

RBI's Balance Sheet and Liquidity Management: 2012-13

Amol Agrawal¹

Central banks' balance sheet has emerged as a key tool to fight the crisis in both developed and emerging economies, albeit for different reasons.

The RBI recently released its Annual Report for the year 2012-13. RBI's balance sheet has also been under attention for both the purposes - providing liquidity to financial markets and fighting rupee depreciation. In 2011-12, when liquidity tightened in money markets, RBI provided liquidity to markets thereby expanding its balance sheet. The balance sheet was expanded amidst high inflation leading to balancing trade-offs between tight liquidity and high inflation. As rupee depreciated recently, the liquidity was tightened limiting the scope of balance sheet expansion.

The author has been writing on RBI's balance sheet and scope actively (see Occasional papers at <http://www.stcipd.com/research.aspx>). This paper looks at RBI's balance sheet in 2012-13 and compares it with previous years.

I. RBI Balance Sheet (2012-13)

RBI's balance sheet is divided into balance sheet of two RBI departments. The same practice is also followed by Bank of England, whose model has been adopted by RBI since its foundation years.

- Issue department: looks at issuing and management of currency in the system.
- Banking department: looks at all the other central banking operations like maintenance of CRR balances, loans to government etc.

RBI constituted a technical Committee in 2012 to review the form of presentation of the Bank's Balance Sheet and Profit & Loss Account under Chairmanship of Mr. Y. H. Malegam). The committee recommended merging these two balance sheets to simplify the structure. It will be interesting to see if RBI adopts this recommendation in future reports.

In 2012-13, the balance sheet stood at around Rs 23.9 lakh cr, increasing by 8% compared to last year. Unlike 2010-11 and 2011-12, where we saw higher growth in banking department balance sheet, we see higher growth in issue department in 2012-13. As a result, share of issue department in total balance sheet has risen from 50% to 50.3% and share of banking department has declined from 50% to 49.7%.

Table 1: A Snapshot of RBI's Balance Sheet (in Rs Cr)

	2009-10	2010-11	2011-12	2012-13	2010-11	2011-12	2012-13
Issue Department	8,42,041	9,69,276	11,03,473	12,01,624	15.1	13.8	8.9
Banking Department	7,11,017	8,35,390	11,05,471	11,88,454	17.5	32.3	7.5

¹ Amol Agrawal is an economic researcher and follows research in economics closely. He avidly blogs at <http://mostlyeconomics.wordpress.com>

Total	15,53,058	18,04,667	22,08,945	23,90,711	16.2	22.4	8.2
	(% of Total)						
Issue Department	54.2	53.7	50.0	50.3			
Banking Department	45.8	46.3	50.0	49.7			
<i>Source: RBI</i>							

II. Issue Department (2012-13)

As we had seen in previous reports, RBI issues currency mainly backed by foreign assets and gold. Though, this is mainly from an accounting perspective. In reality, currency is not really backed by any assets as seen in era of gold standard. Most countries issue fiat currency which is acceptable mainly because of government order. The same applies to India as well.

Table 2: Balance Sheet of Issue Department (in Rs Cr)

Liabilities	2010-11	2011-12	2012-13	Assets	2010-11	2011-12	2012-13
Total Notes Issued	9,69,276	11,03,473	12,01,624	Gold Coin and Bullion:			
i) Notes held in the Banking Department	15	9	8	(a) Held in India	57,807	76,010	67,432
ii) Notes in Circulation	9,69,261	11,03,465	12,01,616	(b) Held outside India	–	–	–
				Foreign Securities	9,10,166	10,26,197	11,32,910
				Rupee Coin	258	221	236
				Government of India Rupee Securities	1,046	1,046	1,046
Total Liabilities	9,69,276	11,03,473	12,01,624	Total Assets	9,69,276	11,03,473	12,01,624

Liabilities

There is only one kind of liability, total currency in the system (with public + banking system). This has grown by 8.9%.

Assets

- In assets we have three kinds of assets – foreign, domestic securities and gold. Since 2005-06, RBI has chosen to back currency mainly via forex assets and this trend continues in 2012-13 as well.
- Foreign assets form 94% of total issue department balance sheet (compared to 93% in 2011-12). Foreign assets have grown by 10.4% in 2012-13 vs. 12.7% in 2011-12.
- Value of Gold has declined by 11.2% in 2012-13 compared to a growth of 31.5% in 2011-12. As a result of the decline, its share in balance sheet has declined to 5.6% compared to 6.9% in 2011-12 and 5.9% in 2010-11.
- Domestic securities value remains at 1046.4 Cr, a level which has remained constant since 2005-06. This implies domestic securities share in issue department balance sheet remains at a marginal level of 0.08%.
- Share of rupee coins has increased by 6.8% but its share remains marginal at 0.02%.

III. Banking Department (2012-13)

The banking department involves various transactions of RBI with the banking system and the government. It also includes other liabilities which are non-monetary in nature like

capital, reserves and provisions. We have simplified the balance sheet of Banking department and have only included major items (Table 3).

LIABILITIES	2010-11	2011-12	2012-13	ASSETS	2010-11	2011-12	2012-13
Deposits	4,13,640	3,72,368	373892	Balances Held Abroad	3,03,531	3,64,027	3,39,502
Other Liabilities	4,21,749	7,26,355	808473	Investments	4,58,606	6,30,589	7,27,611
				Loans and Advances	3,388.5	20,585	36,512
				Notes	15	9	8
				Other Assets	69,864	90,269	85,456
Total Liabilities	8,35,390	11,05,471	11,89,087	Total Assets	8,35,390	11,05,471	11,89,087

Source: RBI

Liabilities:

- Deposits:** Total deposits rose marginally from Rs. 3.72 lakh Cr to Rs 3.74 lakh cr. This was mainly because of rise in deposits of Others which include Rupee Deposits from the Foreign Central Banks and the Foreign Financial Institutions, Deposits from the Indian Financial Institutions and Accumulated Retirement Benefits (Table 4). In this Annual Report, RBI has given more information as it shows deposits placed by Mutual Funds as well which stands at Rs 1 Cr same as seen in 2011-12. Apart from this, we also know that Miscellaneous deposits include balances of CCIL, PDs etc.

	2010-11	2011-12	2012-13
Deposits (a+b+c)	4,13,640	3,72,368	3,73,892
(a) Government (i+ii)	143	143	142
(i) Central Government	101	100	100
(ii) State Governments	42	42	42
(b) Banks (sum of i to v)	4,01,067	3,72,225	3,73,749
(i) Scheduled Commercial Banks	3,81,206	3,41,954	3,39,143
(ii) Scheduled State Co-operative Banks	3,680	3,324	3,204
(iii) Other Scheduled Co-operative Banks	5,755	5,364	5,521
(iv) Non-Scheduled State Co-operative Banks	67	92	224
(v) Other Banks	10,358	9,287	9,060
(c) Others (sum of i to iv)	12,431	12,205	16,597
i) Rupee Deposits from the Foreign Central Banks and the Foreign Financial Institutions	725	1,118	1,533
ii) Deposits from the Indian Financial Institutions	199	127	70
iii) Deposits placed by Mutual Funds	-	1	1
iii) Accumulated Retirement Benefits (i+ii)	9,401	10,539	14,102
(i) Provident Fund	3,013	3,355	3,610
(ii) Gratuity and Superannuation Fund	6,388	7,184	10,492
iv) Miscellaneous (deposits of Clearing Corporation of India Ltd, primary dealers, employee credit societies, etc. and sundry deposits.)	2,105	421	889

Source: RBI

Deposits of SCBs which is bulk of the category declined marginally from Rs 3.42 lakh cr to Rs. 3.39 lakh cr. The bank deposits in turn declined because of CRR cuts by RBI. RBI eased CRR by 75 bps in 2012-13 (Sep-12, Nov-12 and Jan-13 respectively) leading to this decline.

- **Other liabilities:** This includes all the liabilities which do not create any money like capital, various RBI reserves etc. In WSS, all these liabilities are classified as Other Liabilities in Table 1 (RBI Balance Sheet) and net non-monetary liabilities in Table 7 (Reserve Money). The break-up of other liabilities is available only in the Annual Report. We have included capital and other reserves as well in Table 5 which are mentioned separately in the annual report.

		2010-11	2011-12	2012-13
1	Paid up Capital of RBI (fully by Government of India)	5	5	5
2	Reserve Fund	6,500	6,500	6,500
3	National Industrial Credit (Long Term Operations) Fund	20	21	22
4	National Housing Credit (Long Term Operations) Fund	194	195	196
5	Provisions of Reserve Bank	4,14,197	7,26,355	8,01,563
	Contingency Reserve	1,70,728	1,95,405	2,21,652
	Asset Development Reserve	15,866	18,214	20,761
	Currency and Gold Revaluation Account	1,82,286	4,73,172	5,20,113
	Investment Revaluation Account	4,269	12,222	2,485
	Exchange Equalisation Account	0.01	2,405	1,699
	Settlement Liabilities	16,689	Nil	Nil
	Provision for Outstanding Expenses	1,518	1,616	1843
	Profits Transferred to GoI	15,009	16,010	33,010
6	Miscellaneous	7,832	7,311	6,723
7.	Bills Payable include Outstanding Drafts / Telegraphic Transfers/Payment Orders drawn by RBI	833	27	187
	Other Liabilities (1 to 7)	4,21,749	7,33,103	8,15,196
<i>Source: RBI</i>				

Unlike previous year, we do not see a significant rise in other liabilities. Last year they had jumped by nearly 74% compared to this year's gain of 11%. have increased significantly mainly because of Currency and Gold Revaluation Account (CGRA). Last year, bulk of this rise was because of gains in valuation of currency and gold account which rose from Rs 1.82 lakh cr to Rs. 4.73 lakh cr. The sharp depreciation in Rupee and rise in price of gold has led to rise in this account.

Even in 2012-13, CGRA has risen by 10% as Rupee continued to depreciate. Though, Rupee depreciated more sharply post RBI closing of accounts on 30 Jun, 2013 and hence the gains are limited.

In 2012-13, profits transferred to GoI surged by 106% to Rs 33,010 Cr. This is the largest transfer in RBI's history. RBI generated net income worth Rs 33,014 Cr in 2012-13 on account of increase in interest on holding of Domestic Securities (increased from Rs 27,673

cr to Rs 40,868 Cr in 2012-13). The return on domestic assets increased from 5.4% to 7.2% in 2012-13 contributing majorly to surge in profits of RBI.

Items under Assets

- **Notes, Rupee Coins and Small Coins:** It is noted as a liability item in issue department. Includes stock of bank notes, one rupee notes, rupee coins of Rs 1, 2, 5 and 10 and small coins to meet requirements of the banking functions conducted by the Reserve Bank. The value of this stock declined from 9 Cr to Rs 8 Cr as on June 30, 2013.
- **Balances held abroad:** Balances held abroad comprise the following:
 - deposits with other central banks,
 - deposits with the Bank for International Settlements (BIS) and
 - balances with foreign commercial banks.

This balance has declined from Rs 59,057 Cr to Rs 52,357 Cr in 2012-13.

Balances held abroad along with foreign currency assets held in Issue (which are categorised in investments in banking department below) and Banking department form the total foreign currency assets held by RBI (Table 6). In 2012-13, Issue department holds around 74% of foreign currency assets and 26% is held by banking department. The ratio was 71% and 29% in 2011-12.

Table 6: Foreign Currency Assets held by RBI			
	2010-11	2011-12	2012-13
1. Held in Issue Department	9,10,166	10,26,197	11,32,910
2. Held in Banking Department (i + ii)	3,58,578	4,23,084	3,91,858
i) Foreign currency assets	55,047	59,057	52,357
ii) Balances held abroad	3,03,531	3,64,027	3,39,501
3. Foreign Currency Assets (1+2)	12,68,744	14,49,281	15,24,768
<i>Source: RBI</i>			

The foreign assets in Banking department declined by 7.4% and issue department saw gains of 10.4%. As issue department holds nearly 75% of total forex assets, a rise in former led to a total rise in forex assets of RBI by 5.2%.

- **Investments:** This includes various items:
 - a) Government of India Rupee securities including securities received as collateral under Repurchase agreement (Repo) and Marginal Standing Facility (MSF), netted against the securities used as collateral for Reverse Repo sales
 - b) Foreign securities held in the Banking Department as asset backing against future expansion of Issue Department liabilities (Rs 59,057 Cr) as noted in Table 6.
 - c) Shares held in the BIS and the Society for World wide Inter bank Financial Telecommunication (SWIFT). Adding items (ii) and (iii) in this list make foreign currency assets of the banking department (Sum of Rs 52090 Cr and Rs 267 Cr in table 7 equals Rs. 52,357 Cr in Table 6).

d) Holdings in subsidiaries/associate institutions

Table 7 lists the amounts under each category.

		2010-11	2011-12	2012-13	Linkages to WSS (Assets Side)
	Investments (1 to 5)	4,58,606	6,30,590	7,27,610	
1	RBI Investment in G-sec	2,95,037	4,82,727	5,94,687	Included in Rupee Securities
2	G-sec received under Repo/MSF netted with Reverse Repo	1,07,202	87,486	79,246	
3	Foreign Securities	54,834	58,803	52090	Included in Foreign Currency Assets
4	Shares in BIS/Swift	213	254	267	
5	Holding in Subsidiaries/Institutions	1,320	1,320	1320	Included in Investments
I	DICGC	50	50	50	
ii	NABARD	20	20	20	
iii	NHB	450	450	450	
	Bhartiya Reserve Bank Note Mudran	800	800	800	

**Note: The repo transactions differ from the actual reporting on account of haircut.
Source: RBI*

As we can see, RBI investments in government securities has increased sharply from Rs.4.83 lakh Cr to Rs 5.95 lakh cr, a rise of Rs 1.02 lakh Cr. This is on account of OMO purchases in the period (around Rs 90,000 Cr in the period 1-Jul-12 to 30-Jun-13). This excludes net LAF repo/MSF on that day (equal to Rs 79,246 Cr on Jun 30 2013). In its balance sheet RBI includes the value of haircut as well. Hence, the values of Net repo in balance sheet will differ from the figures reported in RBI's LAF data. For instance, RBI LAF data reports Net Repo on 28-Jun-12 (as it is carried forward till 30-Jun-12) is Rs 76,190 Cr vs Rs 79,246 Cr reported in its balance sheet. Table 8 also shows that there is a total rise in Rupee securities in trading account has risen by more than 1 lakh Cr but OMO is just around Rs 90,000 Cr in the period. This could be on account of RBI purchasing additional securities like T-Bill and SDLs as well (just hypothesizing).

	2010-11	2011-12	2012-13
Rupee Securities (including Treasury Bills) (1+2)	4,03,285	5,71,259	6,74,979
1. Issue Department	1,046	1,046	1,046
2. Banking Department (a+b)	4,02,239	5,70,213	6,73,933
a. Securities Held in trading account	2,95,037	4,82,727	5,94,687
b. Net Repo + MSF	1,07,202	87,486	79,246

Source: RBI

These two categories along with securities held in issue department (Rs 1,046 Cr) lead to total government securities held by RBI on 30 Jun. Table 8 shows the rupee securities in both the departments with banking department holding nearly 100% of the total rupee securities.

In our previous report we had suggested one could calculate the trading account of RBI as reported in WSS. This could be done by simply deducting Net Repo and Securities held in Issue department (which has remained constant at Rs 1046 Cr) from the overall Rupee Securities amount. As per the recent annual report, RBI also includes the haircut in Repo and therefore straight forward calculations may not be possible. However, one could multiply the net repo and MSF on that day by around 1.05 which is seen as the average haircut to get an estimate and still do the exercise.

- **Loans and Advances:** This includes loans given to Centre and State Government and commercial banks. Loan to centre is also called as Ways and Means Advances a RBI facility started to help government in case of temporary mismatches. The centre availed WMA worth Rs 14,661 Cr vs. nil amount last year. State governments increased WMA facility from Rs 731 Cr to Rs 2,145 Cr. In the banking system, commercial banks availed refinance facility worth Rs 18,717 Cr compared to Rs 16,796 Cr as tight liquidity persisted in the system.

	2010-11	2011-12	2012-13
Loans and Advances (a+b)	3,389	20,585	36,512
a) Government	847	731	16,806
(i) Central Government	770	--	14,661
(ii) State Governments	77	731	2,145
b) Banks	2,542	19,854	19,706
(i) Scheduled Commercial Banks	1,747	16,796	18,717
(ii) Scheduled State Co-operative Banks	--	39	--
(iii) Other Scheduled Co-operative Banks	--	129	165
(iv) Non-Scheduled State Co-operative Banks	--	--	--
(v) NABARD	--	--	--
(vi) Others	795	2,890	824

Source: RBI

- **Other Assets:** Includes RBI's fixed assets like various premises, income accrued but not received, staff advances etc. It also includes gold held by the Banking department which has declined from Rs 69,046 Cr to 61,254 Cr. Change in gold in turn is responsible for most of the changes in the Other Assets category

	2010-11	2011-12	2012-13
Fixed Assets (net of accumulated depreciation)	488	437	450
Gold (in Banking Department)	52,511	69,046	61,254
Income Accrued	15,901	19,511	22,388
Miscellaneous	949	1,266	1,364
Total	69,864	90,269	85,456

Source: RBI

IV. RBI's Consolidated Balance Sheet (2012-13)

Table 11 shows a consolidated picture of RBI's balance sheet with contributions from each of the departments. We see some changes in composition of the balance sheet across broad categories.

Liabilities: Share of bank deposits has declined from 17% to 15.6% in 2012-13 on account of CRR cut in the given year by 75 bps. Share of other liabilities has increased from 33.2% to 34.1% on account of rise in CGRA account and pension fund (explained above). Share of currency has increased marginally from 50% to 50.3% in 2012-13, tracking rise in currency by 8.9%.

Assets		Liabilities			
	2011-12	2012-13		2011-12	2012-13
Total Notes Issued	1103473	1201624	Foreign Assets	1449281	1524768
Deposits	372368	373891	Issue	1026197	1132910
Other Liabilities	733103	815196	Banking	423084	391858
			Gold	145056	128686
			Issue	76010	67432
			Banking	69046	61254
			Rupee Securities	571259	674979
			Issue	1046	1046
			Banking	570213	673933
			Loans and Advances	20585	36512
			Other Assets	22764	25766
			Investment in subsidiaries	1320	1320
			Investments Of Banking Dept except Gold	21223	24202
			Notes and Coins in Banking	9	8
			Rupee Coins in Issue	221	236
Total	2208945	2390711	Total	2208945	2390711
<i>Note: totals may not add due to rounding</i>					
<i>Source: RBI</i>					

In assets, we see that share of forex assets continues to decline (from 65.6% to 63.8%) as share of rupee securities continues to rise (from 25.9% to 28.2%). This is in line with the developments seen in last 2-3 years where RBI has been creating liquidity mainly via rupee assets. Share of gold which had risen in 2011-12 (6.6% compared to 6.1% in 2010-11) has declined to 5.4% in 2012-13. This is because of decline in value of Gold in 2012-13.

V. Liquidity in 2012-13

The purpose of above exercise is to understand the liquidity created by RBI in 2012-13. The analysis shows that RBI has expanded its balance sheet by 8.2% but it excludes the impact of CRR which is not included in balance sheet.

RBI eased CRR three times in 2012-13 infusing liquidity worth nearly Rs 53,500 Cr in the system. This needs to be added to the liquidity figures to get a more correct picture. Likewise, we also need to exclude non-monetary liabilities/other liabilities to understand the actual reserve money in the system. Balance sheet includes both monetary and non-monetary liabilities which does not give the true picture.

RBI's WSS gives us a different table in form of reserve money creation (Table 7). It shows compared to previous year, reserve money growth is 7.1% compared to 8.9% growth in total balance sheet as seen above. However, if we include CRR balances, we get a total RM growth of 10.7% in 2012-13.

Table 12: Reserve Money (in Rs Cr)			
	29-Jun-12	28-Jun-13	% change
Reserve Money	1463007	1566485	7.1
Components			
Currency in circulation -Total	1117650	1217495	8.9
Bankers' deposits with RBI	343458	346590	0.9
`Other' deposits with RBI	1,898	2398	26.3
Sources			
RBI's Claims on - Government (net)	567561	678458	19.5
RBI's Claims on Banks & Commercial sector	11,337	24412	115.3
Net foreign exchange assets of RBI	1595768	1659182	4.0
Govt's currency liabilities to the public	14,107	15717	11.4
Minus Net non-monetary liabilities of RBI	725662	811286	11.8
<i>Source: RBI</i>			
<i>Memo:</i>			
CRR		53,500	
Adjusted Reserve Money		1,619,985	
Change in Adj. RM			10.7

VI. Converting RBI's Annual Balance Sheet into WSS

We can convert RBI's balance sheet in WSS format as well. For the period Jun-Jul 13 last WSS showed data till 28-Jun-13. However, RBI closes its accounts on 30-Jun-13. So, we can convert the above balance sheet into WSS format just to understand the categorization in WSS clearly. Table 13 converts the above analysis into WSS format for 30-Jun-13. One can see some differences from 28-Jun-13 figures on account of changes in valuation on account closing day. Balance sheet amount as on 28-Jun-13 was Rs. 23,72,528 Cr which rises to Rs. 23,90,711 Cr as on 30-Jun-13 (a rise of 0.7%).

Table 13: Showing Annual Accounts in WSS format (in Rs Cr)					
	28-Jun-13	30-Jun-13		28-Jun-13	30-Jun-13
1 Notes Issued	1201786	1201624	1 Foreign Currency Assets	1530211	1524768
1.1 Notes in Circulation	1201778	1201616	i) Issue		1132910
1.2 Notes held in Banking Department	8	8	ii) Banking		391858
2 Deposits		373892	2 Gold Coin and Bullion	129000	128686
2.1 Central Government	101	100	i) Issue		67432
2.2 Market Stabilisation Scheme		0	ii) Banking		61254
2.3 State Governments	42	42	3 Rupee Securities (including Treasury Bills)	675539	674979
2.4 Scheduled Commercial Banks	328772	339143	i) Issue		1046
2.5 Scheduled State Co-operative Banks	3428	3204	ii) Banking		673933
2.6 Other Banks	14391	14805	4 Loans and Advances	0	36512
(i) Other Scheduled Co-operative Banks		5521	4.1 Central Government	1572	14661
(ii) Non-Scheduled State Co-op Banks		224	4.2 State Governments	1245	2145
(iii) Other Banks		9060	4.3 NABARD		
2.7 Others	12547	16597	4.4 Scheduled Commercial Banks	22124	18717
3 Other Liabilities	811462	815196	4.5 Scheduled State Co-op.Banks		0
i) Bills Payable		187	4.6 Industrial Development Bank of India		0
ii) Capital paid-up		5	4.7 Export-Import Bank of India		0
iii) Reserve Fund		6500	4.8 Others	989	824
iv) National Industrial Credit (Long Term Operations) Fund		22	5 Bills Purchased and Discounted	0	0
v) National Housing Credit (Long Term Operations) Fund		196	5.1 Commercial	0	0
vi) Other Liabilities (CGRA, EEA etc)		808286	5.2 Treasury	0	0
			6 Investments	1320	1320
			7 Other Assets	10529	24446
			Investments Of Banking Dept except Gold		24202
			Notes and Coins in Banking Department		8
			Rupee Coins in Issue Dept		236
TOTAL LIABILITIES (1+2+3)	2372528	2390711	Total Assets (1+2+3+4+5+6+7)	2372528	2390711
Source: RBI					

VII. Summing Up

Central bank balance sheets have become a critical element of central bank's toolkit. However, there is much confusion on what constitutes the balance sheet of a central bank. The above analysis is a continued effort by the author to simplify RBI's balance sheet. RBI updates its balance sheet every week in its WSS but things are not clear on meaning of various items. So, RBI's annual accounts are used as it is a more detailed presentation of RBI's accounts. This helps understand the flows more clearly and make sense of developments in RBI's balance sheet.