

*There has been a steady increase in the demand for banknotes and coins over the years, despite the increased use of technology-driven non-cash modes of payments during the recent period. The Reserve Bank continued its efforts to ensure supply of good quality banknotes in pursuance of its Clean Note Policy. Further, to increase the longevity of banknotes, the Reserve Bank is planning to introduce ₹10 plastic banknotes in five cities of India on a trial basis. To address the challenge of counterfeit notes, the Reserve Bank tried to enhance public awareness through sensitization programmes across the country. The Bank and Government of India together, have initiated various measures to strengthen the security features and design of banknotes.*

VIII.1 Managing currency is one of the core functions of the Reserve Bank, being the central bank of India. Although coins of all denominations are issued by the government, they are put into circulation through the Reserve Bank. The Reserve Bank is the sole authority for issuing banknotes in India under Section 22 of the Reserve Bank of India Act, 1934. The Reserve Bank has the responsibility for providing banknotes throughout the country and also for maintaining the quality of the banknotes. Although there is a rising trend of using technology-driven non-cash modes of payment, the demand for banknotes and coins has been rising. The Reserve Bank, in accordance with the pace of demand for banknotes, tries to ensure a steady supply of clean banknotes as per its Clean Note Policy. It also continues its efforts to strengthen the security features of banknotes and enhance public awareness of banknotes, for which it has initiated various sensitisation programmes.

VIII.2 To ensure adequate quantity of banknotes and coins in the system and to ascertain better quality and the genuineness of banknotes, the Reserve Bank took several steps during 2012-13. Keeping in view the increase in demand for banknotes, the Reserve Bank placed an enhanced indent during 2012-13. Soiled and unfit banknotes were removed from circulation and disposed of in an eco-friendly manner by shredding and briquetting them. In order to prioritise the detection of

counterfeit notes in the system, banks were directed to enhance their use of technology. The government has initiated the process of selecting new features for the next series and the Reserve Bank is actively associated with this activity. Simultaneously, the Reserve Bank initiated the process of reviewing the banknote designs in consultation with the Government. To promote a reporting system for counterfeit notes, the administrative and legal procedures are being simplified. Further, as part of its Clean Note Policy, the Reserve Bank has been exploring alternatives for enhancing the life of banknotes, such as plastic notes, which will be introduced on a trial basis in select Indian cities (Box VIII.1).

#### **BANKNOTES IN CIRCULATION**

VIII.3 At 11.6 per cent, the growth in value of banknotes outpaced the growth in volume terms (6.0 per cent) in 2012-13. Notes of denominations of ₹500 and ₹1,000 together accounted for around 83 per cent of the total value of banknotes in circulation during the year (Table VIII.1).

#### **COINS IN CIRCULATION**

VIII.4 There was an increase in the volume and value of coins in circulation in 2012-13 compared with 2011-12 (Table VIII.2). While the total value of coins in circulation increased by 15.0 per cent, in volume terms the increase was 8.6 per cent.

### Box VIII.1 Plastic Banknotes

To increase the circulation life of banknotes, particularly in small denominations, the Reserve Bank, in consultation with Government of India, considered various options, including printing banknotes on plastic substrate. Accordingly, it has decided to introduce one billion pieces of ₹ 10 banknotes on plastic substrate for field trials in five cities, viz., Jaipur, Bhubaneswar, Kochi, Shimla and Mysore, which have been identified because of their geographic and climatic diversity.

Australia was the first country to introduce polymer notes in 1988. Since then, over 30 countries have introduced polymer banknotes, of which several have completely switched from paper to polymer. The latest entrant is Canada, where notes for denominations of CAD 20, 50 and 100 are already in circulation and notes for denominations of 5 and 10 will be put into circulation in November 2013.

#### Advantages of Plastic

Some of the advantages of plastic over paper are its properties of less soilage due to the smoother surface and hence they are more hygienic; they are cost-effective because

they last longer; they create minimal dust and no fibres during printing and handling; and they can contain certain security features that are difficult and expensive to counterfeit.

#### Carbon Footprint

The Reserve Bank engaged the services of The Energy and Resources Institute (TERI) to conduct a study on the carbon footprint of cotton-based banknote paper substrate *vis-à-vis* plastic-based substrate and to estimate their overall environmental impact, taking into account their complete life-cycles. The Life Cycle Impact Assessment results for the two types of notes indicate that replacing cotton-based notes with plastic-based notes would have significant environmental benefits. Polymer/plastic banknotes (and the waste from production) can be granulated and recycled into useful plastic products such as compost bins, plumbing fittings and other household and industrial products. The base material of polymer is a non-renewable resource, but due to its recyclability, it has more than one life.

## CURRENCY OPERATIONS

### Infrastructure for Currency Management

VIII.5 The functions relating to issuance of currency (both banknotes and coins) and their

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

Denomination	Volume (Million pieces)			Value (₹ billion)		
	2011	2012	2013	2011	2012	2013
1	2	3	4	5	6	7
₹2 and ₹5	11,116 (17.2)	11,540 (16.6)	11,624 (15.8)	43 (0.5)	45 (0.4)	46 (0.4)
₹10	21,288 (33.0)	23,002 (33.2)	25,168 (34.2)	213 (2.3)	230 (2.2)	252 (2.2)
₹20	3,020 (4.7)	3,510 (5.1)	3,825 (5.2)	60 (0.7)	70 (0.7)	77 (0.6)
₹50	3196 (5.0)	3,488 (5.0)	3,461 (4.7)	160 (1.7)	174 (1.6)	173 (1.5)
₹100	14024 (21.7)	14,119 (20.3)	14,421 (19.6)	1,402 (15.0)	1,412 (13.4)	1,442 (12.4)
₹500	8,906 (13.8)	10,256 (14.8)	10,719 (14.6)	4,453 (47.6)	5,128 (48.7)	5,359 (46.0)
₹1,000	3027 (4.7)	3,469 (5.0)	4,299 (5.9)	3,027 (32.4)	3,469 (33.0)	4,299 (36.9)
<b>Total</b>	<b>64,577</b>	<b>69,384</b>	<b>73,517</b>	<b>9,358</b>	<b>10,528</b>	<b>11,648</b>

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

management is performed by the Reserve Bank through its 18 issue offices, one sub-office at Lucknow, a Currency Chest at Kochi and a network of 4,211 Currency Chests and 3,990 Small Coin

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

Denomination	Volume (Million pieces)			Value (₹ billion)		
	2011	2012	2013	2011	2012	2013
1	2	3	4	5	6	7
Small coin*	54,797 (48.8)	14785 (18.9)	14788 (17.5)	15 (11.8)	7 (5.3)	7 (4.6)
₹ 1	32,675 (29.1)	34414 (44.1)	35884 (42.4)	33 (26.0)	34 (25.6)	36 (23.5)
₹ 2	15,342 (13.7)	18201 (23.3)	22113 (26.1)	31 (24.4)	36 (27.1)	44 (28.8)
₹ 5	9,070 (8.1)	9981 (12.8)	10675 (12.6)	45 (35.4)	50 (37.2)	53 (34.6)
₹ 10	300 (0.3)	648 (0.8)	1267 (1.5)	3 (2.4)	6 (4.8)	13 (8.5)
<b>Total</b>	<b>1,12,184</b>	<b>78,029</b>	<b>84,727</b>	<b>127</b>	<b>133</b>	<b>153</b>

\*: Coins of denomination of 25 paise and below ceased to be legal tender from June 30, 2011.

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

**Table VIII.3: Currency Chests and Small Coin Depots as at end-December 2012**

Category	No. of Currency Chests	No. of Small Coin Depots
1	2	3
Treasuries	11	0
State Bank of India	2,165	2,093
SBI Associate Banks	773	770
Nationalised Banks	1,136	1,004
Private Sector Banks	117	114
Co-operative Banks	1	1
Regional Rural Banks	3	3
Foreign Banks	5	5
<b>Total</b>	<b>4,211</b>	<b>3,990</b>

Depots spread across the country. Almost all the Currency Chests are being managed by Scheduled Commercial Banks, under the Agency Agreements. Currency Chests with sub-treasury offices are being gradually phased out and their number was 11 as on December 31, 2012. As at end-December 2012, the State Bank of India and its associates accounted for the highest share of around 70 per cent of Currency Chests, followed by the nationalised banks with 27 per cent (Table VIII.3).

VIII.6 The Monetary Policy Statement for 2012-13 announced in April 2012 stated that banknotes and coins would be distributed only through currency chests/ bank branches in order to bring related services closer to customers. Banks are expected to strengthen their distribution systems and procedures to meet the growing needs of people.

### CLEAN NOTE POLICY

#### *Indent and Supply of Banknotes and Coins by the Presses and Mints to RBI*

VIII.7 The total supply of notes received from the Presses in volume terms increased by 8.6 per cent in 2012-13 (Table VIII.4). The supply of coins also increased during the period by 12.9 per cent over the previous year (Table VIII.5).

**Table VIII.4: Indent and Supply of Banknotes by the Presses to RBI (April-March)**

Denomination	Volume (million pieces)							
	2010-11		2011-12		2012-13		2013-14	
	Indent	Supply	Indent	Supply	Indent	Supply	Indent	
1	2	3	4	5	6	7	8	
₹5	0	674	0	2	0	0	0	
₹10	5,000	5,143	5,700	6,252	12,094	5,506	12,164	
₹20	1,500	1,104	600	1,045	1,060	1,154	1,203	
₹50	2,000	1,602	1,200	949	1,182	1,626	994	
₹100	4,300	3,420	6,100	5,079	5,704	6,675	5,187	
₹500	4,000	4,130	2,000	2,330	3,985	3,002	4,839	
₹1000	1,000	467	2,000	1,927	746	1,141	975	
<b>Total</b>	<b>17,800</b>	<b>16,540</b>	<b>17,600</b>	<b>17,584</b>	<b>24,770</b>	<b>19,103</b>	<b>25,362</b>	

VIII.8 Incidentally, there has been a spate of complaints about non-availability or short supply of coins in the recent times. Accordingly, to look into the issue, a High Level Committee, Chaired by Deputy Governor (Dr K.C. Chakrabarty) was constituted in terms of the Government of India orders dated December 19, 2011. The Committee has since submitted its Report to Government of India on August 14, 2012. Government of India conveyed its response on July 31, 2013 advising the Reserve Bank to take appropriate action with regard to distribution of coins and advising that recommendations involving the Mints were being examined separately in consultation with Security

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

Denomination	Volume (million pieces)							
	2010-11		2011-12		2012-13		2013-14	
	Indent	Supply	Indent	Supply	Indent	Supply	Indent	
1	2	3	4	5	6	7	8	
50 Paise	70	59	70	107	50	6	50	
₹1	2,600	2,746	1,600	1,480	4,177	1,572	5,418	
₹2	1,700	1,811	2,900	3,343	2,741	3,742	3,546	
₹5	1,300	1,292	800	761	1,586	615	1,819	
₹10	1,000	232	1,000	403	1,000	943	1,200	
<b>Total</b>	<b>6,670</b>	<b>6,140</b>	<b>6,370</b>	<b>6,094</b>	<b>9,554</b>	<b>6,878</b>	<b>12,033</b>	

**Table VIII.6: Disposal of Soiled and Supply of Banknotes by the Reserve Bank to the Currency Chests**

Denomination	Volume (million pieces)					
	2010-11		2011-12		2012-13	
	Disposal	Supply	Disposal	Supply	Disposal	Supply
1	2	3	4	5	6	7
₹ 1000	179	706	375	371	450	1536
₹ 500	1,864	4,347	1,994	5,560	2263	2725
₹ 100	5,227	4,085	5,577	1,091	5627	6348
₹ 50	2,095	1,114	1,578	1,522	1357	1257
₹ 20	664	1,296	562	4,237	609	904
₹ 10	3,657	5,580	3,584	3,379	3752	5991
Up to ₹ 5	166	549	101	1,440	72	105
<b>Total</b>	<b>13,852</b>	<b>17,677</b>	<b>13,772</b>	<b>17,600</b>	<b>14130</b>	<b>18866</b>

Printing and Minting Corporation of India Limited (SPMCIL).

#### *Disposal of Soiled Banknotes*

VIII.9 Around 14.1 billion pieces of soiled banknotes (20.4 per cent of banknotes in circulation)<sup>1</sup> were processed and removed from circulation during 2012-13 (Table VIII.6). The number of banknotes withdrawn from circulation and eventually disposed of at the Reserve Bank offices increased over the previous year by 358 million pieces. During 2012-13, around 8.97 billion pieces were processed through 59 Currency Verification and Processing Systems (CVPS) and the remainder were disposed of under other modes.

#### *Measures to Improve the Quality of Banknotes in Circulation*

VIII.10 In compliance with a recommendation by the High-Level Group on Systems & Procedures for Currency Distribution, banks have been directed that notes in the denomination of ₹100 and above are to be processed through Note Sorting Machines conforming to the Note Authentication and Fitness Sorting Parameters prescribed by the Reserve Bank before issuing them over the counters or through ATMs. Banks have been further directed

to cover every branch to ensure compliance with this recommendation. As on December 31, 2012, banks have installed 12,827 NSMs.

VIII.11 The facility to adjudicate cut/mutilated banknotes and exchange soiled banknotes for clean and good quality banknotes as also coins has been extended to cover all bank branches, including those of co-operative banks and RRBs.

### **COUNTERFEIT BANKNOTES**

VIII.12 Due to the increased use of NSMs, bank branches detected more than 94 per cent of the total detected counterfeit banknotes during 2012-13 (Table VIII.7). Of the counterfeit notes detected by

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

Year	Detection at		Total
	Reserve Bank	Other banks	
	1	2	
2010-11	45,235 (10.4)	3,90,372 (89.6)	4,35,607
2011-12	37,690 (7.2)	4,83,465 (92.8)	5,21,155
2012-13	29,200 (5.9)	4,69,052 (94.1)	4,98,252

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

<sup>1</sup> As on March 2013.

the Reserve Bank in 2012-13, around 79 per cent (23,093 pieces) were detected in the soiled note remittances by banks and about 21 per cent (6,107 pieces) were tendered over Reserve Bank counters.

VIII.13 During 2012-13, the detection of counterfeit notes in the denomination of ₹1000 increased by 18.2 per cent, whereas detection of counterfeit ₹500 and ₹100 notes decreased by 6.8 per cent and 12.3 per cent, respectively, in comparison with the previous year (Table VIII.8).

VIII.14 Banks have been advised to ensure that the notes they receive over the counters are re-circulated only after they have been properly authenticated through machines. They have also been advised to streamline their systems in a manner which will make them bear the risk of counterfeit notes rather than the common man who unknowingly comes in possession of such notes. Banks have been told that if counterfeit notes are detected but not impounded and reported, it would be construed as willful involvement by the concerned bank in circulating counterfeit notes and may attract penal measures.

VIII.15 The Reserve Bank has initiated several other steps such as strengthening security features, rationalising reporting, introducing a scheme for compensation to banks for detection and reporting of counterfeit notes at their back offices/Currency Chests, imparting training to banks and other organisations and making improvements in the merchandised processing of notes. These measures will help reduce the menace of counterfeit notes.

## EXPENDITURE ON SECURITY PRINTING AND DISTRIBUTION

VIII.16 The total expenditure incurred on security printing (note forms) during 2012-13 (July-June) was ₹28.72 billion as compared to ₹ 27.36 billion in 2011-2012 (July- June). The increase in security printing charges by ₹1.36 billion (5.0 per cent) over the previous year was mainly on account of increase in the supply of banknotes during 2012-13. Expenditure on remittance of treasure has increased from ₹528 million in 2011-12 (July-June) to ₹641 million in 2012-13.

## THE WAY FORWARD

### (i) *Exiting from the retail function*

VIII.17 Historically, central banks have been administering retail cash services for surveillance reasons. The general trend has been to transfer this work to commercial banks, because with their wider network and presence they are able to discharge the services more effectively and at locations closer to customers. This implies that while the Reserve Bank will withdraw from the retail function, it will continue to manage the distribution of banknotes and coins through currency chests and bank branches. Thus, the core function as envisaged in the Preamble of the RBI Act, 1934 shall continue to be discharged by the Reserve Bank. The Reserve Bank is committed to the objective of ensuring the supply of clean notes and coins to the people to meet their genuine needs.

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

Year	(No. of pieces)								
	₹2	₹5	₹10	₹20	₹50	₹100	₹500	₹1000	Total
1	2	3	4	5	6	7	8	9	10
2010-11	-	-	139	126	10,962	1,24,219	2,46,049	54,112	4,35,607
2011-12	-	-	126	216	12,457	1,23,398	3,01,678	83,280	5,21,155
2012-13	1	1	321	221	9,759	1,08,225	2,81,265	98,459	4,98,252

*(ii) Capacity Augmentation of CVPS & SBS*

VIII.18 A roadmap for enhancing the processing capacity of soiled notes through the Currency Verification and Processing System (CVPS) for the period 2012-13 to 2014-15 has been worked out to attain the objectives of the Clean Note Policy and maintain the average life cycle of banknotes. Of the 59 CVPS in the Reserve Bank offices, which have an annual processing capacity of 7.5 billion pieces, 39 have a processing speed of 30 notes per second. The remaining 20 machines are being upgraded from 20 to 30 notes per second.

VIII.19 There are also 28 Shredding and Briquetting Systems (SBS) in the Reserve Bank. Of these, the capacity of 5 machines has been enhanced, and another 13 machines will be upgraded/overhauled during the next 12 to 15 months.

*(iii) Encourage opening of currency chests in the rural and semi-urban areas*

VIII.20 The outreach and the financial inclusion programmes of the Reserve Bank have created awareness among rural people about the Clean Note Policy and there is a need to ensure adequate supply of notes and coins in rural and semi-urban areas. It is proposed to further encourage the opening of Currency Chests in these areas as also in the North Eastern region.

*(iv) Distribution of Banknotes and Coins - Alternative Avenues*

VIII.21 There is a need to identify alternative avenues for the distribution of banknotes and coins.

The Monetary Policy Statement 2013-14 in May 2013 announced that banks should consider offering these services through Business Correspondents (BCs) and engage Cash in Transit (CIT) companies. This would address the problem of last-mile connectivity.

*(v) Improving Currency Distribution in Districts – Identification of Lead Banks*

VIII.22 To ensure that banks have a more pronounced stake in the distribution of banknotes and coins and to facilitate their uninterrupted supply in places other than metropolitan and urban centres, the Reserve Bank formulated a scheme, on pilot basis, on the lines of the Lead Bank Scheme, to allot specific areas (districts/states) to individual banks for currency management purpose. RBI would identify the nodal bank for currency management (BCM), which would be responsible for ensuring that the genuine needs of people for clean notes and coins are appropriately met through proper coordination with the Currency Chests and Small Coin Depots situated in that area.

VIII.23 Currency management is one of the functions of the Reserve Bank that brings it in direct interface with the common man. It has been the endeavour of the Reserve Bank to perform this function effectively so that the genuine demand for various denominations of currency is met across the nation, the notes are reasonably clean and security features are periodically enhanced to prevent counterfeiting of banknotes. The Reserve Bank will continue to take steps in this direction.