Half Yearly Report on Management of Foreign Exchange Reserves

April-September 2010

Reserve Bank of India
Department of External Investments and Operations
Central Office
Mumbai

Report on Management of Foreign Exchange Reserves

Contents

Part I: Objectives, Statutory Provisions and Movement of Reserves

I.1 Introduction

Based on a review undertaken in 2003 of the policy and operational matters relating to the management of the reserves, the Reserve Bank of India had decided to compile and make public half-yearly reports on management of foreign exchange reserves for bringing about more transparency and enhancing the level of disclosure. The first such report with reference to the position as on September 30, 2003 was placed in the public domain on February 3, 2004. These reports are now being prepared half yearly with reference to the position as of March 31 and September 30 each year with a time lag of about three months. The present report is the 15th in the series with reference to the position as on September 30, 2010. The report is divided into three parts: Part I gives the objectives of reserves management, statutory provisions, movement of reserves and information on the external liabilities *vis-à-vis* the foreign exchange reserves, prepayment / repayment of external debt, Financial Transaction Plan (FTP) of the IMF, adequacy of reserves, *etc.* An overview of the risk management practices followed by the Reserve Bank of India in relation to reserves management is covered in Part II. Part III of the report provides information on transparency and disclosure practices followed by the RBI with regard to the reserves management.

I.2 Objectives of Reserves Management

The guiding objectives of foreign exchange reserves management in India are similar to those of many central banks in the world. The demands placed on the foreign exchange reserves may vary widely depending upon a variety of factors including the exchange rate regime adopted by the country, the extent of openness of the economy, the size of the external sector in a country's GDP and the nature of markets operating in the country. While liquidity and safety constitute the twin objectives of reserve management in India, return optimisation becomes an embedded strategy within this framework.

I.3 Legal Framework and Policies

The Reserve Bank of India Act, 1934 provides the overarching legal framework for deployment of reserves in different foreign currency assets (FCA) and gold within the broad parameters of currencies, instruments, issuers and counterparties. The essential legal framework for reserves management is provided in sub-sections 17 (6A), 17(12), 17(12A), 17(13) and 33 (6) of the above Act. In brief, the law broadly permits the following investment categories:

(i) deposits with other central banks and the Bank for International Settlements (BIS);

(ii) deposits with foreign commercial banks;

(iii) debt instruments representing sovereign/sovereign-guaranteed liability with residual maturity for the debt papers not exceeding 10 years;

(iv) other instruments / institutions as approved by the Central Board of the Reserve Bank in accordance with the provisions of the Act; and

(v) dealing in certain types of derivatives.

RBI has framed appropriate guidelines stipulating stringent criteria for issuers / counterparties / investments with a view to enhancing the safety and liquidity aspects of the reserves.

I.4 Movement of Reserves

I.4.1 Review of Growth of Reserves since 1991

India's foreign exchange reserves have grown significantly since 1991. The reserves, which stood at US$ 5.8 billion at end-March 1991 increased gradually to US$ 54.1 billion by end-March 2002, after which it rose steadily reaching a level of US$ 309.7 billion in March 2008. The reserves declined to US$ 252.0 billion in March 2009. The reserves stood at US$ 292.9 billion as on September 30, 2010 compared to US $ 279.1billion as on March 31, 2010. (Table 1 & Chart 1).

Although both US dollar and Euro are intervention currencies and the FCA are maintained in major currencies like US dollar, Euro, Pound Sterling, Japanese Yen etc. the foreign exchange reserves are denominated and expressed in US dollar only. Movements in the FCA occur mainly on account of purchases and sales of foreign exchange by the RBI in the foreign exchange market in India. In addition, income arising out of the deployment of the foreign exchange reserves and the external aid receipts of the Central Government also flow into the reserves. The movement of the US dollar against other currencies in which FCA are held also impact the level of reserves in US dollar terms.

Table 1 : Movement in Foreign Exchange Reserves					
					(US$ million)
Date	**FCA**	**SDR**	**Gold**	**RTP**	**Forex Reserves**
30-Sep-07	239,954	2 (1)	7,367	438	247,761
31-Mar-08	299,230	18 (11)	10,039	436	309,723
30-Sep-08	277,300	4 (2)	8,565	467	286,336
31-Mar-09	241,426	1 (1)	9,577	981	251,985
30-Sep-09	264,373	5224 (3297)	10,316	1365	281,278
31-Mar-10	254,685	5006 (3297)	17,986	1380	279,057
30-Sep-10	265,231	5130 (3297)	20,516	1993	292,870

Notes:

1. FCA (Foreign Currency Assets): FCAs are maintained as a multi-currency portfolio comprising major currencies, such as, US dollar, Euro, Pound sterling, Japanese yen, etc. and are valued in terms of US dollars.

2. FCA excludes US$ 250.0 million invested in foreign currency denominated bonds issued by IIFC (UK) since March 20, 2009.

3. SDR (Special Drawing Rights): Values in SDR have been indicated in parentheses. They include SDRs 3082.5 million (equivalent to US $ 4883 million) allocated under general allocation and SDRs 214.6 million (equivalent to US$ 340 million) allocated under special allocation by the IMF on August 28, 2009 and September 9, 2009, respectively.

4. Gold: Gold includes US$ 6699 million reflecting the purchase of 200 metric tonnes of gold from IMF during October 19-30 2009. The physical stock of gold which was 357.75 tonne as at end September 2009, increased to 557.75 tonne as at end September, 2010.

5. RTP refers to the Reserve Tranche Position in the IMF.

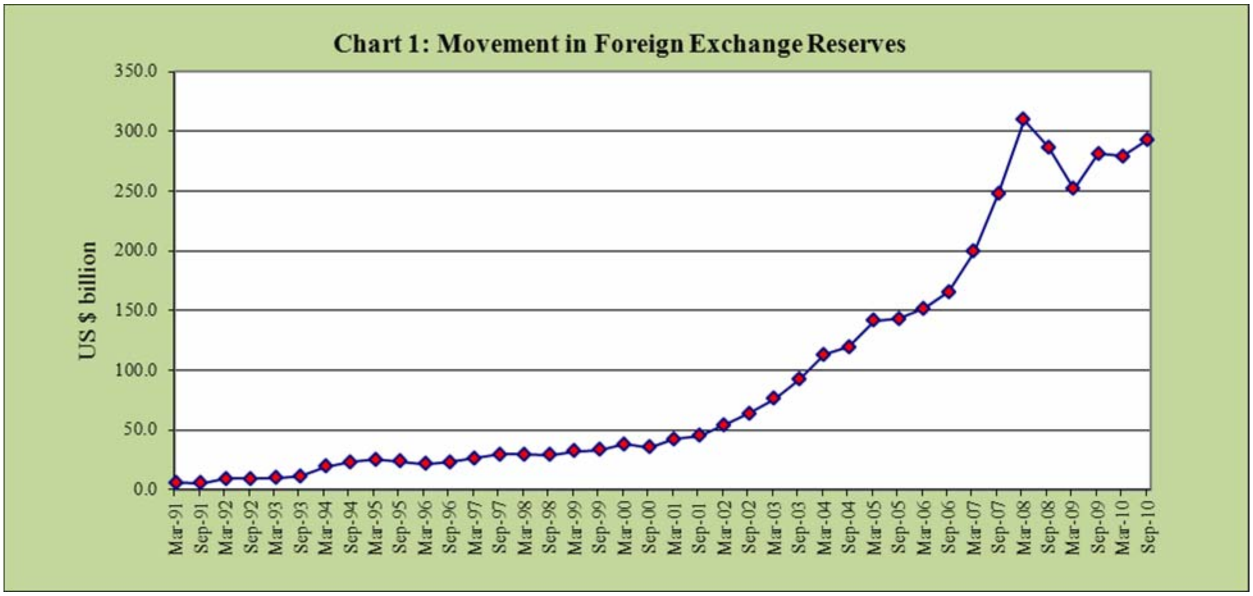

Chart 1: Movement in Foreign Exchange Reserves

I.4.2. Sources of Accretion to the Reserves Table 2 provides details of the major sources of accretion to foreign exchange reserves during the period from March 1991 to end-September 2010.

Table 2: Sources of Accretion to Foreign Exchange Reserves since 1991			
			(US$ billion)
		Items	**1991-92 to 2010-11 (Upto September 2010)**
A		Reserves as at end-March 1991	5.8
B.I.		Current Account Balance	-144.7
B.II.		Capital Account (net) (a to e)	415.7
	a.	Foreign Investment	236.2
		Of which	
		FDI	102.7
		FII	103.0
	b.	NRI Deposits	39.1
	c.	External Assistance	24.3
	d.	External Commercial Borrowings	76.7
	e.	Other items in Capital Account*	39.0
B.III.		Valuation Change	16.5
		Reserves as at end-September 2010 (A+BI+BII+BIII)	292.9

***** : Include errors and omissions.

Table 3 provides details of sources of variation in foreign exchange reserves during 2010-11 vis-à-vis the corresponding period of the previous year. On balance of payments basis (i.e., excluding valuation effects), the foreign exchange reserves increased by US$ 7 billion during April-September 2010 as against an increase of US$ 9.5 billion during April-September 2009. The valuation gain, reflecting the depreciation of the US dollar against the major international currencies, accounted for US$ 6.8 billion during April-September 2010 as compared with a valuation gain of US$ 19.8 billion during April-September 2009. Accordingly, valuation gain during April-September 2010 accounted for 49.3 per cent of the total increase in foreign exchange reserves.

Table 3: Sources of Variation in Foreign Exchange Reserves				
				(US$ billion)
Items			2009-10	2010-11
			April-September	April-September
I.		**Current Account Balance**	**-13.3**	**-27.9**
II.		**Capital Account (net) (a to f)**	**22.8**	**34.9**
	a.	Foreign Investment (i+ii)	30.3	29.1
		(i) Foreign Direct Investment	12.3	5.3
		(ii) Portfolio Investment	17.9	23.8
		Of which:		
		FIIs	15.3	22.3
		ADRs/GDRs	2.7	1.6
	b.	External Commercial Borrowings	0.7	6.0
	c.	Banking Capital	1.0	0.8
		of which: NRI Deposits	2.9	2.2
	d.	Short-Term Trade Credit	-0.05	6.7
	e.	External Assistance	1.0	3.0
	f.	Other items in capital account*	-10.2	-10.7
III.		**Valuation Change**	**19.8**	**6.8**
		Total (I+II+III) @	**29.3**	**13.8**

Note:*: (i) 'Other items in capital account' apart from 'Errors and Omissions' also include leads and lags in exports, funds held abroad, advances received pending issue of shares under FDI and transactions of capital receipts not included elsewhere.(ii) Increase in reserves (+) / Decrease in reserves (-).
@: Difference, if any, is due to rounding off.

An analysis of the sources of reserves accretion during the entire reform period from 1991 onwards reveals an increase in net foreign direct investment (FDI) from US$ 129 million in 1991-92 to US$ 5.3 billion during April-September 2010-11. The cumulative FDI investment up to end-September 2010 has been US$ 102.7 billion. The cumulative net FII investments which has increased from US$ 1 million at end-March 1993 to US$ 103.0 billion at end-September 2010, has also largely contributed to the increase in foreign exchange reserves. The net inflows of US$ 22.3 billion by FIIs during April-September 2010-11 led to an increase in cumulative portfolio stock to US$ 133.5 billion at end-September 2010 from US$ 109.7 billion at end-March 2010. Outstanding NRI deposits increased from US$ 14.0 billion at end-March 1991 to US$ 47.9 billion as at end-March 2010. As at end-September 2010, the outstanding NRI deposits stood at US$ 49.9 billion.

On the current account, India’s exports, which were US$ 18.3 billion during 1991-92 increased to US$ 182.2 billion in 2009-10. During April-September 2010-11, India's export amounted US$ 110.5 billion as compared with US$ 82.6 billion during April-September 2009. India’s imports which were US$ 24.1 billion in 1991-92 increased to US$ 300.6 billion in 2009-10. During April-September 2010-11, India's import amounted to US$ 177.5 billion as compared with US$ 138.4 billion during April-September 2009. Invisibles, in particular private remittances, have contributed significantly to the current account. Net invisibles inflows, comprising mainly of private transfer remittances and services, increased from US$ 1.6 billion in 1991-92 to US$ 80.0 billion in 2009-10. During April-September 2010, net invisibles stood at US$ 39.1 billion as compared with US$ 42.5 billion during April-September 2009. India’s current account balance which was in deficit at 3.0 per cent of GDP in 1990-91 turned into a surplus during the period 2001-02 to 2003-04. However, this could not be sustained in the subsequent years. In the aftermath of the global financial crisis, the current account deficit increased from 1.3 per cent of GDP in 2007-08 to 2.4 per cent of GDP in 2008-09 and further to 2.9 per cent in 2009-10.

I.5 External Liabilities vis-à-vis Foreign Exchange Reserves

The accretion of foreign exchange reserves needs to be seen in the light of total external liabilities of the country. India’s International Investment Position (IIP), which is a summary record of the stock of country's external financial assets and liabilities as at end September 2010 is furnished in Table 4.

The net IIP as at end September 2010 was negative at US$ 211.1 billion, implying that our external liabilities are more than the external assets. The net IIP as at end September 2008 and 2009 was US$ (-) 81.1 billion and US$ (-) 103.4 billion respectively.

Table 4: International Investment Position of India		
		(US$ billion)
	Item	**September 2010 (P)**
A	**Total External Assets**	**401.7**
1.	Direct Investment Abroad	89.2
2.	Portfolio Investment	1.0
3.	Other Investments	18.6
4.	Foreign Exchange Reserves	292.9
B	**Total External Liabilities**	**612.8**
1.	Direct Investment in India	191.7
2.	Portfolio Investment	164.3
3.	Other Investments	256.8
	Net IIP (A-B)	**(-)211.1**
P: Provisional.		

I.6 Adequacy of Reserves

Adequacy of reserves has emerged as an important parameter in gauging the ability to absorb external shocks. With the changing profile of capital flows, the traditional approach of assessing reserve adequacy in terms of import cover has been broadened to include a number of parameters which take into account the size, composition and risk profiles of various types of capital flows as well as the types of external shocks to which the economy is vulnerable. The High Level Committee on Balance of Payments, which was chaired by Dr. C. Rangarajan, erstwhile Governor of the Reserve Bank of India, had suggested that, while determining the adequacy of reserves, due attention should be paid to payment obligations, in addition to the traditional measure of import cover of 3 to 4 months. In 1997, the Report of Committee on Capital Account Convertibility under the chairmanship of Shri S.S.Tarapore, erstwhile Deputy Governor of the Reserve Bank of India suggested alternative measures of adequacy of reserves which, in addition to trade-based indicators, also included money-based and debt-based indicators. Similar views have been held by the Committee on Fuller Capital Account Convertibility (Chairman: Shri S.S.Tarapore, July 2006). In the recent period, assessment of reserve adequacy has been influenced by the introduction of new measures. One such measure requires that the usable foreign exchange reserves should exceed scheduled amortisation of foreign currency debts (assuming no rollovers) during the following year. The other one is based on a 'Liquidity at Risk' rule that takes into account the foreseeable risks that a country could face. This approach requires that a country's foreign exchange liquidity position could be calculated under a range of possible outcomes for relevant financial variables, such as, exchange rates, commodity prices, credit spreads etc. Reserve Bank of India has been undertaking exercises based on intuition and risk models to estimate 'Liquidity at Risk (LAR) of the reserves.

The traditional trade-based indicator of reserve adequacy, *viz*, import cover of reserves, which fell to a low of three weeks of imports at end-December 1990 reached a peak of 16.9 months of imports at the end of March 2004. At the end of September 2010, the import cover stands at 10.3 months. The ratio of short-term debt[1] to the foreign exchange reserves declined from 146.5 per cent at end-March 1991 to 12.5 per cent as at end-March 2005, but increased slightly to 12.9 per cent as at end-March 2006. However, with expansion in the coverage of short-term debt, the ratio increased to 14.8 per cent at end-March 2008, to 17.2 per cent at end-March 2009 and 18.8 per cent at end-March 2010 and further to 22.5 per cent at end-September 2010. The ratio of volatile capital flows (defined to include cumulative portfolio inflows and short-term debt) to the reserves declined from 146.6 per cent as at end-March 1991 to 47.9 per cent at end-March 2009, but increased to 58.1 per cent as at end-March 2010 and further to 68.1 as at end-September 2010.

I.7. Management of Gold Reserves

The Reserve Bank held 557.75 tonnes of gold forming about 7.0 per cent of the total foreign exchange reserves in value terms as on September 30, 2010. Of these, 265.49 tonnes are held abroad (65.49 tonnes since 1991 and further 200 tonnes since November 2009) in deposits / safe custody with the Bank of England and the Bank for International Settlements.

I.8 Investment Pattern and Earnings of the Foreign Currency Assets

The foreign currency assets are invested in multi-currency, multi-asset portfolios as per the existing norms which are similar to the best international practices followed in this regard. As at end-September 2010, out of the total foreign currency assets of US$ 265.2 billion, US$ 146.4 billion was invested in securities, US$ 113.6 billion was deposited with other central banks, BIS and the IMF and US$ 5.2 billion was placed with the External Asset Managers (EAMs) **(**Table 5**).** A small portion of the reserves has been assigned to the EAMs with the main objective of gaining access to and deriving benefits from their expertise and market research.

Table 5 : Deployment Pattern of Foreign Currency Assets		
		(US$ Million)
	As on September 30, 2010	**As on March 31, 2010**
Foreign Currency Assets *	265,231	254,685
(a)Securities	146,377	132,110
(b) Deposits with other central banks, BIS & IMF	113,613	117,526
(c) Deposits with foreign commercial banks / funds placed with EAMs	5,241	5,049
* Excludes US$ 250 million invested in foreign currency denominated bonds issued by IIFC (UK).		

The rate of earnings on foreign currency assets and gold, after accounting for depreciation, decreased from 4.16 per cent in July 2008 - June 2009 to 2.09 in July 2009 to June 2010 reflecting the generally low global interest rate environment.

I.9 Other Related Aspects

I.9.1 Pre-payment

There was no pre-payment of any debt during the half year ended September 2010.

I.9.2 Financial Transaction Plan (FTP) of the IMF

International Monetary Fund (IMF) designated India as a creditor under its Financial Transaction Plan (FTP) in February 2003. During April 2009 to March 2010, SDR 130 million was made available to Romania, SDR 50 million to Sri Lanka and SDR 117.93 million to Belarus. The total purchase transactions amounted to SDR 1194.16 million as at the end March 2010. India was included in repurchase transactions of the FTP since November 2005. There was one repurchase transaction during the half year ended September 2010.

I.9.3 Investments under Note Purchase Agreement with IMF

In order to strengthen the IMF’s lendable resources, the RBI has entered into a Note Purchase Agreement (NPA) with the IMF under which the RBI shall purchase IMF Notes for an amount up to the equivalent of US$10 billion. The RBI has subscribed to US$ 725.9 million Notes issued under the NPA till end-September 2010.

Part II: Risk Management

II.1. Risk Management

Sound risk management is an integral part of efficient foreign exchange reserves management. The strategy for reserves management places emphasis on managing and controlling the exposure to financial and operational risks associated with deployment of reserves. The broad strategy for reserve management including currency composition and investment policy is decided in consultation with the Government of India. The risk management functions are aimed at ensuring development of sound governance structure in line with the best international practices, improved accountability, a culture of risk awareness across all operations and efficient allocation of resources for development of in-house skills and expertise. The risks attendant on deployment of reserves, *viz.*, credit risk, market risk, liquidity risk and operational risk and the systems employed to manage these risks are detailed in the following paragraphs.

II.1.1 Credit Risk

Credit risk is defined as the potential that a borrower or counterparty will fail to meet its obligation in accordance with agreed terms. The Reserve Bank has been extremely sensitive to the credit risk it faces on the investment of foreign exchange reserves in the international markets. The Reserve Bank's investments in bonds/treasury bills represent debt obligations of highly rated sovereigns and supranational entities. Further, deposits are placed with the Bank for International Settlements (BIS) and other central banks. Transactions in foreign exchange and bonds/treasury bills with commercial banks/investment banks and other securities firms give rise to credit risk.

Credit risk has been in focus since the onset of the credit crisis in the US financial markets and its contagion effect on other economies leading to global financial crisis during the second half of 2008 and during 2009. The Reserve Bank continues to apply stringent criteria for selection of counterparties. Credit exposure *vis-à-vis* sanctioned limit in respect of approved counterparties is monitored continuously. Developments regarding counterparties are constantly under watch. The basic objective of such an on-going exercise is to assess whether counterparty's credit quality is under potential threat.

II.1.2 Market Risk

Market risk arises on account of exchange rate and interest rate movements. These are detailed as under:

II.1.2.1 Currency Risk: Currency risk arises due to uncertainty in exchange rates. Decisions are taken regarding the long-term exposure on different currencies depending on the likely movements in exchange rate and other considerations in the medium and long-term (e.g., maintenance of major portion of reserves in the intervention currency, the approximate currency profile of the reserves in line with the changing external trade profile of the country, benefit of diversification, etc.). The decision making procedure is supported by reviews of the strategy on a regular basis.

II.1.2.2 Interest Rate Risk: The crucial aspect of the management of interest rate risk is to protect the value of the investments as much as possible from the adverse impact of the interest rate movements. The interest rate sensitivity of the reserves portfolio is identified in terms of benchmark duration and the permitted deviation from the benchmark. The focus of the investment strategy revolves around the need to keep the interest rate risk of the portfolio reasonably low with a view to minimising losses arising out of adverse interest rate movements, if any.

II.1.3 Liquidity Risk

Liquidity risk involves the risk of not being able to sell an instrument or close a position when required without facing significant costs. The reserves need to have a high level of liquidity at all times in order to be able to meet any unforeseen and emergency needs. Any adverse development has to be met with reserves and, hence, the need for a highly liquid portfolio is a necessary constraint in the investment strategy. The choice of instruments determines the liquidity of the portfolio. For example, in some markets, treasury securities could be liquidated in large volumes without much distortion of the price in the market and, thus, can be considered as liquid. In fact, excepting fixed deposits with the BIS, foreign commercial banks and central banks and securities issued by supranationals, almost all other types of investments are in highly liquid instruments which could be converted into cash at short notice. The Reserve Bank closely monitors the portion of the reserves which could be converted into cash at a very short notice to meet any unforeseen / emergent needs.

II.1.4 Operational Risk and Control System

In tune with the global trend, considerable attention is paid to strengthen the operational risk control arrangements. Key operational procedures are documented. Internally, there is total separation of the front office and back office functions and the internal control systems ensure several checks at the stages of deal capture, deal processing and settlement. There is a separate set-up responsible for risk measurement and monitoring, performance evaluation and concurrent audit. The deal processing and settlement system is also subject to internal control guidelines based on the principle of one point data entry and powers are delegated to officers at various levels for generation of payment instructions. There is a system of concurrent audit for monitoring compliance in respect of all the internal control guidelines. Further, reconciliation of accounts is done regularly. In addition to annual inspection by the internal machinery of the Reserve Bank for this purpose and statutory audit of accounts by external auditors, there is a system of appointing special external auditors to audit the dealing room transactions. There is a comprehensive reporting mechanism covering significant areas of activity / operations relating to reserve management. These are being provided to the senior management periodically, *viz.*, on daily, weekly, monthly, quarterly, half-yearly and yearly intervals, depending on the type and sensitivity of information. The Reserve Bank uses SWIFT as the messaging platform to settle its trades and send financial messages to its counterparties, banks with whom nostro accounts are maintained, custodians of securities and other business partners.

II.1.5 ISO Certification

The Information Security Management Systems (ISMS) of the Department of External Investments and Operations of the Bank is compliant with the provisions of ISO 27001 Standards.

Part III: Transparency and Disclosures

The Reserve Bank has been making available in the public domain data relating to foreign exchange reserves, its operations in foreign exchange market, position of the country’s external assets and liabilities and earnings from deployment of foreign currency assets and gold through periodic press releases of its Weekly Statistical Supplements, monthly Bulletins, Annual Reports, etc. The Reserve Bank's approach with regard to transparency and disclosure closely follows international best practices in this regard. The Reserve Bank is among the 68 central banks across the globe which has adopted the Special Data Dissemination Standards (SDDS) template of the IMF for publication of the detailed data on foreign exchange reserves. Such data are made available on monthly basis on the Reserve Bank's website.

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[1] Redefined from 2005-06 by including suppliers’ credit up to 180 days and FII investments in the Government of India Treasury Bills and other instruments and further in March 2007 by including external debt liabilities of the banking system and the investments in the Government securities by the foreign central banks and the international institutions.