

Agpaytech's Research
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The Indian Payment Landscape: What Does It Look Like Today?

Executive Summary

It is an acknowledged fact that the payment and settlement systems are the backbones of any economy. The Reserve Bank of India, by the powers entrusted to it by the Payment and Settlement Systems (Act 2007), has endeavoured to ensure that India has state-of-the-art payment and settlement systems that are efficient, safe, well secured, fast, and affordable.

Given the thrust, there has been considerable impetus on the development process. From 2015 to 2018, several outcomes in new and

innovative systems have been witnessed. Electronic payment modes have seen a sizeable increase in transaction turnover. Furthermore, starting in 2021, payment and settlement systems in India are noticing the enhancement of the robust foundation built over the last two decades. Consequently, giving rise to a cashless society based on efficiency and increased uninterrupted availability of secure, convenient, and reasonable payment infrastructure.

This report provides deep insights into the evolution and future of the payments market in India. It focuses on the top-performing payment products in the country. Furthermore, it covers our viewpoint on how the digital payments market will shape up in the coming years and the factors behind the large-scale adoption of digital payments.



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Introduction

India's financial model, in its latest assessment, has acknowledged the growing power of both cash and digital payments in the nation. The development of the less-cash economy has sparked all over India. Demonetization accelerated the emergence of e-wallet players and the creation of the UPI (unified payments interface). Such innovations helped build the economy and empower citizens with secure and uncomplicated payment options. To ensure a powerful payments infrastructure, the Government considered the opinions of all of society's financial members, which paved the way toward a viable solution.



India's Payments Infrastructure

Digital modes like electronic fund transfers have experienced greater adoption and increased use of cards backed by customer propositions designed around loyalty and privilege programmes. Some of India's better known and widely used digital payment apps are Phonepe, Google pays, Paytm, Amazon pay, Freecharge, Jio Money, BHIM, and Mobikwik.

The introduction of the UPI (Unified Payments Interface) accelerated the wallet infrastructure. UPI has enabled the transfer of money directly from users' bank accounts to another bank account without exchanging sensitive information such as the account numbers, IFSC Codes accounts type or any other vital information.

The wallet concept works on the fundamental of recharging users' digital wallets and transferring the funds to another user's wallet on the same platform. Compared to the traditional Indian payment methods such as credit and debit cards, UPI is a quantum leap in technology and is currently the preferred payment method in India.

Financial Inclusion in India

FSS (Financial software and systems), a leading global payment processor and provider of integrated payment products, is partnering with India Post Payments Bank (IPPB) to promote financial inclusion among underserved and unbanked segments. This collaboration with IPPB will use the FSS Aadhaar Enabled Payment System (AePS) to deliver interoperable and affordable doorstep banking services to customers across India. The FSS (AePS) solution helps with the branchless business model. Its digital distribution and micro-targeting lower acquisition costs and improve service delivery to users. The partnership strategy brings millions of unbanked customers into the financial mainstream. There are nearly 410 million Jan Dhan accounts in India. The Jan Dhan Yojana account is a zero-balance account, and as such, account holders are not required to maintain a minimum balance in their accounts. Pradhan Mantri Jan Dhan Yojana brings under the purview of insurance many people who cannot afford insurance out of their pocket. This facility helps to ensure that kind of financial inclusion allows them to start saving and growing their money. Therefore, every family will get a RuPay debit card with the Jan Dhan bank account. The account holders have easy access to their money when they need it.

Table 1: Beneficiaries of Pradhan Mantri Jan-Dhan Yojana (which can be roughly translated as prime minister's people's wealth scheme)

Bank Type/Name	No. of Beneficiaries at rural/semiurban centre bank branches	No. of Beneficiaries at urban metro centre bank branches	No. of Rural-Urban Female Beneficiaries	No. of total Beneficiaries	Deposits in Accounts (\$ million)	No. of Rupay Debit cards issued to Beneficiaries
Public Sector Banks	22.33	13.37	19.70	35.70	17144.24	27.26
Regional Rural Banks	7.22	1.11	4.81	8.32	4437.12	3.41
Private Sector Banks	0.70	0.60	0.71	1.30	659.05	1.10
Grand Total	30.25	15.08	25.22	45.33	22240.41	31.77

Source: Agpaytech Research (RBI)

Adoption of Digital Payment System

India's retail business accounts for 8.9% of the country's GDP, and it was required for the retail payment infrastructure to be completely overhauled. However, organisations have struggled to keep up with evolving consumer behaviour over the past couple of years. This situation drove the emergence of new trends in retail payments. As consumers and businesses moved their money transfer methods from traditional means such as cash and check to digital payments, industry stakeholders responded swiftly to the changing landscape through hi-tech innovation. The emergence of e-commerce increased digital payment infrastructure adoption as mobile payments and smartphones made it more accessible and convenient for consumers to complete their digital purchases.

The preferred modes of retail payment platforms in India includes the following.

- Banking Cards
- USSD
- Adhar Card (AEPS)
- UPI (Need a infographic to these points)
- Mobile Wallets
- Banks Pre-paid Cards
- Point of Sale
- Internet Banking
- Mobile Banking



Retail Payment System Policy

Payments and settlement systems are essential for the functioning of monetary markets, individual remittances, and overall financial inclusion, as they help the economy's growth. Consequently, the Reserve Bank of India (RBI) has set the regulatory framework to ensure that different payment systems operate safely, securely, and efficiently to meet the demands of various industry segments. Emerging scenarios have increased the demand for technological changes, and non-banking entities have now been permitted to operate in the highly regulated payments space. To ensure smooth functioning and avoid exploitation of this emerging framework, RBI has issued new guidelines wherein the licensed banks too need to obtain specific permission from the Central Bank to set up and operate a payment system. As of 2018, there were 89 authorised non-bank Payment System Operators.

Table 2: Number of entities authorised under the PSS Act (as on 31.12.2018)

Payment System	No. of existing Operators
Retail Payment System Umbrella Organisation (NPCI)	1
Card Networks	5
PPI issuers (non-banks)	48
Instant Money Transfer	1
ATM Networks	5
MTSS-OP	9
WLAOs	8
Bharat Bill Payment operating Units (BBPOUs)	8
TReDS	3
Bharat Bill Payment Central Unit (BBPCU)	1
Total PSOs	89

Source: Reserve Bank of India (RBI)

Table 3: Number of banks approved under the PSS act (as on 31.12.2018)

Payment System	No. of banks approved
PPI issuers 60	Commercial-53
	Co-operative-5
	RRB-2
BBPOUs 37	Commercial-29
	Co-operative-6
	RRB-2

Source: Reserve Bank of India (RBI)

RBI manages and operates the National electronic fund transfer (NEFT) system in the retail payments space. Services such as the electronic clearing service (ECS)- Debit and credit cards, and other retail payment methods are owned and operated by NPCI (National Payments Corporation of India).

Retail Payment System landscape

In India, payment systems have grown characterised by a few operators in various payment systems. And some discussions on this emergence are still going on, which are pointed out here-under:

1. Various retail payment systems are concentrated in a single entity versus diversification across multiple operators.
2. Payment systems managed by a single operator [Unified Payments Interface (UPI), Immediate Payment Service (IMPS), Aadhaar Enabled Payment System (AePS), Aadhaar Payment Bridge System (APBS), Bharat Bill Payment System (BBPS), Instant Money Transfer (IMT)] versus multiple systems with similar product features offered by different operators.
3. Availability of a window for licensing operators of a payment system on-tap.
4. Review the licensing criteria to facilitate innovation and competition and to broad-base potential applicants.

Table 4: Payment System Operators and Participants (banks and non-banks)

S.	Category	Payment System	Operator	Participants		
				Banks	Non-banks	Others
1	ATM Networks	NFS	NPCI	√ (Direct & sub-member –1096)	√ (Sub-member)	x
		Cashnet	Euro netServices India Pvt. Ltd. (non-bank)	√	X	X
		BANCS (Banks ATM Network and Customer Services)	Bank of India	Not operational		
		ATM sharing arrangement with Everest Bank of Nepal	Punjab National Bank	It is a bilateral arrangement		
		State Bank ATM network	StateBankofIndia	√	x	x
2	Funds Transfer	IMPS	NPCI	√ (416)	√ (26 non-bank PPI users)	x
3	Cards	Card Networks (operated by non-banks)	RuPaybyNPCI	√		x
			VISA			
			MasterCard			
			AmericanExpress			
			Diners			
4	Bulk and Repetitive payments	NACH	NPCI	√	x	x
5	Aadhar based Payments	APBS	NPCI	√ (962)	x	x
		AePS	NPCI	√	x	x
		BHIM Aadhaar Pay	NPCI	√	x	x
6	-	MTSS–OP (Cross Border–MoneyTransfer–inbound only)	9 non-banks (OP)	√ (As Indian Agents of OP)	√ (As India Agents of OP)	x
7	-	PPIssuers	Banks and non-banks	√ (60)	√ (48)	x

8	-	IMT	Empays Payment System India Pvt. Ltd.(non-bank)	√	x	x
9	-	TReDS	3 non-banks (Mynd Solutions)	√	√	x
			Receivables Exchange of India and A.TREDS)			
10	-	BBPS	NPCI (BBPCU)	√ (63 BBPOUs)#	√ (10 BBPOUs)#	x
11	-	UPI	NPCI	√ (129)	x	x
12	-	NETC	NPCI	√ (22)	x	x

* Indirect for settlement

26 banks and 2 non-banks have 'in-principle' approval

Source: RBI data



Payment and Settlement Systems

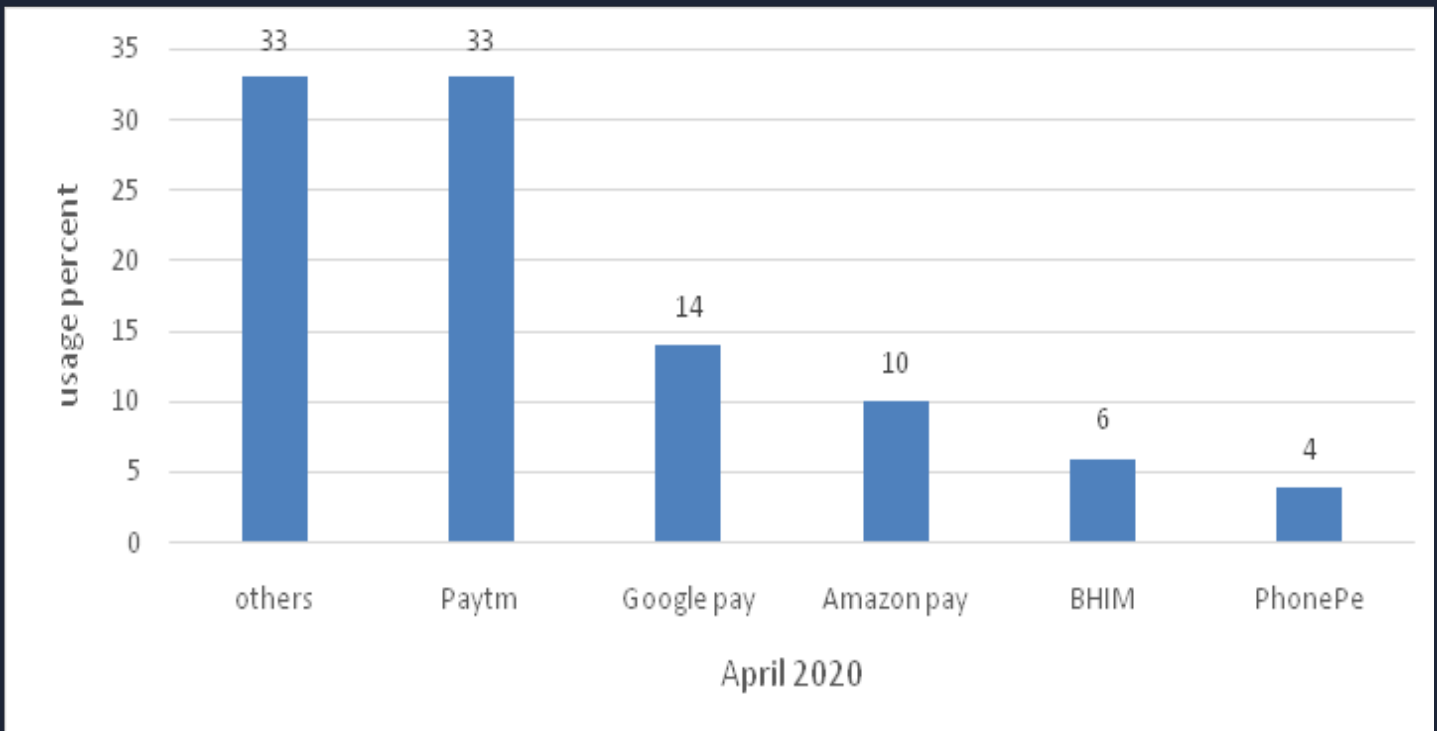
Reserve Bank has taken many initiatives towards introducing and upgrading safe and efficient modes of payment systems. For instance, the Indian banking system has depended on the logistics of the collection and delivery of paper instruments. Covering these aspects of a country's banking structure has always been considered while developing the payment systems.

- ➔ **Electronic Payments:** RBI has taken the electronic payments initiatives in the '80s' and '90s, focused on technology-based solutions to improve the payment and settlement system infrastructure. Therefore, introducing new payment products takes advantage of banks' technological advancements.
- ➔ **Electronic Clearing Services (ECS) Credit:** ECS (Credit) scheme during the 1990s to handle bulk and repetitive payment requirements (like salary, interest, dividend payments) of corporates and other institutions. In 2008, the Bank launched a new National Electronic Clearing Service (NECS) at the National clearing cell.
- ➔ **Electronic clearing service (ECS) Debit:** The ECS (Debit) Scheme is introduced by RBI to provide a faster method of effecting periodic and repetitive payments by mandating bank branches to debit their accounts and pass on the money to the companies. Therefore, it has no maximum or minimum payment limit.
- ➔ **Electronic funds transfer (EFT):** The retail fund transfer system was introduced in the 1990s. This system enables an account holder of a bank to electronically transfer funds to another account holder with any participating bank.
- ➔ **National Electronic funds Transfer (NEFT) system:** In November 2005, a more secure method was introduced for facilitating one-to-one funds transfer requirements of individuals and corporate. The NEFT system provides batch settlements at hourly intervals enabling near real-time funds transfer.
- ➔ **Real-time Gross settlement (RTGS) system:** RTGS is a fund transfer system where money transfers from one Bank to another on a real-time and gross basis. It was introduced in 2004 and settles all inter-bank payments and customer transactions above two lakhs.
- ➔ **Clearing Corporation of India Limited (CCIL):** CCIL was set up in April 2001 by banks, financial institutions, and primary dealers to function as an industry service organisation for clearing and settling trades in the money market, Government securities and the foreign exchange markets. The clearing corporation plays the crucial role of a central counterparty (CCP) in the government securities, USD-INR forex exchange (both spot and forward segments) and collateralised borrowing and lending obligation markets.

The Growth of the Mobile Payment System in India

Non-cash transactions will grow by 20% by 2023. According to a leading consulting firm report, India's digital and fintech arm is the UPI (Unified Payments Interface), which lets mobile apps complete instant transfers between bank accounts. The usage of the UPI jumped from 103,000 transactions to 1.97 million in just three months at the end of 2016. Mobile payment methods are now omnipresent, even with the smallest stores displaying many QR code stickers for different providers.

Figure 1: Usage of the digital payment app in India (April 2020)



Source: Statista 2022

The National Payments Corporation of India (NPCI) has designed and developed the UPI and created the *99# service that allows feature phones without internet connectivity to make mobile payments and store money in digital wallets. In addition, Recently, RBI has introduced interoperable cardless withdrawal at ATMs using UPI platforms. The Cardless cash withdrawal system has enabled access to any bank's ATM for a user, such as Third-Party or White Label ATMs. However, banks are not expected to stop issuing credit or debit cards as many utilities

have been launched based on this payment mechanism. They are not just used cash for withdrawals; they are also used for payments in a foreign country. Therefore, RBI will soon be issuing guidelines to the National payments corporation of India (NPCI), ATM networks and banks to initiate service. The cardless withdrawing facility gives the option to customers to not use debit or credit cards while withdrawing cash from any ATMs. For instance, while visiting the UPI-enabled ATMs, users will be able to withdraw cash using UPI apps such as Paytm, Amazon Pay, and GPay. Being a successful real-time payments system globally, UPI offers simplicity, safety, and security to India's P2P and P2M transactions.

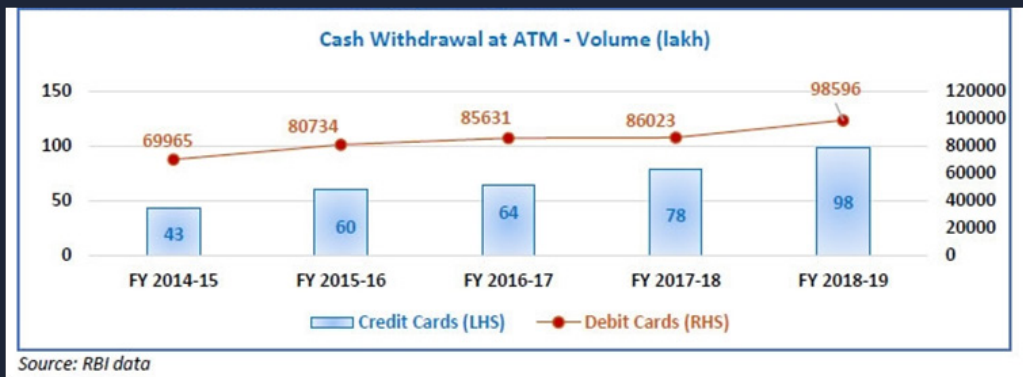
Testament to its success, UPI recently clocked \$5.04 Billion transactions on its platform in March 2022. In 2021, UPI enabled 39 Bn financial transactions amounting to \$940 Billion, equivalent to around 31% of India's GDP. In addition, RBI launched UPI on feature phones, called UPI123Pay, on the 8th of March, which will allow the feature phone users to make UPI transactions without needing an internet connection.



Cash Withdrawal ATMs

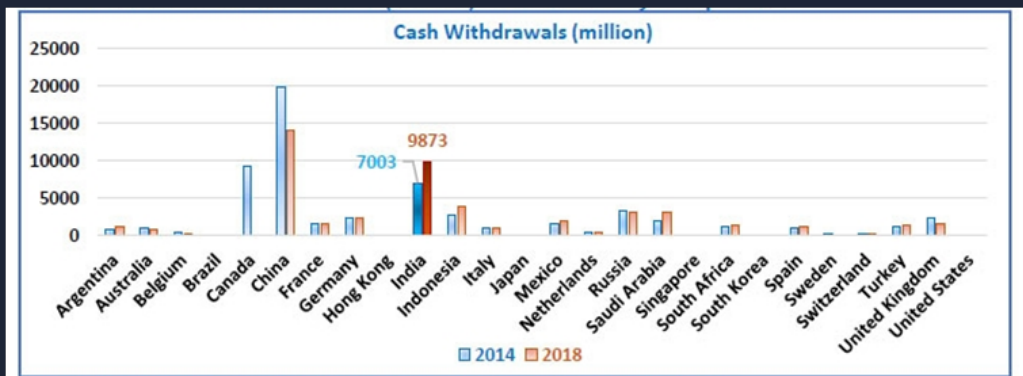
The digital revolution is taking over the world. The payment and settlement systems are heralding extraordinary changes through the digital course. Consumers can now choose from several payment methods to complete a single transaction. The instances of cash withdrawal from ATMs have increased over the past five years. India's cash withdrawal percentage to GDP has remained constant at around 17%, with a CAGR of 9% in volume and 10% in value. The growth has been slow compared to digital payment transactions (RBI, 2020)

Figure 2: Cash withdrawal From ATMs(volume) - India



Source: RBI data

Figure 3: Cash Withdrawal at ATMs(volume) – Cross-country Comparison



Source: BIS Red Book 'Country Tables' compiled by the Bank of International Settlements

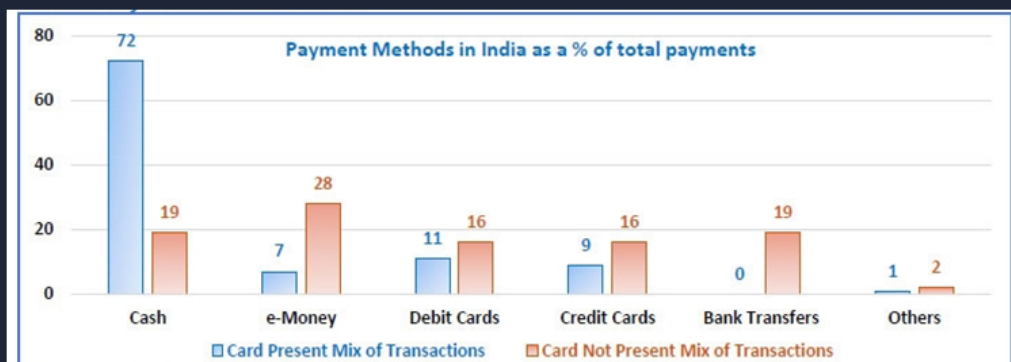
Various surveys and reports have attempted to measure the level of cash payments in the Indian economy. The cash withdrawn in a country as a share of its annual GDP to determine the popularity of physical cash exchange in comparison to that of alternative payment methods.

Table 5: Cash propensity and Growth in Cash

Country	Population	GDP (USD bn)	Cash Propensity %	Total Cash Growth
Australia	24.4	1282.0	11.2	-0.7
China	1382.7	10365.4	35.9	9.2
India	1299.8	2939.5	49.3	10.5
Japan	127.0	5049.4	3.4	-8.5
Korea	51.2	1458.9	4.1	2.1
Singapore	5.6	276.3	16.7	1.6

Source: Payments Global Cash Index for Asia Pacific published in June 2018

Figure 4: Payment Methods in India



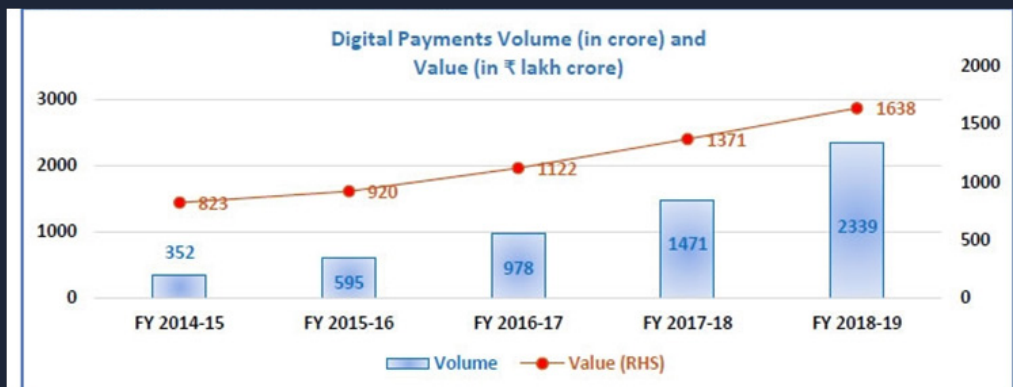
Source: Worldpay Global Payments Report November 2018

The Worldpay Global Payments Report (2018) has observed in India that while cash is used as the primary method of sale and purchase, eMoney dominates the online payments arena.

Progress in Digitisation

Digital payments in the country have witnessed a CAGR (Compound annual growth rate) of 61% and 19% in terms of volume and value. Furthermore, the growth of digital payments and retail electronic payments comprising credit transfers (NEFT, fast payments (IMPS and UPI) and direct debits (ECS, NACH) have shown a rapid growth at a CAGR of 65% and 42 % in terms of volume and value.

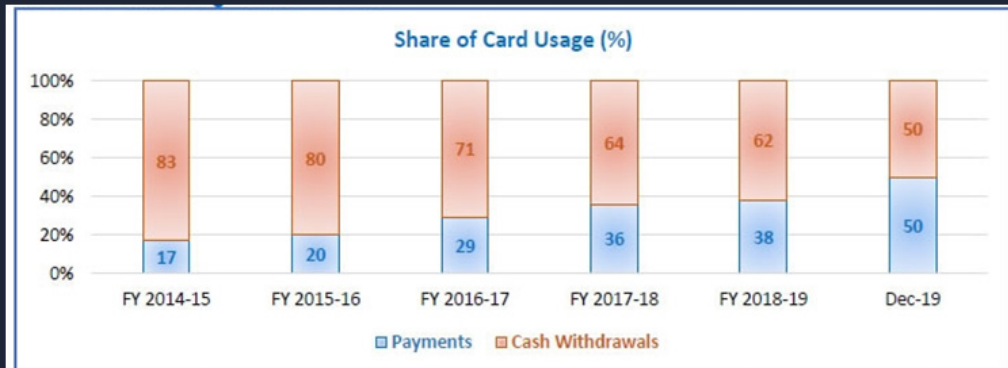
Figure 5: Digital Payments Trend in India



Source: RBI Data

In addition to the above, the trend of card payments has converted into contactless payments and tokenisation technologies, contributing to the growth of digital payments. The use of cards for payments is increasing vis-a-vis their use for withdrawing cash.

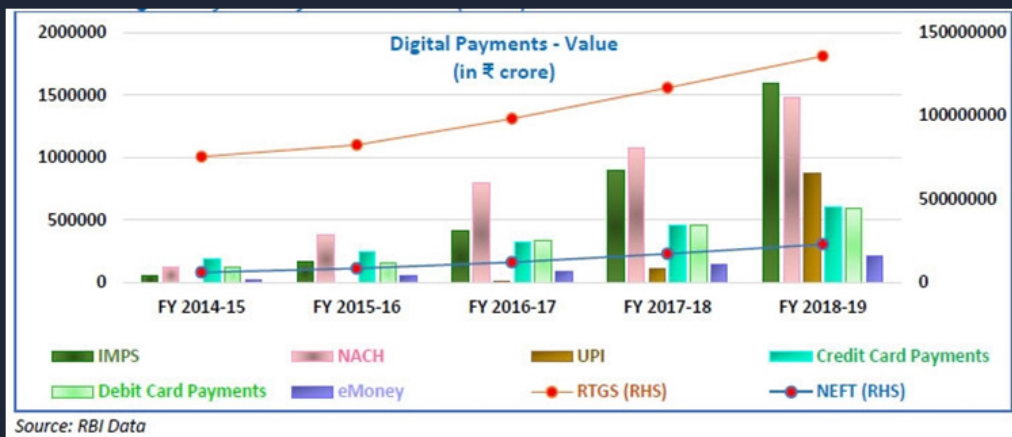
Figure 6: Card Usage Trend- India



Source: RBI Data

The volume of the digital payment system in India is increasing. Many options are now available to consumers, making it more convenient to use digital payments. Instant person-to-person retail payments trends are growing around the world. India has immediate Payment Systems (IMPS) and Unified Payments Interface (UPI) as fast payment mechanisms to help it keep pace with the global developments.

Figure 7: Digital payment system in India



Source: RBI Data

Source: RBI Data

Cheque Clearing System

Financial transactions are a substantial part of any economy, and it happens through cheques, drafts, pay-orders, cashier's cheques, and the likes. The persons or liable organisations deal with these settlement mechanisms to pay money. The various payees or beneficiaries have their accounts spread over different banks. And to tackle this challenge, banks established the clearing house mechanism. It is a central place or office where the representatives of all the banks in a particular area meet and exchange cheques and other instruments drawn on each other's banks. The Bank managing the clearinghouse operation is called the settlement Bank. All banks participating in the clearing system maintain current accounts with the settlement bank to facilitate the settlement. The RBI is a participating bank in the clearing house, as it acts as a banker to the different Government Branches such as income tax, sales tax, and Excise Duty departments. The representatives of all banks meet at the settlement bank (clearing house) to exchange the cheques and other instruments and settle their net claims on each other.

Conclusion

The payment ecosystem is now a fertile ground for new and emerging business ideas. Financial Technology companies are posing solid challenges to traditional operators thanks to their cutting-edge technology. The COVID-19 crisis forced a massive shift in consumer behaviour toward a cashless society and the adoption of digital payment modes. During this period, consumers preferred making payments digitally; and now, this mode of payment has found adoption into their daily lives. Today one may buy many items digitally, from everyday products like groceries to an expensive article over the internet. The digitalisation of payment mechanisms has helped people's lives become smooth and more manageable. Though some areas in rural India, some people still use offline payment mechanisms. However, it is not a matter of internet connectivity or a trustable ecosystem. This lack of adoption is attributable to illiteracy, and the Government is pulling all stops in addressing this matter.

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About Agpaytech

Agpaytech is a company pioneering in the Fintech Space with a focused approach on building robust technologies for eCommerce Card Processing Solution for Payment Service Providers (PSPs). Additionally, we provide Compliance and Regulatory Umbrella, Remittance-as-a-Service White-Label Solution, Foreign Exchange, Cross Border Payments, digital currency technology. We have partnered with multiple banks, non-banking financial institutions, and corporate organizations to create a solid service delivery model for them and their customers to ease their international remittances and payments concerns. info@agpaytech.com



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