Half Yearly Report on Foreign Exchange Reserves

2008-09

(covering the period up to March 2009)

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

Report on Management of Foreign Exchange Reserves

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Part I: Objectives, Statutory Provisions and Movement of Reserves

I.1 Introduction

Based on a review of the main policy and operational matters relating to the management of the reserves undertaken in 2003, 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 31st March and 30th September each year with a time lag of about three months. The present report is the 12th in the series with reference to the position as on March 31, 2009. The report is divided into three parts: Part I gives the objectives of reserves management, statutory provisions, movement of reserves and other useful information like 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.* 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 the Reserves Management

The guiding objectives of foreign exchange reserves management in India are similar to 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. Even within this divergent framework most countries have adopted the primary objective of reserve management as preservation of the long-term value of the reserves in terms of purchasing power and the need to minimise risk and volatility in returns. India is not an exception in this regard. While safety and liquidity 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 the foreign currency assets (FCA) and gold defining the broad parameters in respect 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(1) 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$ 25.2 billion by end-March 1995. The growth continued in the second half of the 1990s with the reserves touching the level of US$ 38.0 billion by end-March 2000. Subsequently, the reserves rose to US$ 113.0 billion by end-March 2004, US$ 199.2 billion by end-March 2007 and further to US$ 309.7 billion by end-March 2008. Thereafter the reserves declined to US$ 252.0 billion by end March 2009 (**Table 1 & Chart 1**).

Although both US dollar and Euro are intervention currencies and the Foreign Currency Assets are maintained in major currencies like US Dollar, Euro, Pound Sterling, Australian Dollar, Japanese Yen etc., the foreign exchange reserves are denominated and expressed in US Dollar only. The foreign exchange reserve data prior to 2002-03 do not include the Reserve Tranche Position (RTP) in the International Monetary Fund (IMF). Movements in the FCA occur mainly on account of purchases and sales of foreign exchange by RBI in the foreign exchange market in India. In addition, income arising out of the deployment of foreign exchange reserves is also held in the portfolio of the reserves. External aid receipts of the Central Government also flow into the reserves. The movement of the US

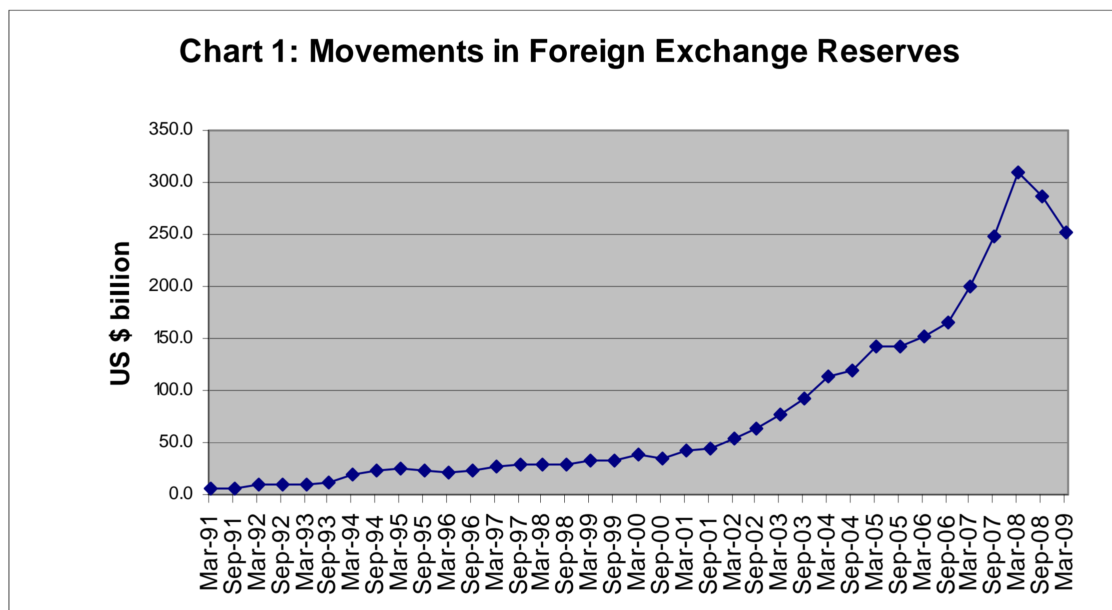
dollar against other currencies in which FCA are held also impact the level of reserves in US dollar terms.

Table 1: Movement in Reserves

(US $ million)

Date	FCA	SDR	GOLD	RTP	Forex Reserves
31-Mar-06	145,108	3 (2)	5,755	756	151,622
30-Sep-06	158,340	1 (1)	6,202	762	165,305
31-Mar-07	191,924	2 (1)	6,784	469	199,179
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

Note: 1. FCA (Foreign Currency Assets): FCAs are maintained as a multicurrency portfolio comprising major currencies, such as, US dollar, Euro, Pound sterling, Japanese yen, etc. and is valued in terms of US dollars.
2. SDR (Special Drawing Rights): Values in SDR have been indicated in parentheses.
3. Gold: Physical stock has remained unchanged at approximately 357 tonnes.
4. RTP refers to the Reserve Tranche Position in the IMF.



1.4.2. Sources of Accretion to the Reserves

Table 2 details the major sources of accretion to foreign exchange reserves during the period from March 1991 to March 2009.

Table 2: Sources of Accretion to Foreign Exchange Reserves since 1991

(US$ billion)

Items			1991-92 to 2008-09 (up to end March 2009)
A		**Reserve Outstanding as on end-March 1991**	**5.8**
B.I.		**Current Account Balance**	**-81.6**
B.II.		**Capital Account (net) (a to e)**	**331.7**
	a.	Foreign Investment *of which:* *(i) FDI* *(ii) FII*	155.2 *75.8* *51.6*
	b.	NRI Deposits	34.1
	c.	External Assistance	18.6
	d.	External Commercial Borrowings	68.2
	e.	Other items in Capital Account*	55.6
B.III.		**Valuation Change**	**-4.0**
		Total (A+BI+BII+BIII)	**252.0**

*: also include errors and omissions.

Table 3 provides details of variation in foreign exchange reserves during 2008-09 and the corresponding period of the previous year. The foreign exchange reserves (including the valuation effects) declined by US$ 57,738 million during 2008-09 as against an increase of US$ 110,544 million during 2007-08. On balance of payments basis (*i.e.,* excluding valuation effects), the foreign exchange reserves declined by US$ 20,080 million during 2008-

09 as against an increase of US$ 92,164 million during 2007-08. The valuation loss explained 65.2 per cent of decline in reserves during 2008-09. Apart from current account deficits, outflows under FIIs, short-term trade credit to India and banking capital were the other major sources contributing to decline in foreign exchange reserves during the financial year 2008-09.

Table 3: Sources of Variation in Foreign Exchange Reserves

(US $ billion)

Items			2007-08	2008-09
I.		**Current Account Balance**	**(-) 17.0**	**(-) 29.8**
II.		**Capital Account (net) (a to f)**	**109.2**	**9.7**
	a.	Foreign Investment (i+ii)	45.0	3.5
		(i) Foreign Direct Investment	15.4	17.5
		(ii) Portfolio Investment	29.6	(-) 14.0
		Of which:		
		FIIs	20.3	(-) 15.0
		ADRs/GDRs	8.8	1.2
	b.	External Commercial Borrowings	22.6	8.2
	c.	Banking Capital	11.8	(-) 3.4
		of which: NRI Deposits	0.2	4.3
	d.	Short-Term Trade Credit	17.2	(-) 5.8
	e.	External Assistance	2.1	2.6
	f.	Other items in capital account*	10.6	4.7
III.		**Valuation Change**	**18.4**	**(-) 37.7**
		Total (I+II+III)	**110.5**	**(-) 57.7**

* Other items in capital account, apart from 'Errors and Omissions', also comprise leads and lags in exports, funds held abroad, advances received pending issue of shares under FDI and transactions of capital receipts not included elsewhere. The transactions of these capital receipts mainly constitute cross border transactions relating to financial derivatives and hedging (margin payments and settlement), migrant transfers and other capital transfers (transfers of capital assets by the Indian migrants abroad, investment grants, payments of compensation), realization of guarantees, etc.

An analysis of the sources of reserves accretion during the entire reform period from 1991 onwards reveals that the increase in foreign exchange reserves has been facilitated by an increase in net foreign direct investment (FDI) from US $ 129 million in 1991-92 to US$ 17.5 billion in 2008-09. FII investments in the Indian capital market, which commenced in January 1993, have shown significant increase over the subsequent years. Cumulative net FII investments increased from US$ 1 million at end-March 1993 to US$ 51.6 billion at end-March 2009. The net outflows of US$ 15.0 billion by FIIs led to decline in cumulative portfolio stock to US$ 79.4 billion at end-March 2009 from US$ 94.5 billion at end-March 2008. Outstanding NRI deposits increased from US$ 14.0 billion at end-March 1991 to US$ 43.7 billion as at end-March 2008. As at end-March 2009, the outstanding NRI deposit stood at US$ 41.3 billion. Turning to the current account, India's exports, which were US$ 18.3 billion during 1991-92 increased to US$ 166.2 billion in 2007-08. During 2008-09, India's exports amounted to US $ 175.2 billion. India's imports which were US $ 24.1 billion in 1991-92 increased to US $ 257.8 billion in 2007-08. During 2008-09, India's imports amounted to US $ 294.6 billion. 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$ 89.6 billion in 2008-09. India's current account balance which was in deficit at 3.0 per cent of GDP in 1990-91 turned into a surplus of 0.7 per cent in 2001-02 and further a surplus of 1.2 per cent in 2002-03. A surplus of US $ 14.1 billion was posted in the current account during the financial year 2003-04, driven mainly by the surplus in the invisibles account. However, this was not sustained during 2004-05, with the current account posting a deficit of US$

2.5 billion, driven mainly by the surge in oil prices in the international market. During 2005-06 and 2006-07, current account deficit widened further and remained around 1 per cent of GDP, driven mainly by strong import demand, both oil and non-oil. The current account deficit further increased to US $ 17.0 billion or 1.5 per cent of GDP in 2007-08 and again to US$ 29.8 billion or 2.6 per cent of GDP in 2008-09 led by high import payments.

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, is available as of end December 2008 **(Table 4)**.

Table 4: International Investment Position of India

(US $ billion)

Item	December 2008 (P)
A Total Foreign Assets	**340.2**
1. Direct Investment Abroad	61.8
2. Portfolio Investment	0.6
3. Other Investments	21.9
4. Foreign Exchange Reserves	255.9
B Total Foreign Liabilities	**420.3**
1. Direct Investment in India	123.3
2. Portfolio Investment	93.4
3. Other Investments	203.6
Net Foreign Liabilities (B-A)	**80.1**

P: Provisional

1.6 Adequacy of Reserves

Adequacy of reserves has emerged as an important parameter in gauging its 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 3 weeks of imports at end-December 1990, rose to 11.5 months of imports at end-March 2002 and increased further to 14.2 months of imports or about five years of debt servicing at end-March 2003. At end-March 2004, the import cover of reserves was 16.9 months, which came down to 14.4 months as at end-March 2008 and further to 10.3 months as at end-March 2009. The ratio of short-term debt[*] 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. With expansion in the coverage of short-term debt, the ratio further increased to 14.1 per cent at end-March 2007, to 15.2 per cent at end-March 2008 and then to 19.6 per cent at end-March 2009. 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 46.2 per cent as at end March 2007. The ratio, which had declined to 45.4 per cent at end-March 2008, increased to 51.1 per cent as at end-March 2009.

[*] 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.

I.7. Management of Gold Reserves

The Reserve Bank holds about 357 tonnes of gold forming about 3.8 per cent of the total foreign exchange reserves in value terms as on March 31, 2009. Of these, 65 tonnes are being held abroad since 1991 in deposits / safe custody with the Bank of England and the BIS.

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-March 2009, out of the total foreign currency assets of US$ 241.4 billion, US$ 134.8 billion was invested in securities, US $ 101.9 billion was deposited with other central banks, BIS and the IMF and US$ 4.7 billion was in the form of deposits with foreign commercial banks / funds placed with the External Asset Managers (EAMs) **(Table 5).** A small portion of the reserves is assigned to the EAMs with the objective of gaining access to and delivering benefit from their expertise and market research.

Table 5: Deployment Pattern of Foreign Currency Assets

(US $ Million)

	As on March 31, 2009	**As on September 30, 2008**
Foreign Currency Assets	**241,426**	**277,300**
(a)Securities	134,792	111,287
(b) Deposits with other central banks, BIS & IMF	101,906	160,587
(c) Deposits with foreign commercial banks / funds placed with EAMs	4,728	5,426

The rate of earnings on foreign currency assets and gold, after accounting for depreciation, increased from 4.6 per cent in July 2006 - June 2007 to 4.8 per cent in July 2007 - June 2008.

I.9 Other Related Aspects

I.9.1 Pre-payment

The significant increase in forex reserves enabled prepayment of certain high-cost foreign currency loans of the Government of India from the Asian Development Bank (ADB) and the International Bank for Reconstruction and Development (IBRD) / World Bank amounting to US$ 3.03 billion during February 2003. During 2003-04, prepayment of certain high cost loans to the IBRD and the ADB amounting to US$ 2.6 billion was made by the Government. Additionally, prepayment of bilateral loans amounting to

US$ 1.1 million was also made. Thus, the total quantum of prepayments was of the order of US$ 3.7 billion during 2003-04. During 2004-05, prepayment of bilateral loans to the tune of US$ 30.3 million was made. During 2006-07, there was only one prepayment of US$ 58.7 million in the month of April 2006. There was no pre-payment of any debt during 2007-08 and 2008-09.

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. In terms of this arrangement, India participated in the IMF's financial support to Burundi in March-May 2003 with a contribution of SDR 5 million and to Brazil in June-September 2003 with SDR 350 million. In December 2003, SDR 43 million was made available to Indonesia under the FTP. During 2004-05, SDR 61 million was made available under the FTP to countries like Uruguay, Haiti, Dominican Republic and Sri Lanka. During May-June 2005, SDR 34 million was made available to Turkey and Uruguay. During 2008-09, SDR 317 million was made available to countries like Bangladesh, Turkey and Pakistan. Further, during March-June 2009, SDR 86 million was made available to Georgia and SDR 130 million to Romania. Thus, the total purchase transactions amounted to SDR 1026 million as at the end of June 2009. India was included in repurchase transactions of the FTP since November 2005. There were 21 repurchase transactions during the period from November 2005 to March 2009 totalling SDR 772 million received from 7 countries, viz., Turkey, Algeria, Brazil, Indonesia, Uruguay, Ukraine and Moldova.

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. Investments in bonds/treasury bills, which represent debt obligations of highly rated sovereigns and supranational entities, do not give rise to any substantial credit risk. Placement of deposit with BIS and other central banks is also considered credit risk-free. However, placement of deposits with

commercial banks as also transactions in foreign exchange and bonds/treasury bills with commercial banks/investment banks and other securities firms give rise to credit risk. Stringent credit criteria are, therefore, applied for selection of counterparties. Credit exposure *vis-a-vis* sanctioned limit in respect of approved counterparties is monitored continuously. The basic objective of an on-going tracking exercise is to assess if any approved institution's quality is under potential threat and accordingly prune down the credit limits or de-list it altogether, if considered necessary. A quarterly review exercise is also carried out in respect of counterparties for possible inclusion/ deletion.

II.1.2 Market Risk

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

II.1.2.1 Currency Risk: Currency risk arises due to uncertainty in exchange rates. Foreign exchange reserves are invested in multi-currency, multi-market portfolios. Decisions are taken regarding the long-term exposure on different currencies depending on the likely movements in its exchange rate and other considerations in the medium- and long-term (eg., 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 concept of duration is used to measure and manage interest rate risk. The focus of the investment strategy revolves around the overwhelming 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. This approach is warranted as reserves are viewed as a market stabilising force in an uncertain environment.

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 maintain 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, Treasury securities can be liquidated in large volumes without much distortion to the price in the market and, thus, can be considered as liquid. In fact, excepting fixed deposits held with the foreign commercial banks and the central banks, 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. The main objective of the special audit is to see that risk management systems and internal control guidelines are adhered to. There exists a comprehensive reporting mechanism covering all 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. Major upgrades to SWIFT

facilities, which took place in the recent years globally, were successfully carried out by the Reserve Bank.

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, and 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 64 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.