants with internet connectivity) is expected to increase from ~75% in FY 2024 to nearly 85% by FY 2029. However, with only ~11% of merchants in India using DCPs for payments in FY 2024, there is significant growth potential for further digitization of merchants as they seek technology to digitize their stores.

Many of these trends are also common to international markets and are leading to broad market expansion. Digitization of payments and commerce is being led by improved digital acceptance, improved connectivity, security, workflow automation and integration with payment flows. In India, post COVID pandemic, there has been an accelerated shift to online for both merchants and consumers. The adoption of UPI and related innovations, such as Credit through UPI, are accelerating payment volume growth and creating new monetization opportunities from innovation on value added services. As a result, fintech infrastructure services are expanding, with merchants looking for solutions to integrate their workflows with payment flows. Fintech infrastructure services are also growing as merchants are looking for solutions to integrate their workflows and accounts with payments flows. This is leading to embedded services proliferation driven by growing demand from merchants and enterprises for embedded services, including embedded payments, embedded issuance, and more. Underpenetration of credit will continue to scale credit disbursal to fulfil unmet needs of credit, with evolving models of credit delivery. Underpenetration in cards will lead to cardification of consumers, driving growth in prepaid and credit issuance and spending patterns including Credit on UPI and Co-branded cards. Expansion of Prepaid will also be led through new and evolving use cases across Open-loop and closed-loop prepaid instruments, such as mobility cards, meal cards, expense cards, gig economy penetration.

1.1 Peer to Merchant ("P2M") digital payments

India's digital merchant has multiple payment solutions requirements as indicated below:

Figure 3: India Digital Merchant Payment Ecosystem



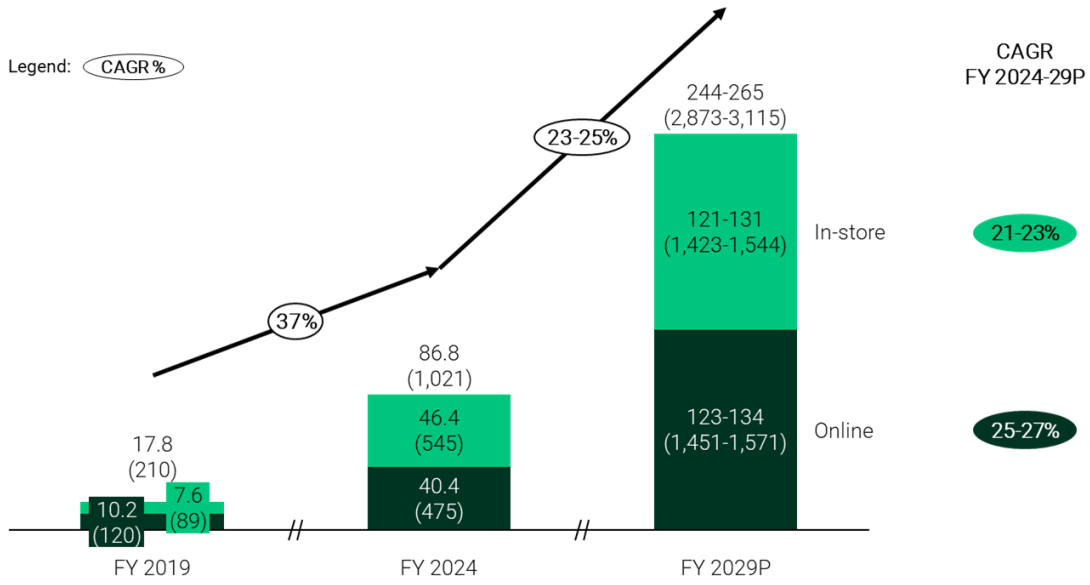
Source(s): Redseer Research and Analysis

The P2M payments in India have experienced rapid growth, expanding from ~₹17.8 trillion (US$210 billion) transaction value in FY 2019 to ~₹86.8 trillion (US$1,021 billion) in FY 2024 at a CAGR of approximately 37%. The transaction value is further projected to reach ₹244-265 trillion (US$2.9-3.1 trillion) by FY 2029 at a CAGR of 23-25% from FY 2024.

44% of all private consumption transactions were conducted digitally (non-cash) in FY 2024. Digital payments are made through various methods, including credit cards, debit cards, UPI, prepaid cards, and netbanking. Merchants enable these payments through DCPs, soundboxes and QR stickers, and online payment gateways and aggregators. In-store P2M is ~₹46.4 trillion (US$545 billion) in FY 2024, growing at 44% CAGR from FY 2019. The in-store payments are expected to reach ₹121-131 trillion (US$1,423-1,544 billion) by FY 2029, growing 21-23% annually. Online P2M is ~₹40.4 trillion (US$475 billion)

in FY2024, growing at 32% CAGR from FY 2019 and is expected to reach ₹123-134 trillion (US$1,451-1,571 billion) by FY 2029, growing 25-27% annually. These digital payment methods have reduced the reliance on cash, which has consequently dropped from 85% of all P2M payments in FY 2019 to 56% in FY 2024 and is further expected to drop to 19-21% by FY 2029.

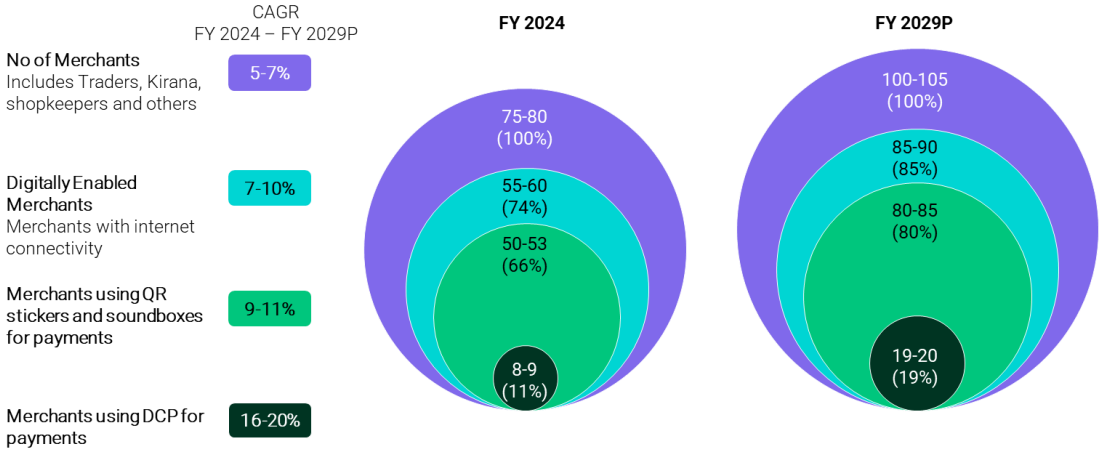
Figure 4: India Digital P2M TPV[1] – by payment method
In ₹ trillions (US$ billion), FY 2019, FY 2024, FY 2029P



Note(s): 1. TPV – Total Payment Value
Source(s): RBI, Redseer Research and Analysis

Supporting digital payments growth, India has a large merchant base of 75-80 million merchants, as of FY 2024, who are nascent in their digitization journey with ~74% of the merchants connected to the internet. Of these, while majority of merchants (~66%) currently rely on low-cost solutions like QR code payments and soundboxes, high-value merchants—comprising 11% of the base—are increasingly adopting solutions such as DCPs as they increasingly look to digitize beyond payments. Further, there are challenges driven by a proliferation of domestic and international payment methods, complex integrations with business workflows, increasing complexity through proliferation of hardware, software and services at checkout points, along with emerging opportunities through open data, API first infrastructure, data and software tools to engage with consumers. Further, merchants' needs are evolving and increasing in complexity as they look for the next wave of commerce tools to digitize their storefronts including choice of form factor, bundling hardware and software, acceptance of all payment methods, omnichannel commerce, digitization of billing, invoicing and ERP systems, affordability solutions for consumers, managing rewards, loyalty and cashback programs, analytics and martech to grow their business. Merchants need a critical growth partner, not only a payment provider. By FY2029, the penetration of merchants using DCP for payments is expected to expand to 19% (19-20 million), reflecting the rising demand for more sophisticated payment infrastructure among businesses as the merchant ecosystem matures digitally.

Figure 5: Indian digital payments merchant funnel
In million



Source(s): Redseer Research and Analysis

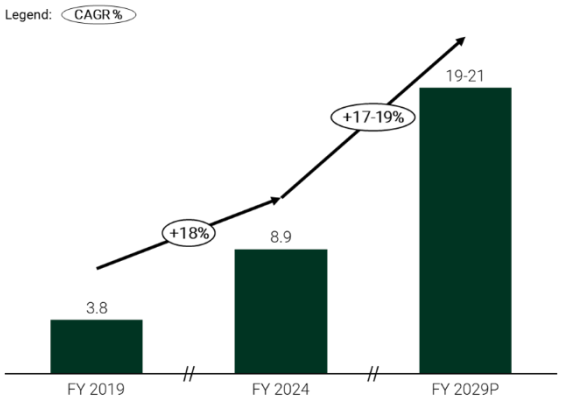
1.2 India In-store Digital payments

In-store digital payments encompass a range of solutions, including DCPs, QR stickers, and soundboxes. While DCPs offer multiple payment solutions and monetization opportunities through transaction fees and value-added services, including software, service and hardware led revenue, bolstered by unified payments soundbox has a single payment solution along with monetization opportunity through transaction fees. QR code stickers on the other hand lack opportunity for monetization. Additionally, merchants also demand more services with new form factors for UPI, including a shift away from paper-based QR code stickers. This report focuses on the role of DCPs in driving the adoption and growth of digital transactions.

DCP-based TPV in India have grown at a CAGR of ~20% over the last 5 years, led by the digitization of merchants

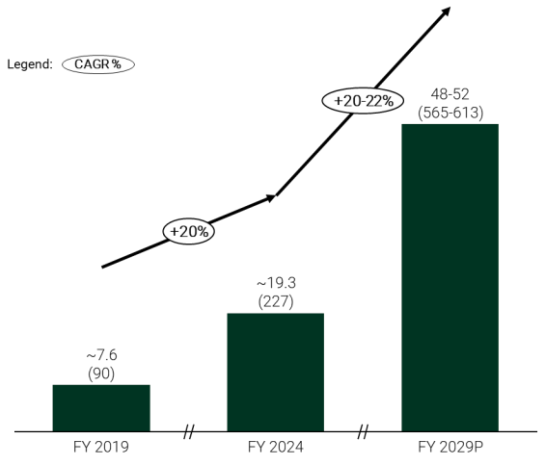
As India's digital economy expands, the role of DCPs has become increasingly pivotal in facilitating cashless transactions across various segments of the market which are currently used by ~11% of all merchants in India. The number of DCPs has grown at a rapid pace, rising from 3.8 million in FY 2019 to 8.9 million in FY 2024, with projections indicating continued growth to 19-21 million by FY 2029 as highlighted in Figure 7 below. The payment value processed through DCPs is expected to reach ₹48-52 trillion (US$565-613 billion) by FY 2029, growing at 20-22% CAGR from ~₹19.3 trillion (US$227 billion) in FY2024. As of FY 2024, among in-store payments, Pine Labs is a prominent player in terms of number of TPV processed.

Figure 6: Total DCP deployed[1]
In million, FY 2019, FY 2024, FY 2029P



Note(s): 1. Indicates the data for total number of Terminal Identification (TIDs) deployed; there can be multiple TID per DCP
Source(s): RBI, Redseer Research and Analysis

Merchant TPV processed through DCP
In ₹ trillion (US$ billion), FY 2019, FY 2024, FY 2029P



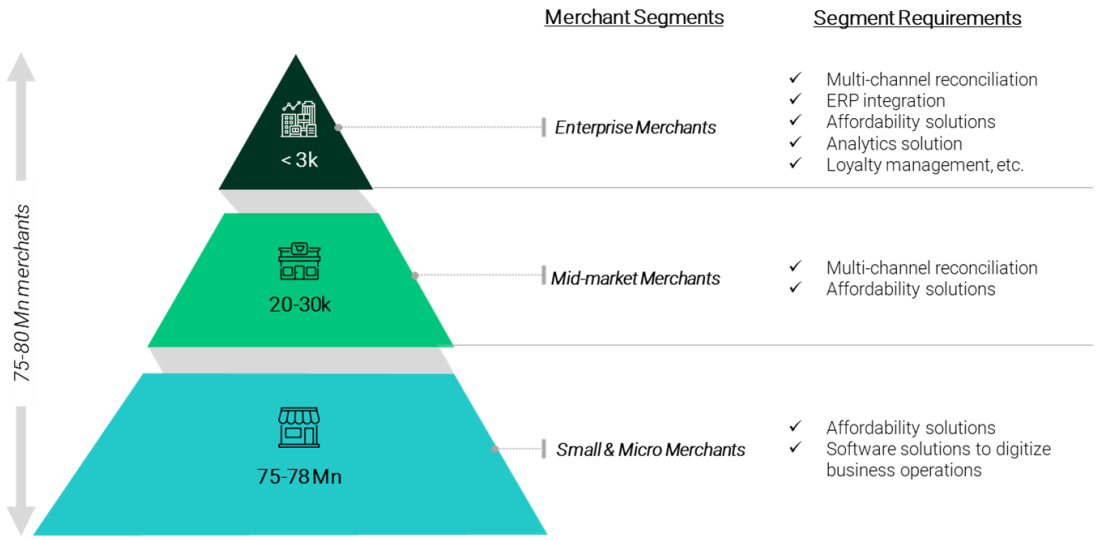
Note(s): Includes P2M transactions taking place at Point of Sale through all digital payment modes
Source(s): RBI, Redseer Research and Analysis

India's merchant ecosystem exhibits varying levels of DCP adoption and presents significant opportunities for growth across segments

India's merchant ecosystem, segmented into large enterprises, mid-market businesses, MSMEs, and smaller merchants, demonstrates diverse needs and varying levels of adoption for DCP solutions, reflecting their operational scale and complexity.

- **Large Enterprises** form the smallest segment with fewer than 3000 enterprises in India with a typically high contribution to overall retail in the country. With close to 100% adoption of DCP systems, these enterprise merchants are digitally savvy and require robust systems like multi-location management, ERP integration, affordability for consumers, advanced analytics, and loyalty solutions to streamline operations and enhance customer engagement. Their adoption of DCP based solutions is driven by operational complexity and a focus on scaling through store expansions and growing consumer demand.
- **Mid-Market Businesses** are moderately digitized and prioritize features like reconciliation tools, and affordability-focused solutions for consumers to optimize financial operations and manage growth. Their adoption continues to increase as they expand their footprint and respond to rising consumer expectations.
- **Small and Micro Merchants**, forming the largest segment, are at an early stage of their digitization journey. They seek affordable payment solutions to transition from cash to digital payments. In addition, they seek simple business software solutions to digitize their stores.

Figure 7: Merchant Segments – by number of merchants and needs
In #, FY 2024



Source(s): Redseer Research and Analysis

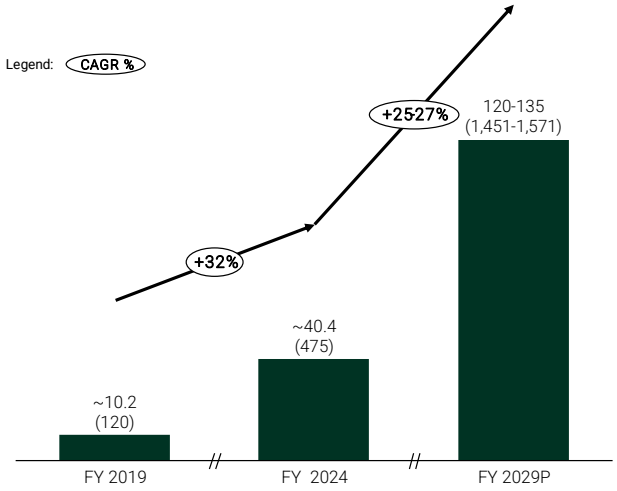
This diversity highlights the importance of customized DCP-based solutions to cater to the unique operational requirements of each segment.

1.3 Online payments

Transaction value of online payments has surged at a CAGR of 32% over the last 5 years

The transaction value processed in India has shown a strong upward trajectory, rising from ~₹10 trillion (US$120 billion) in FY 2019 to an estimated ~₹40 trillion (US$475 billion) by FY 2024, representing a CAGR of 32%, driven by online payments in sectors such as e-commerce, recharge and bill payments, online insurance premiums, wealth management fund transfers, online loan repayments, education payments, online travel and accommodation, food services, and mobility. This growth is expected to continue to increase with projections indicating the transaction value to reach ₹120-135 trillion (US$1,451-1,571 billion) by FY 2029, driven by a CAGR of 25-27% from FY 2024 onwards.

Figure 8: Online payments TPV
In ₹ trillions (US$ billion), FY 2019, FY 2024, FY 2029P



Source(s): RBI, Redseer Research and Analysis

Online payment service providers are adapting to the retail industry's shift toward omnichannel models, offering seamless payment solutions across physical, digital, and mobile touchpoints. Providers with strong offline presence are leveraging their infrastructure to scale into online channels, ensuring consistent and frictionless consumer experiences.

To drive the next wave of growth, these players are expanding their offerings beyond payment processing to include value-added services such as tokenization, fraud prevention, real-time settlements, fintech infrastructure, and subscription management. These tools not only enhance security and operational efficiency but also enable merchants to optimize cash flow, expand into global markets with cross-border payment capabilities, and improve customer engagement through analytics-driven insights. By addressing the diverse needs of both digitally mature and emerging merchants, payment and technology solutions providers are well-positioned to lead in an increasingly digital and interconnected marketplace.

1.4 Fintech infrastructure

The rapid digitization of financial services in India is leading to the rise of disaggregation and unbundling of services, supported by government initiatives such as fintech infrastructure solutions that are transforming the business ecosystem. Innovations such as the Account Aggregator ("AA") framework for secure financial data sharing, technology services for Bharat Connect, identity and verification solutions, and the UPI Switch for streamlined payment processing are enabling businesses to integrate payments seamlessly into their workflows, which in turn are driving more efficient, secure, and user-friendly payment experiences across sectors. This is driving multiple use cases such as bill payments, in-app payments, subscriptions and autopay, real-time identity verification through Digilocker and Aadhaar embedded into workflows, lending decisions based on insights from the AA framework, and embedded insurance and investment journeys.

I. Bill payment solutions

Bharat Connect is driving the digital transformation of India's historically cash- and cheque-based bill payment system

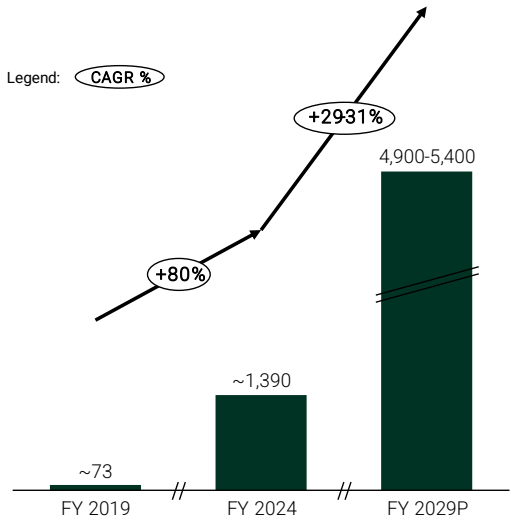
India's bill payment ecosystem has historically been dominated by cash and cheques, with digital payments accounting for less than 10% as recently as 2020. The launch of the Bharat Bill Payment System ("BBPS"), now Bharat Connect, marked a major shift toward digitalization by providing a unified platform for bill payments across categories like electricity, water, and telecom.

Key components of the BBPS ecosystem include the Central Unit which is managed by NPCI to set standards, Biller Operating Units to onboard billers onto the platform, Customer Service Points which are used for physical in-person payments and Payment & Technology Service Providers who offer digital payment options and provide APIs for seamless integration and interoperability.

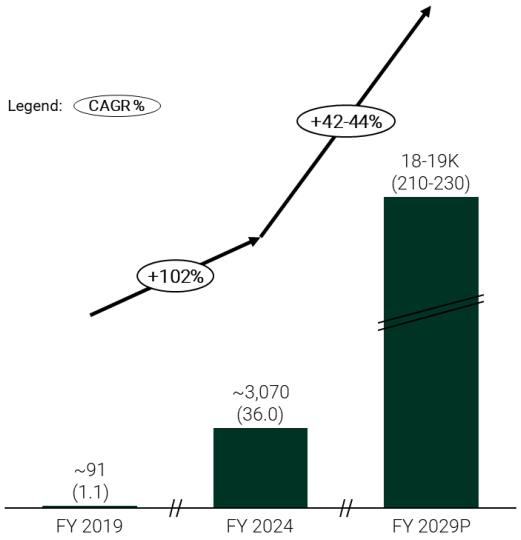
Digital bill payments through Bharat Connect have seen a CAGR growth of 80% and 102% in volume and value between FY 2019 and FY 2024

Digital bill payments through Bharat Connect have witnessed substantial growth with transaction volume rising at a CAGR of ~80% between FY 2019 to FY 2024, while the transaction value increased at a CAGR OF ~102% during the same period. Looking ahead, it is estimated that by FY 2029, Bharat Connect transaction volumes will grow to 4,900-5,400 million, while transaction values could rise significantly to around ₹18,000-19,000 billion (US$210-230 billion) as highlighted in Figures 8 below. Pine Labs is a prominent player in the fintech infrastructure market, enabling payments as a technology service provider.

Figure 9: Fintech Infrastructure Bill Payments Transaction Volume
In million, FY 2019, FY 2024, FY 2029P



Fintech Infrastructure Bill Payments TPV
In ₹ billion (US$ billion), FY 2019, FY 2024, FY 2029P



Source(s): Bharat Connect, Redseer Research and Analysis

This growth is expected to be driven by:

- **Regulatory support:** RBI has introduced measures to boost Bharat Connect adoption, such as reducing minimum net worth requirement for implementation from ₹100 crore to ₹25 crore.
- **Cross-border growth:** Increased interest from banks, non-banks, and Fintechs is extending BBPS's reach for inward billing by Non-resident Indians, boosting transaction volumes.
- **Higher ticket sizes via credit cards:** Credit card integration within Bharat Connect has increased the average ticket size by ~14% from FY 2022 to FY 2024.

- **Biller onboarding:** Over 22,000 billers have joined Bharat Connect, offering more payment options and driving higher transaction volumes.
- **Category expansion**: Bharat Connect now covers 30+ bill payment categories, with electricity, loan repayment, and FASTag accounting for the largest share by value. Several high-ticket bill categories are fuelling growth in both transaction volume and value with a more diverse and comprehensive mix. Categories such as Electricity bill payments, FASTag, loan and credit card repayments, and insurance which account for over 90% of BBPS transactions by value, are expected to see their contribution share reduce to 60-65% by FY 2029 with the expansion of payment categories such as B2B, media and entertainment subscription platforms, mobility, e-challans, EMI payments, and clubs and associations payments, etc.

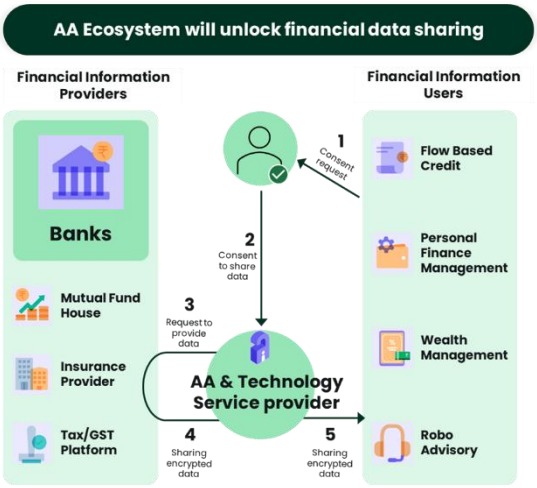
II. Account Aggregator ("AA") Gateway Solutions

AAs are revolutionizing financial data sharing through secure and consent-based networks

In 2021, RBI created an Account Aggregator framework, enabling individuals to securely and seamlessly share their financial data with consent with the goal of empowering businesses and individuals.

Acting as intermediaries, AAs and Technology Service providers utilise API-based platforms to simplify integration of Financial Information Providers ("FIPs") such as banks, insurers and mutual funds with Financial Information Users ("FIUs"). This model, explained in the diagram below, drives innovation and efficiency in financial services and has been the key driver in seamlessly obtaining consents to collate data across banks, lenders, income and tax, and securities leading to better insights and lending journeys. Lending institutions, fintechs, wealth management and personal finance platforms use this framework, for underwriting, verification, and fraud analysis, etc. while ensuring privacy and streamlining data access.

Figure 10: Fintech Infrastructure ecosystem



Source(s): Bharat Connect, Redseer Research and Analysis

AA framework has seen a surge in adoption with the rising number of network participants

According to Sahamati's estimates, about 80-90 million people in FY 2024 use the AA framework which is ~8% of the adult population in India. Currently, 31 FIPs and 78 FIUs are live, with 6 FIPs and 15 FIUs in the evaluating phase and 1 FIP and 3 FIUs in development. The rise in linked accounts and fulfilled consent requests highlights the framework's scalability and acceptance across the ecosystem.

The AA ecosystem plays a pivotal role in lending, wealth management, and insurance by enabling seamless financial data sharing for originations and onboarding. In lending, the number of retail loans originations are expected to grow at a CAGR of 14-16% from ~36 million in FY 2024 to ~72 million in FY 2029 while SME loans originations are expected to grow at a CAGR of 17-19% from ~3 million to ~7 million during the same period, reflecting higher demand for automated and seamless onboarding. In wealth/personal finance management, household financial savings rose to ₹29.7 trillion in FY23, while the demat accounts stood at 179 million and bank accounts at 2.88 billion (including savings and deposit accounts) in FY 2024. The number of demat accounts are further expected to rise to over 250-300 million by FY 2029, underscoring the need for efficient onboarding and financial tracking through AA. Similarly, in insurance, total premiums (life and general) are also expected to grow to ₹19-20 trillion in FY 2029, at a CAGR 11-13% from FY 2024 to FY 2029, with 35-40 million new life insurance policies and 350-400 million general insurance policies getting issued. As the financial services sectors mature, the usage and adoption of AA is expected to rise along with the need for secure and seamless financial data sharing.

III. UPI Switch

With the advent of UPI as a key payment mechanism, technology players are now offering UPI Switch platform that allows users to make payments using UPI and acts as a bridge between banks and the UPI network, routing requests to the appropriate

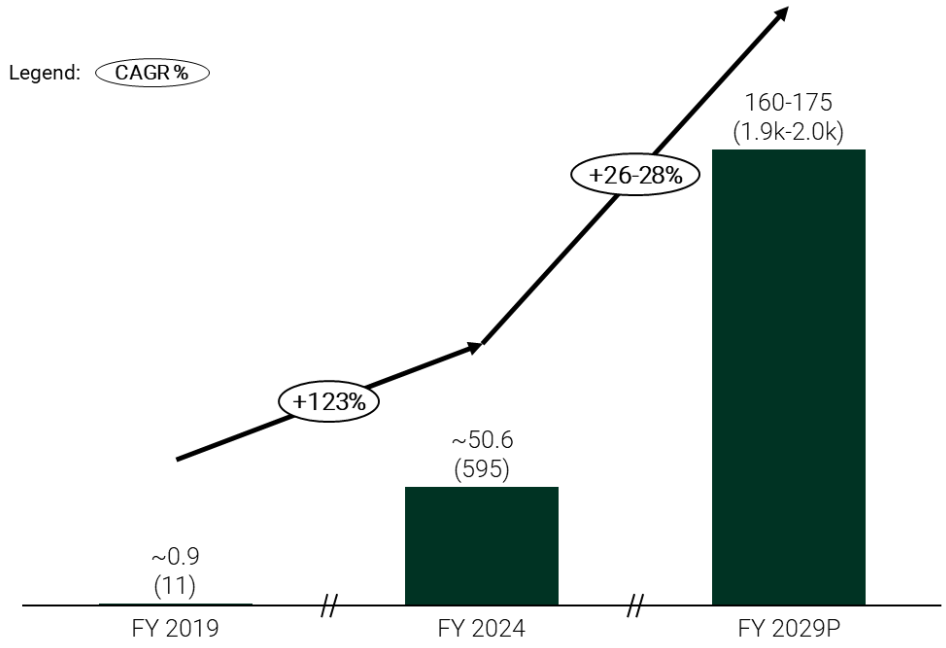
bank to process transactions. The UPI switch serves as a critical backbone, enabling banks, fintechs, and payment aggregators to handle high volumes of instant payments with speed, security, and scalability. Apart from NPCI's central switch and bank-operated switches, fintech players also provide third-party switches that enable scalability and interoperability for smaller banks and aggregators with faster and better success rate transactions.

UPI Switches power a wide range of applications, including recurring mandates for subscriptions and instalments, single-use mandates for IPOs and ticket reservations, and secure one-time payments using QR codes or intent links. They also facilitate innovative solutions like UPI Lite for small-ticket transactions, addressing the need for quick and frictionless micropayments.

The use cases of UPI are rapidly growing, with integration into credit cards, cross-border remittance support, and expanding acceptance in offline and rural contexts, which also enable monetization opportunities for ecosystem participants. These advancements are making UPI more inclusive and versatile, driving its adoption among merchants and consumers alike.

The UPI P2M TPV has grown rapidly at a CAGR of ~123% from ~₹0.9 trillion (US$11 billion) in FY 2019 ₹50.6 trillion (US$595 billion) in FY 2024. It is further projected to grow significantly at a CAGR of 26-28% to ₹160-175 trillion (US$1.9-2.0 trillion) by FY 2029. This highlights the continued and increasing reliance of merchants and consumers on UPI-based payment solutions as a core driver of India's digital payments landscape.

Figure 11: UPI P2M TPV
In ₹ trillions (US$ billion), FY 2019, FY 2024, FY 2029P



Source(s): RBI, Redseer Research and Analysis

Technology Service Providers that enable the fintech infrastructure, AA, and identity & verification, and UPI Switch ecosystems typically generate revenue through SaaS fees, per-transaction fees, and integration and customization fees.

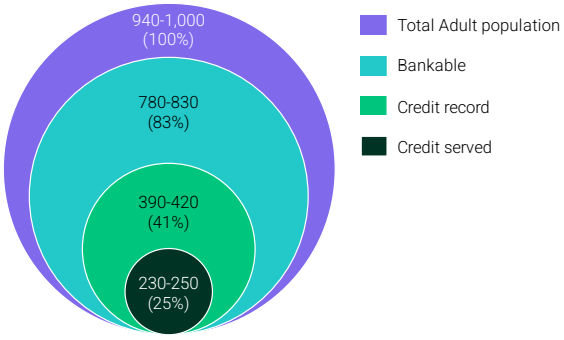
1.5 Affordability Solutions

Increasing consumer demand for point-of-purchase lending with affordability solutions popularized by large platforms

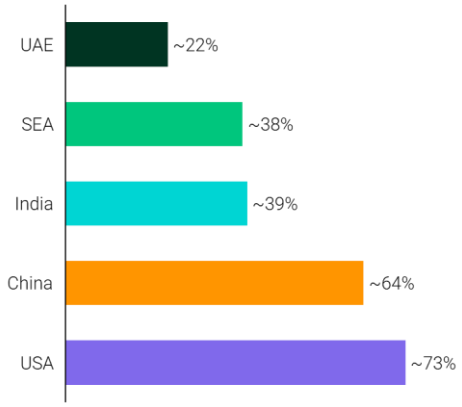
Retail consumption loans in India have grown at a CAGR of 17% from ~₹22 trillion (US$259 billion) in FY 2019 to ~₹48 trillion (US$565 billion) in FY 2024. It is further expected to grow by a CAGR of 15-20% to ₹95-120 trillion (US$1,118-1,416 billion) by FY 2029, driven by rising credit card penetration, increasing demand for small-ticket personal loans, and digital lending platforms catering to underserved segments, as India advances toward financial inclusion and expands its middle-class consumer base.

Despite this significant transformation in the lending landscape, India remains a credit under-served market with credit penetration at ~25% of adult population due to demand and supply factors such as a lack of credit history and limited supply and access to formal lending institutions respectively. Household debt in India, as a percentage of GDP, stands at approximately ~39%. It remains lower than economies such as China (~64%) and the USA (~73%), while exceeding that of the UAE, which stands at ~22% as of CY 2023. There is increased regulatory focus by RBI in India to drive the credit penetration in India by transforming the traditional credit methods with new digital lending opportunities.

Figure 12: Credit penetration in India
In million, FY 2024



Household debt as a % of GDP – Global benchmarks
In %, CY 2023



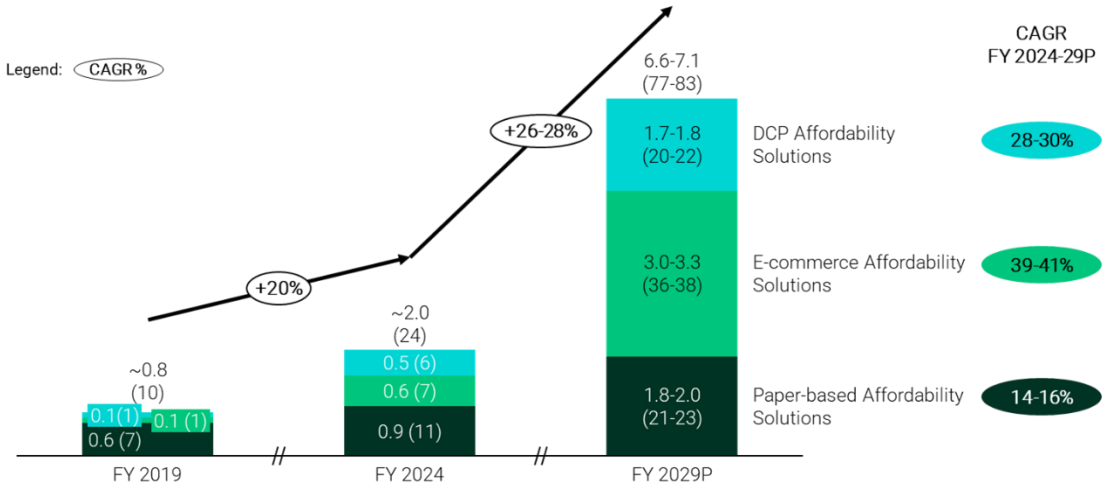
Note(s): Adult population defined as >18 years of age
Source(s): IMF, Redseer Research and Analysis

In response to this under penetration, newer affordability solutions have emerged, making shopping more accessible for consumers. By enabling deferred payments or easy instalments, these solutions lower barriers to consumption across categories, driving in a new wave of commerce. With over 100 million credit card holders in India already eligible for affordability solutions through their pre-approved credit limits, adoption is further accelerating, reinforcing its role in expanding consumer spending. Affordability solutions have gained momentum within certain consumer categories such as electronics and appliances and travel and lodging. Affordability solutions at checkout points provide consumer convenience and are an innovative way for merchants, brands and credit issuers to drive growth, increase average order values by offering campaigns, engagement programs to acquire, and retain consumers and drive conversions.

The affordability solutions market includes paper-based, e-commerce and Digital affordability at point of sale. Paper-based affordability solution, enabled at the point of consumption with the help of an in-store salesperson, typically requires consumers to complete an application form and a credit assessment to receive financing approval at the point of sale, making it a more cumbersome manual process for customers. On the other hand, digital affordability solution and e-commerce affordability solution transactions are instantly available where consumers are usually pre-approved by banks and use a credit, debit card or another identifier to make use of the available credit line. Due to this there is an increasing shift from Paper-based affordability solution models to Digital, including both DCP and E-commerce affordability solutions. Going forward as well, Digital affordability solutions, both for DCP and e-commerce will drive the growth for the segment due to:

- Consumer convenience, including a minimal application process, instant financing and flexible terms. This trend is particularly noticeable among the younger, aspirational demographic, who are increasingly turning to affordability solutions for both online and offline purchases
- Broad based card penetration across India, creating awareness around consumer financing, particularly outside of Tier 1 cities (Delhi, Mumbai, Chennai, Kolkata, Bangalore, Hyderabad, Ahmedabad and Pune)
- Improved access to credit with increasing number of pre-approved credit limits by banks and emergence of a variety of NBFCs (Non-Banking Financial Companies) potentially leveraging alternative means to establish consumer credit scores and eligibility
- Awareness push by brands which encourage these affordability solutions and co-branded credit as a catalyst for sales growth and conversions at point of sale, acquisition of new consumers through brand-specific programs and promotions and data-driven targeting for campaigns, which lead to increase in spend and share of wallet
- Expansion to other industries, including fashion, furniture, healthcare, lifestyle, personal transport, travel and education.

Figure 13: India Affordability Solutions TPV – Split by segments
In ₹ trillions (US$ billion), FY 2019, FY 2024, FY 2029P



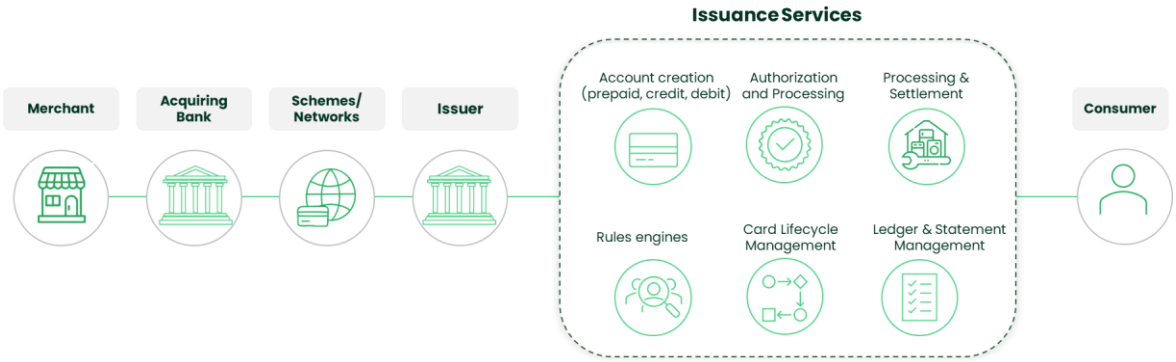
Source(s): Redseer Research and Analysis

The growth of DCPs and rising popularity of DCPs based affordability solutions has led to significant innovation which has led to new solutions and models to meet diverse consumer needs. Innovations such as EMI with Trade-In, where consumers can exchange old products to offset costs and use EMI options for the remaining amount, and Instant Cash Back, which allows purchase price to be reduced at the point of sale. Consumer affordability is increasingly going beyond basic credit and now involves services around warranty, insurance, returns and rewards. These advancements enhance customer satisfaction and loyalty by providing tailored financing solutions. Within the DCP-based affordability solutions landscape in India, Pine Labs emerges as the market leader in terms of the transaction value processed.

1.6 Issuing, Acquiring, and Processing market in India

Modern issuance solutions now go beyond traditional processing and act as the backbone to issue, accept, store and move currency held in accounts. Merchants and brands increasingly use issuing solutions for comprehensive management of the entire life cycle of acquiring consumers, engaging, retaining, and growing their consumer base through prepaid instruments. Consequently, brands are able to bring in new customers by using gift cards as a new channel and gather intelligence around the customer acquisition funnel. The modern Issuing ecosystem in India is as outlined below:

Figure 14: India's Issuing ecosystem



Source(s): Redseer Research and Analysis

The use cases in issuing are evolving and include gifting, loyalty management, compensation, cashbacks, meals, expense management solutions, mobility, refunds, rewards and promotions, channel incentives and cross border payment. This is further outlined in the sections below.

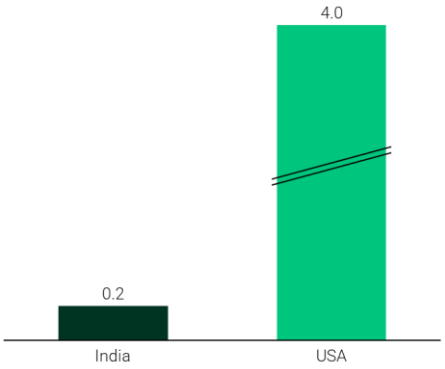
I. Prepaid Cards opportunity

Prepaid cards represent a versatile payment instrument that can be issued in physical or virtual forms. Based on their usability, they are classified into:

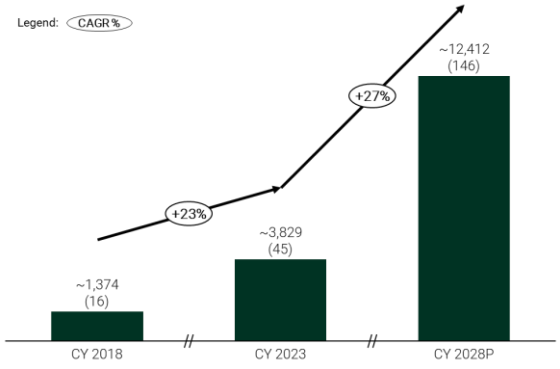
- **Open-Loop Cards**: Usable at any merchant accepting card networks (e.g., Visa, Mastercard, RuPay), typically issued by banks for applications like forex, travel, and corporate expenses.
- **Semi-Closed-Loop Cards**: Restricted to specific merchant ecosystems (e.g., e-commerce platforms, retail chains), issued by banks and RBI-registered non-banking entities.
- **Closed-Loop Cards**: Usable only with the issuing merchant (e.g., gift cards, fuel payments, loyalty programs), issued by any entity, even non-RBI registered ones.

Closed and semi-closed loop prepaid (SCLP) cards are under-penetrated in India, with ~0.2 cards per capita compared to ~ 4 in USA. The total transaction value of prepaid cards is ~₹3.8 trillion (US$45 billion) in 2023, having grown at a CAGR of 23% from ~₹1.4 trillion (US$16 billion) in 2018. Closed and SCLP cards value is further expected to grow at a CAGR of 27% to ~₹12.4 trillion (US$146 billion) by CY 2028P.

Figure 15: Prepaid cards per capita
In #, CY 2023



India Closed and SCLP cards TPV
In ₹ billion (US$ billion), CY 2018, CY 2023, CY 2028P



Source(s): PayNXT360

Key drivers for the growth in prepaid cards include:

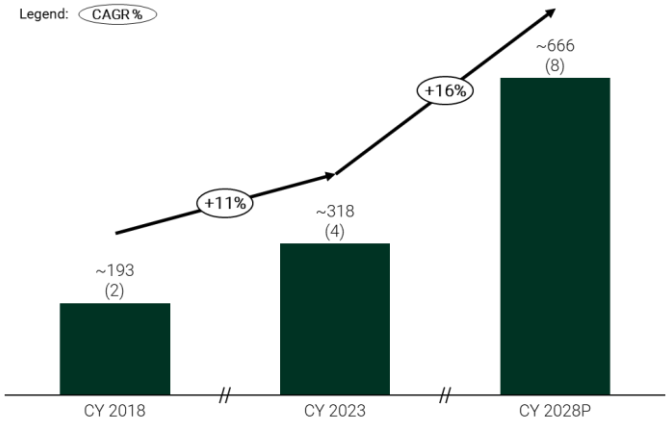
- The corporate sector is leveraging prepaid cards for diverse needs, such as employee rewards and benefits, expense management, meal cards and rewards for channel partners.
- Brands are increasingly using prepaid cards as a new channel to acquire consumers, engage with consumers through delightful user experience for loyalty and rewards programs, including simplified refunds experience,analytical and campaign tools to drive recurring spends and build loyalty
- Central and state governments are increasingly adopting prepaid cards for direct benefit transfers (DBTs) like subsidies, pensions and welfare payments to make DBTs more efficient.

New formats such as virtual cards are gaining popularity due to their convenience with features like instant issuance. Besides these growth drivers, prepaid cards adoption is also expanding due to innovative use-cases such as:

- Mobility Cards: For transit systems, fleet management, and fuel expenses.
- Gig Economy & Neo-Banking: Prepaid salary cards for gig workers, freelancers, and contract employees, addressing liquidity challenges.
- Retail and E-Commerce: Prepaid instruments for promotions, customer loyalty, and festive gifting.
- Gaming and Health: Gaming cards for in-game purchases and health cards for medical expenses, showcasing niche applications.
- Forex Cards: Prepaid cards for international travel, offering currency conversion convenience.

Gift cards, a major category within the prepaid cards market form one of the largest segments within prepaid cards in India, representing 12% of the Prepaid card market by TPV. Use cases, such as corporate channel incentives, returns and cancellations drive the majority of usage of prepaid cards. The segment's overall growth, projected at 16% CAGR, underscores its critical role in the expansion of the prepaid card ecosystem. The majority of gift cards issued are closed loop or semi-closed loop, representing 71% of the overall gift card issuances.

Figure 16: India – Gift cards TPV
In US$ billion, CY 2018, CY 2023, CY 2028P



Source(s): PayNxt360

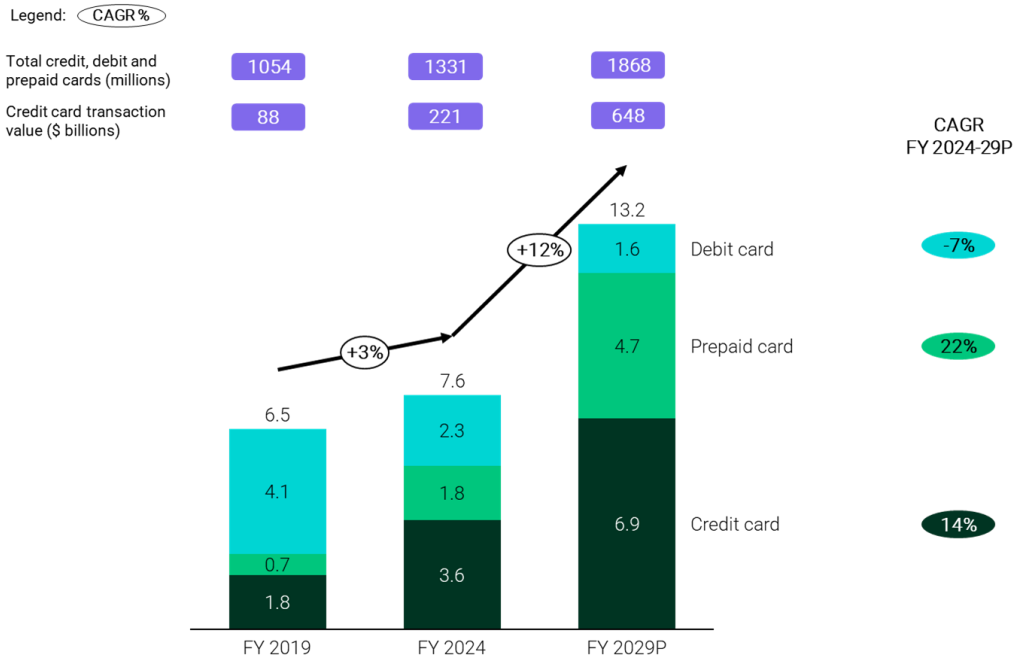
As of FY 2024, Pine Labs is the largest player in closed and semi-closed loop gift card issuances in India, in terms of transaction value.

II. Issuing & Acquiring solutions for Open loop cards

With the growth of digital payments financial institutions (fintech firms, small finance banks, NBFCs, and banks) are looking to issue more credit, debit, and prepaid cards, and hence seek issuing solutions for consumers and acquiring solutions to enable digital payments for merchants. Number of cards issued and the volume of transactions through these cards represents the total addressable market for issuing and acquiring solutions.

Over the last 5 years, India has witnessed continued growth in the total number of cards (credit, debit, and prepaid), which have risen by 5% from ~1.1 billion in FY 2019 to ~1.3 billion in FY 2023 with 60+ issuing and acquiring banks driving this growth. Looking ahead, the number of cards is expected to grow to ~1.9 billion by FY 2029.Between the year FY 2019 and FY 2024, credit card transactions grew at 15%, prepaid transactions grew at 20% and debit transaction declined at -11%. The credit card transactions are further projected to grow at 14% CAGR between FY 2024 and FY 2029 with credit card on UPI being a key driver, whereas prepaid cards transactions is projected to grow at 22% CAGR and debit cards transactions is projected to decline at 7% CAGR during the same period.

Figure 17: Total card transactions volume for India – split by credit, debit and prepaid cards
In billion, FY 2019, FY 2024, FY 2029P



Source(s): PayNXT360, Redseer Research and Analysis

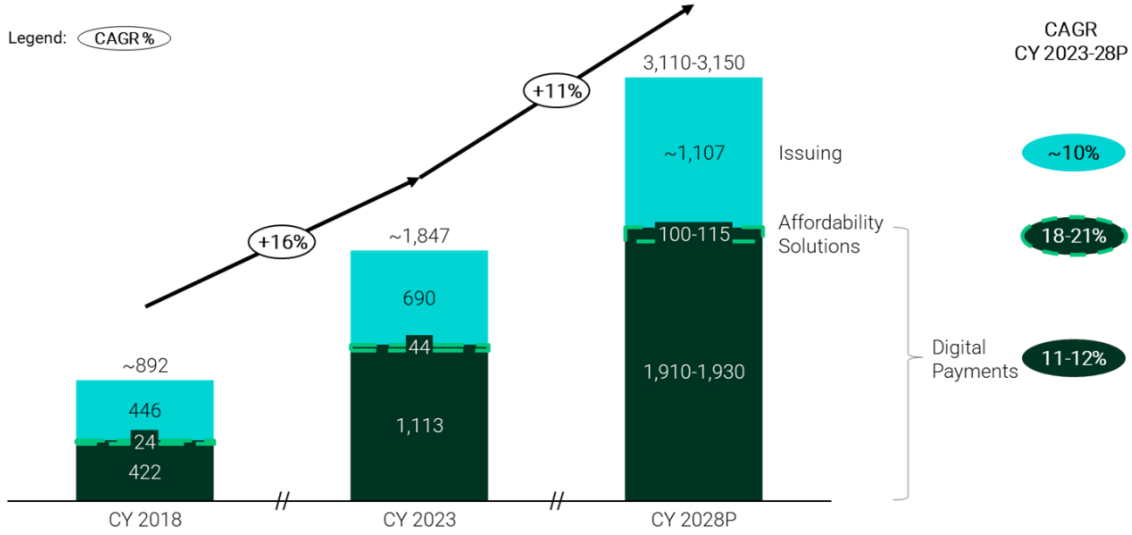
The Indian credit card market has also witnessed a rapid growth of co-branded cards at a CAGR of 60% between FY 2019 and FY 2024. Consumers are increasingly seeking greater choice and personalization in the rewards and loyalty programs for which banks are partnering with merchants across various categories, such as travel, shopping, and fuel purchases, to incentivize ongoing card usage through attractive and innovative benefits such as higher cashback points, complimentary offerings, exclusive deals, etc.

Chapter 2: Opportunity in select international geographies

2.1 TAM

The total market opportunity for Pine Labs in select geographies – SEA, UAE, Australia, and USA – across different segments is over US$1.8 trillion in 2023, having grown at a CAGR of 16% from ~US$0.9 trillion in 2018. It is projected to grow further to US$3.1-3.2 trillion by 2028 at a CAGR of 11-12% driven by the increasing penetration of affordability solutions and maturing of the digital payment ecosystem.

Figure 18: Total Market Size (TPV) for International Geographies – Split by segment
In US$ billion, CY 2018, CY 2023, CY 2028P



Note(s): 1. Digital Payments and affordability solutions include SEA, and UAE, while Issuing also includes USA and Australia in addition to SEA and UAE, 2. Digital Payments includes Affordability solutions market size
Source(s): Central banks of countries, Redseer Research and Analysis

2.2 Southeast Asia

Within the Southeast Asia market, this report delves into the landscape of Digital payments through DCPs, Affordability Solutions and Issuing across the six countries – Indonesia, Singapore Thailand, Vietnam, Philippines, and Malaysia. Some of the macroeconomic trends shaping this region are as shown below –

SEA statistics	CY 2023	CY 2028P	CAGR CY 2023-28P
Nominal GDP	US$3.7 trillion	US$5.0 trillion	7%
Consumption[2]	US$2.3 trillion	US$3.2 trillion	7%
Retail Market Size	US$1.0 trillion	US$1.4-1.5 trillion	6-8%
P2M Digital Payments	US$1.1 trillion	US$1.8-1.9 trillion	11-13%
Internet Penetration	84%	90-92%	2-3%
Digital Transactors Penetration	36%	41%	4%

Source(s): World Bank, Redseer Research and Analysis

I. Digital Payments

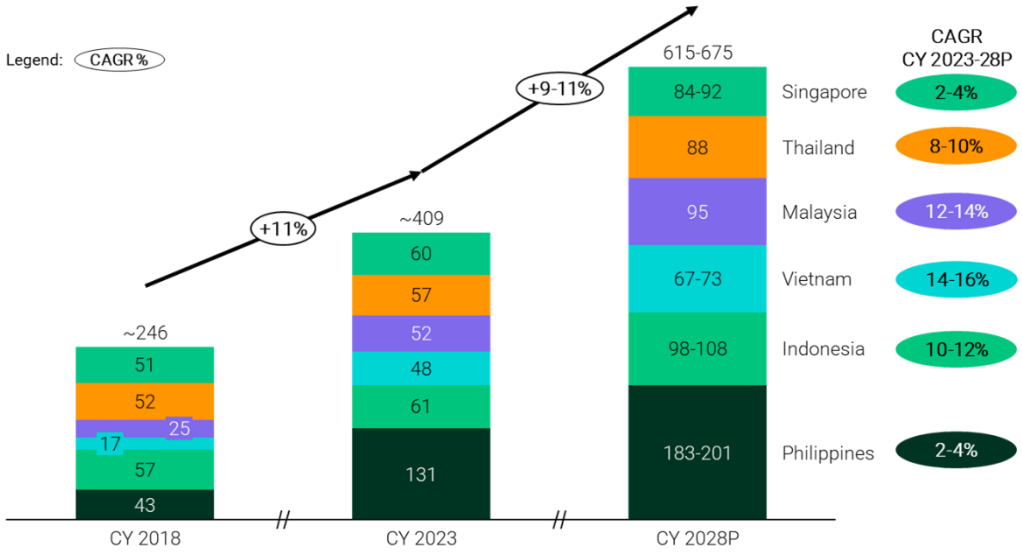
Many of the factors driving digital payments in Inda are also being observed more broadly in Southeast Asia. SEA has a large retail market, estimated to be at US$1.0 trillion in 2023. Digitization is playing a pivotal role in shaping the retail landscape, SEA having achieved ~84% internet penetration and over 82% smartphone penetration in 2023, providing seamless access to digital platforms. Southeast Asian governments such as in Singapore, have proactively supported digitization by promoting initiatives around real-time payments, QR code interoperability and launch of digital banking regimes.

The adoption of DCPs in SEA is also on the rise as the region experiences a rapid shift towards cashless payments. Singapore and Malaysia are leading the way with high DCP penetration (despite a low absolute count), while emerging economies like Vietnam and the Philippines show significant growth potential. The transaction value processed through DCP grew at a ~11%

[2] Represents Final Consumption Expenditure (FCE) which is defined by the World Bank as the sum of household final consumption expenditure (formerly private consumption) and general government final consumption expenditure (formerly general government consumption)

CAGR from 2018 to 2023, driven by the increasing digitization of merchants and the rising adoption of alternative digital payment methods at DCP, such as e-wallets and Affordability solutions, which continue to reduce reliance on cash.

Figure 19: SEA TPV through DCP
In US$ billion, CY 2018, CY 2023, CY 2028P

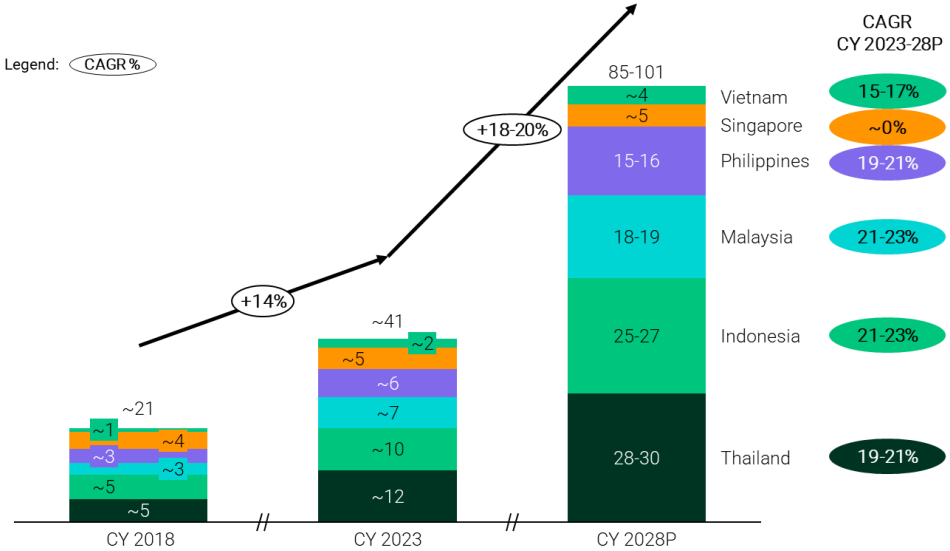


Source(s): Central banks of countries, Redseer Research and Analysis

II. Affordability Solutions

Increasing credit card transactions and broader digitization of payments, along with consumer demand for affordability have also fuelled the rise of Affordability solutions market in SEA. Presently a US$41 billion market, it is expected to increase at a CAGR of 18-20% to US$85-101 billion by 2028. This growth is being led by Indonesia and Malaysia, both expected to grow at robust CAGRs of 21-23% from 2023 to 2028 driven by rising incomes, increasing penetration of digital payments, and particularly the rising adoption of digital wallets. The evolving regulatory landscape is also fostering transparency and trust, while the entry of new players and innovative offerings is accelerating adoption.

Figure 20: SEA Affordability Solutions TPV
In US$ billion, CY 2018, CY 2023, CY 2028P

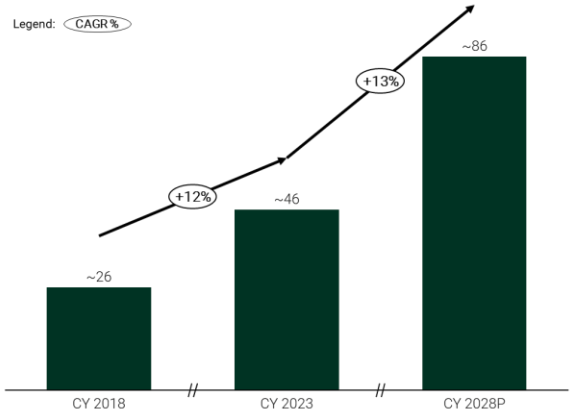


Source(s): Redseer Research and Analysis

III. Issuing

Prepaid
The total value of transactions processed by prepaid cards in SEA is ~US$46 trillion in 2023 having grown at a CAGR of 12% from ~US$26 trillion in 2018. It is further expected to grow to ~US$86 trillion in 2028 at a CAGR of 13% driven by the rising financial inclusion and thereby usage by unbanked and underbanked population. The rapid growth of e-commerce and the emerging categories within prepaid cards are also expected to drive the future growth.

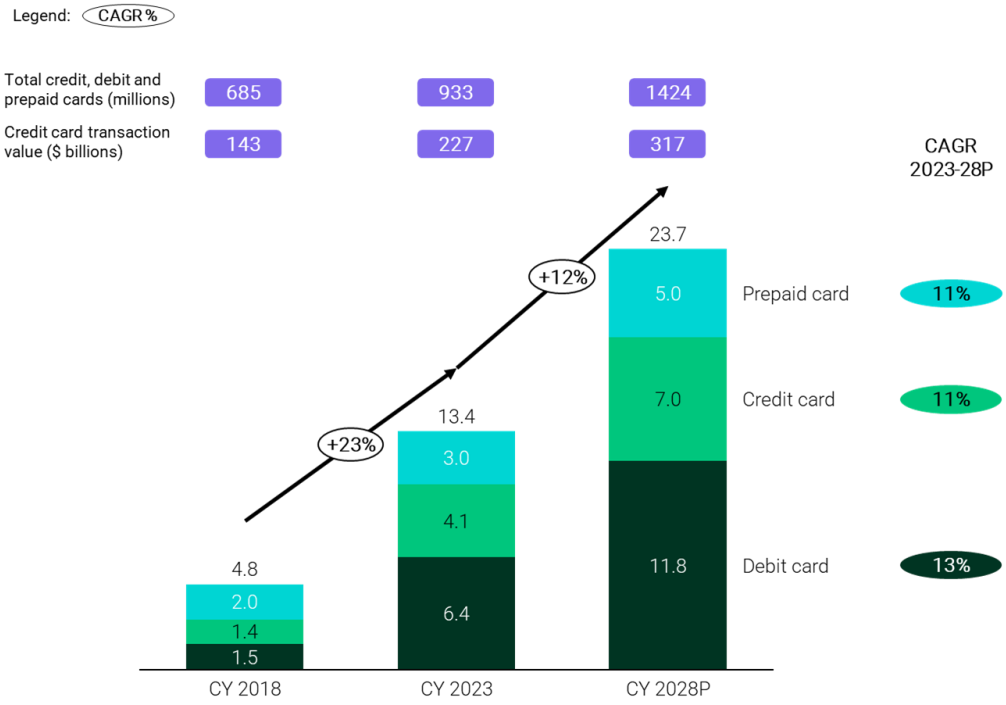
Figure 21: Total prepaid card TPV – SEA
In US$ billion, CY 2018, CY 2023, CY 2028P



Source(s): Central Bank Reports, Redseer Research and Analysis

The total volume of transactions through credit, debit and prepaid cards has grown at 23% CAGR between CY 2018 and CY 2023 and are further expected to grow at 13% CAGR from CY 2023 to CY 2028.

Figure 22: Total card transactions volume for SEA – split by credit, debit and prepaid cards
In billion, CY 2018, CY 2023, CY 2028P



Source(s): PayNXT360, Redseer Research and Analysis

2.3 United Arab Emirates

In UAE, this report delves into the Digital Payments through DCPs, Affordability Solutions, and Issuing markets. The macroeconomic indicators in UAE are as shown below –

UAE statistics	CY 2023	CY 2028P	CAGR CY 2023-28P
Nominal GDP	US$514 billion	US$674 billion	6%
Consumption[3]	US$215 billion	US$304 billion	7%
Retail Market Size	US$77 billion	US$108 billion	7%
P2M Digital Payments	US$101 billion	US$163-178 billion	10-12%
Internet Penetration	99%	99%	1%

[3] Represents Final Consumption Expenditure (FCE) which is defined by the World Bank as the sum of household final consumption expenditure (formerly private consumption) and general government final consumption expenditure (formerly general government consumption)

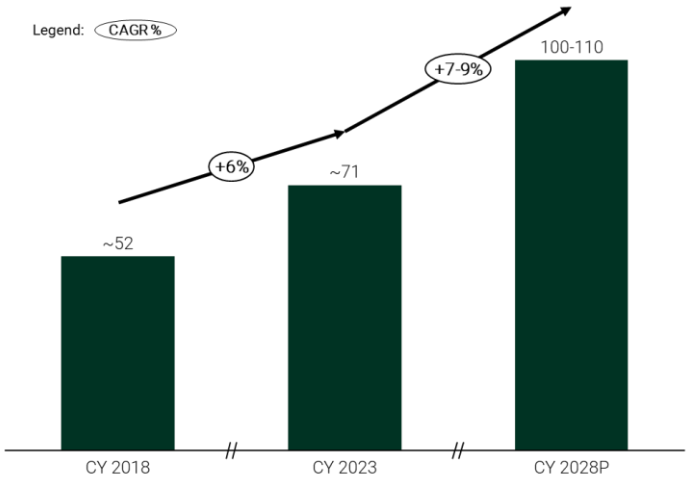
Digital Transactors Penetration	68%	77%	3%

I. Digital Payments

Similar to India and SEA, growth of digital payments in the UAE is being driven by a robust retail growth, digitization of customers and favourable government initiatives such as Cashless UAE among other drivers. In 2023, UAE's retail market was valued at US$75-80 billion. Digital penetration in the UAE mirrors that of advanced western economies with over 90-95%. internet and smartphone penetration in 2023, enabling a growing base of consumers to participate in digital ecosystems

Transaction value processed through DCPs in UAE grew at a CAGR of 6% between 2018 and 2023. The increasing adoption of digital wallet payments, combined with government initiatives promoting cashless transactions, is expected to further drive growth, with projections of an 7-9% CAGR from CY 2023 to CY 2028.

Figure 23: UAE TPV through DCPs
In US$ billion, CY 2018, CY 2023, CY 2028P

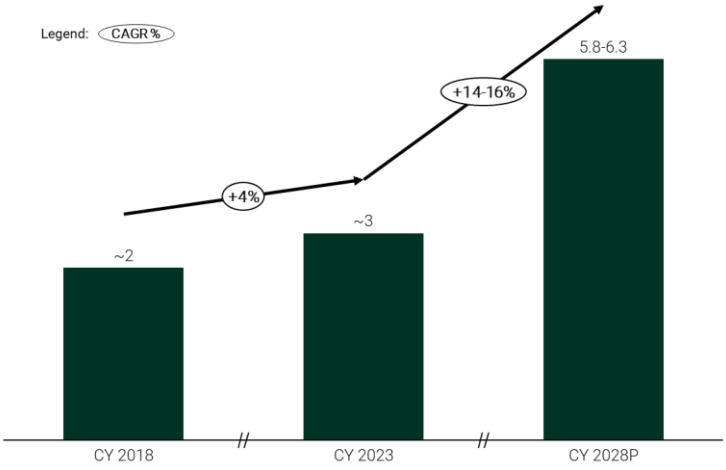


Source(s): Redseer Research and Analysis

II. Affordability Solutions

The UAE market has witnessed the rise of companies extending affordability solutions over the past five years, providing payment financing solutions to consumers. Currently valued at US$3 billion, the Affordability Solutions market in the UAE is projected to grow at a CAGR of 14-16%, reaching US$5.8-6.3 billion by CY 2028.

Figure 24: UAE Affordability Solutions TPV
In US$ billion, CY 2018, CY 2023, CY 2028P



Source(s): Redseer Research and Analysis

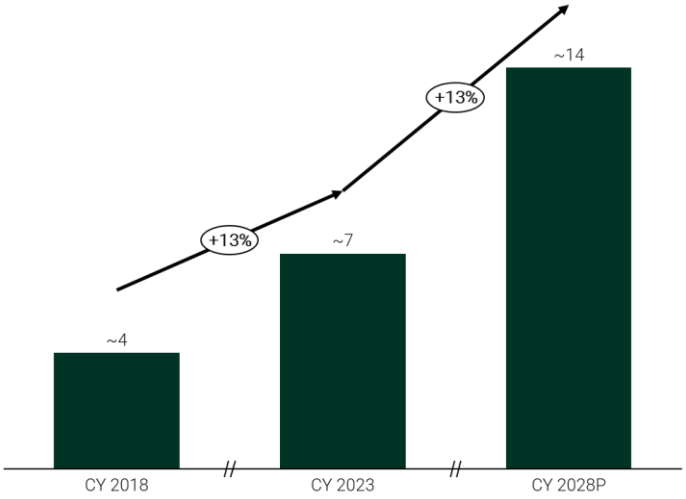
III. Issuing

Prepaid

The UAE prepaid cards TPV in 2023 is ~US$7 billion, having grown from ~US$4 billion in 2018 at a CAGR of 13%. This is further expected to rise to ~US$14 billion in 2028 at a CAGR of 13%. This growth can be attributed to the increasing usage of

prepaid cards for corporate, travel, and gifting purposes. Additionally, rising adoption of digital payment methods along with favourable government initiatives are expected to further drive growth.

Figure 25: UAE – Prepaid TPV
In US$ billion, CY 2018, CY 2023, CY 2028P

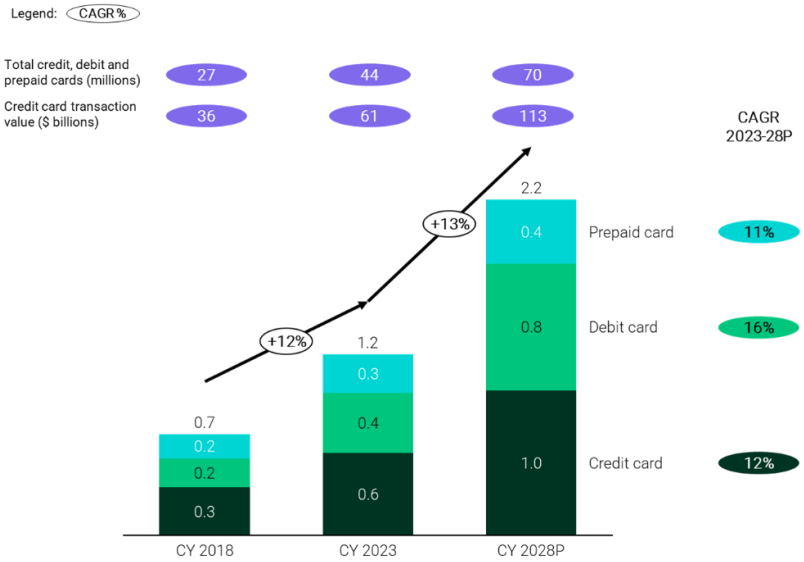


Source(s): Redseer Research and Analysis

Issuing & Acquiring solutions

The total volume of transactions through credit, debit and prepaid cards has grown at 12% CAGR between CY 2018 and CY 2023 and are further expected to grow at 13% CAGR from CY 2023 to CY 2028.

Figure 26: Total card transactions volume for SEA – split by credit, debit and prepaid cards
In billion, CY 2018, CY 2023, CY 2028P

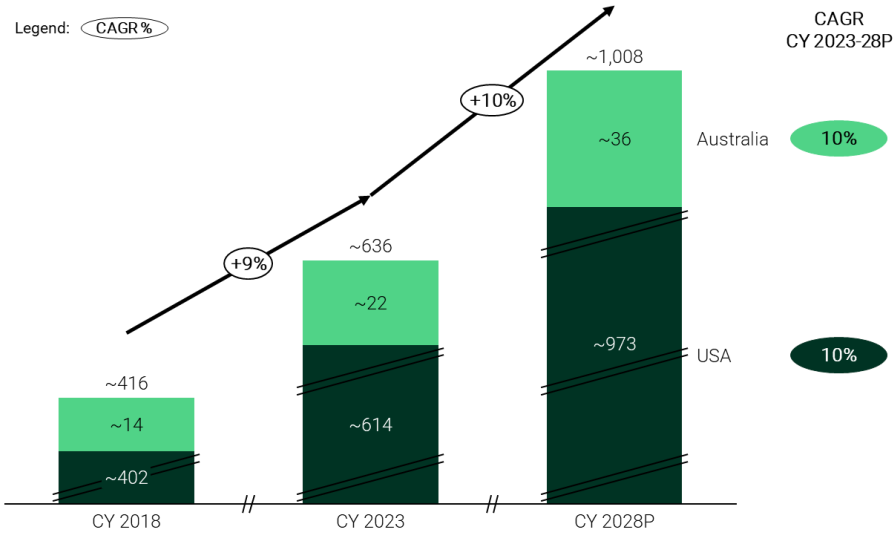


Source(s): PayNXT360, Redseer Research and Analysis

2.4 Market opportunity in other select markets

This report delves into the prepaid cards market for other select markets of Australia and USA. The prepaid card market is growing significantly across the key geographies of Australia and USA, with a combined CAGR of 9% from 2018 to 2023. The United States is the market leader driven by high consumer adoption for payroll, gifting, and expense management. Australia shows steady growth, supported by digital adoption and corporate use cases. They are expected to grow at a CAGR of 10% from 2023 to 2028 to ~US$1,008 billion.

Figure 27: Prepaid Cards TPV – Select international markets
In US$ billion, CY 2018, CY 2023, CY 2028P



Source(s): PayNXT360

Chapter 3: Competitive Landscape

3.1 Competitive Landscape of Digital Payments

There is no single company in India that has created a comparable suite of products and solutions that Pine Labs offers to its customers within Digital Payments. However, the competitive landscape consists of peers globally and in India that provide limited number of specific products and solutions operating at scale similar to Pine Labs. Within Digital Payments, Pine Labs provides a comprehensive suite of omnichannel solutions to ecosystem partners which include merchants, brands and financial institutions and these solutions include in-store payments through DCPs, online payments, affordability solutions, and fintech infrastructure. We have considered the scaled listed players in India operating in the same industry as well as scaled private Indian companies with more than ~₹15 billion revenue from operations in FY 2023 and FY 2024. We have also compared to the global listed companies operating in the market as mentioned below in no particular order –

Indian peers:

1. **One 97 Communications Limited ("Paytm"), a listed player in India** is both, a B2B and B2C player offering payment solutions, commerce solutions and financial services to customers and merchants. Some of its B2C offerings include mobile wallets, UPI payments, online bill payments, ticket bookings, and financial services such as insurance, wealth management, lending, etc. B2B offerings include services such as in-store and online payment solutions including DCP solutions, affordability solutions, lending for merchants, business software solutions, etc.
2. **Razorpay Software Private Limited ("Razorpay")** is a digital payments provider offering online payments, merchant solutions, etc. Its offerings include payment gateway, recurring payments, payment links, multi-currency support, among others. Razorpay also enables affordability solution options and supports seamless integration across e-commerce platforms. Beyond payments, it also offers value-added solutions for business banking, merchant financing, etc.
3. **PayU Payments Private Limited ("PayU")** caters to online businesses and merchants with offerings such as payment gateway, subscription billing, payment links, recurring payments, multi-currency support, etc. Additionally, PayU provides fraud detection tools, payment authentication, international payment acceptance, among other offerings.
4. **PhonePe Private Limited ("PhonePe")** is a digital payments platform that offers a diverse range of solutions across consumer and merchant ecosystems. For consumers, its services include UPI payments, mobile wallets, bill payments, recharges, ticket bookings, P2P payments, insurance, investments and lending products, etc. For merchants, PhonePe provides QR code-based payment acceptance, integration with UPI and other payment methods, in-store (through DCP) and online transaction solutions, including affordability solutions, and merchant lending solutions, etc.
5. **IndiaIdeas.com Limited ("BillDesk")** is a digital payment gateway also offering recurring payments and bill aggregation solutions across sectors. It provides secure bill payment solutions for utilities, telecom, insurance, taxes, subscriptions, etc. For consumers, BillDesk enables automated bill payments, UPI-based transactions, debit/credit card processing, and net banking options among others.
6. **Infibeam Avenues Limited ("CCAvenue")** is a payment gateway offering multi-channel transaction processing and enables businesses to accept payments through UPI, credit/debit cards, net banking, digital wallets, BNPL solutions, etc. CCAvenue provides customized checkout experiences, tokenization solutions, multi-currency support, subscription billing, and advanced fraud detection systems among other solutions to ensure seamless and secure transactions.

Global peers:

7 **Adyen N.V. ("Adyen")** is a global listed payment processing platform which offer solutions such as online payments, in-store payments, mobile channel payments, subscription billing, consumer lending through cash advances, fraud detection, etc., along with other services.

8 **Shopify Inc. ("Shopify")** is a global listed e-commerce enablement platform that enables payment solutions supporting omnichannel selling for merchants through social media, marketplaces, and brick-and-mortar stores. It also offers solutions like customizable website templates, inventory and order management, marketing tools, seamless integrations with third-party apps, etc.

9 **Block, Inc. ("Block")** is a global listed digital payments solution provider offering end-to-end solutions for commerce, financial services, expense management, loyalty management, risk and fraud management, etc. Additionally, Block also offers online payments, affordability solutions, P2P payments, etc.

3.2 Competitive Landscape of Issuing, Processing, and Acquiring

There is no single competitor in India that offers a comparable and integrated suite of issuing, processing, acquiring and distribution solutions that Pine Labs offers. Pine Labs is well positioned to meet the diverse needs of ecosystem partners which include merchants, brands and enterprises, and financial institutions. Its issuing capabilities enable efficient management of payment instruments – prepaid (including gift cards) and credit cards – across physical, digital, and virtual formats, supported by robust processing systems certified by leading card networks. It enables prepaid card management for merchants for their corporate as well as consumer needs. On the acquiring front, Pine Labs facilitates seamless and secure payment acceptance across both in-store and online channels. Leveraging strong merchant partnerships and a scalable technology infrastructure, Pine Labs offers an end-to-end payments ecosystem that distinguishes it from its peers. Some of its peers in this space are listed as follows:

Indian peers:

Zaggle Prepaid Ocean Services Limited ("Zaggle") is a listed Indian player that caters to corporate expense management, issuing and processing, offering prepaid card programs, reward and loyalty solutions, etc. Zaggle caters to the corporate clients to provide employee benefits and channel partners.

Global peers:

Marqeta, Inc. ("Marqeta") is a global listed provider of card issuing and processing stack for credit, debit and prepaid cards. It provides scalable APIs to create and manage these cards. It also offers fintech infrastructure solutions such as banking-as-a-service, as well as risk and compliance management tools through KYC/AML (anti-money laundering) checks, etc.

In FY 2024, Pine Labs is the largest Closed Loop Gift Card processing in terms of Total Processed Value, the largest digital affordability solution enabler at Digital Checkout Point in terms of Total Processed Value. Pine Labs is also a prominent player among the top 5 in-store digital platforms and a prominent Bharat Bill Payment System (BBPS) transactions processing solutions provider.

Figure 28: Key Performance Indicators (KPIs) – Pine Labs and its Listed Competitors
9-months period ended December 31, 2024/ 9-months period ended September 30, 2024

KPIs	Unit	Pine Labs – Pro Forma	Pine Labs - Restated	Paytm[6]	Zaggle[7]	KPIs	Unit	Adyen[8]	Block[9]	Marqeta[10]	Shopify[11]
Platform GTV	₹ Bn	7,531.05	3,351.72	13,770.00	NA	Platform GTV	₹ Bn	NA	15,202.93	17,951.32	NA
Digital Infrastructure and Transaction Processing GTV	₹ Bn	7,148.26	3,106.83	NA	NA	Digital Infrastructure and Transaction Processing GTV	₹ Bn	NA	NA	NA	NA
Affordability, VAS & Transaction Processing GTV	₹ Bn	1,479.92	1,373.46	NA	NA	Affordability, VAS & Transaction Processing GTV	₹ Bn	NA	NA	NA	NA
Issuing and Acquiring Platform GTV	₹ Bn	382.79	244.89	NA	NA	Issuing and Acquiring Platform GTV	₹ Bn	NA	NA	NA	NA
Merchants	Mn	0.92	0.27	43.00	NA	Merchants	Mn	NA	NA	NA	NA
Digital check-out points (DCPs)	Mn	1.73	0.90	NA	NA	Digital check-out points (DCPs)	Mn	NA	NA	NA	NA
Pre-paid Cards Issued	Mn	474.47	449.89	NA	NA	Pre-paid Cards Issued	Mn	NA	NA	NA	NA
Number of Transactions	Bn	3.97	2.02	29.99	NA	Number of Transactions	Bn	NA	NA	NA	NA
Fintech Infrastructure Transactions	Bn	0.49	NA	NA	NA	Fintech Infrastructure Transactions	Bn	NA	NA	NA	NA
Revenue from operations from Outside India	%	14.15%	2.85%	NA	0.00%	International Revenue %	%	NA	NA	NA	NA
Revenue from Operations[1]	₹ Mn	16,756.27	12,081.60	49,890.00	8,916.00	Revenue[1]	₹ Mn	NA	1,537,521.82	31,552.43	515,780.00
Digital Infrastructure and Transaction	₹ Mn	11,929.25	8,537.94	39,910.00	NA	Digital Infrastructure and	₹ Mn	NA	NA	NA	NA

Platform Revenue						Transaction Platform Revenue					
Issuing and Acquiring Platform Revenue	₹ Mn	4,827.02	3,543.66	NA	8,916.00	Issuing and Acquiring Platform Revenue	₹ Mn	NA	NA	NA	NA
Contribution Margin/ Contribution Profit[2]	₹ Mn	12,840.12	10,059.83	26,080.00	NA	Gross Profit[2]	₹ Mn	NA	559,099.23	21,559.91	261,375.00
Contribution Margin as a percentage of revenue from operations/Contribution Margin[3]	%	76.63%	83.27%	52.28%	NA	% Gross Margin[3]	%	NA	36.36%	68.33%	50.68%
Adjusted EBITDA[4]	₹ Mn	2,726.58	2,714.25	-7,720.00	865.60	Adjusted EBITDA [4]	₹ Mn	NA	1,93,121.87	1,396.46	NA
Adjusted EBITDA Margin[5]	%	16.27%	22.47%	-15.47%	9.71%	Adjusted EBITDA Margin[5]	%	NA	12.56%	4.43%	NA

Note(s): All figures considered are consolidated unless specified, NA = Not Available on public platforms/company filings, 9-months period ended December 31, 2024 for Indian players – Pine Labs, Paytm, PhonePe, PayU, Razorpay and Zaggle, 9-months period ended September 30, 2024for global players – Adyen, Block, Marqeta and Shopify, 1. Revenue – For Indian peers, Revenue from Operations is considered and for the global peers, a comparable KPI is considered which is Defined by each player 2.Contribution Margin/Contribution Profit/Gross Profit – For Pine Labs, Contribution Margin is considered, for other Indian peers, Contribution Profit is considered and for the global peers, a comparable KPI is considered which is Defined by each player, 3. Contribution Margin as a percentage of revenue from operations/Contribution Margin/ % Gross Margin - This metric has been calculated via Contribution Margin/Contribution Profit/Gross profit divided by the Revenue from Operations taken, 4. Adjusted EBITDA – For Pine Labs and Indian peers, Adjusted EBITDA before accounting for ESOPs cost and for the global peers, Adjusted EBITDA which is Defined by each player, 5.Adjusted EBITDA Margin – This has been calculated via Adjusted EBITDA (as defined in 4) divided by the Revenue from Operations taken, 6. For Paytm, Number of transactions includes only merchant transactions, Adjusted EBITDA is Adjusted EBITDA before ESOPs, 7. For Zaggle, Adjusted EBITDA is Adjusted EBITDA before accounting for ESOPs and Adjusted EBITDA and Adjusted EBITDA margin are given at the standalone level, and Revenue from operations from Outside India has been calculated as Outside India Business Revenue divided by Overall Business Revenue, 8. For Adyen, Net Revenue (Revenue less Costs incurred from Financial Institutions less Cost of goods sold) is considered as Gross Profit, 9. For Block, Platform GTV is defined as GPV (Gross Payment Volume) which includes Square GPV and Cash App Business GPV. GPV does not include transactions from BNPL platform because GPV is related only to transaction-based revenue and not to subscription and services-based revenue. Total Net Revenue has been considered as Revenue, Gross Profit (Net Revenue less Cost of Revenue) is considered as Gross Profit, and Non-GAAP financial measure - Adjusted EBITDA has been considered, 10. For Marqeta, Net Revenue has been considered as Revenue, Gross Profit (Net Revenue less Cost of Revenue) has been considered as Gross Profit, and Non-GAAP financial measure - Adjusted EBITDA has been considered, 11. For Shopify, Revenue from Subscription solutions and merchant solutions has been considered for Revenue.

Figure 29: Key Performance Indicators (KPIs) – Pine Labs and its Listed Competitors

9-months period ended December 31, 2023/ 9-months period ended September 30, 2023

KPIs	Unit	Pine Labs – Proforma	Pine Labs - Restated	Paytm[6]	Zaggle[7]	KPIs	Unit	Adyen[8]	Block[9]	Marqeta[10]	Shopify[11]
Platform GTV	₹ Bn	4,482.64	2,989.16	13,650.00	NA	Platform GTV	₹ Bn	NA	14,467.43	13,624.23	NA

Digital Infrastructure and Transaction Processing GTV	₹ Bn	4,200.71	2,777.12	NA	NA	Digital Infrastructure and Transaction Processing GTV	₹ Bn	NA	NA	NA	NA
Affordability, VAS & Transaction Processing GTV	₹ Bn	1,039.71	956.78	NA	NA	Affordability, VAS & Transaction Processing GTV	₹ Bn	NA	NA	NA	NA
Issuing and Acquiring Platform GTV	₹ Bn	281.93	212.04	NA	NA	Issuing and Acquiring Platform GTV	₹ Bn	NA	NA	NA	NA
Merchants	Mn	0.56	0.27	39.30	NA	Merchants	Mn	NA	NA	NA	NA
Digital check-out points (DCPs)	Mn	1.27	0.83	NA	NA	Digital check-out points (DCPs)	Mn	NA	NA	NA	NA
Pre-paid Cards Issued	Mn	391.00	367.49	NA	NA	Pre-paid Cards Issued	Mn	NA	NA	NA	NA
Number of Transactions	Bn	2.49	1.84	27.07	NA	Number of Transactions	Bn	NA	NA	NA	NA
Fintech Infrastructure Transactions	Bn	0.17	NA	NA	NA	Fintech Infrastructure Transactions	Bn	NA	NA	NA	NA
Revenue from operations from Outside India	%	9.60%	2.57%	NA	0.00%	International Revenue %	%	NA	NA	NA	NA
Revenue from Operations[1]	₹ Mn	12,603.24	9,820.54	77,110.00	5,022.00	Revenue[1]	₹ Mn	NA	1,372,119.39	47,374.67	417,860.00
Digital Infrastructure and Transaction Platform Revenue	₹ Mn	9,238.16	6,660.47	62,740.00	NA	Digital Infrastructure and Transaction Platform Revenue	₹ Mn	NA	NA	NA	NA
Issuing and Acquiring	₹ Mn	3,365.08	3,160.07	NA	5,022.00	Issuing and Acquiri	₹ Mn	NA	NA	NA	NA

Platform Revenue						ng Platform Revenue					
Contribution Margin/ Contribution Profit[2]	₹ Mn	10,093.23	8,249.87	42,500.00	NA	Gross Profit[2]	₹ Mn	NA	465,726.39	20,933.89	208,505.00
Contribution Margin as a percentage of revenue from operations/Contribution Margin[3]	%	80.08%	84.01%	55.12%	NA	% Gross Margin[3]	%	NA	33.94%	44.19%	49.90%
Adjusted EBITDA[4]	₹ Mn	1,065.32	1,292.66	4,560.00	584.00	Adjusted EBITDA [4]	₹ Mn	NA	1,04,571.85	-474.81	NA
Adjusted EBITDA Margin[5]	%	8.45%	13.16%	5.91%	11.63%	Adjusted EBITDA Margin[5]	%	NA	7.62%	-1.00%	NA

Note(s): All figures considered are consolidated unless specified, NA = Not Available on public platforms/company filings, 9-months period ended December 31, 2023 for Indian players – Pine Labs, Paytm, PhonePe, PayU, Razorpay and Zaggle, 9-months period ended September 30, 2023 for global players – Adyen, Block, Marqeta and Shopify, 1. Revenue – For Indian peers, Revenue from Operations is considered and for the global peers, a comparable KPI is considered which is Defined by each player 2.Contribution Margin/Contribution Profit/Gross Profit – For Pine Labs, Contribution Margin is considered, for other Indian peers, Contribution Profit is considered and for the global peers, a comparable KPI is considered which is Defined by each player, 3. Contribution Margin as a percentage of revenue from operations/Contribution Margin/ % Gross Margin - This metric has been calculated via Contribution Margin/Contribution Profit/Gross profit divided by the Revenue from Operations taken, 4. Adjusted EBITDA – For Pine Labs and Indian peers, Adjusted EBITDA before accounting for ESOPs cost and for the global peers, Adjusted EBITDA which is Defined by each player, 5.Adjusted EBITDA Margin – This has been calculated via Adjusted EBITDA (as defined in 4) divided by the Revenue from Operations taken, 6. For Paytm, Number of transactions includes only merchant transactions, Adjusted EBITDA is Adjusted EBITDA before ESOPs, 7. For Zaggle, Adjusted EBITDA is Adjusted EBITDA before accounting for ESOPs and Adjusted EBITDA and Adjusted EBITDA margin are given at the standalone level, and Revenue from operations from Outside India has been calculated as Outside India Business Revenue divided by Overall Business Revenue, 8. For Adyen, Net Revenue (Revenue less Costs incurred from Financial Institutions less Cost of goods sold) is considered as Gross Profit, 9. For Block, Platform GTV is defined as GPV (Gross Payment Volume) which includes Square GPV and Cash App Business GPV. GPV does not include transactions from BNPL platform because GPV is related only to transaction-based revenue and not to subscription and services-based revenue. Total Net Revenue has been considered as Revenue, Gross Profit (Net Revenue less Cost of Revenue) is considered as Gross Profit, and Non-GAAP financial measure - Adjusted EBITDA has been considered, 10. For Marqeta, Net Revenue has been considered as Revenue, Gross Profit (Net Revenue less Cost of Revenue) has been considered as Gross Profit, and Non-GAAP financial measure - Adjusted EBITDA has been considered, 11. For Shopify, Revenue from Subscription solutions and merchant solutions has been considered for Revenue.

Figure 30: Key Performance Indicators (KPIs) – Pine Labs and its Listed Competitors

FY 2024/CY 2023

KPIs	Unit	Pine Labs – Pro Forma	Pine Labs - Restated	Paytm[6]	Zaggle[7]	KPIs	Unit	Adyen[8]	Block[9]	Marqeta[10]	Shopify[11]
Platform GTV	₹ Bn	6,084.36	3,966.69	18,300.00	NA	Platform GTV	₹ Bn	93,129.60	19,354.42	18,892.44	NA
Digital Infrastructure and Transaction Processing GTV	₹ Bn	5,704.72	3,681.41	NA	NA	Digital Infrastructure and Transaction	₹ Bn	NA	NA	NA	NA

						Processing GTV					
Affordability, VAS & Transaction Processing GTV	₹ Bn	1,420.15	1,307.28	NA	NA	Affordability, VAS & Transaction Processing GTV	₹ Bn	NA	NA	NA	NA
Issuing and Acquiring Platform GTV	₹ Bn	379.64	285.28	NA	NA	Issuing and Acquiring Platform GTV	₹ Bn	NA	NA	NA	NA
Merchants	Mn	0.64	0.27	40.60	NA	Merchants	Mn	NA	NA	NA	NA
Digital check-out points (DCPs)	Mn	1.39	0.84	NA	NA	Digital check-out points (DCPs)	Mn	NA	NA	NA	NA
Pre-paid Cards Issued	Mn	529.00	497.24	NA	NA	Pre-paid Cards Issued	Mn	NA	NA	NA	NA
Number of Transactions	Bn	3.44	2.45	36.69	NA	Number of Transactions	Bn	NA	NA	NA	NA
Fintech Infrastructure Transactions	Bn	0.25	NA	NA	NA	Fintech Infrastructure Transactions	Bn	NA	NA	NA	NA
Revenue from operations from Outside India	%	10.94%	2.59%	NA	0.00%	International Revenue %	%	NA	NA	NA	NA
Revenue from Operations[1]	₹ Mn	17,695.46	13,410.14	99,778.00	7,755.98	Revenue[1]	₹ Mn	178,886.98	1,862,827.96	57,474.54	600,100.00
Digital Infrastructure and Transaction Platform Revenue	₹ Mn	12,764.33	9,050.61	61,280.00	NA	Digital Infrastructure and Transaction Platform Revenue	₹ Mn	NA	NA	NA	NA
Issuing and Acquiring Platform Revenue	₹ Mn	4,931.13	4,359.53	NA	7,755.98	Issuing and Acquiring Platform Revenue	₹ Mn	NA	NA	NA	NA

Contribution Margin/ Contribution Profit[2]	₹ Mn	13,853.85	11,221.26	55,380.00	NA	Gross Profit[2]	₹ Mn	156,101.86	637,915.31	28,008.69	298,775.00
Contribution Margin as a percentage of revenue from operations/Contribution Margin[3]	%	78.29 %	83.68 %	55.50 %	NA	% Gross Margin[3]	%	87.26 %	34.24%	48.73 %	49.79 %
Adjusted EBITDA[4]	₹ Mn	1,582.01	1,772.97	5,590.00	855.70	Adjusted EBITDA [4]	₹ Mn	71,331.36	1,52,355.70	-194.65	NA
Adjusted EBITDA Margin[5]	%	8.94 %	13.22 %	5.60 %	11.03%	Adjusted EBITDA Margin[5]	%	39.88 %	8.18%	-0.34%	NA

Note(s): All figures considered are consolidated unless specified, NA = Not Available on public platforms/company filings, FY 2024 for Indian players – Pine Labs, Paytm, PhonePe, PayU, Razorpay and Zaggle, CY 2023 for global players – Adyen, Block, Marqeta and Shopify, 1. Revenue – For Indian peers, Revenue from Operations is considered and for the global peers, a comparable KPI is considered which is Defined by each player 2.Contribution Margin/Contribution Profit/Gross Profit – For Pine Labs, Contribution Margin is considered, for other Indian peers, Contribution Profit is considered and for the global peers, a comparable KPI is considered which is Defined by each player, 3. Contribution Margin as a percentage of revenue from operations/ Contribution Margin/ % Gross Margin, - This metric has been calculated via Contribution Margin/ or Contribution Profit/ or Gross profit divided by the Revenue from Operations taken, 4. Adjusted EBITDA – For Pine Labs and Indian peers, Adjusted EBITDA before accounting for ESOPs cost (before ESOPs) and for the global peers, Adjusted EBITDA which is Defined by each player, 5.% Adjusted EBITDA Margin – This has been calculated via Adjusted EBITDA (as defined in 4) divided by the Revenue from Operations taken, 6. For Paytm, Number of transactions includes only merchant transactions, Adjusted EBITDA is Adjusted EBITDA before ESOPs, 7. For Zaggle, Adjusted EBITDA is Adjusted EBITDA before accounting for ESOPs and Adjusted EBITDA and Adjusted EBITDA margin are given at the standalone level, and Revenue from operations from Outside India International Revenue % has been calculated as Outside India Business Revenue divided by Overall Business Revenue, 8. For Adyen, Net Revenue (Revenue less Costs incurred from Financial Institutions less Cost of goods sold) is considered as Gross Profit, 9. For Block, Platform GTV is defined as GPV (Gross Payment Volume) which includes Square GPV and Cash App Business GPV. GPV does not include transactions from BNPL platform because GPV is related only to transaction-based revenue and not to subscription and services-based revenue. Total Net Revenue has been considered as Revenue, Gross Profit (Net Revenue less Cost of Revenue) is considered as Gross Profit, and Non-GAAP financial measure - Adjusted EBITDA has been considered, 10. For Marqeta, Net Revenue has been considered as Revenue, Gross Profit (Net Revenue less Cost of Revenue) has been considered as Gross Profit, and Non-GAAP financial measure - Adjusted EBITDA has been considered, 11. For Shopify, Revenue from Subscription solutions and merchant solutions has been considered for Revenue.

Figure 31: Key Performance Indicators (KPIs) – Pine Labs and its Listed Competitors
FY 2023/CY 2022

KPIs	Unit	Pine Labs – Pro Forma	Pine Labs - Restated	Paytm[6]	Zaggle[7]	KPIs	Unit	Adyen[8]	Block[9]	Marqeta[10]	Shopify[11]
Platform GTV	₹ Bn	4,397.2	3,502.80	13,200.00	NA	Platform GTV	₹ Bn	73,680.00	17,301.56	14,132.10	NA
Digital Infrastructure and Transaction Processing GTV	₹ Bn	4,063.36	3,246.79	NA	NA	Digital Infrastructure and Transaction Processing GTV	₹ Bn	NA	NA	NA	NA
Affordability, VAS & Transaction	₹ Bn	1,002.75	920.33	NA	NA	Affordability, VAS &	₹ Bn	NA	NA	NA	NA

Processing GTV						Transaction Processing GTV				
Issuing and Acquiring Platform GTV	₹ Bn	333.91	256.01	NA	NA	Issuing and Acquiring Platform GTV	₹ Bn	NA	NA	NA	NA
Merchants	Mn	0.53	0.27	35.6	NA	Merchants	Mn	NA	NA	NA	NA
Digital check-out points (DCPs)	Mn	1.19	0.79	NA	NA	Digital check-out points (DCPs)	Mn	NA	NA	NA	NA
Pre-paid Cards Issued	Mn	495.15	474.72	NA	NA	Pre-paid Cards Issued	Mn	NA	NA	NA	NA
Number of Transactions	Bn	2.57	2.28	24.01	NA	Number of Transactions	Bn	NA	NA	NA	NA
Fintech Infrastructure Transactions	Bn	0.09	NA	NA	NA	Fintech Infrastructure Transactions	Bn	NA	NA	NA	NA
Revenue from operations from Outside India	%	8.50%	2.08%	NA	0.58%	International Revenue %	%	NA	NA	NA	NA
Revenue from Operations[1]	₹ Mn	15,976.58	12,907.32	79,903.00	5,534.60	Revenue[1]	₹ Mn	857,818.66	1,490,184.90	63,597.51	475,988.44
Digital Infrastructure and Transaction Platform Revenue	₹ Mn	11,524.02	8,551.22	48,440.00	NA	Digital Infrastructure and Transaction Platform Revenue	₹ Mn	NA	NA	NA	NA
Issuing and Acquiring Platform Revenue	₹ Mn	4,452.56	4,356.10	NA	5,534.60	Issuing and Acquiring Platform Revenue	₹ Mn	NA	NA	NA	NA
Contribution Margin/ Contribution Profit[2]	₹ Mn	12,810.37	10,978.02	39,000.00	NA	Gross Profit[2]	₹ Mn	127,659.94	509,310.82	27,200.09	234,100.12

Contribution Margin as a percentage of revenue from operations/Contribution Margin[3]	%	80.18 %	85.05 %	48.81 %	NA	% Gross Margin[3]	%	14.89 %	34.18%	42.77 %	49.18 %
Adjusted EBITDA[4]	₹ Mn	1,967.95	2,756.33	-1,760.00	625.10	Adjusted EBITDA [4]	₹ Mn	69,915.65	84,231.94	-3,552.15	NA
Adjusted EBITDA Margin[5]	%	12.32 %	21.35 %	-2.20 %	11.29%	Adjusted EBITDA Margin[5]	%	8.15%	5.65%	-5.59%	NA

Note(s): All figures considered are consolidated unless specified, NA = Not Available on public platforms/company filings, FY 2023 for Indian players – Pine Labs, Paytm, PhonePe, PayU, Razorpay and Zaggle, CY 2022 for global players – Adyen, Block, Marqeta and Shopify, 1. Revenue – For Indian peers, Revenue from Operations is considered and for the global peers, a comparable KPI is considered which is Defined by each player 2.Contribution Margin/Contribution Profit/Gross Profit – For Pine Labs, Contribution Margin is considered, for other Indian peers, Contribution Profit is considered and for the global peers, a comparable KPI is considered which is Defined by each player, 3. Contribution Margin as a percentage of revenue from operations/Contribution Margin/ % Gross Margin - This metric has been calculated via Contribution Margin/Contribution Profit/Gross profit divided by the Revenue from Operations taken, 4. Adjusted EBITDA – For Pine Labs and Indian peers, Adjusted EBITDA before accounting for ESOPs cost and for the global peers, Adjusted EBITDA which is Defined by each player, 5.Adjusted EBITDA Margin – This has been calculated via Adjusted EBITDA (as defined in 4) divided by the Revenue from Operations taken, 6. For Paytm, Number of transactions includes only merchant transactions, Adjusted EBITDA is Adjusted EBITDA before ESOPs, 7. For Zaggle, Adjusted EBITDA is Adjusted EBITDA before accounting for ESOPs and Adjusted EBITDA and Adjusted EBITDA margin are given at the standalone level, and Revenue from operations from Outside India has been calculated as Outside India Business Revenue divided by Overall Business Revenue, 8. For Adyen, Net Revenue (Revenue less Costs incurred from Financial Institutions less Cost of goods sold) is considered as Gross Profit, 9. For Block, Platform GTV is defined as GPV (Gross Payment Volume) which includes Square GPV and Cash App Business GPV. GPV does not include transactions from BNPL platform because GPV is related only to transaction-based revenue and not to subscription and services-based revenue. Total Net Revenue has been considered as Revenue, Gross Profit (Net Revenue less Cost of Revenue) is considered as Gross Profit, and Non-GAAP financial measure - Adjusted EBITDA has been considered, 10. For Marqeta, Net Revenue has been considered as Revenue, Gross Profit (Net Revenue less Cost of Revenue) has been considered as Gross Profit, and Non-GAAP financial measure - Adjusted EBITDA has been considered, 11. For Shopify, Revenue from Subscription solutions and merchant solutions has been considered for Revenue.

Figure 32: Key Performance Indicators (KPIs) – Pine Labs and its Listed Competitors
FY 2022/CY 2021

KPIs	Unit	Pine Labs – Pro Forma	Pine Labs - Restated	Paytm[6]	Zaggle[7]	KPIs	Unit	Adyen[8]	Block[9]	Marqeta[10]	Shopify[11]
Platform GTV	₹ Bn	2,318.74	2,194.00	8,500.00	NA	Platform GTV	₹ Bn	49,536.00	14,256.20	9,446.31	NA
Digital Infrastructure and Transaction Processing GTV	₹ Bn	2,068.29	1,969.90	NA	NA	Digital Infrastructure and Transaction Processing GTV	₹ Bn	NA	NA	NA	NA
Affordability, VAS & Transaction Processing GTV	₹ Bn	534.63	504.93	NA	NA	Affordability, VAS & Transaction Processing GTV	₹ Bn	NA	NA	NA	NA

Issuing and Acquiring Platform GTV	₹ Bn	250.45	224.10	NA	NA	Issuing and Acquiring Platform GTV	₹ Bn	NA	NA	NA	NA
Merchants	Mn	0.25	0.23	NA	NA	Merchants	Mn	NA	NA	NA	NA
Digital check-out points (DCPs)	Mn	0.68	0.65	NA	NA	Digital check-out points (DCPs)	Mn	NA	NA	NA	NA
Pre-paid Cards Issued	Mn	664.50	653.24	NA	NA	Pre-paid Cards Issued	Mn	NA	NA	NA	NA
Number of Transactions	Bn	2.15	2.09	12.60	NA	Number of Transactions	Bn	NA	NA	NA	NA
Fintech Infrastructure Transactions	Bn	NA	NA	NA	NA	Fintech Infrastructure Transactions	Bn	NA	NA	NA	NA
Revenue from operations from Outside India	%	10.02%	1.90%	NA	0.93%	International Revenue %	%	NA	NA	NA	NA
Revenue from Operations[1]	₹ Mn	10,187.49	9,339.83	49,742.00	3,712.55	Revenue[1]	₹ Mn	575,560.22	1,501,202.26	43,959.88	392,007.76
Digital Infrastructure and Transaction Platform Revenue	₹ Mn	6,779.77	6,000.70	34,200.00	NA	Digital Infrastructure and Transaction Platform Revenue	₹ Mn	NA	NA	NA	NA
Issuing and Acquiring Platform Revenue	₹ Mn	3,407.72	3,339.13	NA	3,712.55	Issuing and Acquiring Platform Revenue	₹ Mn	NA	NA	NA	NA
Contribution Margin/ Contribution Profit[2]	₹ Mn	8,172.76	7,699.34	14,980.00	NA	Gross Profit[2]	₹ Mn	96,144.00	375,684.96	19,694.93	210,900.98
Contribution Margin as a percentage of revenue from operations/Co	%	80.22%	82.44%	30.12%	NA	% Gross Margin[3]	%	16.70%	25.03%	44.80%	53.80%

ntribution Margin[3]											
Adjusted EBITDA[4]	₹ Mn	926.51	1,918.96	-15,180.00	598.50	Adjusted EBITDA [4]	₹ Mn	60,479.23	86,160.85	-1,084.60	NA
Adjusted EBITDA Margin[5]	%	9.09%	20.55%	-30.52%	16.13%	Adjusted EBITDA Margin[5]	%	10.51%	5.74%	-2.47%	NA

Note(s): All figures considered are consolidated unless specified, NA = Not Available on public platforms/company filings, FY 2022 for Indian players – Pine Labs, Paytm, PhonePe, PayU, Razorpay and Zaggle, CY 2021 for global players – Adyen, Block, Marqeta and Shopify, 1. Revenue – For Indian peers, Revenue from Operations is considered and for the global peers, a comparable KPI is considered which is Defined by each player 2.Contribution Margin/Contribution Profit/Gross Profit – For Pine Labs, Contribution Margin is considered, for other Indian peers, Contribution Profit is considered and for the global peers, a comparable KPI is considered which is Defined by each player, 3. Contribution Margin as a percentage of revenue from operations/Contribution Margin/ % Gross Margin - This metric has been calculated via Contribution Margin/Contribution Profit/Gross profit divided by the Revenue from Operations taken, 4. Adjusted EBITDA – For Pine Labs and Indian peers, Adjusted EBITDA before accounting for ESOPs cost and for the global peers, Adjusted EBITDA which is Defined by each player, 5.Adjusted EBITDA Margin – This has been calculated via Adjusted EBITDA (as defined in 4) divided by the Revenue from Operations taken, 6. For Paytm, Number of transactions includes only merchant transactions, Adjusted EBITDA is Adjusted EBITDA before ESOPs, 7. For Zaggle, Adjusted EBITDA is Adjusted EBITDA before accounting for ESOPs and Adjusted EBITDA and Adjusted EBITDA margin are given at the standalone level, and Revenue from operations from Outside India has been calculated as Outside India Business Revenue divided by Overall Business Revenue, 8. For Adyen, Net Revenue (Revenue less Costs incurred from Financial Institutions less Cost of goods sold) is considered as Gross Profit, 9. For Block, Platform GTV is defined as GPV (Gross Payment Volume) which includes Square GPV and Cash App Business GPV. GPV does not include transactions from BNPL platform because GPV is related only to transaction-based revenue and not to subscription and services-based revenue. Total Net Revenue has been considered as Revenue, Gross Profit (Net Revenue less Cost of Revenue) is considered as Gross Profit, and Non-GAAP financial measure - Adjusted EBITDA has been considered, 10. For Marqeta, Net Revenue has been considered as Revenue, Gross Profit (Net Revenue less Cost of Revenue) has been considered as Gross Profit, and Non-GAAP financial measure - Adjusted EBITDA has been considered, 11. For Shopify, Revenue from Subscription solutions and merchant solutions has been considered for Revenue.

Chapter 4: Industry Threats and Challenges

- Economic downturns such as inflation, interest rate hikes, and liquidity constraints may impact consumer spending
- Government-backed digital initiatives such as UPI and other future real-time payments may impact traditional card-based processing models
- Emerging technologies like CBDCs (Central Bank Digital Currencies), e-money could alter the digital payment landscape
- Changes in the regulations for lending or affordability solutions such as affordability solutions could shift consumers towards alternate payment methods
- Vulnerability to cyberattacks, financial fraud, and data breaches may impact consumer confidence in digital payments
- Changes in lending patterns by financial institutions due to increase in delinquencies may negatively impact consumer lending, impacting solutions such as affordability solutions

Chapter 5: Glossary

Terms in Use	Definition
Aadhaar UID	12-digit individual unique identification number issued by the Unique Identification Authority of India on behalf of the Government of India
Affordability Solutions	Short-term financing options such as Pay Later that let consumers defer part-payment for purchases, making consumption more affordable and accessible.
Affordability, VAS & Transaction Processing GTV	Affordability, VAS and Transaction Processing GTV is defined as the total transaction value primarily processed for Pine Labs' Affordability solutions, Payment Aggregation, Dynamic Currency Conversion (DCC) and UPI offerings. This is a subset of entire Digital Infrastructure and Transaction Platform GTV.
Bharat Connect	Bharat Connect is a bill payment system in India that allows businesses and customers to connect and make payments. It was previously known as Bharat Bill Payment System ("BBPS")
Compound Annual	CAGR (Compound Annual Growth Rate) is the average annual growth rate of an investment or value over a specified period, assuming constant year-on-year growth.

Growth Rate ("CAGR")	
Card Acquiring	Card acquiring is the process of collecting and transmitting debit, credit and prepaid card details between participating parties to facilitate transactions
Card Issuing	Card issuing is the process by which a financial institution or an authorized entity issues cards, such as credit, debit, or prepaid cards, to consumers or businesses
Card Processing	Card processing is the process of authorizing, authenticating, and settling transactions made with a card, such as a credit card, debit card, or prepaid card
CY	Calendar Year (January to December)
Digital Checkout Points ("DCP")	Digital check-out points represent the number of live touchpoints (at the end of the period) at merchant stores powered by Pine Labs' platform.
DigiLocker	DigiLocker is a Government of India-launched secure cloud-based platform for storage, sharing and verification of documents and certificates
Digital Infrastructure and Transaction Platform GTV	Digital Infrastructure and Transaction Platform GTV is defined as the total transaction value processed through Pine Labs' Digital Infrastructure and Transaction Platform.
Digital Infrastructure and Transaction Platform Revenue	Digital Infrastructure and Transaction Platform Revenue includes revenue derived from subscription, transaction and other VAS services offered including Affordability transactions. Revenue is primarily earned from merchants, acquirers, credit partners and consumer brands.
E-commerce	Retail business model that involves customers buying and selling goods over the internet.
E-KYC	Electronic Know-Your-Customer is a digital process to verify a customer's identity without the need for physical documents
e-RUPI	e-RUPI is a person- and purpose-specific cashless e-voucher designed to guarantee that the stored money value reaches its intended beneficiary and can only be used for the specific benefit or purpose for which it was intended.
Fintech	Financial technology used to describe new technology that seeks to support, improve and automate the delivery and use of financial services.
Fintech Infrastructure	The embedded finance solutions offered by players
Fintech Infrastructure Transactions	Fintech Infrastructure Transactions is defined as transactions to facilitate payment to a payee or biller or a transaction to collect financial data from financial institutions.
FY	Financial year as per Indian standard which begins on April 1 of the base year and ends on March 31 of the following year. For reference, FY 24 includes time period April 1, 2023 to March 31, 2024.
Gross Domestic Product ("GDP")	Gross domestic product is the total monetary or market value of all the finished goods and services produced within a country's borders in a specific time period.
Gross Merchandise Value ("GMV")	Represents the total sales value of goods sold through a platform before any deductions.
Gross Transactions Value ("GTV")	Measures the total value of transactions processed within a specified period of time
Goods & Services Tax ("GST")	The goods and services tax is a value-added tax levied on most goods and services sold for domestic consumption. The GST is paid by consumers, but it is remitted to the government by the businesses selling the goods and services.
Issuing	Enabling merchants, brands, and financial institutions to create and manage prepaid instruments or digital payment solutions that facilitate consumer transactions
Issuing and Acquiring Platform GTV	Issuing and Acquiring Platform GTV is defined as the total value of prepaid activations, loads, redemptions of prepaid programs (net of returns/ chargeback) and sale value of prepaid card distributed.
Issuing and Acquiring Platform Revenue	Issuing and Acquiring Platform Revenue includes revenue primarily from issuing and processing prepaid cards, distributing prepaid cards, interest and breakage income.
Merchant Discount Rate ("MDR")	Refers to the rate at which merchants are charged for accepting debit card and credit card payments and funds paid via net banking and digital wallets
Metro	Metro cities indicate eight cities, namely – Mumbai (Maharashtra), Delhi (National Capital Territory), Bangalore (Karnataka), Chennai (Tamil Nadu), Hyderabad (Telangana), Kolkata (West Bengal), Pune (Maharashtra) and Ahmedabad (Gujarat)
Middle-income households	Households with annual income between ₹0.3-1.1 million (US$ 3,500-13,000)

Payment Aggregators ("PA")	A third-party provider that offers a unified platform to merchants for processing multiple payment methods.
Payment Gateway ("PG")	Digital service that processes online payments by securely transmitting customer payment information for authentication and approval by acting as a secure bridge between the merchant and the bank.
Payment Infrastructure Development Fund ("PIDF")	Scheme launched by the RBI to facilitate and subsidize the development of payment acceptance infrastructure with a primary focus on Tier-3 to Tier-6 cities in India as well as North Eastern States and Union Territories of Jammu & Kashmir and Ladakh.
Private Final Consumption Expenditure ("PFCE")	Expenditure incurred by the resident households and non-profit institutions serving households on final consumption of goods and services, whether made within or outside the economic territory
Soundboxes	Devices that carry UPI QR codes and give instant voice notification for successful payments
Tier-1	Cities with a population of more than 1 million
Tier-2+	Cities with a population of less than 1 million
TPV	Total Payment Value
UPI	Unified Payments Interface, which is an instant payment mechanism, developed by NPCI
[Year]P	[Year] Projected
YTD	Year to date