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12 November 2021

India

Financial services

Key players

Acko

BharatPe

Cred

Go Digit

Google Pay

Mswipe

Pay U / Billdesk

Phonepe

Pine Labs

Razor Pay

The India Stack has created a clear path for the country's fintech revolution. Digital payments have risen from US\$61bn in FY16 to US\$300bn in FY21, and we expect them to grow to US\$1tn by FY26, or 30% of India consumption.



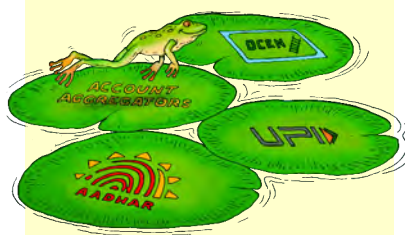
Leaps and bounds

Elements in place for a multifold growth opportunity

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Delivering India's best ideas

CLSA Vehicle financing
Sector outlook - Overweight

Thanks for your support in the Automobile Business Park Project, which is for our future vision.

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22 July 2021

India
Consumer

Motor power
On a long-term growth journey

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CLSA Indian aerospace
Sector outlook - Overweight

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India
Capital goods

Going supersonic
Domestic plays fly as defence spending comes home

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CLSA India online food delivery
Sector outlook

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18 April 2021

India
Consumer

Ready, set, deliver!
Race for US\$11bn online food services market is on

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Bringing India's population into the digital age

The path of digital infrastructure

Multifold growth opportunity

Expanding fintech landscape

Conducive regulatory environment

Monetisation key to value

Leaps and bounds

India is blossoming into one of the world's largest fintech markets. Favourable demographics, rising mobile penetration, a deep engineering talent pool and the unique and collaborative India Stack have created an ideal environment to spawn rapid development. The India Stack unifies government, business and talent under the common goal of bringing the country into the modern age. Combined with a conducive regulatory environment, we believe the nation is set for a digital rebirth.

The role of the government and industry bodies in developing the India Stack - which enables stakeholders to use an open digital infrastructure - is unique and forms the bedrock of the nation's fast-paced fintech evolution. The first two layers, biometric digital ID Aadhaar and a unified payments interface (UPI), have led to rapid financial inclusion and payment digitisation. We expect the next two layers, safe data-sharing account aggregators (AA) and the open credit enablement network (OCEN), to further encourage advancement by democratising lending.

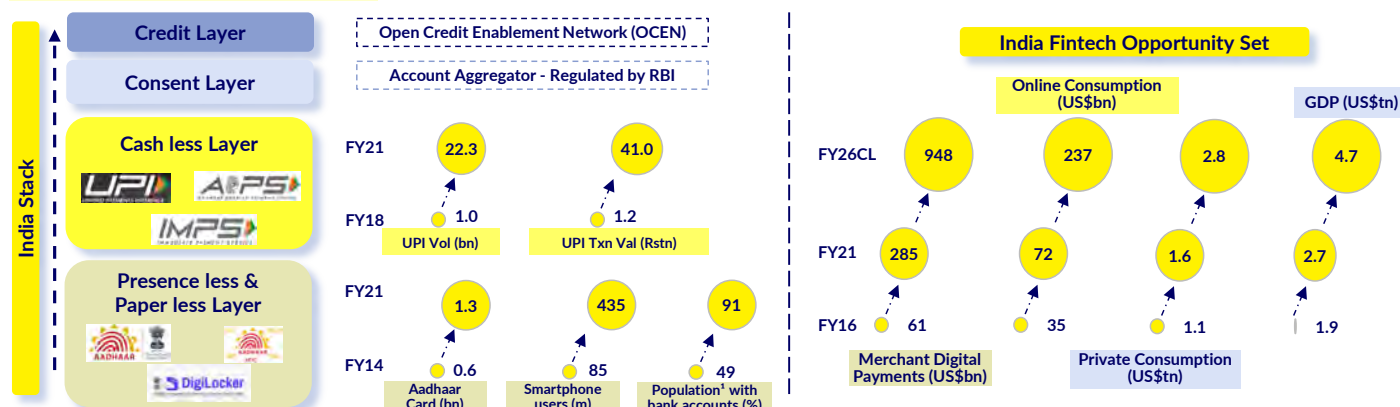
UPI comprises 60% of total payments by volume and digital payments have risen from US\$61bn in FY16 to US\$300bn as of FY21. Given increasing online purchases and digital adoption, we expect this to grow to US\$0.9-1tn by FY26, or 30% of Indian consumption. At US\$15-20bn, buy now pay later (BNPL), equated monthly instalment (EMI) and purchase lending represent just 5-6% of digital payments; we expect this market to jump 5x to US\$90-100bn by FY26, or 10% of digital payments.

Payment firms are diversifying into lending, distribution and super apps to monetise their large customer and merchant bases. Neobanks, BNPL and digital lenders, which offer convenience and strong user interfaces, are also expanding the marketplace. Rather than competing, these newcomers are collaborating with existing players. In addition, insurtech firms are innovating product, distribution and underwriting; while wealthtech has gained scale, disintermediating traditional businesses.

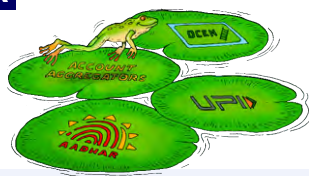
India does not currently require financial institutions to have a separate digital banking licence and regulations have encouraged interoperable payments systems. As collaboration rises between different types of financial firms, regulators are increasingly focused on data protection and we also see stricter norms for risk transfers and first-loss guarantees. Unlike China, concentration risk is too low for regulatory concern.

Fintechs currently represent c.2% of global/Indian market value, with payments being the largest contributor. Globally, fintechs are valued at 20-80x revenue. The key to sustainable value creation lies in monetising the customer base.

India Stack: Backbone of the country's fintech revolution



Note: Population above age of 15 Years. Source: CLSA



Building a digital revolution

The four layers of the India Stack are key to its fintech success

More to come as the next two layers are put in motion

Digital payments to triple and digital lending to quintuple in FY21-26CL

Stacking up

Over the last several years, India has been quietly building a digital revolution. As the world's second most populous country with a high number of unbanked persons, it has been working hard to solve the problem of financial inclusion. In response, the government and industry bodies have collaborated to create one of the world's most unique public goods - the India Stack.

The path of digital infrastructure: The India Stack is a set of application programming interface (API) technologies that form the building blocks of its digital infrastructure. Its ultimate aim is to offer digital services by providing solutions to four key challenges of the Indian ecosystem: customer identity and tedious paperwork, the dominance of physical cash, data protection and low credit penetration. The first two layers, which consists of Aadhaar and a unified payments interface (UPI), have led to rapid financial inclusion and payment digitisation. We expect the next two layers, account aggregator (AA) and the open credit enablement network (OCEN), to further encourage advancement, by democratising lending. Each layer is best-in-class globally and together the India Stack provides an unparalleled digital infrastructure for the country's ongoing fintech evolution.

India Stack - The backbone of India's digital revolution

India Stack

What is in it?

Achievement

Credit Layer
- OCEN

Launched new open interface for digitising all aspects of lending value chain

Consent Layer
- Account

RBI regulates the account aggregator NBFCs which will work as data sharing platforms

Cash less Layer
- Unified Payments Interface (UPI)

UPI Volumes (bn)

FY18

FY21

1.0

22.3

UPI Transaction Value (Rstn)

1.2

41.0

Presence less & Paper less Layer
- AADHAR

No. of Aadhaar Card (bn)

FY14

FY21

0.6

1.3

No. of smartphone users (m)

85

435

Population (15yrs+) with bank accounts (%)

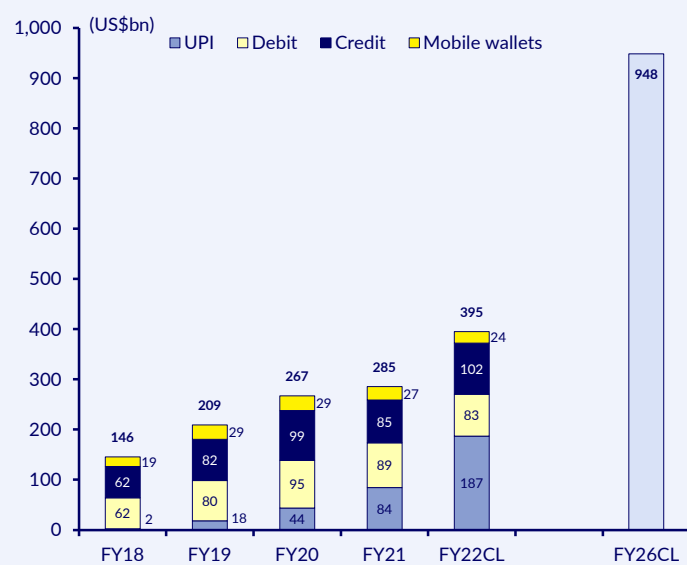
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Source: CLSA

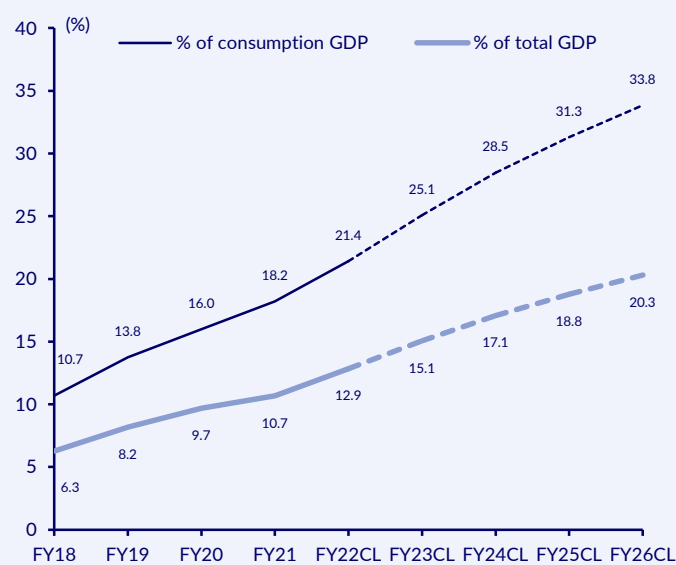
Multifold growth opportunity: India's fintech opportunity set has significantly expanded over the past five years due to strong demographics, the India Stack and the JAM trinity, a government initiative to increase financial access by combining no-frill bank accounts, the Aadhaar card and mobile connections. With rising UPI use, digital payments have risen from US\$61bn in FY16 (6% of consumption) to c.US\$300bn (18% of consumption) in FY21. UPI currently contributes 60% to total payments by volume. Given increases in online purchases and digital adoption, we expect digital payments to grow to US\$0.9-1tn by FY26, or 30% of consumption. At US\$15-20bn, BNPL, EMI and purchase lending represent just 5-6% of digital payments; we expect this market to jump 5x to US\$90-100bn by FY26, 10% of digital payments.

Digital merchant payments to rise to c.US\$1tn by FY26CL



Source: RBI, NPCI, CLSA

Digital merchant payments to expand significantly



Source: RBI, NPCI, Ministry of Statistics and Programme Implementation, CLSA

CLSA model for market estimate of consumer financing and BNPL

(US\$bn)	FY16	FY21	FY22CL	FY23CL	FY24CL	FY25CL	FY26CL	FY16-21 Cagr (%)	FY21-26CL Cagr (%)
India's GDP	1,866	2,676	3,077	3,415	3,791	4,208	4,671	7.5	11.8
India's consumption GDP	1,101	1,568	1,846	2,049	2,275	2,525	2,803	7.3	12.3
Retail commerce digital payments	61	285	395	514	648	790	948	36.3	27.1
% of consumption GDP	5.5	18.2	21.4	25.1	28.5	31.3	33.8	27.0	
% of total GDP	3.3	10.7	12.9	15.1	17.1	18.8	20.3	26.8	
Online consumption	34.8	71.6	97.6	130.7	162.5	197.3	237.2	15.5	27.1
% of consumption GDP	3.2	4.6	5.3	6.4	7.1	7.8	8.5		
% of total GDP	1.9	2.7	3.2	3.8	4.3	4.7	5.1		
Lending									
Digital only BNPL payments	na	4	6	9	13	18	24	na	47.0
(% of online consumption)	na	4.9	6.1	7.1	8.1	9.1	10.1		
Total BNPL disbursements (digital/offline/POS)	na	20	31	43	58	74	94	na	36.3
(% of retail commerce digital payments)	na	7.0	7.8	8.4	8.9	9.4	9.9		

Source: RedSeer, Paytm, Mobikwik, Euromonitor, RBI, NPCI, Ministry of Statistics and Programme Implementation, CLSA

Fintech companies at different stages of evolution

Expanding fintech landscape: Various segments are at different stages of evolution and revenue monetisation. Discount brokers have already disrupted the broking industry and fintechs now dominate digital payments. Payment platforms have built huge scale on the issuing and acquiring side; what's key for them is the ability to diversify and monetise their customer and merchant base. For digital lenders, the opportunity set is substantial but managing credit and navigating potential regulatory tightening is paramount. The scope for the digital distribution of banking services (neobanks), insurance (insuretech) and wealth products (wealthtech) is significant and differentiating products and service offerings are the most important factors.

Most value concentrated in payments

India's diverse fintech landscape						
Payments	Platforms / Payments	Paytm	Google Pay	Bharatpe	Mobikwik	Jio Money
		Phonepe	Amazon Pay	CRED	Freecharge	
	POS players	Pine labs	Mswipe	Innoviti	AG Transact	
	Payment gateways	Razorpay	Billdesk	PayU	CC Avenue	Instamojo
Lending / Credit	POS / BNPL / Consumer	Simpl	Kissht	Flipkart	ePayLater	Indiagold
		Zest	Capital Float	Rupeek	Flexmoney	Postpe
		Lazypay	Amazon	Flexipay	Olamoney	EarlySalary
		Paytm	Mobikwik Zip	Krazybee	LoanTap	
	SME	InCred	LendingKart	Niyogin	NeoGrowth	Aye Finance
		KredX	Vistaar Finance	Credable	Capital Float	
	P2P (peer-to-peer)	Faircent	5paisa.com	Finzy	Lendbox	Lendenclub
Neobanks	Consumer focused	Jupiter	Instantpay	Walrus	Fi	
		Niyo	Fampay	Freo	Slice	
	SME focused	Open	RazorpayX	Niyo	Instantpay	
Insuretech	Digital insurers	Acko	Digit	Toffee		
	Aggregators / others	Policy Bazaar	Turtlemint	Coverfox	RenewBuy	PolicyBoss
Wealthtech	Broking	Zerodha	Groww	Upstox	Smallcase	
	Wealth management	Kuvera	ETMoney	Fisdrom	Indwealth	Stockal

Source: Companies, CLSA

Digital payments up 5x in last 5Y; we expect 3x growth in next 5Y

Payments and platforms - diversify and monetise: India's digital payments market has quintupled over the last five years and we expect it to triple over FY21-26. While part of UPI payments/acceptance is free (0 merchant discount rate or MDR), many large payment companies have developed substantial customer bases on the issuing side and merchant bases on the acquiring side which are multiple times larger than peer banks and NBFCs. The key will be to see how companies are able to diversify and monetise their large customer and merchant bases.

We expect digital lending/BNPL market to grow 5-8x by FY26

Digital lending/BNPL - 5-8x opportunity but tighter regulations: We expect digital the lending/BNPL market to expand 5-8x, from US\$20bn currently to US\$100bn by FY26. Fintechs dominate the less than Rs25,000 personal loan space and the convenient payments, ready availability of credit and affordability-enhancing features will continue to drive this market. BNPL has been a high-delinquency product and underwriting will be a differentiating factor. In addition, we expect some regulatory tightening on risk transfers and use of first-loss guarantees.

Insuretechs aim to simplify buying and claim process

Insuretech - differentiated product and sale process: Digital insurance sales make up less than 2% of overall insurance premiums but consumer surveys indicate that, increasingly, 30-40% of customers prefer to search and buy insurance online. Fintechs in the insurance space are offering differentiated products (including bite-sized insurance), moving completely to online sales, digitising the agency force and/or providing convenient comparison and fulfillment platforms.

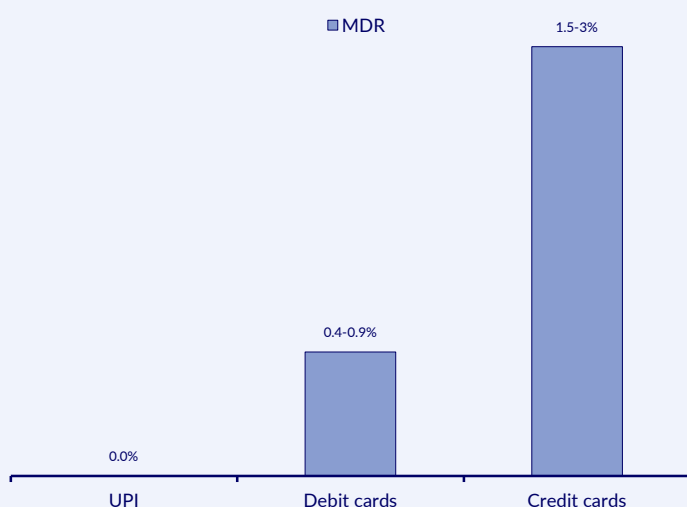
Indian neobanks operate in partnership with traditional banks

Neobanks - mainly partnerships: Unlike many other markets, India does not require separate digital bank licencing and neobanks operate through partnerships with banks. They offer user-friendly interfaces, low-fee services on both the consumer and SME banking sides, and act as digital acquisition engines for traditional banks.

Discount brokers have captured significant market share

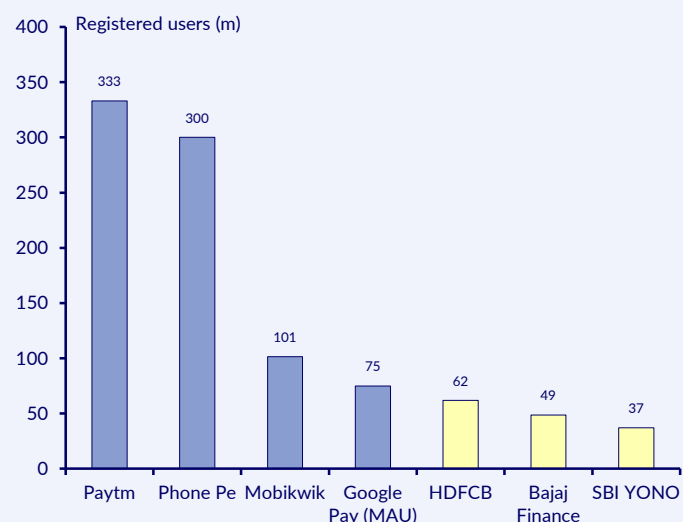
Wealthtech - already disruptors: Discount brokers have gained more than 40% market share and are already disruptors. Increasingly, wealth tech companies and payment platforms are offering investment advisory and gaining share in the distribution of wealth products at a lower cost than traditional distributors.

UPI payments have no fees - Need to diversify and monetise



Source: RBI, CLSA

Large customer base of fintech payment companies



Source: Companies, CLSA

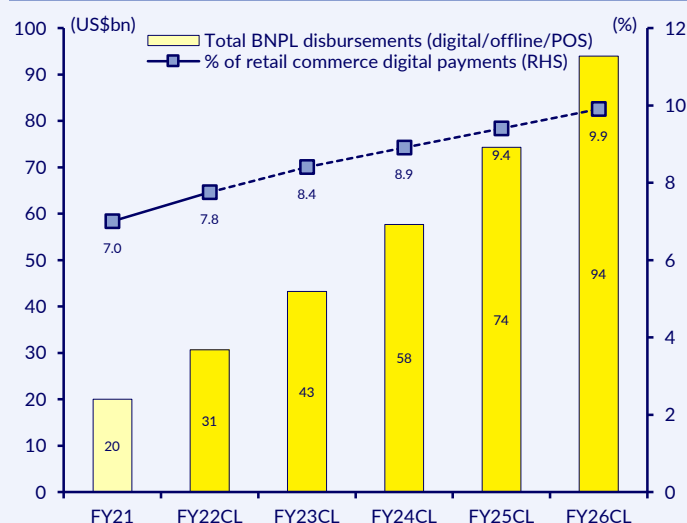
Issuers all diversifying,
acquirers going into
lending

Payment giants: Mapping diversification and monetisation plans

	Consumer Payments		Lending		Payment gateway	Distribution of financial products
	P2P/Wallet	P2M	Consumer	Merchant		
Issuing side / consumer facing						
Paytm	Y	Y	Y	Y	Y	Y
Phonepe	Y	Y			Y	Y
Mobikwik	Y	Y	Y		Y	Y
Google Pay	Y	Y			Y	Y
CRED		Y	Y		Y	
Acquiring side / merchants focus						
Pine labs			Y	Y	Y	
Mswipe			Y	Y		
Razorpay				Y	Y	
PayU			Y	Y	Y	

Source: Companies, CLSA

BNPL market could grow 5-8x over FY21-26CL



Source: RBI, NPCI, Redseer, Paytm, CLSA

Insurtech - Multifold opportunity for digital sales

Digital Penetration in Insurance

Less than 2%



Share of total premiums

5-10%



Share of life insurance sum assured

40-50%



Share of insurance search

Source: CLSA

Expect some tightening on risk transfer, speed breakers on lending

Conducive regulatory environment: India's regulatory landscape has been supportive and the majority of payment regulations have aided in expanding scope in digital payments. Unlike China, there are very few fintechs in balance-sheet-related businesses such as lending/deposits and wealth distribution. Hence, we do not see adverse regulatory outcomes in India. The RBI is tightening its rules on customer data protection and we expect increased scrutiny in risk transfers and first-loss guarantees given growing collaboration between fintechs and traditional banks/NBFCs. In terms of digital bank licences, India has been following a differentiated approach with tap-payment and small-finance bank licencing; we expect the regulator to take a very calibrated approach.

India's diverse fintechs' set to gain prominence

Gaining prominence: Over the last few years, fintech companies have gained prominence around the world. Currently, listed and private market deals value fintechs at a 2% equivalent of global market capitalisation. In India, most fintechs are privately listed and private deal valuations imply a value of US\$50bn, which is c.2% equivalent to Indian listed market cap. Given the diverse set of fintechs and the evolving India Stack, we expect the fintech universe in India to gain prominence as its path to revenue and profit generation become clearer.

India has 14 fintech unicorns; 6 of top 8 are payment companies

India fintech unicorns

Company	Value (US\$bn)	Founded	Sub-Category
One97 (Paytm)	16	2010	Payments
PhonePe	5.5	2015	Payments
BillDesk ¹	4.7	2000	Payments
CRED	4.0	2018	Credit
Policybazaar	3.5	2008	Insurance
Digit Insurance	3.5	2016	Insurance
Pine Labs	3.0	1998	Payments
RazorPay	3.0	2014	Payments
Groww	3.0	2017	Wealth
BharatPe	2.9	2018	Payments
Coinswitch	1.9	2017	Crypto
Zeta	1.5	2015	Banking
CoinDCX	1.1	2017	Crypto
Acko	1.1	2016	Insurance

¹ Being acquired by PayU. Source: Fintechlabs, CLSA

We would like to thank Evalueserve for its help in preparing our research reports. Akshay Chandak (Strategy and Oil & Gas), Ayush Gandhi (Strategy), Dhaval Parekh (Materials), Keshub Bhat (IT), Pratik Jain (Auto) and Zen Javeri (Power, Infra and Capital Goods) provide research support services to CLSA.

Unparalleled India Stack the backbone of its fintech revolution

India has 14 fintech unicorns

The path of digital infrastructure









The India Stack is a network of application programming interfaces (APIs) enabling stakeholders to use an open digital infrastructure to spur innovation. The first two layers, which consists of Aadhaar and a unified payments interface (UPI), have led to rapid financial inclusion and payment digitisation. We expect the next two layers, account aggregator (AA) and the open credit enablement network (OCEN), to further encourage advancement by democratising lending.

India is evolving into one of the world's largest fintech markets and is ranked No.4 in number of fintech unicorns valued at c.US\$50bn. While many factors are contributing to the nation's digital successes, we believe the role of the government, regulators and industry bodies in developing the India Stack provided the foundation for rapid digitisation and innovation.

Figure 1

India Stack: The basics

India Stack

	What is it?	What is in it?	When was it launched?	Achievement	
	Credit Layer - OCEN	Democratizing credit		2020	Launched new open interface for digitising all aspects of lending value chain
	Consent Layer - Account Aggregators	Data empowerment and protection architecture		2016/2020	RBI regulates the account aggregator NBFCs which will work as data sharing
	Cash less Layer - Unified Payments Interface (UPI)	Electronic payment system which democratize payments	  	2016/2010	UPI Volumes (bn) FY18 1.0 → FY21 22.3 UPI Transaction Value (Rstn) FY18 1.2 → FY21 41.0
	Presence less & Paper less Layer - AADHAR	Unique universal digital biometric identity with open access & digital record keeping /documentation	  	2009	No. of Aadhaar Card (bn) FY14 0.6 → FY21 1.3 No. of smartphone users (m) FY14 85 → FY21 435 Population (15yrs+) with bank accounts (%) FY14 49 → FY21 91

Source: CLSA

India Stack's four layers provide a clear path

A set of open APIs forming the building blocks of India's digital infrastructure

Using the latest technology to solve problems and save on time and cost

The India Stack's first two layers, the presence-less and paperless (Aadhaar) and the cashless (UPI), have aided financial inclusion and payment digitisation, both still ongoing. The next two layers, consent (AA) and credit (OCEN), have the potential to further drive significant innovations and opportunities in the expanding fintech space. Each layer is best-in-class globally and together the India Stack provides an unparalleled digital infrastructure for India's ongoing fintech evolution.

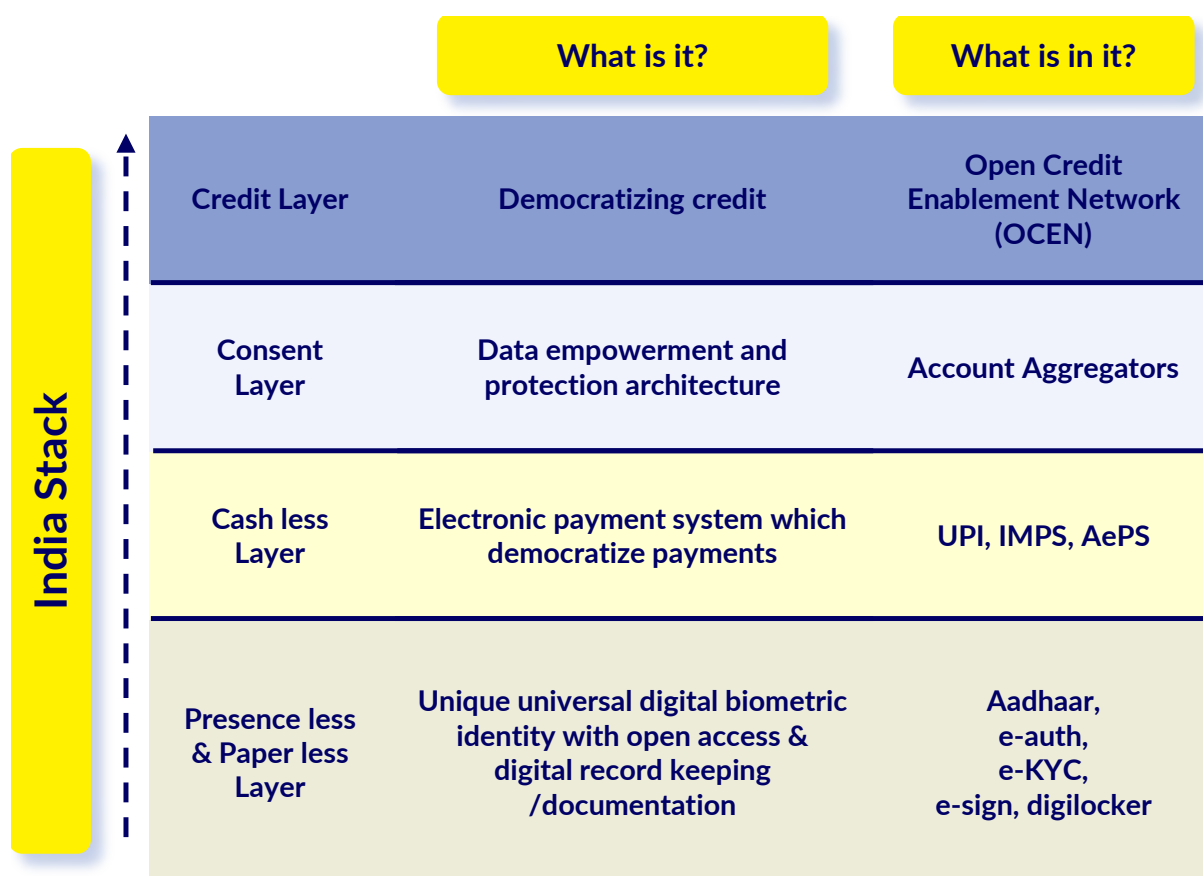
India Stack - What is it?

The India Stack is a set of open API-based technologies that form the building blocks of the digital infrastructure currently being built in India. The infrastructure's ultimate aim is to offer digital services to end users by providing solutions to four key challenges of the Indian ecosystem: customer identity and tedious paperwork, the dominance of physical cash, data protection and low credit penetration.

In other words, the India Stack is a four-layered foundation that lays a path to a digital nation and/or economy, with each layer solving a unique challenge that helps lower the overall cost of doing financial transactions in the country.

Figure 2

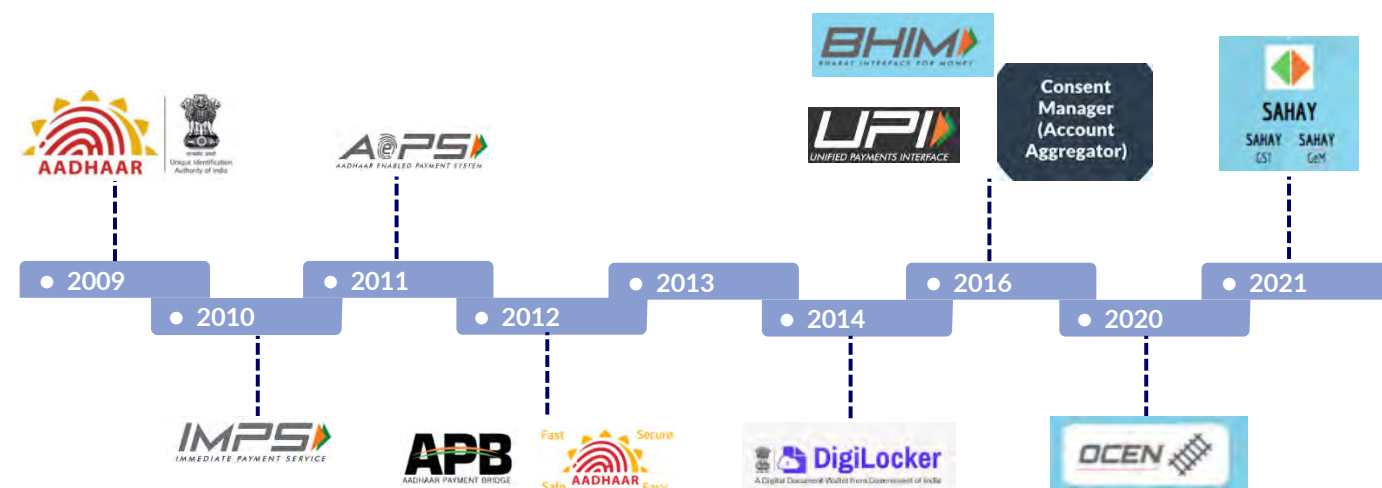
India Stack - Building block of the growing digital infrastructure in India



Source: CLSA

Figure 3

Timeline of the India Stack's evolution



Source: CLSA

The India Stack digital infrastructure is a public good

Provider of each API in the stack governs the API

Who owns the India Stack?

Given that India Stack is an open API infrastructure, it is essentially a public good available to all stakeholders in the economy, from private to government entities. Different organisations and groups are providers of each unique API in the stack, and ownership of the API specifications and governance rests with them.

Figure 4

APIs across the four layers and their providers

Layer	Provider	APIs/Functionality	Uses
Presence less & Paperless	UIDAI	Authentication	Service delivery, Authentication, Direct Benefits Transfer
	UIDAI	KYC	Bank account opening, SIM issuance
	Certifying Authority	eSign/ Digital Signature	Contracts, Agreements
	Meity/Digilocker	Document	Consented Document Sharing
Cashless	NPCI	UPI/Payments	Retail payments, including P2P, P2M, govt. through mobile
	AEPS, Aadhaar Pay	Payments	Cash deposit/withdrawal, transfers, merchant payments
	IMPS	Payments	Remittances, Mobile payments
Consent	NBFC Account aggregators (AA)	Consented data sharing	Personal finance management, loan processing, consent sharing
Credit	Open APIs/ OCEN	Lending	Allows fintechs, banks, NBFCs systems to integrate seamlessly

Note: UIDAI - Unique Identification Authority of India, KYC - Know your client, Meity - Ministry of Electronics and Information Technology, NPCI - National Payments Corporation of India, UPI - Unified Payments Interface, P2P - Peer to Peer, P2M - Peer to Merchant, AEPS - Aadhaar Enabled Payment Services, IMPS - Immediate Payment Service. Source: CLSA

As of Aug-21, over 95% of the Indian population has a biometric digital ID card

More than just an identity card

Includes e-KYC, e-authorisation, e-sign and digilocker

Way ahead of global peers

Layer 1: Aadhaar - Presence-less and paperless layer

The Government of India set up the Unique Identification Authority of India in 2009 with the objective to give every Indian a universal biometric digital identity, called the "Aadhaar Card". The 12-digit Aadhaar number encompasses each individual's four key personal (name, birthdate, gender and email/phone) and biometric details (photograph, iris scan and thumbprint). As of Aug-21, over 1.3bn Aadhaar cards have been issued, covering over 95% of the population.

Aadhaar card

The Aadhaar card is more than just another physical identity card for use by government agencies. Apart from identity verification, it has wide applications ranging from government benefit schemes to digital services and payments and credit products from private businesses.

The four main offerings of UIDAI's Aadhaar, which include e-authorisation, e-KYC, e-sign and digilocker, have simplified customers' ability to verify identity, furnish details digitally and save electronic copies of important documents in a cloud storage space.

Aadhaar card is far ahead of peers from developed countries, such as the US Social Security Network (US SSN) or the UK National Insurance Number (NINO) in terms of applications, given that neither SSN nor NINO contain biometric details and their use is restricted to only federal agencies. Malaysia is credited with having the world's first biometric identification system when its MyKad launched in 2001. However, MyKad is a smart card with a computer chip (data stored in each card), which is different from the digital Aadhaar in that it has a centralised government database.

Paul Romer, Noble prize winner in economics and former chief economist of the World Bank, commented that 'the Aadhaar system in India is the most sophisticated that I have seen. It's the basis for all kinds of connections that involve things like financial transactions. It could be good for the world if this became widely adopted'.

The US Social Security Network is a non-biometric identity card

Figure 5

Global comparison of government identity cards

Country	ID Card	Biometric	Use by private sector	Applications
USA	Social Security Network	No	Not allowed	Identity card, government benefits, tax reporting, opening account in banks, availing loan
UK	National Insurance Number	No	Not allowed	Identity card, tax filing purpose, government health programme
India	Aadhaar	Yes	Allowed	Identity card, government benefits, e-KYC, e-sign, digilocker, payments, credit, private retail businesses
Malaysia	MyKad	Yes	Na	Identity, payment, business and retail services, ATM card, digital wallet, driving licence and passport substitute as well
Indonesia	KTP	Yes	Allowed under eKTP	Identity verification, bureaucratic purposes, government schemes
Brazil	ABRID	Yes	Na	Identity verification, bureaucratic purposes, proof of citizenship, banking transactions

Source: CLSA

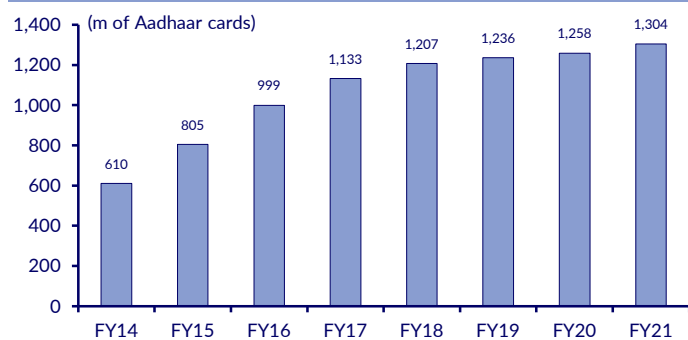
Reliance Jio used e-KYC to onboard more than 100m customers in first 6 months

Enabling the JAM Trinity and revolutionising financial inclusion

According to the World Bank, e-KYC has reduced onboarding costs for service providers in India from US\$23 to US\$0.15. This has revolutionised bank account openings and telecom cards issuances. With the government initiative to open no-frill accounts for financial inclusion linked to Aadhaar, almost 91% of the Indian population (over age 15) has a bank account now compared to only 49% in 2014. The JAM trinity, which combines no-frill bank accounts, the Aadhaar card and mobile connections, is the bedrock of the India Stack and key to financial inclusion.

Figure 6

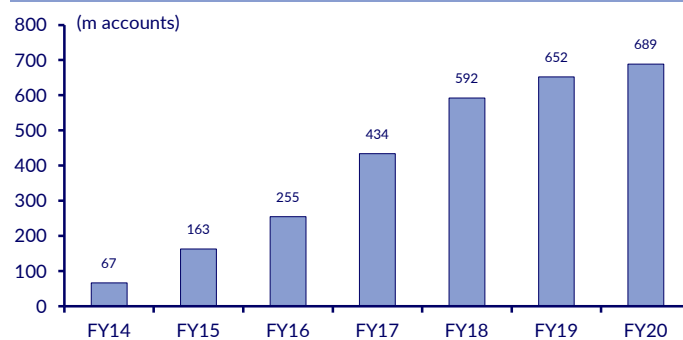
Rapid scale-up of Aadhaar programme



Note: Number of cards for FY21 is as of Aug-21. Source: UIDAI, CLSA

Figure 7

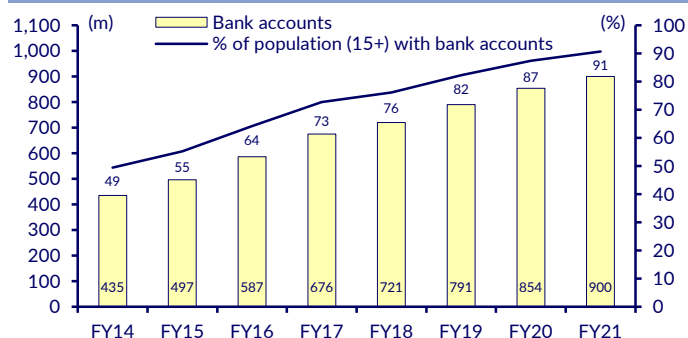
Aadhaar with linked banked accounts up 10x in past six years



Source: UIDAI, CLSA

Figure 8

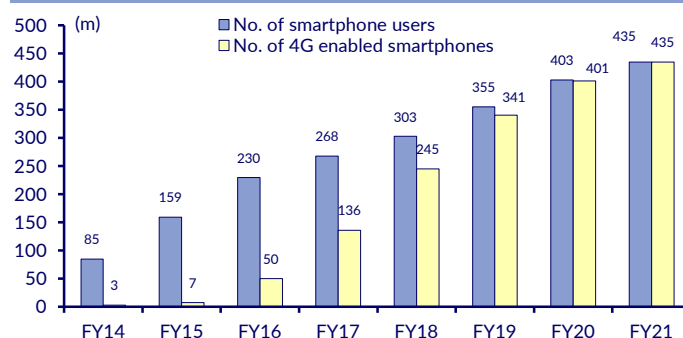
Over 90% of population (age 15+) now have bank accounts



Note: % of banked population in age group above 15yrs. Source: UIDAI, CLSA

Figure 9

Addition of 400m 4G-enabled smartphones in five years

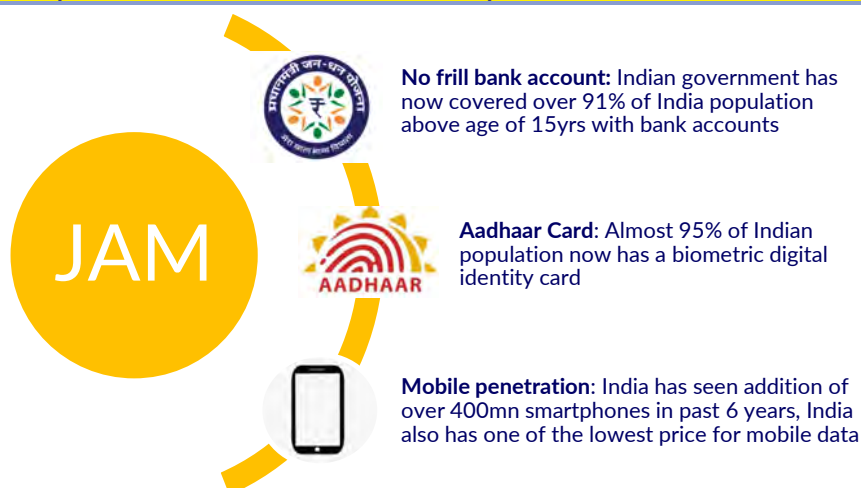


Source: TRAI, CLSA

JAM trinity forms the bedrock of India stack enabling next layers

Figure 10

JAM trinity: No-frill bank accounts, biometric identity card and mobile connection



Source: CLSA

India's unparalleled UPI payment system was launched in 2016

UPI monthly transaction value has shot up 3x from Mar-20 to Aug-21

Layer 2: UPI - Cashless layer

Cheap internet data, high smartphone penetration and India's biometric identity card fuelled the rapid scale up of online payment systems over mobile platforms. The National Payment Corporation of India (NPCI), a specialised division of the Reserve Bank of India, launched Unified Payments Interface (UPI) in 2016, a mobile-first, real-time payment system that is interoperable between banks.

UPI - Interoperable and mobile-first interface; customer success

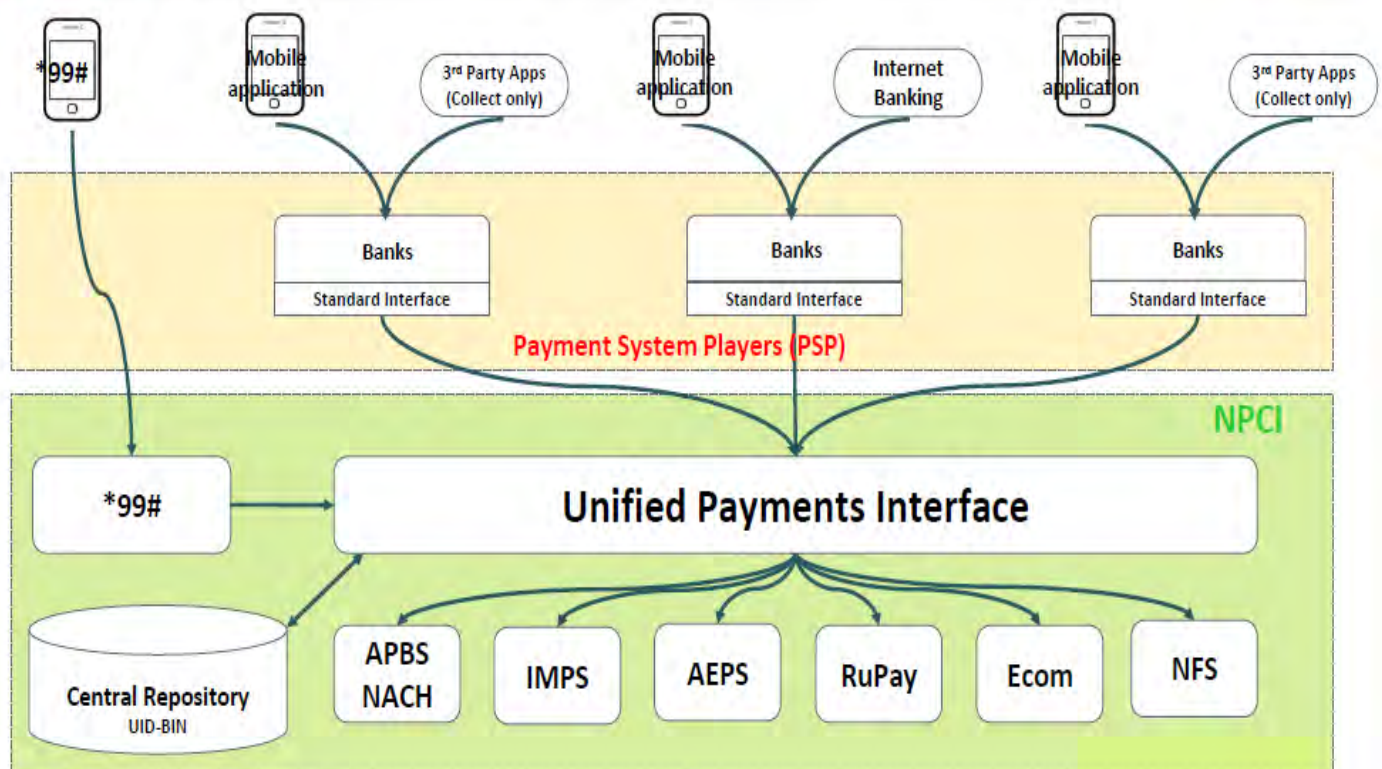
The key players in the UPI architecture are banks, customers and payment/fintech apps. All payment service providers and issuer banks have a standardised interface with which they interact with NPCI's UPI, thus making the system interoperable. UPI has been a big success for banking transactions because it requires customers to remember only their UPI ID, eliminating the need to remember long bank account numbers.

Currently, about 250 banks are live UPI members, which means they allow interbank fund transfers using UPI. There are over 50 UPI apps with, Phone Pe leading the space (1.6bn volume as of Aug-21). Monthly UPI volumes crossed 1bn in October 2019 and stand at 3.5bn as of Aug-21. Meanwhile, monthly transactions were Rs6.4tn for Aug-21, about 3x higher than Mar-20 and indicating rapid adoption during Covid-19.

Figure 11

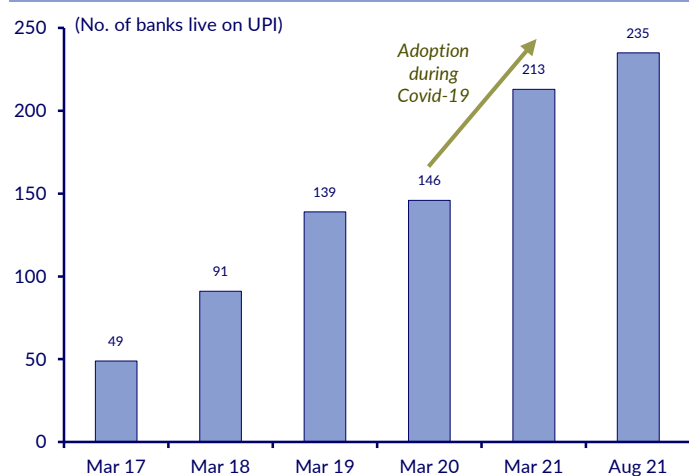
Unified payment interface (UPI)

UPI Architecture



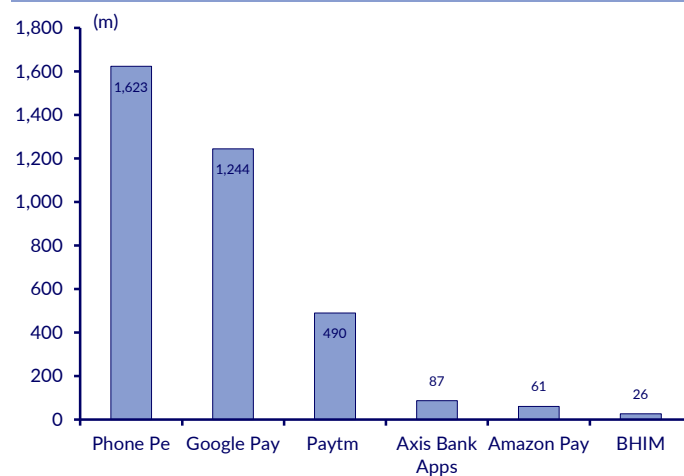
Note: *99# is NPCI USSD service code to access banking service via phone Note: ABPS - Aadhaar Payment Bridge System, NACH - National Automated Clearing House, IMPS - Immediate Payment Service, AEPS - Aadhaar Enabled Payment System, NFS - National Financial Switch. Source: NPCI

Figure 12

Covid-driven adoption of UPI by banks

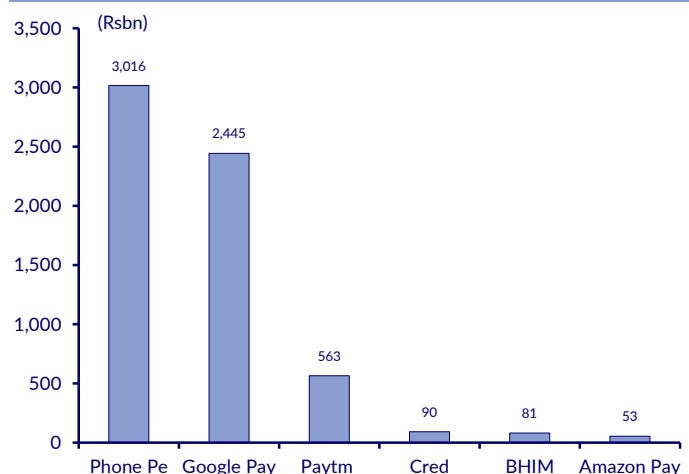
Source: NPCI, CLSA

Figure 13

Largest UPI apps in terms of monthly volume (Aug 2021)

Source: NPCI, CLSA

Figure 14

Largest UPI apps in terms of monthly value (Aug 2021)

Source: NPCI, CLSA

Figure 15

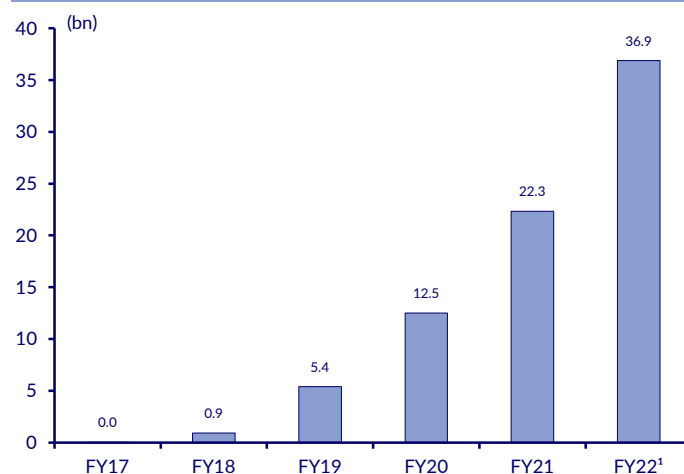
UPI volumes¹ FY22 is estimated basis 6MFY22. Source: NPCI, CLSA

Figure 16

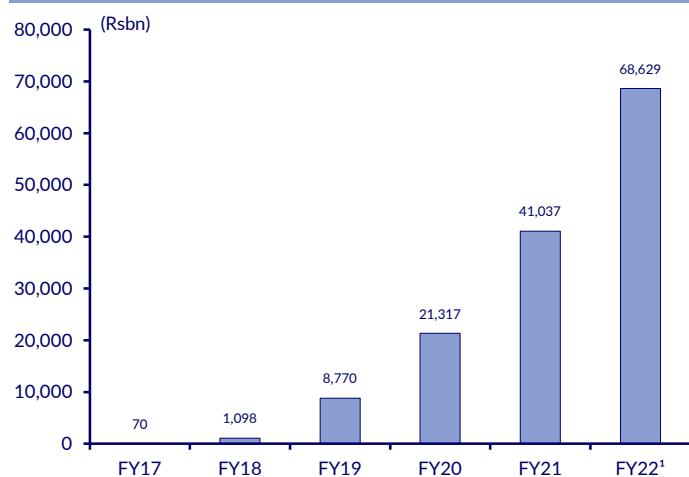
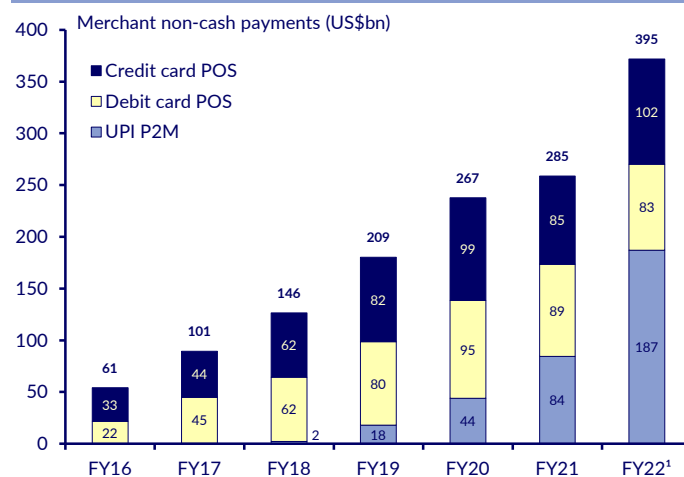
UPI transaction value¹ FY22 is estimated basis 6MFY22. Source: NPCI, CLSA

Figure 17

UPI P2M is now as large as debit and credit card POS volumes¹ FY22 is estimated basis 6MFY22. Source: NPCI, RBI, CLSA

Highest number of digital transactions in the world, making India data rich

UPI, India's instant payment platform, was launched in 2016

India's real-time payment transactions is 60% higher than China

China and Korea's real time payment forms 7/11% of total payments

India outpaced world in digital payments

India registered over 25.5bn real-time payment transactions in 2020, the highest in the world and 60% higher than China. The rapid adoption of online payment systems further supports India becoming a data-rich country.

Figure 18

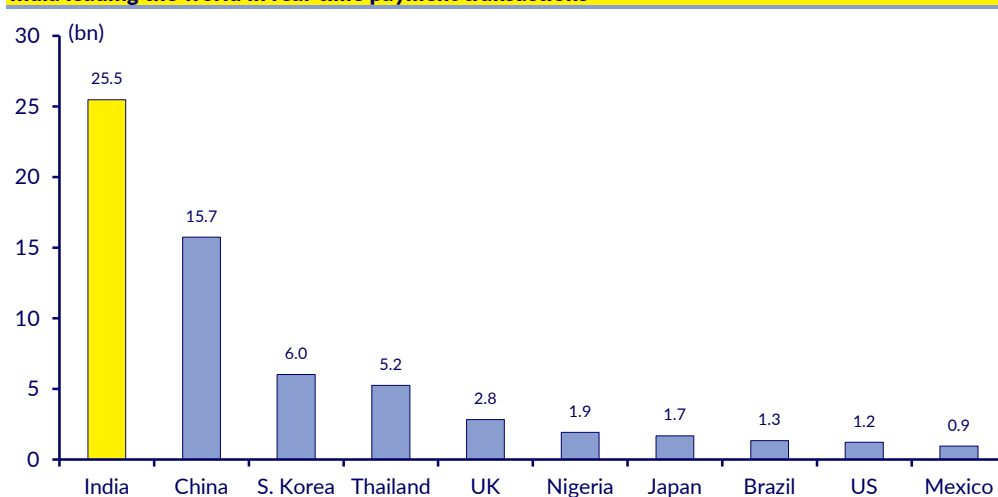
Emerging payment platforms across the globe

Country	Instant Payment Method	Year launched
USA	RTP & Zelle	2017
China	IBPS	2010
Singapore	FAST, PayNow	2014, 2017
UK	Faster Payments	2007
India	IMPS, UPI	2010, 2016
Brazil	SITRAF, PIX	2002, 2020
Malaysia	DuitNow	2018
South Korea	EBS	2001

Source: ACI Worldwide, CLSA

Figure 19

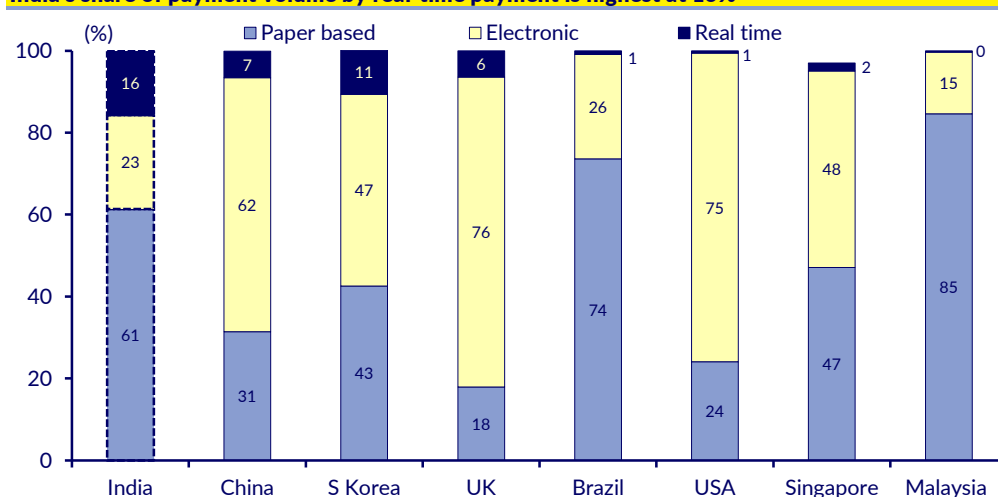
India leading the world in real-time payment transactions



Note: For the year 2020. Source: ACI Worldwide, CLSA

Figure 20

India's share of payment volume by real-time payment is highest at 16%



Note: For the year 2020. Source: ACI Worldwide, CLSA

Empowering customers with legal rights around their data

Account Aggregators are NBFCs that act as traffic police for flow of data

Layer 3: Consent layer - Account aggregator

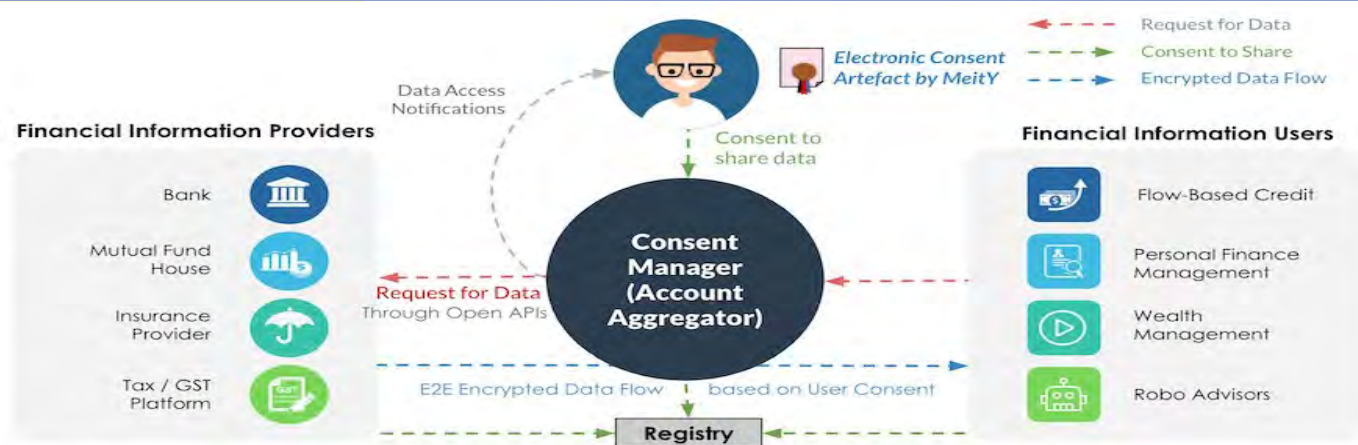
The India Stack's third layer (consent) focuses on data empowerment and protection architecture (DEPA). The Government of India tabled the Personal Data Protection Bill (PDP) in 2019, which would have given Indians four key rights on their data - right to data confirmation, right to data correction or erasure, right to be forgotten and right to data portability. Reserve Bank of India also recently created a new class of financial intermediary called account aggregators (AA) who will act as the consent manager for the flow of financial data.

What is an account aggregator ecosystem?

Account aggregators are non-banking financial companies that are licenced by RBI who act as a bridge to collect data from financial information providers (FIP), such as banks and mutual funds, and then share the data with financial information users (FIU), such as banks, NBFCs, fintech companies and lending agencies after receiving consent from the user.

Figure 21

The account aggregator ecosystem



Source: sahamati.org.in

In India, there are currently seven account aggregators; four have operating licences from the RBI and a downloadable app. One Money was the first account aggregator to receive a licence and launch its app.

Figure 22

Account Aggregators currently in India

Account Aggregators	Licence
CAMSFinServ	Operating Licence
Cookiejar Technologies Private Limited (Finvu)	Operating Licence
FinSec AA Solutions private Limited (OneMoney)	Operating Licence
NESL Asset Data Limited	Operating Licence
Perfios Account Aggregation Service Pvt Ltd	In Principal Approval
PhonePe Technology Services Private Limited	In Principal Approval
Yodlee Finsoft Private Limited	In Principal Approval

Source: sahamati.org.in

Real-time, secure, accurate and selective data sharing

Real-time, secure, accurate and selective data sharing . . .

Sharing personal details or financial information with banks and NBFCs while availing a loan or other facility is a tedious process that requires customers to submit either physical or scanned photocopies. The company then scrapes relevant data from the document for processing, making this a time consuming effort. However, AAs are real time in nature as digital documents can be transferred within minutes. The system is also much more secure than any existing format, as the data being transferred is encrypted and thus not visible or storable by AAs. The AA ecosystem also allows for granular and selective sharing of data by users, which lends greater security and safety to end customers. Finally, the data is in a machine-

AA is an easy interoperable ecosystem

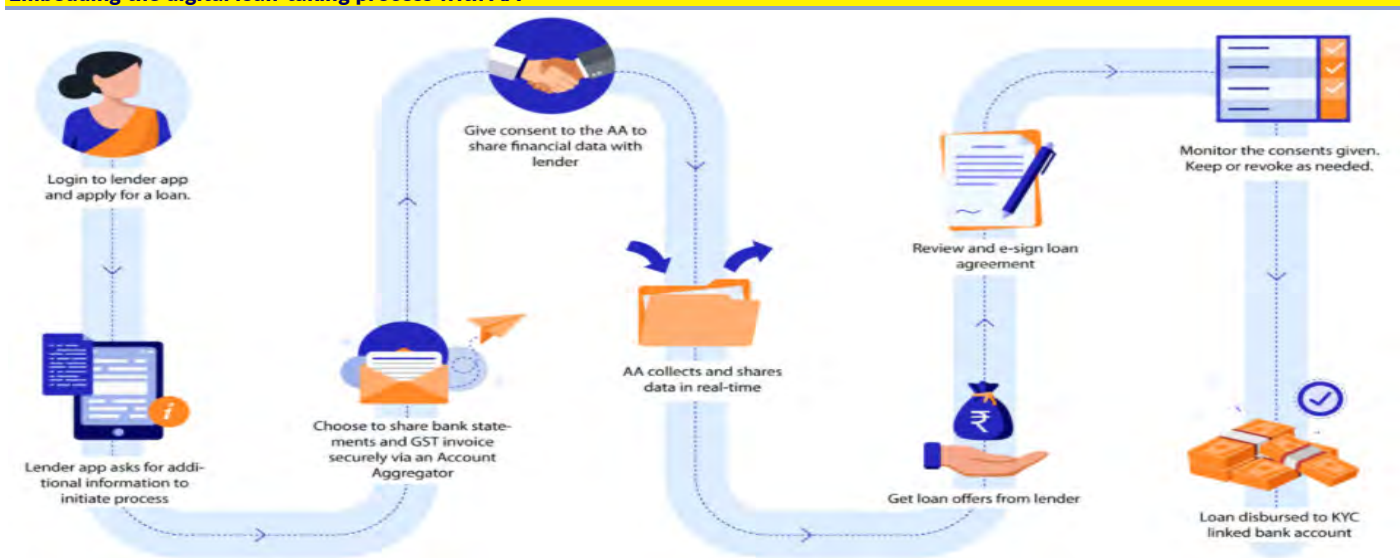
readable format, making it more accurate for financial information users (FIUs). Most importantly, since the AA ecosystem is in place to safeguard user's rights, they have been given the right to revoke their consent at any time.

... can potentially change credit in India

One of the key advantages of the AA ecosystem is that it's a plug-and-play model. This makes the entire AA ecosystem interoperable by design. Thus, any FIP that has integrated with an AA app can automatically request data from users from other AA apps. This seamless ecosystem, in our view, can offer clean data at a faster speed and thus has the potential to revolutionise small-ticket-sized credit offerings.

Figure 23

Embedding the digital loan-taking process with AA



Source: sahamati.org.in

Banks will play a dual role as FIP and FIU

Who are the FIUs and FIPs?

Currently, only asset-based data can be shared via the AA ecosystem, which includes data such as bank account details, deposits, mutual funds, insurance policies, pension funds and tax data. Thus, typical FIPs are banks, mutual funds, insurance providers and tax/GST platforms.

Typical FIUs are banks, NBFCs, flow-based credit providers, personal finance management companies, wealth management firms and robo advisors. Any company registered and regulated by RBI, SEBI (Securities and Exchange Board of India), IRDAI (Insurance Regulatory and Development Authority) or PFRDA (Pension Fund Regulatory and Development Authority) has been granted permission to become a FIU. Furthermore, any institution receiving data as an FIU must be registered as an FIP per regulation.

Banks thus play a dual role in the ecosystem and as can be seen in fig 24 are one of the early adopters as well.

Figure 24

Entities already undergoing FIP/FIU implementation

Banks	NBFCs	Others
Axis Bank	Bajaj Finserv	Epifi Wealth Private Limited
Federal Bank	DMI Finance	Kairos Capital
ICICI bank	NewGrowth Credit	Paisabazaar
IDFC First Bank	Lending Kart	
HDFC Bank		
Indusind Bank		
Kotak Mahindra Bank		
SBI		

Source: sahamati.org.in

Per the RBI, an entity registered as an FIU also has to be an FIP

FIU benefits include lower costs, faster turnaround, less fraud and better monitoring

Cash-earning and non-salaried class retail customers stand to benefit

Real-time GST invoices can be a boon for MSME credit

TSPs helps build the specific products and services for FIUs/FIPs

Simple user experience on the One Money App - first AA in India

Participating in AA ecosystem beneficial to lending institutions (FIUs) . . .

Adopting the AA ecosystem can significantly improve lending institutions (FIUs) ability to underwrite loans. We expect significant reduction in turnaround time and costs for underwriting loans, as tedious paper work will be replaced by apps, which can do the same job seamlessly within minutes. Further, as user's financial data is now provided directly by institutions the chances of fraud can significantly reduce. Another added benefit could be timely monitoring of the customers' financial health with regular access to his bank account details vs bureau data which comes with a lag and only covers his loan repayment statistics.

. . . as well as to retail customers & MSMEs

Retail customers stand to gain significantly in the AA ecosystem due to faster loan disbursal, secure handling of personal data and the possibility of lower fees or specialised products. The key customer segment to benefit, in our view, is the non-salaried and cash-earning class, which has traditionally struggled within the asset-based lending model and may benefit from the cashflow-based credit supported by the AA ecosystem.

Easy and real-time access to GST invoices, along with other financial details, can support MSME (Micro, Small and Medium Enterprises) lending - another segment which has struggled under the traditional asset-based credit model.

Another benefit for retail customers will be better and more customised investment advice from wealth management firms and robo advisors. This segment would greatly value users' investment data (mutual fund, insurance, pension) being readily available.

TSPs - new generation of fintechs

The AA ecosystem also involves fintech companies who collaborate with FIU/FIP to deliver AA specific products and services; they are called Technical Service Providers (TSP). TSPs develop the foundation modules for the ecosystem including data standards, data analytics, early warning monitors, product design and user experience to name a few. Conversely, FIP/FIUs can develop these products internally as well.

One Money App: Easy user experience

FinSec AA Solutions Private Limited, owner of the One Money App, was the first company to receive the NBFC AA licence. We show a customer's journey to set up an account with One Money App.

Key takeaways from discussion with SETU

SETU is a data standard technical service provider (TSP) that was established in 2018. The founders of SETU, Sahil Kini and Nikhil Kumar, were volunteers who helped build the India Stack and had worked on e-KYC earlier. As a data standard TSP, SETU develops the foundation modules for FIP/FIUs, which helps them connect to the AA in the ecosystem.

Equitas Small Finance Bank (SFB) has entered into a tie up with Google Pay, in which users will be able to open fixed deposits (FDs) with Equitas via the Google Pay App. SETU was a key player in this partnership because it built the APIs for technology integration between Equitas and Google Pay. The SETU founders highlighted that the project took a significant

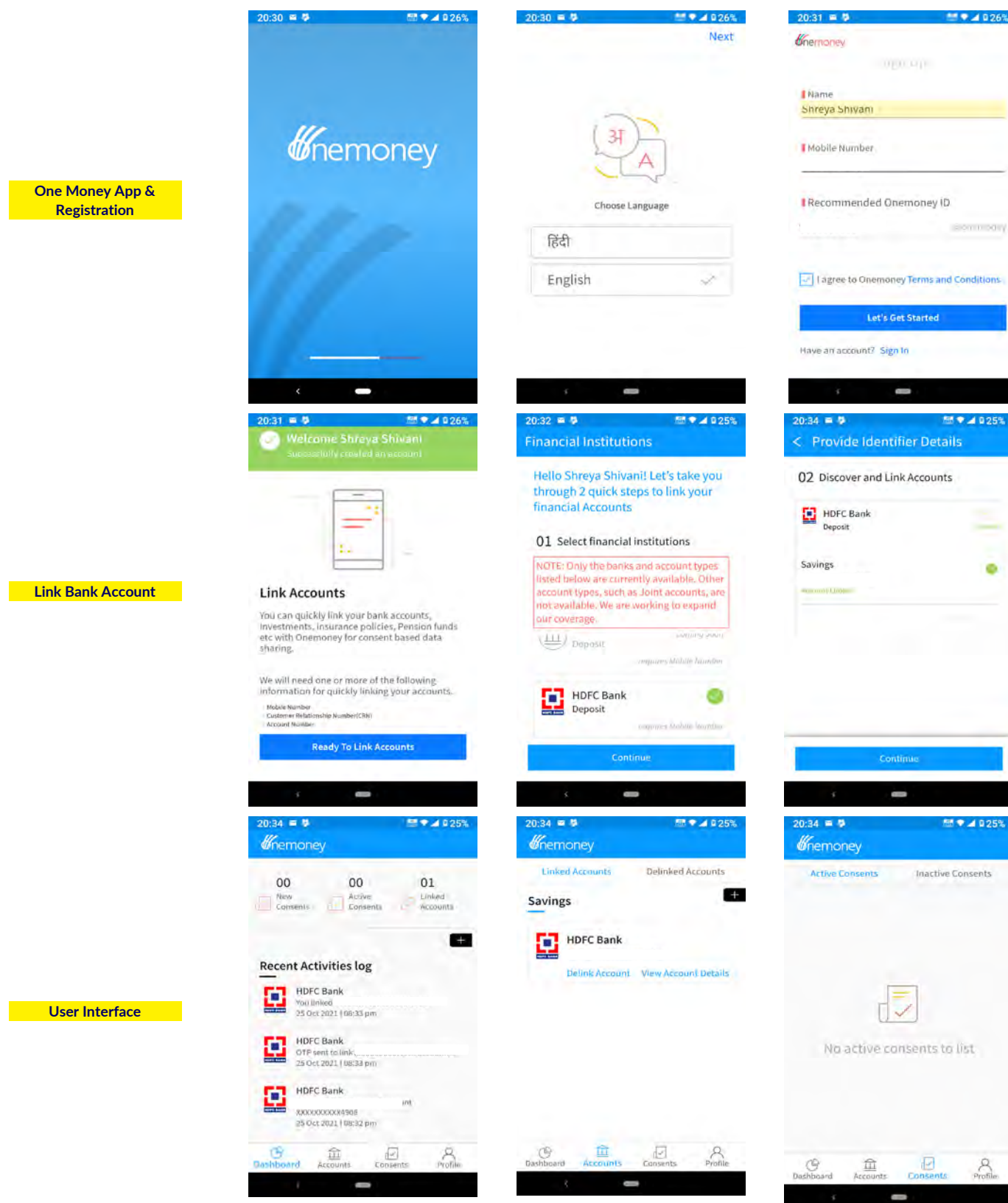
amount of time from idea inception to going live. Interaction and integration between teams from different companies led to the long gestation period. A common open credit network that utilises the AA framework will significantly help reduce this gestation period.

The SETU founders believe that the AA framework, along with the open credit network being built (discussed in next section), will substantially reduce costs and the time taken for loan origination/servicing and allow for faster integration of different business models. However, the FIP/FIU model is not a significant profit-generating model and these entities will have to offer value-added services in order to make money.



Figure 25

User experience of opening an account on One Money (account aggregator app)



Source: One Money, CLSA

Launch of democratised credit enablement network

A wide spectrum of digital capabilities . . .

. . . for each step of the lending cycle

The OCEN rails act as open interface between lenders and loan service providers

Layer 4: Credit Layer - OCEN

The first three layers of the IndiaStack provide digital identity, secure online payments and seamless sharing of personal details, which represent almost all the steps of the loan cycle than can potentially be digitised. However, there is still a gap for a simplified and interoperable digital marketplace for credit. The launch of the Open Credit Enablement Network, aka OCEN, in July 2020 is a step towards setting up this digital marketplace, which would lead to the democratisation of credit.

Figure 26

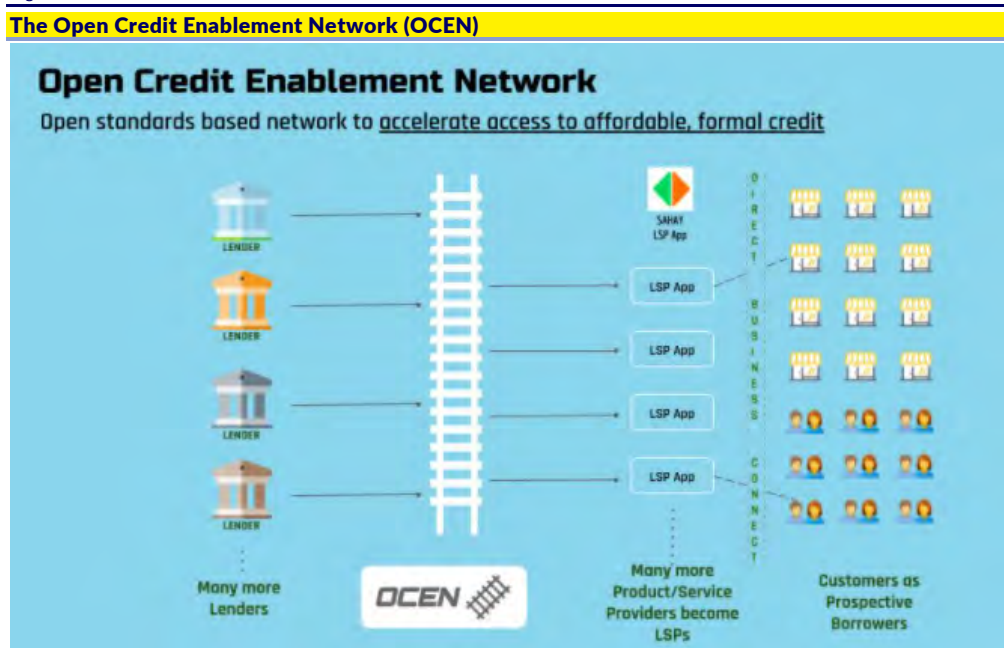
Each step of loan cycle can be digitised	
Steps in loan cycle	Digital technology applicable
Origination	OCEN - LSP
KYC	EKYC, PAN , AA
Underwriting	LSP, AA
Documentation	eSign
Collections	LSP, eNACH, credit card, UPI e mandate
Monitoring	AA
Disbursals	NEFT, IMPS, RTGS, UPI

Note: OCEN - Open Credit Enablement Network, LSP - Loan service provider, eKYC - electronic Know your client, PAN - Permanent account number, AA - Account aggregator, NEFT - national electronic funds transfer, IMPS - Immediate Payment Service, RTGS - Real-Time Gross Settlement, UPI- Unified Payment Interface. Source: CLSA

What is OCEN?

OCEN is a set of open APIs to facilitate the various aspects of the lending value chain. It contains an API for each step of the lending lifecycle, such as loan origination, user consent for data (AA ecosystem), loan disbursal, customer service and collections. One of the key challenges faced by fintech players in offering third-party loan products is the integration of technology and systems with each bank, NBFC, or lending partner, which makes rolling out of product both time consuming and costly. With this new network in place, loan-providing fintechs simply need to plug into the OCEN network to access loan products offered by different banks, SFBs and NBFCs (who are also plugged into OCEN).

Figure 27



Source: sahamati.org.in

LSPs will create a digital credit marketplace

LSPs can earn fees offering the credit marketplace to its customers

First LSPs, SahayGST, Sahay GeM

Sahay GeM offers loans against purchase orders

Recently launched for loans against purchase orders

Loan service providers - Agents of borrowers

The key players in the OCEN ecosystem are lenders (banks, small finance banks, NBFCs), borrowers (retail and SME), technology service providers (fintech companies) and a new class of customer-facing digital platforms called loan service providers (LSPs).

LSPs are tech companies that are able to embed credit products into their existing products and services. Kirana-tech companies, ed-tech platforms, invoicing apps, neobanks and fintechs, to name a few, are already working on integrating with the OCEN APIs. LSPs can benefit from the OCEN ecosystem since they will be able to offer loan products to their existing customer base and earn added fees for this service. Furthermore, LSPs can also share their data about the customers to the lenders which can further reduce information asymmetry between lenders and borrowers.

The first LSPs, SAHAY GST and SAHAY GeM (government e-marketplace) apps, are in the process of being launched. These are equivalent to the BHIM app (NPCI's mobile payment app), first government-backed app offering UPI. These two apps can become a working model for the private sector to adapt and integrate with the OCEN API.

Gem SAHAY app provides financing opportunity to GeM sellers (must be on GST Network) against Purchase Orders (Upto 80% of value). Key features being same day loan disbursement, short tenure 75-90 day, end to end digital process and only for sellers on GSTN.

Figure 28

GeM (government e-marketplace) SAHAY App

INTRODUCING GeM SAHAY
उन्नति की ओर

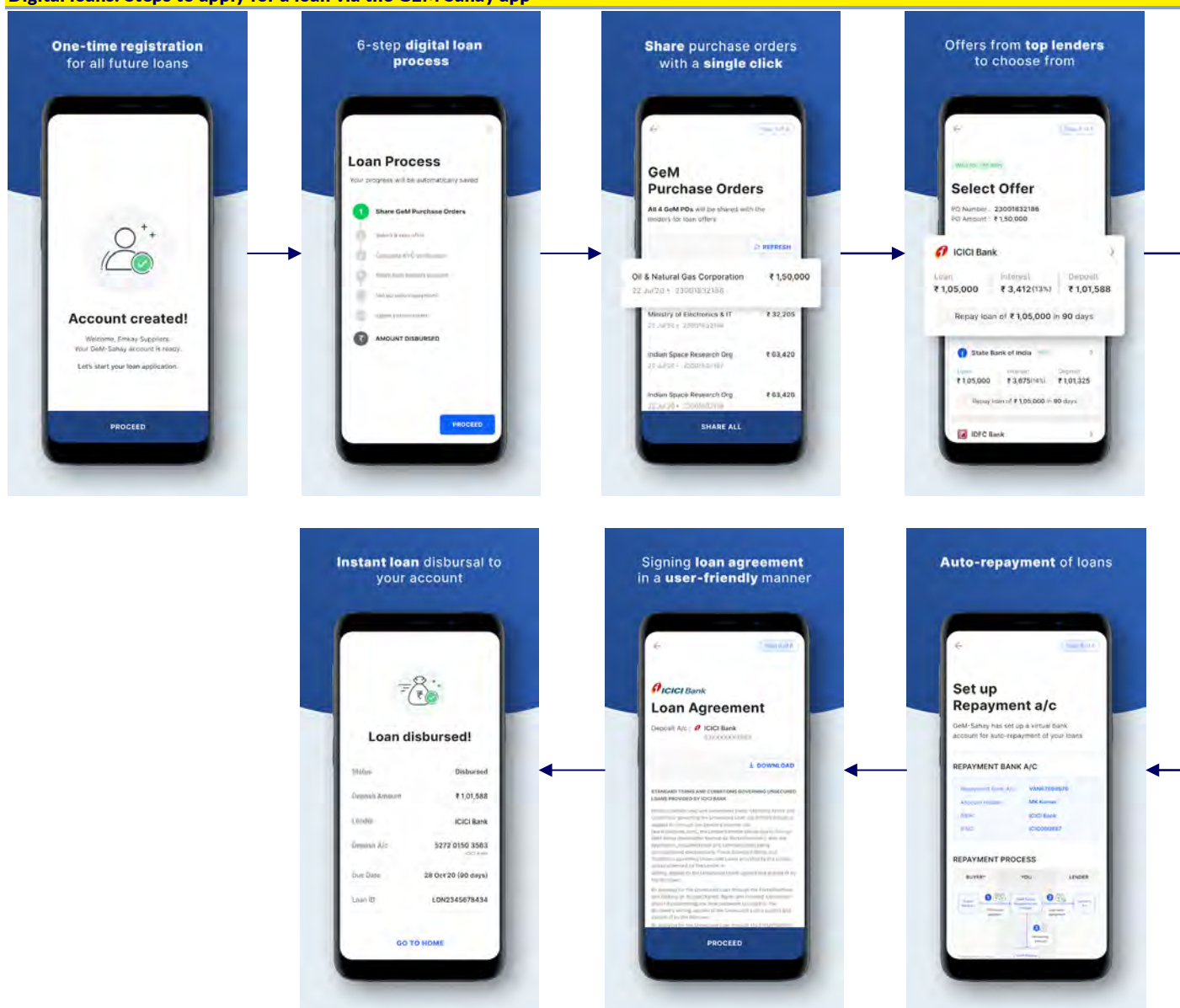
KEY HIGHLIGHTS

- INSTANT** FRICITIONLESS FINANCING OF MINIMUM 80% LTV
- END-TO-END** DIGITAL PROCESS
- EASY REGISTRATION** VIA UDYAM AND AADHAR
- Instant loan disbursement**
- Easy Registration via Udyam and Aadhar**
- Fictionless financing of minimum 80% LTV**
- Uncollateralized loan and without the need for buyers' consent**
- Our Banking Partners:**
Live: UGRO Capital
Coming Soon: ICICI Bank, IDFC First Bank, HDFC Bank
- Get loan at the point of acceptance of an order on the GeM platform**
- End-to-end digital process**

Download APP via Website | Download On Google Play

Source: <https://gem.gov.in/sahay>

Figure 29

Digital loans: Steps to apply for a loan via the GEM Sahay app

Source: Google Play Store

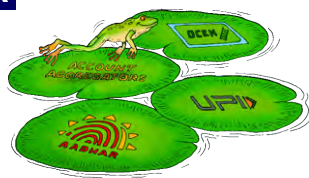
Expanding the reach of the formal financial sector

OCEN both an opportunity and a threat for incumbents

OCEN can expand the credit pie and capture share from informal market

Small ticket size loans, MSME loans, non-salaried customers and rural customers are among the segments that have not benefited from the existing formal financial sector given the adverse unit economics. However, the OCEN system can roll out customer-specific specialised loan products such as cashflow-based lending, small-ticket-size lending or ultra short-term personal loans for the smallest businesses, which can help cashflow challenges.

What could this mean for incumbent lenders? For traditional lenders, OCEN is an opportunity and a threat. Various platforms and customer-sourcing engines can connect faster and more seamlessly with banks and NBFCs, hence providing lenders with more avenues to source customers. At the same time, it could also mean that banks and NBFCs have to be more agile and technologically adaptive to be able to integrate and partner with fintechs and platforms.



Digital payments to triple to US\$900bn while lending jumps 5x over FY21-26CL

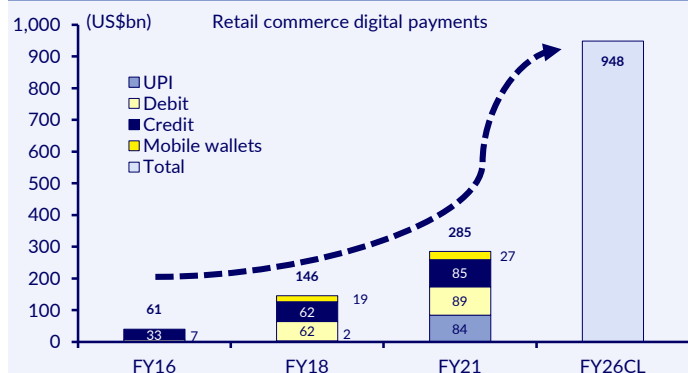
Multifold growth opportunity

India fintech's opportunity set significantly expanded over the past five years due to strong demographics, the government-backed India Stack and the JAM trinity's success. With rising UPI use, digital payments have increased from US\$61bn in FY16 (6% of consumption) to about US\$300bn (18% of consumption) as of FY21. UPI currently contributes 60% to total payments by volume. Given increases in online purchases and digital adoption, we expect digital payments to grow to US\$900bn-1tn by FY26, or 30% of India's consumption. At US\$15-20bn, Buy Now Pay Later (BNPL), equated monthly instalment (EMI) and purchase lending represent just 5-6% of digital payments; we expect this market to jump 5x to US\$90-100bn by FY26, 10% of digital payments.

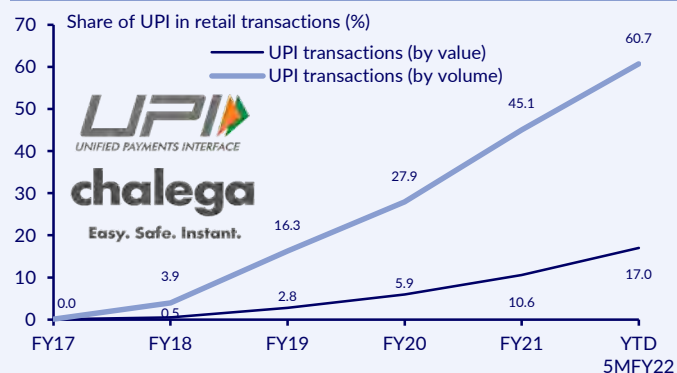
Figure 30

India's fintech opportunity

Digital payments have proliferated



UPI payments now constitute c.60% of retail payments



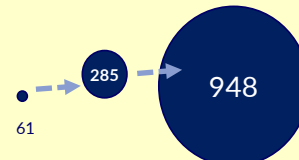
Factors aiding fintech adoption / opportunity size:

1. Rising consumption
2. Growing share of online consumption
3. Growing share of digital payments in offline consumption
4. Large unmet need for small ticket credit

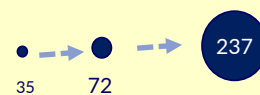
(made to scale)

Merchant digital payments (US\$bn)

FY16 FY21 FY26CL



Online consumption (US\$bn)



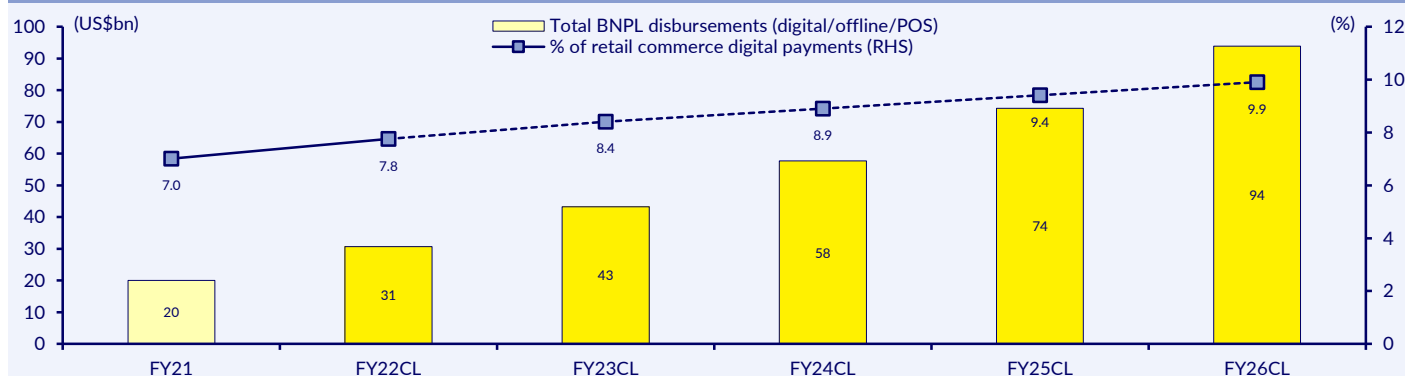
Private consumption



GDP (US\$tn)



BNPL and digital lending set to grow from small base



Source: RBI, NPCI, Ministry of Statistics and Programme Implementation, Redseer, Euromonitor, Paytm, CLSA

Less than 4Y after launch, UPI and wallets have captured 60% of retail transaction volumes

UPI transactions rose to Rs41tn in FY21 and is reaching a Rs60tn+ run rate in FY22

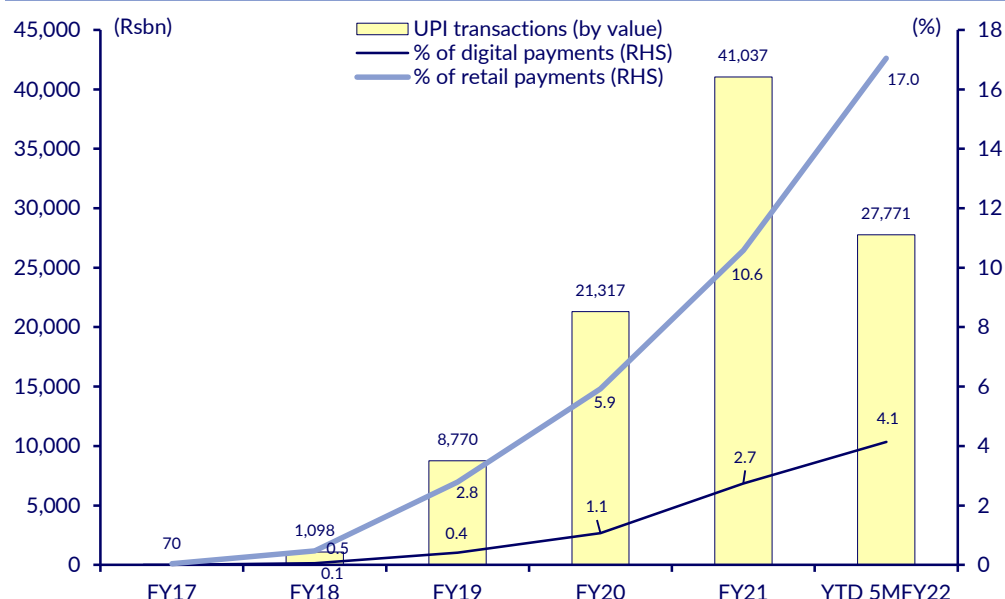
UPI/wallets contribute 60%+ of digital transaction by volume

Digital payments: A meteoric rise

In India, digital payments have significantly benefited from the first two parts of the India Stack; Aadhaar increased financial inclusion while UPI enabled the convenient transfer of money at no cost. Less than four years after launch, UPI and wallets now contribute more than 60% of retail transactions by volume and 17% by value. UPI P2M transactions have recently increased to US\$16bn monthly, which is almost equal to merchant payments that happen through debit and credit cards together.

Figure 31

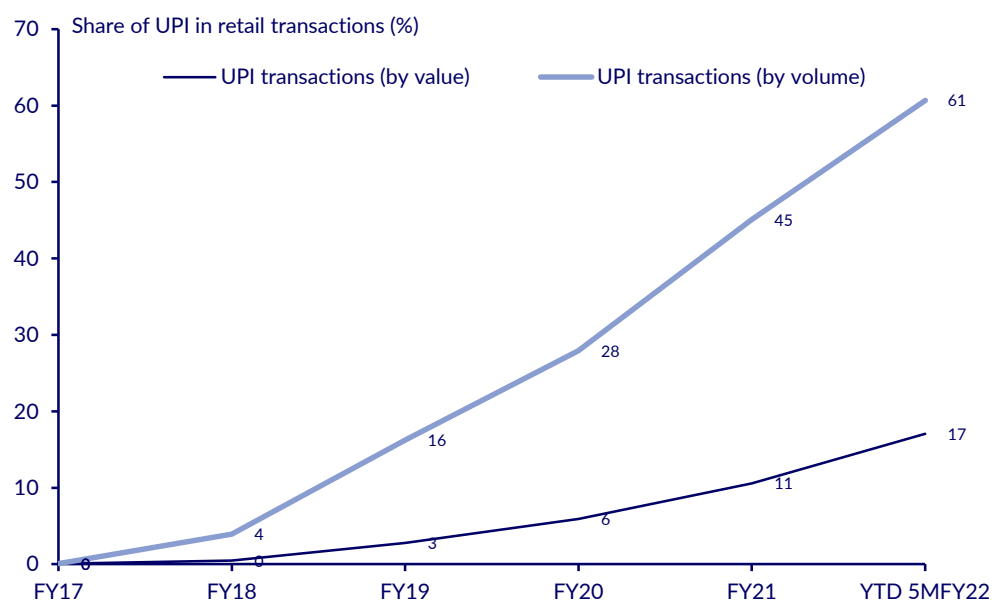
UPI transaction on a roll from launch



Note: Digital payments include IMPS, RTGS, NEFT, NACH, credit and debit cards, UPI, PPI, CTS; Retail payments exclude RTGS and CTS from digital payments. Source: RBI, NPCI, CLSA

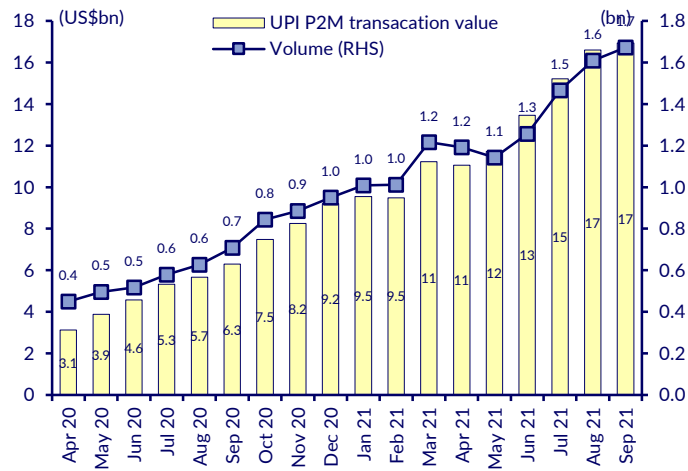
Figure 32

Share of UPI and wallets at 60%+ of retail transaction by volume and 17% by value



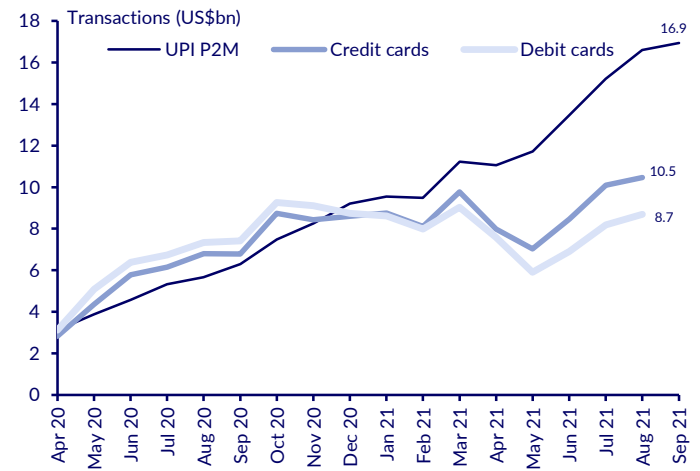
Note: Digital payments include IMPS, RTGS, NEFT, NACH, credit and debit cards, UPI, PPI, CTS; Retail payments exclude RTGS and CTS from digital payments. Source: RBI, NPCI, CLSA

Figure 33

UPI P2M transactions have increased to US\$17bn monthly

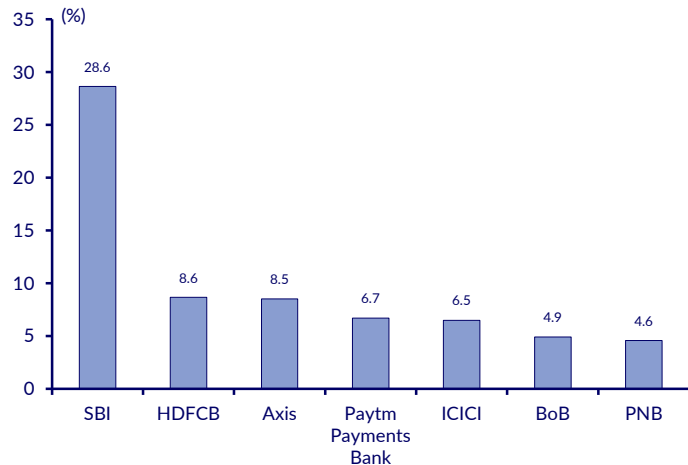
Source: NPCI, CLSA

Figure 34

UPI P2M is now almost equal to debit plus credit card together

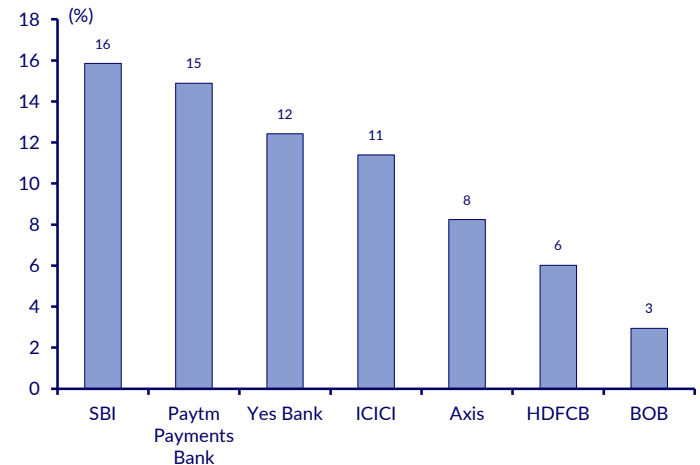
Source: RBI, NPCI, CLSA

Figure 35

UPI remitter market share

Note: based on FY21. Source: NPCI, CLSA

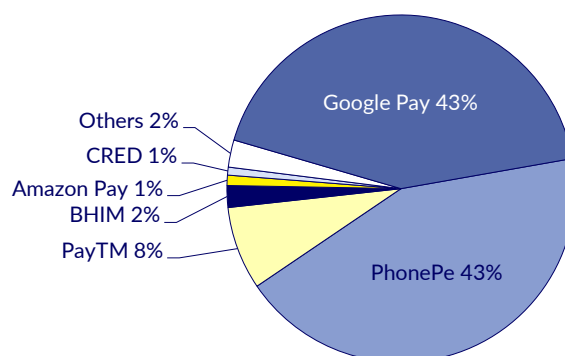
Figure 36

UPI beneficiary market share

Note: based on FY21. Source: NPCI, CLSA

Google Pay and PhonePe dominate the UPI App market share

Figure 37

UPI app market share

Note: based on FY21. Source: NPCI, CLSA

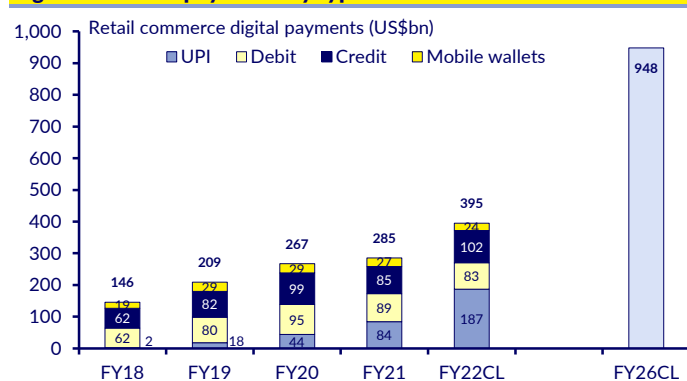
Digital payments rose from 5% consumption equivalent in FY16 to 15% in FY21

Digital merchant payments can grow to c.US\$1tn by FY26CL

With the substantial rise in UPI volume, we estimate that digital payments (debit cards + credit cards + UPI P2M) from consumers to merchants increased from 5% of consumption spending equivalent in FY16 to more than 15% in FY21 and is likely to cross to 20% in FY22. While consumption grew a 9-10% Cagr over FY16-21 (adjusting for the Covid dip), UPI-driven digital payments grew by a more than 40% Cagr leading to higher share of consumption spending. As digital payments and high online consumption continue to increase, we expect digital payments to jump to a 30% equivalent of private consumption and more than 20% of GDP by FY26CL. This implies a 27% Cagr in digital payments over FY21-26CL.

Figure 38

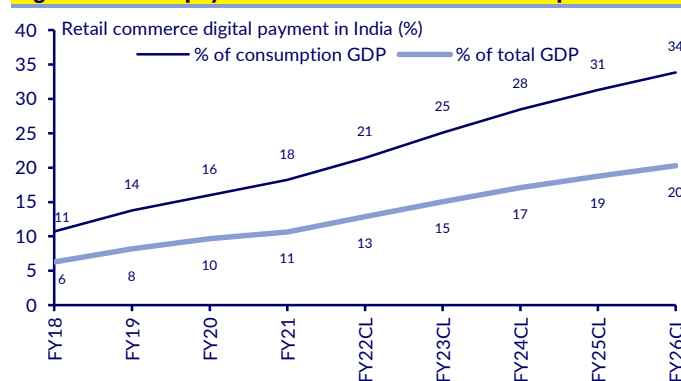
Digital merchant payments by type



Source: RBI, NPCI, CLSA

Figure 39

Digital merchant payments as a % of GDP and consumption GDP



Source: RBI, NPCI, Ministry of Statistics and Programme Implementation, CLSA

Online consumption could grow from US\$72bn in FY21 to US\$237bn in FY26CL

Figure 40

Online consumption

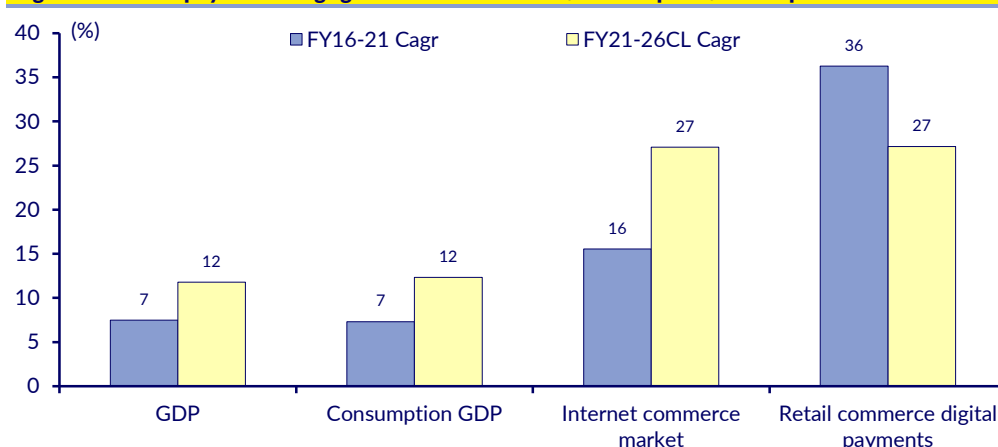
US\$bn	FY21	FY26CL	Cagr (%)
Online gaming	1.5	5.9	31.6
Travel and ticketing	20.3	69.6	28.0
Film ticketing	2.6	3.5	6.1
E-tailing	41.2	129.2	25.7
E grocery	2.7	17.9	46.4
Online food delivery	3.4	11.1	26.7
Total	71.6	237.2	27.1

Source: Euro monitor, Paytm, CLSA

Internet commerce and cashless consumption set to grow at a 27% Cagr over FY21-26CL

Figure 41

Digital merchant payments Cagr growth vs overall GDP/consumption/online purchases



Source: RBI, NPCI, Ministry of Statistics and Programme Implementation, Euro monitor, Paytm, CLSA

Figure 42

CLSA macro model on consumption and digital payments									
(US\$bn)	FY16	FY21	FY22CL	FY23CL	FY24CL	FY25CL	FY26CL	FY16-21 Cagr (%)	FY21-26CL Cagr (%)
India's GDP	1,866	2,676	3,077	3,415	3,791	4,208	4,671	7.5	11.8
India's consumption GDP	1,101	1,568	1,846	2,049	2,275	2,525	2,803	7.3	12.3
Retail commerce digital payments									
UPI	-	84	187						
Debit	22	89	83						
Credit	33	85	102						
Mobile wallets	7	27	24						
Total	61	285	395	514	648	790	948	36.3	27.1
% of consumption GDP	5.5	18.2	21.4	25.1	28.5	31.3	33.8	27.0	
% of total GDP	3.3	10.7	12.9	15.1	17.1	18.8	20.3	26.8	
Online consumption									
Online gaming	0.3	1.5	2.0	2.7	3.5	4.6	5.9	38.0	31.6
Travel and ticketing	23.8	20.3	30.1	43.8	52.6	60.5	69.6	(3.1)	28.0
Film ticketing	1.3	2.6	2.8	2.9	3.1	3.3	3.5	14.9	6.1
E-tailing	8.6	41.2	53.9	69.1	86.7	106.8	129.2	36.8	25.7
E grocery	0.2	2.7	4.3	6.5	9.5	13.3	17.9	67.0	46.4
Online food delivery	0.6	3.4	4.5	5.7	7.1	9.0	11.1	41.4	26.7
Total	34.8	71.6	97.6	130.7	162.5	197.3	237.2	15.5	27.1
% of consumption GDP	3.2	4.6	5.3	6.4	7.1	7.8	8.5		
% of total GDP	1.9	2.7	3.2	3.8	4.3	4.7	5.1		

Source: RBI, NPCI, Ministry of Statistics and Programme Implementation, Euro monitor, Paytm, CLSA

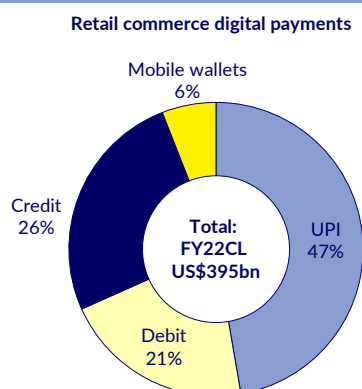
Merchant acceptance segment seeing more innovation

Payment acceptance: Rapidly evolving ecosystem

The merchant payment acceptance system is evolving quickly, with significant innovation in point-of-sale (POS) systems and the large-scale deployment of QR codes (97m in FY21). These developments are making it possible for small merchants and shops to seamlessly accept digital payments at no to low cost. Internet payment gateway services provide small and large businesses not only online payment services but also value-added services and lending and financing options. In line with our expectations, Redseer expects digital merchant payments to increase to +US\$1tn by FY26, providing substantial opportunities across payments, SME lending and cash management and consumer financing.

Figure 43

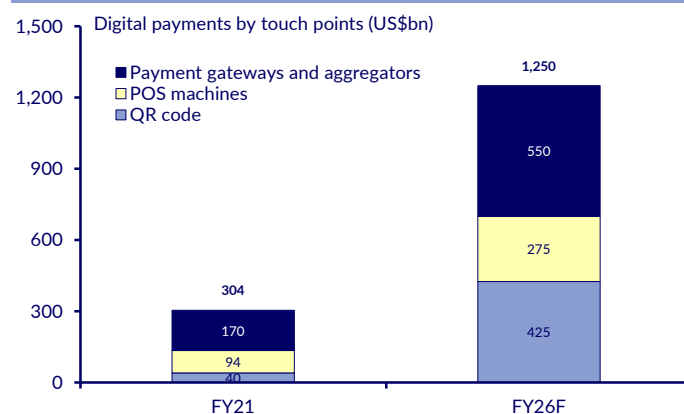
Digital payments break-up (debit cards+ credit cards + UPI P2M +wallets) - Issuing side



Source: RBI, NPCI, CLSA

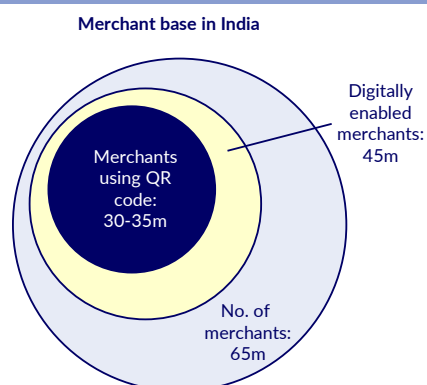
Figure 44

Digital payments by touch points (QR code + POS + Internet gateway) (US\$bn) - Accepting side



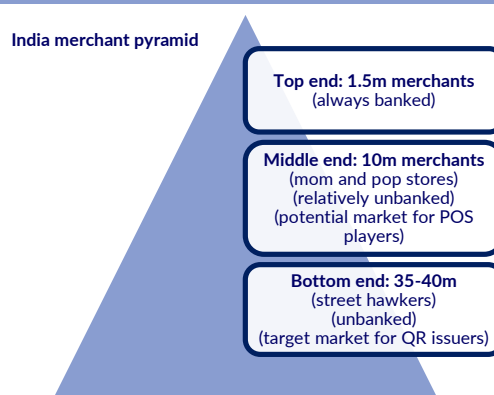
Source: Paytm, CLSA

Figure 45

Merchant status in India with internet connectivity and QR codes

Source: RedSeer, Paytm, CLSA

Figure 46

Offline merchant tiering and payment acceptance systems

Source: CLSA

We estimate Rs134k POS monthly throughput vs c.Rs2500 for QR code

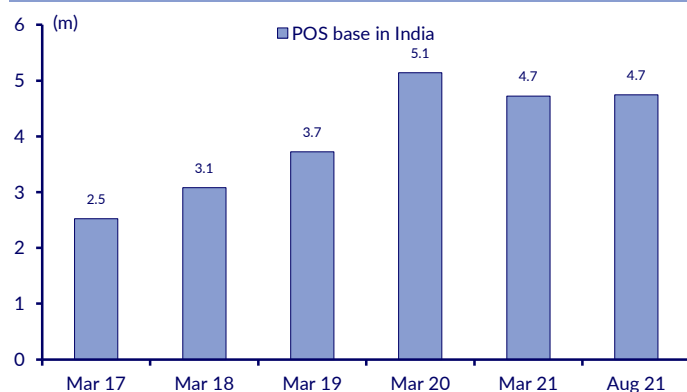
Figure 47

Annual throughput in POS and QR codes

	POS	QR code
Throughput (US\$bn)	100	40
Terminals/ Codes (m)	4.6	97
Yearly throughput (Rs)	1,608,696	30,515
Monthly throughput (Rs)	134,058	2,543

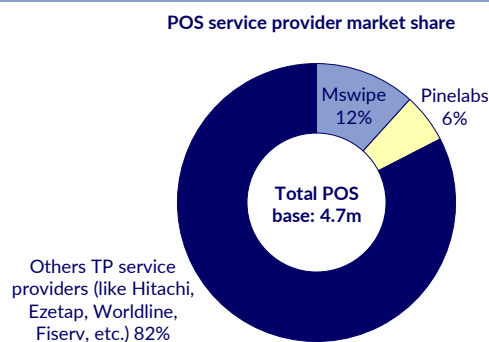
Source: RBI, Paytm, CLSA

Figure 48

POS terminals have grown from 2.5m to 4.7m in India

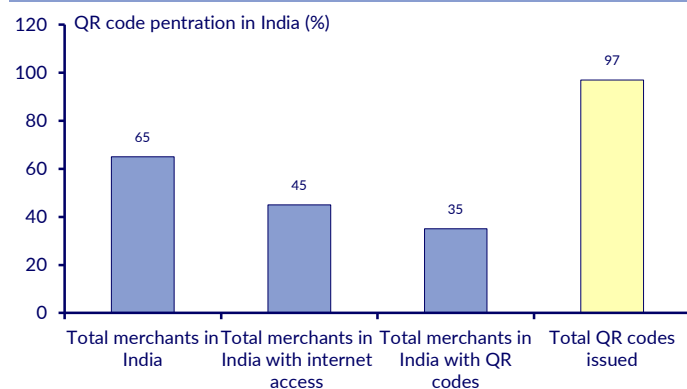
Source: RBI, CLSA

Figure 49

Pine Labs, Mswipe are the largest POS service providers

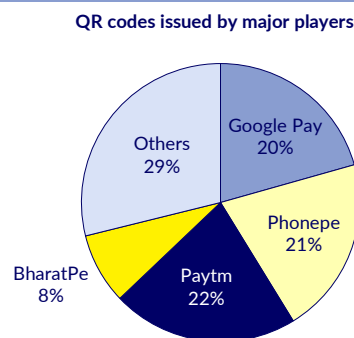
Source: RBI, companies, CLSA

Figure 50

QR code issuance in India

Source: RedSeer, Paytm, CLSA

Figure 51

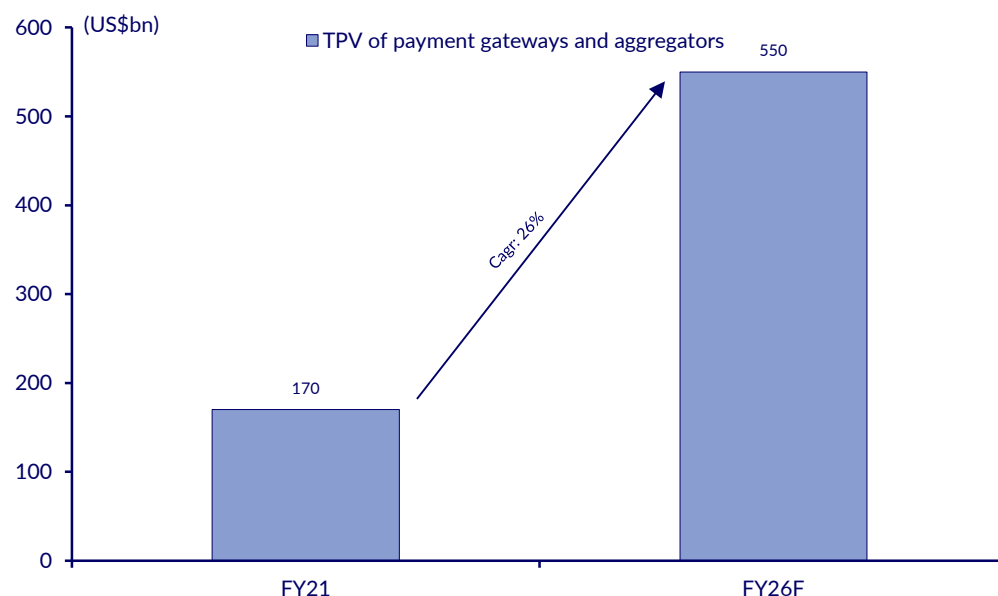
Key players in QR code issuances

Note: Google Pay is our assumption. Source: Paytm, companies, CLSA

Payment gateways and aggregators opportunity size to grow >3x by FY26

Figure 52

Online payment gateway/aggregators - Set to grow at a fast pace



Source: Paytm, CLSA

Figure 53

Online consumption set to grow at a fast pace

US\$bn	FY16	FY21	FY22CL	FY23CL	FY24CL	FY25CL	FY26CL	FY16 -21 Cagr (%)	FY21 -26CL Cagr (%)
Online consumption									
Online gaming	0.3	1.5	2.0	2.7	3.5	4.6	5.9	38.0	31.6
Travel and ticketing	23.8	20.3	30.1	43.8	52.6	60.5	69.6	(3.1)	28.0
Film ticketing	1.3	2.6	2.8	2.9	3.1	3.3	3.5	14.9	6.1
E-tailing	8.6	41.2	53.9	69.1	86.7	106.8	129.2	36.8	25.7
E grocery	0.2	2.7	4.3	6.5	9.5	13.3	17.9	67.0	46.4
Online food delivery	0.6	3.4	4.5	5.7	7.1	9.0	11.1	41.4	26.7
Total	34.8	71.6	97.6	130.7	162.5	197.3	237.2	15.5	27.1
% of consumption GDP	3.2	4.6	5.3	6.4	7.1	7.8	8.5		
% of total GDP	1.9	2.7	3.2	3.8	4.3	4.7	5.1		

Source: Ministry of Statistics and Programme Implementation, Euro monitor, Paytm, CLSA

Consumer and digital lending opportunity: 5-8x over FY21-26CL

India's retail lending market is more than US\$600bn and has grown by a 14% CAGR over the last five years. Asset-backed financing, such as mortgages, LAP (loans against property) and vehicle lending, contribute more than 80% of the loan book by value and have grown at a steady 14% CAGR. The unsecured consumer lending market is relatively small and the small-ticket personal/consumption loan segment is growing at a brisk pace with CIBIL highlighting a 23-30x increase in small-ticket personal lending. Fintechs, with their customer reach, appeal to millennials and easy payment options dominate the less than Rs25000 personal loan (PL) originations, with 45% share of total number of PL sourced in 2020 as per CIBIL.

We expect online consumption to grow at 27% CAGR in FY21-26CL vs 15-16% in FY16-21

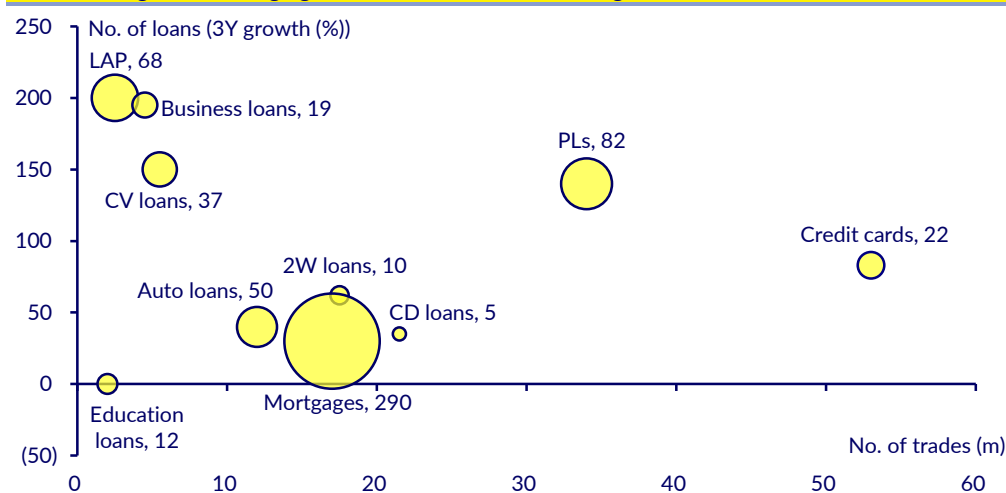
Unsecured small-ticket lending small now but growing briskly

India retail/consumer lending market is US\$600bn with more than 80% in asset-backed products

65% of personal and 49% of retail loans are made to customers under age 30

Figure 54

Retail lending market - High growth in non-collateralised segments



Note: figures in title indicate size of market in US\$bn. Source: TU CIBIL, Google, CLSA

Figure 55

Percentage of new loan applications by select customer type

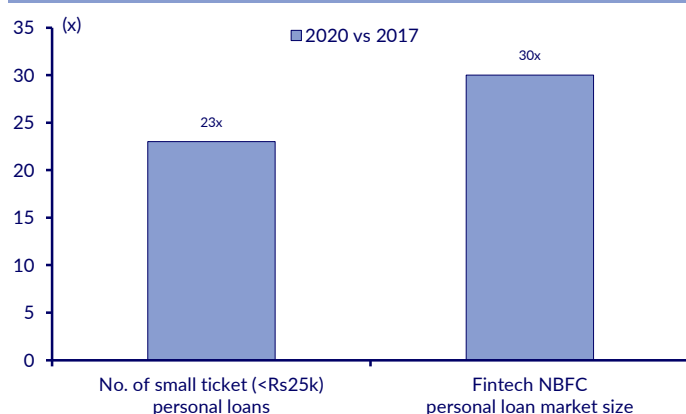
(%)	Retail loans	Auto loans	Home loans	Personal loans	Consumer durable loans
Under age 30	49	32	21	65	48
Outside tier-1 cities	71	74	60	68	63
Female borrowers	24	15	31	22	25

Note: All Retail Enquiries: New to credit only. Source: TU CIBIL, Google, CLSA

Significant rise in small-ticket personal loans (PL): Small ticket personal loans (less than Rs25000 ticket size) has seen a significant increase, with the overall market growing 23x from CY17 to CY20. Within that, volumes for fintech companies have risen 30x between CY17-20 per CIBIL. With the rapid expansion, small-ticket PLs contribute c.60% of overall PL volumes, fintechs contribute c.45% of system PL by number and more than 70% are originated outside the tier-1 cities. While fintechs have a low share of super prime and prime customers (13-18% of loans by volume), they have a higher share of new to credit and subprime customers (50-60%), indicating they are expanding the credit market. They have also gained meaningful share (38%) of prime customers, possibly due to the convenience/ease factor.

Figure 56

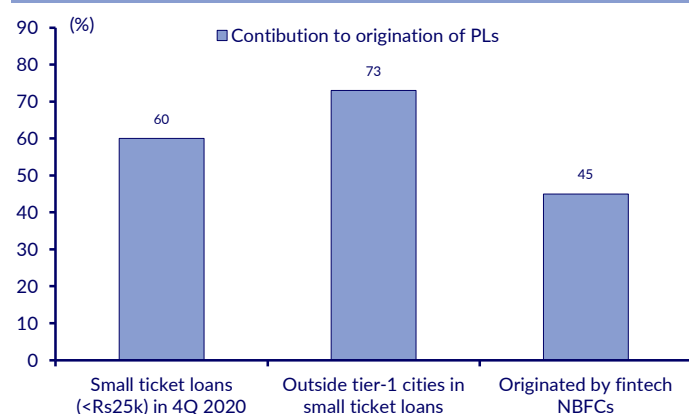
Small-ticket and fintech lending has grown multifold



Source: TU CIBIL, Google, CLSA

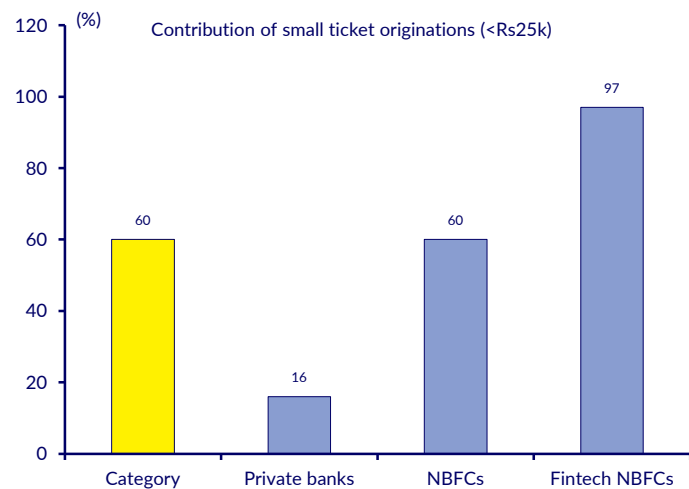
Figure 57

Contribution of small-ticket loans rose, particularly outside tier-1



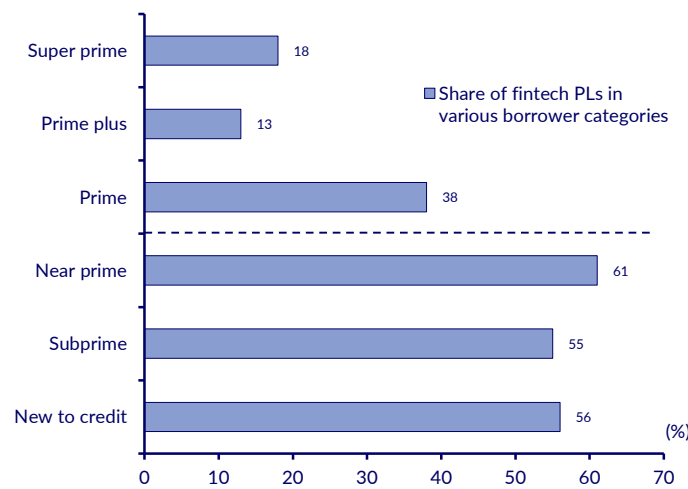
Source: TU CIBIL, Google, CLSA

Figure 58

Contribution of small-ticket originations by financial company type

Source: TU CIBIL, Google, CLSA

Figure 59

Credit rating share of various borrower categories in personal loans

Source: TU CIBIL, Google, CLSA

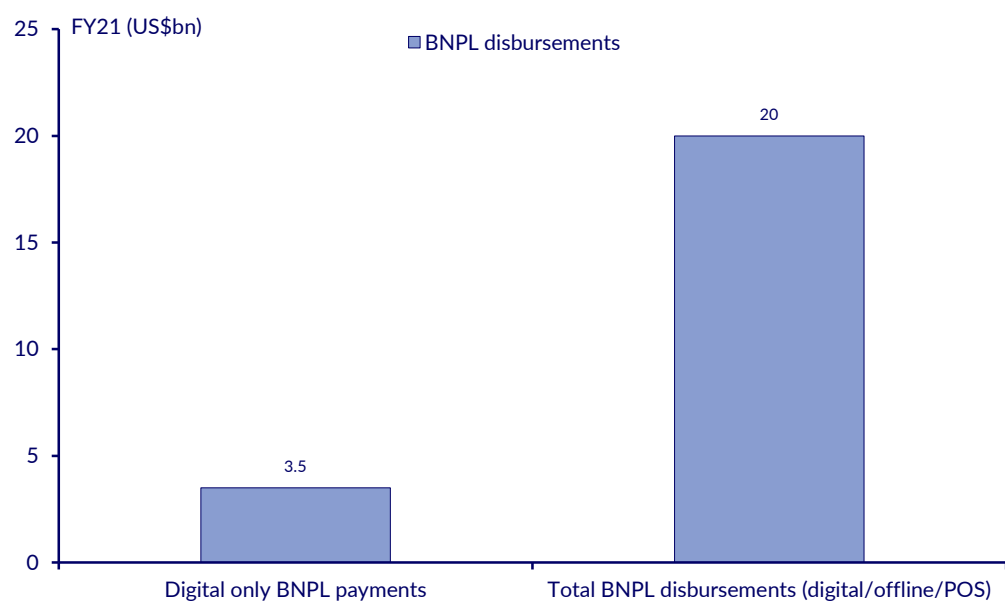
Total offline / POS / BNPL financing set to grow from small base

As per industry estimates, total BNPL disbursements were US\$20bn and digital BNPL disbursement were US\$3.5bn

Digital and consumer lending to grow 5-8x over FY21-26CL

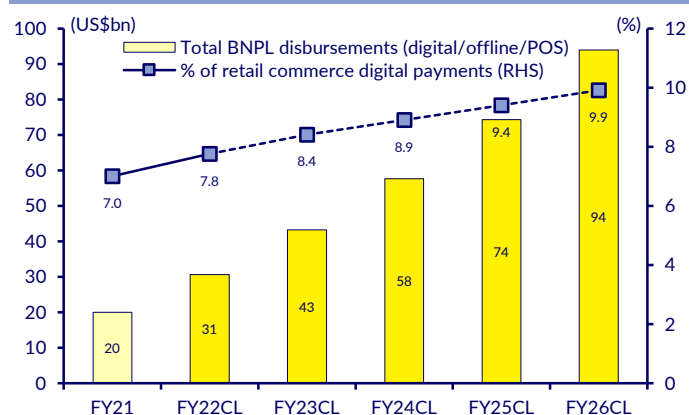
According to Redseer, the total offline, POS financing and BNPL market had c.US\$20bn of disbursements in FY21 and the digital BNPL market was US\$3bn of disbursements in FY21. As discussed in the earlier section, we expect digital merchant payments to increase from US\$300bn in FY21 to US\$950bn in FY26 and online consumer purchases to jump from US\$75bn in FY21 to US\$240bn in FY26. Digital/offline and POS/EMI financing is equal to 8% of digital payments and digital BNPL is 5% of online consumer purchases. An increase of consumer digital financing from 7-8% to 10-11% over FY21-26 will lead to a US\$90bn overall BNPL/consumer financing market by FY26CL; we forecast the pure digital BNPL opportunity to increase from US\$3bn to US\$25bn by FY26.

Figure 60

Consumer financing (offline, online BNPL and EMI financing)

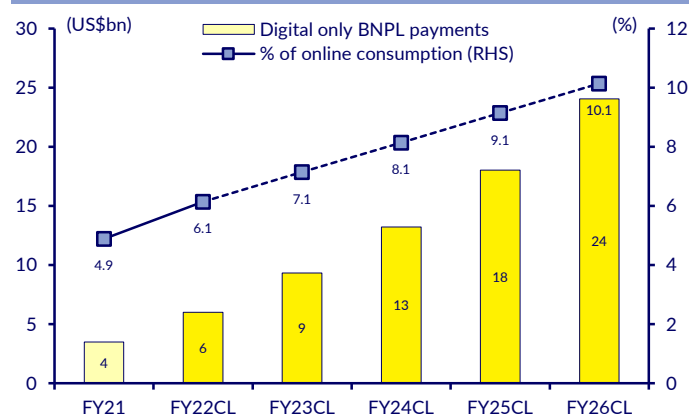
Source: RedSeer, Paytm, Mobikwik, CLSA

Figure 61

Total consumer financing market a US\$90bn opportunity

Source: Paytm, CLSA

Figure 62

Digital BNPL market a US\$25bn opportunity

Source: RedSeer, Mobikwik, CLSA

Figure 63

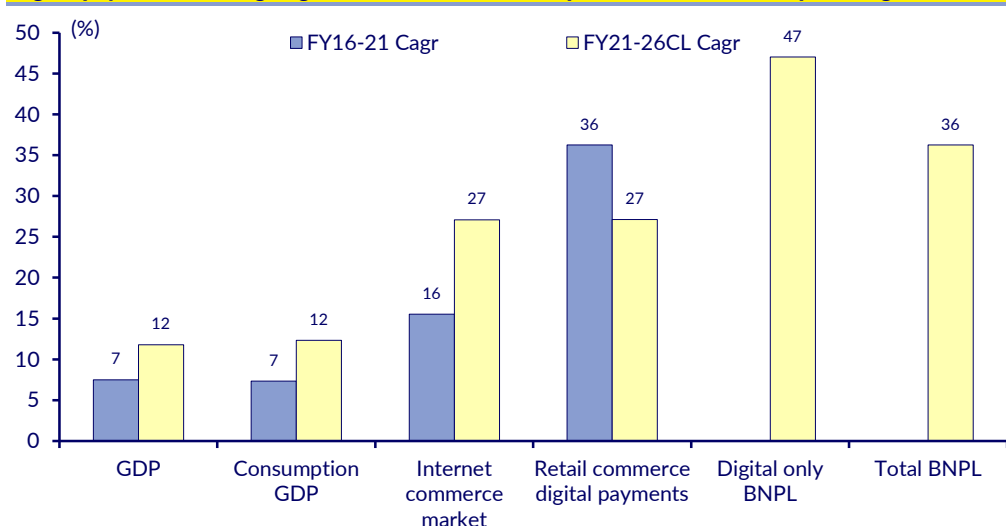
CLSA model for market estimate of consumer financing and BNPL

(US\$bn)	FY16	FY21	FY22CL	FY23CL	FY24CL	FY25CL	FY26CL	FY16-21 Cagr (%)	FY21-26CL Cagr (%)
India's GDP	1,866	2,676	3,077	3,415	3,791	4,208	4,671	7.5	11.8
India's consumption GDP	1,101	1,568	1,846	2,049	2,275	2,525	2,803	7.3	12.3
Retail commerce digital payments	61	285	395	514	648	790	948	36.3	27.1
% of consumption GDP	5.5	18.2	21.4	25.1	28.5	31.3	33.8	27.0	
% of total GDP	3.3	10.7	12.9	15.1	17.1	18.8	20.3	26.8	
Online consumption	34.8	71.6	97.6	130.7	162.5	197.3	237.2	15.5	27.1
% of consumption GDP	3.2	4.6	5.3	6.4	7.1	7.8	8.5		
% of total GDP	1.9	2.7	3.2	3.8	4.3	4.7	5.1		
Lending									
Digital only BNPL payments	na	4	6	9	13	18	24	na	47.0
(% of online consumption)	na	4.9	6.1	7.1	8.1	9.1	10.1		
Total BNPL disbursements (digital/offline/POS)	na	20	31	43	58	74	94	na	36.3
(% of retail commerce digital payments)	na	7.0	7.8	8.4	8.9	9.4	9.9		

Source: RedSeer, Paytm, Mobikwik, Euromonitor, RBI, NPCI, Ministry of Statistics and Programme Implementation, CLSA

BNPL and digital-only BNPL to grow at 35%+ Cagr for next five years in our view

Figure 64

Digital payments/lending Cagr over India GDP/consumption GDP and online spend Cagr

Source: RedSeer, Paytm, Mobikwik, Euromonitor, RBI, NPCI, Ministry of Statistics and Programme Implementation, CLSA



The pandemic has changed customer behaviour - key positive for fintechs

India consumer survey: Is fintech set to gain prominence?

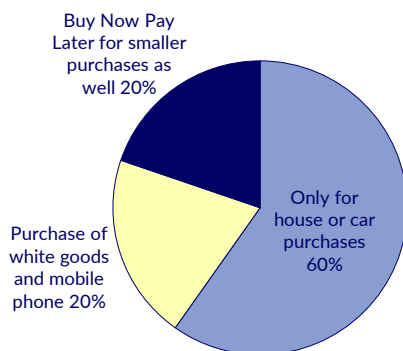
We recently conducted a proprietary online survey of 1000 Indian consumers. In the report, we highlighted the potential for fintechs to gain prominence in the medium term based on our survey results. An overwhelming 75% of respondents considered fintechs to be more transparent in terms of fees/penalties/interest rates compared to banks. In addition, about 65% of those surveyed took small personal loans from fintechs because they needed the money.

Furthermore, the pandemic has caused changes in consumer habits. While 78% of customers in the survey used to pay with cash pre-pandemic, and 60% of the same customers migrated to digital modes of payment. Of these 60% customers, nearly 80% said that they would continue to use digital methods. As a result, about 37% of consumers have migrated permanently to digital payments. If this is a broad-based outcome, it should bode well for payment fintechs in general.

The pandemic has also driven consumers towards life and health insurance, with more than 80% now willing to buy the same. This is a key positive for the insurance industry, including the insuretechs.

Figure 65

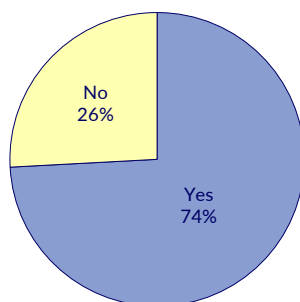
What purchases do you generally finance via credit?



Source: SurveyMonkey, CLSA

Figure 67

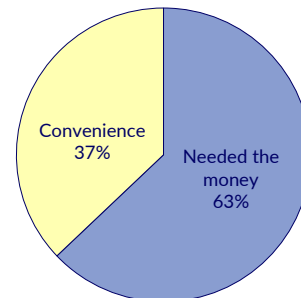
Are fintechs more transparent than banks?



Source: SurveyMonkey, CLSA

Figure 66

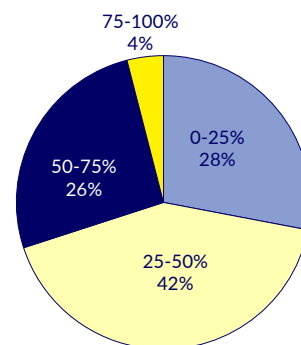
Why did you apply for a loan from a fintech?



Source: SurveyMonkey, CLSA

Figure 68

Contribution % of online shopping in overall consumption basket?

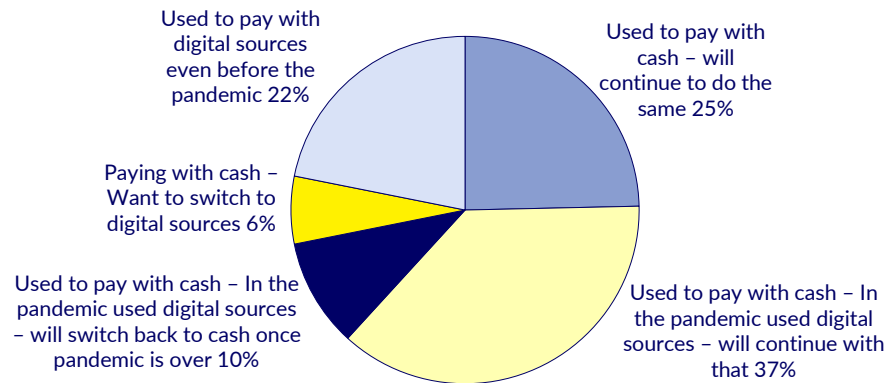


Source: SurveyMonkey, CLSA

Only 10% who switched to digital in the pandemic plan to switch back to cash

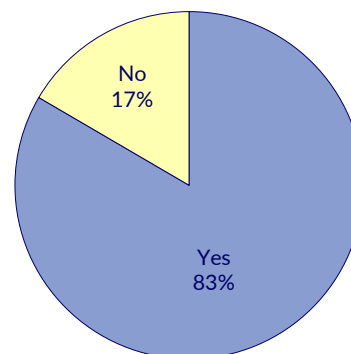
Pandemic-driven insurance demand in line with post-pandemic trends in other countries

Figure 69

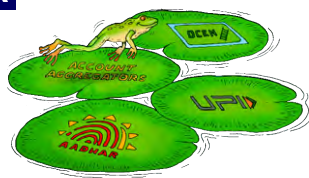
How do you pay for purchases?

Source: SurveyMonkey, CLSA

Figure 70

Post Covid, are you more willing to buy health and life insurance?

Source: SurveyMonkey, CLSA



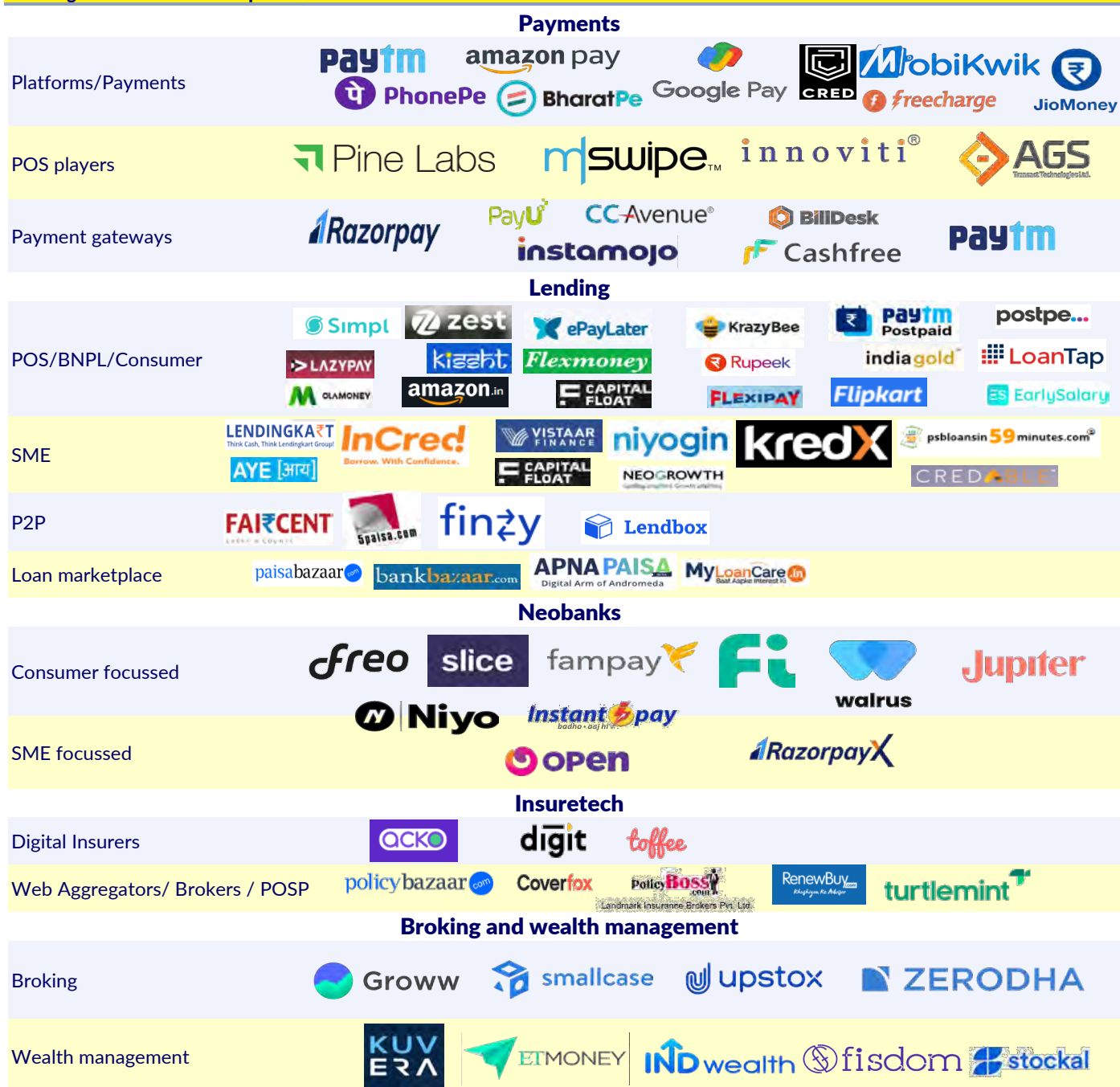
Fintechs at different stages of evolution

Expanding fintech landscape

Payment firms are diversifying into lending, distribution and super apps to monetise their large customer and merchant bases. Neobanks, BNPL and digital lenders, which offer convenience and strong user interfaces, are also expanding the marketplace. Rather than competing, these newcomers are collaborating with existing players. In addition, insurtech firms are innovating product, distribution and underwriting while wealthtech has gained scale, disintermediating traditional businesses.

Figure 71

Evolving India fintech landscape



Source: Companies, CLSA

Many payment platforms have much larger customer bases than banks/NBFCs

Payments and platforms: Diversification and monetisation

India's payment landscape has changed significantly and rapidly over the past five years, with digital merchant payments increasing from US\$60bn in FY16 to US\$285bn in FY21. We expect digital payments to further rise to US\$950bn by FY26F. While traditional digital payment options such as debit/credit cards and their related acceptance ecosystem enjoy meaningful revenue and profitability, payments and acceptance through UPI is free (0 MDR). Hence, the majority of consumer peer-to-peer (P2P) and person-to-merchant (P2M) payment companies need to innovate and diversify into various lending and distribution services. The positive is that many of these large platforms have developed customer/merchant bases that are multiple times by size compared to peer banks and NBFCs. The key will to be see how successfully these payment companies are able to diversify and monetise their large customer/merchant base.

Figure 72

India's payment landscape and key players



Source: Companies, CLSA

Payment firms saw rapid customer acquisition, driven by zero payment fees

POS players increasingly diversifying into lending for monetisation

AEPS is bank-led model allowing interoperable transactions at POS and micro ATMs

Segmenting the payment companies

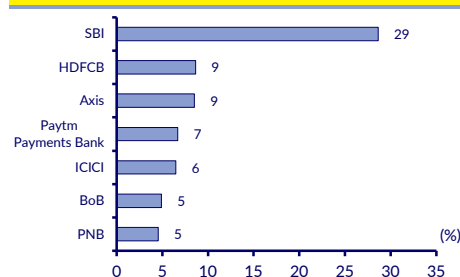
- ❑ **UPI/Platforms: Advantage of large customer/merchant base:** The majority of companies such as Paytm, PhonePe and GooglePay are large platforms or super apps with a large share of consumer/merchant digital payments. Since customer acquisition has been based on UPI (which is zero fees), these firms are diversifying into lending, super apps and distribution services to monetise their large consumer and merchant databases.
- ❑ **POS players: Advantage of presence at offline merchant points:** Companies like Pine Labs and Mswipe are point-of-sale (POS) service providers but are diversifying and using their strong offline merchant network and consumer touch point advantage to diversify into lending/distribution. They are also expanding their offerings into full-service payment aggregators and gateways.
- ❑ **Payment gateways/B2B: Advantage of presence at online check-out points:** Payment gateway is a software service which enable businesses to accept online payments through multiple options. A payment aggregator facilitates any transaction across online and offline modes. Companies like RazorPay, PayU, CC Avenue and BillDesk (acquired. by PayU) are large payment gateways and enjoy the benefit of their presence during check-out page for online payments. This has allowed payments/aggregators to expand into offering full stack payment solutions to merchants, including lending and offer lending related payment options to consumers.
- ❑ **Aadhaar enabled payment systems (Aeps)/Remittances:** These businesses offer convenient cash in/cash out points for payments. AePS is a bank-led model which allows online interoperable financial transaction at POS and micro ATMs through business correspondents rather than full-fledged bank branches/ATMs.

Gained significant size and scale

- ❑ **Issuing side players piggybacked on the UPI ride:** Fintech players such as Paytm, Phonepe and Google Pay have built dominant market shares in UPI payments, which are clearly on the rise and have already surpassed other payments forms like credit cards and debit cards (for P2M payments).
- ❑ **Merchant acquiring players have deployed POS / QR code based solutions:** Fintechs on the acquiring side have also used digital payments forms like POS machines and QR codes to offer easy payment solutions to merchants as well as offer them value added services like accounting and reconciliation facilities.

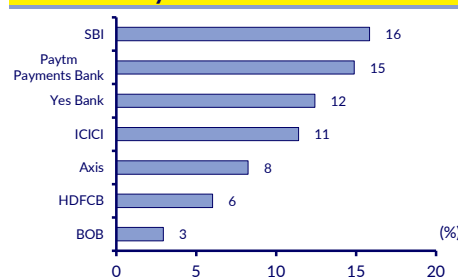
Some players like Paytm, Phonepe and Google Pay have been active on both the issuing and acquiring sides. As a result, they have built strong customer and merchant bases. In some cases, the number of users materially exceed the customer base of large banks.

Figure 73

UPI remitter market share

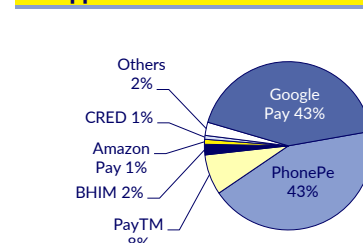
Source: NPCI, CLSA

Figure 74

UPI beneficiary market share

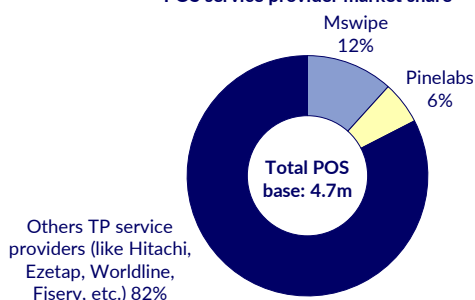
Source: NPCI, CLSA

Figure 75

UPI app market share

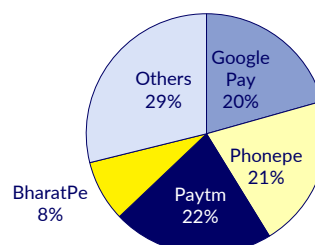
Source: NPCI, CLSA

Figure 76

Largest POS operators**POS service provider market share**

Source: Companies, RBI, CLSA

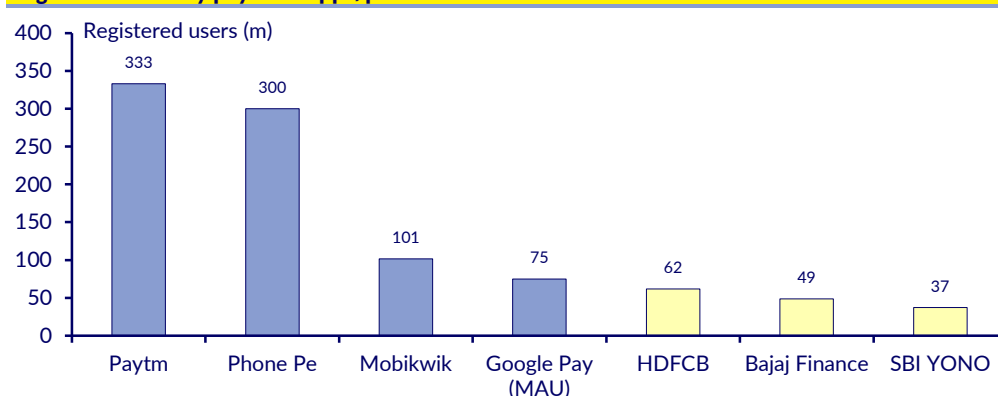
Figure 77

Largest QR code issuers**QR codes issued by major players**

Note: Google Pay is our assumption. Source: Companies, Paytm, CLSA

Large platforms have amassed large customer base via ease in payments

Figure 78

Registered users by payment apps/platforms

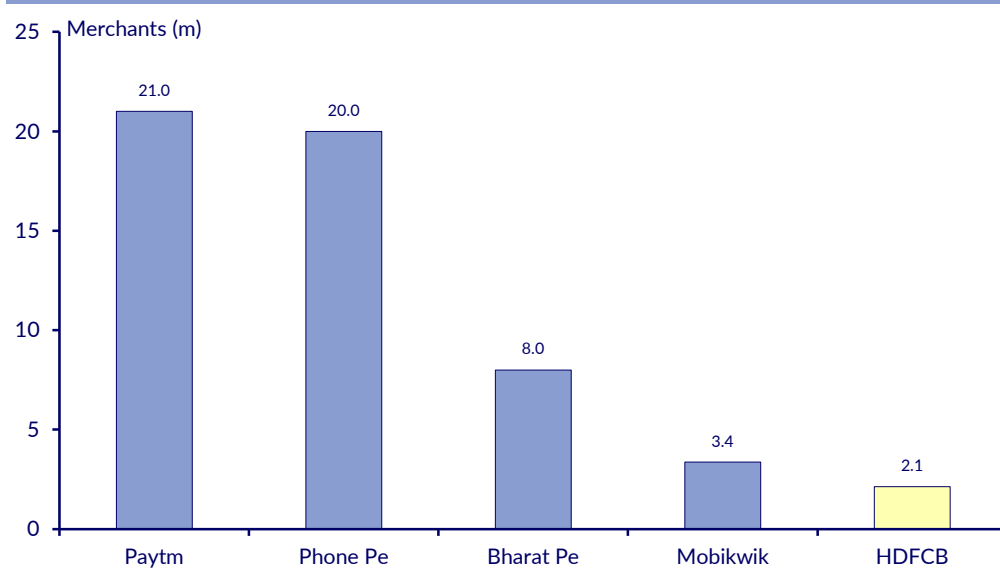
Source: Companies, CLSA

Similarly, their merchant base has swelled with focus on providing merchant value-added services

While some payment forms are profitable, others need to diversify to monetise

Figure 79

Merchants by payment apps/platforms



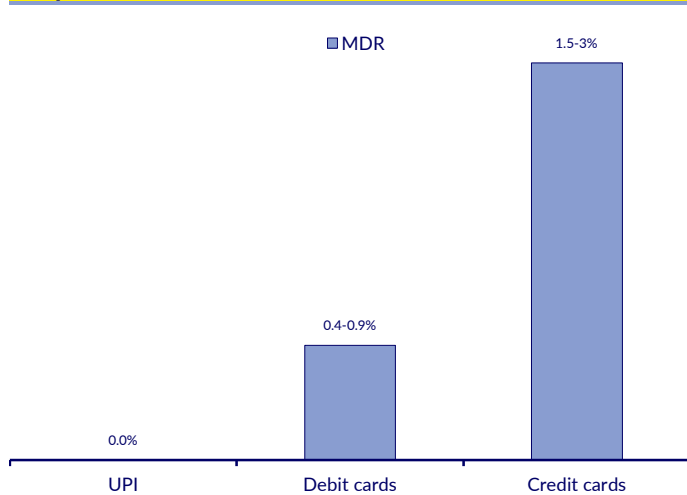
Source: Companies, CLSA

Parts of payments not remunerative - Diversification imperative

While digital payments have exploded and payment companies have gained scale in terms of customers and merchant network, one needs to differentiate between payments which are remunerative and some which are not. UPI payments is not remunerative as UPI payments is free of charge while there is a MDR on debit/credit cards and POS/ gateways companies also charge a fees for the service. Payments in international markets is remunerative with gross take rate of 1-3% for players like Square/Adyen and net take rate of 0.2-1.0%. So while certain payment acceptance are profitable by themselves (example- Billdesk has a take rate of 25-30bps as per Prosus's presentation) but UPI based issuers and merchant acquirers need to diversify to lending/distribution/Superapp business to monetise their strong network of customers/merchants.

Figure 80

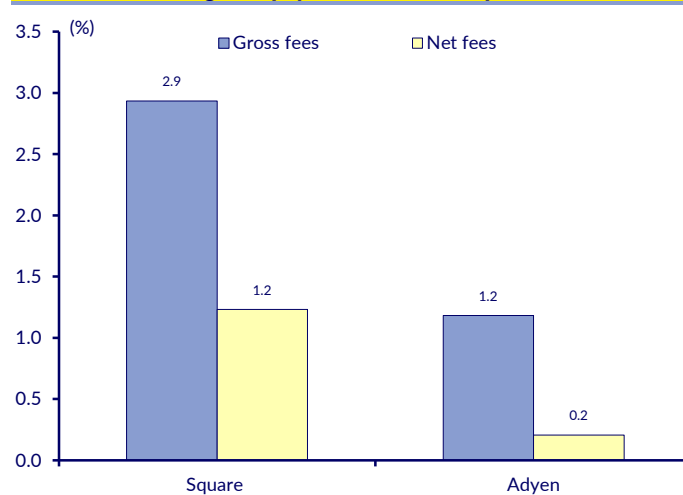
Comparable merchant discount rates



Source: CLSA

Figure 81

Take rate of select global payment fintech companies



Source: Companies, CLSA

Figure 82

Success story in payment gateway: Billdesk acquired for US\$4.7bn

PayU to acquire 100% of BillDesk for \$4.7bn



Source: PayU, CLSA

Figure 83

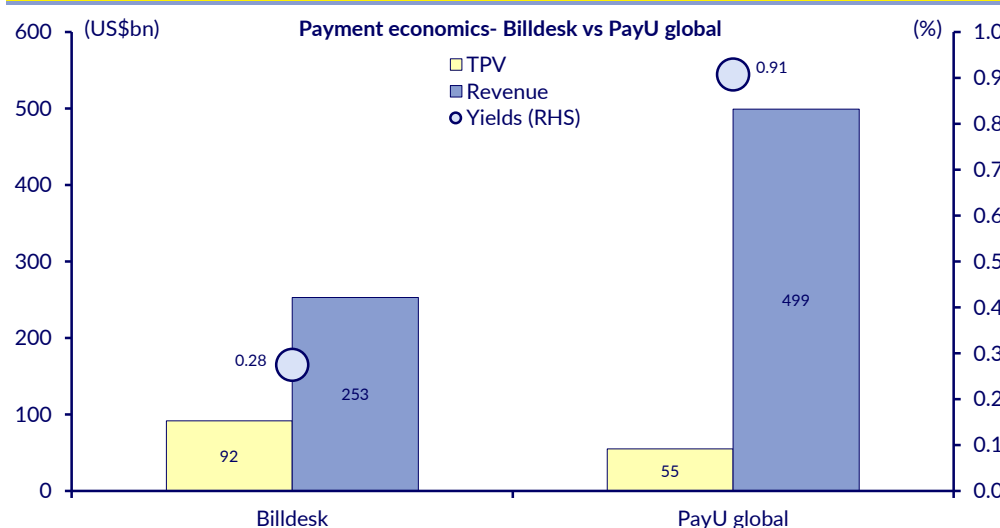
Business rationale for Billdesk acquisition by PayU India

Business verticals	PayU India	BillDesk
Ecommerce + Travel	One of the leading PSP for large and mid-sized merchants	One of the leading PSP for large merchants
Bill payments + Government	Small vertical, but fast-growing	Preferred PSP for Utilities, Financial Services & Government
SME	400K+ merchants	5K+ merchants, predominantly Enterprise led businesses
Credit	Buy Now Pay Later + Affordability	Nascent business
Security & risk management	Serving 60+ banks	Serving 5+ banks

Source: PayU, CLSA

Billdesk (Indian entity) has a take rate of 28bps, compared to zero for UPI

Figure 84

Billdesk gross take rate of 28bps - Based on FY21 financials

Source: PayU, CLSA







Figure 85

Leading payments gateways in India - a summary

Payment Gateway	Merchants	TPV (US\$bn)	Domestic transaction fee	Overseas transaction fee	Key merchants
RazorPay	1m	50	2-3% on domestic credit card / debit card / wallet	3-4% on international payments	Unacademy, UrbanClap, Zoomcar, Groffers, BookMyShow, Nykaa, goibibo, SpiceJet
PayU India	400k+	27			Myntra, Grofers, Urban Ladder, Alt Balaji, BookMyShow, Ola, Jabong
CC Avenue	na	18-20			Baggit, Myntra, Lakme, Airtel, Vistara, Starbucks
Billdesk	5k+	92			Flipkart, Jio, Freecharge, HDFC Bank, Tata Sky, HDFC AMC, Kotak, Vodafone, Microsoft
Paytm	87k	na			Jabong, OLA, Cleartrip, Redbus, Gibibo, Zomato, Adani, Jio, Zomato, Oyo, Uber

Source: Companies, CLSA

Figure 86

Profiles of global payment companies								
Company	Country	Segment	Established	TPV (US\$bn)	Net revenue (US\$m)	Take rate (%)	Valuation (US\$bn)	
 Square	USA	Payment acceptance	2009	104	1,383	1.33	116.1	
 Adyen	Netherlands	Payment acceptance	2006	361	815	0.23	95.7	
 Stripe ¹	Ireland/USA	Payment gateway	2011	255	7,400	2.90	95.0	
 VISA	USA	Card payment network	1958	8,800	21,800	0.25	506.7	
 Mastercard	USA	Card payment network	1966	6,300	15,300	0.24	353.7	
 PayPal	USA	Diversified payments	1998	936	21,450	2.29	317.6	

¹ Gross take rate for Stripe. Note: Valuations/market cap as of 18-Oct-2021 or last available. Source: Companies, CLSA

Payment companies are diversifying to monetise - three key trends

We map large payment platforms in India (table below) and their current and intended service offerings. The three key trends we notice are:

1) UPI-based issuers and super apps are diversifying into being full financial service platforms including lending, distribution and non-financial related services as they intend to capitalise on large customer/merchant base they have built. Some of these businesses do not have a clear revenue visibility today and success to their business models will depend upon engagement levels of relationship built and ability to monetise these relationships.

Figure 87

Large payments companies and platforms - Widening their scope of product offering										
	Paytm	Phone Pe	Mobikwik	Google Pay	Bharat Pe	Pine Labs	Mswipe	RazorPay	PayU	CRED
Payments										
P2P Payments	Y	Y	Y	Y						
Wallet	Y	Y	Y							
Payment gateway - online	Y	Y	Y	Y		Y		Y	Y	Y
Merchant offline- POS	Y				Y	Y	Y			
Merchant offline- QR	Y	Y	Y	Y	Y	Y	Y			
Recharge and Bill	Y	Y	Y	Y						
Utility/rent payments	Y	Y	Y	Y						Y
Merchant service provider	Y			Y	Y	Y	Y	Y	Y	
Lending:										
BNPL/ POS/ consumer PL	Y		Y		Y	Y	Y		Y	Y
SME/ Merchant	Y				Y	Y	Y	Y	Y	
P2P					Y					Y
Bank licence (Payment/SFB)	Y				Y					
Para banking services:										
Broking	Y									
Insurance	Y	Y	Y							
Mutual fund	Y	Y	Y							
Gold	Y	Y	Y	Y						
Non Financials services:										
SuperApp	Y	Y		Y						
Advertising	Y	Y		Y						Y
Shopping	Y	Y	Y	Y						Y
Travel	Y	Y	Y	Y						Y
Gaming	Y			Y						Y

Source: Companies, CLSA

Fintechs are collaborating with mainstream banks

Figure 88

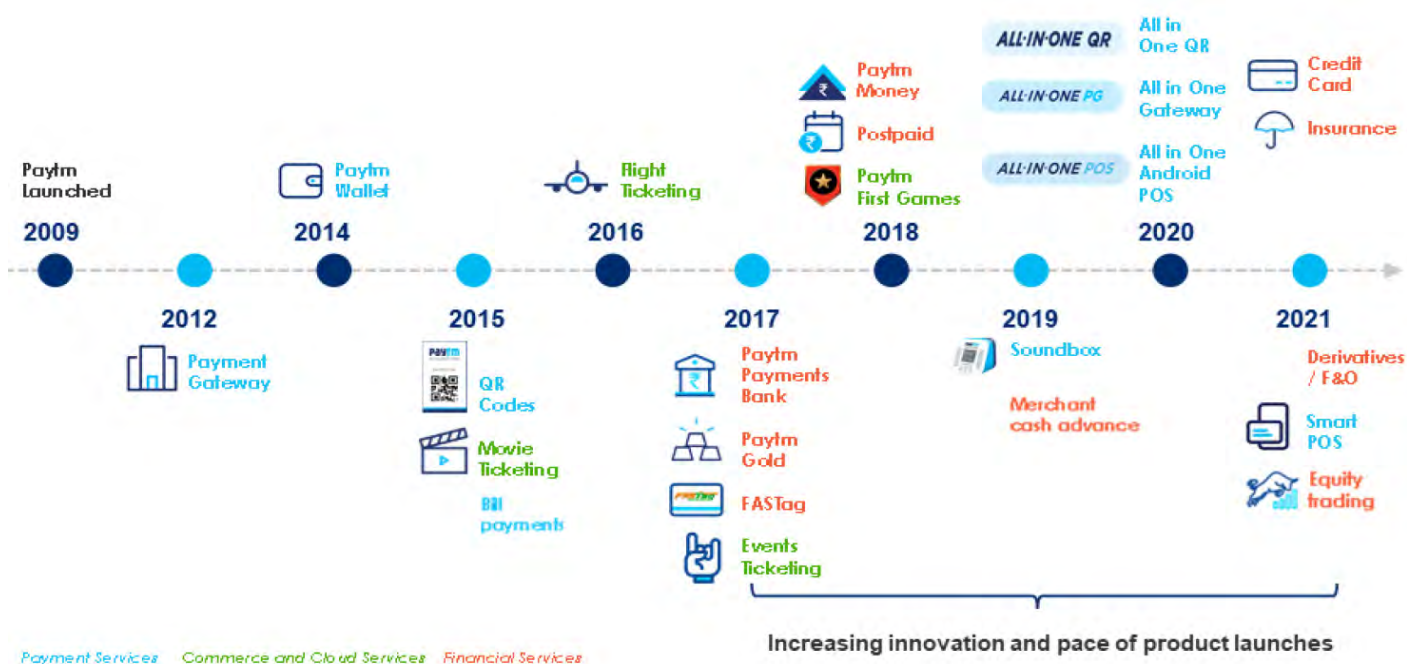
Payment fintechs collaboration with banks

Fintech partner	Banking partners	Nature of collaboration
Paytm	HDFC Bank	Digital payments, lending and point of sale (POS) solutions
Bharatpe	Axis Bank	Merchant POS acquiring business
Phonepe	ICICI Bank	Fastag issuance
Google Pay	Equitas SFB	FD and wealth distribution
Paytm	IndusInd Bank	FD and wealth distribution
Paytm	Suryoday Bank	FD and wealth distribution
30 fintechs	SBM Bank	FD and wealth distribution

Source: Media articles ([link](#), [link](#), [link](#), [link](#), [link](#), [link](#)), CLSA

Figure 89

Paytm's evolution from a wallet/payment gateway to a full stack company



Source: Paytm, CLSA

2) Acquiring businesses getting into lending: Many of POS and gateways businesses are present at the point of sale offline or at the check-out point during online purchases. This provides them with an opportunity to fund the merchant based on digital sales volumes and also facilitate seamless BNPL and lending transactions for customers through their touch points.

POS companies diversifying in lending and distribution

Figure 90

Pine Labs offering consumer/digital loans on its POS offering



Source: Pine Labs, CLSA

Figure 91

Payment gateways offer full suite of lending solutions

Supercharge your business with the all-powerful **Payment Gateway**

- ✓ 100+ Payment Methods
- ✓ Industry Leading Success Rate
- ✓ Superior Checkout Experience
- ✓ Easy to Integrate
- ✓ Instant Settlements from day 1
- ✓ In-depth Reporting and Insights



Source: Razor Pay, CLSA

Figure 92

Neobank offerings by RazorpayX

Manage your company's finances with **RazorpayX Business Banking**.

- ✓ Open a fully digital current account.
- ✓ Automate payables & complement payments
- ✓ Simplify and track spends with Corporate cards
- ✓ View financial insights at a glance

[Sign Up](#)

[Know More](#)



Source: Razor Pay, CLSA

Large platforms are building holistic online ecosystems

3) Non-financial apps, tech companies and conglomerates are also building their own super app ecosystems and embedding financial product offerings (figure 93).

Figure 93

Tech platforms/conglomerates building large ecosystems embedding financial services

	Tata	Jio	Flipkart
FinTech	TATA AIA TATA CAPITAL	Jio Pay	PhonePe
Omni channel retail/ e-commerce	TATA CLIQ Croma CARAT LANE	AJIO JioMart	Flipkart Bewakoof PhonePe
E-grocery	Star Quik big basket	JioMart	PhonePe Flipkart Star Quik
Travel and hospitality	TAT VIVANTA GINGER		PhonePe makeMyTrip OYO
Telecom, Internet, DTH	TATA sky	Jio JioMeet JioFiber	

Among many other service offerings either directly or through partnerships that mostly cut across these include e-B2B retail, FoodTech, E-pharm, EdTech, Logistics, OTT streaming platforms (news and entertainment), e-mobility, and gaming

Source: Fintech Convergence Council, EY, CLSA

BNPL: Short-term micro credit with little or no interest

Deferred payment model vs regular EMI model

Share of financing in online/offline sales stands at 3%/6% respectively

Digital lending: A large opportunity

In the digital lending section, we briefly touch upon two emerging segments - BNPL and MSME lending.

What is BNPL?

Buy-Now-Pay-Later (BNPL) is a short-term micro credit model, where consumers have to pay little to no interest for online and offline purchases. Apart from ecommerce marketplaces and offline merchants, BNPL start-ups are tying up with food delivery companies, travel booking players as well as grocery and other essential delivery platforms. There are two types of BNPL products offered:

- ❑ **A deferred payment model** wherein the customer has to repay the amount after 14-30 days. These are typically smaller-ticket loans offered for convenience of payments to low-risk customers.
- ❑ **Regular EMI model** with a tenure of a few months. This may or may not be zero-cost.

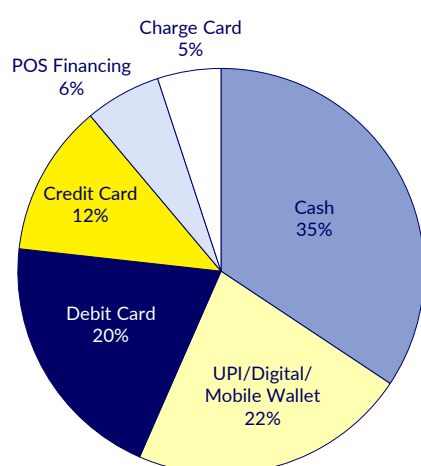
How do Indians pay at the point-of-sale (POS)?

In the offline segment, the usage of cash at the POS has dramatically declined for India - from 70% pre-Covid to 35% now, according to estimates by Worldpay. Cards and digital/mobile wallets dominate the offline market with share of 32%/22% respectively. However, financing is only 6% of offline sales.

In the online segment, the use of cash is much lower (8%). Interestingly, India is ahead of the global average in usage of BNPL in ecommerce purchases (3% share vs global average of 2.1%).

Figure 94

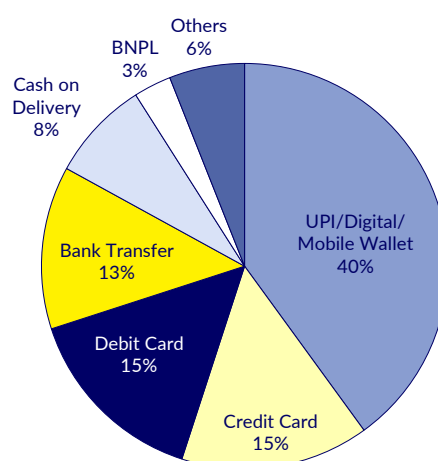
POS payments mix - India



Note: Digital should include UPI. Source: Worldpay, CLSA

Figure 95

Ecommerce payments mix - India



Note: Digital should include UPI. Source: Worldpay, CLSA

Key positive for BNPL: convenience and instant credit availability

Share of BNPL to rise across the globe

By region, Europe is the global BNPL leader

We expect BNPL to comprise 10% of online consumption by FY26, up from 5% currently

Key drivers of growing BNPL acceptance

BNPL is targeted at credit-worthy customers who may be excluded from the formal financing system. These could include young professionals or self-employed customers. For the manufacturer/merchant, BNPL helps in the upselling of consumer products such as white goods. The key positives of BNPL include-

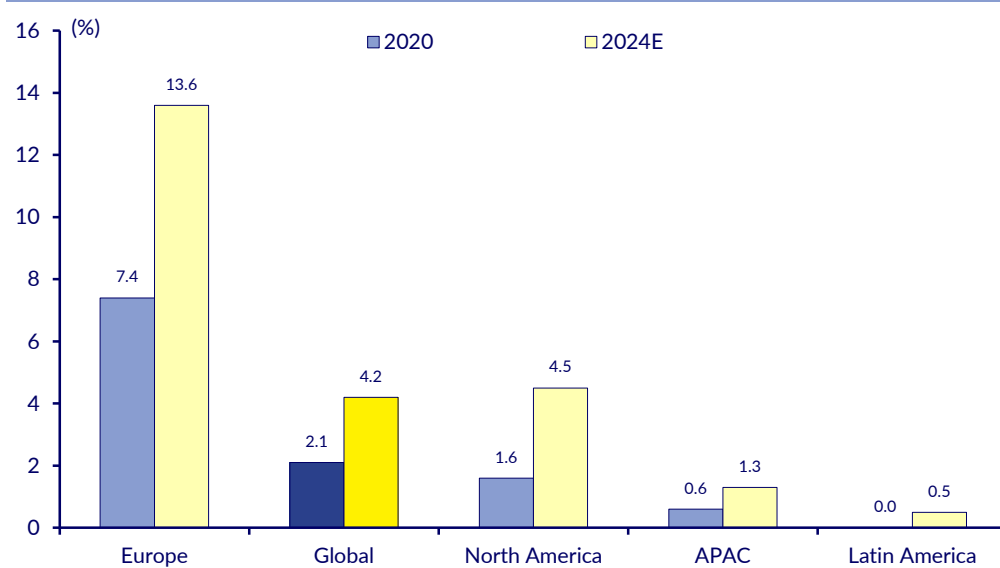
- ❑ Convenience of payments (can make one payment instead of multiple payments)
- ❑ Increased affordability for the customer, leading to upsell prospects for the seller
- ❑ Instant availability of credit at the point-of-sale with ease (only c.2% of Indians have a credit card as compared to c.20% for China)

BNPL set to gain traction globally . . .

Currently, only 2.1% of global ecommerce purchases happen via BNPL. This share is expected to rise to 4.2% by 2024 according to a report by Worldpay. Europe leads the way in BNPL use, with a 7.4% share of total ecommerce purchases. On the other hand, APAC is much lower at 0.6%.

Figure 96

Share of BNPL in ecommerce payments

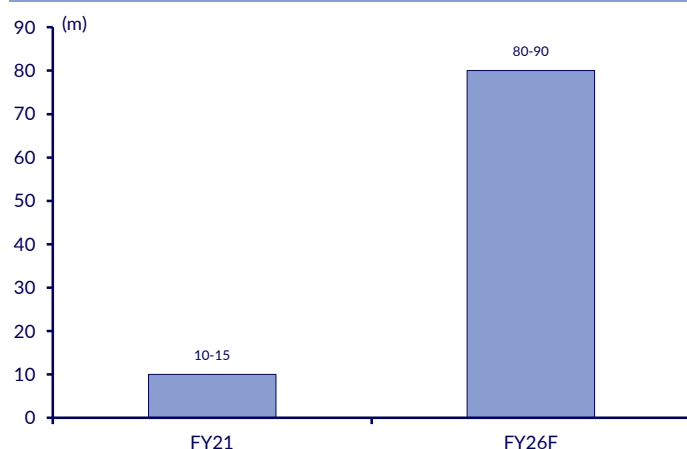


Source: Worldpay, CLSA

. . . as well as in India

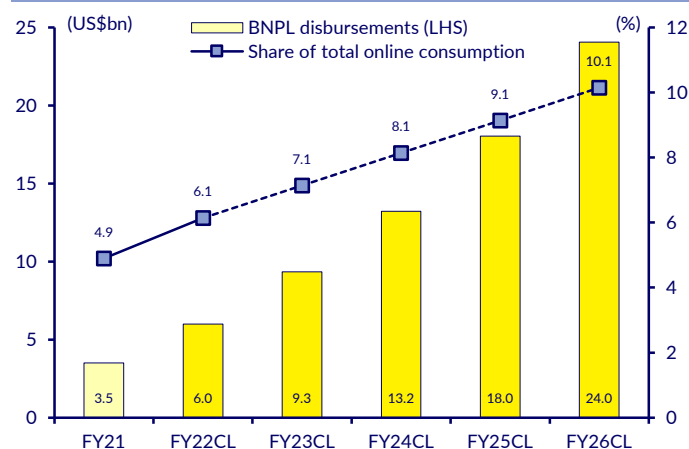
As per industry estimates by Redseer, only 10-15m people in India have availed of BNPL credit from digital-only players. In FY21, disbursements by such players amounted to \$3.5b, representing c.5% of total online sales in India. As discussed in the previous chapter, we believe this can grow to 10% of total online sales over the next five years (note that in certain developed markets, BNPL already contributes to 10%+ of ecommerce sales). Correspondingly, BNPL disbursements from digital-only players are expected to increase of \$24b by FY26, in our view. As per Lizzie Chapman, Co-Founder and CEO of ZestMoney, India will be the largest BNPL market in the world.

Figure 97

Number of BNPL users

Source: Mobikwik DRHP, CLSA

Figure 98

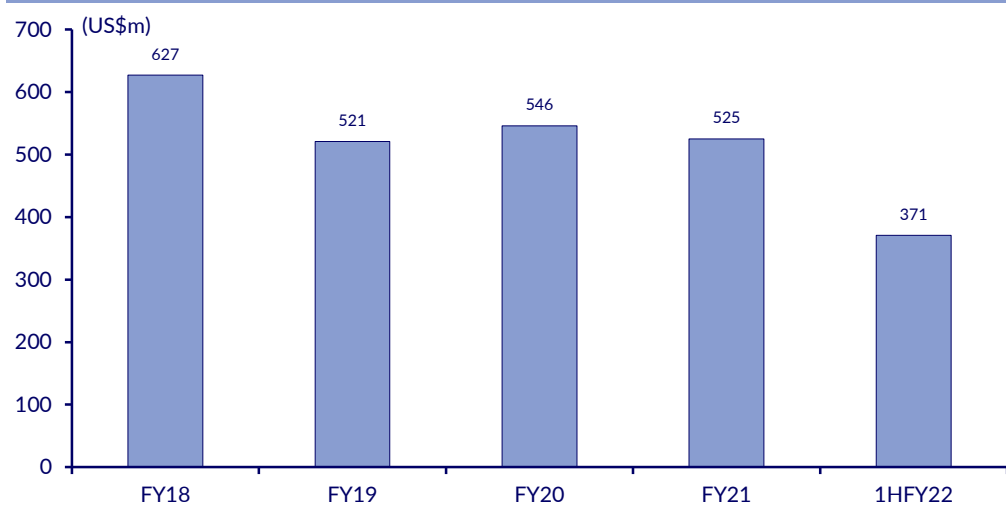
BNPL disbursements and share of total online consumption

Source: Mobikwik DRHP, CLSA

\$2.6bn equity funding raised by BNPL companies

Over FY18-1HFY22, BNPL companies raised nearly \$2.6bn in equity funding. Additionally, as per media reports, ZestMoney and Capital Float raised US\$50m each while ePayLater raised US\$10m in Sep 2021.

Figure 99

Funding raised by BNPL sector

Source: CBInsights, CLSA

Underwriting a challenge for new customers

In addition to credit bureau data, BNPL players rely on other parameters such as demographic data, address, SMS scrub, etc. Wallet companies and banks have a natural advantage over others for their existing customers as they have customer behaviour/transaction data. However, for other BNPL players, in the absence of core income data, underwriting would be a challenge.

Ticket sizes low, possibly to keep credit quality in check

Ticket sizes vary from Rs5k to Rs100k (limit of Rs60k while using eKYC). However, the average ticket size is usually Rs10-20k. As per a CIBIL report, 97% of disbursements by fintechs in 2020 were of a ticket size less than Rs25k, as compared to 60%/16% for NBFCs/Private Banks. Some of the key reasons for the

ZestMoney and Capital Float raised US\$50m each in Sep-21

Wallet co. and banks have underwriting advantage over BNPL players

97% of disbursements by fintechs in 2020 were of a ticket size less than Rs25k

Fintechs have a higher share of low-ticket loans compared to banks and NBFCs

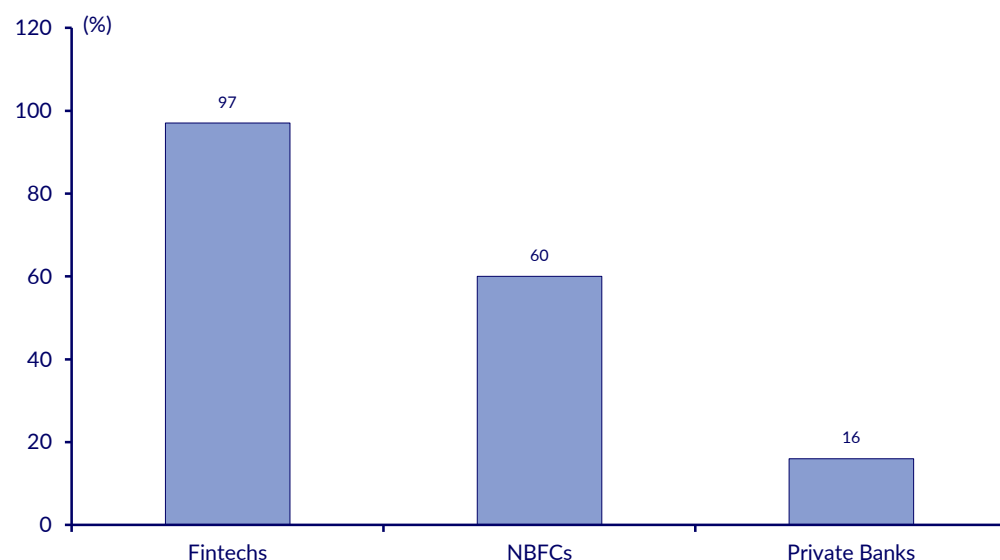
Traditionally, a large share of small ticket personal loan are to subprime and new to credit customers

Disbursements of small-ticket loans migrating towards prime and near-prime borrowers

same, in our view are - a) the typical BNPL customer profile being younger and of a lower earning capacity, b) shorter duration of loans implies that the ticket size has to be smaller to keep EMI relatively comfortable.

Figure 100

Share of loans less than Rs25k by company type



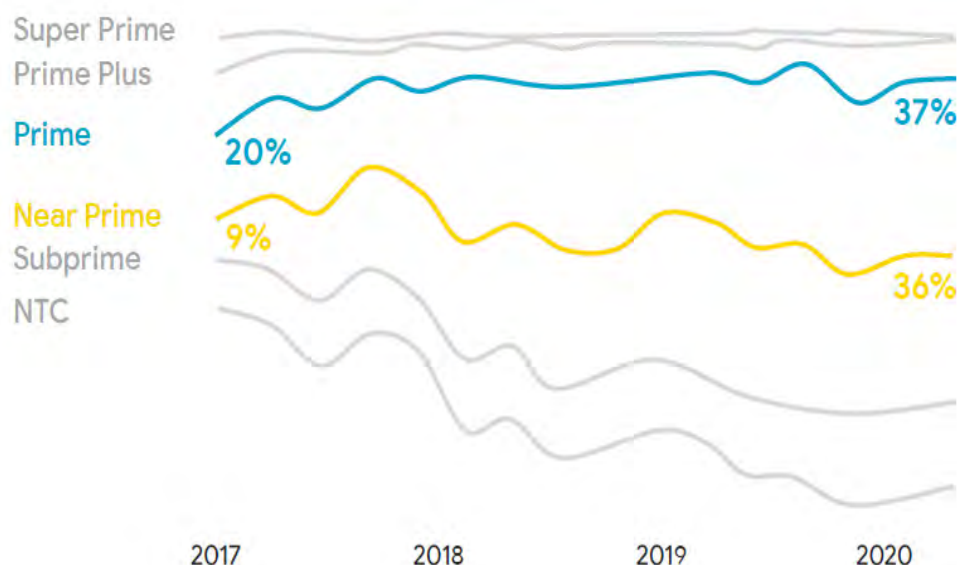
Note: in 2020. Source: TU CIBIL, Google, CLSA

Disbursements migrating towards better-quality customers

A few years back, a large share of small-ticket (<Rs25k) personal loan disbursements were to sub-prime and new-to-credit categories. However, that has been incrementally changing. The share of disbursements to Prime and Near-Prime categories increased from 29% to 73% over 2017-20. Note that this data is for the industry and not just the fintech/BNPL players.

Figure 101

Small-ticket loan disbursements by customer type



Scores - Subprime: 300-680; Near Prime: 681-730; Prime: 731-770; Prime Plus: 771-790; Super Prime: 790+.
Source: TU CIBIL, Google, CLSA

Other Fintechs also entering BNPL space

Most BNPLs have a ticket size of less than Rs30k

EMI solutions on debit cards by banks pose a risk to BNPL companies

PAR31-180 for short-term personal loans stood at 12.7% as of FY21

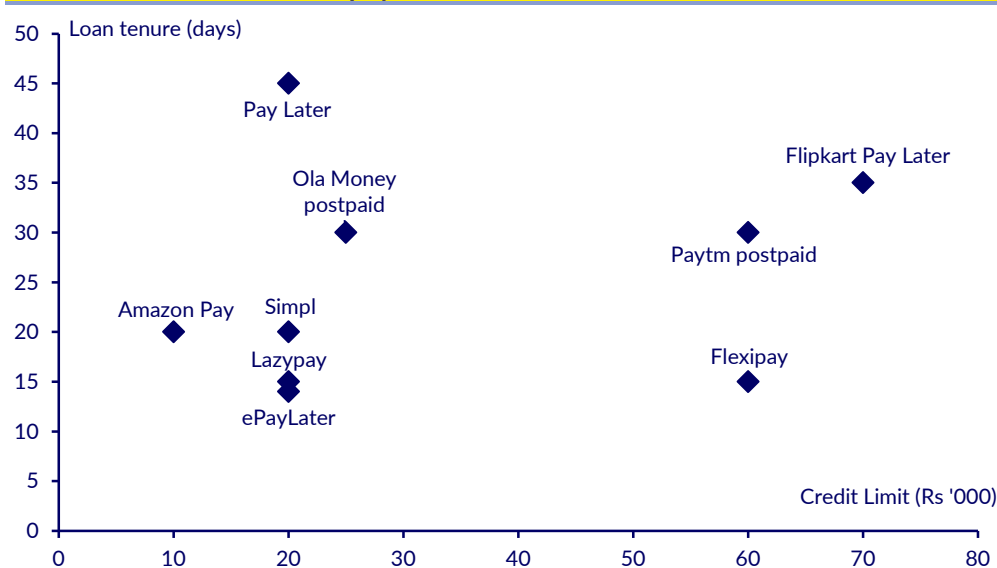
Several players from different segments have started BNPL

Players from several business segments have started BNPL. These include -

- ❑ Standalone lenders such as Capital Float, Simpl, Lazypay, Zestmoney, ePayLater
- ❑ Ecommerce marketplaces like Flipkart and Amazon
- ❑ Payments companies like Paytm, Mobikwik, BharatPe and Pine Labs
- ❑ Traditional Banks like HDFCB (Flexipay) and ICICIB (PayLater)

Figure 102

Credit limit and tenure of various players



Source: Media articles, CLSA

Banks' response - EMI solutions on debit card spends

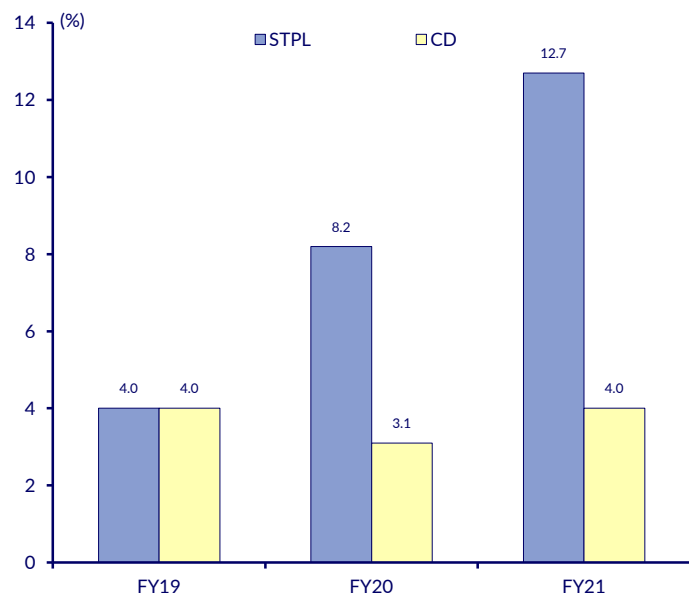
Banks have started offering BNPL products to certain pre-approved customers on their debit cards. The debit card customer base for any bank would be multiple times larger than the credit card base - this ensures a wider target audience. A few years back, ICICIB launched an EMI option on its debit cards. Recently, Kotak Mahindra Bank launched a debit card EMI facility on all purchases of Rs5k and above for eligible customers at all online and offline stores.

High delinquency product

Unlike conventional NBFCs, fintechs do not have 'feet-on-street'. While this isn't a requirement at the time of disbursements, it would be at the time of collections. Given the unsecured nature of these loans, recovery rates would be very low in case of defaults, in our view. While tying up with collection agencies is a possibility, the low ticket size of the product makes the cost of physical collections economically unviable.

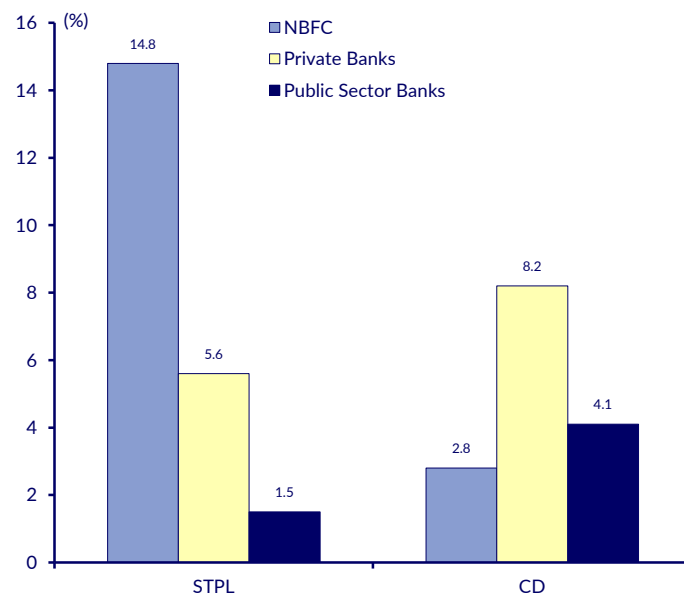
As can be seen in the charts below, overdue loans in the small-ticket personal loan (STPL) segment for the industry has been on an uptrend in the past two years. This is partly due to Covid. In our view, this has been driven largely by the proliferation of BNPL players in the past two years.

Figure 103

PAR 31-180 increased meaningfully for STPL over FY19-21 (%)

Note: CD - Consumer durables financing. Source: CRIF HighMark

Figure 104

PAR 31-180 highest for NBFCs in STPL (%)

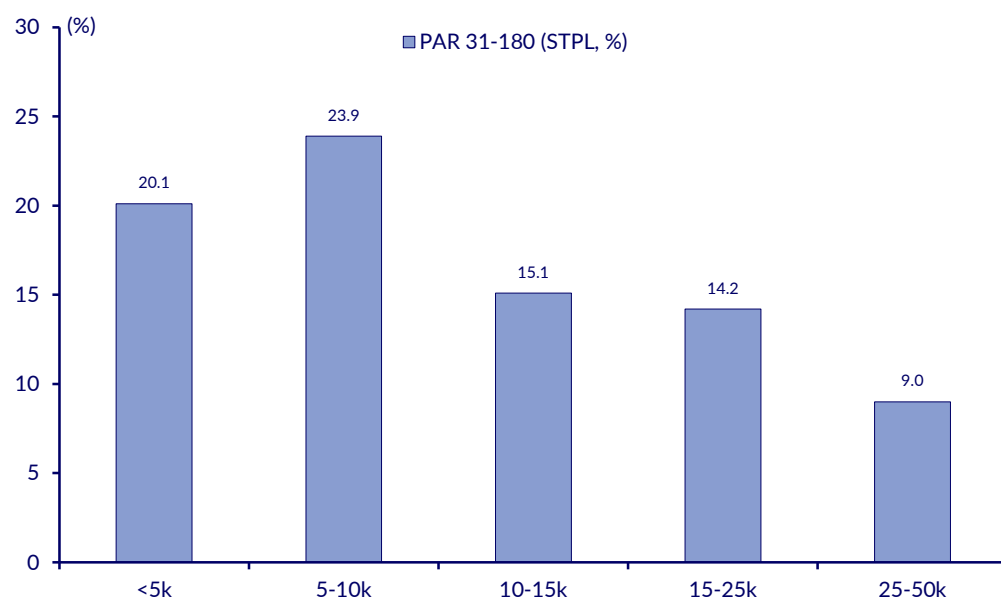
Source: CRIF HighMark

Small-ticket personal loan (STPL) with higher delinquency

Delinquency generally inversely related to ticket size

Within the STPL portfolio, lower the ticket size, higher the delinquency. However, the <Rs5k ticket size segment has a lower delinquency than the Rs5-10k ticket size segment - we believe this could be due to the former being used more for convenience than for credit.

Figure 105

Loan delinquency % by ticket size

Source: CRIF Highmark

Stage 3 loans of Mobikwik at 113%

Profitability metrics vary from player to player

ZestMoney has a customer base of 11m and is tied up with 75k stores

Capital Float adding over 150k customers per month

Here are some asset quality details for some specific players -

- ❑ **Krazybee** - As on February 28, 2021, the company's 0+ delinquencies remained high at 31.1% while the 90+ delinquencies stood at 2.2%. Further, it has restructured 19% of its portfolio as of December 2020.
- ❑ **Mobikwik** - Stage 2 and Stage 3 loans stood at c.13% of total loans each.
- ❑ **Capital Float** - As of 1HFY21, the GNPL ratio inclusive of write-offs of the prior 12 months stood at 19.6%
- ❑ **LazyPay** - The GNPL ratio increased from 2.26% in FY20 to 10.44% in FY21. Inclusive of write-offs, the GNPL ratio increased from 4.98% in FY20 to 18.9%.

Are BNPL players profitable?

Given the lack of available data, it is hard to ascertain the profitability of BNPL players. Moreover, profitability metrics would differ depending on whether the company uses its own balance sheet for lending or that of a partner, the extent of first-loss provided to the lending partner, etc.

Key details of some leading BNPL players

Figure 106

ZestMoney snapshot	
Incorporation	2015
Key investors	Goldman Sachs, Omidyar Network, Ribbit Capital, PayU, Xiaomi, Zip
Number of customers	11m
Number of store tie-ups	75k
Number of OEM tie-ups	8k
Revenue (FY21, Rsbn)	1.0
Average customer age	34
Other details	70% of customers are from Tier II/III cities

Source: CLSA, Company, Media articles

Figure 107

Capital Float snapshot	
Incorporation	2013 (started BNPL in 2018)
Key Investors	Sequoia Capital, Ribbit Capital, Creation Investments, Amazon, SAIF Partners, Lightrock India
Number of customers	2.5m
Share of customers having a credit card	50%
Customer additions	150k/month
Number of purchases/month	1.5-2m
Disbursements since inception	Rs20bn
Partners	Amazon, EdTech companies, Makemytrip
Share of no-cost BNPL transactions	70%
Other details	Minimum customer age - 23 years; Decline 30% of applications

Source: CLSA, Company, Media articles

LazyPay is backed by PayU and has seen a disbursement rate of Rs1bn per month

Customers upgrading to banks loans a key risk for BNPL players

Tightening of fintech regulations up to par with banks and NBFCs is a risk

MSME sector an underserved industry in terms of credit . . .

. . . thus fintechs have now started offering credit to them

Figure 108

LazyPay snapshot

Incorporation of BNPL product	2017
Key investors	PayU (owned by Naspers)
Number of customers	3m
Number of merchants	300
Customer additions	75k/month
Disbursements/month	Rs1bn
Disbursements since inception	US\$300m

Source: CLSA, Company, Media articles

Risk factors

- ❑ **Asset quality:** There are two risk factors pertaining to asset quality - a) the lender may not have enough income/savings data of the customer, leading to risks in underwriting and b) lack of a collections team is a hindrance in the case of delinquencies.
- ❑ **Customers migrating to banks after a few cycles:** Many new-to-credit customers who are not sanctioned loans by banks end up availing loans from BNPL providers. If these customers repay their loans on time, they will develop a healthy credit score. Post that, banks would be willing to lend to them.
- ❑ **EMI solutions on debit cards:** While credit card penetration is low in India, debit card penetration is healthy. Some banks have started offering 'Pay Later' solutions on debit cards. While it is still nascent, if this were to gather pace, it could disrupt the growth potential for BNPL players.
- ❑ **Regulations:** Currently, regulations for BNPL fintechs are not as tight as they are for banks and NBFCs. Some fintechs do not even report to bureaus. Greater regulatory scrutiny over time could pose some risks to the business models of these players. For example, if the regulator were to ask fintechs to hold a particular proportion of the loans they generate for their partners, it could lead to a slowdown in disbursements for the fintech.

MSME lending

Underserved segment; Fintechs trying to make inroads

The MSME segment is one of the most underserved segments when it comes to credit. The estimated 63m MSMEs in India contribute 30% to its GDP. The sector accounts for c.25% of commercial lending exposure and <15% of total lending in India. As per some estimates, there is a credit gap of over \$200b to this sector.

Over the past few years, several fintechs have come up in the MSME lending space. These include players like LendingKart, Capital Float, Incred, Vivriti, Flexiloans, etc. Many of the POS, gateway companies or UPI led payment companies like Pine Labs, Mswipe, Razor pay, BharatPe, etc who have a strong touchpoint with merchants at physical stores or through online payment checkout and are also getting active in lending to smaller merchants based on the digital collections of these merchants.

Figure 109




Payment companies getting active in lending

	Consumer lending /BNPL	Type (Partnership /captive)	Merchant/ business lending	Type (Partnership /captive)	Lending AUMs	Disbursements
Paytm	Y	Partner led	Y	Partner led	na	2.6m loans in FY21
Phonepe	N	na	By 2022	na	na	na
Bharatpe	Y	Partner led	Y	80% loans are partner led	US\$160m	Merchant: US\$400m (cumulative)
CRED	Y	Partner led	N	na	US\$325m	na
Pine Labs	Y	Partner led	Y	Partner led	na	Consumer: US\$2bn (FY20)
Mswipe	Y	Partner led	Y	Own NBFC + partnerships	US\$13m (by Mar 22)	NA
PayU	Y	Captive (LazyPay)	N	na	na	Consumer: US\$300m cumulative
RazorPay	Y	Partner led	Y	Own NBFC + partnerships	na	US\$45m per month run rate
Mobikwik	Y	Partner led	N	na	na	US\$40m GMV (FY21)

Source: Companies, CLSA

Figure 110

Key details of key fintechs in this space (FY21)

	Lendingkart	Capital Float	Incred Financial
			
Incorporation	2014	2013	1991 (acquired by Incred in 2016)
Business	Unsecured SME loans	Unsecured MSME lending, personal loans, BNPL	Personal loans, school financing, student loans, others
Key investors	Fullerton Financial Holdings (39%), Saama Capital, Mayfield India, India Quotient, Bertelsmann India Investments, Sistema Asia Fund and Darren Capital Management	Ribbit Capital, Elevation Capital, ASPADA, Sequoia, SAIF Partners, Amazon, Creation Investments	Bee Finance (Promoter's company), Investcorp (IDFC Private Equity), Paragon Partners, FMO, OAKS Asset Management, Moore Strategic Ventures and Elevor Equity
Average ticket size	c.Rs0.6m		50% of portfolio has ticket size > Rs2m
Tenure	32 months		
Rating	BBB+	BBB-	A
Key financials			
Total assets (Rsbn)	26.4	9.4	27.9
Networth (Rsbn)	8.5	5.2	10.5
CRAR (%)	39	36	37
NIM (%)	11.8	3.8	na
GNPL ratio (%)	2.5	3.9	3.4
NNPL ratio (%)	0.9	1.6	1.7
Credit costs (%)	7.3	7.0	3.7
Restructuring (%)	20	na	4
RoA (%)	(1.1)	(10.0)	0.4
RoE (%)	(3.5)	(26.4)	1.0

Source: CLSA, CRISIL, ICRA

Insurance is a fast growth sector; changing consumer preference a boon to tech

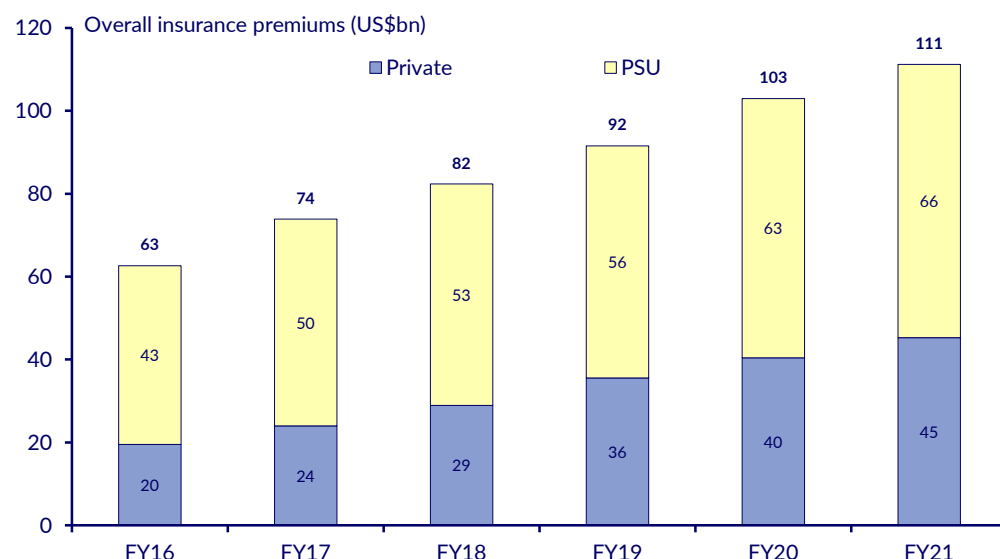
Private sector insurance premiums for FY21 stood at US\$45bn

Insuretech: Innovation in products, distribution and underwriting

The Indian insurance space has been a fast growing sector. As of FY21, annual premiums collected totaled US\$110bn. Of this total, US\$45bn were for private insurers, which enjoyed a 18% Cagr over FY16-21CL. Digital insurance sales are in a nascent stage, with low-single digit overall insurance sales in India (using various measures). However, the market is quickly picking up, especially in products linked to protection and prevention. Consumer preference is shifting towards simpler products with clear communication, seamless online searches and transactions and hassle-free claims. All of these factors signal significant growth opportunities for insuretech firms.

Figure 111

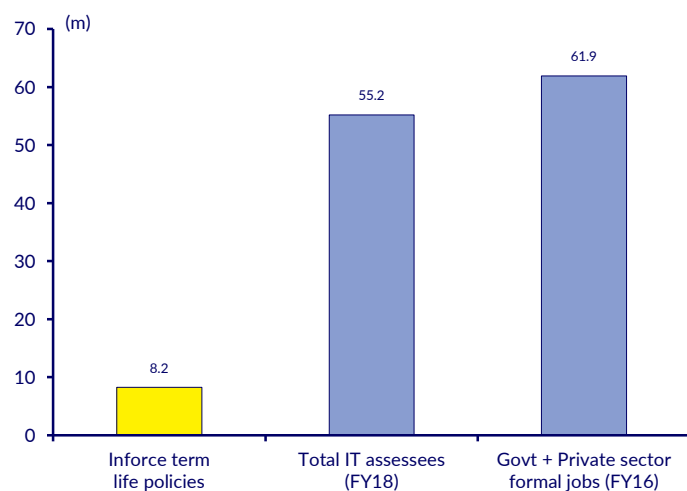
India: Insurance sector premiums, private and PSU



Source: IRDAI, CLSA

Figure 112

India: Term life policies vs income tax assessments and jobs



Source: India Income Tax Department, Ministry of Statistics and Programme Implementation, CLSA

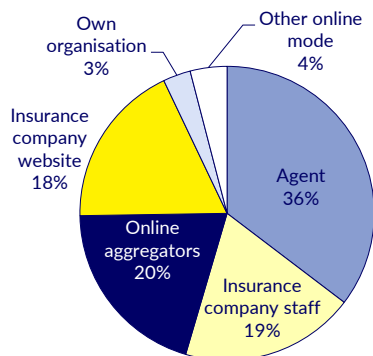
Figure 113

India: Health insurance penetration



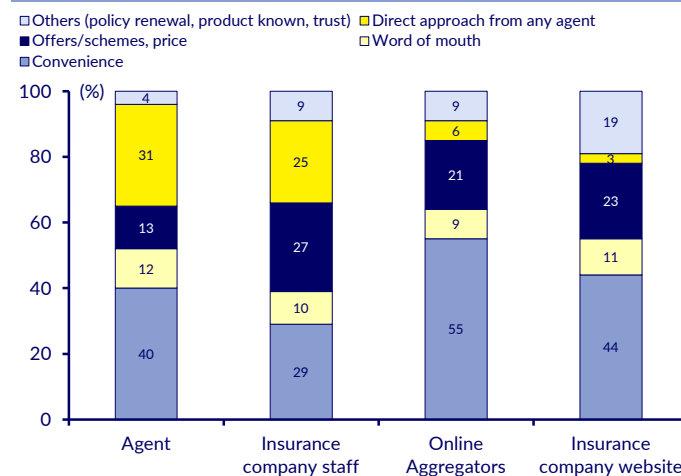
Note: Penetration defined as no. of lives covered by retail health policies (individual and family floater policies only). Source: IRDAI, CLSA

Figure 114

India: Preferred mode for insurance purchase

Source: PWC

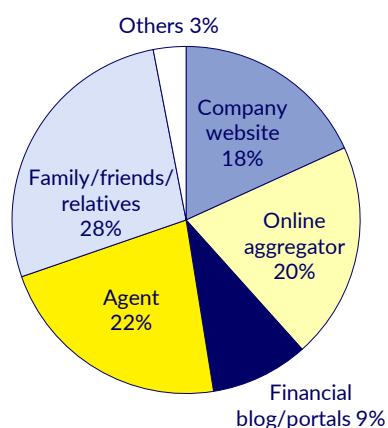
Figure 115

India: Key driver for buying insurance via aggregators or websites

Source: PWC

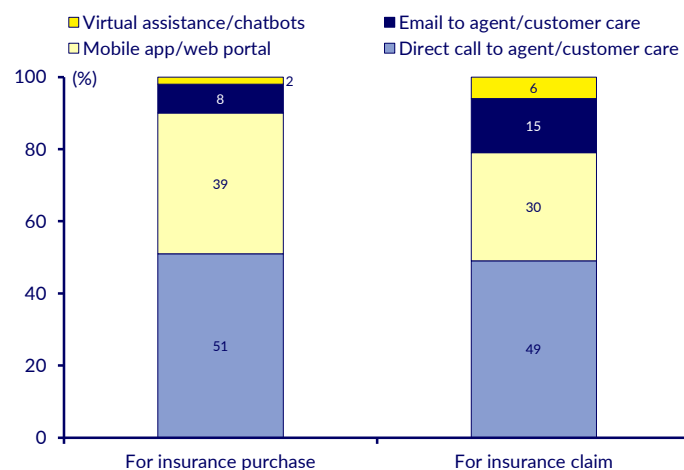
About 47% of customers prefer to collect and search for insurance info online

Figure 116

Preferred source for insurance information

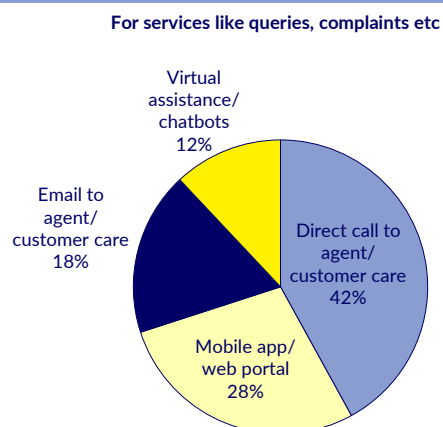
Source: PWC

Figure 117

Preferred customer communication method for purchases, claims

Source: PWC

Figure 118

Preferred customer communication method for other services

Source: PWC

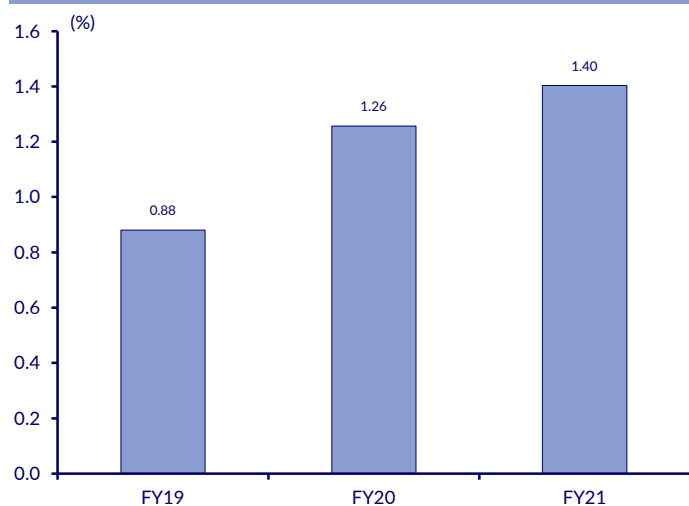
Digital sales of insurance currently low

Overall digital sales proportion low but increasing in specialised products:

Digital sales proportion is low in overall insurance premiums as we estimate that largest insurance aggregator with +90% market share contributes 1.5% of private sector insurance premiums (life + non-Life). Within the general insurance space, new Insuretech manufacturers like ACKO/Digit together contribute <3% of general insurance premiums. However, share of Insuretech platforms in specific pockets is increasing and we estimate that largest insurance aggregator has a c.10% share of sum assured (term life business). Share of ACKO/Digit in motor insurance is high at 5% of overall market. Micro-insurance and pocket sized contextual insurance is dominated by emerging Insuretech players. Increasingly as per the PWC survey, 40-50% of customers prefer to purchase insurance online vs a much smaller percentage of sales that is completed digitally.

Figure 119

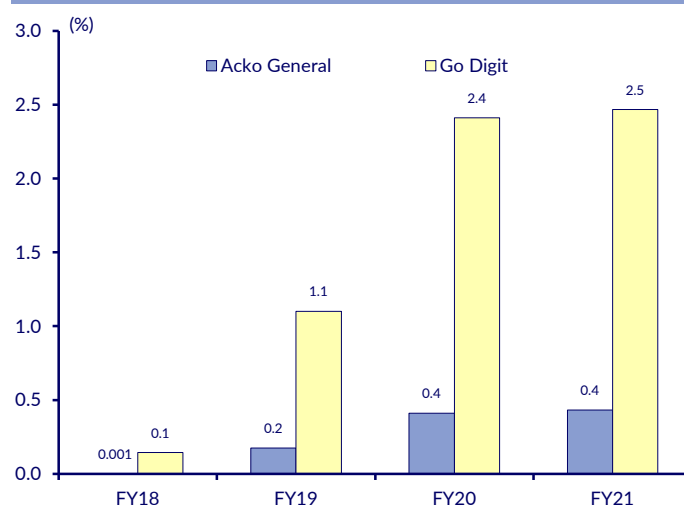
Policybazaar premiums as % of private sector premiums



Source: PolicyBazaar, IRDAI, CLSA

Figure 120

Market share in private general insurance industry



Source: Company, IRDAI, CLSA

Figure 121

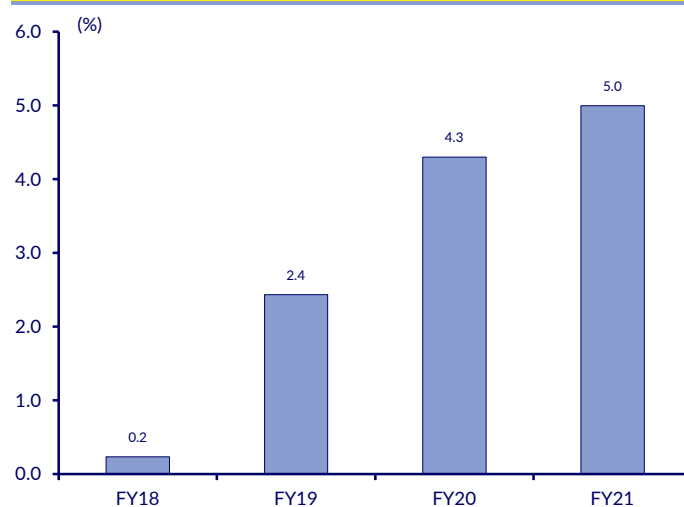
Share of Policybazaar's life insurance sum assured in industry



Source: IRDAI, PolicyBazaar, CLSA

Figure 122

Share of insuretechs (ACKO/Digit) in motor insurance



Source: Company, IRDAI, CLSA

Figure 123

Digital insurance sales penetration to rise

Digital platforms contribute less than 2% of premiums collection

Share of digital platforms in sales of term life and auto insurance is higher at 5-10%

Share of digital to rise as 40-50% customers prefer to research and buy online

Acko and Go Digit have digital insurance business model

Policybazaar is the largest insurance web aggregator in India

RenewBuy, Coverfox, Turtlemint are some of the brokers in the industry

Acko and Toffee sell bite-sized insurance

Digital Penetration in Insurance

Less than 2%



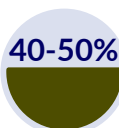
Share of total premiums

5-10%



Share of life insurance sum assured

40-50%



Share of insurance search

Source: CLSA

Insurtech ecosystem - Varied business models

Digital insurers: These companies are registered as Insurers like ACKO/Digit. Within this, ACKO has a digital only approach to selling insurance policies and uses no intermediaries while Digit follows a multi-channel digital approach but has focused on providing their agents a strong interface and digital capability to sell and service customers.

Insurance aggregators/marketplace: These companies act as intermediaries/ brokers and are price comparison and policy fulfillment platforms with tie-up with multiple insurance companies. Policy bazaar is the largest market with +90% market share of insurance marketplace. Other players in the space include Coverfox, ET insure.

Distributors - Brokers/POSPs: These companies are intermediaries/ brokers. IRDA regulations in 2015 on POSP (point of sales person) introduced a new set of intermediaries called POSP who could sell basic insurance policies with minimum qualifications. Companies like Renew Buy (+50000 agents) and Turtlemint (+0.1m agents) have established a model of pooling POSPs and digitally enabling them.

Bite-sized insurers: Some insurance companies specialise in selling bite-sized insurance, including Toffee (bicycle/pet) and ACKO (Ola rides). According to ACKO, the company intends to use bite-sized insurance to better understand 100m digitally transacting customers of India. In the long term, this will provide better underwriting capabilities and a big cross-sell pool.

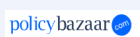
Figure 124

Insurtech ecosystem in India**Insurtech**

Digital Insurers



Web Aggregators/ Brokers / POSP










Employee Insurance



Source: Companies, CLSA

Figure 125

Profile of large insurtech companies

Company	Category	Start year	Money raised (US\$m)	Last deal valuation (US\$m)	Description	Key highlight	Founders
 Policybazaar	Web Aggregators/ Brokers	2008	723	2,400	Policybazaar is an online platform for insurance and lending products which was started in 2008 with aim to increase choice and transparency for end customers. In FY20, Policybazaar was India's largest digital insurance marketplace with a 93.4% market share based on the number of policies sold. Company also has 65.3% share of all digital insurance sales in India by volume was transacted through Policybazaar.	48m customers / 126.5m visits on website	Yashish Dahiya and Alok Bansal
 Acko	Digital Insurers	2016	464	1,100	ACKO started as India's first digital only insurer targeting largely India's 100m digitally transacting customers in age bracket of 19-45 and income bracket of US\$800-1000 per month. It does not use intermediaries for distribution and is a full digital only platform. Auto and group health forms 60% and 30% of premiums. It also sells micro insurance through its partners like OLA	60m customers / 800m policies (including micro insurance)	Varun Dua (ex founder of Coverfox) & Ruchi Deepak
 Go Digit	Digital Insurers	2017	461	3,500	Digit is a full-fledged insurance company with aim to simplify insurance buying /claim process. While it distributes its products across online/offline channels including online aggregation, it has a strong focus on providing seamless interface/claim processes for its agents. Annual premiums have grown to Rs24bn in FY21 with 80% share from motor insurance	20m customers	Kamesh Goyal (ex Allianz insurance) and backed by Fairfax
 Coverfox	Web Aggregators/ Brokers / POSP	2013	51	100	Coverfox is an IRDAI authorised insurance broker, which started operations in 2013 as a web-aggregator and comparison platform. It has now transformed into an insurance broker. Coverfox has tie-up with +40 insurance companies and offers free claim assistance services.	1m customers / 0.5m policies	Varun Dua (started ACKO in 2016) & Devendra Rane (currently with Paytm)
 Turtlemint	Web Aggregators/ Brokers / POSP	2015	77	na	Turtlemint intends to 'demystify' insurance by explaining the product in a simple way and providing smart tools to the end customer. Turtlemint has a unique hybrid (online-offline) insurance advisors community with digital tools and provide a wide variety of products, customized recommendation tools, courses to empower advisors digitally. It has a PoSP network of over 120,000 advisors and have also launched web aggregator service	1.5m customers	Anand Prabhudesai (ex Yahoo, Nokia, Quikr) Dhirendra Mahyavanshi (ex - Lombard and Quikr)
 RenewBuy	Web Aggregators/ Brokers / POSP	2015	84	na	RenewBuy is an insurance broker that sells third-party motor, health and life insurance in semi-urban and rural pockets (Real Bharat), through its subsidiary D2C Insurance broking.	2.5m customers	Balachander Sekhar (ex PNB Metlife, Reliance retail) and Indraneel Chatterjee (ex-PNB Metlife)
 Toffee	Digital insurance (Bite size)	2017	7.1	na	Toffee insurance offers bite sized insurance policies in product segments such as cycles, commute, pets, etc. Toffee's business partners are Hero cycles, Makemytrip, EKO. It also works with large insurers such as ICICI Pru Life, Tata AIG, HDFC ERGO, Bajaj Allianz, Care health, India first for under-writing policies.	0.2m customers	Rohan Kumar and Nishant Jain

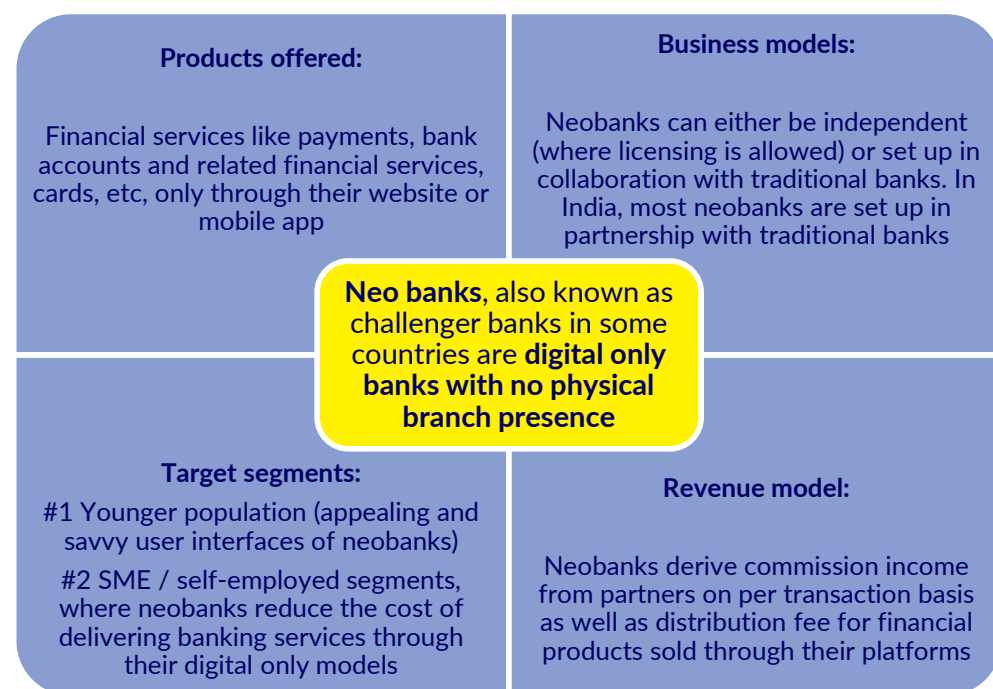
Source: Companies, Crunchbase, CLSA

Exploring neobanks: Mainly intermediaries

What are neobanks?

Figure 126

Neobanks are branchless banks with no brick and mortar presence



Source: CLSA

Evolution of neobanks

The neobank concept first surfaced in the UK after the 2008 financial crisis. Historically, the UK's banking sector has been dominated by a small number of large banks. Prior to the crisis, setting up a bank in the UK was an extremely expensive and long-winded process; when Metro Bank was issued a licence in 2010, it was the first to do so in 100 years. However, after the crisis, it was seen as essential to open up the banking sector in the UK to achieve a broader and more financially-resilient sector. A 2019 report by AT Kearney stated that European neobanks gained more than 15m customers between 2011 and 2019. By 2023, they are projected to have up to 85m customers - equivalent to 20% of Europe's population over age 14.

Neobanks offer a clutter-free experience . . .

. . . and are more cost effective for both providers and customers

Advantages offered by neobanks

User-friendly platform: Neobanks generally offer clutter free, appealing and personalised user interfaces. In addition, they provide value added services viz. alert and notifications, online customer support, etc. which improve user experience.

Cost and time effective: Due to digital-only models, not only do neobanks have lower operational and manpower requirements but are also able to process customer requests in a swifter manner.

Lower fees and charges / higher rewards: Some neobanks charge much lower fees (like low forex markup) and also offer higher rewards like (rewards for cards spends) due to low delivery cost of their services at a fraction of that of traditional banks.

For traditional banks: Neobanks partnerships enable traditional banks to target specific customer segments without incurring initial technology and setup costs. However, in return they do share a part of their revenue in form of commissions.

Figure 127

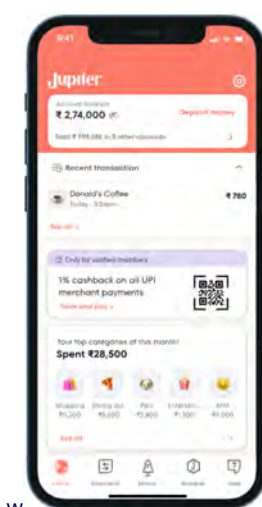
Neobanks offer user-friendly interfaces



Source: NIYO, CLSA

Figure 128

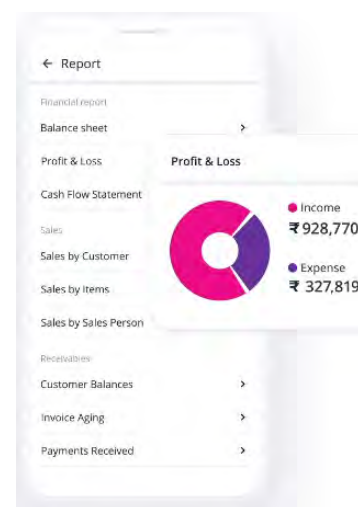
Often offer lower fees and higher rewards



Source: Jupiter, CLSA

Figure 129

Also offer value added services



Source: Open, CLSA

Neobanks are either consumer facing (millennial) or SME focused

Neobanks derive per transaction fee as well as distribution fee

Operating segments and business / revenue model:

Consumer facing neobanks: focus on targeted services, beyond fixed deposits and debit and credit cards, they offer tailor made solutions based on your transaction history. Example: NiYo, Jupiter, Fi, Slice.

Business / SME focused neobanks: provide software solutions related to payables and receivables, services like tax filing, payrolls, and expense management. Example: Open, RazorpayX.

Revenue model of neobanks: Neobanks derive commission income from partners on per transaction basis as well as distribution fee for financial products sold through their platforms.

Revenue model of neobanks

"Jupiter (an Indian Neobank) will make money via commissions if a customer uses his debit card, takes out a loan or an insurance policy using Jupiter. Monetisation is there in every transaction. All smartphone users - 700 million of them - are Jupiter's target customers, but initial focus will be on young working professionals between 18-35, a category of people who are more technologically savvy, experiment with new apps and have relatively more disposable income."

- Mr Jitendra Gupta, Founder, Jupiter ([link to interview](#))

India does not have a neobanking licensing regime

Landscape of neobanks in India:

In India, RBI's current regulations do not permit setting up of pure digital only banks (or neobanks) and prefer physical branch presence.

Hence, neobanks in India mostly partner up with traditional banks and do sourcing and front-end management while back end transaction processing is done by banks.

Some traditional banks such as Kotak Bank and DBS Bank offer digital only bank accounts within their 811 / Digibank offerings, respectively.

Figure 130A





Neobank landscape in India

Name	Estd.	Valuation (US\$m)	Amount raised (US\$m)	Sub- category	Product offerings	Customer base	Partnerships
Freo 	2015 (As Money Tap)	na	90	Consumer	- Bank accounts - Loans - Credit cards - Buy Now Pay Later - Expense and credit score management	11m (including Moneytap)	RBL Bank, IDFC First Bank, HDB-FS, Fullerton India, InCRed, Credit Siason, Acko, Apollo Finvest
InstantPay 	2013	na	340	Consumer/business	- API banking platform - Accounting support - Current account - Pay Later - Working capital and overdraft - Wealth management - Insurance marketplace - Cash management and collections	10m (MAU)	ICICI Bank, Axis Bank, IndusInd Bank and Yes Bank
Slice 	2016	na	84	Consumer	- Credit cards for millennials	3m	Visa and SBM Bank
Niyo 	2015	136	49	Consumer/business	- Zero-balance accounts - Salary advance - Free accidental term insurance - Zero markup forex cards - Tax saver cards (claim employee benefits) - Open banking platform for businesses - Payroll management for businesses - Wealth management products	2m	IDFC First Bank, ICICI Bank, Yes Bank, DCB Bank, Equitas, SBM, DCB Bank, 5Paisha, Stockal
Fampay 	2019	na	43	Consumers	- Prepaid cards for teenagers	2m	IDFC First Bank
Open 	2017	500	103	Business	- Deposit accounts - Money transfers - Debit /credit cards - Expense management - Invoice management - API and accounting solutions	1.5m	Axis Bank, Yes Bank, ICICI Bank, SBM Bank, Equitas, Kotak Bank, VISA, NPCI

Continued on the next page

Figure 130B

Neobank landscape in India (Cont'd)

Name	Estd.	Valuation (US\$m)	Amount raised (US\$m)	Sub- category	Product offerings	Customer base	Partnerships
	2019	160	25	Consumer	- Zero balance savings accounts - Prepaid cards - Bill payments - Money transfers - Money mgmt tools	500k (2021 target)	Federal Bank, VISA, NPCI
	2020	na	na	Consumer	- Banking solutions for teenagers and young adults	500k	RBL Bank, VISA, Mastercard
	2019	300	114	Consumer	- Money transfer - Cash withdrawal - Savings account - NFC-enabled prepaid cards - Dashboard for transactions monitoring - Wealth management - Pay Later	100k	Federal Bank, VISA, NPCI
	2018	na	na	Business	- Accounting and transaction support - Payroll and expense management - Corporate cards - Working capital financing - API banking - Transaction reporting and analytics	15k	RBL Bank, Opfin (for payroll management)

Source: Companies, CLSA

A regulatory framework needs to emerge for Indian neobanks

Way ahead:

As discussed earlier, neobanks face a big operational constraint in India— they do not have a banking licence of their own, and therefore outsource their banking responsibilities to licenced banks. Neobanks may pave the way for banking to go digital but a regulatory framework needs to emerge that will determine how the data generated by these banks should be used and how they can tailor-make their products based on this data.

Figure 131

Brief profile of neobanks in other countries

Company	Country	Segment	Estd.	Valuation (US\$bn)	Revenue (US\$m)		Customers (m)	Mcap/cust (US\$/cust)	Mcap/net revenues	
					FY20	FY21			FY20	FY21
Neobanks										
Revolut	UK	Consumer/SME	2015	33.0	307	na	15.0	2,200	108	na
Nubank	Brazil	Consumer/SME	2013	30.0	na	na	40.0	750	na	na
KakaoBank	S. Korea	Consumer	2016	24.7	361	554	16.5	1,498	68	45
Chime	USA	Consumer	2013	14.5	na	na	5.0	2,900	na	na
Jago Bank	Indonesia	Consumer/SME	1992	13.2	6.4	26.9	0.5	26,400	2,066	491

Note: Valuations/market cap as of 18-Oct-2021 or last available; yellow shaded companies are listed. Source: Companies, CLSA

Wealth tech spans across brokers, mutual fund investments, advisory, etc

Wealthtech have been disruptors

What is wealthtech?

Wealthtech refers to digital products or services catering to the investment, savings and trading needs of customers. It started with the emergence of discount brokers that did not have any branches and did everything online. Over time, this concept has extended to parallel segments such as financial product advisory and distribution and robo-advisory. Apart from standalone wealthtech players, large payment companies like Paytm have also ventured into the space.

Figure 132

Snapshot on the wealthtech landscape



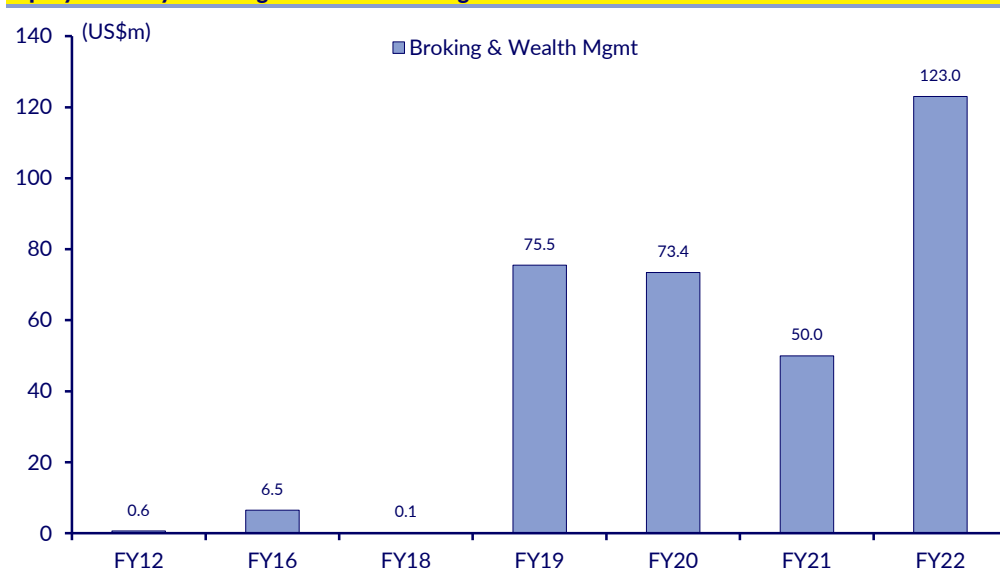
Source: CLSA

Raised nearly \$0.3bn over the years

Over the past 6-7 years, wealthtech companies raised nearly \$0.3bn in equity, according to EY. Funding to the sector in YTD FY22 is the highest at US\$0.12bn.

Figure 133

Equity raised by brokerage and wealth management fintechs



Note: FY22 refers to YTD FY22. Source: CBInsights, CLSA

Highest capital raise in FY22 YTD at US\$0.12bn

Zerodha, Upstox and Groww have disrupted retail equity broking

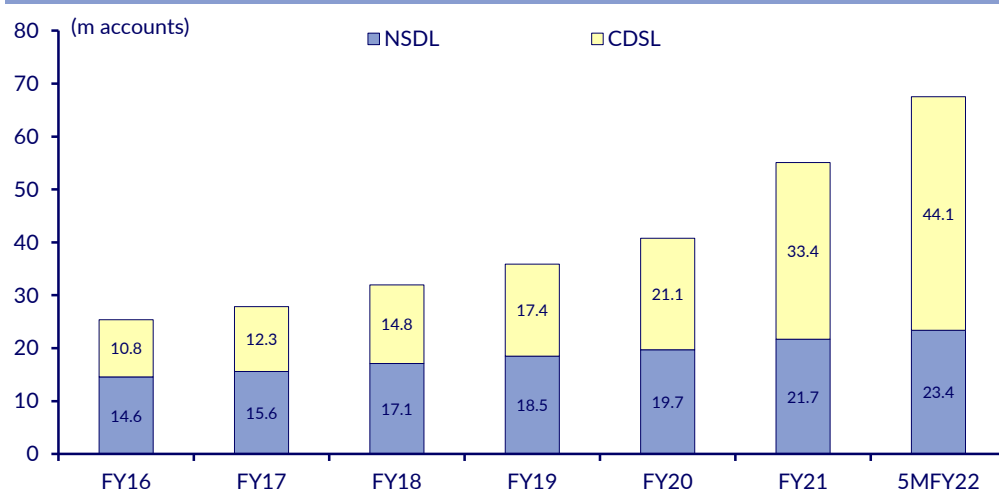
Surge in the number of demat accounts over the past 18 months

Broking space disrupted by discount brokers

Over the past five years, discount brokers have disrupted the retail equity broking segment with a superior product proposition and differentiated pricing models. The two largest brokers by active client count are fintechs - Zerodha and Upstox. Groww, which started operations in 2018, is now among the top five. Moreover, after last year's Covid outbreak, there has been a surge in the number of new equity investors in the market, as evidenced by the rising number of demat accounts. A demat account holds financial securities in electronic form.

Figure 134

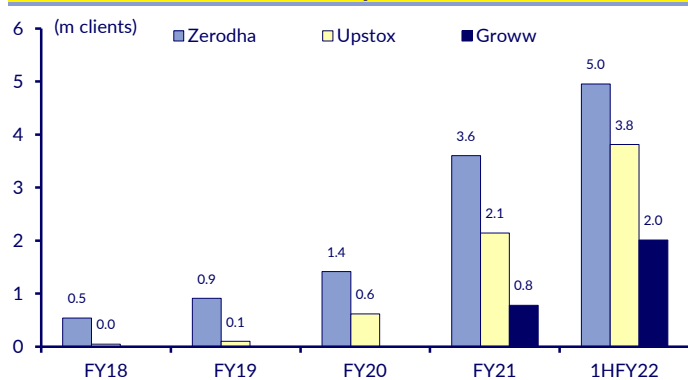
Number of demat accounts outstanding



Note: NSDL - National Securities Depository Limited, CDSL - Central Depository Services Limited. Source: SEBI, CLSA

Figure 135

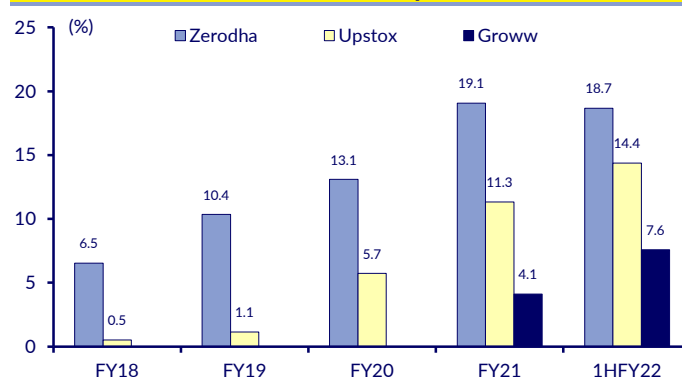
Number of NSE active clients of Top-3 fintech brokers



Source: NSE, CLSA

Figure 136

Market share in NSE active clients of Top-3 fintech brokers



Source: NSE, CLSA

Three different kinds of business models in wealth tech

Different revenue models across players

The revenue model varies among different players.

- ❑ Discount brokers charge flat fees per order punched in by the customer
- ❑ Subscription fees on advisory products (fee could be fixed or as a % of AUM managed)
- ❑ Commissions paid by product manufacturers

Some companies even distribute direct mutual funds for free and earn revenues largely from cross-sell of other products.

Several new mutual fund licenses granted in the past few months

Zerodha recently received AMC license from SEBI



New entrants in the mutual fund business

Some fintechs have integrated backwards and commenced manufacturing of mutual fund products. In addition, many non-fintech players have applied for and received mutual fund licences. Zerodha, Navi (owned by Sachin Bansal), Bajaj Finserv, NJ India Invest, White Oak Capital and Samco Securities are among a handful of players that have recently received a mutual fund licence. In addition, several others like Unifi Capital have applications pending with SEBI. Different players have different objectives and therefore, a different approach - some of them are going to have passively-managed schemes while some intend to be active fund managers.

Figure 137

Several new players have received AMC licences from SEBI

Player	Investment strategy
Navi	Passive
Zerodha	Passive
Samco Securities	Active
NJ India Invest	Passive (smart-beta)
White Oak Capital	Active

Source: CLSA

Snapshot of some of the key players

Figure 138

Zerodha snapshot

Incorporation	2010
Key Investors	Nithin & Nikhil Kamath (bootstrapped start-up)
Number of active customers (m)	5
Zerodha Coin AUM (Rsbn)	55
Profit (Rsbn, FY21)	10
Other details	40% of new customers are from Tier-II cities

Source: CLSA

Figure 139

Upstox snapshot

Incorporation	2009
Key Investors	Tiger Global, Kalaari Capital, Ratan Tata
Number of customers	5m+ (3.8m NSE active)
Number of employees	400+
Revenue/Loss (FY20)	Rs1.6bn/380m
Other details	70% of customers are first-time users; 80% of customers from Tier II/III cities

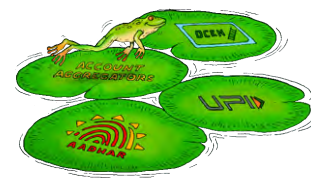
Source: CLSA, Media

Figure 140

Groww snapshot

Incorporation	2017
Key Investors	Sequoia Capital, Ribbit Capital, Tiger Global, Y Combinator
Number of customers	15m+ (2m in broking)
Number of SIPs monthly	250k
Other details	60% of customers are from smaller towns and cities and 60% of these are first-time investors

Source: CLSA, Media



No digital licences needed, focus on data protection and risk transfers

Conducive regulatory environment

A contributing factor to India's fintech development is the conducive regulatory environment. Importantly, there is no separate digital banking licence in India. The Reserve Bank of India's (RBI) payments regulations have helped ensure interoperability between bank accounts and PPIs. As collaboration rises between fintech firms, banks and non-banking financial companies (NBFC), RBI is increasingly focused on data protection. As a result, we expect to see stricter norms for risk transfers and first-loss guarantees. Unlike China, concentration risk is too low for regulatory concern.

Figure 141

Summary - fintech regulations

No separate digital banking licences	India does not currently have any separate licencing regime for digital bank/ Neobanks unlike few other Asian countries who have opted to start with digital bank licences
Payment businesses - Mandatory interoperability	Payment business have to be registered with RBI and various regulations around payment aggregators/gateways/ PPIs are applicable. Recent regulations mandate interoperability between payment instruments and RBI is incrementally focusing on customer data protection.
Lending/deposit taking - Expect some tightening in risk transfer	Lending/Deposit taking businesses are regulated through NBFC/bank licence regimes. Fintechs can also opt for NBFC licence or work on co-lending basis or just originate for banks/NBFCs. With increasing partnerships between fintechs and banks/NBFCs we expect norms around risk transfers and credit enhancements to get tightened.

Source: CLSA

Figure 142

Key regulations relating to payments and banking/lending businesses

Key Payment regulations in India	Details
Payment and settlement systems act (PSSA act), 2007	Principal legislation governing payment regulations; It requires/mandates any form of payment service to be authorized by the RBI
Payment aggregators and Payment gateways guidelines, 2020	Requires registration of payment aggregators with RBI on or before Dec 21. <i>Regulation mandated separation of marketplace business and payment aggregator business</i>
Prepaid payment instruments (PPI) 2021	Master circular on PPIs was issued in 2017 with non-bank issuers allowed semi open PPIs only. Interoperability was allowed in FY18 and <i>recent regulations mandates interoperability, has increased PPI limits and also allowed cash withdrawals</i>
MDR charges, 2018	<i>In 2019, government fixed MDR at "0" for UPI and Rupay. Debit card MDR fees was reduced to 0.4-0.9%. Credit card MDR are not restricted</i>
Key Lending regulations in India	Details
Peer to Peer lending guidelines, 2017	P2P lending is regulated through this regulation; It prescribes exposure norms and borrowing limits for P2P platforms
Payments bank guidelines, 2014	Defined the scope of activities to be undertaken by payments bank viz. accepting deposits and providing remittance services. Also established guidelines with respect to promoter /shareholding norms, capitalisation and leverage requirements for payment banks
Small finance bank guidelines, 2014	Established scope of activities permitted for SFBs (viz. providing savings vehicle and credit to small and underserved sections of society); also laid out regulations with respect to shareholding, reserve requirements, capitalisation, eligibility of applicants, etc.

Source: RBI, CLSA

India does not have digital bank licenses

RBI incrementally focusing on data protections

Expect some tightening of risk transfer norms

Payment service has to be authorized by RBI while lending for Fintech is guided by NBFC regulations or small/payment bank licenses

Recent PPI regulations can make wallets a stronger proposition

No MDR charges on UPI so payment companies must diversify

RBI mandates ecommerce marketplaces to separate payment business

Wallets/PPIs granted interoperability in 2018; recent regulations are a big change which mandates interoperability, increases cash holding limits and allows cash withdrawals from PPIs

Credit card MDR isn't restricted while debit card is restricted between 0.4-0.9%

Payment business regulations - Key changes in recent times

- ❑ Entities in payment business have to be registered with RBI governed by "Payment and settlement system act, 2007.
- ❑ **PPI regulations - Mandatory interoperability + higher limits + cash withdrawals:** The regulator has rolled out comprehensive regulations on PPIs (pre-paid payment instruments over last 3-4 years) which not only mandates interoperability and also allows cash withdrawal from PPIs - Recent changes introduced makes PPI/wallets a stronger product offering with increased limits and cash withdrawal feature. We believe cash withdrawal feature can enhance the use of wallets.
- ❑ **Recent regulations on Payment gateways/ aggregators** mandate a RBI registration for non-bank entities by Dec-21 and also mandate separation of ecommerce marketplace and payment aggregator/gateway business Paytm in its DRHP has indicated that they will have to separate the payment business from the marketplace business.
- ❑ **"0" MDR on UPI and Rupay cards:** Government fixed MDR (merchant discount rate) for UPI and rupay cards at "0", debit cards MDR is capped at 0.4-0.9% by RBI, while credit cards MDR is not capped. MDR rates on UPI being "0" makes it imperative for Fintech companies to diversifying so that they can monetise their customer base.

Figure 143

Regulations relating to payment aggregators/ gateways

- ❑ Payment aggregators (PA) are entities which facilitate ecommerce sites and merchants to accept various payment instruments
- ❑ Payment gateways are entities that provide technology infrastructure to facilitate processing of online transactions
- ❑ Non bank PAs will require authorisation from RBI under PSSA act 2007 - Existing PAs have to apply before Dec 21
- ❑ Ecommerce marketplaces have to separate this business from their marketplace business and apply for authorisation
- ❑ From Jan 22, no entity can except card issuer and card network can save customer data on online transactions- Token can be used instead of saving data to complete a transaction.
- ❑ Minimum capital requirement of Rs150-250m for Payment aggregators

Source: RBI, CLSA

Figure 144

Regulations relating to pre-paid instruments (PPIs)

Master circular on PPI regulations, 2017: Banks allowed to issue semi closed PPIs and open PPIs, while non-banks allowed to issue only semi closed PPIs. Non-bank PPI issuers to get RBI registration

2018: Guidelines for interoperability for PPI instruments - Allows PPIs/wallets to be interoperable

May-21: Mandatory interoperability for full KYC PPIs through both card networks (cards) and UPI (wallets)

- Interoperability mandatory on acceptance side as well and to be enabled by Mar 22
- Maximum amount outstanding in respect of full KYC PPIs increased to Rs0.2m from Rs0.1m
- Cash withdrawal allowed for full KYC PPIs; Upper limit of Rs2k per transaction and Rs10k per month
- All cash withdrawals to be authenticated by additional factor of authentication (like debit cards)

Source: RBI, CLSA

Figure 145

Other payment-related regulations

MDR charges/fees: In 2019, government fixed NIL MDR for UPI and Rupay. Debit card MDR fees was reduced to 0.4-0.9%. Credit card MDR are not restricted.

UPI caps on APP market share: NPCI mandated a 30% cap on UPI App market share. After breaching 30% share new customer on-boarding will need to stop/slow down

Ban on card networks: In 2018, RBI mandated all payment data to be stored locally for all card networks - Failure of that has led to ban on issuing cards by Amex, MasterCard and Diners Club

Source: RBI, CLSA

India doesn't have a neobanking licensing regime unlike some other countries

Different licensing regimes for digital banks

Digital bank Licences in India and Global comparison:

- ❑ **No separate digital/Neobanks:** India does not have any specific licensing regime for Digital/Neobanks for now and regulation applicable for banks, NBFCs and P2P lending govern Fintech lending/ banking activities.
- ❑ **For banking services,** apart from universal banks, RBI has issued payments bank licences and small finance bank licences and some of the emerging Fintech companies are registered as payment banks and could migrate to becoming small finance banks.
- ❑ **Pure lending business** can be operated by on balance sheet business by Fintechs which would need to be registered as NBFCs. Fintechs also work on co-lending basis and can also work as loan originators for banks/NBFCs. Regulations relating to co-lending and sourcing is not very clearly defined/regulated. Given that majority of Fintechs act as loan origination platforms for banks/NBFCs, regulations could evolve on scope of origination/co-lending and related credit enhancements.
- ❑ **P2P lending platforms** are governed by RBI and the 2017, NBFC P2P lending platform directions clearly define the scope/Limitation of P2P lending platforms.

Figure 146

Digital/Neobank licensing regimes



Source: CLSA

Figure 147

Global licensing regime comparison of digital/neobanks

Country	Licensing	Digital banks	Mostly linked to larger platforms
China	Issued 5 digital only bank licences in 2015	Mybank Webank Suning/ XW/ Alibank	SME bank by Ant Financials (Alibaba) Neobank by Tencent group
Korea	Issued two digital bank licence in 2017 and one in 2019	Kbank Kakao bank	Owned by telecom company KT Corporation Owned by Kakao group (social media/chat messaging) and Korea investments
Taiwan	Issued 3 Licences in 2019	Rakuten Next Line Financials Grab-Singtel	Ecommerce and Social media giant Led by Chunghwa Telecom Social media giant
Singapore	Issued Digital bank licences in Dec 2020	SEA Ant group Greenland consortium Bank Jago	Super App - Full Digital bank licence Ecommerce + Gaming giant - Full Digital bank licence Digital wholesale bank Licence Digital wholesale bank Licence
Indonesia	No distinction between digital and non-digital banks- Old banks being transformed as Digital banks		Bank Artos converted into Digital bank "Bank Jago" - Gojek (Superapp) owns 22% stake
Malaysia	29 applicants for 5 digital bank licences		
Thailand	No digital bank licences- Regulator studying the landscape		
Australia	Australia issues a restricted licence suited to Neo/Digital banks - Licence is for maximum of 2 years till the applicant is able to meet the prudential framework for bank in full		

Source: CLSA

Payment banks cannot participate in lending business

Figure 148

Regulations relating to Payments banks

Objectives: Provide savings and payments/remittance services; Can't undertake lending.

Deposits: Accept current and savings bank deposits from individuals / small businesses. Maximum balance per customer cannot exceed Rs0.1m.

Shareholding:

Promoter holding at least 40% of its paid-up equity capital for the first five years. Compulsory listing when net worth exceeds Rs5bn.

Prudential requirements:

1. Invest minimum 75% of deposits in short-term G-Secs (Max 25% in deposits with other banks)
2. Minimum capital requirement of Rs1bn
3. Minimum Total CAR of 15% of RWA of which Tier 1 CAR will be 7.5%
4. Leverage ratio of not less than 3% ie, liabilities/ net worth to not exceed 33x

Source: RBI, CLSA

Small finance banks created to accept deposits and lend to underserved

Figure 149

Regulations relating to small finance banks

Objectives: Basic banking activities of accepting deposits & lending to unserved sections.

Shareholding:

Promoter holding at least 40% for first five years; to be reduced to 26% by 12th year. Compulsory listing when net worth exceeds Rs5bn.

Prudential requirements:

1. At least 75% of past year credit to the priority sectors.
2. At least 50% of loan portfolio should constitute loans and advances of up to Rs2.5m.
3. Single and group borrower exposure limits of 10% and 15% of capital funds.
4. At least 25% of branches to be in unbanked rural centres
5. Minimum capital requirement of Rs1bn
6. Minimum Total CAR of 15% of RWA of which Tier 1 CAR will be 7.5%
7. Leverage ratio of not less than 3% ie, liabilities/ net worth to not exceed 33x

Source: RBI, CLSA

P2P lending has exposure and tenure caps

Figure 150

Regulations relating to P2P lending platforms

Old and prospective P2P operators to be registered with RBI

Minimum Net worth of >Rs20m

Restrictions: No deposit rating, No lending, no credit enhancement, no secured lending on platform, cannot hold lender/borrower money in self account and cannot cross sell except credit life products

Prudential borrowing and lending limits

1. Aggregator exposure of Lender across P2P platform of Rs5m
2. Maximum exposure for a borrower cannot exceed Rs1m across platforms
3. Exposure of one lender to one borrower cannot exceed Rs50,000
4. Maximum tenure of 36 months

Source: RBI, CLSA

Fintech regulations - Taking a leaf out of China's playbook

(A conversation with our China financials team that includes India-specific implications and comparison)

Q1. Could you give us a lowdown on China's payments market and some of its unique features?

Low fees on payments vs developed markets: Compared to developed markets like the USA, China's payment fee rate is very low (30-50bps vs 1-3%). This is mainly due to government intervention to ease the burden for merchants and help promote the electronic payment sector.

Lower fees across products: Although almost every country has intervention on payment fee rate in some kind, China's control is the most effective as it affects every part of the payment value chain: e-wallet, banks, acquirers, card network. The launch of digital Rmb will drive down payment fees even further.

Need to diversify to lending/ distribution: Low fee rate means that companies in China feel greater urgency to expand into other business lines compared to its peers in other countries. One way is to embed it into the internet services ecosystem: e-commerce, digital advertising, etc. The other way is to make it the entry point to a super financial app that can offer lending, wealth management, insurance.

Indian context: Indian regulator has brought down the MDR on debit card (low value transactions) to 0.4%, the government has put "0" MDR on UPI and Rupay but credit cards/ payment gateways continue to charge a higher MDR (2%). So while some payment businesses are remunerative in parts, a large number of payment companies have built their business models around UPI (zero MDR). Like China, this is imperative and hence they are diversifying as well.

Q2. Has there been a fair bit of regulatory tightening for fintechs in China as far as the lending segment is concerned? Could you throw some light on these and regulator's motivation behind these regulations?

Lending is profitable and has grown at a fast pace: Lending is the most profitable way to monetise traffic from payment for most companies in China. Problem is China's household leverage is not low anymore and the market is concentrated in just one or two players. Bargaining power is so huge that banks are more than willing to offer the funding to them to make the loan. As a result, the growth has been so fast and regulators are concerned. Although the asset quality stays well, they are worried potential risks in the future. Therefore, two major changes have been adopted to slow the sector down.

Marketplace vs financial institution: One is to convert the very large ones into a semi-financial institution where it is subject to capital constraints like banks. In this sense, they are not a pure marketplace for borrowers and lenders to meet but need to utilize their own balance sheet for funding.

Data protection: The other change is on data protection. It mainly targets the smaller players. Although they can continue to be the lending marketplace, regulators now require them to be the data collector without making credit assessments. The credit assessment function should be done by banks or licenced credit bureau. In that way, banks have more responsibility in terms of credit decisions and that should dis-encourage the reckless lending.

Indian context: Digital lending is just starting off and hence concentration systemic risk is lower. While some lending fintechs operate through their NBFCs (regulated entities) there are co-lending models and also just origination arrangement by Fintech with NBFC/bank partners with credit enhancements given. As digital lending grows, regulations around co-lending/ originations and credit enhancements could be relooked at by regulators.

Q3. What are some of the regulatory concerns related to wealth management and the deposit mobilisation segment?

The main concern is on two products: money market fund and bank deposits. The popularity of money market funds, which mainly invest in interbank short-term fixed income products indirectly, raises the funding cost of the entire financial system.

Regulators are also worried about the concentration risk as consumers flock to just one product promoted by the popular payment service provider. A cap is placed on the overall growth rate of money market product sold by the same platform to solve the issue.

For deposits, many regional banks rely on popular super apps to sell deposits outside their own designated region. Regulators are concerned about the spillover risks and such practice is banned entirely. Deposits therefore can only be offered by banks themselves but not by third parties.

Indian context: Deposit mobilisation is governed by banking guidelines and is at very nascent stage by fintechs just starting to get into tie-up with smaller banks. Even large brands like Paytm's deposit mobilisation has been quite gradual, so we don't see any regulatory risk there. Wealth distribution share of fintech companies have increased but the products are mostly over the counter mutual funds/ insurance schemes by well-regulated players and again we see no concentration risk here.



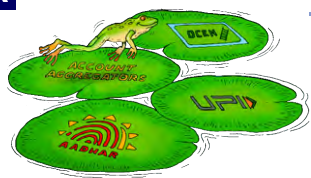
Hans Fan

Deputy Head of HK/China Research &
Head of China Financial Research



Ethan Wang

Research Analyst,
China financials and fintech



Payments are the largest contributor to market value

220 global fintech unicorns valued at US\$2tn

Fintech unicorns are almost equally divided between listed and private

US contributes +50% of fintech unicorns; India ranks 4th

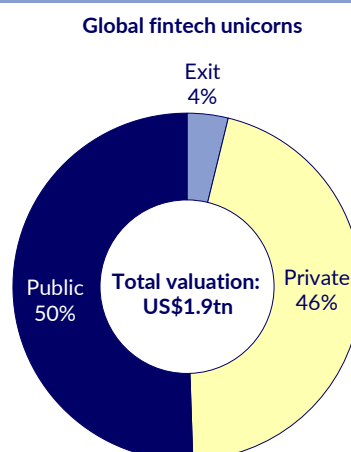
Monetisation key to value

Fintechs currently represent c.2% of global/Indian market value, with payments being the largest contributor. Globally, fintechs are valued at 20-80x revenue. The key to sustainable value creation lies in monetising the customer base.

Fintech companies have gained prominence with about 220 fintechs globally attaining unicorn status with an estimated total valuation of US\$2tn (either based on listed market capitalisation or last deal valuations), forming more than 2% of global market capitalisation. Of this, 50% (by valuation) are already publicly listed with listed market capitalisation of c.US\$1tn. The India fintech space is finally seeing listings for prominent players and with significant diversity in the fintech ecosystem here, we believe fintechs with a clear path to revenue/profitability will continue to gain prominence.

Figure 151

Global fintech unicorns valued at c.US\$2tn

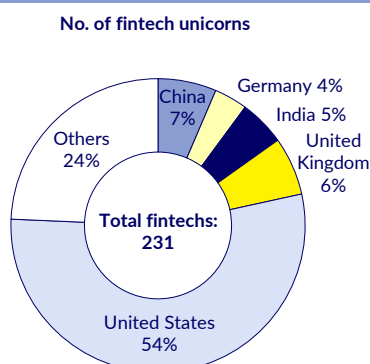


Source: Fintechlabs, CLSA

By country: The USA has the largest number of fintech companies, contributing more than 50% by number as well as value via fintech unicorns. India ranks No.4, with 14 Fintech unicorns valued at c.US\$50bn and the space is fast expanding, both in terms of number and size of fintech companies. India's overall fintech count is much larger and the unicorn count is now close to China/the UK.

Figure 152

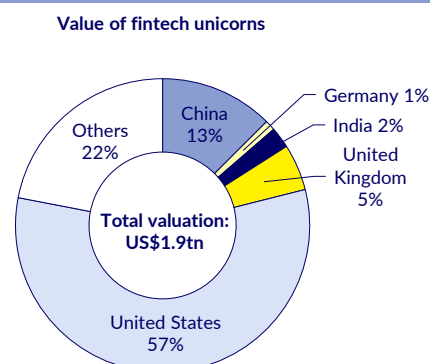
Country contribution of fintechs (by nos.)



Source: Fintechlabs, CLSA

Figure 153

Country contribution of fintechs (by valuation of fintechs)



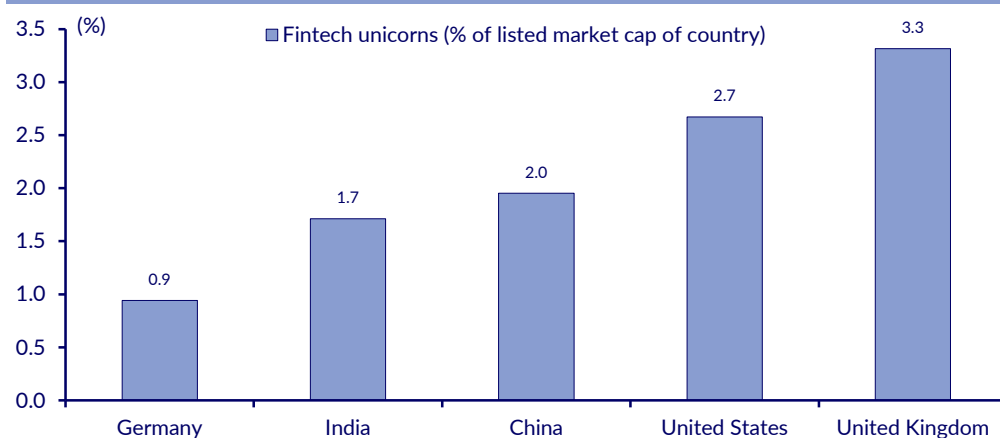
Source: Fintechlabs, CLSA

Fintech unicorn valuations are 1-3% of overall listed market cap of top countries

Payments segment contribute maximum unicorns

Figure 154

Fintech companies' valuation as % of listed market cap for some of top fintech nations

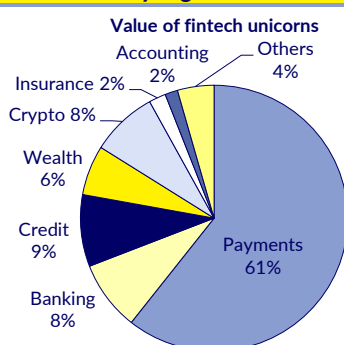


Note: Based on 2020 market capitalisation. Source: World Bank, Fintechlabs, CEIC, CLSA

Payments is the big space followed by neobanks/crypto/lending and wealth: Payments contribute +30% by number of unicorns but a larger +60% of the global value of fintech companies. The next largest segments of neobanking, Crypto, lending and wealth form each form 6-9% by value. Other segments like accounting/ analytics/ insuretech/ payroll etc constitute 8% of value of fintech unicorns.

Figure 155

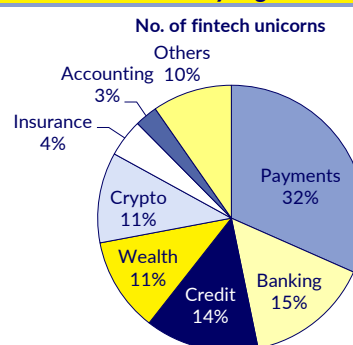
Value of fintech unicorns by segment



Source: Fintechlabs, CLSA

Figure 156

Percentage of fintech unicorns by segment

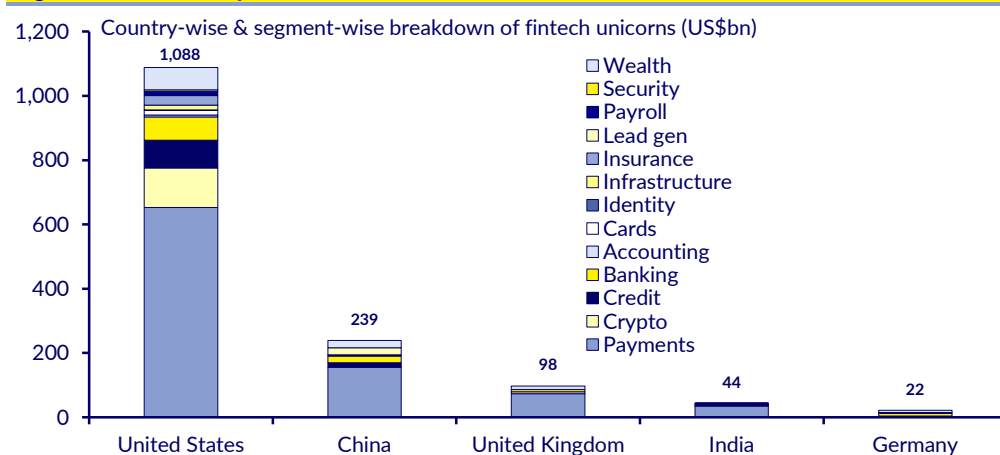


Source: Fintechlabs, CLSA

Payments, followed by credit and banking, form the bulk of fintech landscape

Figure 157

Segment breakdown by market



Source: Fintechlabs, CLSA

The USA contributes five of the global top-10 fintech unicorns

Figure 158

Top-20 global fintech companies				
S. No.	Company	Value (US\$bn)	Country	Sub-category
1	PayPal	337	United States	Payments
2	Ant Technology	150	China	Payments
3	Square	116	United States	Payments
4	Adyen	96	Netherlands	Payments
5	Stripe	95	United States	Payments
6	Coinbase	67	United States	Crypto
7	Klarna	46	Sweden	Payments
8	Robinhood	35	United States	Investing
9	Revolut	33	United Kingdom	Payments
10	Nubank	30	Brazil	Banking
11	Afterpay	29	Australia	Lending
12	Bill.com	28	United States	Payments
13	KakaoBank	28	South Korea	Lending
14	Chime	25	United States	Banking
15	Affirm	24	United States	Lending
16	Nuvei	23	Canada	Payments
17	Xero	22	New Zealand	Accounting
18	Lakala	22	China	Lead gen
19	WeBank	21	China	Banking
20	Lufax	21	China	Investing

Source: Fintechlabs, CLSA

Fintech universe in India materially larger than just the unicorns

India - Big universe of Fintech beyond the unicorns: Given India's unparalleled digital infrastructure (India Stack) and various enablers in place, Indian Fintech space is expanding very fast with +2,000+ Fintech companies in India and the space is materially larger than what is represented by the unicorns.

Figure 159

Fintech universe in India materially larger than represented by just the unicorns			
	India	USA	USA/India (x)
No. of fintechs	2,000+	10,000+	c.5x
No. of fintech unicorns (by nos.)	14	118	c.8x
No. of fintech unicorns (by value)	54	1088	c.20x

Source: Statista, Fintechlabs, CLSA

USA has 5x the number of fintechs vs 20x the valuation

India has 14 fintech unicorns

Figure 160

India fintech unicorns			
Company	Value (US\$bn)	Founded	Sub-Category
One97 (Paytm)	16	2010	Payments
PhonePe	5.5	2015	Payments
BillDesk ¹	4.7	2000	Payments
CRED	4.0	2018	Credit
PolicyBazaar	3.5	2008	Insurance
Digit Insurance	3.5	2016	Insurance
PineLabs	3.0	1998	Payments
RazorPay	3.0	2014	Payments
Groww	3.0	2017	Wealth
BharatPe	2.9	2018	Payments
Coinswitch	1.9	2017	Crypto
Zeta	1.5	2015	Banking
CoinDCX	1.1	2017	Crypto
Acko	1.1	2016	Insurance

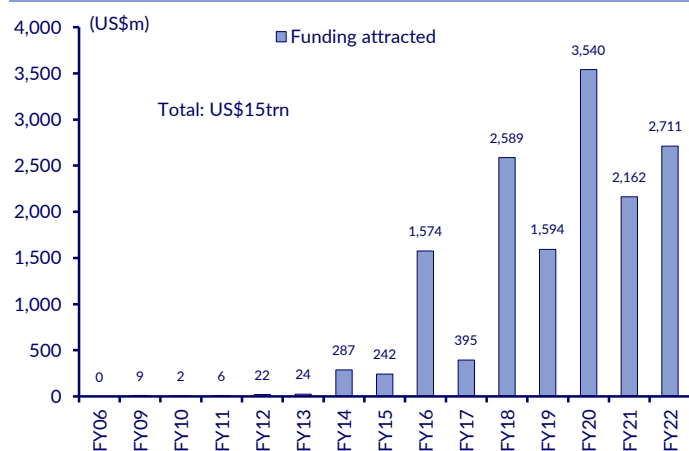
¹ To be acquired by PayU. Source: Fintechlabs, CLSA

80% of fintech fund raise happened post FY18

Deal activity picked up pace in last 2-3 years: There has been a significant amount of fintech deal activity across various sub-segment and sizes in India. We estimate that Indian fintechs have raised over US\$15bn with more than 80% of that raised from FY18. Fintechs have raised between US\$1.5-3.5bn in India over FY18-21 annually and raised more than US\$2.7bn in the first five months of FY22.

Figure 161

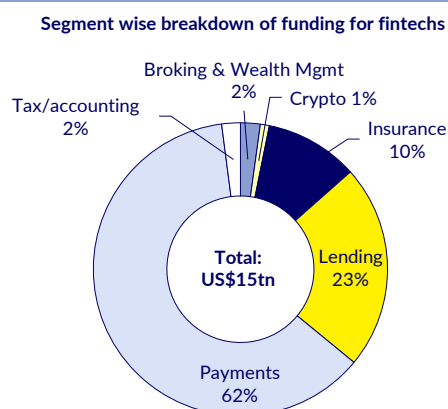
India fintech deals on the rise



Source: Crunch base, CLSA

Figure 162

Payments, lending and insurtech lead deals



Source: Crunch base, CLSA

Fintech valuations vary based on operating segment and geography

Global valuations: We map global fintech valuations in the table below for various fintech segments. Payments companies trade between 20-80x FY21 revenue and 40-175x FY21 earnings. BNPL companies trade at 35-40x FY21 revenues. Neobanks trade at US\$1000-3000 per customer. Robinhood, a US based fintech broking company trades at 12x FY21 revenues.

Figure 163

Global valuations - Fintechs

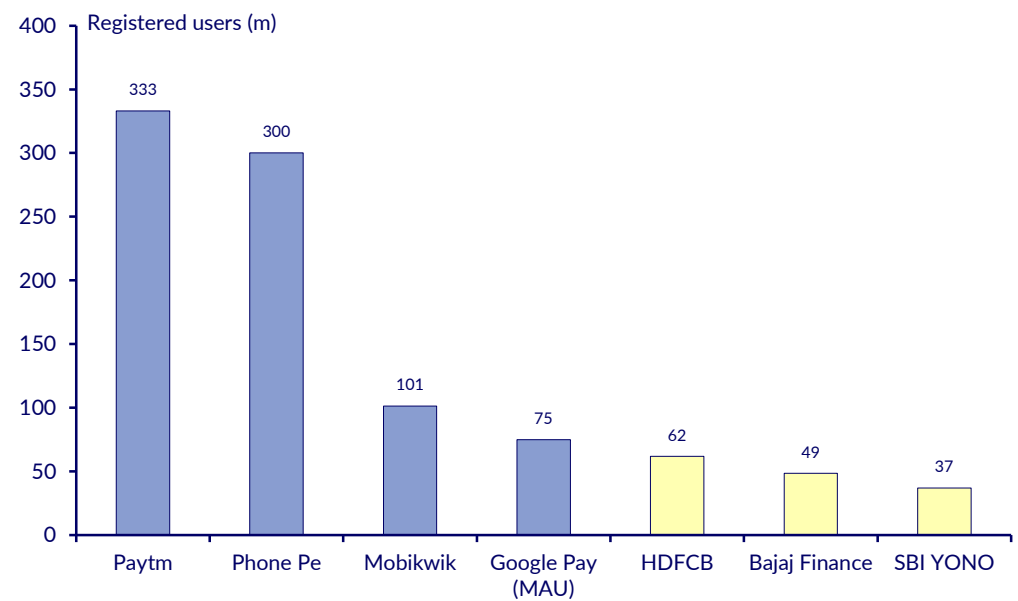
Company	Country	Segment	Estd.	Valuation (US\$bn)	Revenue (US\$m)		PAT (US\$m)		Mcap/ net revenues		Mcap/ earnings	
					FY20	FY21	FY20	FY21	FY20	FY21	FY20	FY21
Payments												
Adyen	Netherlands	Payment acceptance	2006	95	809	1,183	300	542	117.3	80.3	316.3	175.4
Square	USA	Payment acceptance	2009	116	1,383	2,740	375	995	84.2	42.5	310.4	117.0
Stripe ¹	Ireland/USA	Payment gateway	2011	95.0	7,400	na	na	na	12.8	na	na	na
VISA	USA	Card payment network	1958	507	21,746	24,049	11,118	12,650	23.3	21.1	45.6	40.1
Mastercard	USA	Card payment network	1966	354	15,424	18,851	6,334	8,060	22.9	18.8	55.8	43.9
PayPal	USA	Diversified payments	1998	318	13,490	16,221	4,503	5,600	23.5	19.6	70.5	56.7
Company	Country	Segment	Estd.	Valuation (US\$bn)	Revenue (US\$m)		GMV (US\$bn)	Loans (US\$bn)	Mcap/ net revenues		Mcap/ GMV	Mcap/ Loans
					FY20	FY21			FY20	FY21		
BNPL												
Klarna	Switzerland	BNPL	2005	45.6	1,330	NA	53	5.3	34.3	na	0.9	8.6
Afterpay	Australia	BNPL	2014	26.9	387	706	8	0.6	69.5	38.1	3.2	46.0
Affirm	USA	BNPL	2012	42.8	835	1,216	8.3	1.90	51.2	35.2	5.2	22.5
Company	Country	Segment	Estd.	Valuation (US\$bn)	Revenue (US\$m)		Customers (m)	Mcap/ cust (US\$)	Mcap/ net revenues			
					FY20	FY21			FY20	FY21		
Neobanks												
Revolut	UK	Consumer/SME	2015	33.0	307	na	15.0	2,200	108	na		
Nubank	Brazil	Consumer/SME	2013	30.0	na	na	40.0	750	na	na		
KakaoBank	S. Korea	Consumer	2016	24.7	361	554	16.5	1,498	68	45		
Chime	USA	Consumer	2013	14.5	na	na	5.0	2,900	NA	NA		
Jago Bank	Indonesia	Consumer/SME	1992	13.2	6.4	26.9	0.5	26,400	2,066	491		
Company	Country	Segment	Estd.	Valuation (US\$bn)	Revenue (US\$m)		Customers (m)	Mcap/ cust (US\$)	Mcap/ net revenues			
					FY20	FY21			FY20	FY21		
Wealth												
Robinhood	USA	Broker	2013	35.0	959	2,828	22.5	1,553	36.4	12.4		

Note: Valuations/market cap as of 18-Oct-2021 or last available; ¹ Estimated TPV based on take rate; yellow shaded companies are listed.

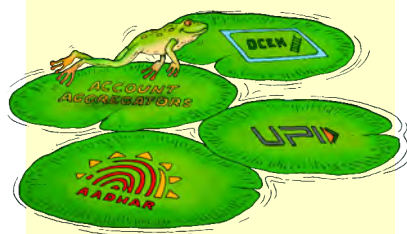
Source: Companies, Bloomberg, CLSA

Fintechs have amassed huge customer bases, exceeding traditional banks

Figure 164

Indian fintech: User base vs incumbent players

Source: Companies, CLSA



Company profiles

Acko.....	77
BharatPe.....	79
CRED	81
Go Digit	82
Google Pay.....	84
Mswipe.....	85
Pay U / Billdesk.....	86
Phonepe	87
Pine Labs.....	89
Razor Pay	91

Notes





Acko (Digital insurer)

Background and vision:

Established in 2016, Acko is India's first digital-only insurer. Since its founding, Acko has acquired c.60m unique customers and delivered 800m policies. The company had total gross premiums of Rs4.2bn in FY21, which has grown over 400x in the last three years. Acko's target segment is largely 100m digital transacting customers in the age bracket of 19-45, 90% urban with income of >US\$800-1000 per month.

Established (year)	2016
Total users (m)	60
No. of policies (m)	800
Money raised (US\$m)	464
Last valuation (US\$m)	1,100

Health and auto policies offered by Acko

Founders and key management

Name	Role	Background
Varun Dua	Founder, MD & CEO	More than 10 years' experience in insurance industry; co-founded Coverfox Insurance Broking Pvt. Ltd.
Ruchi Deepak	Founder & Non-Executive Director	Global experience working in both India and the UK; has advised on financing, exits, IPO and strategic matters in a career spanning 11 years.
Jitendra Nayyar	CFO	About 28 years of finance leadership and business partnership experience, in various industries including insurance, telecom, FMCG etc.

Source: Company, CLSA

Products and services offered:

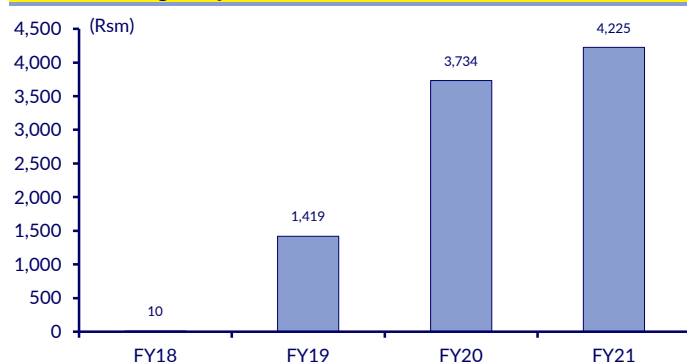
Insurance solutions offered

Car & Taxi	Bike	Health	Electronics
Comprehensive plan	Comprehensive plan	Aarogya Sanjeevani	Mobile protection
Third party	Third party	Group cover	Appliance protection
Commercial			

Source: Company, CLSA

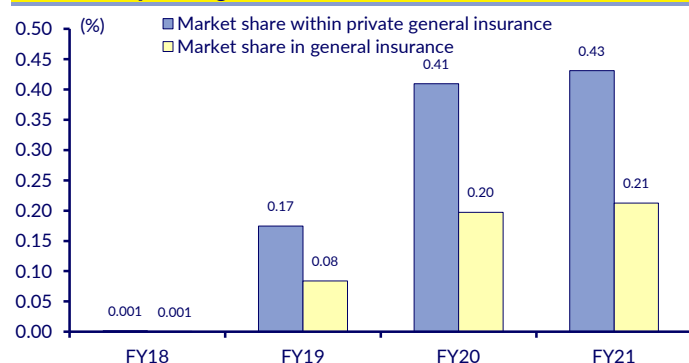
Key financial parameters:

Acko General: gross premiums



Source: IRDAI, CLSA

General and private general insurance market share



Source: IRDAI, CLSA

Motor premiums formed 70% of book in FY19-20

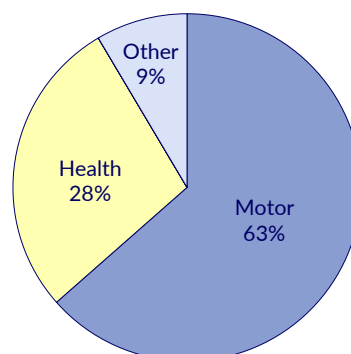
Acko General: product mix

(Rsm)	FY19	FY20	FY21
Motor	753	2,187	2,683
Health	304	959	1,183
Fire	-	-	0.1
Marine	-	-	-
Other	-	-	360
Total	1,057	3,146	4,225
(%)			
Motor	71	70	63
Health	29	30	28
Fire	0	0	0
Marine	0	0	0
Other			9

Source: Company, CLSA

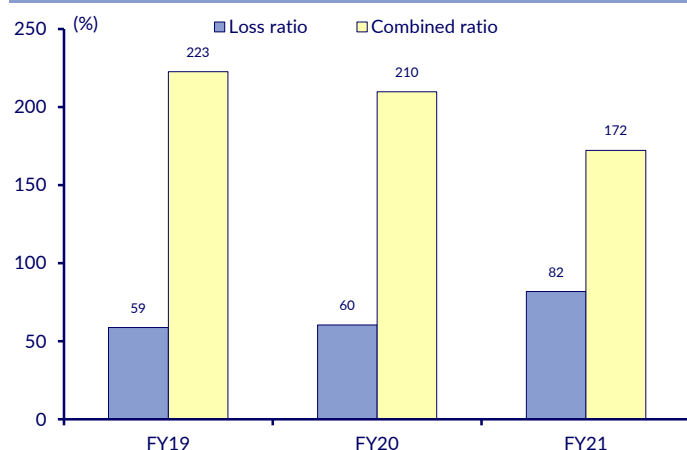
Company primarily operates in employee group health segment

Acko general insurance product mix



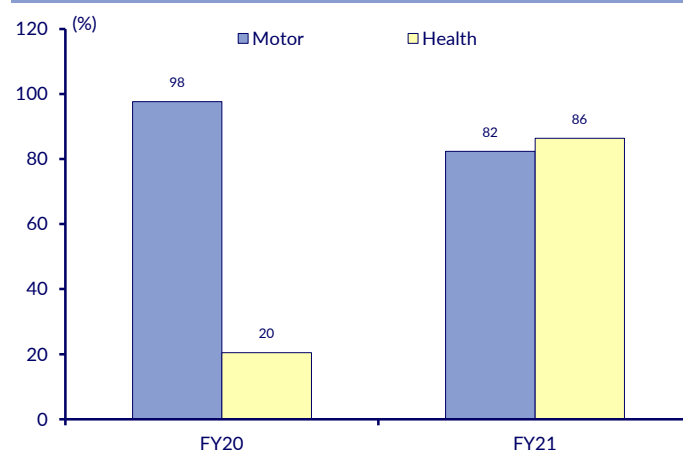
Source: Company, CLSA

Combined ratio declining trend



Source: Company, CLSA

Loss ratio - spike in health in FY21, motor loss ratio declined



Source: Company, CLSA

Auto to breakeven by next year while health business to take 3-4 years

Way forward:

For Acko's motor book, first year acquisition costs were 40% higher than traditional insurers at 20-25%. With negligible renewals costs and 70% renewal rates, the company's lifetime unit economics stacks up better than traditional players. In addition, over time its 40% acquisition cost are expected to come down. On a blended basis, the company expects to breakeven in auto business by next year. On the health side, breakeven will take longer - at about 3-4 years from now.



Established (year)	2018
Total users (m)	na
MAU (m)	na
Merchants (offline)	7.5m
Annual GPV (US\$bn)	12
Money raised (US\$m)	688
Last valuation (US\$m)	2,850

BharatPe offers lending, payments and P2P investments

BharatPe aims to triple POS volumes by FY22 and scale up lending business by 6x in next 1-2 years

BharatPe (Merchant payments & financing)

Background and vision:

BharatPe positions itself as a one-stop business/utility app for offline small businesses in India. It offers merchants a single QR code to accept payments across various apps/platforms for free and also provides loans products/value-added solutions. The company is a leader in offline UPI payments to merchants, reaching over seven million merchants in 140 cities and intends to expand to 300 cities over next two years. It is also diversifying into lending and consumer segments. As of Mar-21, it disbursed Rs12bn of loans to merchants and intends to grow that by 8-10x by Mar-23.

Company history and journey:

Company history

Date	Milestone
2018	Founded in Apr 2018; launched merchant focused QR code
2019	Entered the SME lending segment
2020	Launched BharatPe Swipe POS machine
2021	<ul style="list-style-type: none"> - Acquired Payback for US\$27m - Launched P2P lending platform - '12% Club' app - Launched small finance bank in partnership with Centrum Group - Launched BNPL product called Postpe

Source: Company, CLSA

Founders and key management

Name	Role	Background
Ashneer Grover	CEO & Co-founder	IIT Delhi graduate; prior association with Grofers (CFO) & Amex
Shasvat Nakkani	Co-founder	IIT Delhi dropout

Source: Crunchbase, CLSA

Products and services offered:

Products and solutions offered

Payments & acceptance	Lending	P2P investments
QR codes	Collateral free lending of up to Rs0.7m for SMEs	P2P lending and investments via 12% Club app
POS machines	BNPL solutions	
Bill payments		

Source: Phonepe, CLSA

Business targets envisaged by the company

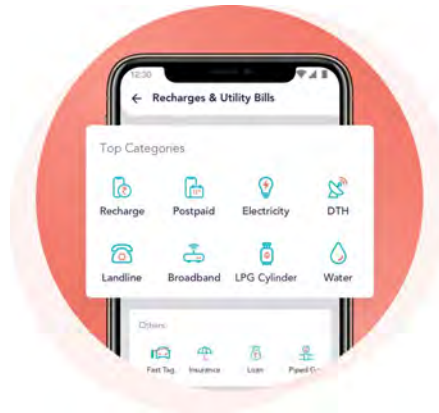
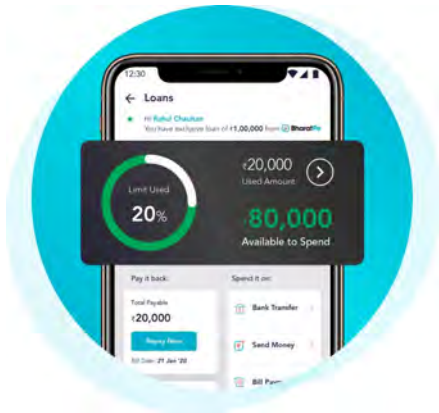
	Current	Target
Merchants	7m	20m
QR code volumes	US\$10bn	NA
Cities present	140-150	400
POS volumes	US\$2bn	US\$6bn by FY22
POS terminals	0.1m	0.3m by FY22
Lending	0.15m merchants	1.0m merchants by FY22-23F
Lending book	US\$150m	US\$750m in 2 years

Source: Company, CLSA

Bharatpe offers unsecured loans . . .

Bill payments for customers

POS machines introduced in 2020



Source: Company, CLSA

Bharatpe is setting up SFB in collaboration with Centrum

Merchant remains the key focus area for Bharatpe

Recent developments:

- ❑ BharatPe and Centrum Group (NBFC) to set up a joint venture with a Small Finance Bank (SFB) licence, which will take over troubled PMC Bank; SFB will aim to focus on small merchants. ([link](#))
- ❑ BharatPe acquired Payback in Jun-21 to roll out rewards/loyalty programs for its merchant base. ([link](#))
- ❑ Forays into P2P lending segment via launch of 12% Club app ([link](#))

Key strategic priorities:

- ❑ BharatPe's key priority will be to continue to expand the merchant network.
- ❑ The number two priority is to both scale existing credit products and launch new credit products for merchants. Until now, it only had unsecured products but it is launching secured lending products as well.
- ❑ The third priority is to get the bank (PMC) up and running and then launch the consumer business. It has already launched a BNPL product called Postpe.



Established (year)	2018
Customer base (only 750+ credit score)	7.5m
UPI value mkt share	c.1.3%
Lending book (Rsbn)	24
Money raised (US\$m)	690
Last valuation (US\$m)	4,000

CRED (Credit card bill payment)

Background and vision:

Established in 2018 by Kunal Shah (ex-Freecharge founder), CRED is a credit card repayment company that has since made forays into payments, unsecured personal loans and, more recently, into P2P lending. The company enables its customers to earn rewards by making timely credit card bill repayments. CRED also partners with various premier and luxury brands, wherein its users can redeem their rewards to purchase goods and services from these brands.

Company history and journey:

Company history

Date	Milestone
2018	Launches the company as a credit card repayment platform
2020	Launches CRED Cash - offering short-term credit lines for customers
2020	Launches CRED Max - utility/rent bill payment platform
2021	Launches CRED Mint - P2P lending / investment platform

Source: Company, CLSA

Products and services offered:

Credit card bill repayments: CRED offers its users ease of credit card bill payments by providing them timely reminders about payments. It offers rewards to its customers for making timely repayments.

Payment services including UPI payments, rent payments, etc.: CRED offers its users the ability to make rent payment on credit cards. CRED is now also offering UPI payments for several online merchants.

Credit distribution / P2P loans & investments: CRED enables its customers to avail personal loans by offering them a pre-approved line of credit based on their spend patterns in partnership with registered banks/NBFCs. Recently, it has also entered P2P lending/investments in partnership with another NBFC - 'Liquiloans'.

Marketplace for premium / luxury brands: CRED also offers an online marketplace in partnership with various luxury/premium brands, wherein its users can redeem their reward points for shopping.

Spend analyser: CRED also offers credit card spending tracking and management feature, which provides the user an analysis of spending and usage efficiency for the card. CRED also allows its users to check their credit score for free.



Go Digit (Digital insurer)

Background and vision:

Go Digit is a digital general insurance company set up in 2017 with the objective of simplifying all facets of insurance from purchase to claims. It is the 32nd general insurance company to receive a licence from IRDAI and is backed by Fairfax. Go digit has rapidly scaled up business and has serviced over 20m customers in the past five years. Gross premiums in FY21 stood at Rs24bn, with more than 80% of premiums from the motor insurance business.

Established (year)	2017
Total users (m)	20
Premiums, FY21(Rsbn)	24
Money raised (US\$m)	461
Last valuation (US\$m)	3,500

Go Digit's suite of insurance products

Founders and key management

Name	Role	Background
Kamesh Goyal	Founder & Chairman	Ex- CEO of Bajaj Allianz General & Life Insurance and over 35+ years' experience in the insurance industry
Vijay Kumar	Director, CEO & Principal Officer	15+ years' experience in the insurance industry; formerly worked with Bajaj Allianz General Insurance
Ravi Khetan	CFO	12+ years' experience with Bajaj Allianz General Insurance

Source: Company, CLSA

Products and services offered:

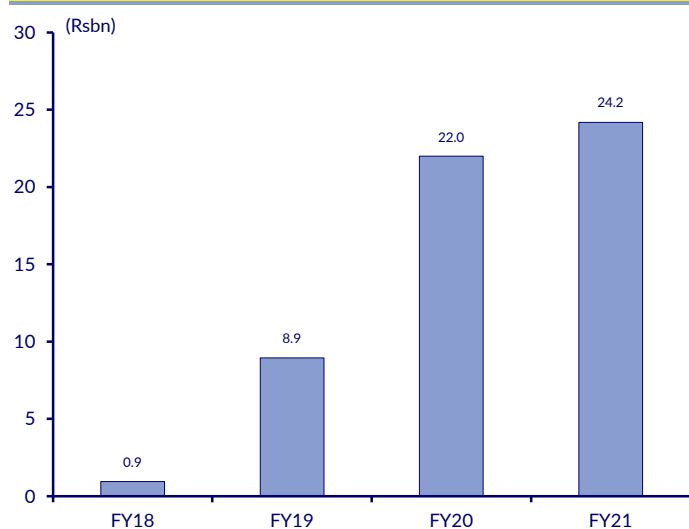
Insurance solutions offered

Motor	Health	Other
Car	Aarogya Sanjeevani	International travel
2W/Bike	OPD	Flight delay
Commercial vehicle	Personal accident	Shop insurance
Taxi/Cab	Corporate health	Home insurance
Auto rickshaw		
Truck		

Source: Company, CLSA

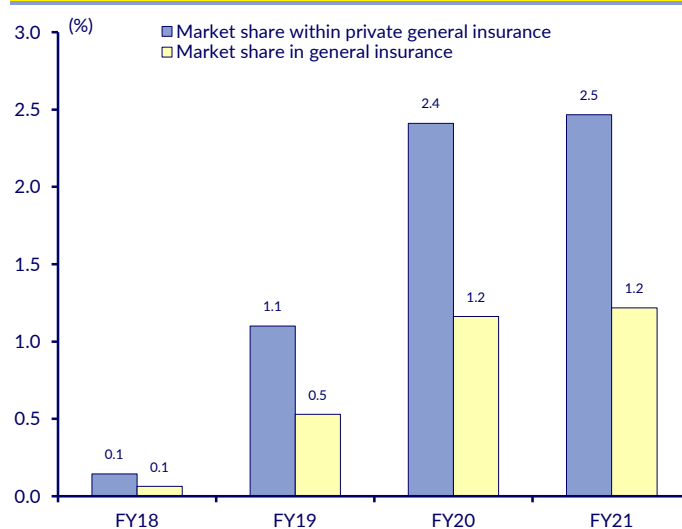
Key financial parameters:

Go Digit gross premiums



Source: IRDAI, CLSA

General and private general insurance market share



Source: IRDAI, CLSA

Share of health insurance rose to 8% in FY21

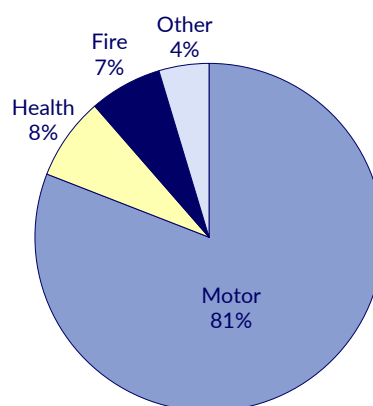
Greater presence in corporate health, also sells retail health and PA

Go Digit product mix

(Rsm)	FY18	FY20	FY21
Motor	747	16,495	19,573
Health	29	355	1,860
Fire	138	424	1,622
Marine	17	19	10
Other	7	4,693	1,125
Total	938	21,985	24,189
(%)			
Motor	80	75	81
Health	3	2	8
Fire	15	2	7
Marine	2	0	0
Other	1	21	5

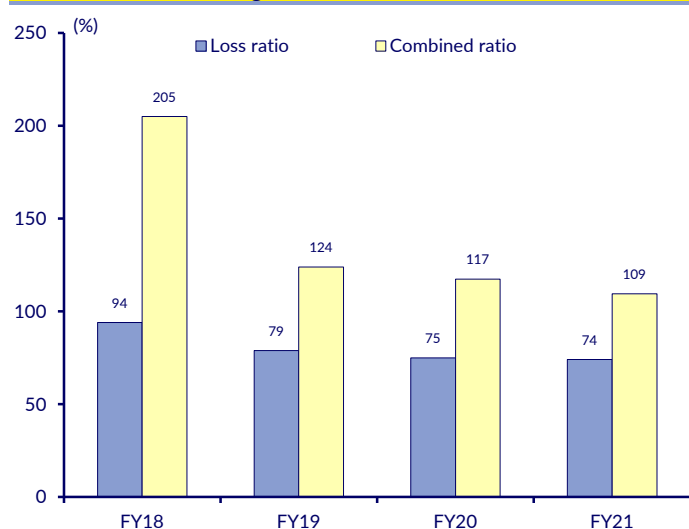
Source: Company, CLSA

Go Digit insurance product mix



Source: Company, CLSA

Combined ratio declining trend



Source: Company, CLSA

Loss ratio - spike in health in FY21, stead motor loss ratio



Source: Company, CLSA



Monthly active users	75m
Share in UPI (value)	38%
Google Pay downloads	500m+
Google Pay business downloads	10m+

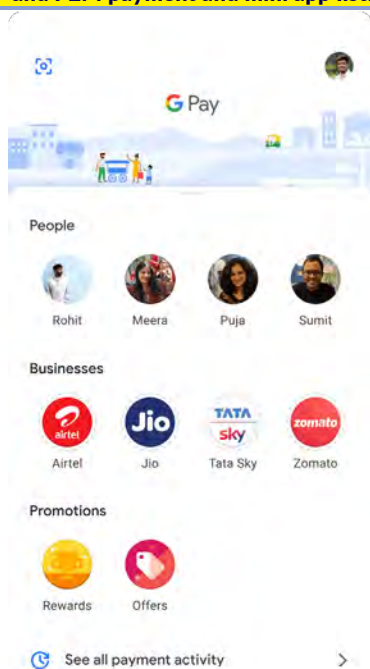
Google Pay (Payments)

Background and vision:

Set up by Google, Google Pay is a leading payment app in India with c.40% market share in UPI payments (by value). Google Pay enables peer-to-peer (P2P) and person-to-merchant (P2M) payments, both online and offline, through UPI. It also has added functionalities to allow merchant payments via debit/credit cards. In addition, online and offline businesses are able to set up mini app listings on the app itself.

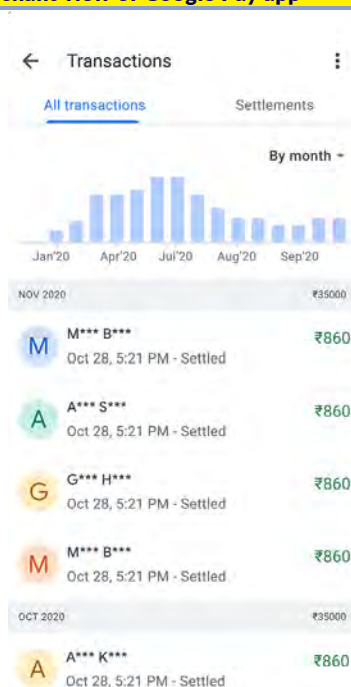
Products and services offered:

P2P and P2M payment and mini app listings



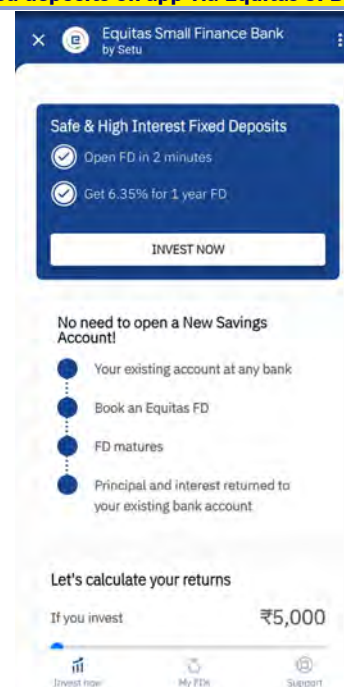
Source: Google Pay

Merchant view of Google Pay app



Source: Google Pay

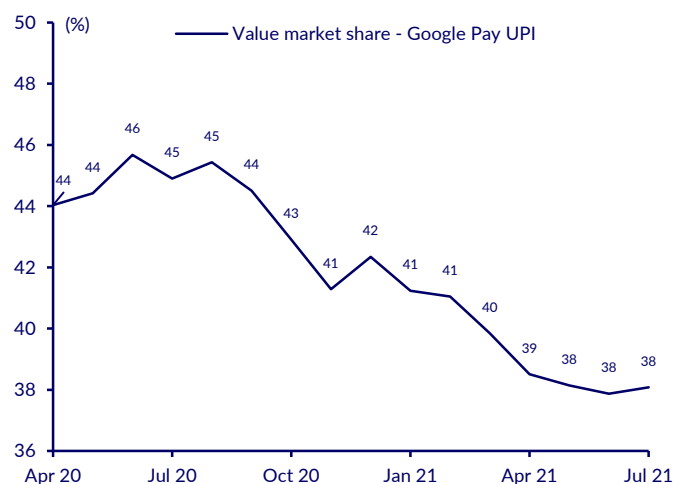
Fixed deposits on app via Equitas SFB



Note: Google Pay recently partnered with Equitas Small Finance Bank. Source: Google Pay

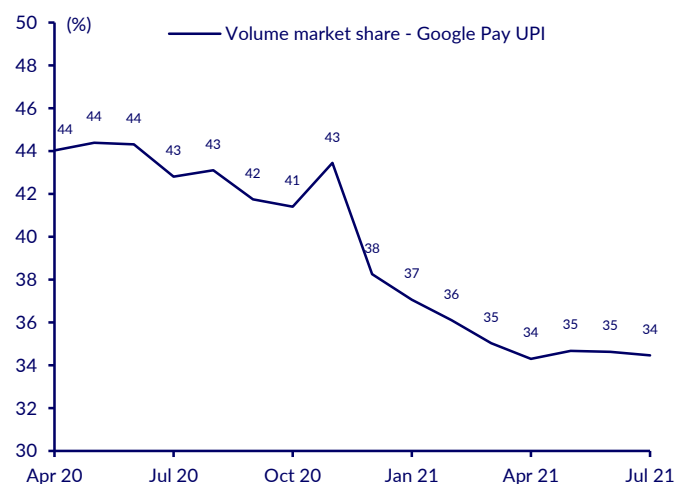
Market share in UPI:

Google Pay: Value market share



Source: NPCI, CLSA

Google Pay: Volume market share



Source: NPCI, CLSA



Established (year)	2011
Total merchant base	1m
POS base	550k
POS market share	c.12%
Money raised (US\$m)	103
Last valuation (US\$m)	450
Management details:	
Manish Patel	Founder/MD
Ketan Patel	CEO
Amit Gala	CFO

Mswipe caters to mid to small tier merchants

Mswipe (POS payment system provider)

Background and vision:

Established in 2011, Mswipe is primarily a payment acceptance solution provider with a 10m merchant base and a 550k POS base (c.12% POS market share); it targets merchants in the mid to bottom part of the overall pyramid. Of late, the company has also secured an NBFC licence through which it aims to provide working capital credit to its merchant customers. It also facilitates consumer credit by coordinating between brand, merchant, consumer and the credit provider.

Company history and journey:

Company history

Date	Milestone
2011-12	Company established; launches its POS solution offerings
2014	Launches transaction processing gateway
2015	Launches POS loans
2017	Launches smart POS terminals
2018	Launches in-house switch
2019	Launches value added platforms like EMI card, brand portal, etc.
2021	Launches its own NBFC for providing merchant credit

Source: Company, CLSA

Products and services offered:

- ❑ **Payment acceptance solutions:** for accepting payment digitally via POS machines, QR-code integration as well as link-based payments.
- ❑ **Merchant business / financing solutions:** Mswipe also provides business solutions for merchants, such as working capital credit, invoicing and analytics.
- ❑ **Facilitate lending to merchant's consumer:** Mswipe partners with brands, merchants and credit providers (banks/NBFCs) to facilitate consumer credit.

Key insights and way forward:

- ❑ The company targets mid-to-small merchants within the merchant pyramid. The top end of the pyramid (c.1.5m merchants) consists of merchants with established banking relationships.
- ❑ Mswipe holds the key in its relationship with merchants as it has not tied up with any bank and the relationship is initiated by Mswipe and not a bank.
- ❑ It charges merchants a fixed fee for POS installation and a variable fee on a per payment basis.
- ❑ Mswipe has recently opened an NBFC (in Jan-21) with a focus on providing merchant working-capital financing for its merchant partners.
- ❑ The company believes the payment acceptance relationship is the enabler but providing merchant credit will be key to monetisation.



Established (year)	2011
Total merchants	450k
Annual transaction volume (US\$bn)	25
Loan disbursements	US\$20m
Market share in ecommerce transactions	50%
Money raised (US\$m)	na
Last valuation (US\$m)	na

PayU acquired Paysense for its consumer lending

PayU recently acquired BillDesk for US\$4.7bn

PayU has invested in various fintechs in India

Pay U / Billdesk (Payment gateway provider)

Background and vision:

PayU is the payments and fintech business of Prosus, a global consumer internet group and one of the largest technology investors in the world with a presence in 20 countries. PayU provides payment gateway solutions to online businesses. In India, PayU serves more than 4,500,000 merchants with over 100+ payment methods. Recently, PayU acquired BillDesk in an all-cash transaction deal for US\$4.7bn - it was the largest ever acquisition in India's payments ecosystem.

Company history and journey:

Company history

Date	Milestone
2011	PayU Payment Gateway launched by ibibo
2012	Management team hired to service outside players
2014	PayU India founded - original business demerged from ibibo
2016	PayU buys Citrus Pay for US\$130m
2017	LazyPay launched; acquired stake in ZestMoney and PaySense
2018	PayU India's payments becomes profitable; achieves US\$100m revenue milestone
2018	Acquired NBFC licence for credit business
2020	Acquired PaySense for US\$185m
2021	Acquires BillDesk - India's oldest payment gateway provider - for US\$4.7bn

Source: Company, CLSA

Recent updates on PayU:

- ❑ PayU is a leading payment gateway services provider with c.50% share in ecommerce related payments. The company has partnered with most large ecommerce players, including Airbnb, Netflix, Myntra, Bookmyshow, and many smaller players as well.
- ❑ PayU recently concluded one of the largest ever deals in the Indian payment space by acquiring BillDesk for US\$4.7bn. Together, both entities will be able to process c.4bn transactions annually.
- ❑ Billdesk, founded in 2000, is the perhaps the oldest payment platform (B2B2C) in India. As per media articles ([link](#)), PayU might take BillDesk to international markets.
- ❑ PayU previously expanded its business in India via the inorganic route by acquiring Pay Sense (consumer lending platform) for US\$185m in 2020 and payment company Citrus Pay for US\$130m in 2016.
- ❑ PayU also recently invested US\$12m in Indiagold, a gold-focused alternative credit platform.



Established (year)	2015
Total users (m)	300
MAU (m)	125
Merchants (offline)	20m
Money raised (US\$m)	1,200
Last valuation (US\$m)	5,500

Founded by ex-Flipkart employees

Phonepe offers wide variety of payments, merchants and financial services

Phonepe (Payments and platforms)

Background and vision:

Phonepe is an Indian digital payments and financial services player with dominant market share in various payment systems such as UPI, bill payments and ecommerce. The company's vision is to build a large, scalable and open transaction ecosystem to address the needs of every Indian consumer to achieve its mission of having 500 million Indians adopt digital payments by 2023.

Company history and journey:

Company history

Date	Milestone
2016	Flipkart acquires Phonepe; Phonepe App goes live
2017	1st UPI app with 10m downloads; 1m transaction per day milestone achieved
2018	Crosses 1bn transactions on the app
2019	Crosses 2bn transactions on the app
2020	<ul style="list-style-type: none"> - Phone Pe ATM goes live in 1m stores in 300 cities - Launched 9 mutual fund curated product offerings - Launched insurance sales - Becomes fastest growing insurtech distributor with 0.5m policies in 5 months - Crosses 250m users mark with +40% UPI market share

Source: Company, CLSA

Founders and key management

Name	Role	Background
Sameer Nigam	Founder & CEO	MBA from Wharton School; served at Flipkart from 2011-15
Rahul Chari	Founder & CTO	Masters from Purdue University; ex-Flipkart
Burzin Engineer	Founder & Chief reliability officer	Masters from Univ of South Carolina; prior exp with Mallers

Source: Crunchbase, CLSA

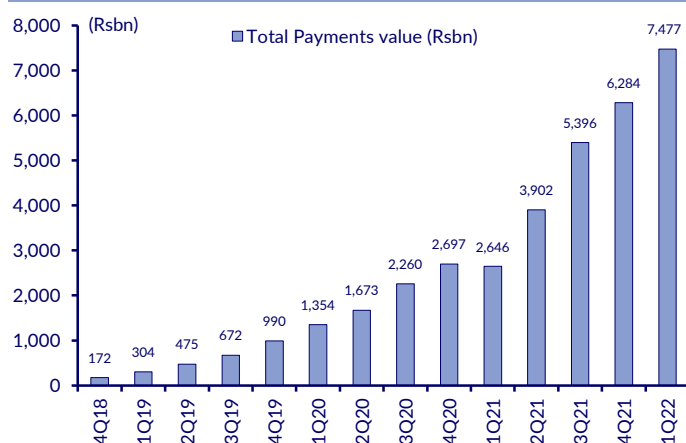
Products and services offered:

Products and solutions offered

Payments	Other financial services	Business offerings
UPI	MF investments	Phonepe Switch (apps listings)
Recharges and bill payments	Insurance distribution	Payment acceptance solutions
P2P	Investments in gold	Advertising solutions
Wallets	Account aggregator	
Debit & credit cards		
Ecommerce solutions		

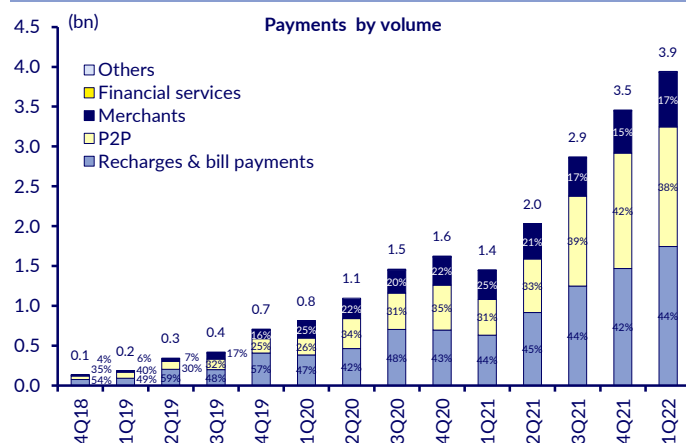
Source: Phonepe, CLSA

Phonepe currently processes Rs7.5tn of quarterly payments

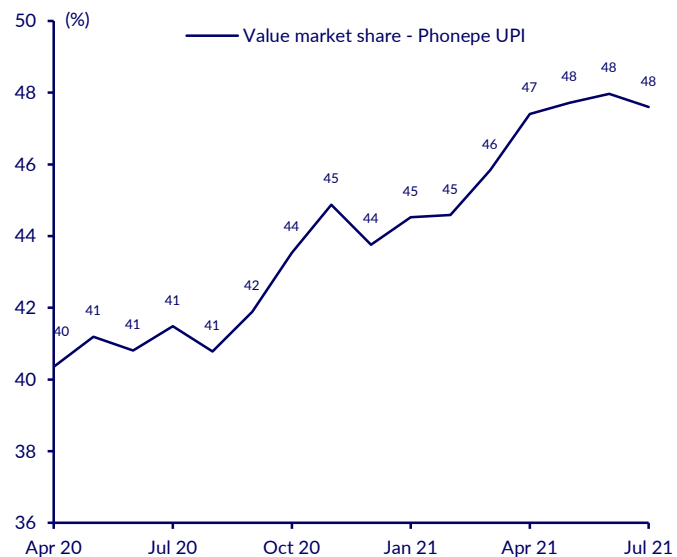


Note: All Phonepe transactions (UPI+cards+wallets). Source: Phonepe, CLSA

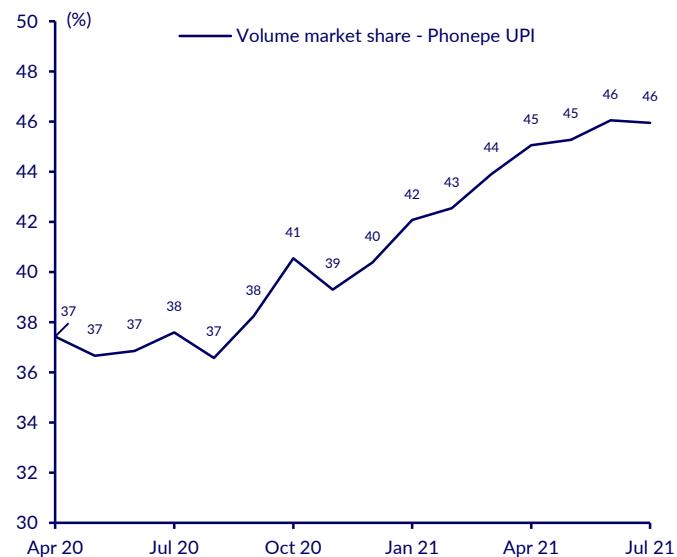
Recharges and bill payments are 44%; P2P c.40% of volumes



Note: All Phonepe transactions (UPI+cards+wallets). Source: Phonepe, CLSA

Market share in UPI:**Phonepe: Value market share**

Source: NPCI, CLSA

Phonepe: Volume market share

Source: NPCI, CLSA

Phonepe aims to start lending business in 2022

Phonepe to prioritise monetisation from payments and distribution rather than lending

Recent developments:

- Planning to apply for a mutual fund licence ([link](#))
- Gets IRDA nod to distribute insurance products ([link](#))
- Aims to start lending business in 2022 ([link](#))

Way forward:

The management believes Phonepe is well positioned to leverage its dominance in payments for the time being and that entering lending in a big way is sometime away. Over a five-year period, it aims to derive 20-25% of its business from advertising services; 40-45% from various financial services offerings and the balance from platform and payments services.



Established (year)	1998
Total merchants	0.3m
POS market share	c.6%
Money raised (US\$m)	807
Last valuation (US\$m)	3,000

Pine Labs provide POS solutions, as well as lending and other value added products

Pine Labs (POS payment system provider)

Background and vision:

Pine Labs started in 1998 as a card-based payment and loyalty-program company before becoming India's largest POS company, with a 0.3m merchant base and installed POS with 6% share of the POS market. It offers various payments acceptance solutions such as POS, QR code, analytics and marketing tools and products as well as financing options to both merchants and SMEs transacting via its platforms.

Company history and journey:

Company history

Date	Milestone
1998	Inception with focus on automated solutions for Petroleum retail
2004	Moved from petroleum focus to POS payment solutions
2012	Built cloud-based payment platform for merchants
2014	Launched myPlutus app for real time access to sales transaction data
2016-17	- Launched business loans - Enabled UPI, QR code and wallet payments via POS
2018	Enabled EMI on debit card transactions
2019	Pine labs acquires Qwik Silver - a gifting solution provider for US\$110m
2021	Acquired 'Fave' - a Singapore-based loyalty cashback start-up company for US\$45m

Source: Company, CLSA

Founders and key management

Name	Role	Background
Lokvir Kapoor	Chairman	IIT Kanpur, IIM Bangalore graduate; previous experience with Schlumberger
Amrith Rau	CEO	Ex CEO of PayU; Founder and ex-CEO of Citrus Pay

Source: Crunchbase, CLSA

Products and services offered:

Products and solutions offered

Payment acceptance	Lending	Business offerings
POS solutions	BNPL for merchants' customers	Cashback, loyalty & gifting solutions
QR code, Mobile payments	Working capital finance for merchants	Sales analytics

Source: Pine labs, CLSA

Payments solution provider

360-degree Payments Solutions



In-Store

Accept all major payment modes and upgrade your customer experience



Online

Make online payments faster, simpler and error-free.



Omnichannel

Sell in-store and online seamlessly

Source: Pine Labs, CLSA

Providing solutions across sectors

Growing businesses across sector



Source: Pine Labs, CLSA

Provides various other business offerings

Do More for your Customer and your Business

For your customer



Pay Later



Loyalty



Prepaid and Gifting

For your business operations



Analytics



Working Capital

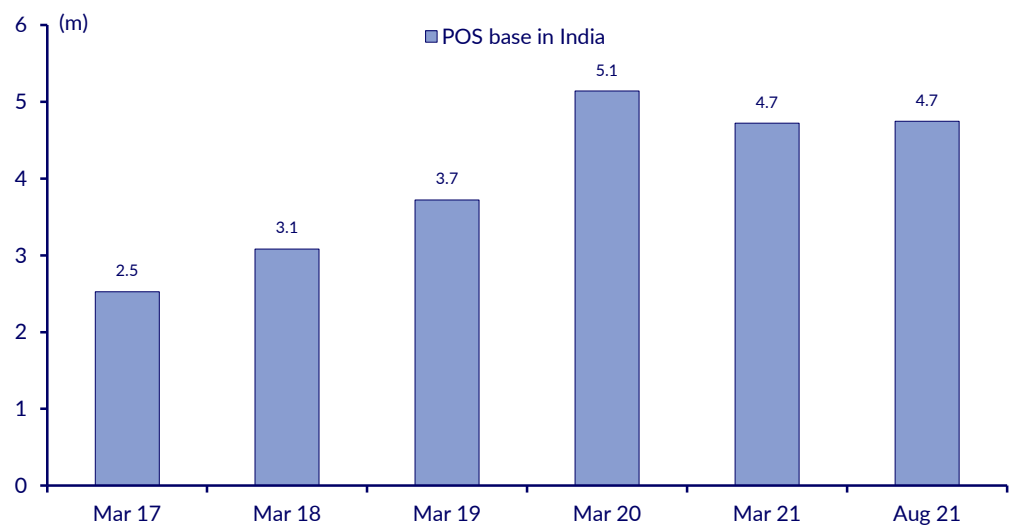


Utility App Integrations

Source: Pine Labs, CLSA

India has c.5m base of installed POS machines

India's POS market

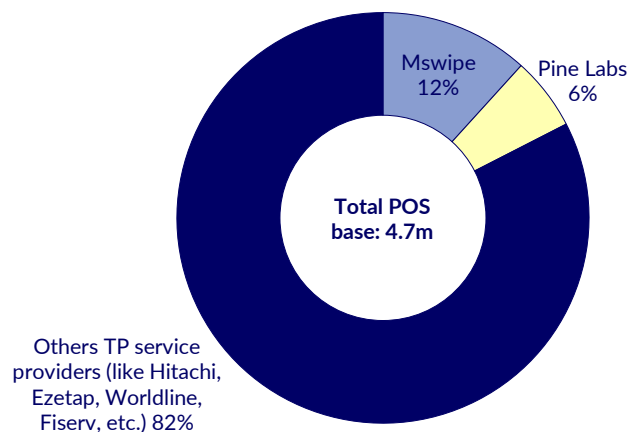


Source: RBI, CLSA

Mswipe and Pine Labs are specialised POS service providers, meaning they hold the customer relationships and use banks for settlement functions. For most of the rest of the POS base, the bank ties up with other third-party service providers.

Pine Labs has 6% market share among POS service providers

POS service provider market share



Source: RBI, companies, CLSA

Way forward and key priorities:

- ❑ Further scale up its commerce stack to allow merchants to automate payment and billing services in stores
- ❑ Extend offline tech and payment capability to online channels by building payment gateway services
- ❑ Expand QR-based solutions
- ❑ Expanding presence in south Asia through its FAVE acquisition in Malaysia
- ❑ Prepaid card business through its wholly owned entity "Qwickcilver" - 8m cards focused on corporate offerings, gifts vouchers and refunds.

Pine labs has various new initiatives and geographic expansion as key strategic priorities



Established (year)	2014
Total merchants	1m
GPV (US\$m)	50,000
Money raised (US\$m)	367
Last valuation (US\$m)	3,000

Razor Pay (Payment gateway provider)

Background and vision:

Started in 2014, Razorpay provides comprehensive payment gateway solutions to small and large merchants for online transactions. The company has more than 1m merchants and processes GPV of US\$50bn annually. Using Razorpay, small and medium-sized businesses can accept payments through multiple modes. Currently, Razorpay works with 1m+ merchants. It also does SME cashflow-based lending through its NBFC RazorPay Capital and offers neobanking services to SMEs through RazorpayX.

Founders and key management

Name	Role	Background
Harshil Mathur	CEO, Founder	IIT Roorkee graduate with previous experience in Schlumberger
Shashank Kumar	Founder	IIT Roorkee graduate with previous experience in Microsoft

Source: Crunchbase, CLSA

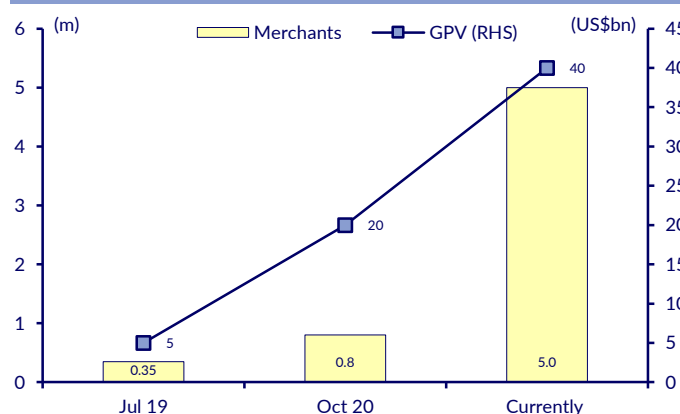
Products and services offered:

Products and solutions offered

Payments	Lending	Neobanking
Payment gateway solutions	SME loans via NBFC	Neobanking services for SMEs
B2B payment and cash management solutions	Cashflow-based lending to merchants via NBFC Razorpay Capital	<ul style="list-style-type: none"> - API banking - Transaction reporting & analytics - Payroll & expense mgmt - Corporate cards

Source: Company, CLSA

Razorpay has 1m+ merchants and total GPV of Rs50bn



Source: Company, CLSA

Key insights:

Initially started as a payments gateway operator, Razorpay has now expanded its offerings to become a holistic B2B payment solution provider.

Overall, Razorpay offers 25+ products that help businesses accept and make payments, borrow money (via Razorpay Capital); RazorPay X, its neobanking platform, enables automated accounting and compliance and offers associated financial services such as payroll, insurance and fraud prevention.

Razor Pay's online payment gateway accepts payment from customers and automates payouts to vendors and employees.

The company charges its customers anywhere between 2-3% in transaction fees depending on the payment mode.

Razorpay caters to some of the biggest startups and businesses, including Oyo, CRED, Facebook, Flipkart, Zomato, Swiggy and Byju.

Companies mentioned

5nance.com (N-R)
 5paisa.com (N-R)
 Acko Insurance (N-R)
 Adani Enterprises (N-R)
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 Alt Balaji (N-R)
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 Amazon Pay (N-R)
 Amex (N-R)
 Ant Financials (N-R)
 Ant Group (N-R)
 Ant Technology (N-R)
 ApnaPaisa (N-R)
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 Axis Bank (AXSB IB - RS755.9 - BUY)
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