

Box 6.2 : Risk on/Risk off Behaviour and Capital Flows to India

The main fallout of euro zone crisis is global uncertainty. This has led to investors' alternating between risk-on/risk-off behaviour, with consequent implications for surge and reversal of capital to emerging economies. A risk-on, prompted by new policy initiatives, creates a favourable disposition towards emerging economy investment, leading to surge in FIIs flows and vice versa.

While change in investor attitude is generally observable in the long-run, the fallout of euro zone crisis has been quick shift between risk-on/risk-off behaviour that has immediate implications for capital flows. An additional factor has been quantitative easing in the US. This increases the supply of liquidity in the system and together with low interest environ and better growth prospects in emerging economies, contributes to increase in capital flows.

A closer look at the global risk-on/off events and FII flows to India shows strong correlation between such events and surge and reversal of capital. For example, the US credit rating downgrade in early August 2011, together with worsening of euro crisis, created a risk-off environment. As a result, there was net withdrawal of FII investment of US\$ 3.7 billion during August-October, 2011.

The Long Term Refinancing Operation (LTRO) of European Central Bank that injected more than euro 1 trillion in the banking system in two tranche in December, 2011 and February, 2012 again created a risk-on environ. As a result, there was a net FII inflow of US\$ 16.9 billion during December 2011-February 2012. The investor euphoria soon evaporated as the euro crisis worsened and the spectre of Greek exit loomed. Consequently, the investor behaviour again became risk-off, leading to net FII outflow of US\$ 2.3 billion during March-June 2012.

The investment climate began improving in July, 2012 with (i) announcement by European Central Bank President that the euro would be saved at all cost; (ii) proposal to set-up Banking Union in the euro zone; (iii) launch of permanent European Stability Mechanism and (iv) launch of QE3 in US. The resulting risk-on atmosphere has seen a net FII inflow of US\$ 10.8 billion during July-October, 2012.

outflow of US\$ 0.06 billion in 2011-12 vis-à-vis inflow of US\$ 0.04 billion in 2010-11. In the first half of 2012-13, there was also an outflow of US\$ 0.5 billion. During 2011-12, both gross inflows of US\$ 478.8 billion and outflows of US\$ 411.1 billion under the capital account (old format) were lower than those of US\$ 503.7 billion and US\$ 439.9 billion in the preceding year 2010-11. However, net inflows of US\$ 67.8 billion under the capital account (bifurcated into capital account and financial account under BPM6) were moderately higher than that of US\$ 63.7 billion in 2010-11. This was primarily on account of a revival in FDI flows to India, a surge in NRI deposits and higher overseas borrowings by banks. However, there was a decline in inflows under FII investments, ADRs/GDRs, external assistance, ECBs and short term trade credit. Risk on/risk off behaviour significantly influenced capital flows (Box 6.2) to India.

6.19 Even though the FDI to India (inward FDI) of US\$ 33.0 billion in 2011-12 was significantly higher than US\$ 29.0 billion in the preceding year, net inflows on account of portfolio investments at US\$ 17.4 billion were lower as compared to US\$ 31.5 billion in 2010-11 reflecting trend towards risk aversion among FIIs due to global economic uncertainty. Rise in inward FDI reflected flows received under BP-Reliance deal of US\$ 7.0 billion in 2011-12. Sector-wise, manufacturing, construction, financial services, business services and communication services

received significant amount of inflows. Country-wise, investment routed through Mauritius remained, as in the past, the largest component, followed by Singapore and the UK. FDI by India (i.e., outward FDI) in net terms moderated by 37.0 per cent to US\$ 10.9 billion in 2011-12 compared to US\$ 17.2 billion a year ago. Sector-wise, moderation in outward FDI was observed in agriculture, hunting, forestry & fishing, financial insurance, real estate & business services, manufacturing and wholesale, retail trade, restaurants & hotels. Furthermore, sectors, viz. financial, insurance, real estate & business services and manufacturing continued to account for more than 50 per cent of total outward FDI during 2011-12. Net FDI (inward FDI minus outward FDI) at US\$ 22.1 billion in 2011-12 showed a significant increase of about 87.0 per cent as against US\$ 11.8 billion in 2010-11.

6.20 Among the debt creating capital flows, net flows under NRI deposits of US\$ 11.9 billion surged more than three-fold in 2011-12 vis-à-vis US\$ 3.2 billion in 2010-11 because of the higher interest rates prevailing in India. Net flows under external commercial borrowing and trade credit showed a decline in 2011-12 vis-à-vis 2010-11. In net terms, capital inflows increased moderately by 6.4 per cent to US\$ 67.8 billion (3.6 per cent of GDP) in 2011-12 as compared with US\$ 63.7 billion (3.7 per cent of GDP) during 2010-11. Since net capital inflows were

inadequate to finance the higher CAD recorded during 2011-12, there was a net drawdown of foreign exchange reserves to the extent of US\$ 12.8 billion during the same period.

Capital and Financial Account during H1 of 2012-13

6.21 Both gross inflows of US\$ 219.5 billion and outflows of US\$ 179.5 billion under the financial account were lower in H1 of 2012-13 as compared with gross inflow of US\$ 246.4 billion and outflow of US\$ 202.9 billion in the same period a year ago. In net terms also, financial inflows declined to US\$ 40.0 billion in H1 of 2012-13 as against US\$ 43.5 billion in H1 of 2011-12. As regards the pattern of capital inflows during H1 of 2012-13, there has been a mixed trend. Inward FDI to India at US\$ 16.2 billion during H1 of 2012-13 decreased by 26.0 per cent compared to US\$ 21.9 billion in H1 of 2011-12. Outward FDI by India was US\$ 3.4 billion in April-September 2012 as against the US\$ 6.1 billion in April-September 2011. The net FDI (inward minus outward) to India was US\$ 12.8 billion during first half of 2012-13 vis-a-vis US\$ 15.7 billion during the corresponding period of previous year. However, recent measures taken by Government regarding liberalisation of FDI limits are

likely to improve investment sentiment and to boost FDI flows into the Indian economy. Scope for further liberalization of FDI norms however remains (Box 6.3).

6.22 Net portfolio flows including FIIs showed a quantum jump to US\$ 5.8 billion during H1 of 2012-13 as against US\$ 1.3 billion in H1 of 2011-12. Among debt creating flows, NRI deposits remained robust at US\$ 9.4 billion in H1 of 2012-13 (US\$ 3.9 billion in H1 of 2011-12) but net flows under ECBs declined sharply by about 80.0 per cent to US\$ 1.7 billion during H1 of 2012-13 from US\$ 8.4 billion in H1 of 2011-12. However, unlike in H1 of 2011-12, net flows under trade credit showed an increase of nearly 60 per cent to US\$ 9.5 billion during April-September 2012 as against US\$ 5.9 billion during the corresponding period of 2011-12. Net accretion to reserves (on a BoP basis) during H1 of 2012-13 at 0.4 billion was substantially lower as compared to US\$ 5.7 billion in H1 of previous year. BoP numbers are given at Appendix 6.2 (old format) and 6.3 (new format)

6.23 As per the latest available information on capital inflows, FDI flows to India stood at US\$ 22.2 billion during April-December 2012, which is 22.1 per cent lower than US\$ 28.5 billion during

Box 6.3 : Liberalization of FDI norms

Foreign Direct Investment (FDI) is preferred to the foreign portfolio investments primarily because FDI is expected to bring modern technology, managerial practices and is long term in nature investment. The Government has liberalized FDI norms overtime. As a result, only a handful of sensitive sectors now fall in the prohibited zone and FDI is allowed fully or partially in the rest of the sectors.

Despite successive moves to liberalize the FDI regime, India is ranked fourth on the basis of FDI Restrictiveness Index (FRI) compiled by OECD. FRI gauges the restrictiveness of a country's FDI rules by looking at the four main types of restrictions viz. foreign equity limitations; screening or approval mechanism; restrictions on the employment of foreigners as key personnel; and operational restrictions. A score of 1 indicates a closed economy and 0 indicates openness. FRI for India in 2012 was 0.273 (it was 0.450 in 2006 and 0.297 in 2010) as against OECD average of 0.081. China is the most restrictive country as it is ranked number one with the score of 0.407 in 2012 indicating that it has more restriction than India.

As there is moderation in FDI inflows to India in the current fiscal vis-à-vis last year it is imperative therefore to rationalize FDI norms further.

At present, defence sector is open to FDI subject to 26 per cent cap. It also requires FIPB approval and is subject to licensing under Industries (Development & Regulation) Act, 1951 and guidelines on FDI in production of arms & ammunition. Within the 26 per cent cap, FII is also permissible subject to the proviso that overall cap is not breached. India needs to open up the defence production sector to get access and ensure transfer of technology. The existing FDI policy for defence sector provides for offsets policy. The offsets policy has been revised recently but its direct and indirect benefits have not had visible impact on the domestic defence industry. There is a strong case for a hike in the 26 per cent FDI limit in the defence production sector. By beginning to produce defence goods that advanced countries currently produce, there is scope for productivity improvement, strengthening of manufacturing, generation of employment and lowering of imports in the country.

There is need to review increasing of FDI cap in insurance and public sector banks. By raising cap to 49 per cent in the insurance sector, there is scope for substantial growth in the coming years. Competition and adoption of best practices could strengthen this sector, reduce the premium and expand the services to the vast untapped rural India. This sector could be one of the major sources of long-term investment in infrastructure. Similarly, FDI limit in public sector banks could be increased to 26 per cent. Further, there is also a need to review existing approval mechanisms, operational restrictions and conditions in other sectors to attract foreign investment.

April-December 2011. Up to December 2012, net FII flows amounted to at US\$ 16.0 billion (US\$ 2.7 billion during the corresponding period of 2011-12). FII flows in recent months witnessed improvement, reflecting the impact of various reform measures announced by the Government.

FOREIGN EXCHANGE RESERVES

6.24 India's foreign exchange reserves comprise foreign currency assets (FCA), gold, special drawing rights (SDRs) and reserve tranche position (RTP) in the International Monetary Fund (IMF). The level of foreign exchange reserves is largely the outcome of the Reserve Bank of India (RBI) intervention in the foreign exchange market to smoothen exchange rate volatility and valuation changes due to movement of the US dollar against other major currencies of the world. Foreign exchange reserves are accumulated when there is absorption of the excess foreign exchange flows by the RBI through intervention in the foreign exchange market, aid receipts, interest receipts and funding from the International Bank for Reconstruction and Development (IBRD), Asian Development Bank (ADB), International Development Association (IDA) etc.

6.25 Foreign currency assets are maintained in major currencies like the US dollar, euro, pound sterling, Canadian dollar, Australian dollar and Japanese yen etc. Both the US dollar and the euro are intervention currencies, though the reserves are denominated and expressed in the US dollar only, which is the international numeraire for the purpose.

The movement of the US dollar against other currencies in which FCA are held, therefore impacts the level of reserves in US dollar terms. The level of reserves, denominated in US dollars declines when US dollar appreciates against major international currencies and vice versa. The twin objectives of safety and liquidity have been the guiding principles of foreign exchange reserves management in India with return optimization being embedded strategy within this framework.

6.26 Beginning from a low level of US\$ 5.8 billion at end-March 1991, India's foreign exchange reserves increased gradually to US\$ 25.2 billion by end-March 1995, US\$ 38.0 billion by end-March 2000, US\$ 113.0 billion by end-March 2004 and US\$ 199.2 billion by end-March 2007. The reserves stood at US\$ 314.6 billion at end-May 2008 before declining to US\$ 252.0 billion at the end of March 2009. The decline in reserves in 2008-09 was inter alia a fallout of the global crisis and strengthening of the US dollar vis-à-vis other international currencies. Foreign exchange reserves increased to US\$ 279.1 billion at end-March 2010, mainly on account of valuation gain as the US dollar depreciated against most of the major international currencies. In fiscal 2010-11, the reserves again showed an increasing trend, reaching US\$ 304.8 billion at end-March 2011. In fiscal 2011-12, they reached all-time high of US\$ 322.0 billion at end-August 2011. However, they declined thereafter and stood at US\$ 294.4 billion at end-March 2012. Details of foreign exchange reserves, component wise, since 1950-51 in rupee and US dollar are given at Appendix 6.1 (A) and 6.1 (B)

Table 6.3 : Summary of Changes in Foreign Exchange Reserves (US\$ billion)

Sl. No.	Year	Foreign exchange reserves at the end of financial year (end March)	Total Increase(+)/decrease (-) in reserves	Increase/decrease in reserves on a BoP basis	Increase/decrease in reserves due to valuation effect
1	2	3	4	5	6
1	2007-08	309.7	110.5	92.2 (83.4)	18.3 (16.6)
2	2008-09	252.0	- 57.7	-20.1 (34.8)	- 37.6 (65.2)
3	2009-10	279.1	27.1	13.4 (49.4)	13.7 (50.6)
4	2010-11	304.8	25.7	13.1 (51.0)	12.6 (49.0)
5	2011-12	294.4	- 10.4	- 12.8 (123.0)	2.4 (-23.0)
6	2012-13 (up to Sept. 2012)	294.8	0.4	0.3 (75.0)	0.1 (25.0)

Source : RBI.

Note : Figures in parentheses indicate percentage shares of total change.

6.27 In 2012-13, the reserves increased marginally by US\$ 0.4 billion from US\$ 294.4 billion at end-March 2012 to US\$ 294.8 billion at end-September 2012. Of this total increase, US\$ 0.3 billion was on BoP basis and US\$ 0.1 billion was on account of valuation effect. A summary of changes in the foreign exchange reserves since 2007-08, with a breakdown into increase / decrease on BoP basis and valuation effect is presented in Table 6.3.

6.28 In the current fiscal, foreign exchange reserves on month-on-month basis remained in the range of US\$ 286.0 billion (at end-May 2012) to US\$ 295.6 billion (at end-December 2012). At end-December 2012, reserves stood at US\$ 295.6 billion, indicating a marginal increase of US\$ 1.2 billion from US\$ 294.4 billion at end-March, 2012. At this level, reserves provided about seven months of import cover. Issues relating to build up of foreign exchange reserves are summarized in Box 6.4.

Foreign Currency Assets (FCAs)

6.29 FCAs are the major constituent of India's foreign exchange reserves. FCAs increased by US\$ 1.7 billion from US\$ 260.7 billion at end March 2012

to US\$ 262.4 billion at end-December 2012. In line with the principles of preserving the long-term value of the reserves in terms of purchasing power, minimizing risk and volatility in returns and maintaining liquidity, the RBI holds FCAs in major convertible currencies instruments. These include deposits of other country central banks, the Bank for International Settlements (BIS) and top-rated foreign commercial banks, and in securities representing debt of sovereigns and supranational institutions with residual maturity not exceeding 10 years, to provide a strong bias towards capital preservation and liquidity. The annualized rate of return, net of depreciation, on the multi-currency multi-asset portfolio of the RBI has shown declining trend over the years. It declined from 4.2 per cent in 2008-09 to 2.1 per cent in 2009-10, 1.7 per cent in 2010-11 and further to 1.5 per cent in 2011-12.

Foreign exchange reserves of other countries

6.30 India continues to be one of the largest holders of foreign exchange reserves. Country-wise details of foreign exchange reserves reveal that India is the eighth largest foreign exchange reserves holder

Box 6.4 : Building up Foreign Exchange Reserves

The distinction between convertible and non-convertible currencies is important for emerging economies, as most transactions with the rest of the world are in convertible currencies like US dollar, euro, pound sterling, yen, Swiss Franc etc. The need for increasing the availability of convertible currency for self-insurance has also been behind the race to build-up foreign exchange reserves (FER) in emerging economies after the Asian Crisis of 1997. Such FER accumulation, however, is constrained by the fact that it is possible only in times of currency appreciation.

Following the BoP crisis of 1990-91 that was essentially due to depletion of foreign exchange reserves, there was a conscious effort by the RBI to build up FER. This was done through buying foreign currency in the market during periods of surge in capital flows. As a result, FER levels increased from US\$ 5.8 billion in 1990-91 to US\$ 314.6 billion at end May 2008. The RBI is however following a hands-off policy in foreign exchange market after the 2008 global crisis, with intervention limited to curbing excess rupee volatility. As a result, during 2009-10 and 2010-11, when rupee was appreciating due to increase in capital flows, there was virtually no intervention to build up FER.

The sharp decline in rupee in 2011-12 however led the RBI to inject foreign exchange to the extent of US\$ 20.1 billion to stem the rupee slide. The pressure on currency has continued in the financial year 2012-13 because of the ongoing euro-zone crisis. The import cover of FER, as a result, has declined from 14.4 months of imports in 2007-08 to 7.1 months in 2011-12. There are costs to intervention. The main cost is the release of corresponding rupee liquidity, when RBI intervenes in the market to buy foreign exchange. This may stoke inflation, which may not appeal in the current inflationary situation.

Past experience however shows that measures like Market Stabilization Scheme (MSS) have been effective in draining excess liquidity from the system. Countries like China and Turkey use cash reserve ratio (CRR) for the same purpose. The cost of a particular policy, however, has to be weighed against the benefits, which are manifold. First, intervention to buy FER during surge in capital leads to build-up of reserves, which provides self-insurance against external vulnerability. Second, the higher reserve levels restore investor confidence and may lead to an increase in foreign direct and portfolio investment flows that spurs growth and helps bridge the current account deficit. Third, in a scenario of high trade and CAD, as in India, allowing the currency to appreciate through non-intervention during times of surge in capital, could have further negative fallout for the BoP by making exports less competitive and imports cheaper. Lastly, buying foreign exchange provides more ammunition for intervention when the currency is declining, which could potentially lower currency volatility.

Table 6.4 : Foreign Exchange Reserves of Some Major Countries

Sl. No.	Country	Foreign exchange reserves (end Dec. 2012) (US\$ billion)
1	2	3
1	China	3310.0 ^a
2	Japan	1304.1
3	Russia	538.6
4	Switzerland (November 2012)	531.7
5	Brazil	373.1
6	Republic of Korea (November 2012)	326.2
7	China P R Hong Kong (November 2012)	305.2
8	India	295.6 ^b
9	Germany (November 2012)	259.4
10	France (November 2012)	211.0
11	Italy	185.6
12	Thailand	184.2

Source: IMF

a : As per PBC, at end-December 2012, China's foreign exchange reserves stood at US\$ 3.31 trillion (source: <http://www.pbc.gov.cn>).

b : RBI

In additional foreign exchange reserves of Taiwan are shown at US\$ 403.2 billion (Q4) as per *The Economist* January 31, 2013.

in the world, after China, Japan, Russia, Switzerland, Brazil, Republic of Korea and China P R Hong Kong (Table 6.4) at end-December 2012.

EXCHANGE RATE

6.31 The exchange rate policy is guided by the broad principles of careful monitoring and management of exchange rates with flexibility, while allowing the underlying demand and supply conditions to determine the exchange rate movements over a period in an orderly manner. Subject to this predominant objective, intervention by the RBI in the foreign exchange market is guided by the objectives of reducing excess volatility, preventing the emergence of destabilizing speculative activities, maintaining adequate level of reserves, and developing an orderly foreign exchange market.

6.32 The movement of the exchange rate in 2011-12 indicates that the average monthly

exchange rate of rupee against the US dollar depreciated by 10.6 per cent from ₹ 44.97 per US dollar in March 2011 to ₹ 50.32 per US dollar in March 2012. Similarly, on point-to-point basis, the average exchange rate of rupee (average of buying and selling rate of FEDAI) depreciated by 12.7 per cent from ₹ 44.65 per US dollar on 31 March 2011 to ₹ 51.16 per US dollar on March 30, 2012. The monthly average exchange rate of rupee vis-a-vis pound sterling, euro and Japanese yen also depreciated in 2011-12. The monthly average exchange rate of rupee vis-a-vis pound sterling depreciated by 8.7 per cent from ₹ 72.71 per pound sterling in March 2011 to ₹ 79.65 in March 2012. Similarly, monthly average exchange rate of rupee depreciated by 5.3 per cent from ₹ 62.97 in March 2011 to ₹ 66.48 in March 2012 against the euro and against the Japanese yen by 9.9 per cent from ₹ 54.98 per 100 Japanese yen in March 2011 to ₹ 61.03 per 100 Japanese yen in March 2012.

6.33 On an annual average basis, rupee depreciated against major international currencies in fiscal 2011-12. The annual average exchange rate of rupee was ₹ 45.56 per US dollar in 2010-11 that depreciated by 4.9 per cent to ₹ 47.92 per US dollar in 2011-12. Similarly, the annual average exchange rate of rupee in 2010-11 was ₹ 70.87 per pound sterling, ₹ 60.21 per euro, and ₹ 53.27 per 100 Japanese yen which depreciated by 7.2 per cent to ₹ 76.38 per pound sterling, 8.6 per cent to ₹ 65.88 per euro and 12.3 per cent to ₹ 60.73 per 100 Japanese yen respectively in 2011-12.

6.34 The sharp fall in value of rupee can be explained by the supply-demand imbalance in the domestic foreign exchange market on account of slowdown in FII inflows, strengthening of US dollar in the international market due to the safe haven status of US Treasuries and heightened risk aversion and deleveraging due to the euro area crisis that impacted financial markets across emerging market economies. Apart from the global factors, there were several domestic factors that have added to the weakening trend of the rupee, which include increasing current account deficit, high inflation (Box 6.5). In order to reduce the volatility of exchange rate value of the rupee, the RBI intervened in the foreign exchange market through sale of US dollars amounting to US\$ 20.1 billion in 2011-12. Further, in view of the sharp depreciation of the rupee in 2011-12, the RBI announced various policy measures that were aimed at curbing speculative behaviour of banks and corporate in the foreign exchange market.

A number of steps were also taken to facilitate capital flows and boost exports to augment supply of foreign exchange.

6.35 In the current fiscal, the exchange rate value of rupee has so far undergone many ups and downs. The monthly average exchange rate of rupee per US dollar mostly remained in the range of ₹ 54-56 per US dollar except in the month of April 2012 when the rate was ₹ 51.81 and ₹ 53.02 in October 2012. In the first quarter of current fiscal 2012-13, monthly average exchange rate of rupee showed depreciating trend, going down by 2.9 per cent in April 2012, 4.9 per cent in May and 2.8 per cent in June 2012 over the previous month. In the month of June 2012, the rupee touched all-time low of ₹ 57.22 per US dollar (RBI's reference rate) on June 27, 2012 indicating 10.6 per cent depreciation over ₹ 51.16 per US dollar on March 30, 2012. In the second quarter of 2012-13, monthly average exchange rate of rupee has appreciated by 1.0 per cent in July 2012 and 1.7 per cent in September 2012 over the previous month, while in the month of August 2012 it has

marginally depreciated by 0.1 per cent. In the third quarter, it appreciated by 3.0 per cent in October 2012 and 0.2 per cent in December 2012 while in month of November 2012 it depreciated by 3.2 per cent over the previous month level.

6.36 The Government of India and the RBI have taken a number of steps to boost exports and facilitate capital inflows so as to reduce external vulnerability. Under the Annual Supplement 2012-13 to Foreign Trade Policy 2009-14, the Government has announced initiatives to boost exports. The government has further liberalised FDI policy, including allowing foreign direct investment in multi-brand retail. Other measures to boost capital inflows include a hike in FII investment in debt securities (both corporate and Government), enhancement of all-in-cost ceiling for external commercial borrowings (ECBs) between 3-5 year maturity, higher interest rate ceiling for foreign currency non-resident deposits, deregulation of interest rates on rupee denominated NRI deposits, and administrative steps to curb currency speculation.

Box 6.5 : Reasons for High Volatility in Rupee Exchange Rate

The rupee has experienced unusually high volatility in the past few months. The currency touched the low of ₹ 57.22 per US dollar on 27th June, 2012, before appreciated to ₹ 51.62 per US dollar on October 05, 2012. It again began declining thereafter and has since been in the range of ₹ 53-54 per US dollar. Such volatility has introduced a measure of uncertainty in the domestic market and has impacted business confidence.

The rupee has been under pressure since August 2011, when US sovereign rating was downgraded and the euro zone crisis escalated. The currency went steadily downhill till the end of July, 2012, except for intermitted respite and appreciation in January-February 2012, mainly due to European Central Banks Long Term Refinancing Operation (LTRO) that injected more than euro 1 trillion in three-year loans to banks and created a risk-on environment.

The rupee fell due to decline in exports on account of euro-zone crisis and widening of trade deficit, as imports remained resilient due to high oil prices and gold imports. The widening of trade deficit to 10.2 per cent of GDP in 2011-12 had upset the supply-demand balance in the domestic foreign exchange market, placing downward pressure on the currency. The trade deficit has remained high at 10.8 per cent of GDP in the first six months of the current financial year (April-September 2012), with current account deficit at 4.6 per cent of GDP.

Improved capital flows in recent months, particularly FII flows, however have dampened the downward pressure on the rupee. Such an increase in portfolio flows is partly due to the risk-on behaviour of investors, following series of policy initiatives in the euro zone that lowered the 'tail risk' of euro zone disintegration. The launch of quantitative easing (QE3) by the US Federal Reserve further helped the process. Capital flows have also been attracted by the confidence-inducing effects of major policy reforms that have been announced recently. The resulting increase in capital flows has more than balanced the widening current account deficit in recent months, curbing the rupee slide. Volatility however remains high because of high share of FII flows in total capital flows, and the week-to-week variation in such flows.

Another contributory factor is the fluctuation in the dollar exchange rate vis-a-vis other international currencies. Since bulk of global trade is invoiced and settled in US\$ and most capital flows are denominated in US dollar, the volatility in the value of US dollar exchange rate in the international market has an immediate impact on rupee-US dollar exchange rate. Thus, the fall in the US dollar exchange rate in the international market leads to rupee appreciation, unless offset by widening trade deficit/ changes in the volume of capital flows and vice-versa.

6.37 Domestic policy measures for attracting FDI, coupled with the announcement of quantitative easing by the US Federal Reserve and Bank of Japan in September 2012 contributed to increase in capital inflows to India leading to strengthening of the rupee. Besides, the RBI sold nearly US\$ 3.1 billion during 2012-13 (April-December 2012). As a result, the rupee recovered to ₹ 51.62 per US dollar on October 05, 2012. However, since the second week of October 2012, rupee again showed depreciating trend on account of concerns relating to high CAD and the demand for dollars from oil importing firms and continued uncertainty in the global financial markets. In December 2012, rupee remained range bound (Rs. 54.20-55.09 per US dollar) as FIIs continued to be largely buoyant except on December 21, 2012 when rupee touched a low of ₹ 55.09 per US dollar. The month-wise exchange rate of the rupee against major international currencies and the RBI's sale/purchase of foreign currency in the foreign exchange market during 2012-13 are shown in Table 6.5.

6.38 The monthly average exchange rate of the rupee per US dollar and its appreciation / depreciation during 2012-13 is depicted in Figure 6.3.

Exchange Rate of Other Emerging Economies

6.39 It may be noted that a depreciating exchange rate in 2012-13 is not specific to India. The currencies of other emerging economies, such as Brazilian real, Argentina peso, Russian rouble, and South Africa's rand also depreciated against the US dollar reflecting the increased demand for dollar as a safe haven asset in the wake of sovereign debt crisis in the euro zone and due to uncertain global economic environment. On a point-on-point basis between March 30, 2012 and December 28, 2012, the Argentina peso has depreciated by 10.9 per cent, Brazilian real by 10.5 per cent, South African rand by 9.7 per cent, Indian rupee by 6.7 per cent, Indonesian rupiah by 5.1 per cent and Russian rouble

Table 6.5 : Exchange Rates of Rupee per Foreign Currency and RBI's Sale/Purchase of US Dollar in the Exchange Market during 2012-13

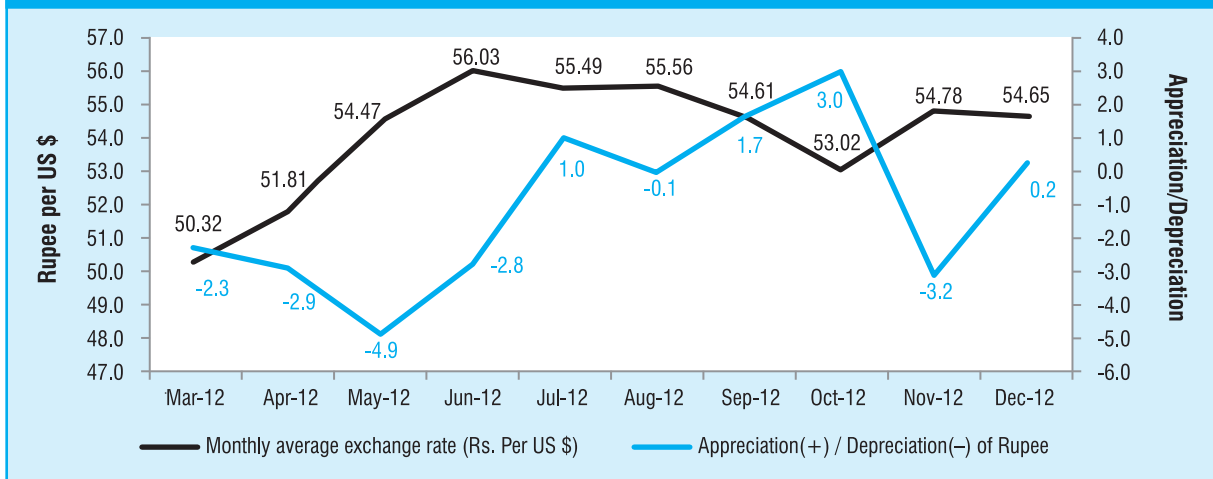
Month	Average exchange rates (₹ per foreign currency) ^a				RBI Net sale (-) / purchase (+) (US\$ million)
	US Dollar	Pound sterling	Euro	Japanese Yen ^b	
1	2	3	4	5	6
2011-12 (annual average)	47.9190	76.3809	65.8761	60.7257	(-) 20,138
	(-4.9)	(-7.2)	(-8.6)	(-12.3)	
March 2012	50.3213	79.6549	66.4807	61.0259	-
	(-2.3)	(-2.5)	(-2.1)	(2.8)	
2012-13 (monthly average)					(-) 3123.0
April 2012	51.8121	82.9119	68.1872	63.7934	-275.0
	(-2.9)	(-3.9)	(-2.5)	(-4.3)	
May 2012	54.4736	86.7323	69.6991	68.3286	-485.0
	(-4.9)	(-4.4)	(-2.2)	(-6.6)	
June 2012	56.0302	87.1349	70.3087	70.6743	-50.0
	(-2.8)	(-0.5)	(-0.9)	(-3.3)	
July 2012	55.4948	86.5173	68.2520	70.2809	-785.0
	(1.0)	(0.7)	(3.0)	(0.6)	
August 2012	55.5594	87.3444	68.8750	70.6814	-452.0
	(-0.1)	(-0.9)	(-0.9)	(-0.6)	
September 2012	54.6055	87.8663	70.1263	69.9084	- 10.0
	(1.7)	(-0.6)	(-1.8)	(1.1)	
October 2012	53.0239	85.2128	68.7522	67.2305	- 95.0
	(3.0)	(3.1)	(2.0)	(4.0)	
November 2012	54.7758	87.5374	70.3665	67.6032	- 921.0
	(- 3.2)	(- 2.7)	(- 2.3)	(- 0.6)	
December 2012	54.6478	88.1910	71.6671	65.2805	-50.0
	(0.2)	(- 0.7)	(- 1.8)	(3.6)	

Source : RBI.

Notes : ^aFEDAI market indicative rates. Data from May 2012 onwards are RBI's reference rates,

^bPer 100 Yen; Figures in parentheses indicate appreciation (+) and depreciation (-) over the previous month/year in per cent. Figures may not tally due to rounding off.

Figure 6.3: Monthly Average Exchange Rate of Rupee per US Dollar and Appreciation (+) / Depreciation (-) over the previous month during March 2012 to December 2012



by 3.4 per cent. The exchange rate of the rupee vis-à-vis select international currencies since 1991-92, year-wise, and during 2012-13, month-wise, is in Appendix 6.4.

Nominal Effective Exchange Rate and Real Effective Exchange Rate

6.40 Nominal rupee depreciation, while having some adverse effects such as greater imported inflation, is also useful over time in offsetting higher domestic inflation and ensuring Indian exports remain competitive. The nominal effective exchange rate (NEER) and real effective exchange rate (REER) indices are used as indicators of external competitiveness of the country over a period of time. NEER is the weighted average of bilateral nominal exchange rates of the home currency in terms of foreign currencies, while REER is defined as a weighted average of nominal exchange rates, adjusted for home and foreign country relative price differentials. REER captures movements in cross-currency exchange rates as well as inflation differentials between India and its major trading partners and reflects the degree of external competitiveness of Indian products. The RBI has been constructing six currency (US dollar, euro for euro zone, pound sterling, Japanese yen, Chinese renminbi and Hong Kong dollar) and 36 currency indices of NEER and REER.

6.41 The 6-currency trade-based NEER (base: 2004-05=100) depreciated by 9.6 per cent between March 2011 and March 2012 and by 8.0 per cent

between March 2012 to December 2012. As compared to this, the monthly average exchange rate of rupee depreciated by 10.6 per cent between March 2011 and March 2012, while in current fiscal it depreciated by 7.9 per cent against the US dollar from ₹ 50.32 per US dollar in March 2012 to ₹ 54.65 per US dollar in December 2012. The 6-currency trade-based REER (base: 2004-05=100) of the Rupee depreciated by 5.5 per cent from 115.97 to 109.59 between March 2011 and March 2012. During 2012-13 so far (up to December 2012), the 6 currency index of 104.56 showed depreciation of 4.6 per cent over March 2012 index of 109.59 largely reflecting depreciation of rupee in nominal terms (Table 6. 6 and Appendix 6.5).

US dollar exchange rate in international market

6.42 In so far as international currencies are concerned, the US dollar appreciated by 2.2 per cent against the pound sterling, 6.0 per cent against the euro, and 0.8 per cent against the Japanese yen during between March 2011 and March 2012. However, it depreciated by 4.2 per cent against Australian dollar during the same period. In current fiscal (up to end-December 2012), the US dollar appreciated by 0.7 per cent against euro, 1.4 per cent against Japanese yen and 0.6 per cent against Australian dollar between March 2012 and December 2012. However, US dollar depreciated by 2.0 per cent against pound sterling (Table 6.7).

Table 6.6 : Indices of NEER and REER of the Indian Rupee (Six-Currency Trade- based Weights) Base 2004-05 (April-March) = 100

Month average	NEER	Appreciation (+)/ depreciation (-) NEER over previous period/month	REER	Appreciation (+)/ depreciation (-) REER over previous period/month
1	2	3	4	5
March 2011	90.29		115.97	
March 2012	81.60	-9.6	109.59	-5.5
2012-13				
April 2012 (P)	79.24	-2.9	107.57	-1.8
May 2012 (P)	76.10	-4.0	104.12	-3.2
June 2012 (P)	74.67	-1.9	102.24	-1.8
July 2012 (P)	75.95	1.7	104.16	1.9
August 2012 (P)	75.53	-0.6	104.76	0.6
September 2012 (P)	75.67	0.2	105.75	0.9
October 2012 (P)	77.55	2.5	107.86	2.0
November 2012 (P)	75.33	- 2.9	105.11	- 2.5
December 2012 (P)	75.05	- 0.4	104.56	- 0.5

Source : RBI. P: Provisional

Table 6.7 : Exchange Rate of US Dollar against International Currencies

Month/Year	USD/ GBP	USD/ Euro	JPY /USD	USD /AUD
1	2	3	4	5
March 2010	1.5082	1.3543	90.8850	0.9095
March 2011	1.6168	1.3999	81.7936	1.0102
March 2012	1.5817	1.3201	82.4348	1.0543
US\$ Appreciation (+) / Depreciation (-) (March 2011- March 2012) in percent	2.22	6.04	-0.78	-4.18
2012-13				
April 2012	1.6009	1.3162	81.4895	1.0350
May 2012	1.5906	1.2800	79.7084	0.9982
June 2012	1.5564	1.2526	79.3214	0.9986
July 2012	1.5589	1.2276	78.9830	1.0293
August 2012	1.5713	1.2400	78.6648	1.0468
September 2012	1.6119	1.2871	78.1678	1.0401
October 2012	1.6083	1.2975	78.9686	1.0293
November 2012	1.5966	1.2820	80.7920	1.0412
December 2012	1.6144	1.3109	83.5778	1.0477
US\$ Appreciation (+) /Depreciation (-) (March 2012-December 2012) in percent	-2.03	0.70	1.39	0.63

Source: Reserve Bank of India. Note: Exchange rate is based on monthly average.

EXTERNAL DEBT

6.43 India's external debt stock at end-March 2012 stood at US\$ 345.4 billion (₹ 1,765,333 crore) recording an increase of US\$ 39.5 billion (12.9 per cent) over end-March 2011 level of US\$ 305.9 billion (₹ 1,365,929 crore). Component-wise, long-term debt increased by 10.9 per cent to US\$ 267.2 billion at end-March 2012 from US\$ 240.9 billion at end-March 2011, while short-term showed an increase of 20.3 per cent to US\$ 78.2 billion from US\$ 65.0 billion at end-March 2011. Appendices 8.4(A) and 8.4(B) present the disaggregated data on India's external debt outstanding in Indian rupee and US dollar terms, respectively. India's external debt stock increased by about US\$ 20.0 billion (5.8 per cent) to US\$ 365.3 billion at end-September 2012 over the level at end-March 2012. The rise in external debt is largely due to higher NRI deposits, short-term debt and commercial borrowings. NRI deposits alone accounted for 42.1 per cent of the rise in total external debt at end-September 2012 over the level of end-March 2012, while short-term debt and commercial borrowings together accounted for 52.6 per cent of the rise in debt during the period.

6.44 The maturity profile of India's external debt indicates the dominance of long-term borrowings. Long-term external debt at US\$ 280.8 billion at end-September 2012 accounted for 76.9 per cent of the total external debt, while the remaining 23.1 per cent was short-term debt. Long-term debt at end-September 2012 increased by US\$ 13.6 billion (5.1 per cent) over the level at end-March 2012, while short-term debt increased by US\$ 6.3 billion

(8.1 per cent). Within long-term, components such as commercial borrowings, NRI deposits and multilateral borrowings taken together, accounted for 62.1 per cent of total external debt at the end of September 2012 while other long-term debt components (viz. bilateral borrowings, export credit, IMF and rupee debt) accounted for 14.8 per cent of total external debt (Table 6.8).

6.45 The currency composition of India's total external debt shows that the share of US dollar denominated debt continued to be the highest in external debt stock at 55.7 per cent at end-September 2012, followed by Indian rupee (22.9 per cent), Japanese yen (8.6 per cent), SDR (8.1 per cent) and euro (3.2 per cent). The currency composition of Government (sovereign) debt indicates pre-dominance of SDR denominated debt (36.6 per cent), which is attributable to borrowing from International Development Association (IDA) i.e., the soft loan window of the World Bank under the multilateral agencies and SDR allocations by the IMF. The share of US dollar denominated debt was 26.2 per cent followed by Japanese yen denominated (19.3 per cent), Indian rupee (14.3) and euro (3.6). At end-September 2012, Government (sovereign) external debt was US\$ 81.5 billion. It accounted for 22.3 per cent of India's total external debt. Non-Government external debt amounted to US\$ 283.9 billion which was 77.7 per cent of total external debt at end-September 2012.

6.46 Over the years, India's external debt stock has witnessed structural change in terms of composition. The share of concessional in total debt

Table 6.8 : Composition of External Debt

(per cent of total external debt)

Sl. No.	Component	March 2011 PR	March 2012 PR	June 2012 PR	September 2012 QE
1	2	3	4	5	6
1	Multilateral	15.8	14.6	14.3	13.9
2	Bilateral	8.4	7.7	7.8	7.6
3	IMF	2.1	1.8	1.7	1.7
4	Export credit	6.1	5.5	5.5	5.2
5	Commercial borrowings	28.9	30.4	29.9	29.8
6	NRI deposit	16.9	17.0	17.5	18.3
7	Rupee debt	0.5	0.4	0.3	0.4
8	Long-term debt (1 to 7)	78.8	77.4	76.9	76.9
9	Short-term debt	21.2	22.6	23.1	23.1
10	Total external debt (8+9)	100.0	100.0	100.0	100.0

Source : Ministry of Finance and RBI. PR : Partially Revised. QE : Quick Estimates.

has declined due to shrinking share of official creditors and the Government debt and the surge in non-concessional private debt. The proportion of concessional in total debt declined from 42.9 per cent (average) during the period 1991-2000 to 28.1 per cent in 2001-2010 and further to 13.2 per cent at end-September 2012. The rising share of non-government debt is evident from the fact that such debt accounted for 65.6 per cent of total debt during the decade of 2000s, vis-a-vis 45.3 per cent in 1990s. Non-Government debt accounted for over 70 per cent of total debt in the last five years and stood at 77.7 per cent at end-September 2012.

6.47 The key external debt indicators are presented in Table 6.9. India's foreign exchange reserves provided a cover of 80.7 per cent to the total external debt stock at end-September 2012 vis-à-vis 85.2 per cent at end-March 2012. The ratio of short-term external debt to foreign exchange reserves was at 28.7 per cent at end-September 2012

as compared to 26.6 per cent at end-March 2012. The ratio of concessional debt to total external debt declined steadily and worked out to 13.2 per cent at end-September 2012 as against 13.9 per cent at end-March 2012.

6.48 India's external debt has remained within manageable limits as indicated by the external debt to GDP ratio of 19.7 per cent and debt service ratio of 6.0 per cent in 2011-12. The active external debt management policy of the Government of India has helped in containing rise in external debt and maintaining a comfortable external debt position. The policy continues to focus on monitoring long and short-term debt, raising sovereign loans on concessional terms with longer maturities, regulating external commercial borrowings through end-use, all-in-cost and maturity restrictions; and rationalizing interest rates on non-resident Indian deposits (Box 6.6).

Table 6.9 : India's Key External Debt Indicators (per cent)

Year	External debt (US\$ billion)	Total external debt to GDP	Debt-service ratio	Foreign exchange reserves to total external debt	Concessional debt to total external debt	Short-term external debt* to foreign exchange reserves	Short-term external debt* to total debt
1	2	3	4	5	6	7	8
1990-91	83.8	28.7	35.3	7.0	45.9	146.5	10.2
1990-91	83.8	28.7	35.3	7.0	45.9	146.5	10.2
1995-96	93.7	27.0	26.2	23.1	44.7	23.2	5.4
2000-01	101.3	22.5	16.6	41.7	35.4	8.6	3.6
2005-06	139.1	16.8	10.1#	109.0	28.4	12.9	14.0
2006-07	172.4	17.5	4.7	115.6	23.0	14.1	16.3
2007-08	224.4	18.0	4.8	138.0	19.7	14.8	20.4
2008-09	224.5	20.3	4.4	112.1	18.7	17.2	19.3
2009-10	260.9	18.2	5.8	106.8	16.8	18.8	20.1
2010-11	305.9	17.5	4.3	99.6	15.5	21.3	21.2
2011-12	345.4	19.7	6.0	85.2	13.9	26.6	22.6
2012-13							
end-June 2012 PR	348.8	-	5.9	83.1	13.5	27.8	23.1
end-Sept. 2012 QE	365.3	-	-	80.7	13.2	28.7	23.1

Source : Ministry of Finance and RBI.

Notes : - Not worked out for the broken period. PR : Partially Revised QE-Quick Estimates.

*: Short-term debt is based on original maturity.

#: Works out to 6.3 per cent, with the exclusion of India millennium deposits (IMDs) repayments of US\$ 7.1 billion and prepayment of US\$ 23.5 million. Debt-service ratio is the proportion of gross debt service payments to external current receipts (net of official transfers).

Box 6.6 : Risks in Foreign Currency Borrowings

Corporate borrowers in India and other emerging economies are keen to borrow in foreign currency to benefit from lower interest and longer terms of credit. Such borrowings however, are not always helpful, especially in times of high currency volatility. During good times, domestic borrowers could enjoy triple benefits of (i) lower interest rates, (ii) longer maturity and (iii) capital gains due to domestic currency appreciation. This would happen when the local currency is appreciating due to surge in capital flows and the debt service liability is falling in domestic currency terms. The opposite would happen when the domestic currency is depreciating due to reversal of capital flows during crisis situations, as happened during the 2008 global crisis.

A sharp depreciation in local currency would mean corresponding increase in debt service liability, as more domestic currency would be required to buy the same amount of foreign exchange for debt service payments. This would lead to erosion in profit margin and have mark-to-market implications for the corporate. There would also be 'debt overhang' problem, as the volume of debt would rise in local currency terms. Together, these factors could create corporate distress, especially because the rupee tends to depreciate precisely when the Indian economy is also under stress, and corporate revenues and margins are under pressure.

In this context, it is felt that one of the factors contributing to faster recovery of Indian economy after the 2008 global crisis was the low level of corporate external debt. As a result, the significant decline in the value of rupee did not have major fallout for the corporate balance-sheets. Foreign currency borrowings, therefore, have to be contracted carefully, especially when no 'natural hedge' is available. Such natural hedge would happen when a foreign currency borrower also has an export market for its products. As a result, export receivables would offset, at least to some extent, the currency risk inherent in debt service payments. This happens because fall in the value of the rupee that leads to higher debt service payments is partly compensated by the increase in the value of rupee receivables through exports. When export receivables and the currency of borrowings is different, the prudent approach is for corporations to enter currency swaps to re-denominate asset and liability in the same currency to create natural hedge. Unfortunately, too many Indian corporations with little foreign currency earnings leave foreign currency borrowings unhedged, so as to profit from low international interest rates. This is a dangerous gamble for reasons described above and should be avoided.

Table 6.10 : International Comparison of Top Twenty Developing Debtor Countries, 2011

Sl. No.	Countries	Total external debt stock (US\$ million)	Total debt to GNI (per cent)	Short-term to total external debt (per cent)	Foreign exchange reserves to total debt (per cent)
1	2	3	4	5	6
1	China	685,418	9.4	69.6	467.3
2	Russian Federation	542,977	31.1	12.9	83.6
3	Brazil	404,317	16.6	10.4	86.7
4	India	334,331	18.3	23.3	81.1
5	Turkey	307,007	40.1	27.3	25.5
6	Mexico	287,037	25.2	17.9	50.2
7	Indonesia	213,541	26.0	17.9	49.9
8	Ukraine	134,481	83.3	24.3	22.6
9	Romania	129,822	72.3	22.9	33.1
10	Kazakhstan	124,437	77.9	7.2	20.2
11	Argentina	114,704	26.3	14.5	37.7
12	South Africa	113,512	28.4	16.6	37.5
13	Chile	96,245	41.0	17.8	43.6
14	Malaysia	94,468	34.8	46.3	139.5
15	Thailand	80,039	24.0	56.2	209.1
16	Colombia	76,918	24.3	14.1	40.8
17	Philippines	76,043	33.6	9.2	88.5
18	Venezuela	67,908	21.8	24.6	14.6
19	Pakistan	60,182	27.3	4.2	24.1
20	Vietnam	57,841	49.1	17.2	23.4

Source : World Bank's International Debt Statistics 2013.

Note : Countries are arranged based on the magnitude of debt presented in Column 3 in the Table.

International Comparison

6.49 A cross country comparison of external debt of twenty most indebted developing countries, based on data from the World Bank's 'International Debt Statistics, 2013' which contains the debt numbers for the year 2011 and has a time lag of two years, showed that in 2011 India was in fourth position in terms of absolute external debt stock after China, the Russian Federation and Brazil. The ratio of India's external debt stock to gross national income (GNI) at 18.3 per cent was the third lowest with China's being the lowest at 9.4 per cent (Table 6.10.). In terms of the cover of external debt provided by foreign exchange reserves, India's position was seventh highest at 81.1 per cent.

CHALLENGES AND OUTLOOK

6.50 The widening of the trade deficit to more than 10 per cent of GDP and the CAD crossing 4 per cent of GDP in 2011-12 and the first half of 2012-13 have been matters of concern. In recent years, net invisible balance reduced the need for financing, while capital inflows were sufficient to

finance the CAD safely. In the current fiscal, the growth in invisibles is insufficient to narrow the growing trade deficit. Besides, the CAD is financed by volatile capital flows, which has led to financial fragility and is reflected in rupee exchange rate volatility.

6.51 The room to increase exports in the short run is limited, as they are dependent upon the recovery and growth of partner countries, especially in industrial economies. This may take time. The main focus has to be on curbing imports, mainly by making oil prices more market determined, and curbing imports of gold. At the same time, further measures to ease the inflow of remittances and steps to diversify software exports could help reduce financing needs. Greater emphasis on FDI including opening up sectors further can help increase the quantum of safe financing. FII flows need to be targeted towards longer term rupee instruments so as to minimize the 'reversal' of capital during risk-off phases. Finally, external commercial borrowing needs to be monitored carefully so that entities without access to foreign exchange revenues do not leave significant exposures unhedged.