Payment Systems Report

Half Year ended June 2025

(A bi-annual publication from The Reserve Bank of India)

Contents

Foreword

The second edition of the half-yearly Payment Systems Report for June 2025 presents an overview of the current landscape of payment systems in India. Over the years, India's digital payments ecosystem has witnessed impressive growth, driven by increased accessibility, user adoption, and a robust acceptance infrastructure.

This report highlights the continuing expansion of the Unified Payments Interface (UPI), which has completely transformed digital payments in India, and brought about significant enhancements across various payment instruments thereby promoting a diversified and inclusive payments ecosystem. These developments have helped ensure safety of payments, foster customer confidence and strengthen operational protocols.

Payment Systems Reports are intended to serve as a resource for policymakers, industry participants, and researchers. The reports capture payments statistics, regulatory developments, and ongoing technological advances that are reshaping India's payment systems. As we move forward, the Reserve Bank of India will continue to promote an efficient, resilient, and accessible payment infrastructure that supports the country's economic growth and digital transformation.

Sd/-

Vivek Deep
Executive Director
October 23, 2025

1. Introduction

1.1 An efficient payment system, by offering safe and cost-efficient instruments that meet diverse user needs, helps in enhancing economic activities and financial inclusion. In India, the Payments and Settlement Systems Act, 2007 (PSS Act, 2007) provides the legal foundation for regulation and supervision of payments and settlement system. The PSS Act, 2007 empowers Reserve Bank of India to license, regulate and supervise payment systems and operators to ensure safety, security, efficiency, and effectiveness of the payment ecosystem as well as protect the interests of consumers.

1.2 With the issuance of Gazette Notification dated May 06, 2025, the PSS Act, 2007 was amended, with effect from May 09, 2025, and consequently the erstwhile Board for Regulation and Supervision of Payment and Settlement Systems (BPSS) has been replaced by the Payments Regulatory Board (PRB). The PRB under the chairmanship of Governor, RBI is the designated authority for regulation and supervision of the payment systems under Sections 3(1) and (2) of the PSS Act, 2007.

1.3 Digital Payments in India have grown exponentially in the last decade[1]. During this period, digital transactions have increased 38 times in volume terms and more than three times in value terms. The CAGR for the decade ending 2024 was 52.5% in terms of volume and 13% in terms of value. In the last five years alone, digital payments in India have increased 6.6 times in volume and 1.6 times in value. This amounts to a five-year CAGR of 46% in terms of volume and 10% in terms of value.

1.4 The Indian payments ecosystem is characterised by a variety of diverse payment options provided by both banks and non-banking entities. This diverse landscape includes instruments like credit and debit cards, fast payment systems like UPI, IMPS, NEFT, RTGS, digital and mobile wallets, net banking and so forth.

1.5 This report presents a comprehensive analysis of various payment systems operated by the RBI, the National Payments Corporation of India (NPCI), banks and

[1] 2014-2024

other Payment System Operators (PSOs). It examines the growth of both large-value and retail payment systems from the second half of 2019 to the first half of 2025. The Report also covers cross-border remittances, and the cost of making such remittances.

1.6 The report is organised as follows. Chapter 2 outlines the structure of India's payment systems and presents key payment system statistics. Chapter 3 covers significant regulatory developments during the HY ended 2025 and highlights major innovations and policy changes in the payments ecosystem. Chapter 4 focuses on RTGS, India's large-value payment system. It details the system's evolution, including major milestones such as the adoption of the ISO 20022 message standard and the transition to 24x7x365 availability. It also explores trends in RTGS transaction volume, ticket sizes, system participation, access options, and other core features. Chapter 5 discusses developments in cross-border payments, highlighting RBI's initiatives to interlink UPI with fast payment systems globally, as well as efforts to internationalise the domestic RuPay card network.

2. Payment Systems in India – An Overview

2.1 An efficient payment system promotes market efficiency, reduces the cost of exchanging goods and services, and sustains the confidence of the participants and customers in the financial system.

2.2 The payments landscape in India consists of a bouquet of payment systems designed to cater to diverse needs of users, which include paper-based instruments (cheques) as well as digital payment systems. Digital payment systems include National Electronic Funds Transfer (NEFT), Immediate Payment Service (IMPS), Real Time Gross Settlement (RTGS), National Automated Clearing House (NACH), debit and credit cards, prepaid payment instruments, Unified Payments Interface (UPI) and so forth.

2.3 Over the past two decades, remarkable growth has been witnessed in the payment landscape in India, with significant advancements in acceptance infrastructure, wider availability and, most importantly, a surge in the number of users opting for digital payment methods. Details of various payment system instruments and authorised payment systems in India are provided in Annex I and II.

2.4 The distribution of payment transactions across systems for H1 2025, in terms of volume and value, is shown in Chart 1 and Chart 2, respectively. It is evident that while in terms of volume during this period, UPI accounted for the largest share at 85 per cent, it accounted for a modest nine per cent in terms of value. On the other hand, during this period, the Real Time Gross Settlement (RTGS) system recorded the largest share of 69 per cent in terms of value but accounted for the lowest share of 0.1 per cent in terms of volume. Being a large value payment system, also called wholesale payment system, RTGS, with a minimum transaction amount of ₹2 lakh, contributes higher in terms of transaction value but records fewer transactions than other payment systems. UPI, on the other hand, processes a very large number of small-value transactions, resulting in a high share in terms of volume, but a relatively lower share in terms of value.

Chart 1: Share of Payment Instruments in Total Payments - Volume for H1:2025

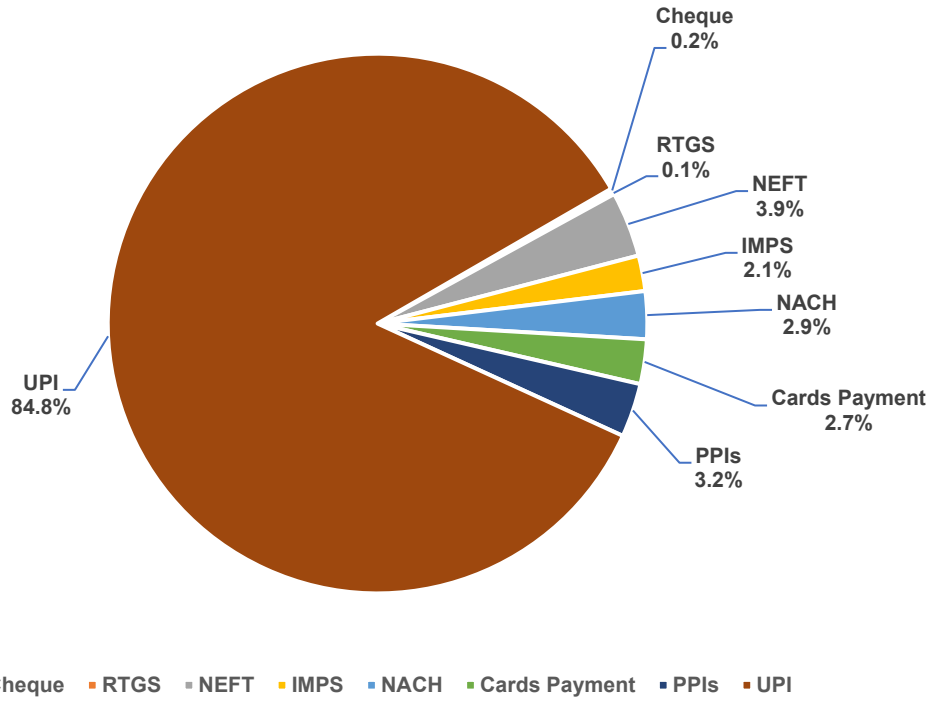
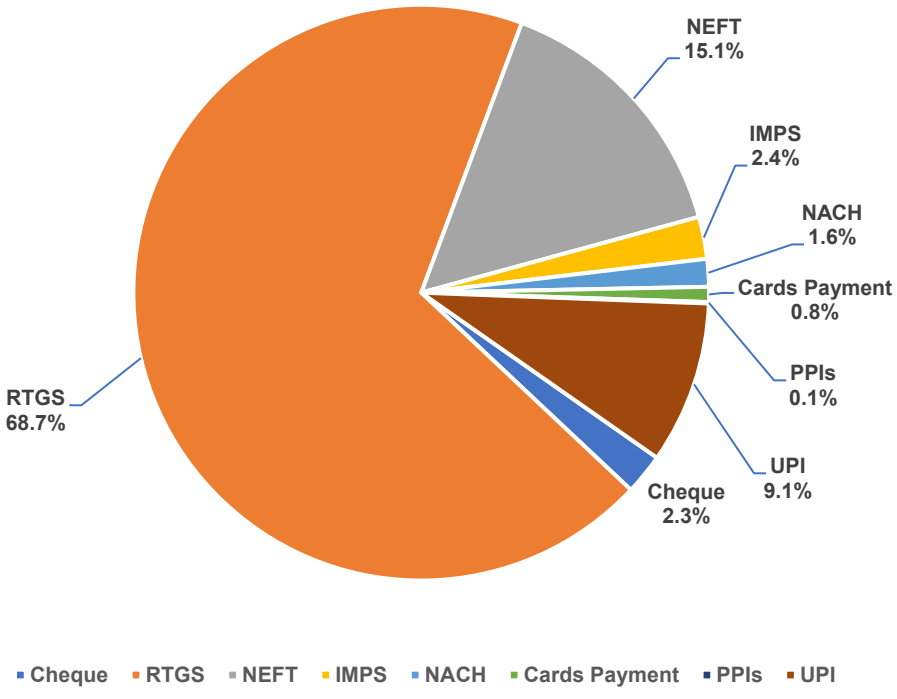


Chart 2: Share of Payment Instruments in Total Payments - Value for H1:2025



Payment System Statistics – Recent Trends

2.5 Tables 2.1 and 2.2 present the transaction volume and value across different categories of payments during the last three half-years. An increasing trend is observed across all categories, except for paper-based instruments which include cheques. The last column in each table reports the daily average of transactions during H1 2025.

Table 2.1: Trend in Payment Transaction Volume over the last three Half-Years				
Transaction Volume (in Crore) *				
	H1-2024	H2-2024	H1-2025	Daily Average (during H1-2025)
Total Payments	9688	11161	12549	69
Paper-based Instruments	32	30	29	0.2
Digital Payments	9656	11131	12520	69
RTGS	15	15	16	0.1
Retail Payments	9673	11146	12533	69
Retail Digital Payments	9641	11116	12503	69

Table 2.2: Trend in Payment Transaction Value over the last three Half-Years				
Transaction Value (in ₹ Lakh Crore) *				
	H1-2024	H2-2024	H1-2025	Daily Average (during H1-2025)
Total Payments	1364	1466	1572	9
Paper-based Instruments	37	35	36	0.2
Digital Payments	1327	1431	1536	8
RTGS	931	1007	1079	6
Retail Payments	434	459	492	3
Retail Digital Payments	396	424	456	3

**Note –*

(a) Total Payments include Digital Payments and Paper-based Instruments.

(b) Digital Payments include Retail Digital Payments and RTGS

(c) Retail Digital Payments include NEFT, IMPS, NACH (credit, debit and APBS), card payment transactions (excl. cash withdrawal), PPI payment transactions (excl. cash withdrawal), UPI (including BHIM & USSD), BHIM Aadhaar Pay, AePS fund transfer and NETC (linked to bank accounts).

(d) Retail Payments include Retail Digital Payments and Paper-based Instruments.

2.6 Table 2.3 presents data on the payment system infrastructure, i.e. the network of systems through which various payment transactions are carried out. The data indicates the outstanding position as of end-December 2024 and end-June 2025. The trend during this period, however, is not uniform across various systems. While debit cards, credit cards, PoS terminals and QR codes exhibit an upward trend, PPI wallets and Micro ATMs registered a decline in end-June 2025 compared with end-December 2024.

Table 2.3: Payment System Infrastructure Outstanding as on HY-end (in lakh)		
	H2-2024	H1-2025
Credit Cards	1080.56	1111.97
Debit Cards	9909.48	10051.80
PPI Wallets	8907.25 (2126.44)*	8681.92 (1629.38)*
PPI Cards	4364.82 (896.75)*	4838.73 (3386.64)*
Bank owned ATMs and CRMs	2.19	2.15
White Label ATMs	0.36	0.36
Micro ATMs	14.76	14.59
PoS Terminals	100.01	117.91
Bharat QR	63.83	67.21
UPI QR	6335.30	6782.51

*Note: Figures in () denote “Active” PPIs
(Active PPI Card / Wallet is defined as that which has at least one financial transaction during the last one year)

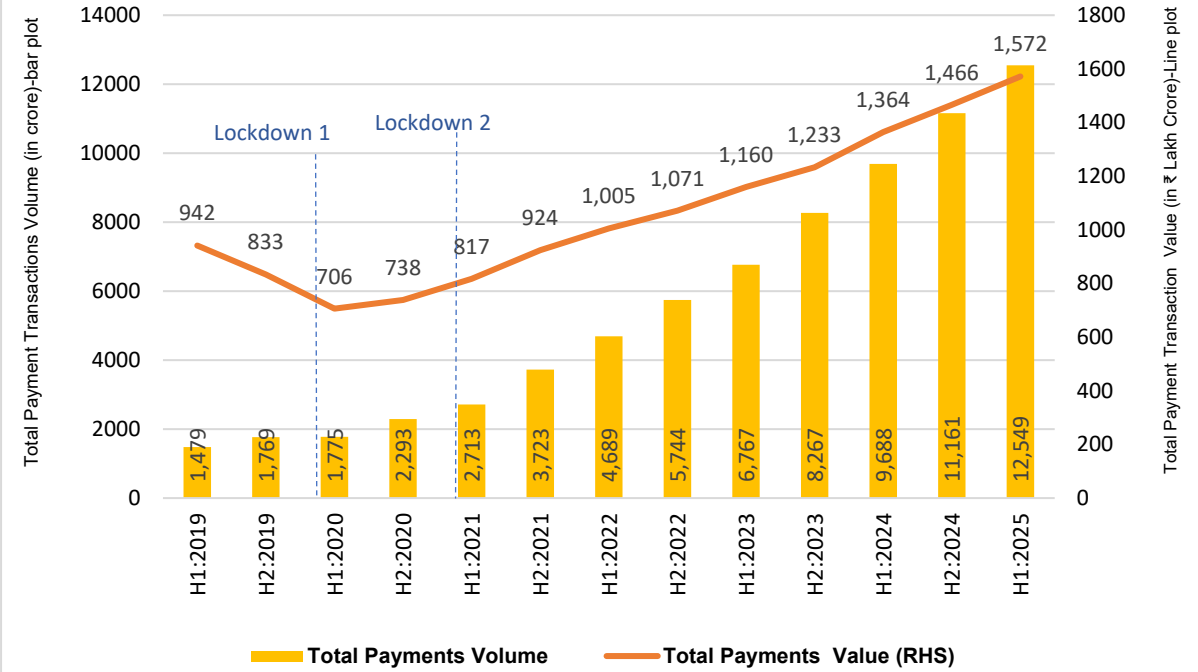
2.7 From the tables 2.1 and 2.2 above, it is clear that digital payments have been rising steadily in the recent period. In the rest of this chapter, we present an analysis of the trend in the payment system data since CY 2019.

Analysis of Payment System Data – since 2019

2.8 The payments ecosystem in India has witnessed remarkable growth in recent years. In terms of volume, the payment transactions grew from 3,248 crore in CY 2019 to 20,849 crore in CY 2024, and, in terms of value, from ₹1,775 lakh crore to ₹2,830

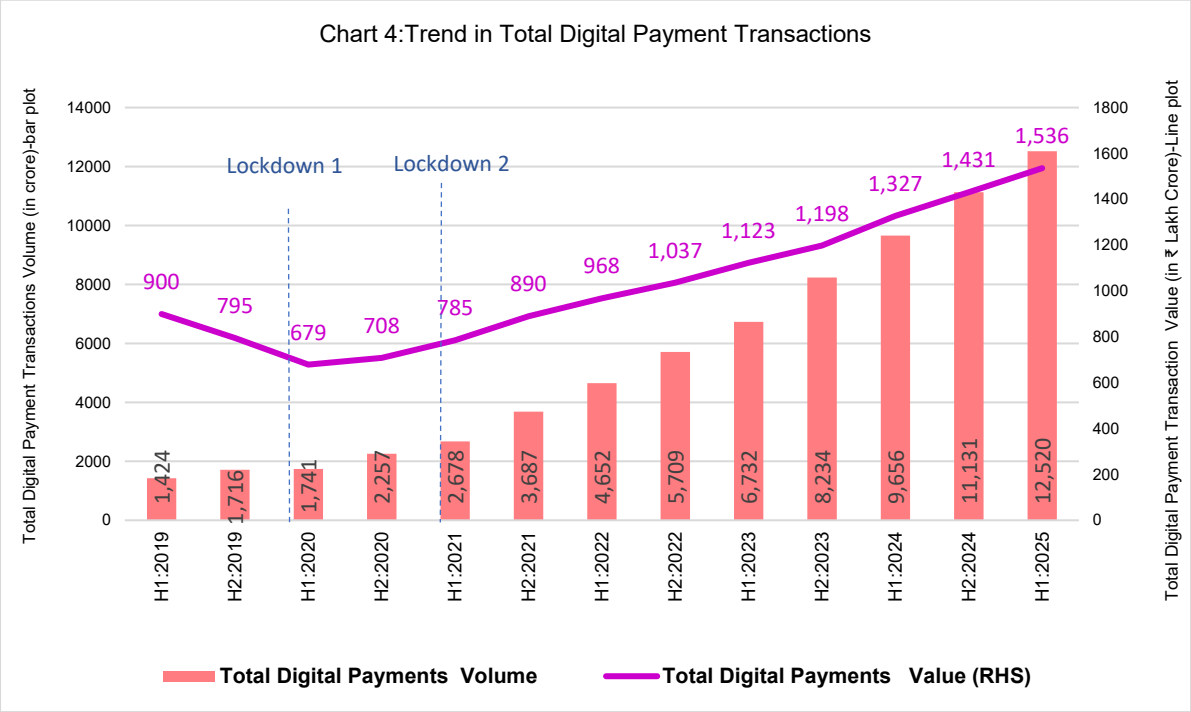
lakh crore during this period. In the HY ending June 2025 transaction volume was 12,549 crore, amounting to ₹1,572 lakh crore (Chart 3). The details regarding the activities in various payments systems in India since CY 2019 are presented in Annex III.

Chart 3: Trend in Total Payment Transactions



2.9 Almost all of the growth in payments is attributable to digital payment transactions[2]. In CY 2019, digital payments accounted for approximately 96.7% of the total payment transactions by volume and 95.5% by value. By CY 2024, these figures had risen to 99.7% in terms of volume and 97.5% in terms of value. This trend continued in H1 of 2025, with digital payments comprising 99.8% of volume and 97.7% of value. Chart 4 depicts the half yearly trend for digital payments.

[2] Digital payment transactions comprise total payment transactions net of transactions in paper-based instruments (cheques)

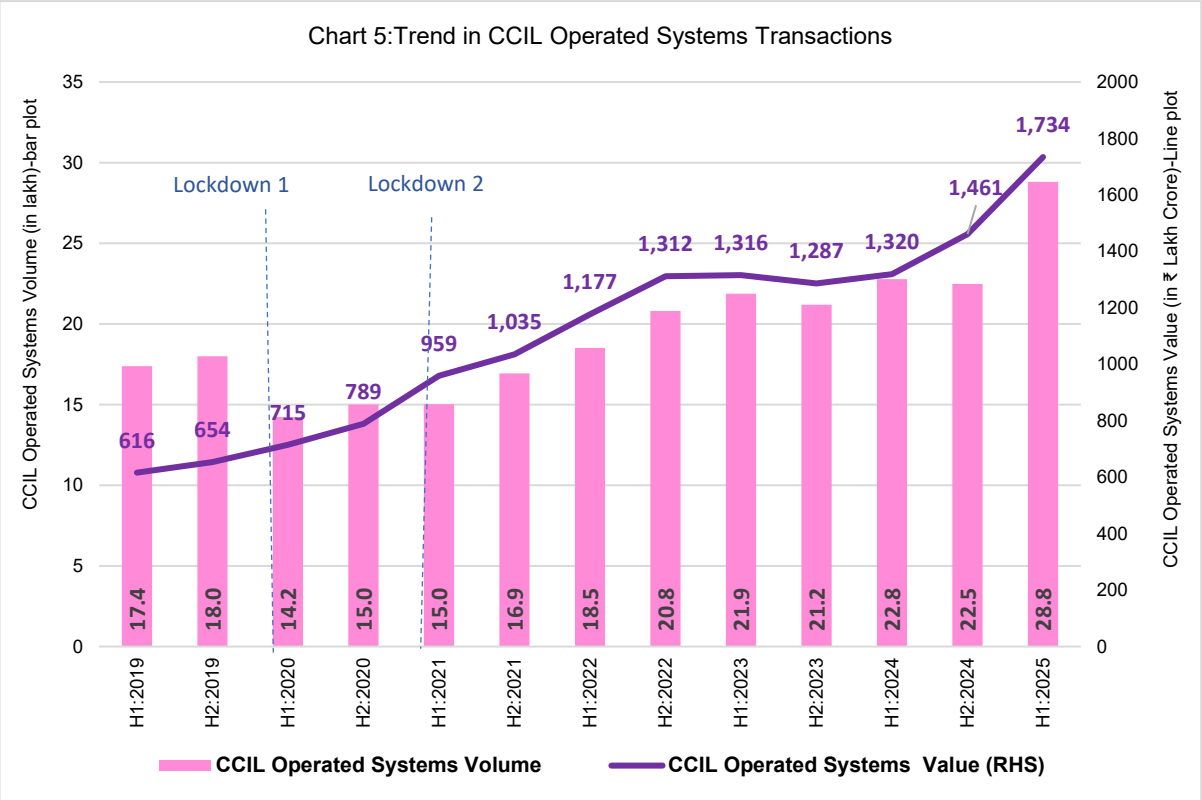


Large Value Payment Systems (LVPS)

2.10 The Large Value Payment Systems (LVPS), also called wholesale payment systems, facilitate large value and high-priority payments such as money market, securities market and interbank settlements involving banks and other financial institutions. In India, LVPS include RBI-operated system viz. Real Time Gross Settlement (RTGS) and systems operated by Clearing Corporation of India Limited (CCIL).

CCIL-operated LVPS

2.11 The CCIL-operated LVPS include Government Securities Market, Forex Clearing, and Rupee Derivative Markets. In recent years, the CCIL transactions have observed an increasing trend. In terms of volume, they increased from 35 lakh in CY 2019 to 45 lakh in CY 2024, while, in terms of value, they increased from ₹1270 lakh crore to ₹2780 lakh crore during this period. During the first half of 2025, a total of 28.8 lakh transactions of value ₹1734 lakh crore were recorded. Chart 5 depicts this trend in CCIL-operated systems on a half-yearly basis while Table 2.4 shows year-wise growth in the three segments, during this period.



2.12 Government Securities (G-Sec) market has experienced notable expansion from a value of ₹769 lakh crore in CY 2019 to ₹1,812 lakh crore by CY 2024. Transaction volume also increased from 13.76 lakh in 2019 to 17.6 lakh in 2024. During H1 2025, 9.85 lakh transactions with a total value of ₹994 lakh crore had been processed (Table 2.4).

2.13 Forex Clearing transactions grew from 16.6 lakh transactions worth ₹466 lakh crore in CY 2020 to 26.3 lakh transactions amounting to ₹885 lakh crore in CY 2024. The H1 of 2025 maintained this growth trend, registering 18.23 lakh transactions amounting to ₹682 lakh crore in value (Table 2.4).

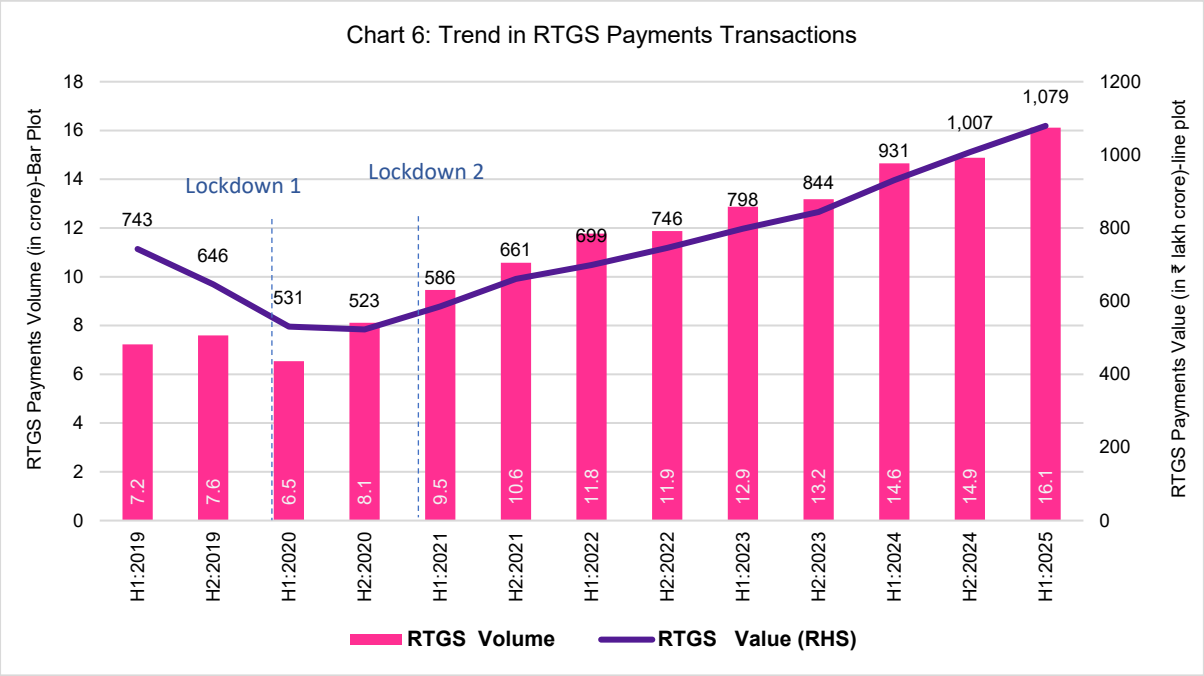
2.14 The Rupee Derivatives market has displayed a steady upward trend since 2019. With just 7,213 transactions worth ₹5.4 lakh crore in 2019, the segment grew to record 1.35 lakh transactions with a value of ₹83 lakh crore in 2024. The momentum persisted in H1 of 2025, with transactions volume of 73,225 and value of ₹58 lakh crore (Table 2.4).

Table 2.4 – Trend in growth of CCIL transactions over the years								
Year	1. Govt. Securities Clearing		2. Forex Clearing		3. Rupee Derivatives		CCIL Operated Systems (1+2+3)	
	Volume (in lakh)	Value (in ₹ lakh crore)	Volume (in lakh)	Value (in ₹ lakh crore)	Volume (in lakh)	Value (in ₹ lakh crore)	Volume (in lakh)	Value (in ₹ lakh crore)
2019	13.76	768.66	21.54	495.81	0.07	5.41	35.38	1269.88
2020	12.30	1014.12	16.59	465.92	0.35	24.17	29.24	1504.21
2021	11.94	1355.44	19.29	595.67	0.75	43.18	31.98	1994.29
2022	14.39	1681.99	23.74	736.89	1.20	70.21	39.33	2489.09
2023	16.47	1712.50	25.19	806.98	1.41	83.28	43.06	2602.77
2024	17.63	1811.88	26.26	885.31	1.35	83.35	45.24	2780.55
2025*	9.85	994.06	18.23	682.04	0.73	58.10	28.81	1734.20

**** up to June 2025***

RBI-operated LVPS – Real Time Gross Settlement (RTGS)

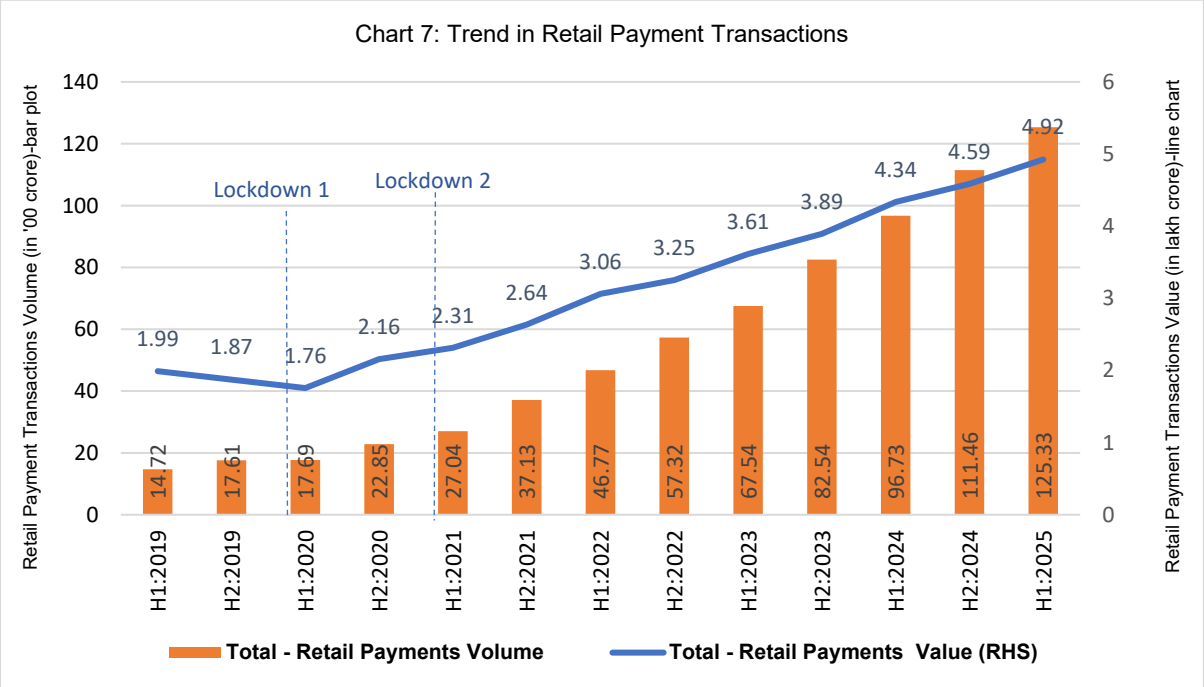
2.15 RTGS is India's primary large-value payment system, owned and operated by the Reserve Bank of India (RBI). RTGS transactions volume grew from 14.8 crore in CY 2019 to 29.5 crore in CY 2024, while transaction value increased from ₹1388.7 lakh crore to ₹1938.2 lakh crore during this period. In CY 2025, by H1 alone, RTGS recorded 16.1 crore transactions amounting to ₹1,079.2 lakh crore, indicating sustained growth and usage (Chart 6).



Retail Payment Systems (all other domestic payment systems)

2.16 Retail Payment Systems are designed to process routine, low- to medium-value transactions, including bill payments, purchases of goods and services, and fund transfers. These systems are characterised by their ability to handle large volumes of transactions efficiently. In India, various retail payment systems exist to cater to different consumer needs. For example, NEFT and IMPS facilitate fund transfers, BBPS provides a platform for bill payments, NACH enables auto-debits from / auto-credits to a customer's bank account based on an authenticated and approved mandate, addressing a range of consumer payment requirements and disbursal of government subsidies and Direct Benefit Transfers (DBT).

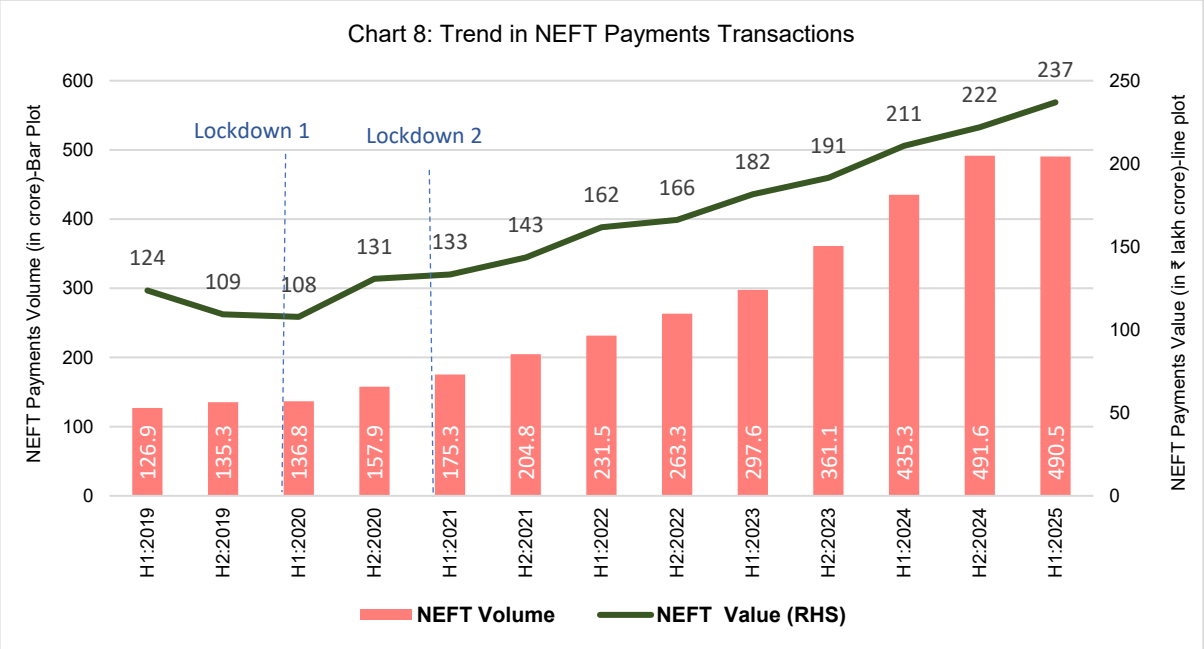
2.17 Retail transactions increased, in volume terms, from 3233 crore in CY 2019 to 20820 crore in CY 2024. In value terms, the transactions grew from ₹386 lakh crore to ₹892 lakh crore during the same period (Chart 7).



RBI-operated Retail Payment System – National Electronic Funds Transfer (NEFT)

2.18 The National Electronic Funds Transfer (NEFT) system is a nationwide, centralised electronic payment platform operated by the Reserve Bank of India (RBI). It enables fund transfers between bank accounts across the country. Although there is no upper limit imposed by the RBI for funds transfer through NEFT system, a member bank may, with the approval of its Board, place such limit based on its own risk perception. This is because NEFT is primarily used for low and medium-value transactions, unlike RTGS, which is designed for high-value payments.

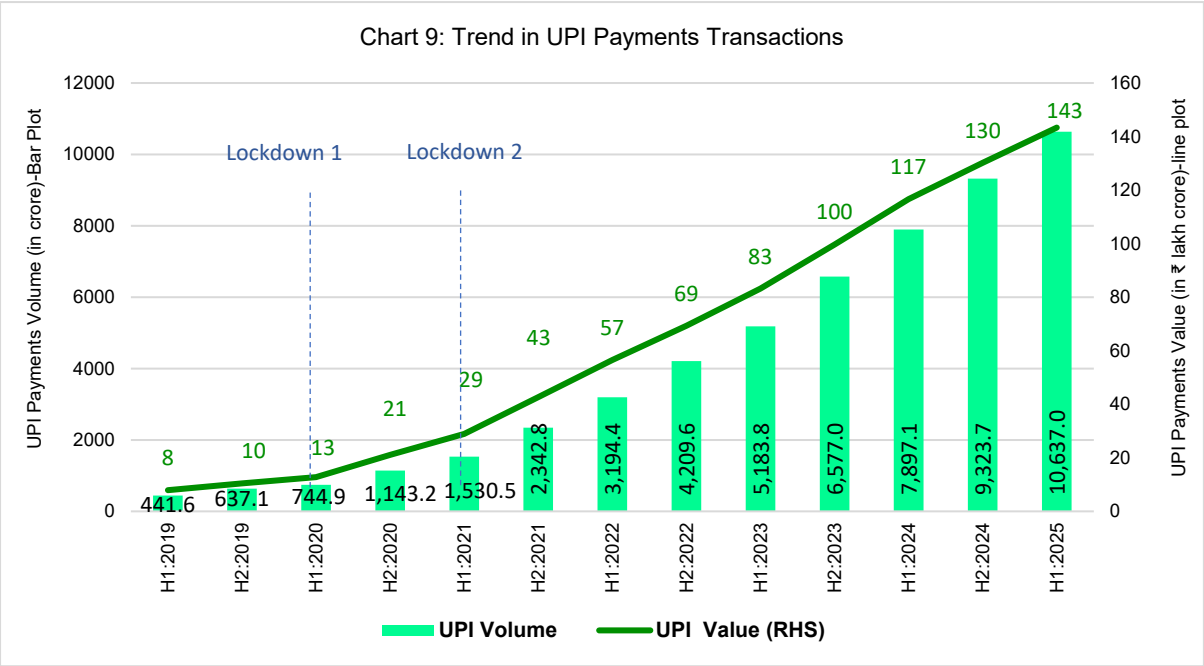
2.19 During the period CY 2019 to CY 2024, NEFT transactions more than tripled in terms of volume, from 262.2 crore to 926.8 crore. However, during the same period, in terms of value, they grew from ₹232.9 lakh crore to ₹432.8 lakh crore. In H1 of CY 2025, NEFT has already processed 490.5 crore transactions, amounting to ₹237.0 lakh crore, indicating sustained growth and widespread adoption (Chart 8).



NPCI Operated Fast Payment Systems

Unified Payment Interface (UPI)

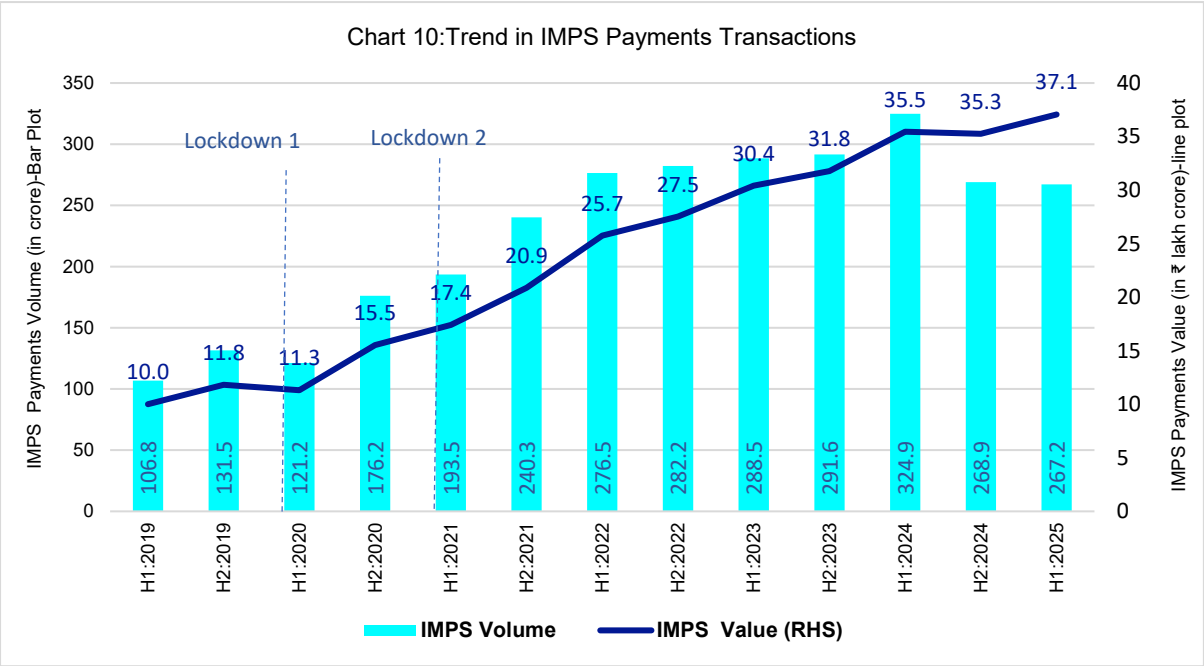
2.20 UPI has become the most widely used retail fast payment system (FPS) in India because of its efficiency, round the clock availability, and ease of use. The volume of UPI transactions has increased significantly from 1,079 crore transactions in CY 2019 to 17,221 crore transactions in CY 2024. The total value of transactions grew from ₹18.4 lakh crore in CY 2019 to ₹246.8 lakh crore in CY 2024. In H1 of CY 2025, the volume of UPI transactions stood at 10,637 crore amounting to ₹143.3 lakh crore in value (Chart 9). The lower average ticket size of UPI transactions indicates that UPI is used mainly for small value transactions.



Immediate Payment Services (IMPS)

2.21 Immediate Payment Service (IMPS) is another FPS in India, enabling real-time settlement of transactions. The individual transaction limit under IMPS is ₹5 lakh across all channels, except for SMS and IVR. IMPS transactions have shown significant growth, with volume doubling from 238.3 crore in CY 2019 to 593.8 crore in CY 2024. More notably, the total transaction value tripled during the same period from ₹21.8 lakh crore to ₹70.7 lakh crore. In H1 of CY 2025, IMPS recorded 267.2 crore transactions amounting to ₹37.1 lakh crore (Chart 10).

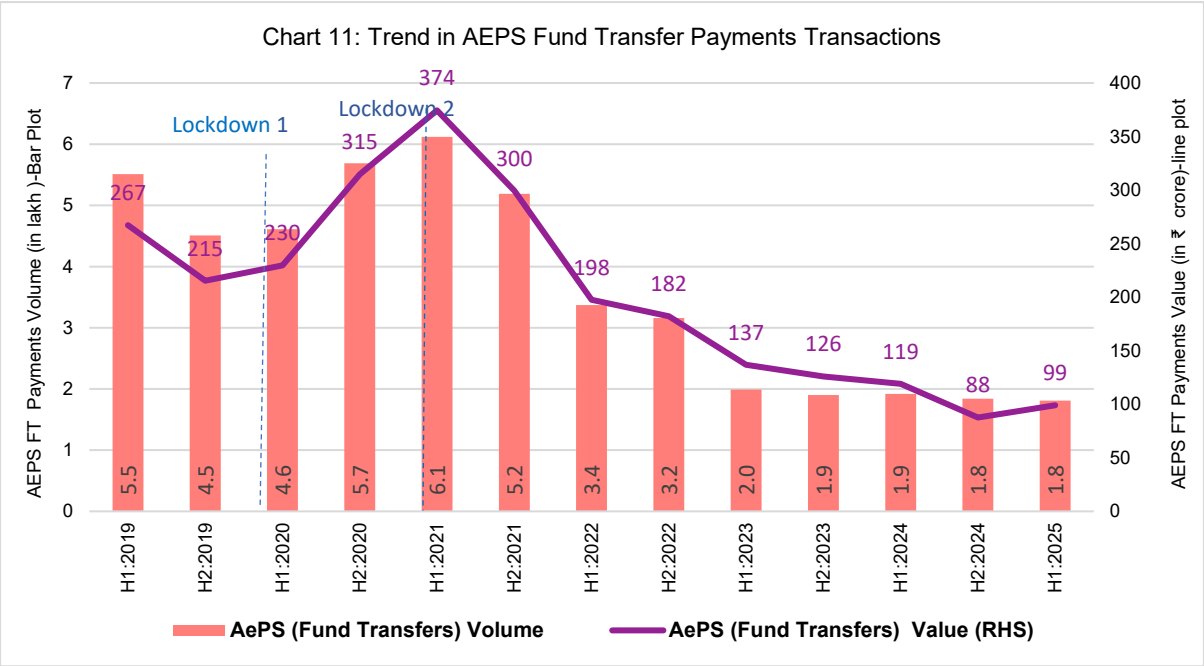
2.22 The average transaction size under IMPS is higher than that of UPI, which indicates that users typically prefer IMPS for medium- to large-value transfers, while UPI is more commonly used for small- to medium-value transactions.

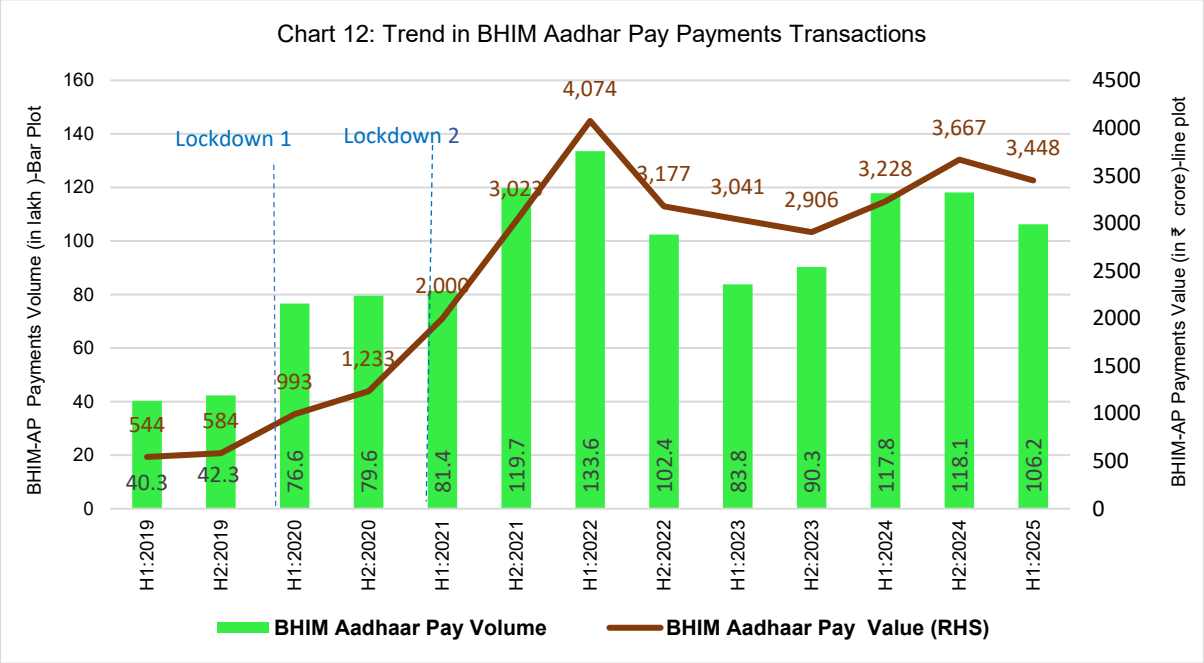


AePS – Fund Transfer and BHIM Aadhaar Pay

2.23 Aadhaar-enabled Payment System (AePS) is a bank-led model that facilitates online interoperable financial inclusion transactions at Point of Sale (Micro ATM) terminals through Business Correspondents of banks, using Aadhaar authentication. The banking services offered under AePS include cash deposit, cash withdrawal, balance enquiry, mini statement, Aadhaar-to-Aadhaar fund transfer, and BHIM Aadhaar Pay. Additional services include e-KYC, Best Finger Detection (BFD), and biometric authentication etc.

2.24 The volume of transactions conducted through AePS (fund transfers) and BHIM Aadhaar Pay surged from 92.61 lakh in CY 2019 to 239.72 lakh in CY 2024.The corresponding value of these transactions rose from ₹1610.55 crore to ₹7102.06 crore over the same period. In the first half of 2025, a total of 108.03 lakh transactions amounting to ₹3545.19 crore were recorded (Charts 11 and 12).





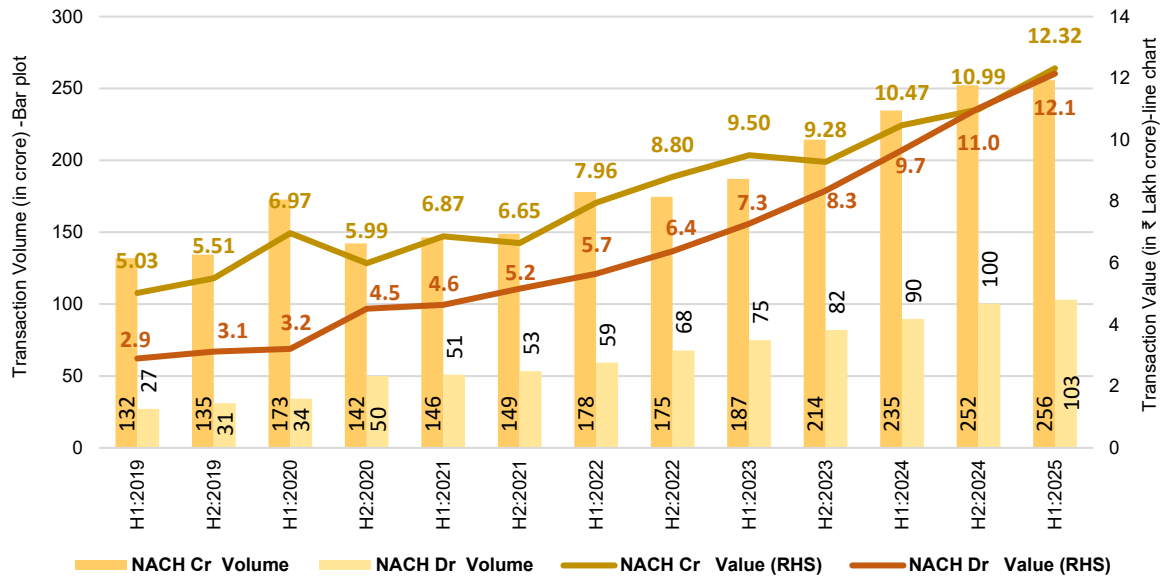
National Automated Clearing House (NACH) – Credit and Debit

2.25 National Automated Clearing House (NACH) is a system run by the National Payments Corporation of India (NPCI) that helps banks automatically handle large numbers of payments and collections. It facilitates two types of transactions. First is called NACH Credit i.e., one debit and multiple credits and includes payment of

salaries, pensions, interest, subsidies, and dividends. Second is called NACH Debit i.e., multiple debits and one credit and includes payment of electricity bills, loan EMIs, and insurance premiums. NACH Credit also covers payment transactions including the government's Direct Benefit Transfer (DBT) payouts, while DBT-related transactions are processed through the Aadhaar Payment Bridge (APB) system. On the other hand, collection-based transactions fall under NACH Debit.

2.26 The usage of NACH has grown significantly in recent years. The volume of transactions increased from 324.7 crore in CY 2019 to 677.1 crore in CY 2024. Transaction value rose from ₹16.6 lakh crore to ₹42.2 lakh crore during the same period. In the first half of 2025 alone, NACH processed 358.8 crore transactions amounting to ₹24.47 lakh crore (Chart 13). Notably, NACH Credit transactions consistently outpace NACH Debit transactions, reflecting the platform's prominent role in bulk disbursements.

Chart 13: Trend in NACH Credit and NACH Debit Transactions

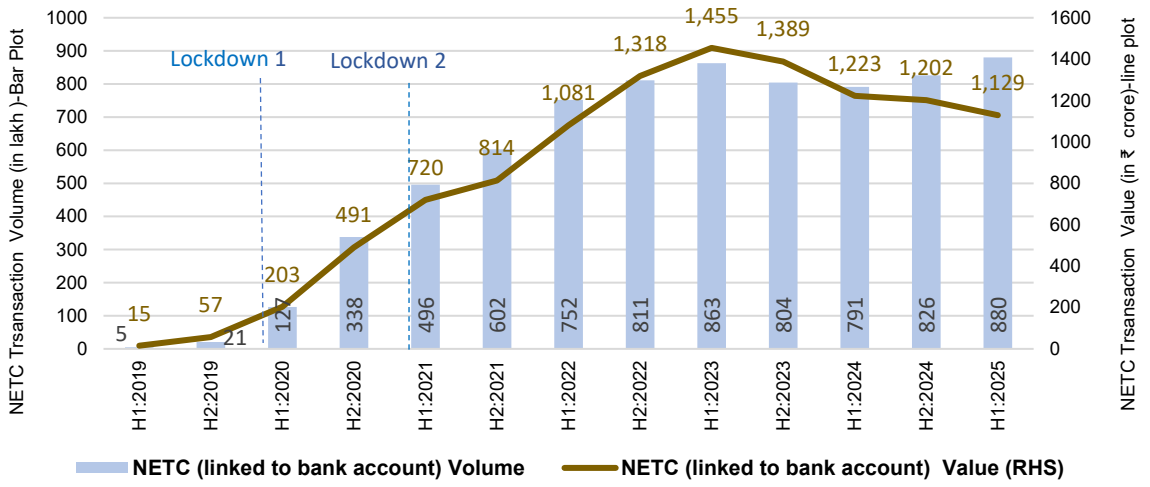


National Electronic Toll Collection (NETC)

2.27 National Electronic Toll Collection (NETC) system uses Radio Frequency Identification (RFID) technology to enable the customer to make electronic payments at NETC enabled highway toll plazas, without stopping the vehicle, from their prepaid account linked to the FASTag.

2.28 NETC (linked to bank account) transaction volume rose from 25.6 lakh in 2019 to 16.2 crore in CY 2024. In value terms, NETC (linked to bank account) showed the same trend, increasing from ₹72.6 crore in 2019 to ₹2425.1 crore in 2024. In H1 of 2025, it recorded 8.8 crore transactions worth ₹1128.98 crore (Chart 14).

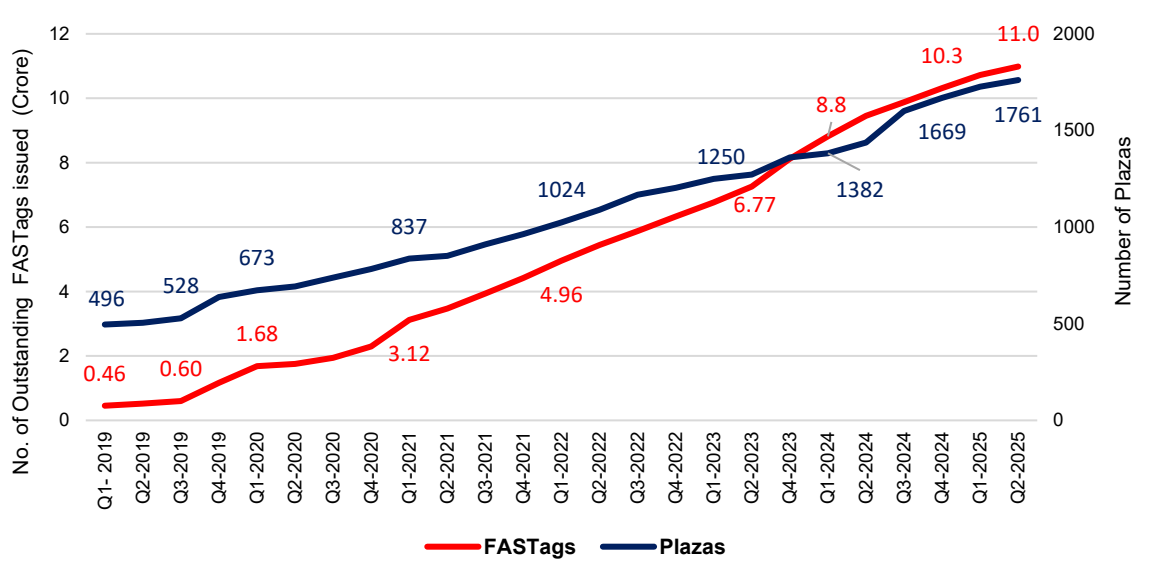
Chart 14: Trend in NETC (linked to bank account) Payment Transactions



NETC Infrastructure

2.29 NETC infrastructure has expanded rapidly. The number of toll plazas onboarded increased from 505 in June 2019 to 1,782 in June 2025. FASTag issuance grew from 52 lakh to 11.11 crore during the same period (Chart 15).

Chart 15: Trend in NETC Infrastructure

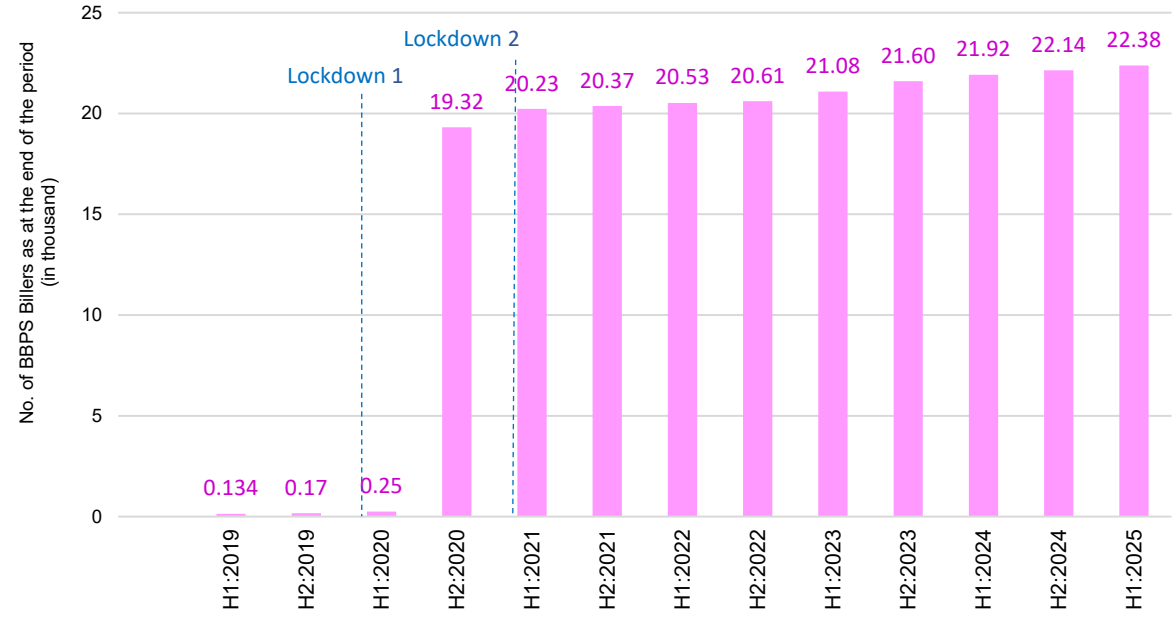


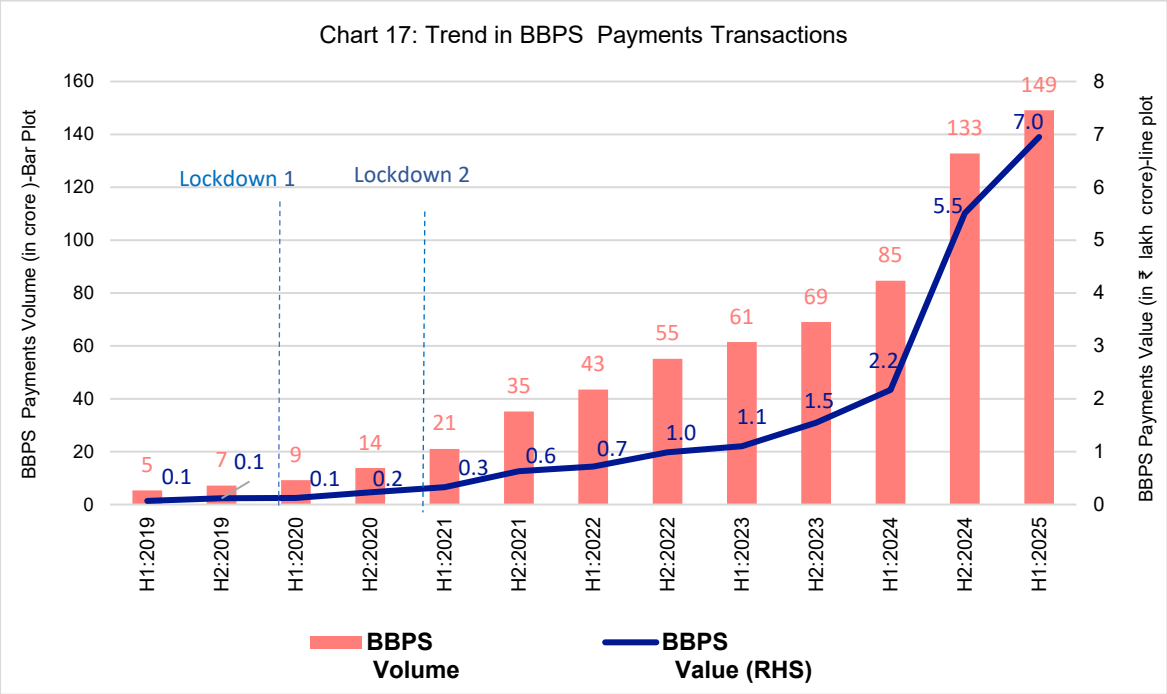
Bharat Bill Payment System (BBPS)

2.30 The Bharat Bill Payment System (BBPS) is an RBI-mandated system that offers a reliable, secure, and integrated platform for bill payments across the country. It facilitates convenient, real-time payment of various utility bills such as electricity, water, gas, telecom, DTH, and more through multiple channels, including bank branches, mobile apps, ATMs, and agent outlets. The system ensures transparency and immediate confirmation of transactions. BBPS is operated by NPCI Bharat BillPay Ltd. (NBBL), a wholly owned subsidiary of NPCI.

2.31 The growth of BBPS has been remarkable, with transaction volume rising from 12.6 crore in CY 2019 to 217.5 crore in CY 2024. Transaction value surged 41 times, from ₹0.2 lakh crore to ₹7.7 lakh crore during the same period. In H1 of 2025 alone, BBPS recorded a transaction volume of 149 crore and a value of ₹ 6.95 lakh crore (Chart 17). The number of billers also expanded significantly, from 134 in June 2019 to 22,378 in June 2025 (Chart 16).

Chart 16: No. of BBPS billers





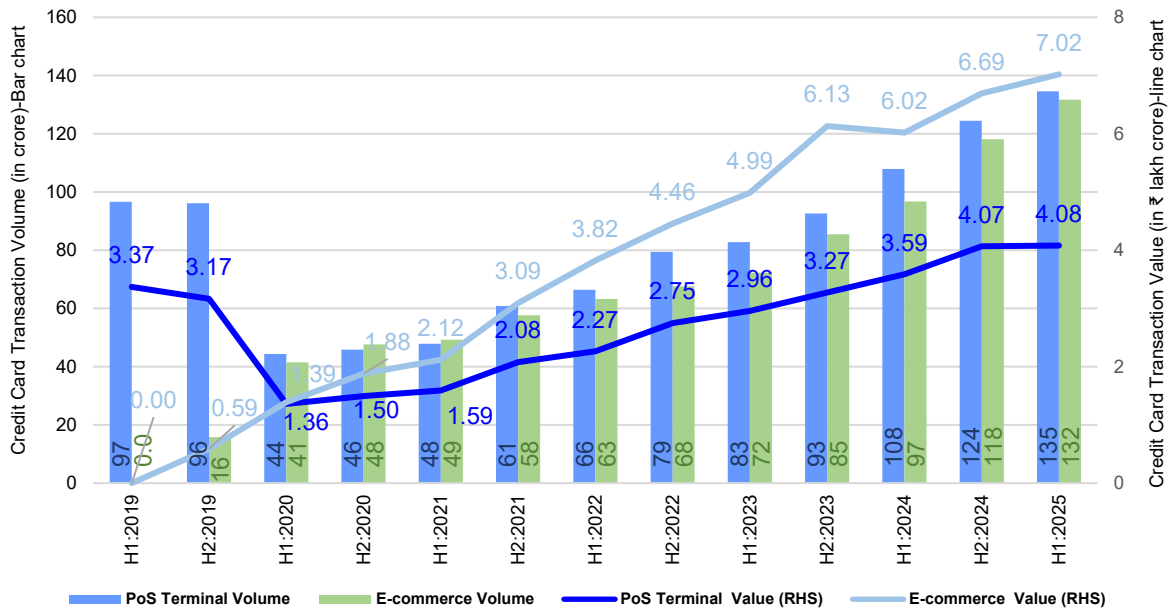
Cards and Prepaid Payment Instruments

2.32 As of June 2025, there were 111.64 crore outstanding cards in India, including 11.12 crore credit cards and 100.52 crore debit cards.

Credit Cards

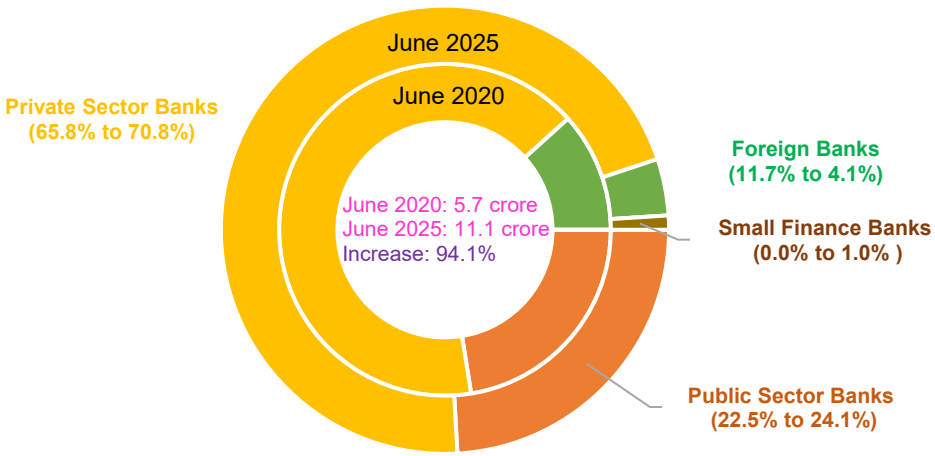
2.33 Credit card transactions have seen an upsurge over the years. Transaction volumes increased from 208.7 crore in 2019 to 447.2 crore in 2024, while value rose from ₹7.1 lakh crore to ₹20.4 lakh crore. In H1 of 2025, 266.3 crore transactions amounting to ₹ 11.1 lakh crore were recorded (Chart 18).

Chart 18: Trend in Credit Card Transaction



2.34 Private sector banks continue to dominate in the credit card space, focusing on digital and co-branded offerings for customers, as their share increased from 65.8 per cent in June 2020 to 70.8 per cent in June 2025. The share of Public Sector Banks (PSBs) grew from 22.5 per cent to 24.1 per cent during this period. In contrast, the share of foreign banks saw a steep decline, from 11.7 per cent to 4.1 per cent, as their outstanding credit cards reduced from 67 lakh to 45 lakh cards during the same period. Small Finance Banks had issued 10 lakh cards by June 2025 (Chart 19).

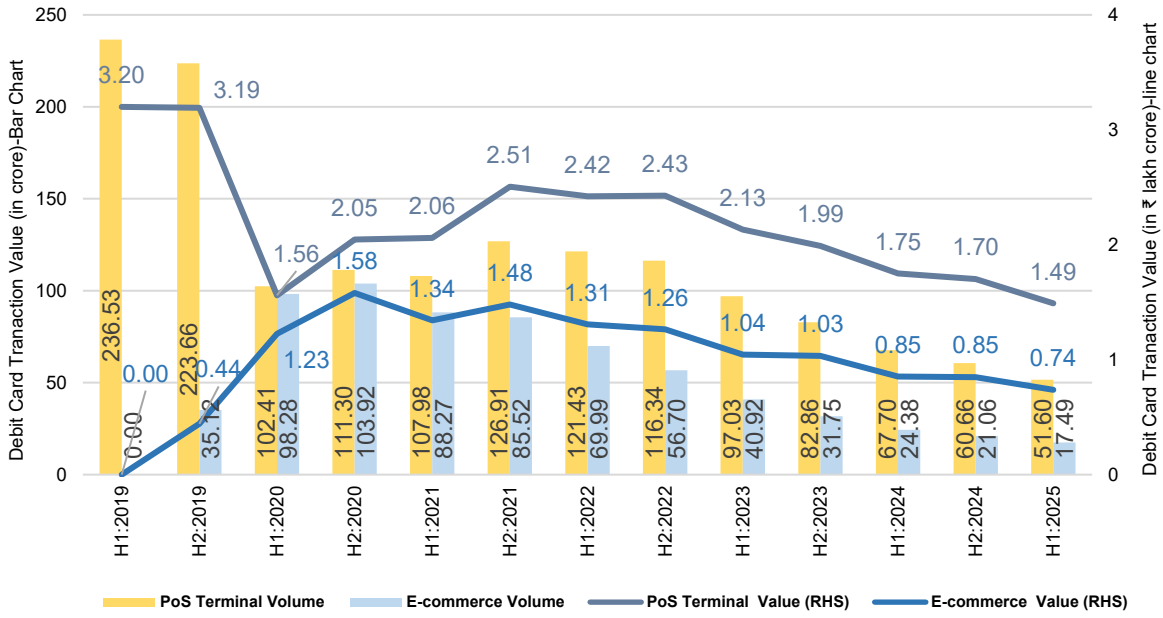
Chart 19: Share of Bank Groups in Outstanding Credit Cards



Debit Cards

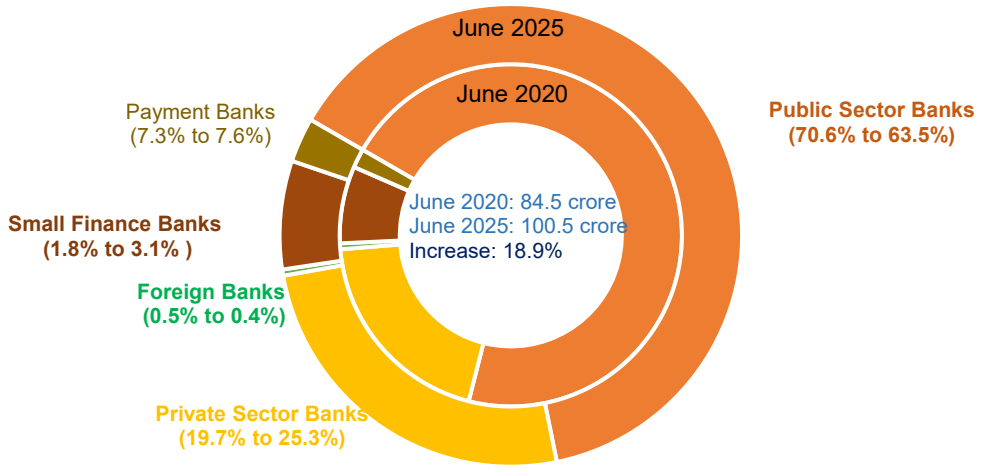
2.35 Transactions in debit cards have witnessed a decline since 2019, both in volume and value. In volume terms, debit card transactions declined from 495.32 crore in CY 2019 to 173.80 crore in CY 2024, while in value terms, they declined from ₹6.83 lakh crore to ₹5.15 lakh crore during this period. In H1 of 2025, debit cards recorded 69.09 crore transactions valued at ₹2.22 lakh crore (Chart 20).

Chart 20: Trend in Debit Card Payment Transactions



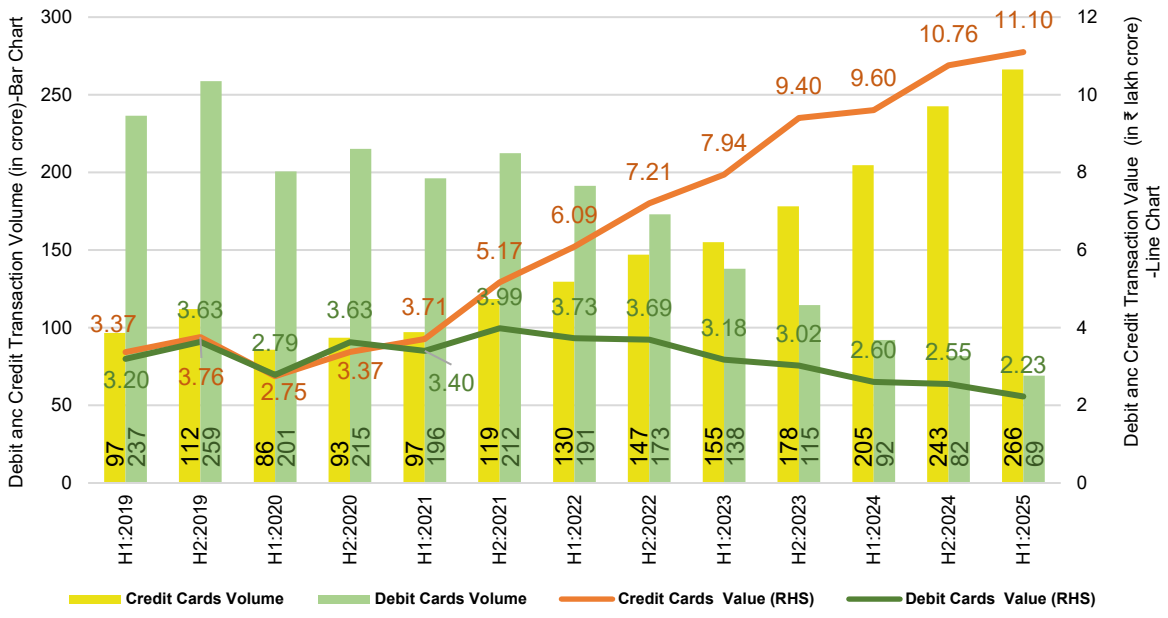
2.36 Debit cards, although more widely held, have seen shifting trends. Unlike in the case of credit cards, PSBs dominate the debit card space, although their market share has declined from 70.6 per cent (59.7 crore cards outstanding) in June 2020 to 63.5 per cent (63.8 crore cards outstanding) in June 2025, partly due to competition in payments posed by UPI. During this period, however, private sector banks improved their share from 19.7 per cent (16.7 crore cards outstanding) to 25.4 per cent (25.5 crore cards outstanding). SFBs and Payment Banks also enhanced their share, with number of cards issued by SFBs doubling from 1.5 crore (1.8 per cent market share) to 3.1 crore (3.1 per cent market share) between June 2020 and June 2025 (Chart 21).

Chart 21: Share of Bank Groups in Oustanding Debit Cards



2.37 To summarise, credit and debit cards are showing different usage patterns (Chart 22). While credit cards are being increasingly used for online purchases and credit access, debit cards are mostly being used for cash withdrawals and basic transactions. Both instruments, however, face growing competition from digital alternatives.

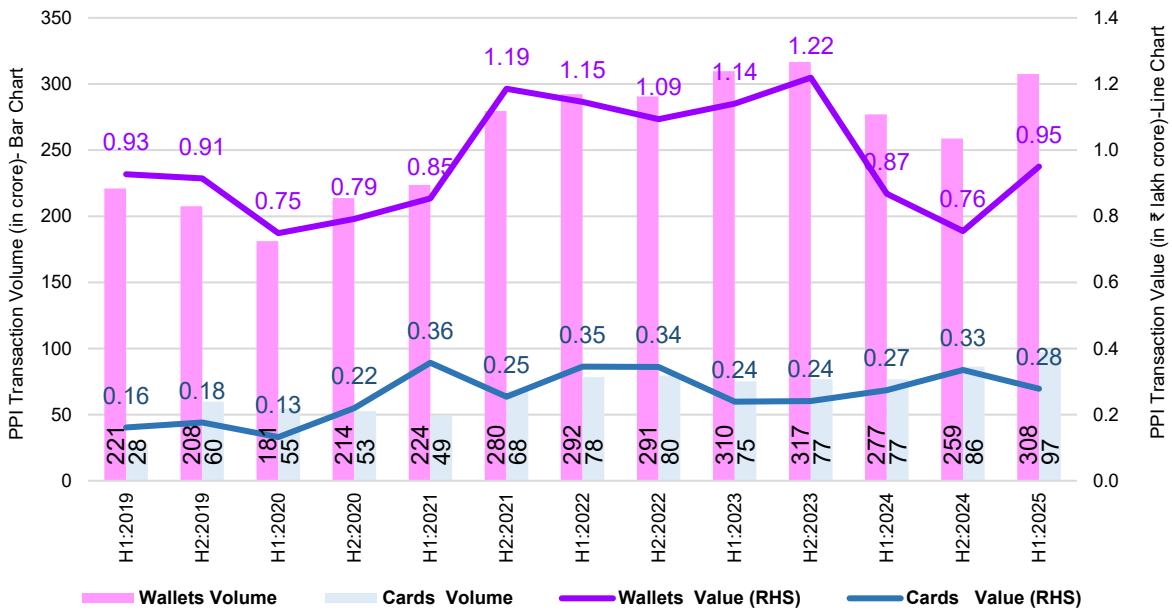
Chart 22: Trend in Debit and Credit card Payment Transactions



Prepaid Payment Instruments (PPIs)

2.38 Prepaid Payment Instruments (PPIs), including mobile wallets and prepaid cards, continue to play a versatile role in digital transactions. While PPI transaction volume rose from 516.2 crore in CY 2019 to 698.9 crore in CY 2024, transaction value remained almost at the same level of ₹2.23 lakh crore during this period. During H1 of 2025, PPIs recorded transaction volume of 404.7 crore and value of ₹1.23 lakh crore. PPI issuance fell from 190 crore (175.5 crore wallets and 14.5 crore cards) in June 2020 to 135.2 crore (86.8 crore wallets and 48.4 crore cards) in June 2025 (Chart 23).

Chart 23: Trend in PPI Payment Transactions



3. Major Regulatory Developments in Payment Systems in India

3.1 The payment system in India plays a critical role in ensuring smooth functioning of the country's financial ecosystem. Payment and Settlement Systems Act, 2007 (PSS Act) provides for the regulation and supervision of payment systems in India and designates the Reserve Bank of India (RBI) for this purpose. Accordingly, RBI exercises the powers, perform the functions, and discharge the duties conferred under PSS Act through the 'Payments Regulatory Board'. A bouquet of payment systems ranging from traditional ones such as cheques, to modern systems like the Unified Payments Interface (UPI), Immediate Payment Service (IMPS), to digital wallets (Prepaid Payment Instruments or PPIs) offer ample choice to customers to make payments safely and conveniently.

3.2 RBI has put in place measures to ensure that the payment systems stay efficient, secure, accessible, and inclusive while facilitating customer protection and orderly expansion of the ecosystem. Key regulatory measures in this regard taken by RBI, in recent years, are as follows:

(a) Card Tokenisation – Reserve Bank of India introduced device tokenisation in 2019 and card-on-file tokenisation (CoFT) in 2021. Tokenisation replaces actual card details with a unique 'token', enhancing transaction security by preventing storage of real card data. Tokenisation allows users to tokenise cards across multiple merchants with consent, enhancing convenience.

(b) Arrangements with Card Networks – The choice of network for a card issued to a customer is decided by the card issuer (bank / non-bank) and is linked to the arrangements that the card issuers have with card networks in terms of their bilateral agreements. The Reserve Bank, therefore, issued instructions in March 2024 as follows:

    (i) Card issuers shall not enter into any arrangement or agreement with card networks that restrain them from availing the services of other card networks and

    (ii) Card issuers shall provide an option to their eligible customers to choose from multiple card networks at the time of issue/renewal. These

provisions are applicable to credit card issuers with number of active cards issued is more than 10 lakh.

(c) Expansion of the Scope of TReDS – Trade Receivables e-Discounting System (TReDS) enables MSMEs to finance receivables via invoice discounting. Certain enhancements were made in June 2023 to boost liquidity by expanding the pool of financier participants, permitting financiers to insure their exposures to encourage bidding by them for payables of low rated buyers, fostering secondary markets for transfer of Factoring Units, displaying bids to other bidders to promote transparent and competitive bidding, and facilitating the settlement of bills not discounted through the TReDS platform.

(d) Payments Infrastructure Development Fund (PIDF) – Launched in January 2021, PIDF aims to boost payment acceptance in Tier-3 to 6 centres, North-Eastern Region and Jammu & Kashmir. The scheme was extended till December 2025 and expanded to cover PM Vishwakarma beneficiaries and new device types such as soundbox devices. Subsidy in focus regions was increased to 90% to further encourage adoption. By May 2025, it subsidised deployment of over 14 lakh PoS devices, 4 crore QR codes and 67.60 lakh soundbox devices. Nearly 53% of the devices are deployed in Tier-5 and 6 centres.

(e) Offline Digital Payments Enablement – A framework was put in place in January 2022 to enable small value offline payments to be made through any channel or instrument, viz., cards, wallets, mobile devices etc. While the upper limit of an offline payment transaction shall be ₹500, the total limit for offline transactions on a payment instrument shall be ₹2,000 at any point in time. However, to encourage customers to use UPI Lite, in December 2024, the per-transaction limit was enhanced to ₹1,000 with ₹5,000 being the total limit. UPI Lite is offline to the extent that AFA is not required, and transaction alerts are not sent in real time.

(f) Pre-sanctioned Credit Lines on UPI – Linking of pre-sanctioned credit lines issued by Scheduled Commercial Banks (excluding Small Finance Banks, Payment Banks and Regional Rural Banks) was permitted vide RBI directions dated September 04, 2023. The instructions were modified in February 12, 2025 to permit Small Finance Banks (SFBs) also to offer credit on UPI, thereby facilitating low-cost credit access and innovation.

(g) e-Mandates for Recurring Transactions – As per the e-Mandate framework issued in August 2009, the cap / limit for e-mandate based recurring transactions without

Additional Factor of Authentication (AFA) is set at ₹2,000/- per transaction. Transactions above this cap are subject to AFA. These limits were subsequently increased to ₹ 5,000/- and then to ₹ 15,000/- per transaction. In December 2024, AFA exemption limit was increased to ₹1 lakh for mutual fund subscriptions, insurance premiums, and credit card bill payments. Other requirements like pre and post notifications, providing an option for opt-out, etc. continue to remain in place.

3.3 Major regulatory developments in payment systems during the half-year of 2025 include issuance of directions on Due Diligence of Aadhaar Enabled Payment System (AePS) Touchpoint Operators (ATOs), permitting NPCI to prescribe transaction limits in UPI and enablement of Credit Guarantee Fund Scheme for Factoring in TReDS.

(a) Issue of directions on Due Diligence of Aadhaar Enabled Payment System (AePS) Touchpoint Operators (ATOs) – The directions, issued on June 27, 2025, cover the due diligence requirements applicable to AePS Touchpoint Operators (ATOs) and the risk management instructions governing the activities of ATOs. These shall come into effect from January 01, 2026.

(b) Permitting NPCI to prescribe transaction limits in UPI – The transaction limit in UPI, for both Person to Person (P2P) and Person to Merchant (P2M) payments, was capped at ₹1 lakh except for specific use cases of P2M transactions where higher limits had been allowed. To enable the ecosystem to respond efficiently to new use cases, NPCI has been permitted to prescribe and subsequently revise transaction limits for all P2M transactions, in consultation with banks and other stakeholders of the UPI ecosystem, based on evolving user needs. Limits for P2P transactions will continue to be capped at ₹1 lakh, as hitherto.

(c) Enablement of Credit Guarantee Fund Scheme for Factoring (CGFSF) in TReDS – With the objective to facilitate seamless financing for MSME sellers from financiers operating on TReDS platforms, CGFSF has been enabled on TReDS platforms. Necessary instructions have been issued to TReDS entities in this regard.

4. In Focus: Real Time Gross Settlement (RTGS) System

4.1 RTGS is a payment and settlement system, where settlement happens on a real-time and gross basis. In this system, the payment instructions are executed immediately, the moment they are received ('real time'), and the settlement of each fund transfer occurs individually without netting ('gross' basis).

4.2 Large Value Payment Systems like RTGS are critical for smooth functioning of the financial system. Hence, RTGS is designated as a Financial Market Infrastructure (FMI) in India, as well as a Systematically Important Payment System (SIPS). The NCIIPC (National Critical Information Infrastructure Protection Centre) also designates RTGS as a critical information infrastructure.

4.3 RTGS is governed under the oversight framework for FMIs and retail payment systems[3]. Its operations are governed by the RTGS System Regulations (version 1.0), a part of the Payment and Settlement Systems Regulations, 2008.

History of RTGS in India

4.4 Prior to implementation of RTGS in 2004, large value transfers were carried out through paper-based clearing[4] and telegraphic transfers. Thereafter, Electronic Clearing System (ECS) and Electronic Funds Transfer (EFT) were introduced in mid-1990s. These systems, however, covered a limited geographical area.

4.5 As a precursor to RTGS, the Reserve Bank of India (RBI implemented the Centralised Funds Management System (CFMS)[5], which enabled funds and treasury managers of commercial banks to obtain the balances in their current accounts

[3] Oversight framework for FMIs and retail payment system dated June 13, 2020 - https://rbi.org.in/web/rbi/-/press-releases/reserve-bank-of-india-publishes-the-oversight-framework-for-financial-market-infrastructures-and-retail-payment-systems-49947

[4] Annual Report 2004 - https://rbi.org.in/web/rbi/publications/reports/annual_report/annual_report_chapterwise?&publishDateFrom=2004-01-01&publishDateTo=2004-12-31

[5] Annual Report 2000 - https://rbi.org.in/web/rbi/publications/reports/annual_report/annual_report_chapterwise?&publishDateFrom=2000-01-01&publishDateTo=2000-12-31

maintained at 17 Regional Offices of RBI's Deposit Accounts Departments and to transfer funds across these accounts.

4.6 Owned and operated by RBI, RTGS was introduced in India in March 2004. The settlement in RTGS takes place in the books of RBI and is final and irrevocable. With effect from December 14, 2020, RTGS is available 24x7x365.

Limits and Intraday Liquidity

4.7 While the minimum amount that can be transferred through RTGS for a customer transaction is Rs 2,00,000, there is no upper limit for such transactions. There are no minimum or maximum limits for interbank transactions. RTGS also settles Multilateral Net Settlement Batch (MNSB) files emanating from retail payment systems like Unified Payments Interface (UPI), Immediate Payment Service (IMPS), Aadhaar-enabled Payment System (AePS), National Electronic Toll Collection (NeTC), National Financial Switch (NFS), and National Automated Clearing House (NACH).

4.8 Being a large value payment system that settles on a gross basis, RTGS requires liquidity on an intraday basis. Arrangement of such funding by participants would entail a cost to them while non availability of funds will lead to delay in outgoing payments. To facilitate smooth settlement of RTGS transactions, Intra-day Liquidity (IDL) facility is made available to eligible RTGS participants. IDL is provided to participants against collateral and must be reversed on the same day.

Implementation of ISO 20022 messaging standards in RTGS

4.9 RTGS system uses the Structured Financial Messaging System (SFMS) over the Indian Financial Network (INFINET) for secure transfer of messages between RBI and participating institutions.

4.10 A major upgrade to the system was made in 2013, when the Next Generation – RTGS (NG-RTGS) was implemented. NG-RTGS supported financial messaging in the ISO20022 message formats, among other advanced features. This made India one of the first countries to implement the ISO20022 standard in RTGS.

4.11 The ISO 20022 messaging system standardises the format and content of financial messages. This enables straight-through processing (STP), hence streamlining transactions, accelerating settlement times, and lowering operational costs. Adoption of ISO 20022 messaging standard has also been identified by the G20 as one of the requirements for improving the efficiency of cross-border payments.

RTGS - 24x7x365

4.12 The operational timings for RTGS were increased multiple times since its introduction in 2004. In 2013, when RTGS was upgraded to NG-RTGS, the operational timings were set as 09:00 to 19:30 hours on weekdays and 09:00 to 15:30 hours on Saturdays. From August 26, 2019, RTGS timings were 07:00 to 19:45 hours. In December 2020, RTGS was made available on a 24x7x365 basis, making India one of the first countries to have a round-the-clock RTGS system. The response to round-the-clock availability of RTGS has been positive with an increasing number of transactions being undertaken during the extended operating hours.

4.13 The round-the-clock availability of RTGS has also facilitated processing of settlement files of retail payment systems (UPI, NACH, IMPS, etc) during weekends and increased the number of daily settlements. This has reduced settlement risk and has enhanced the efficiency of the overall payments ecosystem in the country. The 24x7x365 availability of RTGS has made it possible for other retail payment systems, that post multilateral settlement files in RTGS, to also operate on a 24x7x365 basis.

4.14 One of the targets in the G20 roadmap for enhancing cross border payments is "*adapting operating timetables for critical infrastructures and market participants to enable greater overlap of settlement windows*". Extending the operating hours of RTGS ensures overlap with payment systems of other jurisdictions in different time zones.

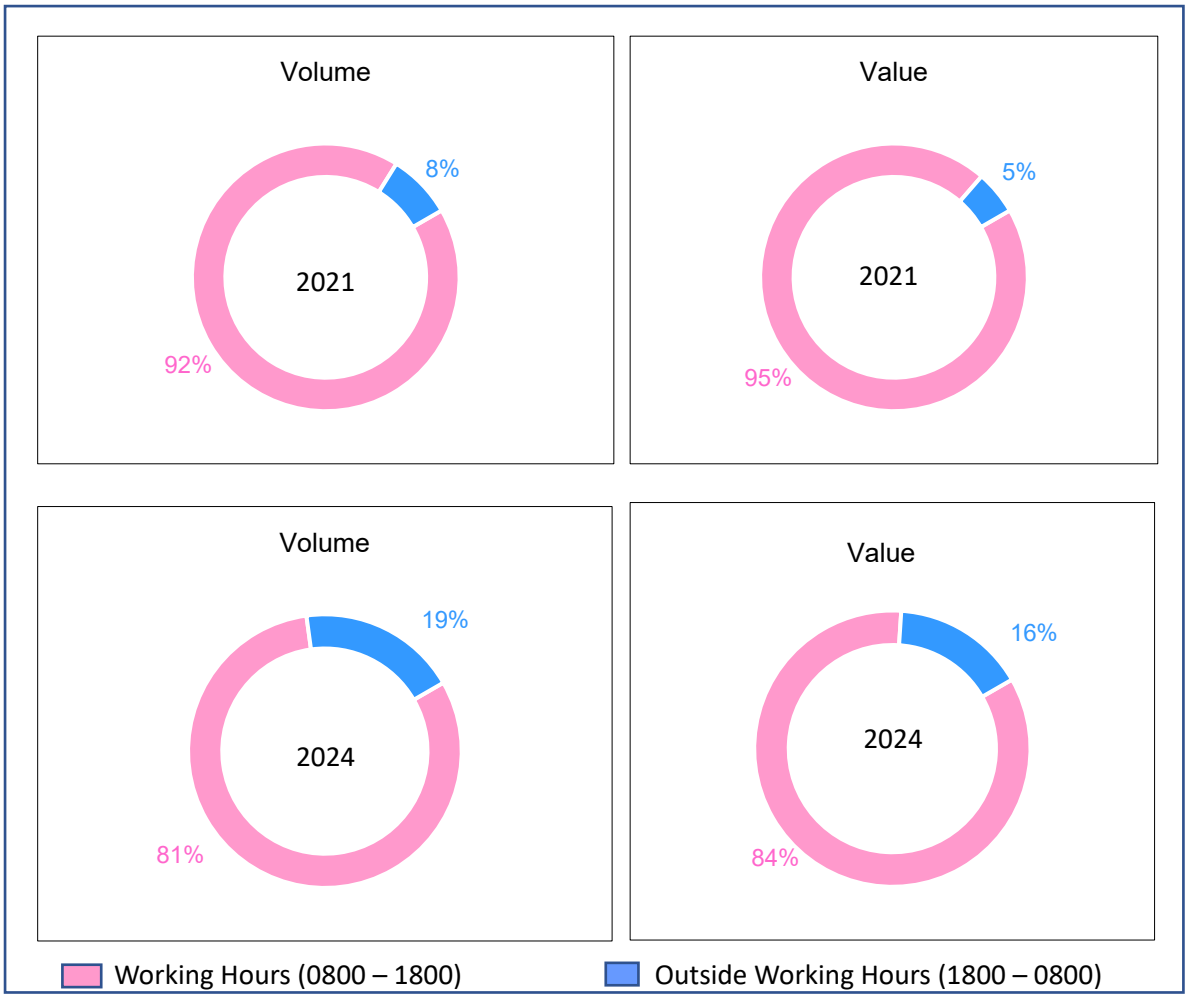
Impact of RTGS 24x7x365

4.15 The introduction of RTGS on 24x7x365 basis was a transformative milestone in the India's payment infrastructure, enabling seamless, round-the-clock high-value fund transfers, eliminating the constraint of banking hours and holidays. With this initiative, India entered a select group of countries offering uninterrupted RTGS.

4.16 Soon after RTGS was made available 24x7x365, a noticeable surge in the number of transactions was observed. The volume of RTGS transactions increased from 14.6 crore in the CY 2020 to 20 crore in CY 2021. In terms of value, during this period, RTGS transactions grew by 18.3 per cent, from ₹1,053 lakh crore to ₹1,246 lakh crore. The surge continued in 2021 even during the period of second nationwide COVID-related lockdown.

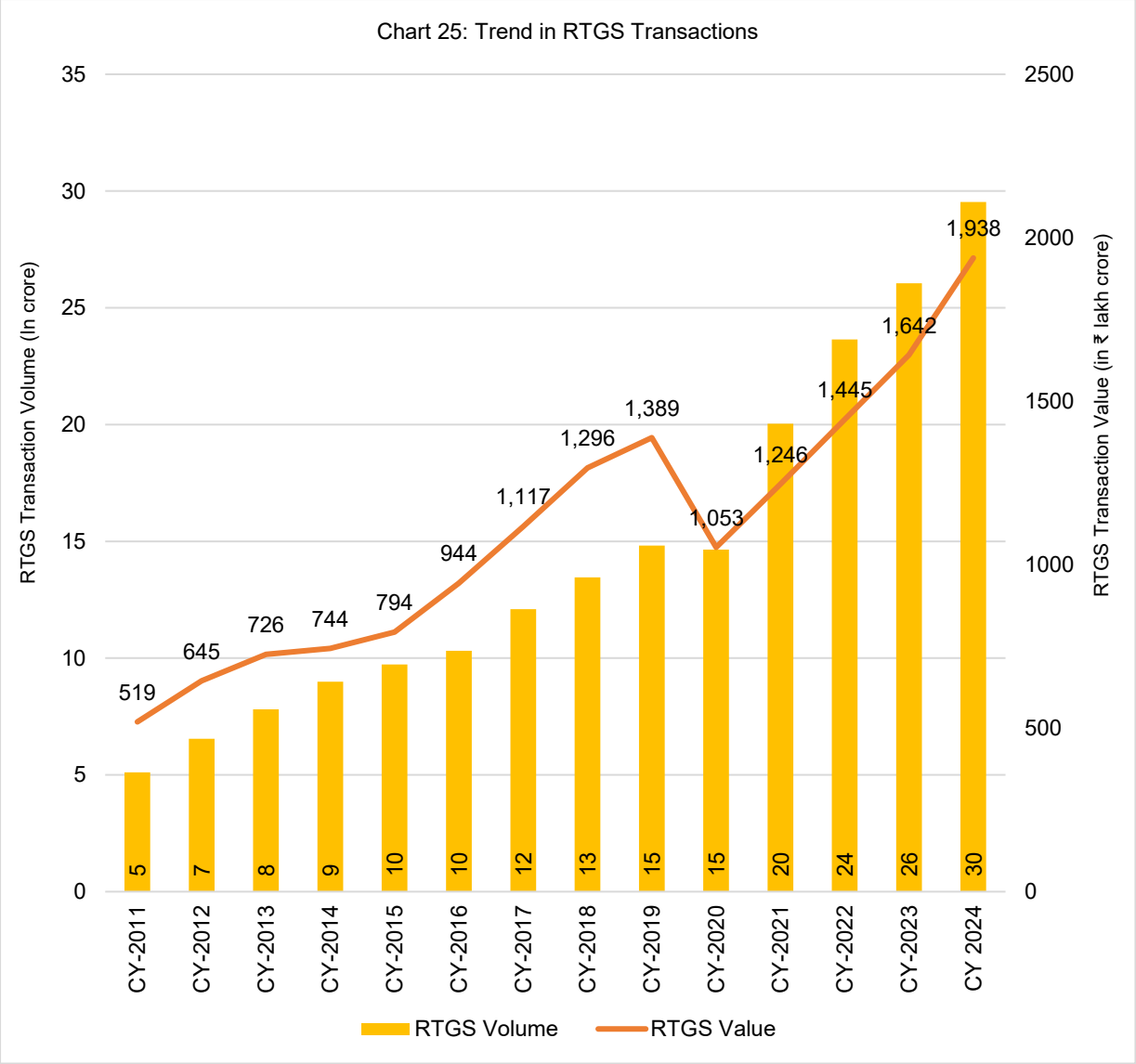
4.17 In CY 2021, 92 per cent of the total RTGS transactions were conducted during regular business hours (08:00 to 18:00 hours), while the remaining 8 per cent took place outside business hours. By CY 2024, the share of transactions, conducted outside business hours (between 18:00 hours to 08:00 hours on the next day), had increased to 19 per cent in terms of volume, and 16 per cent in terms of value (Chart 24). This trend indicates growing adoption and popularity of the RTGS 24x7x365 system.

Chart 24: Comparison of 24x7 operation of RTGS



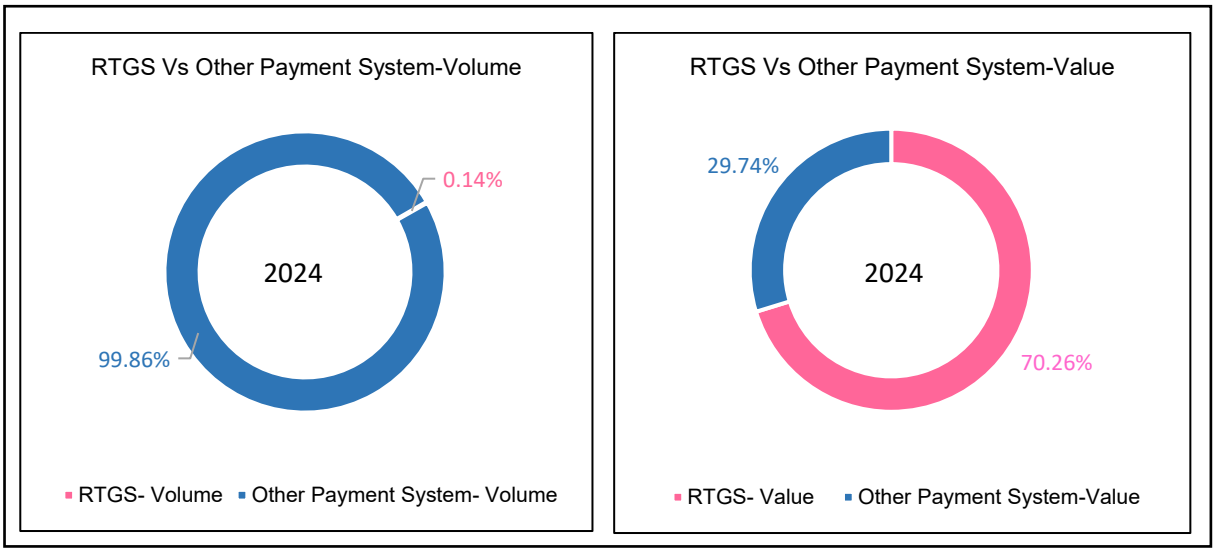
Growth in RTGS payments

4.18 RTGS has seen significant growth in volume and value since its implementation and has served as the backbone of the digital payments revolution in India. RTGS transactions witnessed a CAGR of 13.70%, in terms of volume, and 13.78%, in terms of value, during the period 2020-21 to 2024-25 (Chart 25).



4.19 A comparative analysis of RTGS transactions as a percentage of total digital transactions for CY 2024 is provided in Chart 26.

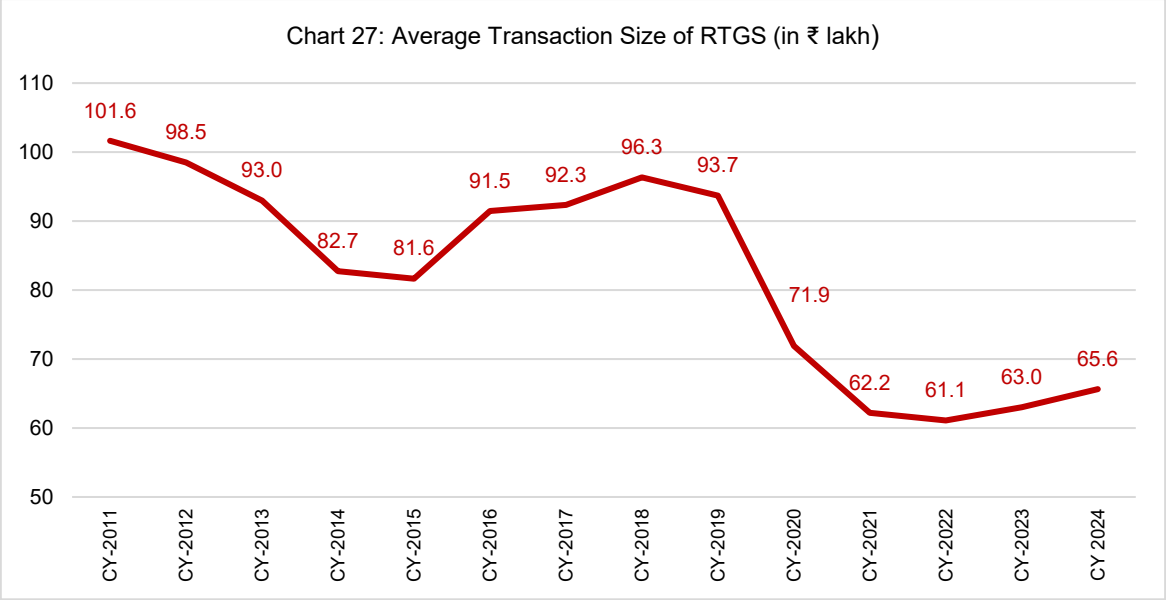
Chart 26: RTGS Payment vs Other Payments



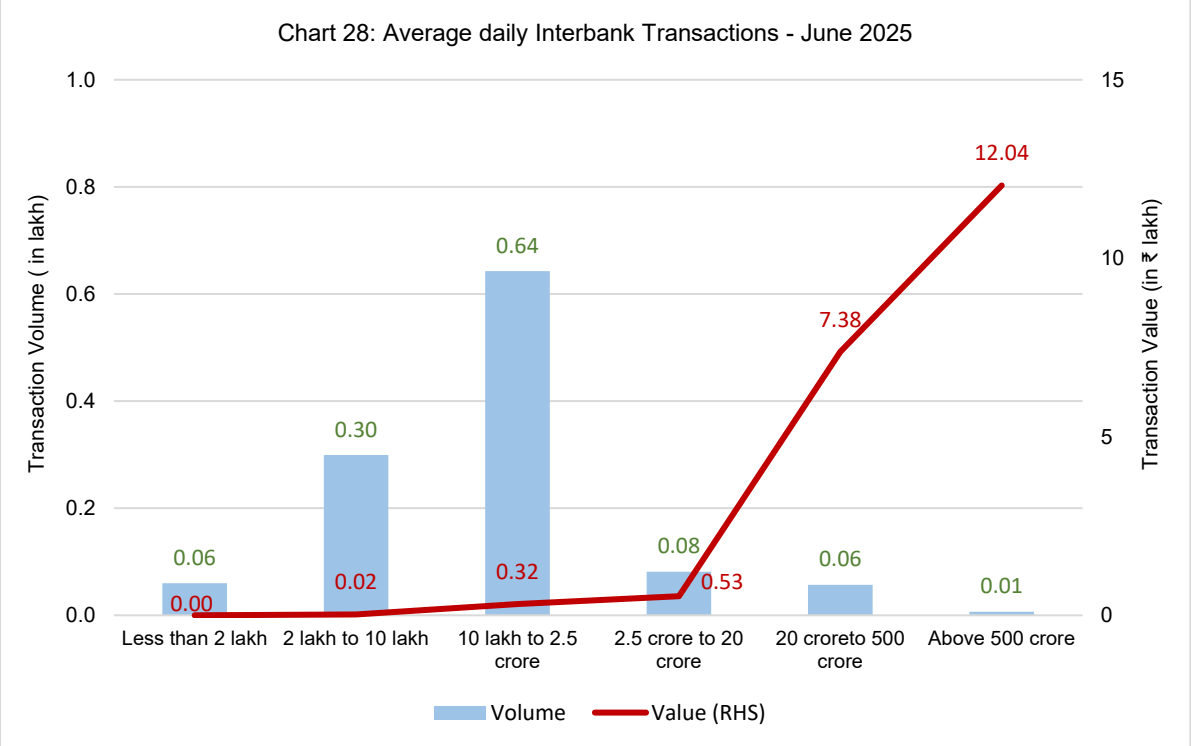
Ticket size in RTGS

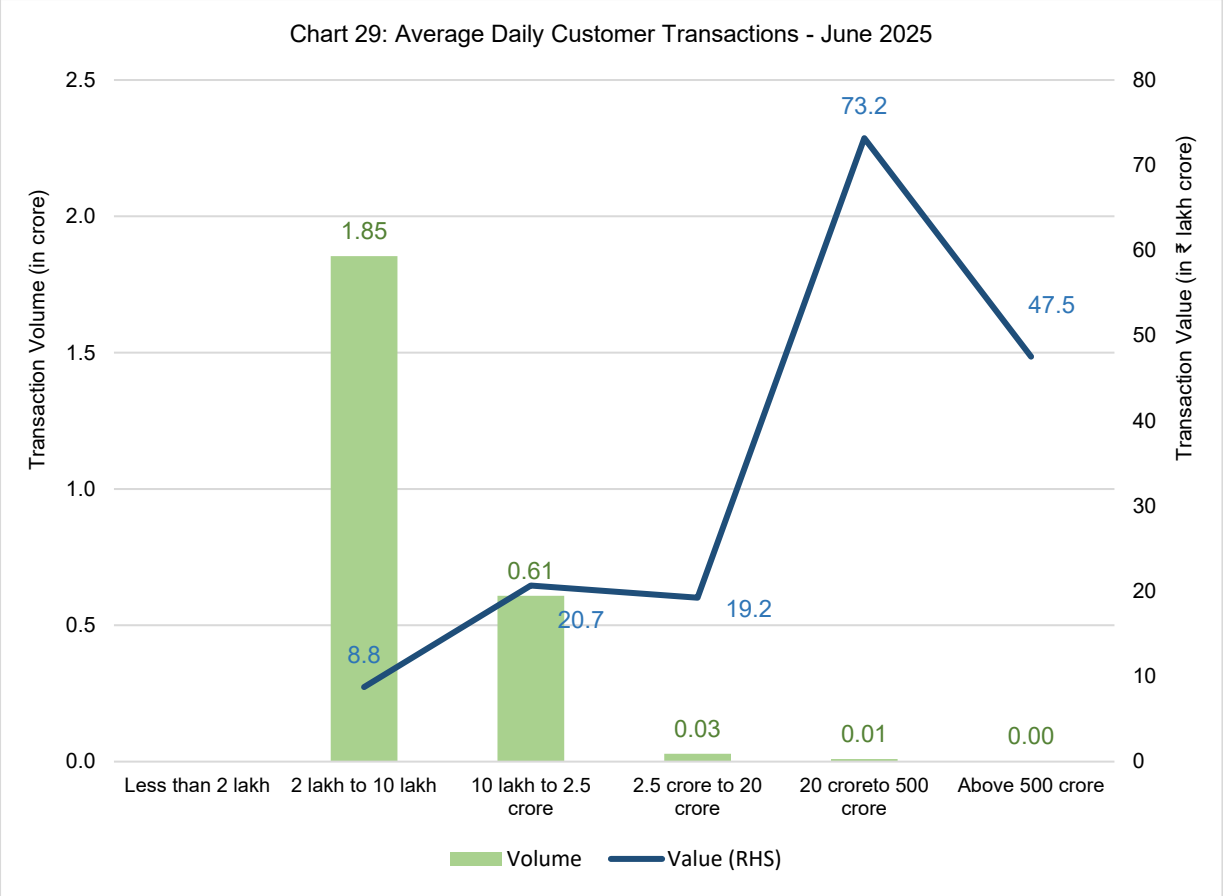
4.20 RTGS transactions are predominantly customer transactions, accounting for more than 99% in terms of volume and 89% in terms of value. Customer transactions comprise all transactions initiated by customers of the remitting bank, which include transactions of both retail customers and corporates.

4.21 While the total volume and value of the RTGS transactions have shown an increasing trend over the years, the average ticket size of such transactions has been fluctuating. The decline in the average ticket size during CY 2011 to CY 2015 was followed by a period of growth between CY 2015 and CY 2018. Post CY 2019 however, a sharp decline in the average ticket size was noted, a trend which persisted through CY 2022. However, a reversal has been observed thereafter with the average ticket size showing an upward trajectory (Chart 27).



4.22 A value-bucket wise analysis carried out from the RTGS transaction data in Charts 28 and 29 shows that approximately 75% of the customer transactions in RTGS lie between the value band of ₹2 Lakh and ₹10 Lakh, which shows that customer transactions are relatively lower in ticket size. However, interbank transactions are of a higher ticket size, with more than half of the transactions being in the ₹10 Lakh – ₹2.5 Crore value band.





Access and Participation in RTGS

4.23 RBI stipulates access criteria to grant membership of RTGS to entities. Membership of RTGS is open to all scheduled / licensed commercial banks, primary dealers, clearing corporations, select development financial institutions and a few categories of non-bank Payment System Operators like White Label ATM Operators, Card Networks and Pre-Paid Instrument Issuers. For clearing organisations, other categories of Payment System Providers and other entities, RBI considers membership requests on a case-to-case basis. Eligible entities that do not comply with the access criteria can participate as a sub-member[6].

[6] Licensed banks which have the technological capabilities but are not able to participate in RTGS on account of either not meeting the access criteria or because of cost considerations can avail RTGS facility as sub-members of direct members.

4.24 There are four types of participants in RTGS, as described below in table 4.1.

Table 4.1 – Participant types in RTGS

Sr. No.	Membership Type	Broad Category	Entities	Transaction types permitted
1.	Type A	Regular Participant	Scheduled/Licensed Banks	IDL, inter-bank, customer transactions, own account transfer
2.	Type B	Restricted Participant	Standalone Primary Dealers	IDL, inter-bank, own account transfer
3.	Type C	Clearing House	Clearing Houses, Card Networks	Gross transaction, MNSB, any other transactions / facilities approved by the Bank.
4.	Type D	Regular or Restricted Participant or clearing house	Non-bank PPI Issuers, WLA operators, etc.	Permitted transaction types are determined based on the specific requirements of the entity

Options for accessing RTGS

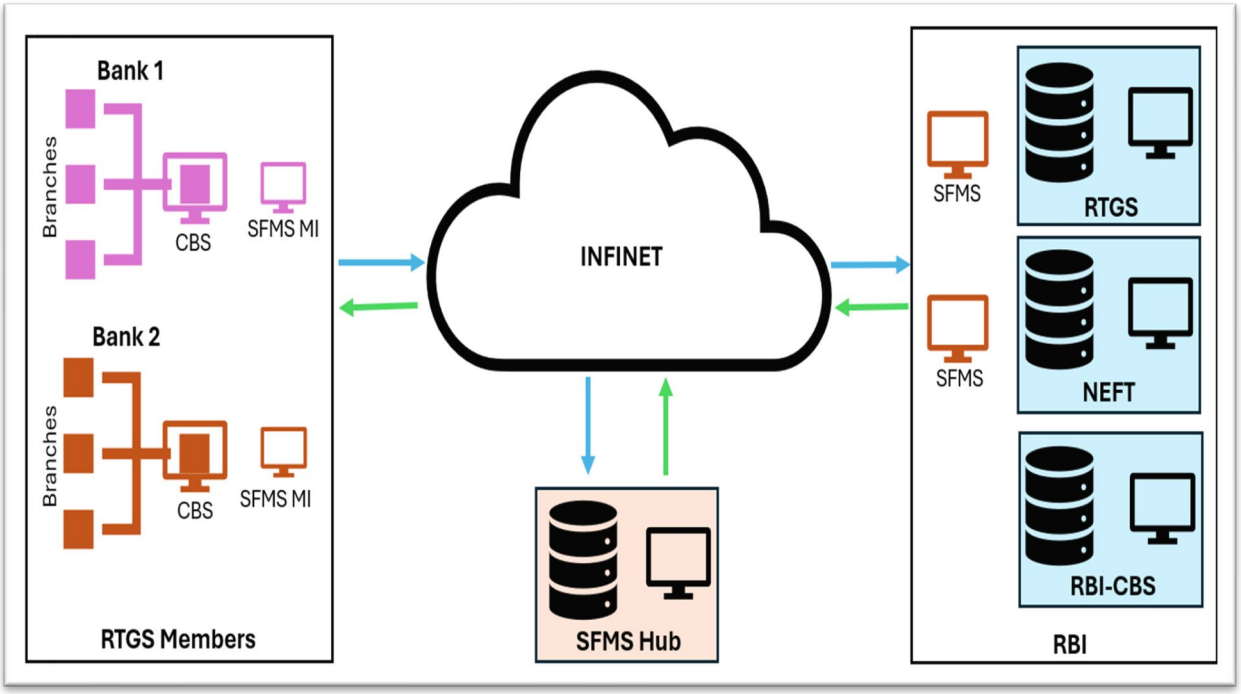
4.25 Members of RTGS can connect to the system using one of the three options available, viz., thick-client, Web service interface and Payment Originator (PO) module. All members are required to have two of the three options available.

(a) *Thick client:* A member must own, install, and maintain the dedicated hardware and software (*SFMS Member Interface*) to connect to the Central System through INFINET. Members having more than 1000 transactions per day are expected to use a thick client.

(b) *Web service interface:* The interface application must be developed by members as per technical specifications and standards provided by the Reserve Bank on its website. The member connects to the Central System through INFINET. Members with more than 100 and less than 1000 transactions a day can use the web service interface.

(c) *Payment Originator (PO) module:* This is a browser-based mode of access over the INFINET. Participants having a daily average volume of 100 or less RTGS transactions are permitted to use this mode of access. PO module does not support straight through processing.

RTGS Architecture



Other features of RTGS

4.26 *Positive confirmation*: In RTGS, acknowledgement messages in a specific format would flow from the beneficiary bank to the remitter bank through SFMS. The format incorporates the date and time of credit to the beneficiary account.

4.27 *Gridlock Resolution Mechanism*: The system provides a gridlock resolution mechanism that settles transactions, pending due to inadequate liquidity, through netting. This resolution process is automated and runs at predefined time interval for the urgent stream of payments in the queue.

4.28 *Hybrid feature*: RTGS has the facility of settling transactions on a gross and off-setting (bilateral or multilateral offsetting) basis through its hybrid settlement features. The transactions are settled on a gross basis or liquidity optimisation basis depending on the priority of the messages. The Hybrid feature is configured to do offsetting settlement every 5 minutes. The transactions with normal priority would be settled in offsetting mechanism, with a maximum of two attempts i.e. the maximum time a transaction would be in “normal” queue is 10 minutes. If the transactions with normal

priority are unable to be settled in offsetting mode within this time, the priority of the transaction would be automatically changed to “urgent”. The parameter value has been set to 10%. This means that 10% of the balance in the settlement account would be taken for settlement in the offsetting mode. The Bank may, at its discretion, make changes to this mechanism after due notification to the members.

4.29 *Priority:* Members may assign a priority while processing a payment transaction at the Member Interface before releasing the transaction to the Central System. The available range of priority is from '01' to '99'. The lower the number assigned, the higher shall be the priority. Priority numbers *“01” to “10”* are reserved for the Bank and members can use priorities from *“11” to “99*”. The transactions of the Bank are assigned with the highest priority followed by the MNSB and inter-bank transaction files. The Bank may change the priority number allocation as and when considered necessary with a due notification to the members. In case a participant, other than the Bank, enters priority numbers ranging from 0 to 10, RTGS assigns a default priority number to the transaction and settles the same.

4.30 *Queuing:* Payment messages received in RTGS are maintained in a logical payment queue, pending settlement. The queue is ordered by priority numbers of the transactions and, within a priority number, by the time of receipt in RTGS. The transaction at the top of the payment queue is taken up for settlement first. Members may cancel or re-prioritise transactions awaiting settlement in the payment queue.

4.31 *Beneficiary Account Name Look-up:* In December 2024, RBI introduced the beneficiary bank account name lookup facility for RTGS and NEFT systems. This allows remitters, using RTGS and NEFT systems, to verify the name of the bank account to which money is being transferred before initiating the transfer and thereby avoid mistakes and prevent frauds. Based on the account number and IFSC of the beneficiary entered by the remitter, the facility fetches the beneficiary’s account name from the bank’s Core Banking Solution (CBS).

Business Continuity and Disaster Recovery

4.32 The RTGS system has a defined Recovery Time Objective of two hours. For operational risk management and business continuity the RTGS system is subject to quarterly BCP/ DR Drills and two disaster recovery sites are available, a near and a far DR site. The Business Continuity plans ensure that the RTGS system can recover quickly from any outages.

Conclusion

4.33 Large Value Payment System in any country is significant, not only from the point of view of settlement of payments but also for ensuring smooth functioning of the overall financial markets. RTGS settles about 70%, by value, of all digital transactions that take place in India. Apart from the above, settlements of other payment systems are also carried out in RTGS. This makes RTGS a very critical payment system. The bouquet of features offered by the RTGS system ensures that customer, interbank and MNSB transactions emanating from other retail payment systems are settled efficiently and without delay. Further, robust risk management practices employed by RBI ensure that the RTGS functions without disruptions, round the clock and on all days of the year.

5. Global Trends in Payment Systems

5.1 The cross-border payments have been witnessing a transformation due to various factors such as technology innovations, increased investment/payments flow across jurisdictions due to globalization, increased remittance flows due to work related migration etc.

5.2 Frictions continue to afflict cross-border payments impacting efficiency and cost effectiveness of such payments for beneficiaries, especially individuals and small enterprises. Some of the frictions include long transaction chains with multiple intermediaries in certain corridors adding to the costs and time of payment, lack of interoperability due to fragmented data standards, complex processing of compliance checks and legacy technology platforms[7].

5.3 Several initiatives are underway globally as a part of the G20 roadmap to address the challenges in cross-border payments, *viz.*, high cost, slow speed, limited access, and insufficient transparency. Financial Stability Board (FSB) and Committee on Payments and Market Infrastructure (CPMI) have been coordinating the policy work on the G20 Roadmap to address these frictions with contributions from other standard setting bodies while BIS Innovation Hub, through various pilot projects, is taking initiatives to address specific aspects of the cross-border payments. Some of the initiatives are discussed below.

(a) The FSB and the CPMI have issued key recommendations to address frictions in cross-border payments. The FSB's December 2024 report on data frameworks stressed the need to standardise sanctions list management, ensure consistent application of the FATF requirements, and enable smoother data transmission for compliance and fraud prevention. In parallel, it also released guidance on regulating and supervising both bank and non-bank cross-border service providers in a consistent and risk-proportionate manner. Complementing this, the CPMI has advanced work on technical harmonisation; its October 2023 report set out harmonised ISO 20022 data requirements to tackle fragmentation in

[7] Financial Stability Board (2020), "Enhancing Cross-border Payments – Stage 1 Report to the G20", April

messaging standards, while its October 2024 report to the G20 proposed harmonising API standards to reduce integration costs, risks, and inefficiencies. Collectively, these initiatives aim to strengthen interoperability, regulatory consistency, and efficiency across global payment systems, thereby supporting the G20's broader cross-border payments initiatives.

(b) The BIS Innovation Hub has initiated several projects in co-ordination with various member countries on cross-border payments. Project Hertha examines the use of network analytics to detect financial crime in real time, while Project Rialto tests instant payments with modular FX and tokenised wholesale central bank money. Project Agora studies how tokenisation can improve wholesale payments, and Project Mandala assesses the feasibility of embedding jurisdiction-specific regulatory requirements into a common protocol for cross-border use cases.

5.4 Among the emerging themes likely to shape cross-border payments, geopolitical risk stands out as particularly impactful. Geopolitical tensions pose significant risks to cross-border payments and financial flows, given the centralised nature of global financial infrastructure and reliance on select settlement currencies. Sanctions, restrictions on financial systems or currencies, and other operational barriers can disrupt markets and access. Affected countries may respond by developing bilateral or multilateral alternatives to safeguard against such disruptions.

5.5 As envisioned in the Payments Vision Document 2025, the Reserve Bank has been actively supporting the global initiatives to ease out the frictions in cross-border payments. One of the issues pertains to delays in cross-border payments being most pronounced at the beneficiary stage. In this context, the Reserve Bank has initiated a review of the frictions impacting timely credit of inward cross-border remittances to beneficiary accounts. This assessment seeks to identify frictions within extant processes and recommend measures to streamline payment processing and enhance overall efficiency in the cross-border payments ecosystem.

5.6 Furthermore, Reserve Bank has been actively pursuing measures to enhance cross-border payments by encouraging various modes of collaboration with other countries which include interlinking of UPI on bilateral and multilateral basis with Fast

Payment Systems (FPSs) of other countries for personal remittances and acceptance of FPS via QR Codes at merchant locations abroad.

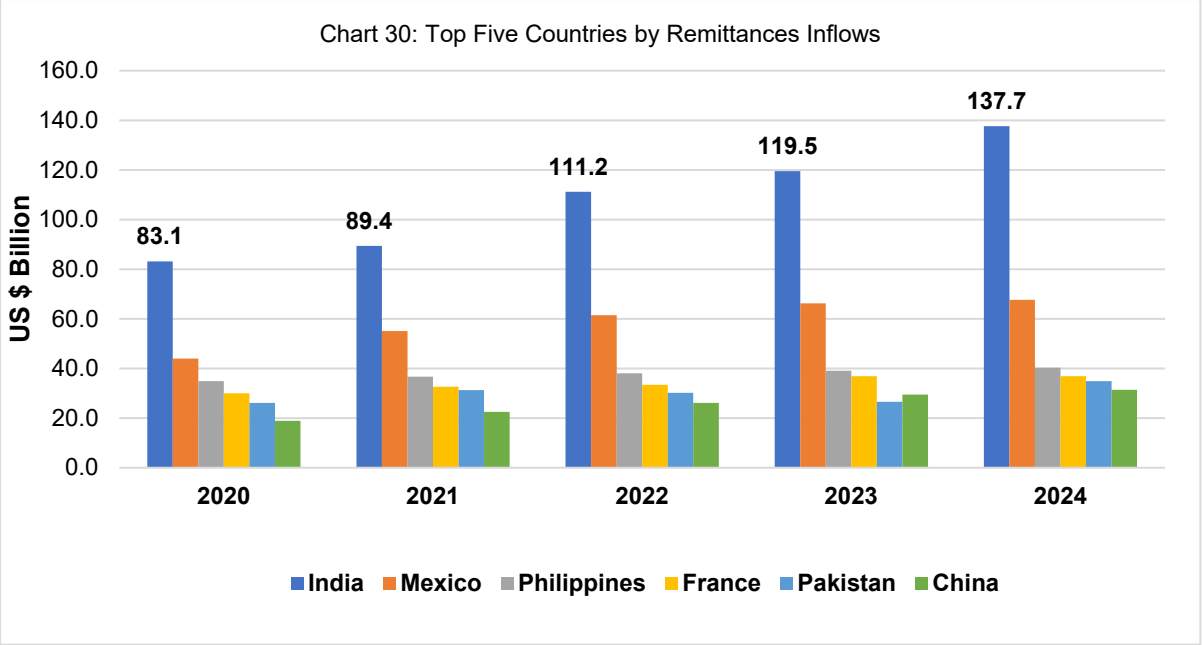
5.7 To this end, the Reserve Bank and the Monetary Authority of Singapore (MAS) operationalised the linkage of their respective FPSs, viz. UPI and PayNow respectively, in 2023, enabling users of the two systems to make instant and low-cost peer-to-peer (P2P) cross-border payments on a reciprocal basis. Further, India, along with Malaysia, Philippines, Singapore and Thailand, has joined Project Nexus, a multilateral international initiative, to enable instant cross-border retail payments by interlinking domestic FPSs. Acceptance of India's UPI apps via QR code has been operationalised in Bhutan, France, Mauritius, Nepal, Singapore, Singapore, the UAE, and Qatar, which enables Indian travellers to these countries to make payments to merchants using their UPI apps.

Cross-Border Payments

5.8 Cross-border remittances are international money transfers for personal, business, or charitable purposes that require currency exchange and must comply with the legal and financial regulations of both the sending and the receiving countries, such as those related to KYC/AML, data privacy, tax reporting etc. These transfers enable funds to flow across different countries, while being subjected to such regulations in all these locations.

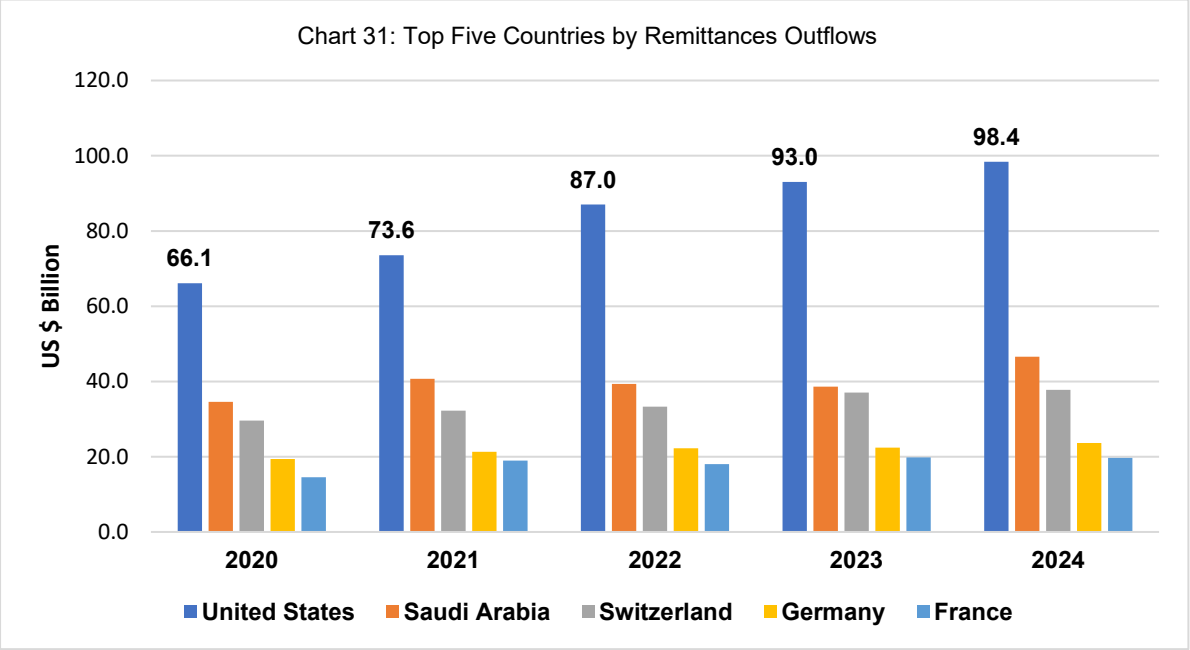
Inward and Outward Remittance

5.9 India remains the top recipient of global foreign remittances, with a record $137.7 billion inflow in 2024, more than double that of Mexico, the second-highest recipient with $67.6 billion. This underscores India's significant position in the global remittance market, driven by its vast diaspora contributing to foreign exchange reserves and economic stability. Chart 30 presents the five leading countries in remittance inflows.



Source: World Bank data; https://data.worldbank.org/

5.10 The United States consistently leads global remittance outflows, sending $98.4 billion in 2024, significantly more than other countries like Saudi Arabia and Switzerland, which contribute $46.6 billion and $37.8 billion respectively. Meanwhile, remittance outflows from Switzerland and Germany have also generally increased. Chart 31 illustrates the top five countries in terms of remittance outflows.

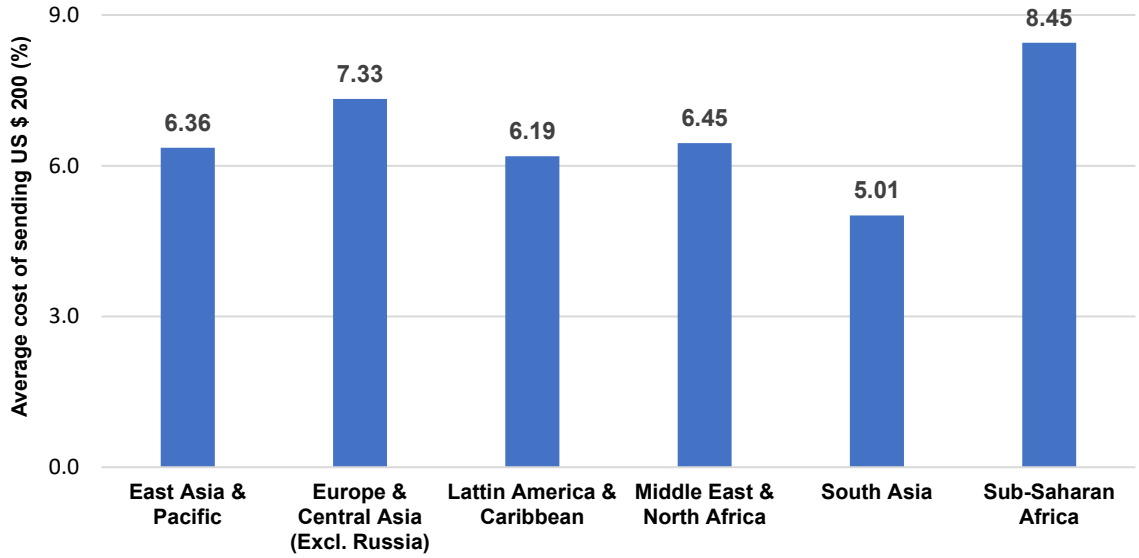


Source: World Bank data; https://data.worldbank.org/

Costs of Remittance

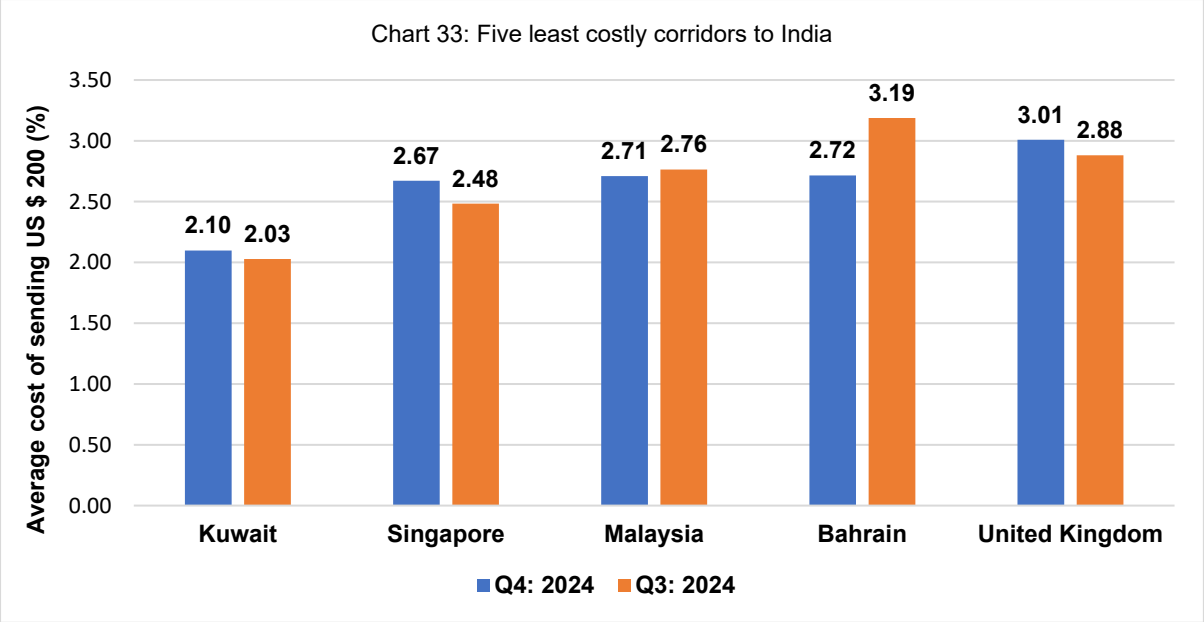
5.11 Global average cost of remittance marginally decreased from 6.65 per cent in Q2 2024 to 6.62 per cent in Q3 2024. Sub-Saharan Africa remains the most expensive region to send money to, recording 8.45 per cent total average cost in Q3 2024, whereas South Asia continues to offer the lowest remittance transaction costs worldwide, with an average of 5.01 per cent for sending $200. The UN Sustainable Development Goals (SDG) and the G20 have indicated a target of 3 per cent for the global average remittance cost to be reached by 2030, while also committing to ensure that in all corridors, remittances can be transferred for 5 per cent or less. Chart 32 shows the region-wise average cost of sending a $200 remittance during the fourth quarter of 2024.

Chart 32: Average Costs by Region of the World-Q4: 2024



Source: World Bank Quarterly Report “Remittance Prices Worldwide -September 2024”

5.12 India emerges as a focal point due to its significant variance in remittance costs across different corridors. The corridor from Kuwait to India is notably the most cost-effective, boasting an impressively low rate of 2.10 per cent (Q4: 2024), well below the SDG benchmark. Chart 33 shows the five corridors with the lowest costs for sending $200 to India.



Source: World Bank data; https://data.worldbank.org/

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6. Financial Stability Board (2020), “Enhancing Cross-border Payments – Stage 1 Report to the G20”, April.

Annex – I

Payment System Instruments

India has developed a diverse and robust payment system infrastructure that caters not only to the domestic population but also supports cross-border needs. The ecosystem encompasses a wide range of payment mechanisms, from large-value transactions to retail and real-time systems. Key components of India's payment systems include the following:

Real Time Gross Settlement (RTGS): Launched in 2004, RTGS is a large-value payment system operated by the Reserve Bank of India (RBI). It facilitates the real-time settlement of funds on a gross basis, available 24x7x365.

National Electronic Funds Transfer (NEFT): NEFT is a nation-wide centralised payment system that caters to both retail and large-value fund transfers. Also operated by the RBI, NEFT processes transactions in half-hourly batches, starting at 00:30 hours, with the last batch processed at 23:30 each day.

National Automated Clearing House (NACH): Developed and operated by the National Payments Corporation of India (NPCI), NACH is designed for bulk and repetitive payments, such as salary disbursements, pension payments, subsidies, utility bill payments, and loan EMIs. It supports both credit and debit transactions and is extensively used by government and corporate entities.

Immediate Payment Service (IMPS): IMPS is a fast payment system introduced by NPCI, offering 24x7 instant fund transfer through multiple channels including mobile banking, internet banking, and ATMs. It enables real-time credit to beneficiaries' accounts and supports both person-to-person and person-to-merchant transactions.

Unified Payments Interface (UPI): Launched in 2016, UPI has transformed digital payments in India and emerged as one of the fastest-growing payment platforms

globally. Developed and managed by NPCI, UPI enables real-time interbank transfers through mobile devices.

Card Payments: Card-based payments form a significant segment of India's retail payment systems. These include debit cards, credit cards, and Prepaid Payment Instruments (PPIs). Debit cards are primarily issued by banks, while credit cards are issued by both banks and a few Non-Banking Financial Companies (NBFCs). PPI cards can be issued by banks as well as authorised non-bank PPI entities.

Prepaid Payment Instruments (PPIs): PPIs are instruments that facilitate the purchase of goods and services, enable financial services, and support fund transfers against the value stored within them. PPIs may take the form of wallets or cards and are classified based on Know Your Customer (KYC) norms into:

Small PPIs: With limited KYC requirements, further subdivided based on the facility of cash loading.

Full-KYC PPIs: Allows greater functionality and higher transaction limits.

Gift PPIs: Non-reloadable instruments with a maximum value of ₹10,000.

PPI-MTS (Mass Transit Systems): Issued by transport operators, reloadable, and capped at a maximum value of ₹3,000.

Bharat Bill Payment System (BBPS): Launched in August 2016, BBPS is an integrated and interoperable platform that offers customers a convenient, anytime-anywhere bill payment service. It facilitates the payment of various recurring bills, including electricity, water, gas, telephone, DTH, insurance, and more.

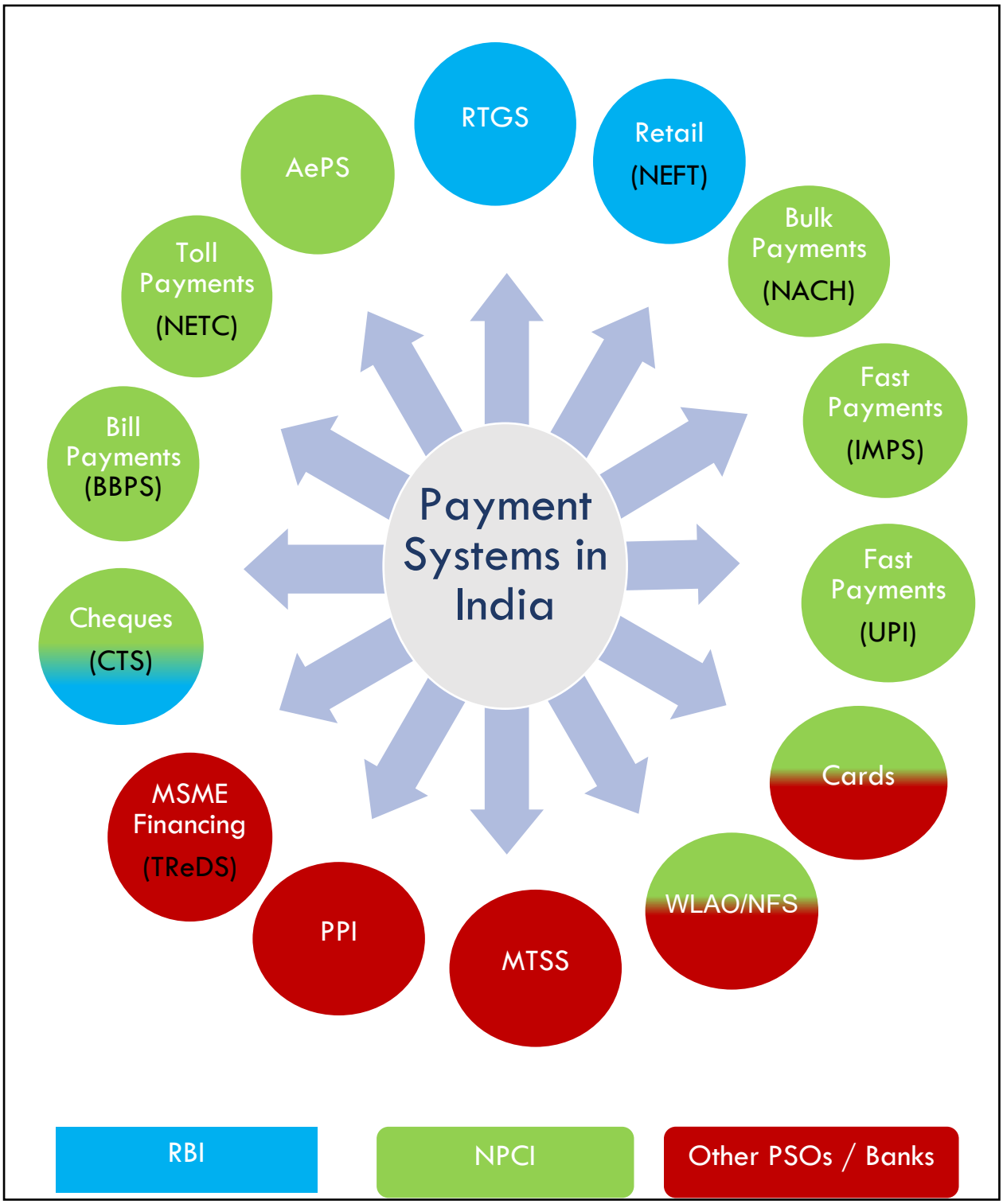
Trade Receivables Discounting System (TReDS): TReDS is an institutional mechanism designed to facilitate the financing of trade receivables for Micro, Small, and Medium Enterprises (MSMEs) from corporate buyers, government departments, and Public Sector Undertakings (PSUs).

National Electronic Toll Collection (NETC): The NETC system provides a unified and interoperable toll payment solution across India. Operated with clearinghouse services for settlement and dispute management, NETC streamlines toll collection through FASTag, a device based on Radio Frequency Identification (RFID) technology.

Aadhaar Enabled Payment System (AePS): Introduced in 2011 to promote financial inclusion, AePS is a bank-led model that allows customers to access their Aadhaar-linked bank accounts using biometric authentication. Through Business Correspondents (BCs), customers can perform basic banking services such as balance inquiry, cash withdrawal, cash deposit, and fund transfers.

Annex – II

Authorised Payment Systems in India



Annex – III

Activity in India's Payment Systems

CCIL Operated Systems*		
Period	Volume (in Crore)	Value (in ₹ Lakh Crore)
H1:2019	0.17	616.19
H2:2019	0.18	653.68
H1:2020	0.14	714.78
H2:2020	0.15	789.42
H1:2021	0.15	959.15
H2:2021	0.17	1035.14
H1:2022	0.19	1177.30
H2:2022	0.21	1311.79
H1:2023	0.22	1316.02
H2:2023	0.21	1286.75
H1:2024	0.23	1319.55
H2:2024	0.22	1460.99
H1:2025	0.29	1734.20

RTGS		
Period	Volume (in Crore)	Value (in ₹ Lakh Crore)
H1:2019	7.23	742.73
H2:2019	7.59	645.94
H1:2020	6.53	530.56
H2:2020	8.11	522.60
H1:2021	9.46	585.69
H2:2021	10.58	660.58
H1:2022	11.77	698.70
H2:2022	11.87	745.86
H1:2023	12.87	798.19
H2:2023	13.18	843.56
H1:2024	14.65	930.92
H2:2024	14.88	1007.29
H1:2025	16.11	1079.23

**: Includes settlement data of government securities, forex clearing and Rupee derivatives.*

AePS (Fund Transfers)		
Period	Volume (in Lakh)	Value (in ₹ '00 Cr)
H1:2019	5.51	2.67
H2:2019	4.51	2.15
H1:2020	4.61	2.30
H2:2020	5.69	3.15
H1:2021	6.12	3.74
H2:2021	5.19	3.00
H1:2022	3.37	1.98
H2:2022	3.16	1.82
H1:2023	1.99	1.37
H2:2023	1.90	1.26
H1:2024	1.92	1.19
H2:2024	1.84	0.88
H1:2025	1.81	0.98

IMPS		
Period	Volume (in Crore)	Value (in ₹ Lakh Crore)
H1:2019	106.79	10.01
H2:2019	131.52	11.81
H1:2020	121.22	11.31
H2:2020	176.16	15.53
H1:2021	193.53	17.41
H2:2021	240.27	20.87
H1:2022	276.52	25.74
H2:2022	282.17	27.52
H1:2023	288.48	30.41
H2:2023	291.58	31.77
H1:2024	324.89	35.45
H2:2024	268.95	35.26
H1:2025	267.17	37.06

NACH Cr		
Period	Volume (in Crore)	Value (in ₹ Lakh Crore)
H1:2019	131.99	5.03
H2:2019	134.50	5.51
H1:2020	172.70	6.97
H2:2020	142.27	5.99
H1:2021	146.42	6.87
H2:2021	148.94	6.65
H1:2022	178.03	7.96
H2:2022	174.68	8.80
H1:2023	187.12	9.50
H2:2023	214.42	9.28
H1:2024	234.71	10.47
H2:2024	252.21	10.99
H1:2025	255.81	12.32

NEFT		
Period	Volume (in Crore)	Value (in ₹ Lakh Crore)
H1:2019	126.89	123.67
H2:2019	135.29	109.30
H1:2020	136.76	107.78
H2:2020	157.87	130.71
H1:2021	175.29	133.29
H2:2021	204.80	143.50
H1:2022	231.49	161.74
H2:2022	263.31	166.21
H1:2023	297.62	181.64
H2:2023	361.09	191.49
H1:2024	435.26	210.80
H2:2024	491.58	221.99
H1:2025	490.48	236.98

UPI		
Period	Volume (in Crore)	Value (in ₹ Lakh Crore)
H1:2019	441.63	7.91
H2:2019	637.12	10.45
H1:2020	744.86	12.77
H2:2020	1143.24	21.11
H1:2021	1530.51	28.91
H2:2021	2342.81	42.66
H1:2022	3194.39	56.58
H2:2022	4209.58	69.37
H1:2023	5183.85	83.20
H2:2023	6577.03	99.68
H1:2024	7897.07	116.64
H2:2024	9323.73	130.19
H1:2025	10636.96	143.35

BHIM Aadhar Pay		
Period	Volume (in Crore)	Value (in ₹ '00 Crore)
H1:2019	0.40	5.44
H2:2019	0.42	5.84
H1:2020	0.77	9.93
H2:2020	0.80	12.33
H1:2021	0.81	20.00
H2:2021	1.20	30.23
H1:2022	1.34	40.74
H2:2022	1.02	31.77
H1:2023	0.84	30.41
H2:2023	0.90	29.06
H1:2024	1.18	32.28
H2:2024	1.18	36.67
H1:2025	1.06	34.48

NACH Dr		
Period	Volume (in Crore)	Value (in ₹ Lakh Crore)
H1:2019	27.15	2.90
H2:2019	31.09	3.13
H1:2020	34.29	3.21
H2:2020	50.09	4.52
H1:2021	50.91	4.64
H2:2021	53.43	5.17
H1:2022	59.24	5.65
H2:2022	67.81	6.39
H1:2023	74.87	7.28
H2:2023	82.01	8.35
H1:2024	89.75	9.66
H2:2024	100.42	11.03
H1:2025	103.03	12.15

Credit Cards		
Period	Volume (in Crore)	Value (in ₹ Lakh Crore)
H1:2019	96.66	3.37
H2:2019	112.01	3.76
H1:2020	85.85	2.75
H2:2020	93.50	3.37
H1:2021	97.12	3.71
H2:2021	118.52	5.17
H1:2022	129.67	6.09
H2:2022	147.07	7.21
H1:2023	155.07	7.94
H2:2023	178.12	9.40
H1:2024	204.64	9.60
H2:2024	242.57	10.76
H1:2025	266.29	11.10

Debit Cards		
Period	Volume (in Crore)	Value (in ₹ Lakh Crore)
H1:2019	236.53	3.20
H2:2019	258.79	3.63
H1:2020	200.70	2.79
H2:2020	215.23	3.63
H1:2021	196.25	3.40
H2:2021	212.43	3.99
H1:2022	191.42	3.73
H2:2022	173.04	3.69
H1:2023	137.95	3.18
H2:2023	114.60	3.02
H1:2024	92.08	2.60
H2:2024	81.72	2.55
H1:2025	69.09	2.23

Prepaid Payment Instrument (PPI)		
Period	Volume (in Crore)	Value (in ₹ Lakh Crore)
H1:2019	248.84	1.09
H2:2019	267.38	1.09
H1:2020	235.70	0.88
H2:2020	266.40	1.01
H1:2021	272.58	1.21
H2:2021	347.57	1.44
H1:2022	370.71	1.49
H2:2022	370.19	1.44
H1:2023	384.83	1.38
H2:2023	393.36	1.46
H1:2024	353.84	1.14
H2:2024	345.04	1.09
H1:2025	404.72	1.23

NETC (linked to bank account)		
Period	Volume (in Crore)	Value (in ₹ '00 Crore)
H1:2019	0.05	0.15
H2:2019	0.21	0.57
H1:2020	1.27	2.03
H2:2020	3.38	4.91
H1:2021	4.96	7.20
H2:2021	6.02	8.14
H1:2022	7.52	10.81
H2:2022	8.11	13.18
H1:2023	8.63	14.55
H2:2023	8.04	13.89
H1:2024	7.91	12.23
H2:2024	8.26	12.02
H1:2025	8.80	11.29