

The issuance of ₹100 and ₹20 currency notes under the Mahatma Gandhi (New) Series, amendment of Note Refund Rules and upgradation of Currency Verification and Processing Systems across offices of the Reserve Bank were the notable features of currency management during 2018-19 within the endeavour to ensure an adequate supply of clean banknotes of various denominations in the economy.

VIII.1 The Reserve Bank's currency management function is guided by the goal of ensuring an adequate supply of clean banknotes of various denominations in the economy. During 2018-19, important developments included introduction of ₹100 and ₹20 denomination notes under the Mahatma Gandhi (New) Series, amendment of Note Refund Rules, 2009, and upgradation of Currency Verification and Processing Systems (CVPS) across offices of the Reserve Bank. Concerted efforts were also made towards indigenisation of manufacturing colour shifting ink. The project of replacing the Integrated Computerised Currency Operations and Management System (ICCOMS) application with an improved currency management module and integration of currency management functions with the Core Banking Solution (e-Kuber) of the Reserve Bank is in progress. The Reserve Bank has also set up a state-of-the-art Banknote Quality Assurance Laboratory in October 2018 at Mumbai.

VIII.2 Against the above backdrop, the rest of the chapter is arranged as follows: section 2 presents the important developments in currency in circulation. Section 3 covers implementation status of the agenda for 2018-19 and section 4 provides agenda for 2019-20.

2. Developments in Currency in Circulation

VIII.3 Currency in circulation (CiC) includes banknotes and coins. At present, the Reserve

Bank issues notes in denominations of ₹2, ₹5, ₹10, ₹20, ₹50, ₹100, ₹200, ₹500 and ₹2000. Coins in circulation comprise 50 paise and 1, 2, 5 and 10 rupee denominations. In terms of value, banknotes accounted for major share of the total CiC (around 99 per cent).

Banknotes

VIII.4 The value and volume of banknotes in circulation increased by 17.0 per cent and 6.2 per cent to ₹21,109 billion and 108,759 million pieces, respectively, during 2018-19. In value terms, the share of ₹500 and ₹2000 banknotes, which had together accounted for 80.2 per cent of the total value of banknotes in circulation at end-March 2018, increased to 82.2 per cent at end-March 2019. There was a sharp increase in the value of ₹500 banknotes in circulation—from 42.9 per cent to 51.0 per cent over the year. In volume terms, ₹10 and ₹100 banknotes constituted 47.2 per cent of total banknotes in circulation at end-March 2019 as against 51.6 per cent at end-March 2018 (Table VIII.1).

Coins

VIII.5 The total value of coins in circulation increased by 0.8 per cent in 2018-19 as against an increase of 2.4 per cent last year, while the total volume increased by 1.1 per cent as compared to an increase of 2.4 per cent in the previous year. As on March 31, 2019, coins of

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

Denom-ination (₹)	Volume (million pieces)			Value (₹ billion)		
	2017	2018	2019	2017	2018	2019
1	2	3	4	5	6	7
2 and 5	11,557 (11.5)	11,425 (11.2)	11,302 (10.4)	45 (0.3)	44 (0.2)	44 (0.2)
10	36,929 (36.8)	30,645 (29.9)	31,260 (28.7)	369 (2.8)	307 (1.7)	313 (1.5)
20	10,158 (10.2)	10,016 (9.8)	8,713 (8.0)	203 (1.5)	200 (1.1)	174 (0.8)
50	7,113 (7.1)	7,343 (7.2)	8,601 (7.9)	356 (2.7)	367 (2.0)	430 (2.0)
100	25,280 (25.2)	22,215 (21.7)	20,074 (18.5)	2,528 (19.3)	2,222 (12.3)	2,007 (9.5)
200	-	1,853 (1.8)	4,000 (3.7)	-	371 (2.1)	800 (3.8)
500	5,882 (5.9)	15,469 (15.1)	21,518 (19.8)	2,941 (22.5)	7,734 (42.9)	10,759 (51.0)
1000	89 (...)	66 (...)	-	89 (0.7)	66 (0.4)	-
2000	3,285 (3.3)	3,363 (3.3)	3,291 (3.0)	6,571 (50.2)	6,726 (37.3)	6,582 (31.2)
Total	100,293 (100.0)	102,395 (100.0)	108,759 (100.0)	13,102 (100.0)	18,037 (100.0)	21,109 (100.0)

- : Not applicable. ... : Negligible.

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

Source: RBI.

₹1, ₹2 and ₹5 together constituted 83.6 per cent of the total volume of coins in circulation, while in value terms, these denominations accounted for 78.3 per cent (Table VIII.2).

Currency Management Infrastructure

VIII.6 The functions relating to issuance of currency (both banknotes and coins) and their management are performed by the Reserve Bank through its issue offices, currency chests and small coin depots spread across the country. As at end-March 2019, the State Bank of India accounted for the highest share of around 63 per cent of currency chests, followed by the nationalised banks with around 31 per cent (Table VIII.3).

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

Denomina-tion (₹)	Volume (million pieces)			Value (₹ billion)		
	2017	2018	2019	2017	2018	2019
1	2	3	4	5	6	7
Small coins	14,788 (12.7)	14,788 (12.4)	14,788 (12.3)	7 (2.8)	7 (2.7)	7 (2.7)
1	48,347 (41.6)	49,636 (41.7)	50,326 (41.8)	48 (19.2)	50 (19.5)	50 (19.4)
2	32,059 (27.6)	32,855 (27.6)	33,154 (27.6)	64 (25.6)	66 (25.8)	66 (25.6)
5	15,783 (13.6)	16,650 (14.0)	17,151 (14.2)	79 (31.6)	83 (32.4)	86 (33.3)
10	5,205 (4.5)	5,049 (4.2)	4,905 (4.1)	52 (20.8)	50 (19.5)	49 (19.0)
Total	116,182 (100.0)	118,978 (100.0)	120,324 (100.0)	250 (100.0)	256 (100.0)	258 (100.0)

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

2. Figures in parentheses may not add up to 100 due to rounding off of numbers.

Source: RBI.

Indent and Supply of Currency

VIII.7 The indent of banknotes for 2018-19 was lower by 5.6 per cent from their level a year ago. However, the supply of banknotes during 2018-19 was higher than in the previous year. The supply of coins also increased during the period by 4.8 per cent over the previous year (Tables VIII.4 and VIII.5).

Table VIII.3: Currency Chests and Small Coin Depots (as at end-March 31, 2019)

Category	No. of Currency Chests	No. of Small Coin Depots
1	2	3
State Bank of India	2,408	2,303
Nationalised Banks	1,186	1,006
Private Sector Banks	197	193
Cooperative Banks	5	5
Foreign Banks	4	4
Regional Rural Banks	7	7
Sub Treasury Offices	4	0
Reserve Bank of India	1	1
Total	3,812	3,519

Source: RBI.

Table VIII.4: Indent and Supply of Banknotes by BRBNMPL and SPMCIL (April-March)

(Million pieces)

Denomination (₹)	2016-17		2017-18		2018-19	
	Indent	Supply	Indent	Supply	Indent	Supply
1	2	3	4	5	6	7
5	..	..	..	..	..	..
10	3,000	2,785	4,237	4,313	3,920	4,289
20	6,000	4,118	2,458	2,051	46	210
50	2,125	2,700	3,784	2,793	4,233	4,040
100	5,500	5,738	8,068	3,170	6,330	6,407
200	-	-	2,694	2,832	2,615	2,730
500 (MG series)	5,725	2,013	-	-	-	-
500 (new design)	-	7,260	9,213	9,693	11,692	11,468
1000	2,200	925	-	-	-	-
2000	3,500	3,504	151	151	47	47
Total	28,050	29,043	30,605	25,003	28,883	29,191

- : Not Applicable. .. : Nil.

Note: BRBNMPL: Bharatiya Reserve Bank Note Mudran Private Limited.

SPMCIL: Security Printing and Minting Corporation of India Limited.

Source: RBI.*Disposal of Soiled Notes*

VIII.8 After completion of processing of the Specified Bank Notes (SBNs) by March 2018, the Reserve Bank focused on the other denominations of soiled notes accumulated due to prioritisation of SBNs processing during 2017-18. As on March 2019, denominations of ₹10 and ₹100 together accounted for 83.3 per

cent of the total disposed soiled banknotes (Table VIII.6).

Counterfeit Notes

VIII.9 During 2018-19, out of the total Fake Indian Currency Notes (FICNs) detected in the banking sector, 5.6 per cent were detected at the Reserve Bank and 94.4 per cent were detected by other banks (Table VIII.7).

Table VIII.5: Indent and Supply of Coins by Mints (April-March)

(Million pieces)

Denomination	2016-17		2017-18		2018-19	
	Indent	Supply	Indent	Supply	Indent	Supply
1	2	3	4	5	6	7
50 Paise	30	30	..	..	..	..
₹1	6,300	3,548	1,830	2,008	2,000	2,555
₹2	4,200	2,461	1,184	1,539	1,000	1,286
₹5	2,270	2,429	1,698	1,545	1,132	678
₹10	2,200	1,223	3,000	760	2,000	1,613
Total	15,000	9,691	7,712	5,852	6,132	6,132

.. : Nil.

Source: RBI.

**Table VIII.6: Disposal of Soiled Banknotes
(April-March)**

(Million pieces)

Denomination (₹)	2016-17	2017-18	2018-19
1	2	3	4
2000	..	..	1
1000	1,514	6,847	2
500	3,506	20,024	15
200	-	-	..
100	2,586	105	3,795
50	778	83	835
20	546	114	1,163
10	3,540	497	6,524
Up to 5	34	8	59
Total	12,503	27,678	12,393

- : Not Applicable. .. : Nil.

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

Source: RBI.

VIII.10 Compared to the previous year, there was an increase of 20.2 per cent, 87.2 per cent and 57.3 per cent in counterfeit notes detected in the denominations of ₹10, ₹20 and ₹50, respectively. Counterfeit notes detected in the denomination of ₹100 declined by 7.5 per cent. In the denomination of ₹200, which was introduced in August 2017, 12,728 counterfeit notes were detected as against 79 during the previous year. Counterfeit notes in the denomination of ₹500

**Table VIII.7: Number of Counterfeit Notes
Detected (April-March)**

(No. of pieces)

Year	Detection at Reserve Bank	Other Banks	Total
1	2	3	4
2016-17	32,432 (4.3)	729,640 (95.7)	762,072 (100.0)
2017-18	188,693 (36.1)	334,090 (63.9)	522,783 (100.0)
2018-19	17,781 (5.6)	299,603 (94.4)	317,384 (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.

**Table VIII.8: Denomination-wise Counterfeit
Notes Detected in the Banking System
(April-March)**

(No. of pieces)

Denomination (₹)	2016-17	2017-18	2018-19
1	2	3	4
2 and 5	80	1	..
10	523	287	345
20	324	437	818
50	9,222	23,447	36,875
100	177,195	239,182	221,218
200	-	79	12,728
500 (MG series)	317,567	127,918	971
500 (New design)	199	9,892	21,865
1000	256,324	103,611	717
2000	638	17,929	21,847
Total	762,072	522,783	317,384

- : Not Applicable. .. : Nil.

Source: RBI.

(new design notes), increased by 121.0 per cent, while in ₹2000, it increased by 21.9 per cent during 2018-19 (Table VIII.8).

Expenditure on Security Printing

VIII.11 The total expenditure incurred on security printing during July 1, 2018 to June 30, 2019 stood at ₹48.11 billion as against ₹49.12 billion in the previous year.

3. Agenda for 2018-19: Implementation Status

Integration of Currency Management Functions with Core Banking Solution (e-Kuber)

VIII.12 The Reserve Bank has been using ICCOMS application as its currency management solution for inventory management and accounting of currency chest transactions as well as currency management operations at its regional offices. ICCOMS is being replaced by an improved currency management module, with integration of currency management functions with the Core Banking Solution (e-Kuber) of the Reserve Bank. Some of the salient features of the new module include improved inventory management, near real time accounting of currency chest

transactions, transit accounting and better tracking of CiC. The integration project is to be implemented in three phases: Regional Office-Issue Department module (Phase I); external accounting module with currency chests portal (Phase II); and MIS-Ancillary module (Phase III). Phase I has been implemented and Phase II is in an advanced stage of implementation.

Laboratory for Banknote Quality Assurance

VIII.13 The Reserve Bank has set up a state-of-the-art Banknote Quality Assurance Laboratory in October 2018 at Mumbai to ensure the standardisation and quality of banknotes among different presses, based on the recommendation of the Group of Experts for Review of Systems and Processes relating to banknote production (Chairman: Shri C. Krishnan).

Automation of Banknote Handling Process

VIII.14 In order to upgrade the infrastructure and processes for currency management, the Reserve Bank is actively deliberating on inducting modern technology and automating the processes of banknote handling, in addition to the existing automated system of processing banknotes through CVPS.

Minimum Standards for Currency Chests (CCs)

VIII.15 The Committee on Currency Movement (CCM) (Chairman: Shri Deepak Mohanty), recommended, *inter alia*, that the Reserve Bank should encourage banks to establish large CCs with modern infrastructure facilities. Accordingly, the revised minimum standards for CCs were issued on April 8, 2019 which stipulate that the strong rooms/vaults should have an area of at least 1500 sq. feet and processing capacity of 660,000 pieces of banknotes per day. For hilly/inaccessible areas, the CCs should have an area of the strong room/vault of at least 600 sq. feet and processing capacity of 210,000 pieces. In addition, the infrastructure at these CCs should be amenable to adoption of automation and implementation of IT solutions.

New Security Features for Banknotes

VIII.16 A Global Pre-Qualification Bid Notice was issued in July 2017 incorporating the “Make in India” clause (to the extent feasible) in terms of Government of India’s Public Procurement (Preference to Make in India) Order, 2017, for procurement of security features for banknotes. The Reserve Bank is actively involved in taking the process forward.

Banknotes in Mahatma Gandhi (New) Series (MGNS)

VIII.17 Banknotes under the Mahatma Gandhi (New) Series were launched in 2016, highlighting the cultural heritage and scientific achievements of the country. During the year, banknotes of ₹100 and ₹20 denominations of the same series were also issued (Table VIII.9).

Procurement of CVPS

VIII.18 During 2017-18, the Reserve Bank invited a global tender for replacing 50 old CVPS machines, and orders for procurement of these machines were placed. The process of supplying and installing the machines is underway and is expected to be completed by December 2019. Fifteen machines have already commenced operations in various offices.

Amendment of Note Refund Rules, 2009

VIII.19 In order to enable the public to exchange mutilated notes in the Mahatma Gandhi (New) series, which are smaller in

Table VIII.9: Introduction of Banknotes under Mahatma Gandhi (New) Series

Denomination (₹)	Motif-Theme	Base Colour	Dimension
1	2	3	4
100	Rani ki Vav	Lavender	66 mm*142 mm
20	Ellora Caves	Greenish Yellow	63 mm*129 mm

Source: RBI.

size compared to the earlier series, at bank branches and RBI offices, the Reserve Bank has made changes to its Note Refund Rules, 2009 (Box. VIII.1).

Implementation of the Recommendations of Committees on Currency Management Aspects
VIII.20 As announced in the Statement on Developmental and Regulatory Policies of

Box. VIII.1

Amendment of Note Refund Rules, 2009

In terms of Section 28 read with Section 58(1) of the RBI Act, 1934, the Central Board of the Reserve Bank of India, with the previous sanction of the central government, makes rules to refund the value of any mutilated or imperfect currency note as a matter of grace. Such notes are exchanged at RBI offices and bank branches in terms of Reserve Bank of India (Note Refund) Rules. The Reserve Bank made amendments to the Reserve Bank of India (Note Refund) Rules, 2009 in view of introduction of the new series of notes having different dimensions as compared to the earlier series notes and introduction of new denominations of banknotes of ₹2000 and ₹200. The Reserve Bank of India (Note Refund) Amendment Rules, 2018 was notified in the Gazette of India on September 6, 2018 and came into force with immediate effect. As per the new Note Refund Rule, there is a change in the minimum area of the single largest undivided piece of the note required for payment of full value for notes of ₹50 and above denominations.

The value of a mutilated note of less than ₹50 denomination may be refunded in full if the undivided area of the single largest piece of the note is as specified in Table 1.

Table 1: Minimum Area Required for Payment of Full Value of Notes Less than ₹50

Denomination (₹)	Length (cm)	Width (cm)	Area (cm ²)	Minimum area (cm ²) required for payment of full value*
1	2	3	4	5
1	9.7	6.3	61.11	31
2	10.7	6.3	67.41	34
5	11.7	6.3	73.71	37
10	13.7	6.3	86.31	44
10 (New MG Series)	12.3	6.3	77.49	39
20	14.7	6.3	92.61	47
20 (New MG Series)	12.9	6.3	81.27	41

*: Indicated as the next complete higher square centimetre after half of the area of the notes in a particular denomination.

The value of a mutilated note of ₹50 and above denomination may be refunded in full or half if the undivided area of the single largest piece of the note is as specified in Table 2.

Mutilated notes of ₹50 and above denomination composed of two pieces of the same note and the two pieces individually having an area equal to or more than 40 per cent of the total area of the note may be refunded for full value of the note.

Table 2: Minimum Area required for Payment of Full and Half Value of Notes of ₹50 and Above

Denomination (₹)	Length (cm)	Width (cm)	Area (cm ²)	Minimum area (cm ²) required for payment of full value@	Minimum area (cm ²) required for payment of half value*
1	2	3	4	5	6
50	14.7	7.3	107.31	86	43
50 (New MG Series)	13.5	6.6	89.10	72	36
100	15.7	7.3	114.61	92	46
100 (New MG series)	14.2	6.6	93.72	75	38
200	14.6	6.6	96.36	78	39
500	15.0	6.6	99.00	80	40
2000	16.6	6.6	109.56	88	44

@: Rounded off to the next complete higher square centimetre of 80 per cent of the area of the notes in a particular denomination.

*: Rounded off to the next complete higher square centimetre of 40 per cent of the area of the notes in a particular denomination.

February 7, 2018, a Task Force was formed to implement the recommendations of inter-agency committees, viz., the High Level Committee on Currency Storage and Movement (HLCCSM) (Chairman: Shri N. S. Vishwanathan) and the Committee on Currency Movement (CCM) (Chairman: Shri Deepak Mohanty). Recommendations relating to standardisation of raw material procurement, quality assurance, note printing processes, security features etc., across all presses and paper mills, made by a Group of Experts (Chairman: Shri C. Krishnan) were also pursued for implementation. Pursuant to the recommendations of the CCM, the Reserve Bank has issued circulars/instructions relating to minimum standards for engaging service providers for cash management activities, using lockable cassettes in ATMs, processing of notes on note sorting machines and standardisation of storage facilities in currency chests, timely reconciliation of transactions of ATM cash replenishment and increasing service charge on cash deposited with a large modern currency chest by non-chest branches to make the retail currency circulation system in India efficient and secure. Norms for opening large currency chests with modern facilities were also issued. The recommendations of the HLCCSM (Interim Report), CCM and Expert Group are in various stages of implementation.

4. Agenda for 2019-20

Introduction of Varnished Banknotes - Field Trial

VIII.21 The Reserve Bank will introduce varnished banknotes of ₹100 denomination on a field trial basis in order to increase the life of Indian banknotes.

Aiding Visually Impaired in Identification of Denomination of Banknotes

VIII.22 The Reserve Bank will develop a mechanism/device for aiding the visually impaired

in identification of denomination of banknotes. Indian banknotes have several features which enable the visually impaired (colour blind, partially sighted and blind people) to identify them, viz., intaglio printing and tactile mark, variable banknote size, large numerals, variable colour, monochromatic hues and patterns. Once the old series banknotes are withdrawn from circulation, identification of the new series banknotes will automatically become easy for the visually impaired. As indicated in the Statement on Developmental and Regulatory Policies of June 6, 2018, the Reserve Bank has embarked upon exploring alternative technological solutions to help the visually impaired in identifying the denomination of banknotes.

Other Areas of Focus

VIII.23 As part of the medium-term strategy framework, the scope for enhancing manufacturing capacities and indigenisation of banknotes, effecting improvements in the processing capabilities and logistics for efficient inventory management of currency and fine-tuning the models for estimation of demand for banknotes and coins are the areas which would receive increased focus during the year 2019-20.

Bhartiya Reserve Bank Note Mudran Private Ltd. (BRBNMPL)

VIII.24 BRBNMPL has set up an ink factory at Mysuru with an annual production capacity of 1,500 metric tonnes, which has started its commercial production from August 2018. Consequently, dry offset inks, Quickset Intaglio Inks (QSI), numbering inks and colour shifting inks used in the printing of banknotes are being manufactured at the Mysuru ink factory. This is a significant milestone achieved in the long journey towards indigenisation.