



Currency Management: Issues and Challenges¹ (With special reference to India)

Mr. Tom Ferguson, Chairman, Banknote Conference 2014; Mr. Tim Vigotsky, Director, Banknote Conference 2014, my fellow speakers - Mr. Barna Barabas, DMD, Jura Security Printing Alliance; Dr. Wolfram Seidemann, Managing Director, Louisenthal; other delegates; ladies & gentlemen. At the outset, I thank the organizers of Banknote Conference 2014 for inviting me to speak at this august gathering. From the contents of the Conference Schedule and from the feedback that I have received from my colleagues in the Reserve Bank of India, who have participated in this Conference over the years, I gather that the Conference seeks to serve certain useful purposes, notably, providing a platform for a free and frank exchange of views, showcasing the latest developments in the rapidly changing field of currency management, bringing together the service providers and the service seekers from across the world under one roof and generally helping the participants to chalk out their future strategies and plans of action.

2. Because of the sheer size of our population and the quantum of banknotes that we are required to put into circulation every year, India has emerged as one of the biggest consumers of the ingredients that go into production of banknotes in the world. In keeping with the magnitude of the banknotes that are put into circulation, the corresponding need to import other machinery for processing, detection and destruction of the bank notes is also humongous. Thus, India is a very significant market for the suppliers of all ingredients and equipments, which form the entire ecosystem of the banknote production and destruction process. As in-charge of the currency management function in the country, we at the Reserve Bank of India, the Central Bank of the country, have experienced severe constraints, some of which can be traced, directly or indirectly to the operations of the global suppliers and vendors in the banknote industry. I intend to use the presence of these global suppliers and vendors and the opportunity to speak at this platform today to highlight some of these concerns, which I feel must be bothering other Central Banks which

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rely on imports for their currency management, especially in the emerging markets. I would be extremely happy if the suppliers /vendors could reflect on our concerns and develop some practical solutions to our problems. However, before I get into the specific issues, let me begin with a brief perspective on various dimensions of the Indian currency system and the issues and challenges that we face in our currency management efforts. I would also like to share some of the recent steps we have taken in this area with a view to seeking your views and feedback for improvements.

Introduction

3. Currency management has a great degree of significance for Central Banks the world over as it is one of the most visible functions which touches the lives of every individual. Since people often tend to judge the efficacy of the central bank from the ease of continuous access and quality of notes in their possession, currency management function entails a certain degree of reputational risk for the central bank. As is the case in most jurisdictions, issue of banknotes and management of currency is one of the core functions of the Reserve Bank of India. It is enshrined in the preamble to the RBI Act, 1934 as “...to regulate the issue of Bank Notes and keeping of reserves with a view to securing monetary stability in India and generally to operate the currency and credit system of the country to its advantage.”

4. The mandate of any central bank is to protect the integrity of banknotes through new design and security features, estimate the demand for banknotes and coins, plan the supply and distribution of adequate quantity of banknotes and coins and ensure quality of banknotes in circulation by timely withdrawal of soiled banknotes. It is equally important to maintain confidence in currency through improvement in systems / procedures and by raising public awareness by enlisting support from all associated with the design, production and supply of banknotes.

Some Numbers

5. 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/e-currency/virtual currency-bit coins, etc. Even internationally, notes in circulation have been increasing despite the use of non-cash modes of payment. However, the large numbers in India present a unique situation as compared to other

countries. A comparative picture of the Notes in Circulation (NIC) in India as compared to some major countries is indicated in the table given below:

Year	India	US	UK	Euro zone	Australia	Canada
2012/13						
No. of Pieces (in billion)	76.47	34.5	2.99	15.8n	1.15	2.00
Value in home currency terms	12468 billion	1198 billion	58 billion	933.7 billion	53.6 million	63.7 million

6. Globally, the cash in circulation to GDP ratio has ranged from 2.5% to 8% whereas in India it has been around 13% due to the predominant usage of cash by a majority of the population. The world-wide growth rates of cash in circulation has varied between 6% and 13%, with Central & South America figuring at the top end followed by Africa (12%), Middle East (11%), Europe (10%), Asia (7%) and finally UK and Ireland at 6%. In the year 2013, 154 billion banknotes were issued globally, of which the maximum banknotes, 54 billion, were issued by China and almost 20 billion banknotes by India. The global projections for the next three years have been worked out at 160 billion, 166 billion and 173 billion banknotes, respectively. These numbers are simply astounding. While it presents a massive opportunity for the vendors associated with the production of banknotes, I believe it simultaneously enjoins upon them certain responsibilities. For instance, the vendors need to be conscious of the impact of their activities on the environment. I will touch upon some of these issues later in my address. At this stage, I would like to mention that there needs to be more investment in research and development efforts by the vendors to ensure that the longevity of the banknotes improves and eventually, the cost of printing of banknotes for the society as a whole comes down. Vendors need to develop such banknote paper that can resist dirt and moisture, thereby increasing the life and quality of the banknotes in circulation. But while the focus needs to be on bringing down the cost of printing banknotes, it cannot be done by compromising on security. In fact, effort has to be on making the banknotes more secure with lesser, but stronger security features.

Currency Management in India- Major Challenges

7. Let me now share with you some of the challenges that we encounter in currency management and currency distribution in India. In a country like India having an area of approximately 3.3 mn sq. km. and a population of more than 1.2 billion, reaching the currency to the end users in far flung areas dotted with difficult terrains, poses an enormous challenge. As on December 31, 2013, there is a network of 110,520 commercial bank branches and 137,080 ATMs. The notes in circulation as on the same date was approximately 76.47 billion pieces valued at ₹ 12, 468 billion while the coins in circulation were around 89.91 billion pieces valued at ₹ 168 billion. As the demand for notes and coins is subject to diverse socio-economic, behavioural and other often unpredictable factors, the task of forecasting demand for currency is a challenging task and can be subject to large variations. At present, the system poses considerable difficulties in capturing the structural and cyclical demands for currency and projecting demand with precision. I would, therefore, also take this opportunity to extend an invitation to the delegates present here to come forward and see if they can work with us for making accurate projections for the demand of banknotes and coins.

8. The other challenges in currency management relates to ensuring durability of banknotes, ensuring adequate supply of all denominations, improving operational efficiency in distribution of notes by controlling cost of handling, distribution and security in transit /storage, providing last mile connectivity at reasonable cost, ensuring equity in distribution and repositioning RBI as an upstream facilitator in the fresh note/coin supply chain, rather than as a retailer with limited reach. Let me highlight the challenge associated with durability of the banknotes in India by giving some figures. We in India, withdraw more number of banknotes from circulation than the number of banknotes collectively produced by all countries taken together with the exception of China. In fact, we are constrained to withdraw over 75% of all notes that we circulate every year as may be seen from the table below:

Denomination	Supply of Banknotes by RBI to Currency Chests and disposal of Soiled notes					
	Volume(Million Pieces)					
	2010-11		2011-12		2012-13	
	Supply	Disposal	Supply	Disposal	Supply	Disposal
1	2	3	4	5	6	7
₹1000	706	179	371	375	1536	450
₹500	4347	1864	5560	1994	2725	2263
₹100	4085	5227	1091	5577	6348	5627
₹50	1114	2095	1522	1578	1257	1357
₹20	1296	664	4237	562	904	609
₹10	5580	3657	3379	3584	5991	3752
up to ₹5	549	166	1440	101	105	72
Total	17677	13852 (78%)	17600	13771 (78%)	18866	14130 (75%)

9. Such massive withdrawal of banknotes from circulation not only means additional cost for printing of fresh notes but also additional requirement of various resources used in production of banknotes. In this context, it becomes imperative that efforts are made to enhance the durability of the banknotes so that not only the wastages are reduced, but also resources are utilized in a sustainable manner, thereby ensuring that the environmental footprint of our currency management operations is minimized.

10. Mechanization of soiled note processing while augmenting capacity has also thrown up new challenges like ensuring standardization of machine parameters, slow progress in improvement in processing capacity by commercial banks and security risks on account of manual intervention. Another challenge with the likely potential to evolve into a reputational risk for RBI is the shortage/ 'perceived' shortage of coins and the lack of understanding on the exact role of the central bank in its distribution. It needs to be understood that while the responsibility for issue of coins is that of the Government of India (GoI), RBI's role is restricted to putting into circulation the coins received by it. Then, there are issues arising out of similar shapes and sizes of coins of different denominations. Last, but not the least, is the growing menace of forged

notes in circulation and creating public awareness about various aspects of banknotes.

Recent Measures in India

a) Constitution of High Level Committee

11. To address the significant challenges faced by us in India and other related issues, a High Level Committee was recently constituted by Gol (Chairman: Dr. K. C. Chakrabarty) having members representing Gol, RBI, Note Presses & Mints. The Committee reviewed the forecasting methodology and studied the international best practices in cash distribution by other Central Banks. It made wide-ranging recommendations, notably, (i) RBI to focus exclusively on management and planning of currency system while passing on the responsibility for distribution of banknotes and coins entirely to commercial banks, (ii) need to introduce private entrepreneurs for distribution of banknotes and coins on behalf of banks, if last mile connectivity for distribution has to be achieved, (iii) identification of a bank willing to assume leadership of currency management function in the district, etc. All these recommendations have been accepted and are at various stages of implementation.

b) Distribution Mechanism

12. The functions relating to issuance of currency (both banknotes and coins) and their management is performed by the Reserve Bank through its 19 issue offices and a network of 4,209 Currency Chests and 3,966 Small Coin Depots spread across the country. Despite the large number of currency chests (extended arms of RBI's Issue Department), the primary responsibility for reaching currency to the banks rests with RBI because of the currency management structure. Every year, based on the Bank's indent for banknotes and coins, the Printing Presses and Mints dispatch notes and coins to the RBI offices. From the RBI offices, the notes and coins are remitted to currency chests operated by commercial banks. The central bank arranges for transport and police escort for transfer of treasure and bears all the expenditure related to it unlike other countries where the commercial banks are responsible for transport of cash. Thus, distribution of cash in India is the primary responsibility of the central bank. The treasure held in the currency chests is the property of the central bank and is subject to audit/verification. Any withdrawal or

deposit in the currency chest by the bank holding the chest is reflected as debit/credit in the bank's account held with RBI.

13. To improve last mile connectivity, we have decided to involve private entrepreneurs in the distribution function. The Cash-in Transit (CIT) companies/Business Correspondents have been allowed to process coin and banknotes, including packaging, sorting and delivery to banks' customers and for retrieval. Banks, including urban co-operative banks and regional rural banks, are also being involved to ensure that last mile delivery of cash related services penetrates throughout the country. We have also initiated a pilot exercise under the lead bank scheme for currency management and intend to upscale it going forward, based on the experience gained.

c) Direct remittance of banknotes

14. At present, remittances of notes from printing presses accompanied by press representatives and police escort are received at our Issue Offices. After receiving these boxes, they are subjected to preliminary verification (PV) wherein the contents of the box are verified by the vault joint custodians in the presence of the press representative. Later, at the time of sending remittance to banks, packing of the boxes is done in the presence of the accompanying RBI staff and vault joint custodians. At the bank, the RBI staff remains stationed till the verification of notes is completed by the bank officials.

15. We have realized that the present process has some inherent inefficiency as the currency notes have to be transported several times before they reach the public. This not only reduces productivity but is also cost-inefficient. Accordingly, we have introduced a scheme for direct remittance of banknotes from Banknote Printing Presses to the commercial banks instead of routing them through RBI Issue offices to save time, efforts and resources. The new process is being given greater impetus by the RBI.

d) Pursuit of Clean Note Policy

16. Since the year 1999, the Bank has been pursuing a 'Clean Note Policy' to ensure an uninterrupted supply and circulation of good quality banknotes. As may be seen

from the Table at para 8 above, during the last three years, 13852 million pieces (mpcs), 13771 mpcs and 14130 mpcs respectively of soiled banknotes were withdrawn and disposed of. While the objectives of Clean Note Policy have been by and large achieved in respect of higher denomination notes, the quality of lower denomination notes, especially ₹ 10, continues to be a cause for concern, possibly due to reluctance/constraints on the part of banks to mop up such notes from circulation.

17. To ensure that genuine banknotes alone are put into circulation, high priority is accorded to detection of counterfeit notes in the banking system. Towards this end, banks have been directed to enhance the use of technology to re-align their cash management systems so as to ensure that cash receipts in the denominations of ₹ 100 and above are not put into re-circulation without being machine processed for authenticity. Banks have also been advised to put in place suitable systems to ensure that counterfeit notes detected are duly impounded and reported by following the prescribed procedure.

e) Currency Processing in India -Trends in Expenditure

18. The currency production costs in our country have been substantial over the years. We in RBI have incurred an expenditure of ₹ 23.76 billion in 2010-11, ₹ 27.36 billion in 2011-12 and ₹ 28.72 billion in 2012-13 on this activity. The two note printing presses, BRBNMPL and SPMCIL, exhibit an increasing trend in their overall expenses viz. ₹12.22 billion, ₹ 13.09 billion and ₹ 14.23 billion in the case of the former and ₹ 26.17 billion, ₹ 27.88 billion and ₹32.82 billion in the case of the latter during the last three years respectively, with the cost of paper and ink contributing significantly in the overall costs. Additionally, RBI has incurred an expenditure of ₹ 5.23 billion for acquisition, upgradation and overhaul of its 59 CVPS machines and 28 SBS (Shredding and Briquetting system) machines employed for destruction of soiled notes.

The Road Ahead & Key Messages

19. Currency management offers significant business opportunities for the players as the cost of printing of banknotes is increasing every year due to the increasing

demand for banknotes. As I mentioned earlier, this also enjoins certain amount of responsibility on the part of the vendors. It is expected from them that the products offered are of high quality and reliability and they strictly adhere to the agreed technical specifications. In this context, I wish to allude to the failure of the selected bidders in meeting the technical specifications of the plastic banknotes in ₹ 10 denomination that we are proposing to introduce on a trial basis in India, necessitating undertaking the exercise afresh, thereby delaying the process. The vendors are also expected to co-operate with the national governments and Central Banks to avoid production of counterfeits by developing country-specific security features and bringing about improvisation in raw materials like paper, ink, thread, etc. Any failure of the vendors in this regard could result in total loss of business with individual countries making efforts to indigenize.

20. Let me now focus your attention on some expectations that we have from the various vendors present in the Banknote Conference here. We all agree that the integrity of banknotes is the most important factor. In this context, it is also actually quite ironical that for the circulation of forged notes the blame is put on the central bank when, in fact, the blame should go to the manufacturer of the forged notes as in the case of spurious drugs, where the manufacturers are prosecuted. However, it is my considered opinion that the integrity of the banknotes is not a technology issue but more of a law and order issue. When I say this I feel I would be echoing the sentiments of all consumers of various products that the industry produces, especially the representatives of the emerging market countries, who rely heavily on imports for currency production in their respective jurisdictions. I firmly believe that upgrading the security and design features of the banknotes every few years to outsmart the counterfeiters is not a long-term solution but only adds to the cost of producing the banknotes.

21. Let me elaborate what I mean. If the counterfeiters are able to do a good job of producing duplicate currency, they are obviously having access to good quality currency paper, printing ink and other components that are necessary for production of banknotes. So, the question is, what is the source of supply for the fraudsters and what is the role of vendors in perpetration of these unlawful activities. The commercial banks the world over follow stringent KYC procedures on their customers. As counterfeiting is a global issue, what I would like the vendors present

here is to similarly do a proper customer identification/due diligence on all their customers. The vendors must join hands to find out who has supplied ink, paper, machinery, etc. to the counterfeiters which would enable the regulators to take appropriate action. In a manner the banks close accounts of customers doing any doubtful transactions; the suppliers should be able to cut off their links with their doubtful customers. In fact, the need of the hour is that counterfeiting should be tackled as a criminal activity with active co-ordination and collective might of all stakeholders-the vendors, Central Banks, law enforcement agencies, etc. Finding a long-term solution to this menace may also require close cross-border cooperation between various countries. The global vendors have, in fact, the maximum stake in ensuring that these problems are countered at the earliest. Over time, the vendors have made significant investments in building capacities and, in the process, created economies of scale and scope. They are the least cost producers of the various ingredients/ components used in production of banknotes and any attempt by individual countries at creating manufacturing capacities could prove inefficient and in many cases, wasteful investment. But the bottom line is that any failure to initiate necessary corrective measures would push more and more countries like India to go for indigenization thereby resulting in loss of big business for the vendors.

22. The global banknote industry, comprising various manufacturers of machines, paper, ink, security features, etc is very huge. I understand that the overall market for this industry is roughly USD 27 to 28 billion. So, while the opportunities for the vendors are immense, I would also take this opportunity to request all the manufacturers, suppliers, vendors in the banknote industry to put their minds together and come up with ideas on not only reducing the cost of paper, ink, machines, etc. but also for enhancing the durability of the banknotes through technological innovations. The vendors must realize that they also have a responsibility towards the environment. These innovations are necessary to reflect that the vendors are conscious about promoting environmental sustainability and 'green' practices. Thus, it is extremely significant that currency production activities are not viewed as mere business proposition for the vendors but also as something which has serious implications for the reputation of all stakeholders - the national governments, Central Banks and the vendors themselves.

23. I once again thank the organizers for the opportunity provided to me and appreciate the patient hearing given by the participants. I hope that the delegates

present at the Conference would reflect on the messages /concerns that I have tried to convey this morning. I hope the Conference would deliberate on these issues and come up with practical solutions to the present/impending challenges. Global co-ordination and intensive efforts to ensure integrity of banknotes is the need of the hour and I hope that all stakeholders viz., the Central Banks, state, policy makers and vendors who are involved in the process of production, supply and distribution of banknotes, would discuss these issues in a more purposeful manner. Ultimately, this is the prime objective of the Conference. It is our collective responsibility to bring greater efficiency in the entire currency management function – an essential commitment that all of us must make to the end users spread across regions and jurisdictions.

Thank you.