

8.1 The balance sheet of a central bank is, in many ways, unique in character and distinct from those of other commercial organisations, including banks. It portrays the financial outcome of its diverse roles and responsibilities in an economy. Seen from this standpoint, it reflects a confluence of accounting principles and macro policies. By the virtue of being the monetary authority, a central bank's balance sheet reflects its exclusive feature of asset creation backing incurrence of monetary liabilities. A central bank is generally not only the sole currency issuance authority of a country, but also responsible for price and exchange rate stability in the economy and is often assigned special responsibilities as the banker to the Government and regulator of banking and financial system in the interest of financial stability. The interplay of such diverse functional responsibilities of a central bank has a significant bearing on various aspects of the macroeconomic framework with implications for external, fiscal and monetary sectors. The evolution of a central bank's balance sheet is, thus, generally closely linked to the development dynamics of an economy reflecting the central bank's role as the monetary authority and regulator of banking sector and financial markets. Against this backdrop, this chapter presents an analytical account of the evolution of the functioning of the Reserve Bank of India as reflected in the dynamics of its balance sheet¹.

8.2 The rest of the chapter is organised as follows. Section I provides an overview of the analytics of the balance sheet of a central bank. It focuses on the major liabilities and assets of a central bank and the analytical representation of the primary monetisation inherent in the balance sheet in terms of the creation of primary money. This section also encompasses a brief survey of recent literature. Section II focuses on the cross-country experiences in connection with central bank balance sheets. This encompasses a host of issues including the differences among central banks in terms of composition of assets and liabilities, capital and reserve positions while also throwing light on country practices in the context of demarcation of responsibilities between the central bank and the Government. Views on capital and reserve position of central banks and the mechanism of profit distribution

between the Government and the central bank in different countries have also been dealt with in this Section. Section III presents a detailed phase-wise analysis of the Reserve Bank balance sheet taking into account the regime shift in terms of monetary policy evolution against the backdrop of the changing macroeconomic environment. In order to bring out the structural shifts taking place through the period covered, the analysis is presented separately for the formative phase (1935-1949), foundation phase (1950-1967), phase of social control (1968-1990) and phase of financial liberalisation (1991 onwards). Section IV analyses the profit and loss account of the Reserve Bank. Apart from discussing constituents of and the trends in income and expenditure of the Reserve Bank, this section focuses on the transfer of profits to the Central Government as well. Section V highlights some of the recent issues in this regard. In particular, it examines three specific issues, viz., (a) transparency in central bank accounts, (b) risk management in central banks, and (c) contingency reserves. Section VI summarises major inferences and outlines the emerging issues in the light of the impact of policy actions of the Reserve Bank on its financial statements.

I. ANALYTICS OF CENTRAL BANK BALANCE SHEETS

8.3 A central bank balance sheet is a reflection of its various functions, particularly its role as a monetary authority and as banker to the Government and banks. In performing these roles, the central bank issues currency to meet public demand and provides credit to various sectors of the economy, thereby, injecting fresh money into the system that provides the basis for creation of money supply by the banking system through the money multiplier process.

8.4 A central bank typically incurs two types of liabilities, viz., (a) monetary liabilities and (b) non-monetary liabilities (Table 8.1). Monetary liabilities of a central bank balance sheet include currency and bank reserves. The size of bank reserves or banks' deposits held with the central bank depends on its three constituents, viz., required reserves, settlement balances and excess reserves. Amongst non-

¹ This chapter includes discussions on the Profit and Loss Account of the Reserve Bank of India as well.

monetary liabilities, Governments typically park their cash balances with the central bank, which is usually their only banker. The capital account comprises paid-up capital – often fully state-subscribed and reserves, kept for contingency and prudential purposes besides revaluation accounts. Miscellaneous liabilities, such as bills payable, are grouped together under ‘other liabilities’.

8.5 On the asset side, most central banks continue to hold ‘monetary’ gold. The quality of the assets backing the national currency is further reinforced by restricting investments in terms of sovereign paper of either domestic Governments or foreign Governments, often in foreign currency. Although some do accept commercial paper, most central banks prefer to deal in gilts because of the concomitant absence of default risk (Zelmer, 2001). Central banks also offer lines of credit to their Governments and to banks (especially, refinance) as their bankers and sometimes as liquidity support to rest of the financial sector as well.² Non-financial assets such as land and buildings and bills receivable are shown under ‘other assets’. However, they are generally negligible in dimension compared to financial assets of central banks.

8.6 The extent of primary monetisation implicit in a central bank’s balance sheet can be assessed by redrawing its assets and liabilities into an analytically meaningful construct of reserve money or high powered money, which is central to the money-multiplier theory of money stock determination. For the purpose of constructing reserve money, a distinction is made between the monetary and non-monetary liabilities (and assets) of a central bank as its assets and liabilities are redrawn to arrive at the sources (assets) and components (liabilities) of reserve money. Several liabilities of a central bank

are actually non-monetary in character because they are liabilities to itself (such as reserves) or illiquid (such as revaluation accounts). Government balances are also typically treated as non-monetary because the Government is usually considered an issuer of money along with the central bank because of its ability to create fiat money. Monetary analysis, thus, focuses on the ‘monetary liabilities’, mainly in the form of currency and banks’ deposits with the central bank, usually called reserve money (Table 8.2).

8.7 The balance sheet of the central bank reflects the flow of primary liquidity in the system and is, thus, considered critical from the point of view of analytics of liquidity management. An analytical decomposition of a stylised central bank balance sheet can be useful in segregating the primary liquidity provided by a central bank into autonomous and discretionary liquidity (Borio, 1997). While autonomous liquidity encompasses the primary liquidity available to banks, arising out of regular central banking functions as the currency authority, banker to banks and to the Government, discretionary liquidity can be assessed by tracking the central bank’s money market operations and reaction of the monetary authority to autonomous changes in market liquidity.

8.8 The size and the composition of various assets and liabilities of a central bank balance sheet depend

Table 8.1: A Stylised Central Bank Balance Sheet

Liabilities	Assets
1	2
1. Paid-up Capital	1. Loans and Advances
2. Reserves	of which: Government
3. Currency	Banks
4. Banks’ Deposits with Central Bank	Others
5. Government Deposits	2. Investments
	of which: Government Securities
	Foreign Assets
	3. Gold
6. Other Liabilities	4. Other Assets
Total Liabilities (1 to 6)	Total Assets (1 to 4)

Table 8.2: A Stylised Decomposition of Reserve Money

Components	Sources
1	2
1. Currency	1. Net Central Bank Credit to Government (a+b-c)
2. Banks’ Deposits with Central Bank	a. Loans and Advances to Government
	b. Investment in Government Securities
	c. Government Deposits with Central Banks
	2. Loans and Advances to Banks and Others
	3. Net Foreign Assets of Central Bank (a+b)
	a. Investments in Foreign Assets (net)
	b. Gold
	4. Net Non-monetary Liabilities (a+b+c-d)
	a. Paid-up Capital
	b. Reserves
	c. Other Liabilities
	d. Other Assets
Reserve Money (1+2)	Reserve Money (1+2+3-4)

² Most central banks act as lender of last resort to the banking system.

BALANCE SHEET OF THE RESERVE BANK

critically on the strength of financial deepening and the resultant degree of monetisation in an economy at any given point of time. As the banking and financial networks spread in a country, banking habits are inculcated in economic agents resulting into a switch from demand for cash to bank deposits. The lower order of cash demand – that is, a lower order of leakage from the banking system – leads to higher degree of monetisation. The expansion in banking activities and the higher degree of monetisation are typically reflected in the balance sheet of the central bank in the form of rising bank reserves necessary for higher inter-bank settlement requirements and prudential and policy considerations. However, at an even matured stage of the payment and settlement systems, with strong deregulated clearing networks, the requirement of excess reserves for settlement purpose comes down significantly. The lower requirement of bank reserves, together with lower cash demand, thus, often ends up shrinking the size of the central bank balance sheet. On the other hand, the asset composition of a central bank balance sheet tends to be driven by the state of financial development. In the initial stage of financial development, the central bank's direct accommodation to Government increases the size of the balance sheet by increasing holding of Government paper. With development of

financial markets, central banks are commonly seen to move more and more towards indirect instruments of monetary management and a central bank's balance sheet increasingly reflects the impact of its market operations. While by using direct instruments of monetary management (e.g., the reserve requirements) a central bank affects the commercial banks' balance sheets directly, by employing indirect instruments (e.g., open market operations) the effects on the market participants' balance sheets evolve subsequent to the effects of the central bank's policy actions on its own balance sheet. Thus, with relatively advanced state of affairs, the composition and movements in the assets and liabilities of a central bank is potentially even more revealing.

Impact of Monetary Operations on Central Bank's Balance Sheet

8.9 In this context, it may be useful to analyse the impact of such policy operations on the balance sheet of a central bank (Table 8.3).

Changes in Reserve Requirements

8.10 Most of the central banks are empowered to levy a cash reserve requirement on banks' eligible demand and time liabilities. Changes in reserve

Table 8.3: Balance Sheet Movements under Different Monetary Policy Instruments

Monetary Policy Instrument	Operation	Central Bank Balance Sheet Movements		
		Monetary Base	Net Domestic Assets	Bank Reserves
1	2	3	4	5
1. Standing facilities	• Higher loans through refinancing facility	↑	↑	↑
	• Higher deposits through deposit facility	↓	↓	↓
2. Open market operations	• Outright purchase of securities or repos	↑	↑	↑
	• Outright sales of securities or reverse repos	↓	↓	↓
3. Foreign exchange operations	• Purchase of foreign currency	↑	Constant	↑
	• Foreign exchange swap (purchase forex spot and sell forward)	↑	Constant	↑
4. Reserve requirements	• Increase in reserve ratios:			
	- Short-run	↑	↑	↑
	- Medium-run	uncertain	uncertain	uncertain
	• Reduction in reserve ratios:			
- Short-run	↓	↓	↓	
- Medium-run	uncertain	uncertain	uncertain	

Source: Schaechter, A. (2001): "Implementation of Monetary Policy and Central Bank Balance Sheet", *IMF Working Paper*, WP/01/149.

requirements alter the composition of reserve money, the profitability of the balance sheet as well as bank liquidity. A change in the cash reserve ratio (CRR) alters the ratio of currency and reserves on the liability side. The impact on the asset side depends on the particular monetary environment. Typically when the central bank finances Government expenditure in a developing economy, it tends to neutralise the monetary impact by raising the CRR, thereby, expanding its balance sheet. If the CRR is raised to sterilise the impact of capital inflows, there would be a shift in favour of net foreign assets. If CRR is raised in order to tighten monetary conditions to arrest capital outflows, the market liquidity gap generated by the mix of higher reserve requirements and draw down of foreign exchange assets is likely to be funded by an increase in net domestic assets either through repos or higher recourse to standing facilities. Finally, a reduction in CRR is almost always associated with a reduction in domestic assets as banks either invest the release of resources in reverse repos or in retiring standing facilities. The impact of reserve requirements on central bank profitability also depends on the monetary situation. First, the payout in the form of interest on CRR balances is a charge on income. Moreover, the change in the ratio of domestic and foreign assets affects central bank's income to the extent of the differential between domestic and international interest rates.

Refinance Facilities

8.11 An increase (reduction) in standing facilities of the central bank to the banks results in a change in the size of reserve money. Typically in a less developed economy, when the central bank aims at promoting sector-specific refinance facilities, the banks' lending to those sectors is refinanced from the central bank leading to an expansion of the central bank's balance sheet.

Open Market Operations (OMOs)

8.12 A basic liquidity management instrument of a central bank is its dealing in Government paper. Open market operations (including repo operations) have emerged as the principal tool of managing liquidity and stabilising short-term interest rates particularly for economies at a relatively matured stage of financial development. The impact of OMO on the central bank balance sheet (and reserve money) is essentially situation-specific. In case OMO is necessitated by changes in demand for either currency or bank

reserves, there would be a corresponding change in the size of the balance sheet (and reserve money). In case, OMO is driven by changes in capital flows, there is no change in the balance sheet size (and reserve money) although monetary conditions in terms of money market rates and exchange rates could be affected. In each case, the composition of the balance sheet (and reserve money) in terms of net domestic and foreign assets would undergo a change depending on the operations involved. In terms of profitability, there are two effects: direct and indirect. In case Government securities are bought outright, the central bank earns interest income from the Government. The central bank also incurs profits/losses in the conduct of OMOs. In case of repo (reverse repo) operations, the central bank earns (pays) interest from (to) the counterparties, viz., commercial banks and primary dealers. Besides, tightening monetary conditions results in a depreciation of the Government securities portfolio, which would have to be accounted for against current income.

Discount / Bank Rate

8.13 The Discount / Bank Rate is the standard rate at which loans to the Government by the central bank and a part of standing facilities to bank's and Primary Dealer's are remunerated. This often serves as the key policy rate acting as a signal for the interest rate in the economy particularly over the medium term. While an increase in the Bank Rate entails higher income from standing facilities, there is a higher outgo on account of higher interest payable on CRR balances in case if a central bank follows the practice of remunerating CRR balances at a rate linked to the Bank Rate.

Recent thinking on Central Bank Balance Sheet

8.14 Central bank balance sheet has received considerable attention in recent literature. The balance sheet of a central bank is seen as a reflection of its interaction with market participants as part of monetary policy operations, and various issues, such as, strength, solvency, transparency and risk management have been flagged in the context of the central bank balance sheet.

8.15 Notwithstanding the fact that the performance of a central bank is judged on the basis of its policy effectiveness in terms of achievement of assigned objectives, there is, by and large, an acceptance of the fact that the strength of the balance sheet improves the effectiveness of a central bank in the discharge of its various functional responsibilities. This

view is a corollary of the developments that have supported greater central bank independence and have made central banks more transparent and accountable in terms of their financial performance (Sullivan, 2003).

8.16 In recent years, as central banks move towards international best practices, one of the key concerns has been adequacy of capital cushion in the wake of increasing sensitivity of central bank balance sheet to market fluctuations. Although some central banks with strong balance sheets hold very low capital, the international developments tend to support the argument that a central bank should hold sufficient capital to remain solvent (Sullivan, 2003; Stella, 1997, 2002 and 2003; Martinez-Resano, 2004). While there is no definitive view on 'capital adequacy' for central banks, determinants of the appropriate level of capital have been looked at from the point of view of the policy regime and policy objectives of central banks. Recent literature underscores the need for an assessment of central bank's financial vulnerability based on 'Value at Risk' (VaR) approach, taking into account risks both from traditional central banking operations and off-balance sheet positions of a central bank (Blejer and Schumacher, 1998). The view in support of strong capital position has been so forceful that several central banks have started examining different options for strengthening their capital position with a view to remaining solvent and operationally independent.

8.17 Differences in composition of assets and liabilities across central banks get closely linked to the relative importance of their functional responsibilities and other country-specific practices. The role of central banks in the economy has undergone a significant shift in terms of their objectives and operations through various phases in the past. Central banks have assumed different responsibilities in different phases influenced by the prevailing macroeconomic, financial, political and legal environment, exchange rate ideology and the relative significance assigned to their role as fiscal agent of the Government and the note issuance authority. In the present environment, central banks are being perceived as modern institutions with a distinctive monetary policy function (Scobie and Cagliosi, 2000).

8.18 It is held that ideally a central bank should hold sufficient capital to absorb any losses arising from the discharge of its functions, and enable it to maintain a non-negative capital position (Sullivan, 2003). A weak financial position of a central bank hampers its

functioning as a fiscal agent of the Government or its credibility to maintain an effective domestic payment system. It would be appropriate for the central banks to adopt, over the medium-term, a risk-based level of capital adequacy which allows a zero capital or non-negative capital position in the context of central bank independence, policy efficacy, reputation and fiscal transparency (Stella, 1997). This view is held notwithstanding the recognition that the establishment of a risk-based capital for central banks is often difficult. At the same time, an undue emphasis on adjustments in levels of capital to risk-based capital adequacy norms may lead to impairment of policy efficacy.

8.19 Notwithstanding wide variations across central banks, there appears to be a recognition of the fact that central banks should be strong in terms of their capital and reserve position to shoulder their policy responsibilities, to safeguard against an increasingly risk prone financial and operational environment, and above all to remain independent. "The appropriate level of central bank net worth is that sufficient to ensure that in the normal course of operations, the bank will be able to meet its policy goals and preserve its financial independence from the treasury" (Stella, 2002).

8.20 An issue that has been extensively debated in the literature relates to the presentation of 'Financial Statements' keeping in view the compulsions being brought about by transparency and accountability requirements for central banks (Sullivan, 2003; International Monetary Fund, 2000; Capie *et al*, 1994). The valuation criteria and other accounting practices still differ across central banks. The central banks are not yet agreeable to the implementation of international accounting standards applicable to commercial financial entities. However, some central banks have put in place their own accounting and reporting standards that are broadly in line with the international standards except for the fact that certain provisions have been modified/adopted to suit their country-specific requirements, and provide for profit smoothing (Martinez-Resano, 2004; Foster, 2004). In the literature, the sustainability of central bank debt issuances for sterilisation operations or extending support during the banking crisis has been examined particularly from the point of view of the burden that such issuances impose on central banks in the medium-term (Stella, 2002). Risk management for central bankers has become a difficult task in an environment of economic uncertainty and volatility in financial markets, which have a significant bearing

on financial performance of central banks (Foster, 2004). While the focus has been on risk management for central banks' foreign reserves, the identification, measurement and management of other financial and operational risks is considered no less important. The risk management procedures have been developed and suitably translated into corporate governance by larger central banks.

II. STYLISTED FACTS FROM CROSS-COUNTRY EXPERIENCES

8.21 While the basics of central banks' balance sheets have elements of commonality, they do differ in terms of specifics reflecting differences in operations such as monetary or debt management as well as the objectives of monetary policy. They also differ in size and composition. Besides, depending on the institutional arrangement between the central bank and the Government, there are variations in the pattern and extent of profit transfer. The financials also differ in terms of accounting policies and disclosure norms.

Size of a Central Bank Balance Sheet

8.22 The size of a central bank balance sheet is primarily a reflection of functional responsibilities including monetary policy objectives, operational practices and degree of development of financial markets in an economy. The balance sheet size, therefore, varies across central banks (Table 8.4).

Composition of Central Bank Balance Sheet

Liabilities

8.23 The notes issued by a central bank typically constitute its major liability. The size of banks' balances with a central bank, the second most important monetary liability of a central bank, provides an idea about their 'voluntary' or 'compulsory' nature. Central banks of New Zealand, Hong Kong, Mexico, Australia and Switzerland do not impose cash reserve requirements on banks. In some countries, a change in reserve requirement by a central bank requires Government approval while in others this authority lies with the central bank. Similarly, Treasury deposits are symptomatic of the banking relationship between the Treasury and the central bank³. Treasury deposits may not necessarily be kept with the central bank.

Table 8.4: Size of Central Bank Balance Sheet

Central Bank	Reference Date	Total Liabilities as per cent to GDP
1	2	3
Australia	June 30, 2005	10.1
Brazil	May 31, 2005	28.3
Canada	December 31, 2004	3.6
Germany	December 31, 2004	13.3
India	June 30, 2005	21.9
Japan	March 31, 2005	29.8
Korea	December 31, 2004	32.5
Malaysia	December 31, 2004	63.6
Portugal	December 31, 2004	22.8
Russia	December 31, 2004	17.0
Singapore	March 31, 2005	10.3
South Africa	March 31, 2005	9.4
Sweden	December 31, 2004	7.2
USA	December 31, 2004	6.9

Source: Balance Sheets of respective central banks

Furthermore, there is no uniform practice of remunerating these deposits across countries. In Japan, USA, South Africa and Russia Government deposits are unremunerated. There is also the tradition of not paying for the services provided by the central bank as fiscal agent (Germany and the Netherlands). In USA, the Department of Treasury is permitted by statute, but not required, to pay for these services. In addition to these deposit balances, there are instances of country-specific practices e.g., Bank of Korea holds substantial amount in the form of Foreign Exchange Stabilisation Fund deposits. There are also a few instances of central banks playing the role of intermediaries for the purpose of raising foreign resources for on lending to the Government (Argentina and Chile) (Table 8.5).

Central Bank Papers

8.24 The issue of central bank's own liabilities has often been associated with the lending support extended to banks in times of banking crises (Chile and Indonesia) or with the sterilisation initiatives to counter the impact of excessive capital inflows. The Central Bank of Argentina issues its own securities as a monetary absorption tool. The securities have been issued in Argentine pesos and US dollars since

³ Some central banks have control over government deposits. Bank of Canada can transfer government deposits from commercial banks to itself; in Germany, government deposits can be held outside the central bank only with its authorisation. Belgium imposes a ceiling on Government deposits linked to Government revenue in the previous year.

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Table 8.5: Major Liabilities of Select Central Banks

(Per cent of Total Liabilities)

Central Bank	Reference Date	Currency	Deposits of Banks and Financial Institutions	Deposits of Government	Central Bank Paper	Securities sold under repurchase agreements*
1	2	3	4	5	6	7
Argentina	December 31, 2004	23.9	9.4	0.1	13.1	0.0
Australia	June 30, 2005	41.9	1.5	31.7	0.0	9.7
Canada	December 31, 2004	94.7	1.1	2.3	0.0	0.0
Chile	December 31, 2003	12.1	1.1	0.8	82.7	0.0
India	June 30, 2005	55.4	18.3	10.6	0.0	0.0
Indonesia	December 31, 2004	19.5	12.6	7.7	22.1	0.0
Jamaica	August 24, 2005	10.7	9.4	7.8	64.8	0.0
Japan	March 31, 2005	49.6	24.0	5.0	0.0	16.2
Malaysia	December 31, 2004	11.4	43.8	9.0	5.9	9.8
Mexico	December 31, 2004	36.0	24.6	11.9	24.6	0.0
Russia	December 31, 2004	40.8	19.8	21.7	0.2	0.0
Singapore	March 31, 2005	8.0	3.9	52.1	0.0	0.0
South Africa	March 31, 2005	38.4	17.7	1.6	10.1	5.6
Sweden	December 31, 2004	59.6	0.3	0.0	0.0	0.0
USA	December 31, 2004	88.7	3.0	0.7	0.0	3.8

* In some cases these details are not separately available.

Source: Balance Sheets of respective central banks.

2002. A portion of these securities has been allowed to be used for repurchase agreements as monetary regulation instrument from May 2004. In Hong Kong, the central bank securities were issued with a view to establishing a benchmark yield curve to help develop the corporate bond market as well as an

instrument for OMOs in the absence of availability of Government paper on account of Government surpluses (Hawkins, 2003). Central bank paper issuances have been significant in Korea, Indonesia, Argentina, Chile, Thailand, UK, South Africa and Mexico (Table 8.6).

Table 8.6: Central Bank Paper in Balance Sheet of Select Central Banks

Central Bank	Instrument	Percentage share of central bank paper in total liabilities
1	2	3
Argentina	Central bank securities	13.1
Brazil	Own issue debt securities	2.4
Chile	Central bank bonds/indexed promissory notes/indexed coupons/deposit certificates	82.7
India	—	—
Indonesia	Bank Indonesia certificates	22.1
Korea	Monetary Stabilisation bonds	56.4
Malaysia	Bank Negara paper	5.9
Mexico	Mexico Regulation bonds	24.6
South Africa	Reserve Bank debentures (unsecured) issued to the market on tender for 28 or 56 days.	10.1
Thailand	Bank of Thailand bonds	25.1@
UK	Debt securities	26.7@

@ As percentage to total liabilities of Banking Department.

Note: Data pertain to 2004 except for Brazil and South Africa for which they pertain to 2005.

8.25 In several cases, the sterilisation of foreign exchange intervention through the issue of central bank paper has had serious implications from the point of view of its impact on profitability of central banks (e.g., Venezuela, Chile, Uruguay, and Portugal). In fact, the burden on the central bank arising as a result of interest expenses and the resultant losses in several cases raise concerns about the sustainability of central bank debt issuances. The counteractive response has been reflected in substitution of central bank paper by Government paper in a number of Latin American countries. In Uruguay, in the late 1980s, the central bank began replacing its own bills with Treasury Bills in the conduct of open market operations. This process was completed by the end of 1993 resulting in transfer of cost of OMOs to the Treasury. Similarly, under the Brazilian Law of Fiscal Responsibility, the central bank was required to cease issuing its own debt effective May 2002 and use only Government securities for all monetary operations.

Assets

8.26 The composition of assets in terms of international *vis-à-vis* domestic assets is indicative of the role of a central bank in controlling the external value of domestic currency or managing exchange rate stability.

8.27 In USA, the Fed is responsible for formulating and executing monetary policy but it conducts all foreign exchange trading for the US Treasury and the Federal Reserve System at the direction of the Federal Open Market Committee and Treasury. Furthermore, the US Treasury decides exchange rate policy in consultation with the Federal Reserve System. In contrast, the central banks of New Zealand and Chile are explicitly entrusted with the task of maintaining stability in domestic and external values of their currencies⁴. In several cases, Treasury or other Government organisations also hold foreign exchange assets in their own portfolios (Canada, USA, New Zealand and Japan). In Japan, the total reserve holding by Bank of Japan accounted for only 3.3 per cent of its total assets. The South African Reserve Bank holds gold and foreign exchange on its balance

sheet but the risk is borne by the South African Government⁵. Reflecting these diverse practices, the share of international assets to total assets of these central banks is relatively low (e.g., Bank of England, Federal Reserve Bank of New York in USA, Bank of Japan, Bank of Canada). At the other extreme, there are central banks that hold sizeable international assets with some of them holding these reserves to support their exchange rate policy (Table 8.7).

8.28 Institutional and functional arrangements in respect of financial support to the Treasury vary widely though an increasing independence granted to central banks in these areas has manifested in reducing share of central bank funding across countries. Lending to the Government (loans, overdraft and purchase of bonds in primary market) is not

Table 8.7: Major Assets of Select Central Banks

(Per cent of Total Assets)

Country	Gold, International Reserves & other Foreign assets	Loans and advances to banks/ other institutions	Claims on Government	Securities purchased under resale agreements*
1	2	3	4	5
Argentina	37.1	13.2	13.7	0.0
Australia	73.5	0.0	0.0	0.0
Canada	1.1	0.0	92.4	5.4
Chile	60.9	3.1	0.0	4.1
India	83.8	0.6	0.1	0.0
Indonesia	45.3	2.3	42.6	0.0
Jamaica	57.0	0.0	36.1	0.0
Japan	3.3	25.0	65.9	3.5
Malaysia	89.0	3.7	0.1	6.2
Mexico	73.0	13.5	0.0	0.0
Russia	85.4	0.6	11.6	0.0
Singapore	95.9	0.0	3.5	0.0
South Africa	76.7	0.0	10.3	10.5
Sweden	79.4	0.0	0.0	9.3
USA	4.3	0.0	89.5	4.1

* In some cases these details are not separately available.

Note : The dates for the data of the central banks for the respective countries are same as in Table 8.4.

Source : Balance Sheets of respective central banks.

⁴ In Hong Kong, foreign reserves are held in the Exchange Fund but the management of reserves is with the Hong Kong Monetary Authority. In Canada, international reserves are held as an asset in the Government's Exchange Fund Account. In New Zealand, the central bank also holds foreign currency assets to enable intervention in the foreign exchange market.

⁵ The Bank maintains the 'Gold and Foreign Exchange Contingency Reserve Account' representing the amount due to the Bank by the South African Government in respect of realised profits and losses incurred on gold and foreign exchange transactions. The amount due is interest free and repayment terms are subject to an agreement between the National Treasury and the Bank.

constitutionally allowed in Brazil, Chile, Peru and Poland⁶. Loans to Government are either prohibited by constitution or law in China, Indonesia, Mexico, Hungary, Russia, Turkey, Euro area, United Kingdom (under Maastricht Treaty) and the United States⁷ (Hawkins, 2003). The fiscal discipline initiatives that culminated in Stability and Growth Pact in the Euro area, fiscal consolidation measures in New Zealand and Australia and also in a number of other countries point towards the reduced dependence of the Government on support from the central bank lending⁸. The practice of imposition of ceiling on lending to Government by central banks is generally considered as an institutional guarantee of central bank independence. Although there is a tendency to revise the ceiling upwards at regular intervals by some central banks, the practice itself gives some credibility to fiscal discipline. Non-bank private sector claims of central banks are mostly insignificant. Central bank of Brazil, however, holds sizeable private sector claims in its balance sheets.

Role of Capital and Reserves in Balance Sheet Management

8.29 Internationally, the issue relating to adequacy of capital and reserves of central banks is unsettled with the country practices varying widely and providing no clear direction in this area. An analysis based on capital and reserve position of select central banks reveals that the ratio of capital and reserves to total liabilities ranges between 0.10 per cent and 38.0 per cent. The large variations can neither be explained in terms of exchange rate regimes, nor in terms of other economic factors, *viz.*, ownership structure, fiscal deficit, undervalued/overvalued exchange rate policies. There seems to be lack of convergence among central banks on the issue of adequacy of reserve levels. This can also be inferred from the fact that there are no international norms on capital and reserve position of central banks. Nevertheless, the important determinants of the level of reserves of central banks are identified as the composition of assets, degree of openness, exchange rate regimes, associated risks and availability of hedging

mechanism, type of monetary policy and intervention tools used, movements in exchange and interest rate variables, other operational and financial risks faced by them, and financial stability concerns. Central bank reserves are generally stipulated at a certain level, in either absolute (Bank of Canada) or relative terms (linked to some component of balance sheet *e.g.*, monetary liabilities in the case of Bank Indonesia). There are also cases of stipulation of central bank reserves in terms of macroeconomic variables, *viz.*, Gross Domestic Product (Bank of Mexico) or some measure of 'solvency' of the central bank.

8.30 Recent developments indicate a preference for holding capital and reserves at a sufficient level to maintain financial soundness of a central bank. For example, the Bank of Japan considers that its capital adequacy ratio (capital base including reserves and provisions as a ratio of the period average of bank notes issued) should be around 10 per cent. The Federal Reserve of USA and Bank of Canada, however, still hold very low capital. In both the cases, international reserves are mainly held in the 'Exchange Stabilisation Fund' or 'Exchange Fund Account' and are therefore not on the central bank balance sheet. In Norway, the proceeds from oil sales are held by a separate government agency. Given this, the view that emerges is that the central banks that do not hold reserve assets on their balance sheets, are less exposed to foreign exchange risk and therefore, require relatively small capital reserves and *vice versa*. On the contrary, the capital requirements are expected to be larger for central banks entrusted with *quasi*-fiscal activities to ensure that any possible losses arising on account of such activities do not interfere with their monetary policy objectives.

8.31 Central bank practices reveal that several central banks maintain revaluation reserves, in addition to general reserves, as stipulated by the legislation or at their own discretion (Table 8.8).

8.32 In case of certain countries, though rare, central bank stocks are traded in stock markets. The reaction of the market to central bank stocks in those countries reveals interesting findings (Box VIII.1).

⁶ In Chile, purchase of bonds in the secondary market by central bank is also prohibited by constitution that puts it in the category of countries having the most stringent legal restrictions on government funding.

⁷ The US Budget Enforcement Act 1990 was an attempt towards fiscal discipline. However, the government funding *via* purchase of bonds in secondary market continues and financing of treasury is an important item on the asset side of the Federal Reserve.

⁸ The constraints on central bank credit to the government have been brought about through restrictions on overdrafts, fixed-term loans and advances and purchase of securities in primary market while allowing discretion in respect of purchase of securities in secondary market, repurchase agreements and government deposits at central bank.

Table 8.8: Capital Account of Central Banks

(Per cent of Total Liabilities)

Country	Capital
1	2
Australia	11.3
Brazil	2.0
Canada	0.1
Germany	11.2
India	15.0
Indonesia	16.8
Italy	19.0
Japan	3.5
Korea	2.3
Malaysia	18.1
Portugal	13.3
Russia	4.6
Singapore	9.2
South Africa	4.0
Sweden	35.7
Switzerland	38.0
Thailand	4.9
UK	7.2
USA	2.9

Note: Data pertain to 2004 except for Australia, Brazil, India, and South Africa for which they pertain to 2005.

Distribution of Profit

8.33 Distribution of central bank profit to Government is almost universal and is also independent of the ownership structure of central banks. The practices differ across countries to the extent that the distribution of profit to the Government is a first charge in several cases and is at pre-determined rates linked to share of surplus, total assets/selected assets/liabilities, paid-up capital or some other criterion

without any discretionary authority vested with the central bank or its board while in other cases, the central bank profit is distributed only after its transfer to reserves in accordance with the central bank legislation in this regard or at discretion of the central bank/Government (Annex VIII.1). Even in countries where the allocation of profit to the central bank reserves is a first charge, the profit allocations to the Government turn out to be sizeable. At the other extreme, some central banks have even utilised their reserves/provisions for dividend distribution to the Treasury in years of negative operating profit (e.g., Portugal, Czech National Bank and Korea)⁹.

8.34 Central banks typically have statutory caps on the amount transferable to the non-Government public. The dividend amount payable to the shareholders by the Bank of Japan is fixed at 5 per cent of its surplus income. Bank of Belgium, Bank of Greece, Swiss National Bank and Central Bank of Turkey also have stipulations that limit the surplus allocations to non-Government shareholders. By virtue of being the note issuance authority, the central banks remit their profits to the Government even if they are privately owned (e.g., South African Reserve Bank). During the initial years of its operations, i.e., the private shareholding era, the Reserve Bank of India paid a dividend at the rate of 3.5 per cent of share capital to private shareholders (remaining surplus was transferred to the Government) which was raised to 4 per cent from June 1943 and remained unaltered till the Bank was nationalised on January 1, 1949. The limitation of dividend was intended to ensure that the Reserve Bank's business activities were not governed by profit considerations.

Box VIII.1

Market Performance of Central Bank Stocks

Share capital of central banks are typically subscribed to by the Government (in some cases by commercial banks too) and central bank stocks are generally not tradable. However, in case of certain countries, e.g., Belgium and Japan, central bank stocks are found to be traded on the Brussels and Tokyo stock exchanges, respectively, giving birth of the rare possibility where the central bank can be owned by the public and the capital market can also offer a quantitative evaluation of a Government agency.

Empirical investigation of central bank stock return assuming its linear relationship with stock market return, bank-specific factors and macroeconomic factors shows that the stocks of the central banks of Belgium and Japan have been under-performing *vis-à-vis* their respective stock market indices. Stocks of these two central banks are found to be under-performing on a risk-adjusted basis too. Empirical testing shows that the only factor

which is statistically significant in determining returns on central bank stocks is the stock market return. Although, macroeconomic variables such as the unemployment rate, the dollar exchange rate, and the growth in industrial production show some significant relationship in a univariate context, neither the assets of the central bank nor the macroeconomic factors are significant determinants of central bank stock returns in multivariate analysis. A study examining the effect of certain macroeconomic events on the value of the Bank of Japan stock also turns out to be statistically insignificant.

Source:

Goldberg L.G. and Rezaul Kabir (2002): The Stock Market Performance of the Central Banks of Belgium and Japan, *Journal of Economics and Business*, Vol 54.

⁹ Bank of Thailand maintains 'Reserve' for stabilisation of profits payable to Government.

Accounting Practices

8.35 Most central banks follow an accrual system of accounting for recognition of income and expenses¹⁰. The international standards stipulate the adoption of fair value as a measurement basis for financial instruments as against the continued use of conservative asset valuation standards by several central banks. Under the conservative method of valuation of assets and liabilities at cost price both in terms of the price of the asset and, in the case of foreign assets and liabilities, the exchange rate of the transaction, changes in values of assets or liabilities and the related profits and losses are recognised only at the time of disposal of the asset or liability (Sullivan, 2002). There is no unanimity of view on the issue of adoption of mark to market principle of valuation by central banks (Annex VIII.2). Given the fact that the central banks are required to act in the public interest, it is held that the requirement of mark to market should not be made applicable to them. However, the risks attached to large-scale foreign exchange intervention by central banks suggest that the adoption of this valuation principle would be in their own interest.

8.36 Central banks face the challenge of making their financial statements more transparent and credible while also striking a proper balance between adequate dividend distribution and improving their capital positions. The recognition of unrealised profits in income statements poses problems from the standpoint of dividend distribution if liquid assets do not back such profits. The distribution of dividends based on unrealised profits has the limitation of being pro-cyclical rather than counter-cyclical. A view is held that market value based accounting practices increase a wedge between short-term and medium-term central bank financial vulnerability (Martinez-Resano, 2004). In view of these constraints, the preferred choice is to adhere to market value specification under the International Accounting Standards (IAS) with appropriate modifications. For example, Norges Bank follows a market value based financial reporting framework with smoothing provisions¹¹. The European System of Central Banks (ESCB) has adopted a modified fair value accounting system that is based on an asymmetric approach to the treatment of unrealised gains and losses for prudential reasons, *i.e.*, to control its financial

strength. While unrealised losses for each asset class are irreversibly recorded in its profit and loss statement, unrealised gains are taken to a revaluation account in the liability side. This practice is considered as an acceptable solution to the independence-accountability trade-off by several central banks. It is also considered appropriate as the provisioning methodology under IAS precludes creation of banking reserves that can be used as buffer against adverse foreign exchange movements. The Federal Reserve System and the Bank of England, however, continue to follow proprietary accounting principles based on an amortised cost approach that has an in-built profit-smoothing feature.

Reporting and Disclosure Practices

8.37 There is a trend towards increasing transparency in balance sheet disclosures in recent times. The Bank of Canada provides details of expenditure by different functions, *viz.*, monetary policy, currency, financial system, funds management and retail debt services. Bank Indonesia publishes details of both income and expenditure by functions such as Monetary Operations (foreign reserve management, money market activities and credit and financing), Payment System Services, Banking Services and others. The Reserve Bank of New Zealand also reports income and expenses by functions in its financial statement. While a few central banks provide activity-wise details of income and expenditure, the Bank of England holds the view that disaggregated analysis by business unit or geographic segment is not considered appropriate for financial reporting purposes.

8.38 The central banks have started disseminating information on off-balance sheet instruments, *viz.*, collateral received, forward foreign exchange and interest rate transactions, securities and other items held in custody, in their financial statements (*e.g.*, Portugal). Off-balance sheet instruments with a positive net market value are reported as assets and those with a negative value as liabilities in the balance sheet of central bank of Sweden (Riksbank). Forward exchange contract liabilities are reported as component of total liabilities by the central bank of South Africa. Off-balance sheet instruments revaluation differences are shown in 'other liabilities' (*e.g.*, Germany).

¹⁰ Bank of Russia accounts for income and expenses in the Profit and Loss account on a cash basis.

¹¹ The fluctuations in profit distribution to the Treasury are avoided by maintaining adequate capital and reserves linked to net open foreign exchange position and holdings of domestic securities, and distributing the average amount transferred to the holding account in the preceding three years.

8.39 The Bank of England, the Bank of Thailand and the Reserve Bank of India prepare separate accounts of the Banking and Issue Departments. Bank of Thailand also excludes accounts of the Exchange Fluctuation Fund and the Financial Institutions Development Fund. South African Reserve Bank provides financial statements for the Group (*i.e.*, the Central Bank and its subsidiaries) and Bank, separately while the Reserve Bank of Australia prepares and disseminates consolidated financial statements covering its subsidiary and controlled entities.

8.40 Reporting of income by functions, however, is not very common in dissemination of financial results by central banks. In the absence of such details, it is not possible to distinguish the central bank revenue accruing from its monopoly function of note issuance. Many central banks continue to be conservative in adoption of valuation criteria and are less transparent in release of information in their financial statements. In several cases, the conservative approach towards disclosures is supported on the basis of the need to ensure policy effectiveness of central banks. However, the trend towards greater central bank independence has made them accountable and transparent in dissemination of information, considered essential in the context of an assessment of their policy efficacy and from the financial sector stability angle. The international accounting standards now focus on recognition of the 'economic value' rather than the 'cash flow' effect of an entity's operations. Notwithstanding the fact that central banks have mandates that set them apart from commercial organisations, keeping in view their exposure to

financial risks, it is considered appropriate for them to adopt the same framework as other commercial entities. Recent developments indicate that the central banks are favourably inclined towards the adoption of international standards applicable to commercial financial entities. This is despite the fact that central banks are not profit maximising entities and their shares are generally not exchanged for 'market' value.

III. EVOLUTION OF CENTRAL BANKING IN INDIA AND RESERVE BANK BALANCE SHEET

8.41 The Reserve Bank of India was established as a private shareholders' bank on April 1, 1935 "to regulate the issue of bank notes and the 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" (Preamble to the Reserve Bank of India Act, 1934). The Reserve Bank took over the control of the Issue Department from the Government and the management of the public debt and Government accounts from the erstwhile Imperial Bank.

8.42 A distinctive feature of the Reserve Bank's financials since its inception has been preparation of two separate balance sheets - one for the Issue Department and the other for the Banking Department. The practice originated from the recommendations of the Hilton Young Commission (1926) following the practice of the Bank of England (Box VIII.2). The Bank, however, prepares a single consolidated profit and loss account¹². Furthermore, a unique practice has been the preparation of unaudited accounts separately

Box VIII.2

Hilton Young Commission and the Reserve Bank Balance Sheet

The separation of Issue and Banking Departments could be traced in "fixed fiduciary issue system" which had been adopted by the UK under its Bank Charter Act of 1844. The Act of 1844 required the separation of the business of note issuing and banking into two separate departments - the Issue Department and the Banking Department. The Issue Department dealt exclusively with the issue and redemption of notes. It held the gold reserves and fixed amount of Government debt as securities backing all the notes issued entitled under the Act. The notes created and issued to the public constituted the active circulation, while the balance of notes issued but not held by the public constituted reserve held by the Banking Department. The Banking Department became responsible for the discount, credit and banking business.

The Royal Commission on Indian Currency and Finance (Chairman: Hilton Young) proposed a proportional reserve system to be adopted by the Reserve Bank of India. While such a system,

per se, does not necessitate the separation of the banking and note issuing departments of the Reserve Bank, such a bifurcation of balance sheet had drawn inspiration from the observation of the Commission that:

"The accounts of the Reserve Bank should be presented in the simplest possible form, and it is essential from this point of view to set out in a separate statement the assets and liabilities in respect of the note issue. We think that such a separation would inspire greater confidence in the new note. Although this is a novel way of dealing with the matter, there would seem to be no strong reason why it should not be adopted."

Source:

The Report of the Royal Commission on Indian Currency and Finance (Chairman: Hilton Young), 1926.

¹² It may be noted that for national accounting purpose, the Issue and Banking Departments of the Reserve Bank are treated separately. While the Issue Department is treated as part of 'public administration', the Banking Department is seen as a constituent of 'banking and insurance'.

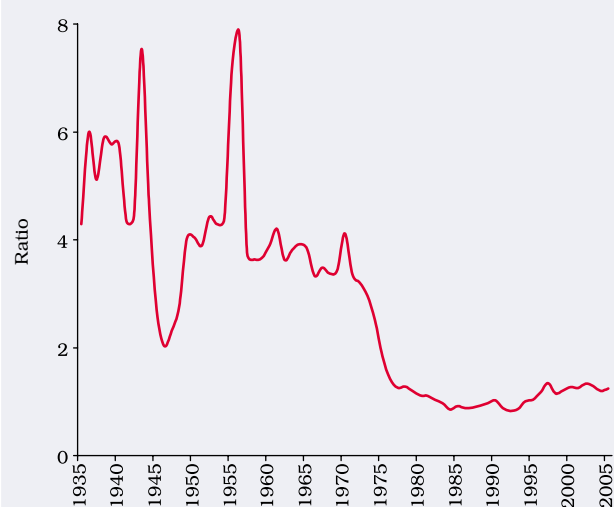
for these two Departments at a weekly frequency under Section 53(1) of the Act and their transmission to the Government. The annual audited accounts, again in bifurcated fashion, are prepared at the end of June followed by transfer of profit to the Government.

8.43 In pursuance of the recommendations of the Hilton Young Commission, the balance sheet of the Issue Department of the Reserve Bank shows the backing of the liabilities in the form of 'notes in circulation' by assets comprising primarily gold coins and bullion, rupee coins, rupee securities and foreign securities. The liabilities of the Banking Department include paid-up capital, Reserve Fund, National Industrial Credit Fund and National Housing Credit Fund, deposits held by Government, banks and others, Bills payable and 'other liabilities' comprising the reserves and provisions. Assets of the Banking Department comprise cash balances (notes, rupee coins and small coins), bills purchased and discounted (Government Treasury Bills and commercial trade bills, both domestic and external), balances held abroad with foreign central banks and international financial entities, investments in Government of India securities, foreign securities, shares in subsidiaries and associate institutions and loans and advances primarily to NABARD under General Line of Credit (GLC) I against loans to commercial and state cooperative banks for seasonal agricultural operations, and GLC II for various other approved short-term purposes.

8.44 An important indicator of the impact of financial deepening on the balance sheet of the Bank is the ratio of Issue to Banking Department Balance sheet (Chart VIII.1). The ratio of Issue to Banking Department balance sheet size, which declined considerably since the early-1970s, hovered around unity since 1980s. While the ratio of notes issued to combined balance sheet of the Bank was marginally higher in the 1950s, it exhibited a steady decline during the phase following nationalisation of banks, reflecting spread of the banking system and the resultant increase in bank reserves with the Reserve Bank (Table 8.9).

8.45 The remaining section analyses the evolving role of the Reserve Bank and its ramifications for the balance sheet in the context of the major functions, viz., note issuance authority, banker to Government, banker to other banks, developmental role and exchange rate and foreign exchange reserves management. The changing contours of the Reserve Bank's balance sheet during the course of its history reflect its evolution across various phases,

Chart VIII.1: Ratio of Issue to Banking Department Balance Sheet



viz., (1) formative years (1935-1949); (2) foundation phase (1950-1967); (3) phase of social control (1968-1990); and (4) phase of financial liberalisation (1991 onwards). These phases have been quite distinct in terms of the role of Reserve Bank and its functional relationships with the Government and the rest of the financial system. The changing role of central banking in India has been reflected in the size of Reserve Bank balance sheet, its composition (domestic vis-à-vis international assets), support to the Government, quantum and terms of financing to the financial system, build up of foreign exchange reserves and ultimately in the income profile of the Bank. In line with the developments in the area of transparency and disclosure norms at the global level, the balance sheet of the Reserve Bank reflects an apparent shift towards the adoption of international best practices in accounting and disclosures. Against this backdrop, this section would probe into each phase in greater detail.

Table 8.9: Note Issuances

Phases	Notes Issued as percentage of	
	Reserve Bank's Total Liabilities	GDP
1	2	3
1935-50	80.2	—
1951-60	81.5	12.1
1961-70	78.7	10.5
1971-80	64.2	9.6
1981-90	48.8	9.9
1991-00	51.5	10.4
2001-04	55.8	11.7

(i) Formative years (1935-1949)

8.46 Since its inception in 1935, the Reserve Bank was the note issuance authority of the country¹³. The Reserve Bank was also responsible for preserving the exchange parity of the rupee with sterling. During the early phase, the financial policy of the Government was against budgetary deficits. In fact, the achievement of budgetary equilibrium had been regarded as a pre-condition for the establishment of the Reserve Bank. However, during the war period, *i.e.*, 1940-46, the high proportion of deficit financing resulted in a substantial monetary expansion leading to inflationary pressures.

Note Issuance Authority

8.47 The system of note issue was founded on the proportional reserve system which was replaced by a system of minimum holding of foreign securities of Rs.400 crore and gold coin and bullion of Rs.115 crore or a total of Rs.515 crore in 1956. Under the Reserve Bank (Second Amendment) Act, 1957, the aggregate value of gold coin, gold bullion and foreign securities in the Issue Department was stipulated at not less than Rs.200 crore at any time, of which the value of gold coin and bullion should at no time be less than Rs.115 crore. These stipulations have not been revised since then.

Banker to the Government

8.48 The Reserve Bank, as the banker to Government, extended Ways and Means Advances (WMA) since 1935 with a view to bridging the temporary mismatches between receipts and payments of the Government. Besides the grant of short-term accommodation, the Reserve Bank, in the formative phase, could purchase the securities of the Central and Local Governments of any maturity up to the aggregate of the share capital of the Bank, the Reserve Fund and three-fifths of the liabilities of the Banking Department in respect of deposits. This arrangement continued till 1954 when it was replaced by a system of automatic monetisation of budget deficits through the issue of *ad hoc* Treasury Bills.

Exchange Rate and Foreign Exchange Management

8.49 The provisions of the Reserve Bank of India Act imposed on the Bank the obligation to preserve the ruling exchange parity of the rupee with sterling at an exchange rate of 1s. 6d. per rupee. During the initial years (1935-1945), the Reserve Bank built up large sterling balances on account of export surpluses followed by financing war expenditure. In the wake of continuous accumulation of sterling balances, the inflationary pressures built up in the system. The Government's borrowing from the banks was used during 1943 - 44 for sterilising surplus spending power with a view to arresting the upward trend of prices. This, however, resulted in a sharp rise in cash balances of the Government with the Reserve Bank. In order to counter inflationary pressures, sales of monetary gold on behalf of Government were undertaken. The intermittent volatility in exchange rate, at times on account of speculative forces, was managed through appropriate adjustments in money rates with a view to giving support to the exchange rate.

8.50 In 1935, Gold held in the Issue Department, that served as the backing for notes in circulation, was held both in India (Rs.41.55 crore) and abroad (Rs.2.87 crore). However, there was transfer of gold held outside India to the country during 1940 - 41, increasing the gold held in India on the assets side of the Issue Department, to Rs.44.41 crore. This was effected through exchange of gold held in India by the Reserve Bank on behalf of the British Government with that held by the latter in London on behalf of the Reserve Bank. Presently, the entire gold of Issue Department is held in India though the Act allows that 15 per cent of the total gold held in the Issue Department can be held abroad¹⁴.

8.51 On expiry of the sterling balance agreement entered into with the UK (July 1948 to June 1951), a fresh long-term agreement was made allowing a release up to £35 million from India's sterling balances in each of the six years beginning July 1, 1951 and also permitting carry forward of the amount not drawn in a particular year for release in a later period¹⁵. The open market operations were guided by the requirements of the Treasury. The Bank was required

¹³ Under Section 22 of the Reserve Bank of India Act, the Bank continued to issue currency notes of the Government till its own distinctive notes were ready for use. In January 1938, the Bank made its first issue of currency notes in denominations of Rs.5 and Rs.10.

¹⁴ The entire gold holding of Banking Department amounting to 65.5 tonnes is held abroad.

¹⁵ The Agreement provided for a total release of pound 160 million (including pound 80 million in India's No. 1 Account) for expenditure over the three-year time period. Of this, a maximum of pound 15 million was to be provided in hard currencies during the first year of the period of the Agreement.

to meet the exchange requirements of Government for remittances to London and repayment of sterling obligations. In 1949, the rupee was devalued by 30.5 per cent; this was in line with the devaluation of currencies of sterling area member countries and a large number of countries in Europe, the Middle East and the Far East. On January 1, 1949, the Reserve Bank Act was amended enabling the holding of other 'foreign securities' in addition to sterling that was in accordance with the obligations assumed by India as a member of the IMF.

Other Major Events

Nationalisation of the Reserve Bank

8.52 Consequent upon the nationalisation of the Reserve Bank, on January 1, 1949, the private shareholding was acquired by the Government through payment of compensation at a fixed rate partly in the form of Government promissory notes of the 3 per cent First Development Loan 1970-75, repayable at par, and partly in cash. The earlier Government holding of 2,200 shares was acquired at par.

Indo-Pak Partition and the Reserve Bank Balance Sheet

8.53 Following the partition of India and Pakistan, the State Bank of Pakistan took charge of the liabilities (along with the corresponding assets) of around Rs.134 crore from the Issue Department of the Reserve Bank of India during the period April 1948 – June 1949. Furthermore, assets (around Rs.101 crore) of the Banking Department were also transferred on July 1, 1948 to the State Bank of Pakistan against an equivalent amount of liabilities consisting deposits of the Pakistan Central and Provincial Governments and of scheduled banks in Pakistan. There was a transfer of additional sterling securities for Rs.12.19 crore to the State Bank of Pakistan against the return of an equivalent amount of rupee securities by it in May 1950. In addition to these, the Government of India paid a sum (out of the surplus profit received from the Bank in 1947-48) in relation to the total value of Pakistan notes in circulation in Pakistan on June 30, 1948, plus the total value of India notes returning from circulation in Pakistan in the year commencing on July 1, 1948 to the total value of India notes and Pakistan notes in circulation in India and Pakistan on June 30, 1948.

(ii) Foundation Phase (1950-67)

8.54 During the early phase of planning, the Reserve Bank focused not only at developing the necessary legislative framework, but also played an

important developmental role through the setting up of an institutional network and by extending financial support for reorganisation and consolidation of the banking and financial system in India. The role of the Reserve Bank in the early days of the planning process was charted out in the First Five-Year Plan (Government of India, 1951):

“...Central banking in a planned economy can hardly be confined to the regulation of overall supply of credit or to a somewhat negative regulation of the flow of bank credit. It would have to take on a direct and active role, firstly in creating or helping to create the machinery needed for financing developmental activities all over the country and secondly, ensuring that the finances available flow in the directions intended...”

Developmental Role

8.55 This concept of “development central banking” encompassed the following three-pronged strategy:

- creating an institutional framework of industrial financing, including promotion of development finance institutions;
- providing concessional finance to banks, especially through refinancing and to development finance institutions through the National Industrial Credit (Long Term Operations) Fund, set up in 1964; and
- promoting rural credit, by providing funds through the National Agricultural Credit (Long Term Operations) Fund and the National Agricultural Credit (Stabilisation) Fund, set up in 1956 and strengthening the cooperative credit structure.

8.56 A major step in the strategy was the transformation of the Imperial Bank of India into the State Bank of India (with the Reserve Bank as a major policy holder) in July 1955, placing a large banking network at the disposal of the Government and the central bank.

8.57 Developmental activities of the Reserve Bank were reflected in its balance sheet in the form of subscription to share capital of several development finance institutions and contribution through various sector-specific dedicated development funds. With a view to catering to the requirements of industrial finance, the Bank played an active role in the establishment of the Industrial Finance Corporation of India and contributed to its share capital and bonds. Financial contributions by the Bank were even

seen in the form of investments in the capital of State Financial Corporations, debentures floated by Central Land Mortgage Banks (subject to Government guarantee)¹⁶.

8.58 The significance of the agriculture sector in the Indian economy was recognised at the inception stage itself as Section 54 of the Reserve Bank Act imposed on the Bank the obligation to create a special Agricultural Credit Department. The setting up of the National Agricultural Credit (Long-Term Operations) Fund and the National Agricultural Credit (Stabilisation) Fund in terms of the provisions of the Reserve Bank (Amendment) Act, 1955 and the annual contributions to these funds was another major development initiative undertaken by the Bank¹⁷. The NAC (Long-Term Operations) Fund was constituted on February 3, 1956 with an initial sum of Rs.10 crore while the NAC (Stabilisation) Fund was constituted on June 30, 1956 with an initial sum of Rs.1 crore. The first annual contribution of Rs.5 crore to the NAC (Long-Term Operations) Fund was made out of the Bank's income for the year ended June 30, 1956. The Bank also participated in the setting up of "Refinance Corporation for Industry Private Ltd." in 1958 that became a public limited company effective March 28, 1961. With the establishment of the Industrial Development Bank of India on July 1, 1964, the Refinance Corporation was taken over by the IDBI on September 1, 1964. Another development was the insertion of a new Section 46 C that provided for the establishment of the National Industrial Credit (Long-Term Operations) Fund that was credited with an initial contribution of Rs.10 crore.

Exchange Rate and Foreign Exchange Management

8.59 The period from the early 1950s witnessed deterioration in the balance of payments position (considered necessary for carrying out the development plans) while the liquidity growth

remained strong. The Reserve Bank's accumulated foreign exchange reserves in the post-devaluation and post-Korean war periods, besides the assurance (of an annual withdrawal of pound sterling 35 million) under the Indo-UK Sterling Balances Agreement, financed the deficit in the balance of payments.

Banker to Banks

8.60 The emergence of inflationary pressures in the 1950s necessitated the Reserve Bank to undertake monetary tightening by raising the Bank Rate in 1951 after 16 years and by closing the open market purchases of Government paper from the banks. This policy, thus, discouraged the prevalent practice by the banks to disinvest Government paper during the busy season, thereby restricting the extent of primary monetisation through the Reserve Bank balance sheet.

(iii) Phase of Social Control (1968-1990)

8.61 The macroeconomic environment remained less favourable with three major oil price shocks (1973-74, 1979-80 and 1983-84) taking place during this period that exacerbated the already strained external resource position of the country. The advent of social control of banks in the late 1960s introduced a policy-induced channelisation in the banking system's resources to the 'priority' sectors backed by the Reserve Bank's refinance facilities. Another salient feature of this phase was the emergence of fiscal imbalances and the unabated recourse of the Government to the Reserve Bank for financing the deficits. This process of automatic monetisation of deficits called for successive increases in the statutory pre-emptions in the form of CRR and statutory liquidity ratio (SLR) in an attempt to neutralise the potential inflationary impact of increased monetisation. The Reserve Bank's balance sheet continued to reflect its role in developmental activities.

¹⁶ Including the Industrial Finance Corporation of India (1948), for medium- and long-term finance, Refinance Corporation of India (1958), to provide banks refinance against industrial loans, Industrial Development Bank of India (1964), the apex term-lending institution (which also took over the Refinance Corporation). The Reserve Bank also played an active role in setting up a network of State Financial Corporations to meet the credit needs of local medium- and small-scale industries in the early 1950s. The Reserve Bank also subscribed to 50 per cent of the initial capital of the Unit Trust of India (1964).

¹⁷ In terms of the recommendations of the All-India Rural Credit Survey, the Reserve Bank was required to credit the NAC (Long-Term Operations) Fund with an initial sum of Rs.10 crore and annual contributions of not less than Rs.5 crore during the five years commencing with the year ending June 30, 1956. In the case of NAC (Stabilisation) Fund, the stipulation was "this Fund will be credited with such sums as the Bank may contribute every year provided that the contribution during each of the five years commencing with the year ending June 30, 1956 shall not be less than Rs.1 crore. In the case of both the Funds the Central Government may, if necessary, authorise the Bank to increase or reduce its contribution in any year." The annual contribution to NAC (Long-Term Operations) Fund was enhanced from Rs.5 crore to Rs.10 crore and further to Rs.11 crore during the year ended June 30, 1962, Rs.12 crore during 1962-63. The annual contributions were enhanced significantly during the Social Control phase and these two Funds were finally transferred to NABARD on July 12, 1982.

Banker to the Government

8.62 The Reserve Bank continued to provide substantial accommodation to the Government. In the absence of any institutional arrangement placing limits on the Government for the issue of securities and therefore on credit to the Government from the Bank, the issue of *ad hoc* Treasury Bills led to severe automatic monetisation during this phase, posing serious problems for monetary management. The large order of deficit financing exerted pressure on the Reserve Bank's balance sheet and turned out to be the single most important driver of reserve money expansion. The Reserve Bank's accommodation to the Government soared, with the net RBI credit to the Government accounting for 90 per cent of reserve money in the 1980s (Jadhav, 1994).

Banker to Banks

8.63 The strategy of neutralising the monetary impact of deficit financing on the asset side through higher cash reserve requirements on the liability side began to expand the Reserve Bank's balance sheet as a proportion of GDP from the mid-1970s. The restrictive measures became more and more stringent with progressive increases in CRR and SLR requirements and curtailment of discretionary refinance¹⁸ to banks from time to time. The rate of interest on required reserves beyond the mandatory minimum of 3.0 per cent of banks' demand and time liabilities was raised steadily from 4.75 per cent in June 1973 to 6.5 per cent in June 1978 in order to cushion the impact of the hike in the CRR, thereby adversely impacting the profitability of the Reserve Bank. This was also aided by the process of progressive increases in SLR stipulations for banks generating additional demand for Government securities. The period was marked by an overall policy of credit restraint that was reflected in a sizeable decline in the Reserve Bank refinance to banks. In fact, there was also a special emphasis on effective maintenance of the SLR on a daily basis. It was in this context that the Committee to Review the Working of the Monetary System (Chairman: Sukhamoy Chakravarty, 1985) emphasised the need to ensure that deficit financing did not exceed "safe limits".

Developmental Role

8.64 The contributions to the three National Funds increased substantially in line with the national priorities to make available adequate credit flow to the agriculture and industrial sectors. The Reserve Bank started contributing towards a dedicated housing credit fund also during this phase. The Reserve Bank increased its allocations to the national funds, which rose from 7.1 per cent of the balance sheet during 1971-75 to an average of 10 per cent of the balance sheet during 1975-80. In 1984-85, the total contribution to these Funds amounted to Rs.675 crore, which increased subsequently to reach Rs.995 crore in 1990-91. Continuing with its developmental role further, the Reserve Bank, along with the Central Government contributed share capital of Rs.100 crore in equal proportions to National Bank for Agriculture and Rural Development (NABARD), which started functioning on July 12, 1982. On July 9, 1988, the National Housing Bank was set up with an initial share capital of Rs.100 crore contributed entirely by the Reserve Bank. The National Housing Credit (Long Term Operations) Fund was established under the Reserve Bank of India Act, 1934 in January 1989 with an initial corpus of Rs.50 crore with the intention of crediting to the Fund every year such sums of money as it may consider necessary¹⁹. Subsequently, consequent upon a decision of the Central Government announced in the Union Budget for the year 1992-93, the Reserve Bank discontinued the practice of crediting large sums to the said Fund and since then only a token amount of Rupees one crore is being transferred to the Fund every year.

Foreign Exchange and Exchange Rate Management

8.65 The phase saw deterioration in the balance of payments, notwithstanding some intermittent improvements in the 1970s. There was a temporary spurt in inward remittances through the Foreign Currency Non-Resident (Account) [FCNR(A)] scheme introduced by banks in November 1975. The external position, however, deteriorated by the early 1980s as a result of a rise in the oil import bill and a deterioration in the terms of trade, and despite the Central Government's negotiated loan of SDR 5 billion from the IMF under the Extended Fund Facility (EFF) in

¹⁸ The refinance facilities were available to banks in the form of Food Credit, Export Credit, Stand-by, Discretionary and 182-days Treasury Bill Refinance.

¹⁹ Annual contribution to the Fund is being made from the profits of the Reserve Bank. The amount in the said Fund can be applied by the Reserve Bank only for (i) making loans and advances to National Housing Bank (NHB) for its business and (ii) purchasing bonds and debentures issued by NHB.

November 1981, the foreign currency assets of the Reserve Bank declined.

8.66 Furthermore, the rupee was devalued sharply by 36.5 per cent on June 6, 1966 and thereafter the Rupee-Pound Sterling exchange rates were revised in tandem with the fluctuating exchange rates of major international currencies. Notwithstanding the continued weakness in pound sterling, the Reserve Bank preferred to continue with the existing sterling system till September 24, 1975 when it finally decided to abandon the rupee's peg to the pound sterling and link it to a basket of currencies²⁰. The sterling devaluation caused a loss in foreign exchange reserves of the Reserve Bank, but resulted in a gain in terms of repayment obligations in rupee terms. In view of considerable volatility in sterling, the British Government offered to provide a guarantee in terms of the dollar for all the sterling holdings of sterling countries if these holdings exceeded 20 per cent of their total gold and foreign exchange reserves. In the process of negotiations, all sterling holdings in excess of 10 per cent of India's gold and foreign exchange reserves qualified for the guarantee and the period of the agreement was negotiated and fixed at three years. Reflecting developments on the exchange rate front, there was a temporary change in revaluation of reserve holdings in each quarter with reference to market rates (not the central rate that was used earlier), allowing booking of revaluation gains as unrealised appreciation in the Issue Department. In other words, the gain was treated as some sort of a secret reserve. However, the decision relating to transfer of gains to a secret reserve was reversed and the entire revaluation gain of Rs.26.4 crore was transferred to the Exchange Fluctuation Reserves (EFR) and shown in 'other liabilities'.

8.67 During this period, there was also a shift in the Reserve Bank's policy from holding investment with central banks to deposits with the Bank for International Settlements (BIS) (Deutsche mark and French franc) that provided benefits of rising interest rates and opportunity for diversification of reserves. The diversification move resulted in the Reserve Bank's foreign exchange reserves outside sterling and dollars exceeding its reserves in sterling and dollars. This entire exercise yielded an appreciation gain of Rs.43.4 crore but then a cautious stance was adopted keeping in view the fact that there was no lender of last resort in the Euro-currency market. With the

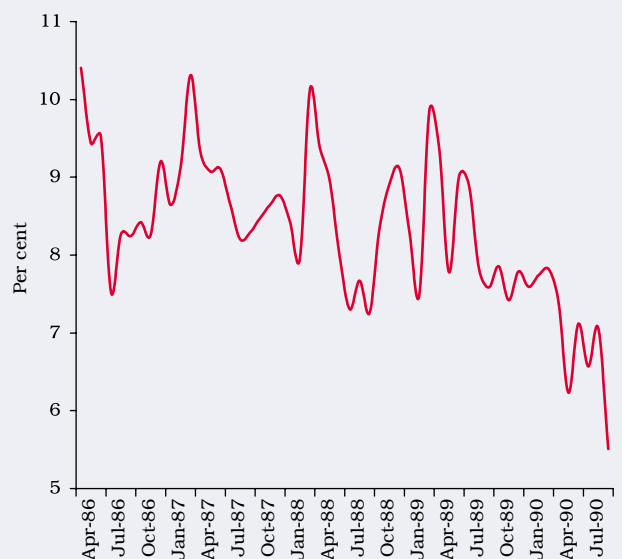
strengthening of the dollar in the latter half of 1973, there was again a switch over from sterling to dollar holdings. As the process of reserve accumulation gained momentum, the statutory provisions relating to deployment of reserves were expanded to allow investment in Eurobonds and commercial bank deposits as also opening of gold accounts with central banks (RBI, 2005).

8.68 The macroeconomic imbalances consequent to the unabated increase in the fiscal deficit during the 1980s eventuated into a severe balance of payments crisis by 1991. The debt-service ratio that had been moving up steadily throughout the 1980s, reached a high of 35.3 per cent in 1990-91, putting India in the category of 'severely indebted countries' in terms of the World Bank criterion. The Reserve Bank's net foreign exchange assets as percentage of reserve money fell sharply from 10.3 per cent as at March 1987 to 5.5 per cent by September 1990 despite a strong export growth due to the pressure on account of repayment of borrowings under Extended Fund Facility (Chart VIII.2).

(iv) Phase of Financial Liberalisation (1991 onwards)

8.69 The macroeconomic crisis was tackled by a coordinated policy response from the Government and the Reserve Bank and the period since 1991 was marked by a number of significant policy

Chart VIII.2: Movement in NFA-Reserve Money Ratio



²⁰ The rupee was pegged to the pound sterling in 1931; this arrangement continued, except for a brief period of three months in September 1971, till it was decided to link the rupee to a basket of currencies in September 1975.

initiatives, such as Government borrowing at market rates, streamlining of quasi-fiscal activities and stoppage of contribution to long-term funds, reduction in pre-emptions, greater use of indirect instruments of monetary policy and disinvestment of shareholding of subsidiaries of the Reserve Bank. All these had profound implications for the Reserve Bank's balance sheet.

Banker to the Government

8.70 With the discontinuation of automatic monetisation of Government deficit through the phasing out of *ad hoc* Treasury Bills by April 1997, there has been a fundamental shift in the Reserve Bank's role as banker to the central Government. With the fixation of net bank credit to Government in line with the overall monetary target, the Reserve Bank began to exercise limited discretion in its acquisition of domestic assets as against the earlier system of automatic acquisition of domestic assets. Accordingly, the Reserve Bank's primary support to the Central Government has come down to fairly low levels backed by comfortable liquidity conditions on account of capital flows, the resultant increase in sterilisation operations through OMO and repo operations and newly-introduced instruments like Market Stabilisation Bonds. The Reserve Bank's subscription to primary issues of Central Government securities, which had been around 46.0 per cent of the gross amount mobilised through dated securities in 1998-99, declined sharply thereafter. In the changed scenario, the net Reserve Bank credit to the Government no longer reflects the extent of direct monetisation, but depicts the combined impact of the operations of the Reserve Bank in the money, Government securities and the foreign exchange markets.

Banker to Banks

8.71 The Reserve Bank gradually reduced the CRR along with rationalisation of the system of payment of interest on eligible CRR balances. The rationalisation process started with a shift from the discriminatory two-tier formula for remuneration of CRR balances to a uniform rate, and the linking of the remuneration of eligible CRR balances to the Bank Rate since November 3, 2001²¹. The SLR has also been reduced in a phased manner from 38.5 per cent in February 1992 to 25.0 per cent in October 1997. Concomitantly the Reserve Bank has rationalised the

standing refinance facilities to the banks by phasing out all refinance windows except export credit refinance. Accordingly, the expansion of the Reserve Bank's balance sheet is restricted to some extent by the lowering of bank reserves with the central bank, on the liability side, and by curbing the standing refinance support to the banks, on the asset side. During this phase as large capital inflows have poured into the economy, the Reserve Bank has been active in absorbing them in its balance sheet while simultaneously largely offloading Government paper as a means of sterilisation, thereby inducing a reallocation of its asset portfolio without any significant expansion of its balance sheet and reserve money.

8.72 Against the backdrop of strong and persistent inflow of foreign capital and the finite stock of Government securities available with the Reserve Bank, the Market Stabilisation Scheme (MSS) was introduced in April 2004 following the Memorandum of Understanding between the Government and the Reserve Bank, whereby, the Government issues securities specifically for the purpose of sterilisation operations. The issuances of Government paper under the MSS are undertaken to absorb rupee liquidity created by capital flows of an enduring nature. In order to neutralise the monetary and budgetary impact of this particular instrument, the proceeds under the MSS are parked in a separate identifiable deposit account maintained by the Government with the Reserve Bank which can be appropriated only for the purpose of redemption and/or buyback of paper issued under the MSS. The resultant decline in the net Reserve Bank credit to the Government neutralises the expansionary impact of an accretion to the Reserve Bank's net foreign assets due to capital flows. Despite issuance of Government paper under MSS being indistinguishable from normal gilt issuance from the angle of an investor, its issuance has a non-monetary character since MSS is the deposit of the Government with the Reserve Bank. Nevertheless, it has an expansionary impact on the size of the balance sheet of the Reserve Bank. The deposits under the MSS amounted to Rs.71,681 crore or around 10.5 per cent of the total liabilities of Reserve Bank as at end-June 2005. This, however, has declined to Rs.31,958 crore or below 5 per cent of total liabilities of Reserve Bank as on February 24, 2006. The operation of the MSS for sterilising capital flows has commenced a phase where the sterilisation costs are transparently borne by the Government instead of the Reserve Bank.

²¹ This has, however, been discontinued with effect from the fortnight beginning September 18, 2004 when the interest rate paid on CRR balances was lowered to 3.5 per cent per annum.

8.73 Besides, there had been considerable reduction of *quasi-fiscal* activities of the Reserve Bank²². An important *quasi-fiscal* activity involved the burden of exchange guarantee to banks for deposits under the Foreign Currency Non-Resident Accounts (FCNRA) falling on the Reserve Bank leading to increasing provisioning requirements against exchange guarantee for these deposits. The exchange risk was borne by the Reserve Bank not only in respect of deposits under FCNRA but also for India Development Bonds (IDBs) and surplus foreign currency funds parked by financial institutions with the Reserve Bank. While the practice of parking surplus foreign currency funds by financial institutions was discontinued, the IDBs were redeemed in early 1997. More importantly, the exchange rate risk liability relating to annual outflows of FCNRA deposits was taken over by the Government with effect from July 1, 1993 with an understanding that the Reserve Bank would transfer to Government profit amounts over and above the normal transfer to meet the FCNRA exchange losses. With the discontinuation of this deposit scheme after August 14, 1994, the exchange guarantees ceased to exist from August 17, 1997. Under the Foreign Currency (Non-Resident) Accounts (Banks) Scheme introduced from May 15, 1993, the exchange risk is borne by the banks themselves. Furthermore, the foreign currency funds raised through Resurgent India Bonds (1998) and India Millennium Deposits (2000) involved no exchange rate guarantee by the Reserve Bank.

Developmental Role

8.74 The developmental role of the Reserve Bank changed its character significantly in the post-liberalisation phase. Efforts of developmental activities in the pre-liberalisation phase were focused on building institutions, which engaged in directly providing finance for development. During the post-liberalisation phase, on the other hand, the Reserve

Bank started building institutions, which played a lead role in developing various segments of financial markets. The Reserve Bank promoted the Discount and Finance House of India (DFHI) in 1988 and the Securities and Trading Corporation of India (STCI) in 1994 with the objective of deepening and activating the Government securities market and the money market²³. Funds were contributed to various other development institutions like Infrastructure Development Finance Company Ltd. (IDFC), NABARD, NHB, Bharatiya Reserve Bank Note Mudran Limited and the like²⁴.

8.75 Since March 2002 the entire outstanding balance of the Development Finance Institutions (DFIs), such as, erstwhile IDBI, EXIM Bank, IIBI and SIDBI out of the NIC (LTO) Fund (Rs.3791.75 crore) was transferred to the Government in lieu of 10.25% Government Stock 2021 of an equal amount. In 2004-05, the Bank transferred its shareholding in Infrastructure Development Finance Company Ltd. to the Central Government at its then book value of Rs.150 crore. At end June 2005, total investment of the Bank in shares of subsidiaries/associate institutions viz., Deposit Insurance and Credit Guarantee Corporation, NABARD, SBI, NHB and Bharatiya Reserve Bank Note Mudran (Pvt) Ltd. taken together stood at Rs.3,973 crore.

8.76 The large annual allocations to the Statutory Funds were also discontinued during the liberalisation phase. In 1991-92, there was no appropriation to the Statutory Funds. Since 1992-93, only Rs.one crore per annum is being allocated to each Fund. It was decided in 1997-98 to transfer the unutilised balance in NIC (LTO) Fund arising from repayments of earlier loans to the contingency reserves on a year-to-year basis. Accordingly, the combined balance under NIC (LTO) Fund and NHC (LTO) Fund, which was around 4.1 per cent of total assets of the Bank as at end-June 1992, came down to as low as 0.03 per cent by June 2005.

²² *Quasi-fiscal* activities of central banks include intervention in foreign exchange markets, issuance of central bank securities to build up foreign exchange reserves, and participation in restructuring of the banking system (Hawkins, 2004). Other *quasi-fiscal* operations associated with exchange system include multiple exchange rate practices, exchange rate guarantees and assumption of exchange rate risk by the central bank, etc.

²³ Later on, in light of the conflict of interest arising as a result of the Reserve Bank's dual role as regulator and owner, the Reserve Bank diluted its ownership in SBI and divested its entire shareholding in DFHI.

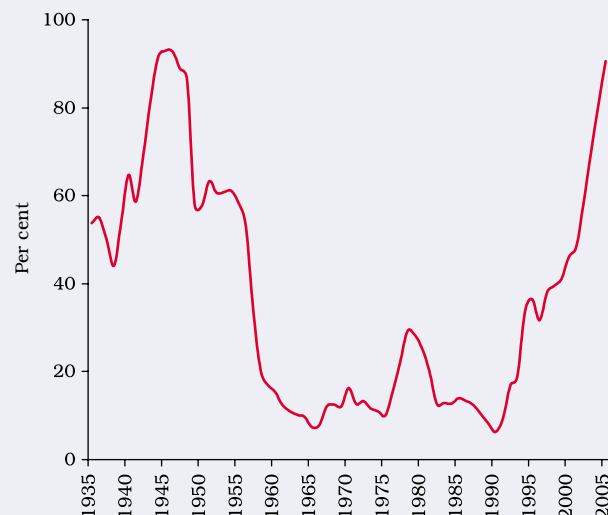
²⁴ The Reserve Bank contributed Rs.150 crore (Rs.20.30 crore in 1996-97 and Rs.129.70 crore in 1997-98) towards the share capital of Infrastructure Development Finance Company Ltd. (IDFC), established in 1996-97 to provide long-term finance for infrastructure development. In addition, the Bank paid Rs.350 crore towards subordinated debt of IDFC during 1997-98. The Reserve Bank also contributed Rs.400 crore during 1997-98 towards the additional equity of NABARD. The incremental authorised capital of NHB from Rs.300 crore to Rs.350 crore was also paid in 1997-98. In 1997, a loan of Rs.700 crore was granted to NHB out of NHC (LTO) Fund drawn from the Bank's CR that was eventually repaid by the NHB in January 2002. The entire equity of Bharatiya Reserve Bank Note Mudran Ltd. at Rs.800 crore was allotted to the Reserve Bank in 1997-98.

Management of Exchange Rate and Foreign Exchange Reserves

8.77 The external sector crisis that set in after the Gulf crisis of August 1990 became severe in the early part of 1991-92 with drying up of short-term and long-term finance to bridge the current account deficit. There was a draw down of India's Reserve Tranche position of SDR 487 million in the Fund, followed by purchase of SDR 1.27 billion under the IMF's financing facilities in 1990-91²⁵. The policy initiatives started with a two-step downward adjustment in the exchange rate of the rupee by about 18-19 per cent against major currencies on July 1 and July 3, 1991 aimed at improving competitiveness of exports, dispelling speculative pressures and stabilising the capital account. This was supplemented by tight monetary policy, aimed at demand containment and import compression, to ensure the effectiveness of exchange rate adjustment. Along with these stabilisation measures, a stage was set for undertaking a wide range of structural reform measures across real, fiscal and financial sectors. The fiscal adjustment was identified as an integral part of the overall structural adjustment process with a focus on the medium-term goal of fiscal consolidation and better coordination between fiscal and monetary policy (see chapter VII).

8.78 Against this backdrop, increasing responsibilities were thrust upon the Reserve Bank underlining the need to prepare itself to meet the challenges in the transitional phase of the reform process. The strengthening of balance sheet of the Bank assumed importance in this environment, driven by certain guiding principles of an ideal central bank balance sheet (Tarapore, 1996). In the financial liberalisation phase, concrete policy measures have been taken to put these principles in actual practice. In line with the basic principle that a central bank should not assume the risk of various types of exchange rate guarantees while avoiding the acceptance of domestic interest bearing obligations (e.g., payment of interest on banks' cash balances with the central bank), the FCNR (A) scheme was discontinued and the practice of interest payment on CRR balances was substantially rationalised. Developments in the 1990s supported a gradual rise in the share of foreign assets in the Reserve Bank's balance sheet (Chart VIII.3).

Chart VIII.3: Percentage of Foreign Currency Assets (including Gold) to Combined Balance Sheet



8.79 The qualitative change in the composition of Reserve Bank's balance sheet in favour of foreign currency assets is of high importance. In 1991, Foreign Currency assets (FCA) at Rs.2,383 crore constituted only 1.9 per cent of total assets. The share of FCA has gone up steadily to 87.2 per cent of total assets at end June 2005. In 1991, the percentage of FCA to notes issued was a meagre 0.4 per cent but it stood at 157.3 per cent at end June 2005. Concomitantly, the share of rupee securities as a percentage of notes issued recorded a sharp decline from 86.7 per cent in 1991 to 0.4 per cent by end June 2005. This is a positive development but it has also given rise to a new dimension of risk on account of increasing interest and exchange rate sensitivity of the Reserve Bank's balance sheet.

8.80 During the 1990s, India received large foreign exchange inflows. The process of financial liberalisation has impacted the process of accumulation of foreign exchange reserves in a number of ways.

- Unlike in the past, when the central bank was the repository of the claims of the rest of the world on the Indian banking sector, the Reserve Bank, in the post-liberalisation phase, empowered banks to freely deal in foreign exchange.

²⁵ The Government leased 20 tonnes of gold to the State Bank of India (SBI), which in turn entered into a sale with a repurchase option in the international market. This transaction brought in foreign exchange of US \$ 200 million or Rs.400 crore. Furthermore, the Reserve Bank raised US \$ 405 million or Rs.1,037.35 crore from Bank of England and Bank of Japan in July 1991 against the gold (a total quantity of 46.9 tonnes, i.e., the permissible limit of 15 per cent of gold that can be held outside) deposited with the former. The gold was repurchased by the SBI in November/December 1991. Of the total quantity, the Government sold 18.41 tonnes to the Reserve Bank of India. The gold holdings of the Reserve Bank involved in both the transactions amounting to 65.31 tonnes are held abroad.

- The increase of foreign exchange reserves during 1991-2005 worked out to three times of the additional external debt incurred suggesting that the bulk of the underlying capital flows were non-debt creating in character in line with the policy choice.
- Although the Reserve Bank continued to promote mobilisation of foreign currency deposits throughout the 1990s, the exchange guarantees provided in the earlier schemes, such as the FCNR(A) scheme and India Development Bonds (1990), were withdrawn in the case of subsequent schemes such as the FCNR(B) scheme, Resurgent India Bonds (1998) and India Millennium Deposits (2000)²⁶.

8.81 In a nutshell, thus, the evolution of the functions of the Reserve Bank on its balance sheet has been summarised in Table 8.10.

IV. PROFIT AND LOSS ACCOUNT OF THE RESERVE BANK

8.82 The Profit and Loss Account of the Reserve Bank is prepared in the form prescribed by the Reserve Bank of India General Regulations, 1949,

under Section 58 of the Act. The historical cost basis of accounting is generally used except where it has been modified to reflect revaluation.

8.83 During the period from 1935 to 1940, the annual accounts of the Reserve Bank were prepared on a calendar year basis and thereafter July-June was adopted as the accounting year. During the pre-nationalisation phase, the Balance Sheet and the Annual Report were submitted to the shareholders of the Bank but this practice was replaced by an arrangement requiring the submission of these statements to the President of India pursuant to the change in ownership in 1949. In the first annual accounts prepared for the period April 1, 1935 to December 31, 1935, there was a surplus income of around Rs.56 lakh from which dividend was distributed to the shareholders at the rate of three and a half per cent per annum while the balance was paid to the Government under Section 47 of the Reserve Bank of India Act.

8.84 An analysis of income and expenditure of the Reserve Bank over the years brings out some interesting features. Major sources of income are interest on domestic and foreign securities and foreign deposits, discount and rediscount charges and commission on management of public debt. The interest rate

Table 8.10: Impact of the Evolution of Select Functions of the Reserve Bank on the Reserve Bank's Balance Sheet in Various Phases: A Stylised Evolution Matrix

Phases	Note Issuance	Banker to Government	Banker to Banks	Exchange Rate & Foreign Exchange Management	Developmental Role
1	2	3	4	5	6
Formative Years (1935-1949)	Remains the sole currency issuer and the function remains broadly the same through different phases	Driven by event-based shocks like war.	–	Accumulation of foreign exchange reserves	–
Foundation Phase (1950-1967)		Automatic monetisation initiated - expansionary effects on the balance sheet	Increasing reserve requirements. Sector specific refinance - expansionary effect on the balance sheet.	Balance sheet driven by net domestic assets. Deterioration in balance of payments.	Introduced balance sheet support to development finance institutions
Phase of Social Control (1968-1990)		Heavy automatic monetisation - heavy credit to the Government			Very strong and consequent large transfers to LTO funds
Phase of Financial Liberalisation (1991 onwards)		Credit to Government shrinking with stoppage of <i>ad hoc</i> Treasury Bills, increasing sterilisation and introduction of MSS.	Reduction in reserve requirements - bankers' deposits coming down	Balance sheet driven by net foreign assets. Huge stock of foreign exchange reserves. Reserve accumulation non-debt creating in nature.	Change of role towards developing institutions & markets - but transfer to LTO funds became nominal

²⁶ In case of exchange rate fluctuations, the Reserve Bank revalues the foreign currency on the asset side and parks the gains/losses in its Currency and Gold Revaluation Account on the liability side.

environment has had an important bearing on 'Discount' and 'interest earnings' of the Reserve Bank while the Bank's investment account showed an inverse relationship with interest rate movements. In the formative years, the international interest rate environment emerged as an important determinant of the Bank's interest income on account of large share of foreign currency assets in balance sheet. For example, the fall in income from Rs.15.6 crore in 1945-46 to Rs.10.1 crore in 1946-47 was mainly the result of the reduced yield on sterling holdings in that year. With the creation of *ad hoc* Treasury Bills for the purpose of replenishing Government's cash balances in 1954, the 'Discount' component of income began to mirror the increasing size of these bills in the Bank's balance sheet. The 'Social Control' phase was a phase of continuous expansion in financial support extended to Government and therefore the terms of financial support became important determinants of interest and discount income of the Bank. An increase in coupon rates on Government securities in the mid-1980s had a positive impact on interest earnings of the Bank.

8.85 In the post-reform phase, the income profile of the Bank has undergone significant changes. The substitution of the relatively higher-yield domestic assets by the foreign exchange assets with lower returns has compressed annual income of the Reserve Bank. Furthermore, there has also been a fall in interest rates across board – both domestic and international. The reduced dependence of the banking system on the Reserve Bank driven both by withdrawal of refinance facilities except for export refinance and comfortable liquidity conditions have also reduced the interest earnings of the Bank. These factors, taken together, have brought about pressure on Reserve Bank's profits.

8.86 An analysis of the composition of expenditure shows an increase in the share of establishment expenditure in total expenditure, particularly during

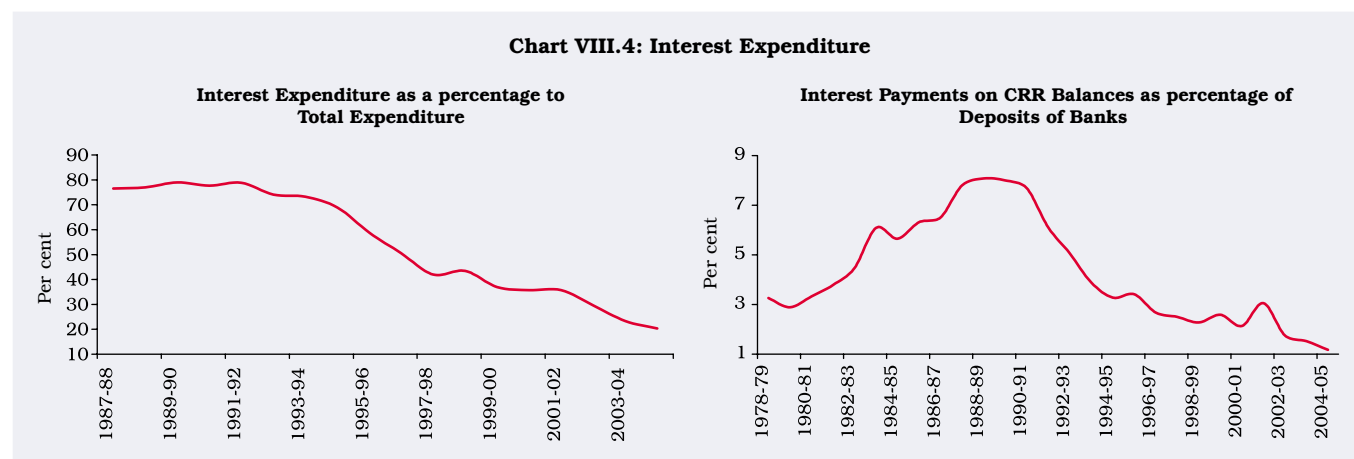
Table 8.11: Composition of Total expenditure (excluding Interest Expenditure)

(Per cent)

Phase	Establishment Expenditure	Non-establishment Expenditure
1	2	3
Formative Phase (1935-1949)	38.6	61.4
Foundation Phase (1950-1967)	51.1	48.9
Social Control Phase (1968-1990)	40.5	59.5
Liberalisation Phase (1991 onwards)	31.0	69.0

the period 1950 to 1967 reflecting increasing geographic and functional expansion of the Reserve Bank. During 1950 to 1967, number of offices of the Bank increased from 8 to 16 while total employees of the Bank increased from 6,046 to 17,717. The share of establishment expenditure in total expenditure declined in the subsequent stages of the liberalisation phase (Table 8.11). An important component of non-establishment expenditure is payment of 'agency charges' that recorded periodic increases on account of revisions in payment of commission to agency banks while also reflecting the impact of variation in Government turnover from year to year. The increasing dependence of the Bank on commercial banks as its agent for performing different functions relating to currency distribution, remittances and other banking requirements has also contributed to the rise in this component of expenditure. Details of interest expenditure available from 1988 onwards reveal that the interest expenditure constituted the largest portion of total expenditure during the period from 1988 to 1990 and was primarily by way of interest payments on eligible CRR balances of banks. However, the corrective mechanism set in the liberalisation phase through a gradual reduction in CRR of banks along with the rationalisation of remuneration on these balances (and linking it to the Bank Rate) resulted in a substantial decline in interest payments (Chart VIII.4).

Chart VIII.4: Interest Expenditure



In the recent years, the remuneration in the CRR balances has been delinked from the Bank Rate and fixed at 3.5 per cent (lower than the Bank Rate) thereby further reducing interest expenditure on CRR balances of banks.

8.87 In recent years, while total expenditure of the Reserve Bank has been rising due to agency charges and security printing expenses, establishment expenditure, as a percentage to total expenses, has generally demonstrated a declining trend. However, the share of Gratuity and Superannuation Fund contribution is showing an increasing trend in the overall establishment expenditure from the year 2002-03 on account of large-scale retirement under the Optional Early Retirement Scheme (OERS) introduced by the Reserve Bank and increase in the estimated liability assessed by actuarial valuations in a scenario of declining discount rate²⁷. The reduction in the work force due to the OERS (that closed on December 31, 2003) was 4,468 representing 15.8 per cent of the work force as on June 30, 2003 (RBI, 2004). While it is challenging to provide for large pension liabilities especially against the backdrop of declining interest rates, the Reserve Bank has consistently adhered to actuarial valuations while contributing to the Gratuity and Superannuation Fund (Table 8.12).

8.88 Reflecting the developments in income and expenditure of the Bank, the rate of surplus including contributions to Statutory Funds but excluding provisions, viz., allocations to contingency reserves posted a rise in the early 1940s, followed by a period of decline from the late 1940s to 1950 and an increase

during 1971-75 (Chart VIII.5). The rate of surplus maintained a declining trend from the mid-1970s to 1995 reflecting the large share of *ad hoc* Treasury Bills in its domestic securities portfolio that carried discount rate of 4.6 per cent, and increase in interest expenditure, following the sustained rise in reserve requirements and hike in remuneration of these deposits with the Reserve Bank.

8.89 The period 1975-1982 and 1985-1991 was characterised by increasing contributions to the National Agricultural and Industrial Credit Funds to enable higher credit flows to agriculture and industry with the ultimate objective of promoting growth prospects of these sectors. The annual contribution to these Funds from profits remained at the discretion of the Bank but a shift in the Bank's decision in support of larger allocations to the Statutory Funds implied a corresponding decline in the transfer of profit to the Government in relative terms. During the year ended 1991-92, there was no allocation made to these Funds, followed by the practice of a contribution of Rs. one crore per year to each of the four statutory funds from 1992-93 onwards (Chart VIII.6). The phasing out of transfers to the National Funds indirectly led to a larger profit transfer to the Government during 1993-94 to 2002-03.

8.90 The Reserve Bank's balance sheet over the years carried large amounts of undated special securities generated out of conversion of *ad hoc* Treasury Bills and carrying a coupon rate of 4.6 per cent

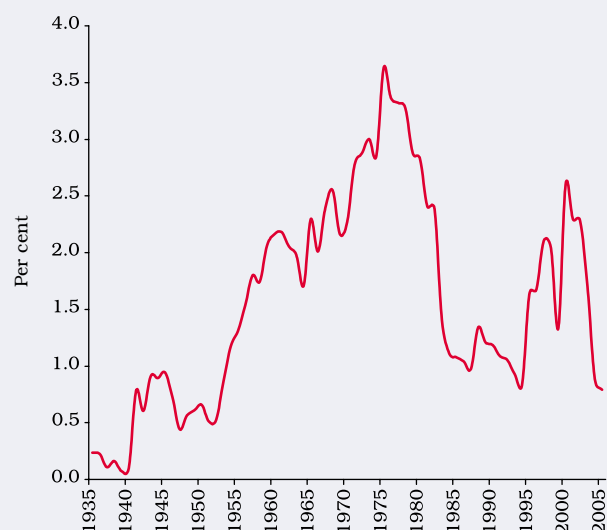
Table 8.12: Reserve Bank's Gratuity and Superannuation Fund

(Rupees crore)

Year	Establishment Expenditure	Gratuity and Superannuation Fund	Gratuity and Superannuation Fund as a per cent to Establishment Expenditure (per cent)
1	2	3	4
1980-81	71	1	1.4
1990-91	244	9	3.7
2000-01	871	38	4.4
2001-02	1304	525	40.3
2002-03	1489	684	45.9
2003-04	2233	1025*	45.9
2004-05	1647	756	45.9

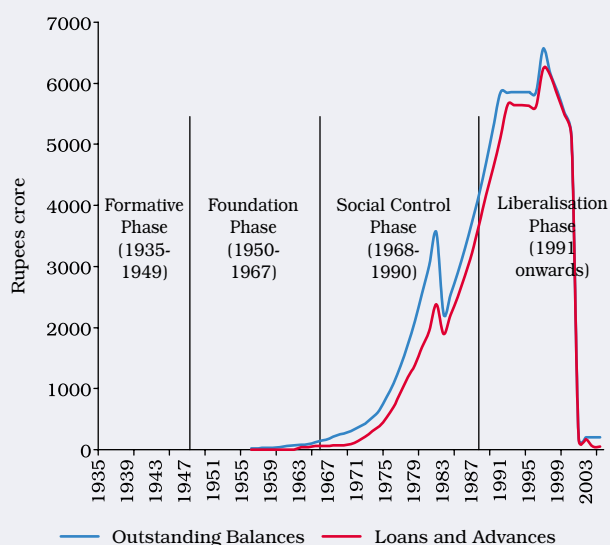
* Includes the amount paid to the Optional Early Retirement Scheme (OERS) optees on account of *ex-gratia*.

Chart VIII.5: Percentage of Surplus (excluding provisions) to Balance Sheet Size



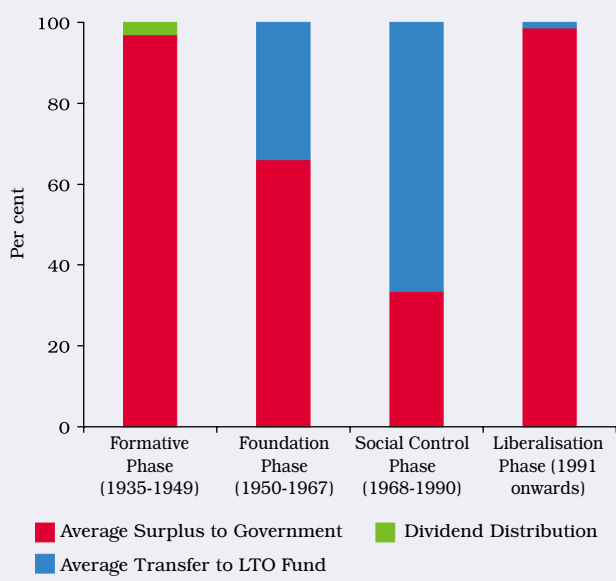
²⁷ Gratuity and Superannuation Fund contribution includes a) Pension Fund, b) Gratuity Fund and c) Leave Encashment (Retired Employees) Fund.

Chart VIII.6: Long-term Funds: Outstanding Balances and Loans and Advances



since 1982. In view of inadequate stock of Government paper to effectively conduct open market operations, the Reserve Bank started converting the entire stock of the Central Government's non-transferable 4.6 per cent undated special securities into marketable securities by the year 2002-03. The increased profit transfer to the Government has since then included compensation payment for the interest differential on account of such conversion, in addition to regular profit transfer (Chart VIII.7).

Chart VIII.7: Distribution of Total Surplus



V. SOME RECENT ISSUES

8.91 Central banks' balance sheets of late have started getting increasing attention. Both international financial organisations as well as individual central banks have played a crucial role. This section highlights three crucial issues for India against the backdrop of some recent developments, which have important future ramifications.

Accounting Standards and Transparency²⁸

8.92 Presently there are three basic accounting standards, viz., the International Accounting Standards (IAS), US Generally Accepted Accounting Principles (US GAAP) and the European Central Bank GAAP being used by central banks. The adoption of IAS has implications for risk management practices including operational decision-making and risk strategies of central banks (Box VIII.3).

8.93 In the Indian context, the Reserve Bank meets the basic requirements of income recognition on an accrual basis, periodic revaluation of the investment portfolio and annual external audit as prescribed by the IAS. In certain cases, the Reserve Bank, in fact, follows even stricter norms than the IAS prescription. For instance, the Reserve Bank marks its investments at the lower of book or market value, thereby adjusting unrealised losses against income without recognising unrealised gains. In case of foreign currency assets, revaluation arising out of exchange rate changes is symmetrically transferred to an adjustment account, denominated as the Currency and Gold Revaluation Account (Jadhav *et al*, 2003) (Box VIII.4).

8.94 The reform phase in India has been marked by a sea change in the direction of increasing transparency in financial statements of the Reserve Bank, particularly since the late 1990s. Although there were some attempts to increase transparency in the Bank's accounts in the second half of 1980s, the Reserve Bank balance sheet did not provide details of various items under income and expenditure; for instance, income used to be shown as net of interest payments and after allocations to internal reserves. The levels of internal reserves were not clearly revealed and clubbed under other liabilities (Tarapore, 1996).

8.95 With the gradual adoption of best accounting/prudential norms, the presentation of the 'Annual Accounts' of the Bank has reflected distinct

²⁸ The cross-country trends on central banking accounting principle as well as transparency has already been analysed in section II above.

**Box VIII.3
International Accounting Standards and Central Banks**

International Accounting Standards (IAS) norms stipulate proper documentation of hedged assets and related hedging instruments, fair valuation of Government debt instruments in central bank balance sheets based on discounted cash-flow techniques if market price is not available and recognition of gold (a non-financial asset) at the lower of cost and net realisable value. While the IAS norms on hedging require revamping of existing risk management strategies that may involve additional costs or operational inefficiencies, the proposed treatment of unrealised gains as income and their distribution as dividend to Government is not acceptable to the central banks from the point of its likely impact on money supply and inflation. There is also an apprehension that the implementation of IAS would impose an additional burden on account of the need to collect statistical data from the financial markets as part of monetary policy role of central banks.

The fair valuation method under IAS 39 (Financial Instruments: Recognition and Measurement) effective from January 1, 2001 calls for periodic valuation of most assets and liabilities at market prices (and not at historical cost) and incorporation of recognised but unrealised profits in net profit computation. This valuation practice is suggested for reasons of higher levels of transparency and accountability. However, the adoption of fair value disclosures has not been uniform across central banks (Annex VIII.3). In

several cases, the valuation change is transferred directly to the revaluation reserve without getting reflected in the income statement. While the revised IAS 21 require all gains and losses (realised and unrealised) on 'monetary assets' to be recognised in the income statement ('non-monetary assets' are not required to be revalued), the IAS 39 introduced a broader use of fair value for assets and liabilities with a proviso that all related gains and losses (both realised and unrealised) be reported in the income statement. The accounting standard allows flexibility by way of valuation of 'loans and receivables' and assets classified as 'held to maturity' at amortised cost. Furthermore, unrealised valuation component in the case of residual financial assets (available for sale) can be transferred directly to revaluation reserves. In IAS 39, all derivatives are required to be fair valued and carried on the balance sheet. The fair valuation accounting norms have an in-built bias for potential volatility of reported earnings and, therefore, raise the basic issue of risk attached to the distribution of unrealised profits as dividends. In the case of IAS 32 (definition of capital), there is an apprehension that its strict application may shift some of the existing capital instruments into the category of 'liabilities' (and not equity). There are also strict rules on impairment and provisioning that prohibit the creation of general banking reserves to cover unforeseen circumstances (Foster, 2004). Cross country experience suggests that a variety of accounting practices prevail across central banks (Table).

Table: Accounting Policies of Select Central Banks

Country	Accounting Practices
Australia	Follows the accounting standards and accounting interpretations issued by the Australian Accounting Standards Board. However, it will adopt and publish its financial statements under Australian equivalents to International Financial Reporting Standards (AIFRS) for the first time for the year ending June 30, 2006. The implementation of the new accounting standards has implications from the point of view of new disclosures.
Singapore	Follows the applicable Singapore Financial Reporting Standards from January 1, 2003. The financial statements disclose less information than would be required under the accounting standards keeping in view the opinion that for effective management of Singapore's monetary policy, it is appropriate not to meet, in some respects, the accounting standards. The accounts are prepared in accordance with the historical cost convention and on an accrual principle. Furthermore, interest income is recognised on a straight-line basis instead of the requirement of an effective yield basis under FRS 18. Investment assets are stated at the lower of cost and market value. Quoted bid, mid or last transaction prices are used as a measure of market value on a consistent basis across asset classes.
Canada	Financial statements are prepared in accordance with the Canadian Generally Accepted Accounting Principles (GAAP).
Italy	Applies in full the accounting rules and recommendations issued by the ECB.
USA	The Federal Reserve prepares its financial statements in accordance with the Financial Accounting Manual that is considered more appropriate to the nature and functions of a central bank than GAAP.
Euro System	The European Central Bank has formulated its own accounting standards to be adopted by the European System of Central Banks (ESCB). However, they are broadly in line with the international accounting standards (IAS) with the exception of different accounting treatment stipulated for unrealised valuation changes.

improvements in terms of transparency and disclosures during the liberalisation phase. A transparent system of allocation to reserves and transfer of profits to Government has already been put in place. In the Bank's accounts for the year ended 1997-98, 'Notes to Accounts' incorporated details of changes in the accounting policies and procedures

introduced during the year while also disclosing information relating to components of 'other liabilities' and 'other assets'. Annual accounts of the Bank now disseminate detailed information relating to composition of the balance sheet, valuation practices, changes in accounting practices and different sources of income and expenditure (Table 8.13).

**Box VIII.4
Gold Valuation in India**

- Gold Coin and Bullion remained unchanged at Rs.44.41 crore at the statutory rate of valuation, at the official parity of 8.47512 grains per rupee or Rupees 21 Annas 3 and Paise 10 per tola in terms of Section 33 (4) during the period from 1935 to 1955.
- With the change in proportional reserve system from 40 per cent of the assets of the Issue Department (and a minimum of Rs.40 crore in gold coin and gold bullion) to a minimum holding of Rs.400 crore in foreign securities and of Rs.115 crore in Gold coin and bullion under the Reserve Bank (Amendment) Act, 1956, it was decided to revalue gold at the official parity price agreed to by the IMF at the time of rupee devaluation in September 1949 viz., 2.88 grains (8.47512 grains earlier) equal to 0.186621 gramme of fine gold per rupee or Rs.62-8 per tola (i.e., equivalent of US \$ 35 an ounce agreed to by the IMF). The gold was revalued on October 6, 1956, increasing the value of gold held in the Issue Department to Rs.117.76 crore. Out of the total revaluation profit of Rs.77.74 crore, a sum of Rs.75 crore was transferred to the Reserve Fund and the balance of Rs.2.74 crore was included in the surplus profit payable to the Government.
- Following the devaluation of the rupee in June 1966, the gold held in the Issue Department was revalued in terms of Section 26 of the Banking Laws (Amendment) Act, 1968 and through an amendment of the Reserve Bank Act at the then prevailing parity rate (IMF) of 0.118489 gramme of fine gold per rupee or Rs.98.44 per tola (Rs.84.39 per 10 grammes) with effect from February 1, 1969. After revaluation, the value of gold held in the Issue Department increased to Rs.182.53 crore (from Rs.115.89 crore) during the year ended June 30, 1969. The profit on the revaluation of gold was transferred to the Reserve Fund.
- An amendment to Section 33(4) of the Reserve Bank Act, 1934 in October 1990 provided for valuation of gold coin/bullion at a rate 'not exceeding the international price' with effect from October 17, 1990. Accordingly, gold was revalued on October 17, 1990 at Rs.1,991.64 grammes, and the appreciation in the value of gold was credited to the Reserve Fund, raising it to Rs.6,500 crore. However, all revaluation gains/losses on account of changes in the gold prices are now being booked in CGRA.

Source: Reserve Bank of India Annual Reports, Various Issues.

Risk Management

8.96 Against the backdrop of the current globalised economic order, one of the biggest challenges for any central bank is effective risk management, which can play an important role in strengthening its balance sheet, and contribute to its creditworthiness in financial markets. Risk management strategy of

central banks is a core component of their overall strategy to maintain financial stability through minimising the scope for systemic risks. Recent developments point out that there is an increasing risk awareness and preparedness on the part of central banks in terms of risk management strategies although it is not considered satisfactory²⁹.

Table 8.13: Increasing Transparency and Disclosures in Annual Financial Statements of RBI

Item	Year of Introduction	Item	Year of Introduction
1	2	1	2
Details of interest receipts, information on interest payments to banks on their CRR balances with the Reserve Bank & contributions to the Statutory Funds	1979-80 to 1984-85	Unrealised gains in foreign currency assets	1994-95
Interest payment as an item of expenditure and contributions to the Statutory Funds	1987-88	Details of income from domestic investments others	1995-96
Details of income receipts, viz., interest, discount, exchange & commission	1990-91	Assets/Liabilities including details of Exchange Fluctuation Reserve, Exchange Equalisation Account and CR	1995-96
Significant Accounting policies and Notes to Accounts	1991-92	Investments in shares of Subsidiaries/ Associate Institutions	1995-96
Details of provisions for exchange cover for Foreign Currency Deposit Schemes	1991-92	Changes in the Accounting Policies and Procedures	1997-98
Table in the Annual Report to depict the trend in income and expenditure	1991-92	Income from Open Market Operations	1999-2000
Interest payments details	1991-92	Transfer of surplus to Government on account of conversion of Special Securities into marketable securities	1999-2000
Break-up of income from domestic & foreign sources	1994-95	National Housing Credit (Long-Term Operations) Fund details	2001-02
Transfers to Contingency Reserves	1994-95	Net earnings from foreign and domestic sources in absolute and percentage terms (excluding capital gain/loss in the case of foreign securities and profit on sale of domestic securities).	2002-03
Appropriation of disposable income	1994-95	Trends in foreign currency and domestic assets	2002-03
Transfer to Government for FCNRA losses	1994-95		
Contingency Reserve balance	1994-95		

²⁹ The Central Banking Publications Survey in 1999 revealed that only 15 per cent of central banks surveyed had an independent risk management unit.

Notwithstanding an attitudinal change in support of the adoption of risk management strategies, an active risk management approach may at times be avoided

if it is not in consonance with a central bank's statutory objectives of financial system and exchange rate stability (Box VIII.5).

Box VIII.5 Risk Management in Central Banking

Various key functions of a central bank, viz., monetary and exchange rate policy, oversight of payment system, supervision and crisis management involve a number of financial and non-financial risks such as reserve management risk, operational risks, risks associated with payment and settlement system, reputational risks, regulatory risks, technological risks and credit risk associated with lender of last resort function.

One of the key areas of risk management for central banks relates to the strategic management of foreign exchange reserves. Central bank investment decisions are often constrained by mandates relating to the objective function, type of assets, investment instruments and other detailed investment guidelines. The underlying idea is that central banks should guard against market, credit and liquidity risks of their investment portfolio. Given the constraints, it is the liquidity, safety and reasonable return considerations that generally underlie the foreign exchange reserve management strategy of central banks. However, the economic compulsions to improve the return on reserve assets have recently encouraged a shift from risk control strategy to a proactive risk management approach. This is getting reflected in an increasing use of private reserve management strategies and methods that are perceived to be aggressive and riskier. With a perceptible change in their risk outlook, several central banks have adopted a focused risk management approach. Under this approach, the emphasis is not only on an efficient allocation and management of foreign exchange reserves but also on the development of sound governance structures with a view to bringing about risk awareness while also infusing an element of discipline through in-built accountability clauses. Furthermore, the good corporate governance principles involving a three-tier governance structure comprising strategic asset allocation, tactical asset allocation and actual portfolio management responsibilities have been institutionalised as part of an appropriate organisational design to ensure a smooth implementation of daily reserve risk management.

Another area of risk management pertains to minimising 'operational risks' arising from inadequate internal processes or unanticipated external events that are viewed critical in the present day central banking environment. The operational risks are generally addressed through suitable provisions for disaster mitigation, crisis management and day-to-day operational risk management while also introducing proper reporting systems and controls. The adoption of best practices and standards has been an important step to reinforce the role of risk controls in a central bank's governance framework.

The establishment of an efficient payments and settlement system has been an integral part of risk management strategy. The objective has been to get as close to a real time transaction, clearing and settlement system as possible with a view to reducing financial float and minimising the risk of a breakdown of the payments system.

In this backdrop, the 'solvency' and 'vulnerability' analysis of central bank portfolios has also assumed significance. The 'Value-at-Risk' (VaR) method is used to quantify central bank solvency and vulnerability. The application of VaR approach to the central bank portfolio is based on the principle of 'economic' and not the 'historical' value of assets and liabilities including off-balance sheet transactions and commitments linked to the role of central banks as guarantors of the stability of the financial system and averters of systemic banking crises. The latter may involve an implicit or explicit deposit guarantee. The solvency analysis, based on VaR, incorporates the likely impact of such contingent liabilities for the quantification and measurement of risk. The assets and liabilities are broken into interest rate (domestic and foreign) and exchange rate positions and the economic value of the central bank portfolio, i.e., the net economic value of central bank equity, based on the VaR, is derived. This is nothing but "equity in terms of the exposure of the central bank positions to risk factors and, therefore, it allows for a direct estimate of how policy variables and exogenous prices bear directly on the ability of the central bank to preserve its solvency" (Blejer & Schumacher, 1998). Given this, the central bank VaR is defined as the worst loss that the central bank portfolio can suffer because of changes in the relevant prices and positions, over a determined horizon, with a certain probability.

The quantification of risks based on VaR is increasingly being adopted by central banks. The Reserve Bank of New Zealand uses VaR model limits and stop-loss limits in respect of its foreign asset portfolio. However, domestic securities held for monetary policy purposes are not covered under VaR. Bank of England uses VaR for monitoring and controlling market risk on the balance sheet while the Central Bank of Italy evaluates the riskiness of foreign exchange positions and securities portfolio on a VaR basis.

Several central banks have already put in place an institutional framework through the setting up of independent risk management units for the proper assessment, regular monitoring and management of risks faced by them (Colombia, Singapore, Korea, Thailand, Canada etc.). The supervision of risk management framework is typically entrusted to the Bank's top management Committee, the Audit Committee, and the Board of Directors – reflective of the importance most central banks attach today to their risk management operations.

Source:

1. Blejer Mario I. and Liliana Schumacher (1998), 'Central Bank Vulnerability and the Credibility of Commitments: A Value-at-Risk Approach to Currency Crises, IMF, May.
2. European Central Bank (2004): "Risk Management for Central Bank Foreign Reserves", May.

Profit Transfers and Reserve Adequacy

8.97 The central banks transfer their profit to the Government although it may not be a first charge on their profit. However, the focus on reserve building before allocation of profit by the central bank to the Government varies from country to country. Wherever the entire profit is required to be transferred to the Government, there is presumably an underlying guarantee that the Government would meet any future losses of the central bank. Notwithstanding this assurance, the central banks consider it prudent to build up their internal reserves to meet any unforeseen contingencies in future.

8.98 In the Indian context, there was no system of allocation to contingency reserves (CR) on a regular basis in the past. However, the need to build up such reserves was felt against the backdrop of difficult circumstances faced in 1993 when the CR fell to Rs.859 crore or 0.5 per cent of total assets of the Bank on account of draw down of huge amount (Rs.4,800 crore) for meeting commitment on exchange loss arising from FCNR (A) Scheme.

8.99 The Reserve Bank of India Act, 1934 prescribes share capital of the Bank at Rs.5 crore under Section 4. There is no specific reference in the Reserve Bank Act relating to the allocation of surplus between the Reserve Bank and the Government. Under Section 46 of the Act, the Government shall transfer to the Reserve Bank rupee securities of the value of Rs.5 crore to be allocated by the latter to the Reserve

Fund³⁰. This Section also provides that the Reserve Bank shall establish and maintain the National Funds *viz.*, the National Rural Credit (Long-Term Operations) Fund, National Rural Credit (Stabilisation) Fund, National Industrial Credit (Long-Term Operations) Fund and the National Housing Credit (Long-Term Operations) Fund through crediting of an initial sum, and such further sums of money as the Reserve Bank may contribute every year. The provisions of Section 47 of the Act mandate that after making provisions for bad and doubtful debts, depreciation in assets, contributions to staff and superannuation funds and for all other matters for which provision is to be made by or under the Act or which are usually provided for by bankers, the balance of the profits may be transferred to the Government. Thus, the Statute provides for the creation of provisions, as per prudent banking practice. Even in the absence of any statutory backing, the Reserve Bank has used the enabling provisions of Section 47 of the Reserve Bank Act, 1934 to create a number of reserves, and strengthened them in line with the central bank practices internationally (Box VIII.6).

8.100 Against the above backdrop – to hedge against variability in prices of domestic and foreign assets, possible losses on account of policy intervention, external shocks and other unforeseen systemic risk – in line with the suggestion of statutory auditors, the Reserve Bank has been pursuing a proactive policy of strengthening the balance sheet and accordingly set an indicative target of 12 per cent of its total assets to set aside under CR (including ADR

Box VIII.6

Reserve Accounts Maintained by the Reserve Bank

Contingency Reserve Account (CR)

The CR is maintained by the Reserve Bank in terms of the provisions contained in Section 47 of the Reserve Bank Act, 1934. This is maintained out of retained profits of the Reserve Bank for meeting unforeseen losses and contingencies which could arise on account of foreign exchange transactions, revaluation of foreign currency assets (beyond the balance in CGRA), depreciation of domestic and foreign securities, exchange guarantees, monetary/exchange rate operations, systemic risk, internal frauds, *etc.*

Asset Development Reserve (ADR)

This was created in 1997-98 to meet internal capital expenditure requirements of the Reserve Bank and to make investments in its subsidiaries and associate institutions with the aim of reaching a level for ADR at one per cent of the Reserve Bank's

total assets within the overall target of 12 per cent for CR by end-June 2005.

Currency and Gold Revaluation Account (CGRA)

All revaluation gains/losses on account of changes in the exchange rates and gold prices are booked in CGRA. A rupee appreciation implies lower rupee value of foreign currency assets and the corresponding depletion of the balance in the CGRA and *vice versa*. It was earlier named as 'Exchange Fluctuation Reserve' *i.e.*, an accounting head for valuation changes in exchange rates and gold. The Fund is volatile responding to movements in exchange rate of the US dollar *vis-à-vis* other currencies and gold price movements.

Source:

Reserve Bank of India Annual Reports, Various Issues.

³⁰ The appreciation gains on account of revaluation of gold from time to time were credited to this Fund. The cumulative appreciation gains credited to the Fund up to October 1990 amounted to Rs.6,495 crore.

of one per cent) to be achieved in phases by end-June 2005 (RBI, 1997-98). Towards this goal, the Reserve Bank accumulated a balance of Rs.60,840 crore under CR and ADR taken together by end-June 2003, which was 11.7 per cent of its total assets. However, with the introduction of the MSS and the resultant expansion of the Reserve Bank's balance sheet, the accumulated balance in CR and ADR taken together at Rs.68,811 crore worked out lower at 10.1 per cent at end June 2005.

VI. CONCLUSIONS

8.101 Analysis of the Reserve Bank's balance sheet over the last seven decades reveals the correlation of its evolution to shifts in the policy regime as well as changes in the macroeconomic environment. In line with the functional evolution of the Reserve Bank across the different phases, the balance sheet of the Bank has undergone considerable changes. From the primacy of the note issuance function during the formative years, to slow but steady fiscal ascendancy during the early phase of planning which culminated into a period of fiscal dominance (and higher pre-emption of the resources of the banking system) coupled with strong developmental role, the Reserve Bank balance sheet has undergone a structural transformation in the 1990s with dominance of foreign assets, market determination of public debt management and reduction in reserve requirements.

8.102 Cross-country experiences suggest that the central banks, depending on the composition of their balance sheets, broadly fall into two distinct categories. Some of them have most of their assets in the form of Government securities, while others hold their assets in foreign exchange reserves and gold. While the former may signify a case of fiscal dominance, its impact on revenues of the central bank gets linked to the financing terms, which may not be strictly based on market principles. The risk profile of the second category, *i.e.*, central banks with large foreign currency assets is substantially different as its balance sheet is constantly exposed to interest and exchange rate risks with the attendant implications of valuation changes and an adverse impact on its financial results. With the recent compositional shift in the Reserve Bank's balance sheet towards foreign currency assets and the resultant shift in the risk-return profile of the Bank, such concerns assume greater significance in the Indian context. With the change in asset composition of the Reserve Bank's balance sheet, relatively lower

rate of return on foreign currency assets, volatility in exchange and interest rates in the global markets and adoption of mark to market valuation norms with asymmetric treatment for appreciation gains, various risks, *viz.*, market risk, credit risk, liquidity risk, risks arising out of intervention operations, operational risk and lender of last resort risk, have assumed greater significance in the context of the health of the Reserve Bank's balance sheet and have intensified the need for adoption of effective and adequate risk management measures. The volatility in financial asset prices during the deregulation phase has had a bearing on the balance sheet of the Reserve Bank to the extent that it is asymmetric in terms of its impact on assets and liabilities. In the wake of these developments, the Bank has initiated several measures to ensure revaluation of both domestic and foreign assets on a prudential basis and also build up adequate cushion in the form of contingency reserves so as to impart policy flexibility in a liberalised environment.

8.103 Globally, there is lot of uncertainty relating to the likely impact of macroeconomic imbalances on financial asset prices. This makes the task of central bankers even more difficult in respect of their portfolio management decisions as any adverse exchange rate movements in international markets could cause significant losses to their foreign exchange portfolio. This issue is particularly important for countries where central banks have built up foreign currency assets through the issue of short-term liability instruments or central bank paper at market rates of interest and in cases where the revaluation risks are borne by central banks. This holds true for the Reserve Bank because it manages foreign exchange reserves and absorbs the valuation impact of exchange and interest rate movements in the international market.

8.104 A relevant issue in this context is that of sterilised intervention. While *per se* sterilised intervention involves adjustment within the assets side of the Reserve Bank's balance sheet (in terms of substitution of domestic assets by foreign assets), recent instruments such as market stabilisation bonds, though innovative, causes an expansion of the balance sheet. Such an expansion of the balance sheet may necessitate corresponding increase in contingency reserves. Thus, in the days to come, a contextual analysis of transfer of surplus and provision of contingency reserves would be needed in the wake of appropriate risk management strategy on the part of the Reserve Bank.

8.105 Another issue of importance is linked to the fact that the central banks now face competitive conditions in the area of various financial services being provided to the private sector. The increasing pressures on their incomes have encouraged consolidation measures aimed at cost effective services supported by the newer technologies. Certain central banks have also started periodic reviews of priced services operations and other system wide activities to take a view on provision and pricing of these services.

8.106 While the Reserve Bank has continued to conduct banking business of the Government, the view that has gained prominence is that the Reserve Bank should assign the retail banking business of the Government in favour of the agency banks with a view to ensuring that in the long run, the Bank will maintain only the principal accounts of the Government, leaving the day to day banking business to commercial banks functioning as its agents (Reddy, 2002). Another issue under consideration relates to the cost of conducting State Government business. Under the existing arrangement, the Bank is not entitled to receive any remuneration for the conduct of ordinary banking business of the Government other than such advantage that may accrue to it from holding of cash balances free of obligation to pay interest thereof.

Furthermore, the Reserve Bank incurs expenditure in terms of reimbursement of costs incurred by agency banks for conducting Government business. Country practices also reveal that the cost of conducting Government business in most countries is borne by the respective Governments and not the central bank. A rationalisation measure being contemplated in respect of remuneration payment to agency banks is to shift from the present cost based system to a system of bidding for Government business by agency banks.

8.107 Finally, to reiterate, balance sheets of central banks are unlike those of commercial organisations. A larger central bank balance sheet does not necessarily connote sound macroeconomy. Illustratively, a number of central banks of developed countries have a smaller balance sheet relative to the size of their economy. The balance sheet of the central bank needs to adhere to the principles of sound central banking ensuring price and financial stability on the one hand, and its developmental role on the other. Transparency is a necessary precondition in this regard. A transparent central bank balance sheet would go a long way to enhance the credibility of the central bank and efficiency of monetary policy. The evolution of balance sheet of the Reserve Bank over nearly seven decades bears testimony to these principles.

ANNEX VIII.1: Select Country Practices relating to Distribution of Profit

Country	Distribution of Profit
Euro system	Under the ESCB Statute, up to 20 per cent of its profit in any year may be transferred to the general reserve fund subject to a limit equal to 100 per cent of the ECB's capital. The remaining net profit is to be distributed to the National Central Banks and shareholders of the ECB, in proportion to their paid-up shares. However, the Governing Body may decide not to transfer net profit to the general reserve fund in any year.
Japan	Under Article 53 of the Bank of Japan Law, 5 per cent of net income for the fiscal year is required to be transferred to the legal reserves (the actual allocation may be higher) while shareholders are paid dividend at the rate of 5 per cent of the face value of shares and the remainder of its income is paid to the government.
Australia	Under Section 30 of the Reserve Bank Act 1959 net profit including transfers to/from unrealised profits reserve earnings available for distribution is payable to the Government after setting aside amounts for contingencies and for transfer to the Reserve Bank Reserve Fund that are determined by the Treasurer in consultation with the Reserve Bank Reserve Board. However, the actual profit distribution is phased out and transferred in more than one tranche extending to more than one financial year.
Singapore	Net profit for the year including transfer of reserves from Currency Fund is paid to the Government by way of contribution to Consolidated Fund, in line with the Statutory Corporations (Contributions to Consolidated Fund) Act, at 20 per cent of the profit for the year in 2005 and return of profit.
Korea	Transfers from the voluntary reserve make up for net loss, if any. Furthermore, in a situation of loss e.g., in 2004, undivided profit surplus of the previous period was transferred to the Government's General Revenue Account.
Germany	Net profit is transferred to the Federal Government after setting aside amount for statutory reserves. In the event of statutory reserves being at their fixed upper limit, the entire surplus is distributed to government.
Canada	Net revenue of the Bank is remitted to the Receiver General for Canada as the statutory reserve is at its fixed upper limit since 1955.
Portugal	Net profit for the year is distributed equally between allocation to reserves and the State.
UK	Profit of both Issue (entire) and Banking (some amount allocated to reserves) departments is payable to the Treasury.
Sweden	Notwithstanding a negative position in 2004, the Central Bank made a dividend payment to the Treasury and financed it through a reduction in the monetary policy repo.
South Africa	In terms of Section 24 of the South African Reserve Bank Act, 1989, nine-tenths of the surplus of the Bank, remaining after provisions normally provided for and payment of dividends (stipulated at 10 cents per share) is to be paid to the Government and one-tenth has to be credited to the statutory reserve fund.
Brazil	Net profit after constitution or reversal of reserves is transferred to the National Treasury. The negative result <i>i.e.</i> , excess of expenses over revenues relating to all central bank operations constitutes a liability of Treasury to Central Bank.
Italy	Net profit for the year, after allocations to the Ordinary Reserve and Extraordinary Reserve accounts and distribution of dividend to shareholders, is transferred to the State.
Norway	A third of the capital in the Transfer Fund that is built up out of any surplus after provisions for or transfers from the Adjustment Fund is transferred to the Treasury every year.
Russia	Under Article 23 of the 2005 Federal Budget Law, the Bank of Russia must transfer funds to the federal budget amounting to 80 per cent (up from 50 per cent earlier) of its profit for 2004 remaining after the payment of taxes and duties in accordance with the Tax Code of the Russian Federation.
Chile	In terms of Article 77 of Law 18,840, a deficit produced in any year will be absorbed with a charge to constituted reserves. When there are no reserves or they are insufficient, the deficit produced in a certain period will be absorbed with a charge to paid-in capital. However, even shareholders' equity was not sufficient to absorb the loss on account of the effects of exchange rate variations on assets in foreign currency at end December 2003, resulting in a shareholders' equity deficit.
USA	Under Section 16 of the Federal Reserve Act, Reserve Banks are required by the Board of Governors to transfer to the US Treasury as interest on Federal Reserve notes excess earnings, after providing for the cost of operations, payment of dividends, and reservation of an amount necessary to equate surplus with capital paid-in.

Source: Central Bank Balance Sheets.

BALANCE SHEET OF THE RESERVE BANK

ANNEX VIII.2: Valuation Norms for Government Securities/Foreign currency denominated Bonds of Select Central Banks

Australia	Domestic securities and marketable foreign government securities are valued at market prices on the last business day of June except when contracted for sale under repurchase agreements .
Canada	Assets and liabilities in foreign currencies are valued at the rates of exchange prevailing at the balance sheet dates. Investments in treasury bills and bonds are recorded at cost and are adjusted for amortisation of purchase discounts and premiums using the constant yield method for TBs and bankers' acceptances and the straight line method for bonds.
Euro system	The Euro system follows the harmonised accounting rules under which gold, foreign exchange, security holdings and financial instruments are valued at market rates and prices at the end of each quarter. The revaluation takes place on an item-by-item basis for securities, interest rate swaps, futures, forward rate agreements and other interest rate instruments. Foreign exchange holdings are revalued on a currency-by-currency basis.
Germany	Gold, foreign currency instruments, securities and financial instruments are valued at mid-market rates and prices on the balance sheet date.
India	Foreign assets of Reserve Bank are translated at the exchange rates prevailing on the last business day of the week and also on the last business day of the month. Foreign securities, other than Treasury bills are valued at the lower of book value or market price at prevailing exchange rates ³¹ . Treasury bills are valued at cost. Gold is valued as at the end of the month at 90 per cent of the daily average price quoted at London for the month. SDRs and RTP are valued at IMF's official rates. Rupee securities are valued at lower of book value or market price. Where the market price for such securities is not available, the rates are derived based on the yield curve prevailing on the last business day of the month.
Japan	Effective from fiscal 2004 Government securities are being valued at amortised cost determined by the moving average method while foreign currency denominated bonds are valued at market price.
Malaysia	Gold, Securities and investments are stated at cost. Assets and liabilities in foreign currencies are revalued into domestic currency at rates of exchange ruling on the balance sheet date.
Portugal	Assets, liabilities and off-balance sheet instruments denominated in foreign currency are converted into euro at the exchange rate prevailing on the balance sheet date while the foreign exchange gains or losses in respect of foreign currency transactions are worked out on an item-by-item basis by reference to the respective weighted average cost. Marketable securities are valued at market price while non-marketable securities are recorded at historical cost.
Russia	Precious metals are accounted for at their acquisition cost while foreign currency assets and liabilities are revalued at the official exchange rates. Government securities in the investment portfolio are accounted for at their acquisition price while those in the trade portfolio are revalued at market rates (if available) and at their acquisition price otherwise.
Singapore	Gold, foreign assets and Government Treasury bills and bonds are stated at cost. Provision is, however, made for diminution in value, if any, based on the lower of cost or market value on an individual investment basis. Assets and liabilities in foreign currencies are translated into domestic currency at the rates of exchange ruling on the balance sheet with few exceptions.
South Africa	Financial instruments are measured initially at cost, including transaction costs. Subsequent measurement in respect of financial assets classified as 'held for trading' and 'available for sale' is at fair values (quoted market prices for quoted financial instruments and accepted valuation techniques for unquoted financial instruments). However, financial assets categorised as 'held to maturity', originated loans and receivables and non-trading liabilities are measured at amortised cost and are re-measured for impairment losses. Revaluation gains and losses on gold and foreign exchange transactions (including forward exchange contracts) have no impact on the Bank's statement as these are transferred to the account of the South African Government.
Thailand	Domestic securities are valued at cost after amortisation of premiums or discounts while foreign securities are stated at fair value.
UK	Government securities and other sterling debt securities are held as investment securities and are valued at cost adjusted for the amortisation of premiums or discounts on a straight-line basis over the period to maturity. Non-sterling investment securities are recorded at cost, in currency of denomination, adjusted for the amortisation of premiums or discounts on a straight-line basis over the period to maturity.

³¹ Profit/loss on sale of foreign currency assets is recognised with respect to the book value.

ANNEX VIII.3: Treatment of Unrealised Gains/Losses by Select Central Banks

Country	Treatment of unrealised gains/losses
Euro system	Unrealised exchange rate and market price valuation gains on the holdings of foreign currency assets and gold from the quarterly revaluation are not recognised as income but are credited to a revaluation account. Unrealised losses are taken to the profit and loss account at the end of the year if they exceed previous revaluation gains registered in the revaluation accounts on the liabilities side. Such losses are reversible on subsequent realisation of the asset or liability in question and not against any future unrealised gains. Unrealised losses resulting from the revaluation of a given security, or a foreign currency or holding of gold are not netted against unrealised gains in other securities or currencies.
France	Unrealised foreign exchange losses are taken to the profit and loss account and then covered by drawing on the "Revaluation Reserve of State reserves".
UK	While any net residual unrealised gain arising from exchange rate movements on the non-sterling investment securities is taken to an investment revaluation reserve with any net unrealised loss taken to the profit and loss account, all exchange gains or losses arising from exchange rate movements on the non-sterling securities available for active management are taken to the profit and loss account.
Sweden	Unrealised price and exchange rate gains and losses are reported separately. Unrealised gains and losses are transferred to the special revaluation accounts. If the unrealised losses exceed the unrealised gains in the corresponding revaluation account at the end of the year, the difference is transferred to the profit and loss account. Unrealised losses in a particular security, a particular currency or gold are not netted against unrealised gains in other securities, currencies or gold.
Thailand	Unrealised gains and losses from revaluation (price) of foreign securities are shown as a separate component of capital and are recognised in the profit and loss account on disposal. Unrealised gains and losses from conversion of foreign assets and liabilities at year-end exchange rates are recorded in the profit and loss account.
Australia	Realised and unrealised gains or losses on foreign currency and those arising from changes in market valuations of marketable foreign government securities and Australian dollar securities are immediately taken to profit but only realised gains are available for distribution.
Germany	Unrealised gains are not recognised as income but are transferred direct to a revaluation account. Unrealised losses are taken into the profit and loss account if they exceed previous revaluation gains registered in the corresponding revaluation account. Netting of unrealised losses in any given security, in any currency or in gold holdings is not permitted against unrealised gains in other securities, currencies or gold.
Portugal	Realised gains and losses arising from financial operations are taken to the profit and loss account on the settlement date while the revaluation differences between the market value and the weighted average cost are transferred in the course of the year to a specific revaluation account for each type of asset. At the end of the year negative revaluation differences are recognised in profit and loss account as 'write downs' on financial assets and positions. Revaluation differences in any one security or currency are not netted against each other.
South Africa	Gains and losses arising from a change in the fair value of available for sale assets are recognised directly in reserves and on sale of these assets, the cumulative gain or loss recognised in equity (reserve account) is transferred to the income statement of the period in which it takes place. Gains and losses arising from a change in the fair value of trading instruments, and on amortisation of premiums or discounts of financial instruments carried at amortised cost are recognised in the income statement of the period in which they arise.
India	Only realised gains are recognised. Unrealised gains/losses on valuation of gold and translation of foreign currency assets and liabilities are not taken to Profit and Loss Account but instead booked in Currency and Gold Revaluation Account.
Russia	Unrealised exchange rate differences are accounted for as "Accrued Exchange Rate Differences" and are not included in the Profit and Loss Account. However, if the balance in 'Accrued Exchange Rate Differences' Account is not sufficient, negative unrealised exchange rate differences are accounted for as Bank of Russia operating expenses.
USA	US government securities and investments denominated in foreign currencies are recorded at cost, on a settlement date basis, and adjusted for amortisation of premiums or accretion of discounts on a straight-line basis. Realised and unrealised gains and losses on investments denominated in foreign currencies arising on account of revaluation at current market exchange rates on a daily basis are reported as "Foreign currency gains (losses), net".