VIII

During the year, the Reserve Bank remained focused on its endeavour to provide adequate quantity of clean banknotes in circulation. In pursuance of this, the process of withdrawal of ₹2000 denomination banknotes was also undertaken. A survey was conducted to have better insights on the usage and preference for banknotes, coins and digital modes of payments in the country. An exercise was initiated to revamp the extant currency management architecture in the country to benefit from state-of-the-art technologies and enhance its operational efficiency.

VIII.1 During 2023-24, the Reserve Bank sustained its efforts to ensure adequate supply of clean banknotes and coins in the economy to meet the demand for cash from the public. The withdrawal of soiled banknotes and momentum of their disposal also continued. For better assessment of the requirement for banknotes going forward, an analysis was undertaken to glean insights from the trends in household cash usage for transactional purposes. The Reserve Bank embarked upon an exercise to modernise the currency management infrastructure in the country. The withdrawal of ₹2000 denomination banknotes, which were introduced in November 2016 to expeditiously meet the currency requirement of the economy post withdrawal of legal tender status of ₹500 and ₹1000 banknotes from circulation, was undertaken.

VIII.2 Against this backdrop, the rest of the chapter is organised into five sections. Section 2 covers the implementation status of the agenda for 2023-24, followed by important developments in currency in circulation along with other activities during the year in section 3. The developments with regard to Bharatiya Reserve Bank Note

Mudran Private Ltd. (BRBNMPL), a whollyowned subsidiary of the Reserve Bank, are given in section 4. The Department's agenda for 2024-25 is provided in section 5 with concluding observations in section 6.

2. Agenda for 2023-24

VIII.3 The Department had set out the following goals for 2023-24:

- Preparation of an implementation programme based on recommendations of the report on currency network design; mechanisation and automation; and scheduling and inventory management for achieving higher efficiency in currency management (Paragraph VIII.4);
- Establishment of a state-of-the-art facility for conducting cutting edge research on banknotes (*Utkarsh* 2.0) [Paragraph VIII.5];
- Conducting survey on quality of notes in circulation (*Utkarsh* 2.0) [Paragraph VIII.6];
- Developing cash usage indicators (*Utkarsh* 2.0) [Paragraph VIII.7];

- Implementation of recommendations of the Committee for review of extant mechanism of cash dispensation and related issues in automated teller machine (ATM) ecosystem (Paragraph VIII.8); and
- Institutionalisation of the process of certification of note sorting machines (NSMs) in alignment with the prescribed sorting standards (*Utkarsh* 2.0) [Paragraph VIII.9].

Implementation Status

VIII.4 An action plan has been formulated for redesigning and modernising the currency management architecture through use of network optimisation, technological solutions, automation and business process re-engineering. The project involving various stakeholders would be implemented in phases.

VIII.5 An adversarial analysis¹ laboratory has been operationalised at the Mysuru campus of BRBNMPL for conducting cutting edge research on banknotes.

VIII.6 Surveys on public perception of the quality of banknotes were carried out in various regions, which helped in understanding the public requirement and accordingly, necessary policy and operational measures were taken.

VIII.7 An analysis to understand the recent trends in household cash usage for transactional purposes *vis-à-vis* the growth in retail digital payments was carried out in the Department to help in better estimation of demand for banknotes, going forward. The methodology would be updated based on incoming data to make the cash usage indicators more robust.

VIII.8 The recommendations of the Committee for review of extant mechanism of cash dispensation and related issues in ATM ecosystem are currently under various stages of implementation.

VIII.9 The institutionalisation of the process of certification of note sorting machines (NSMs) in alignment with the prescribed sorting standards was undertaken by the Bureau of Indian Standards (BIS) at the behest of the Reserve Bank, wherein a panel comprising industry experts, standard setters from BIS, RBI and banks was constituted, which finalised the technical standards for NSMs. The 'Note Sorting Machines (NSMs) Specification IS 18663 : 2024' was published in 'The Gazette of India' on March 19, 2024. These standards shall be utilised for certification of NSMs used by banks across the country and will bring in uniformity in note sorting across the banks.

3. Developments in Currency in Circulation

VIII.10 Currency in circulation includes banknotes, central bank digital currency (CBDC) and coins. Presently, banknotes in circulation comprise denominations of ₹2, ₹5, ₹10, ₹20, ₹50, ₹100, ₹200, ₹500 and ₹2000. The Reserve Bank is no longer printing banknotes of denominations of ₹2, ₹5 and ₹2000. Coins in circulation comprise 50 paise and ₹1, ₹2, ₹5, ₹10 and ₹20 denominations. The Reserve Bank has been publishing denomination-wise data on currency in circulation on a weekly basis from the week ended December 29, 2023.

¹ Conducted to assess counterfeiting risks through in-house simulation of banknote features by trained experts/technicians using commercially available materials and equipment.

VIII.11 In terms of Section 22A of the RBI Act, 1934, denominations as set out in Section 24 of the Act, do not apply to banknotes in digital form. Accordingly, the live-pilot of Digital Rupee-Retail ($e\overline{\tau}$ -R) has been launched in denominations of 50 paise, $\overline{\tau}1$, $\overline{\tau}2$, $\overline{\tau}5$, $\overline{\tau}10$, $\overline{\tau}20$, $\overline{\tau}50$, $\overline{\tau}100$, $\overline{\tau}200$, $\overline{\tau}500$ and $\overline{\tau}2000$, while $e\overline{\tau}$ -Wholesale ($e\overline{\tau}$ -W) does not have any specific denomination.

Banknotes

VIII.12 The value and volume of banknotes in circulation increased by 3.9 per cent and 7.8 per cent, respectively, during 2023-24 as compared with an increase of 7.8 per cent and 4.4 per cent, respectively, during the previous year (Table VIII.1). During 2023-24, the share of ₹500 banknotes increased in value terms whereas that of ₹2000 banknotes declined sharply reflecting the withdrawal of the latter denomination from circulation. In volume terms, ₹500 denomination constituted the highest share of the total banknotes in circulation, followed by ₹10 denomination banknotes as on March 31, 2024.

Withdrawal of ₹2000 Denomination Banknotes from Circulation

VIII.13 The ₹2000 denomination banknote was introduced in November 2016 under Section 24(1) of the RBIAct, primarily to meet the currency requirement of the economy in an expeditious manner after the withdrawal of legal tender status of ₹500 and ₹1000 banknotes in circulation at that time. The objective of introducing ₹2000 banknotes was met once banknotes in other denominations became available in adequate quantities. Therefore, printing of ₹2000 banknotes was stopped in 2018-19.

Denomination (₹)	Volum	ne (pieces in lakh)		V	′alue (₹ crore)	
	2022	2023	2024	2022	2023	2024
1	2	3	4	5	6	7
2 and 5	1,11,261	1,10,843	1,10,547	4,284	4,263	4,249
	(8.5)	(8.1)	(7.5)	(0.1)	(0.1)	(0.1)
10	2,78,046	2,62,123	2,49,506	27,805	26,212	24,951
	(21.3)	(19.2)	(17.0)	(0.9)	(0.8)	(0.7)
20	1,10,129	1,25,802	1,33,973	22,026	25,160	26,795
	(8.4)	(9.2)	(9.1)	(0.7)	(0.8)	(0.8)
50	87,141	85,716	89,783	43,571	42,858	44,892
	(6.7)	(6.3)	(6.1)	(1.4)	(1.3)	(1.3)
100	1,81,420	1,80,584	2,05,656	1,81,421	1,80,584	2,05,656
	(13.9)	(13.3)	(14.0)	(5.8)	(5.4)	(5.9)
200	60,441	62,620	77,108	1,20,881	1,25,241	1,54,215
	(4.6)	(4.6)	(5.2)	(3.9)	(3.7)	(4.4)
500	4,55,468	5,16,338	6,01,770	22,77,340	25,81,690	30,08,847
	(34.9)	(37.9)	(41.0)	(73.3)	(77.1)	(86.5)
2000	21,420	18,111	410	4,28,394	3,62,220	8,202
	(1.6)	(1.3)	(0.03)	(13.8)	(10.8)	(0.2)
Total	13,05,326	13,62,137	14,68,754	31,05,721	33,48,228	34,77,805

Table VIII.1: Banknotes in Circulation (end-March)

Note: 1. Figures in parentheses represent the percentage share in total volume/value.

2. Figures may not add up to total due to rounding-off of the numbers.

Source: RBI.

VIII.14 About 89 per cent of the ₹2000 denomination banknotes were at the end of their estimated life span of 4-5 years and were not commonly used for transactions. It was, therefore, decided to withdraw the ₹2000 denomination banknotes from circulation, while continuing their legal tender status. A press release was issued on May 19, 2023 advising the public to deposit and/ or exchange ₹2000 banknotes at bank branches and at the 19 issue offices² of the Reserve Bank till September 30, 2023, which was later extended up to October 7, 2023. From October 9, 2023, the facility for deposit and/or exchange is available at the Reserve Bank issue offices. Further, ₹2000 banknotes can be sent through India Post to the Reserve Bank issue offices in lieu of credit in their bank accounts. Of the ₹3.56 lakh crore

of ₹2000 banknotes in circulation as on May 19, 2023 when the withdrawal was announced, 97.7 per cent had returned to the banking system up to March 31, 2024.

Coins

VIII.15 The total value as well as volume of coins in circulation increased in 2023-24. As on March 31, 2024, coins of ₹1, ₹2 and ₹5 together constituted 82.5 per cent of the total volume of coins in circulation, while in value terms, these denominations accounted for 68 per cent (Table VIII.2).

e₹ in Circulation

VIII.16 The live pilot of e₹-R, launched on December 1, 2022, gained momentum during the year (Table VIII.3).

Denomination (₹)	Volum	ne (pieces in lakh)		Val	ue (₹ crore)	
	2022	2023	2024	2022	2023	2024
1	2	3	4	5	6	7
Small coins	1,47,880	1,47,880	1,47,880	700	700	700
	(11.9)	(11.6)	(11.2)	(2.5)	(2.3)	(2.1)
1	5,15,879	5,21,618	5,29,934	5,159	5,216	5,299
	(41.4)	(40.8)	(40.0)	(18.4)	(17.2)	(15.9)
2	3,40,792	3,47,277	3,55,929	6,816	6,946	7,119
	(27.3)	(27.1)	(26.9)	(24.4)	(23.0)	(21.3)
5	1,84,331	1,94,155	2,05,471	9,217	9,708	10,274
	(14.8)	(15.2)	(15.5)	(33.0)	(32.1)	(30.8)
10	54,044	59,764	68,637	5,404	5,976	6,864
	(4.3)	(4.7)	(5.2)	(19.3)	(19.8)	(20.6)
20	3,372	8,483	15,667	674	1,697	3,133
	(0.3)	(0.7)	(1.2)	(2.4)	(5.6)	(9.4)
Total	12,46,298	12,79,178	13,23,518	27,970	30,242	33,389

Table VIII.2: Coins in Circulation (end-March)

Note: 1. Figures in parentheses represent the percentage share in total volume/value.

2. Figures may not add up to total due to rounding-off of the numbers.

Source: RBI.

² Ahmedabad, Bengaluru, Belapur, Bhopal, Bhubaneswar, Chandigarh, Chennai, Guwahati, Hyderabad, Jaipur, Jammu, Kanpur, Kolkata, Lucknow, Mumbai, Nagpur, New Delhi, Patna and Thiruvananthapuram.

Table VIII.3: e₹ in Circulation (end-March)

e₹	Denomination	Volume		Val	ue
	(₹)	(pieces i	(pieces in lakh)		ore)
		2023	2024	2023	2024
1	2	3	4	5	6
e₹-R	0.5	2.7	18.4	0.01	0.09
		(16.1)	(7.7)	(0.2)	(0.04)
	1	3.8	37.3	0.04	0.37
		(22.2)	(15.7)	(0.7)	(0.2)
	2	2.8	27.1	0.06	0.54
		(16.2)	(11.4)	(1.0)	(0.2)
	5	2.4	27.3	0.12	1.37
		(13.9)	(11.5)	(2.1)	(0.6)
	10	1.5	21.4	0.15	2.14
		(8.8)	(9.0)	(2.6)	(0.9)
	20	1.2	19.7	0.23	3.94
		(6.8)	(8.3)	(4.1)	(1.7)
	50	0.8	17.0	0.39	8.49
		(4.6)	(7.1)	(6.9)	(3.6)
	100	0.8	20.7	0.83	20.73
		(4.8)	(8.7)	(14.5)	(8.9)
	200	0.6	16.0	1.16	32.01
		(3.4)	(6.7)	(20.4)	(13.7)
	500	0.5	32.9	2.71	164.36
		(3.2)	(13.8)	(47.5)	(70.2)
	2000	-	-	-	-
Total e₹-R		17.1	237.8	5.70	234.04
Total e₹-W				10.69	0.08
Total e₹				16.39	234.12

-: Nil. ...: Not applicable.

Note: 1. Figures in parentheses represent the percentage share in total volume/value.

2. Figures may not add up to total due to rounding-off of the numbers.

Source: RBI.

Currency Management Infrastructure

VIII.17 The functions relating to issuance of currency (*i.e.*, banknotes and coins) and their management are performed by the Reserve Bank through its 19 issue offices, 2,794 currency chests and 2,460 small coin depots spread across the country. As on March 31, 2024, State Bank of India accounted for the highest share of currency chests (Table VIII.4).

Table VIII.4: Currency Chests and Small CoinDepots (end-March 2024)

Category	Number of Currency Chests	Number of Small Coin Depots
1	2	3
State Bank of India	1,467	1,339
Nationalised Banks	1,086	911
Private Sector Banks	224	194
Cooperative Banks	5	5
Foreign Banks	4	3
Regional Rural Banks	7	7
Reserve Bank of India	1	1
Total	2,794	2,460
Source: RBI.		

Indent and Supply of Currency

VIII.18 The volume of indent of banknotes and coins for 2023-24 was higher than 2022-23 (Tables VIII.5 and VIII.6). The supply of banknotes and coins was also higher during 2023-24 as compared with the previous year.

Table VIII.5: Indent and Supply of Banknotes by BRBNMPL and SPMCIL (April-March)

(Pieces in lakh)

Denomi-	2021-22		2022-23		2023-24	
nation (₹)	Indent	Supply	Indent	Supply	Indent	Supply
1	2	3	4	5	6	7
5	-	-	-	-	-	-
10	7,500	7,510	6,000	6,000	8,000	8,000
20	20,000	20,000	20,000	19,999	20,000	20,000
50	15,000	15,000	20,000	20,000	25,000	25,000
100	40,000	40,002	60,000	60,000	70,000	70,000
200	12,000	11,991	20,000	20,000	30,000	30,000
500	1,28,000	1,28,003	1,00,000	1,00,004	90,000	90,000
2000	-	-	-	-	-	-
Total	2,22,500	2,22,505	2,26,000	2,26,002	2,43,000	2,43,000

-: Nil.

BRBNMPL: Bharatiya Reserve Bank Note Mudran Private Ltd.
SPMCIL: Security Printing and Minting Corporation of India Ltd.
Note: Figures may not add up to total due to rounding-off of the numbers.
Source: RBI.

Table VIII.6: Indent and Supply of Coins by Mints (April-March)

(Pieces in lakh)

Denomination (₹)	2021-22		2	2022-23		2023-24	
-	Indent	Supply	Indent	Supply	Indent	Supply	
1	2	3	4	5	6	7	
1	-	-	1,000	1,000	3,000	3,058	
2	2,000	2,000	3,000	3,000	3,000	3,000	
5	2,000	2,000	3,000	3,000	3,000	3,000	
10	2,000	2,000	1,000	1,002	1,000	1,000	
20	2,000	2,000	2,000	2,000	2,000	1,999	
Total	8,000	8,000	10,000	10,002	12,000	12,056	

-: Nil.

Note: Figures may not add up to total due to rounding-off of the numbers. **Source:** RBI.

Disposal of Soiled Banknotes

VIII.19 Details regarding the disposal of soiled banknotes during 2023-24 are set out in Table VIII.7. The Reserve Bank has been publishing denomination wise data on disposal of soiled notes on monthly basis from December 2023.

Table VIII.7: Disposal of Soiled Banknotes (April-March)

		,	(Pieces in lakh)
Denomination (₹)	2021-22	2022-23	2023-24
1	2	3	4
2000	3,847	4,824	18,458
1000	-	-	4
500	22,082	51,092	63,320
200	6,167	13,062	13,594
100	59,203	58,282	60,217
50	27,696	34,219	19,095
20	20,771	21,393	13,971
10	46,778	45,077	23,461
Up to 5	1,257	1,315	370
Total	1,87,801	2,29,264	2,12,493

-: Not applicable.

Note: Figures may not add up to total due to rounding-off of the numbers. Source: RBI.

Counterfeit Notes

VIII.20 During 2023-24, out of the total Fake Indian Currency Notes (FICNs) detected in the banking sector, 7.9 per cent were detected at the Reserve Bank (Table VIII.8).

VIII.21 The counterfeit notes detected in denominations of ₹10, ₹20, ₹50, ₹100 and ₹500 declined during 2023-24, while those in ₹200

Table VIII.8: Number of Counterfeit Notes Detected (April-March)

		(Nu	mber of pieces)
Year	Detection at the Reserve Bank	Detection at Other Banks	Total
1	2	3	4
2021-22	15,878	2,15,093	2,30,971
	(6.9)	(93.1)	(100.0)
2022-23	10,465	2,15,304	2,25,769
	(4.6)	(95.4)	(100.0)
2023-24	17,613	2,05,026	2,22,639
	(7.9)	(92.1)	(100.0)

Note: 1. Figures in parentheses represent the percentage share in total.

2. Does not include counterfeit notes seized by the police and other enforcement agencies.

Source: RBI.

denomination increased marginally as compared with the previous year. On account of the ongoing withdrawal of ₹2000 banknotes from circulation and processing of these notes in large numbers, counterfeit notes detected in this denomination increased during the year (Table VIII.9).

Expenditure on Security Printing

VIII.22 The expenditure incurred on security printing during 2023-24 was ₹5,101.4 crore as against ₹4,682.8 crore in the previous year.

Other Activities

Survey on the Usage of Coins and Banknotes

VIII.23 In the evolving scenario of growth in retail digital payments coupled with continued increase in demand for cash, a survey was conducted in 2023 to understand the usage and preference for cash, coins, factors influencing demand and

Table VIII.9: Denomination-wise Counterfeit Notes Detected in the Banking System (April-March)

(Number of pieces)

		(NUMDE	er of pieces)
Denomination (₹)	2021-22	2022-23	2023-24
1	2	3	4
2 and 5	1	3	1
10	354	313	235
20	311	337	297
50	17,696	17,755	15,366
100	92,237	78,699	66,310
200	27,074	27,258	28,672
500 (Specified Banknotes)	14	6	11
500	79,669	91,110	85,711
1000 (Specified Banknotes)	11	482	1
2000	13,604	9,806	26,035
Total	2,30,971	2,25,769	2,22,639
Source: RBI.			

to assess the shortage/surfeit of cash and coins (Box VIII.1).

Box VIII.1 Survey on the Usage of Coins and Banknotes

The survey covered a total of 22,725 respondents, comprising 11,474 consumers and 11,251 merchants (*viz.*, small manufacturers, retail traders and service providers) spread across 20 states/union territories. Around 63 per cent of the total respondents were from rural and semiurban areas, 19 per cent from urban areas and 18 per cent from metropolitan centres.

Major Findings

Consumers

According to the survey, 56.7 per cent of the consumer respondents required coins predominantly for tendering change while shopping, travelling and for making donations. The need for ₹5 coins was the highest, followed by ₹2 and ₹10. A majority of the respondents reported that they had not faced any shortage of coins in the last one year.

With regard to banknotes, more than 80 per cent of the consumer respondents required banknotes for shopping, travelling, making utility/fee payments and for emergencies.

More than 70 per cent of the respondents cited better availability of banknotes of ₹100 and above *vis-à-vis* banknotes of ₹50 and below. Around 80 per cent of the respondents did not encounter scarcity of banknotes in the last one year.

With increasing ticket size of transactions, the preference among consumer respondents has shifted towards digital payments. Compared to the all-India average, the penetration of digital payment usage was less in rural areas due to lower familiarity with digital payment modes, besides safety concerns. This disparity was more pronounced among the people of age 60 years and above.

Merchants

Around two-thirds of the merchant respondents utilised coins for business transactions, travelling and donations, with its usage being higher among retail traders followed by service providers. The requirement for ₹5 coins was the highest followed by ₹2 coins and ₹10 coins. Around 25 per cent of *(Contd.)* the respondents cited shortage of coins in the last one year with 41 per cent of those deeming it as a seasonal factor.

As regards banknotes, about 90 per cent of the merchant respondents utilised them for business transactions, travelling and exigencies. Easy availability of banknotes particularly of ₹100 and above was noted by the respondents. Above 80 per cent of the respondents reported that they did not face scarcity of banknotes in last one year.

Procurement of New Shredding and Briquetting Systems (SBS)

VIII.24 During the year, purchase orders were placed for procurement of new shredding and briquetting systems for 21 regional offices following due tendering process. Delivery and installation of these SBS machines will commence from Q1:2024-25 and is likely to be completed in the next two years for all the offices.

Mobile Coin Vans (MCVs) for Distribution of Coins – Expansion in Geographical Reach and Operational Scope

VIII.25 To enhance distribution of coins, the scheme of MCVs operating in select states has been extended across the country. Additionally, the scope of services has been broadened to facilitate the exchange of lower denomination notes, which are unfit for circulation. These MCVs distribute coins and banknotes to the public located particularly in semi-urban, rural and remote areas.

Awareness Campaign on Mobile Aided Note Identifier (MANI) App and Misinformation on Coins

VIII.26 The MANI App was launched on January 1, 2020 to facilitate visually impaired persons to identify denomination of Indian banknotes. The App notifies the banknote denomination in 11 regional languages apart from Hindi and English. There was a preference for digital payments with increase in transaction value. However, non-familiarity with digital payment modes and safety concerns were reported as impediments in the usage of digital payment options, especially in rural and semi-urban areas.

In sum, the survey indicated that, while cash remained prevalent, the digital modes of payment were gaining traction among the public.

A pan India radio campaign through *Akashvanil Vividh Bharti*/private FM radio channels was conducted to promote awareness on the MANI App.

VIII.27 During the year, the Reserve Bank embarked on an awareness campaign through a media mix of print and radio to dispel misinformation about coins among members of the public.

Procurement of New Security Features for Indian Banknotes

VIII.28 The Reserve Bank is actively taking forward the process of introduction of new/ upgraded security features for banknotes.

4. Bharatiya Reserve Bank Note Mudran Private Ltd. (BRBNMPL)

VIII.29 The BRBNMPL has been playing a critical role in designing, printing and supply of banknotes. It has been a key partner of the Reserve Bank in implementation of its strategic goal of indigenisation of banknote production, including backward integration for raw materials. The procurements by BRBNMPL are compliant with directions issued under 'Make in India' initiative by the Government of India. BRBNMPL presses have increased direct remittances of banknotes to currency chests, resulting in enhanced logistical efficiency and cost effectiveness. At the behest of the Reserve Bank, BRBNMPL is also establishing a Currency Research and Development Centre (CRDC) at its Mysuru campus for conducting cutting-edge research in the domain of currency.

5. Agenda for 2024-25

VIII.30 During the year, the Department will focus on the following:

- Carrying forward the project on modernisation of the currency management infrastructure;
- Replacement of existing SBS machines;
- Exploring more sustainable and ecofriendly disposal of currency note briquettes;
- Finetuning policies and initiating measures for improving delivery of banknotes/coins to members of the public; and
- Implementation of technical standards issued by BIS for NSMs used by banks across the country.

6. Conclusion

VIII.31 During 2023-24, the Reserve Bank continued with initiatives to enhance banknote distribution efficiency, increase public awareness on banknotes and coins and ensure availability of adequate quantity of clean banknotes and coins for the public. The Reserve Bank formulated an action plan for modernisation and automation of currency management infrastructure and smoothly conducted the process of withdrawal of ₹2000 denomination banknotes from circulation. Going forward, the Reserve Bank's endeavour would be to modernise the currency management infrastructure and sustain the self-sufficiency in banknote production. Analytical research for further strengthening the integrity of banknotes and understanding the trends in public preference for cash vis-à-vis other modes of payment shall continue to remain a focus area.