Global Financial Crisis: How was India Impacted?*

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Abstract

The global crisis has hit India through a "sudden stop" of capital inflows and a collapse of both external and domestic demand. The growth of the economy dropped to 6.7 per cent in 2008-09 (April-March) from 9.0 per cent in the previous year and is projected to decline further in 2009-10 to about 5.0 per cent including the bad monsoon effect. The aggressive monetary and fiscal measures undertaken so far will not be able to secure a sound recovery for the Indian economy with the global economy unlikely to revive its growth soon. A strong recovery of growth to 8-9 per cent, however, is possible for India if it unveils a "second round of reforms" similar to what it had done in the early 1990s.

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1. Background: India on the Eve of the Crisis

India's engagement with the global economy became deeper from the 1990s. Total merchandise trade which was hardly 15 per cent of India's GDP in 1990-91 (April-March) rose by nearly two and half times to 36 per cent of GDP in 2007-08; invisibles trade rose about fourfold from just 5 per cent of GDP to 19 per cent in the same period; and capital flows increased even faster at more than fivefold from 12 per cent of GDP to 65 per cent of GDP over the same period.

Just take the case of exports. Though the ratio of export of goods and services in India's GDP was lower at 23 per cent in 2006 than that in China at 40 per cent (World Bank, 2008), the contribution of export demand to GDP growth in India is not that much lower in comparison with China. This is so because the consumption-GDP ratio is much higher for India at 58 per cent (against China's low 33 per cent) and the import-GDP ratio lower at 26 per cent (32 per cent for China) making the Keynesian income multiplier higher in India[1]. Rough calculations indicate that a 10 per cent increase in export demand can raise the GDP by 4 per cent in China, other things being equal, whereas in India the rise in GDP is 3 per cent.

The deepening global integration of India has made it vulnerable to the global financial crisis. However, three factors helped India to cope with the crisis and soften the blow. They are: (1) the robust, well capitalized and well-regulated financial sector; (2) gradual and cautious opening up of the capital account; and (3) the large stock of foreign reserves.

1.1 Slowing Economy Prior to the Crisis

Indian economy began to slow down in 2007-08 (April-March) after reaching a GDP growth of 9.8 per cent in the last quarter of 2006-07. In fact, Indian economy grew at an annual average rate of 8.8 per cent during the five years ending 2007-08. In the first half of the financial year 2008-09, the growth rate dropped to 7.8 per cent.

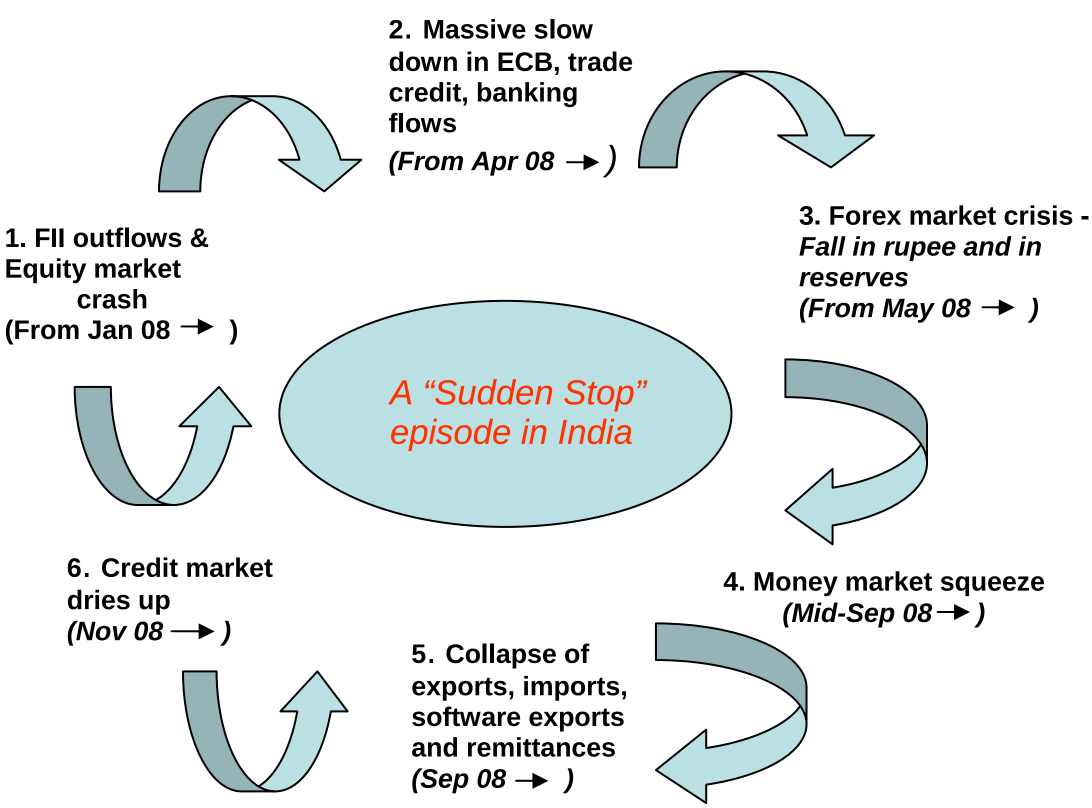
The pre-crisis slowdown of the economy can be attributed to the tightening of monetary policy right from September 2004 in response to the fear that the Indian economy had been overheating and inflation rising. The monetary tightening became harder in 2006-07 and later in early 2008-09 as the huge rise in world commodity prices pushed India's inflation also high.

[1] The income multiplier is given by the formula: 1/1-c (1-t) +m where c=marginal propensity to consume, t=direct taxes as a proportion of GDP, m=imports as a proportion of GDP. With the assumption of a same tax ratio (say, 10 per cent), the income multiplier for India is 1.35 and China just below 1.

2. Spread of Crisis to India

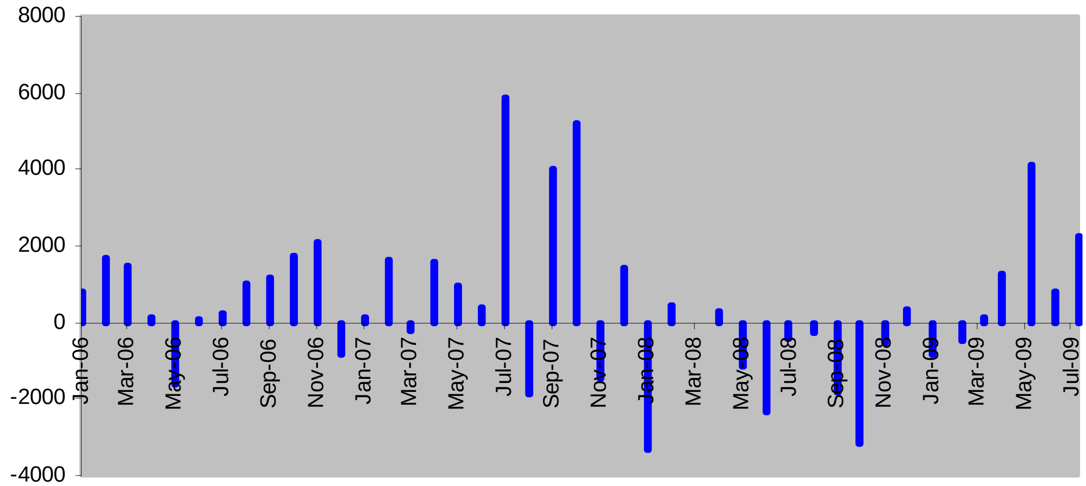
The concept of "sudden stop" was first introduced by Dornbusch et al. (1995) and later given analytical framework by Calvo (1998) to examine the impact of a sudden and largely unexpected cut-back in foreign capital inflows to emerging economies. This is reminiscent of the bankers' old saying that "it's not speed that kills, it's the sudden stop" (Dornbusch, 2001). Calvo (2009) noted the likelihood of India going through a "sudden stop" episode with the onset of the global crisis. The chart below depicts the various stages in the process of the spread of the global financial crisis to India within the framework of the "sudden stop" analysis.

Chart 1: The Spread of Crisis to India



The first impact of the global crisis on India was felt in the stock market in January 2008. This came through the reversal of inflows from foreign institutional investors (FIIs) into the country. India had received about US$ 17.7 billion as net equity investment inflows from FIIs during 2007. This turned into a net disinvestment of US$ 13.3 billion during the period from January 2008 to February 2009. This was the direct result of the massive de-leveraging of US banks after the financial meltdown. The FIIs withdrew funds from all over the emerging markets for meeting the liquidity requirements of their principals in the US. The marked reversal of capital inflows from FIIs in India since December 2007 can be seen from Chart 2.

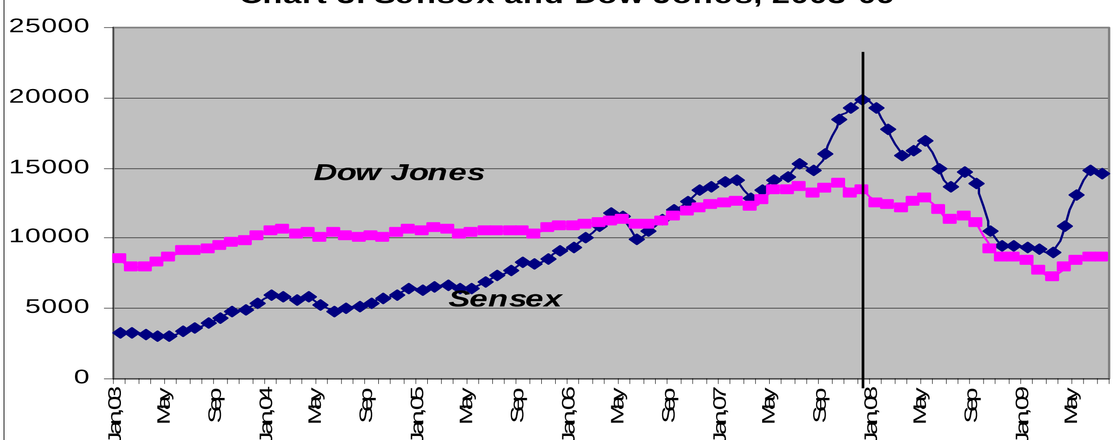
Chart 2: Net FII Equity Inflows into India (US$ Million)



Source: Securities Exchange Board of India.

The sudden withdrawal of FIIs from the Indian stock market brought about a crash in the market in January 2008. The benchmark stock price index, the BSE Sensex, plummeted from 20,873 on 8 January to 9093 on 28 November 2008, a 56 per cent fall over a period of 11 months. The fall in Wall Street started two months before in November 2007, but the intensity of the market crash taking place after a lag in Dalal Street (India's stock exchange) had been much larger as can be seen from Chart 3.

Chart 3: Sensex and Dow Jones, 2003-09



Source: Yahoo Finance.

In stage 2, capital inflows under external commercial borrowings, short-term trade credit and external borrowing by banks dropped sharply from April 2008. As can be seen from Table 1, following a substantial decline in the first half of 2008-09, there was a huge return flow of capital from India in the second half of the year with regard to short-term trade finance and bank borrowings to the extent of US$ 9.5 billion and US$ 11.4 billion respectively.

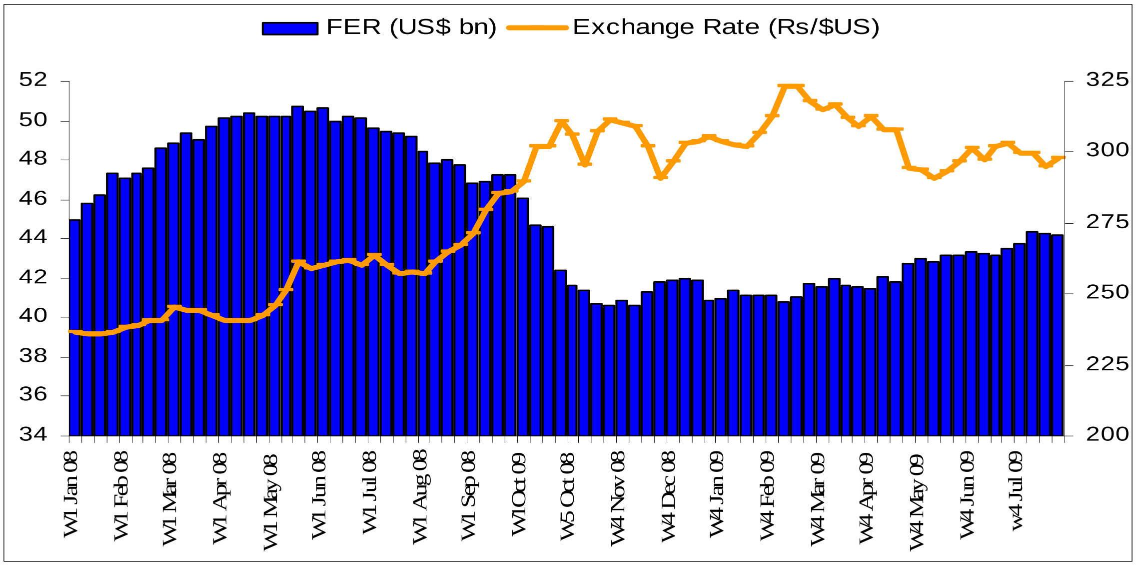
Table 1: India's Balance of Payments: 2008-09

	US$ Million				% Change (Y-O-Y)	
	2007-08	**2008-09**	**H1 2008-09**	**H2 2008-09**	**H1 2008-09**	**H2 2008-09**
Exports	**166163**	**175184**	**98107**	**77077**	**35.1**	**-17.6**
Imports	**257789**	**294587**	**168208**	**126379**	**45.2**	**-11.0**
Trade balance	-91626	-119403	-70101	-49302	-62.2	-1.9
% of GDP	**-7.8**	**-10.4**	**-6.1**	**-4.3**		
Invisible receipts	148604	162556	84635	77921	32.5	-84.1
Invisible payments	74012	72970	36065	36905	14.0	-12.9
Invisibles, net	74592	89586	48570	41016	50.6	-3.1
% of GDP	**6.4**	**7.8**	**4.2**	**3.6**		
Current account	-17034	-29817	-21531	-8286	-96.1	-36.8
% of GDP	**-1.5**	**-2.6**	**-1.9**	**-0.7**		
Capital account (net)	109198	9737	19032	-9295	-63.0	-116.1
% of GDP	**9.3**	**0.9**	**1.7**	**-0.8**		
-Foreign direct investment	15401	17496	13867	3629	185.1	-65.6
-Portfolio investment	29556	-14034	-5521	-8513	-129.9	-176.6
-External commercial borrowings	**22633**	**8158**	**3157**	**5001**	**-71.7**	**-56.4**
-Short-term trade credit	**17183**	**-5795**	**3689**	**-9484**	**-44.0**	**-189.5**
-External assistance	2114	2638	869	1769	22.6	25.9
-NRI deposits	179	4290	1073	3217	1475.6	1151.8
-Other banking capital	**11578**	**-7687**	**3747**	**-11434**	**-35.4**	**-298.0**
-Other flows	10554	4671	-1849	6520	-147.1	-1.7
Change in Reserves (-increase/ +decline)	**-92164**	**20080**	**2499**	**17581**	**106.2**	**134.0**

Source: Reserve Bank of India.

The crisis then moved to the foreign exchange market (Stage 3). The rupee began to tumble from end-April 2008 to November 2008 by about 20 per cent (Chart 4). The Reserve Bank of India intervened by selling dollars to smoothen the fall of the rupee. The heavy selling led to a massive depletion of the stock of reserves from US$ 315 billion in May 2008 to US$ 246 billion in November 2008. A part of the loss of reserves had been due to valuation changes as the dollar appreciated against other reserve currencies but still the actual depletion of official reserves has been quite large during this period.

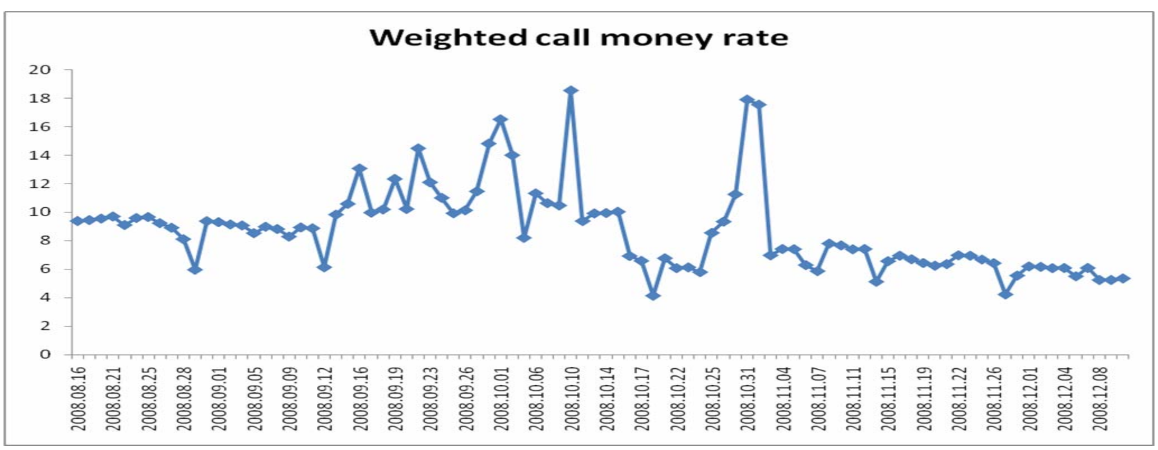
Chart 4: Foreign Exchange Reserves and the Exchange Rate



Source: Reserve Bank of India.

By mid-September 2008, the crisis gripped India's money market (Stage 4). The drying up of funds in the foreign credit markets led to a virtual cessation of external commercial borrowing for India including the access to short-term trade finance. The collapse of stock market ruled out the possibility of companies raising funds from the domestic stock market. Indian banks also lost access to funds from abroad, as inter-bank borrowing seized up in the US and Europe. And, instead, banks had to send funds to their branches abroad in those countries. All these put heavy pressure on domestic banks leading to a liquidity crisis from mid-September to end-October 2008 and this was reflected in the inter-bank call money markets where the call money rates rose to 20 per cent or so (Chart 5).

Chart 5: Liquidity Crisis



Source: Reserve Bank of India.

The current account of India's balance of payments had shown strong growth in the first half of 2008-09: merchandise exports grew by 35 per cent, imports by 45 per cent (Table 1 above), software exports by 38 per cent, and private transfers (remittances) by 41 per cent (Table 2). In the second half of 2008-09, these dramatically changed: merchandise exports declined by 18 per cent, imports by 11 per cent. The growth in software exports dropped to less than 4 per cent and remittances declined in absolute terms by about 20 per cent in the second half of 2008-09. Thus the impact of the global crisis manifested itself in the real sector through the collapse of India's trade sector (Stage 5).

Table 2: Net Invisible Earnings: 2008-09

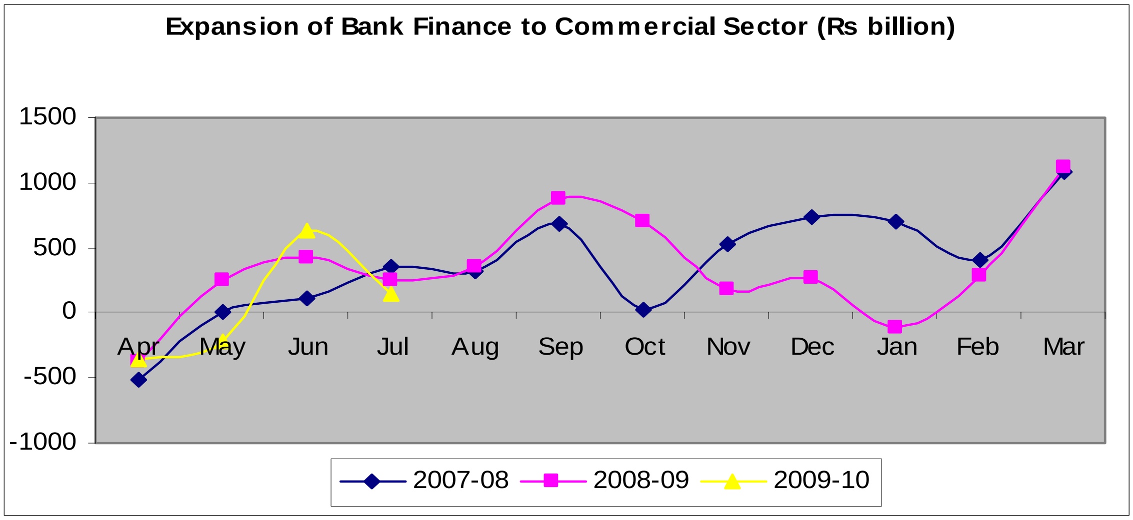
	US$ Million		% Change (Y-O-Y)	
	1st Half	2nd Half	1st Half	2nd Half
Travel	422	1040	10.2	-39.3
Transport	-1497	-214	-43.8	53.4
Insurance	183	95	-25.3	-72.9
Government not included elsewhere	6	-408	107.9	-1460.0
Miscellaneous	26561	23630	43.9	31.6
-Software	22595	21591	37.7	3.6
-Non-software	3966	2039	93.0	170.9
Transfers	24543	19736	40.3	-19.3
-Private	24548	19499	40.6	-19.6
-Official	-5	237	-114.7	15.6
Income	-1648	-2863	48.8	-68.5
-Invest Income	-1431	-2586	50.9	-89.3
-Labour income	-217	-277	28.4	16.8
Total	48570	41016	50.6	-3.1

Source: Reserve Bank of India.

Going back to the financial sector, domestic banks responded to the sudden loss of different avenues of funds for the Indian commercial sector and increased their lending during the period of "credit crunch". In September and October 2008, bank finance (non-food credit and investments in shares, bonds, debentures, commercial paper, etc.) expanded more than the previous year partly compensating for the drying up of funds from other sources (Chart 6).

In the next stage (Stage 6), the crisis spread to the domestic credit markets. The real economy deteriorated from September 2008 shown first by the sharp fall in export growth to 10 per cent in that month from about 35 per cent during April-August 2008, and negative growth thereafter; virtually negligible or negative growth in industrial output from October 2008; and negative growth in central tax revenue collection also from October 2008. Business and consumer confidence began to ebb leading to a decline in overall demand. By November 2008, the situation had fundamentally transformed. Expansion of bank finance to the commercial sector slumped to Rs. 609 billion during the four-month period, November 2008 to February 2009, just about a quarter in comparison with the expansion of Rs. 2,362 billion during the same period a year ago (Chart 6). This is primarily due to a sharp fall in demand for funds as investment and consumption dropped. This is also partly due to banks becoming extremely risk averse with the perception of default rising considerably.

Chart 6: From Credit Crunch to Drop in Credit Demand



Source: Reserve Bank of India.

3. Policy Response

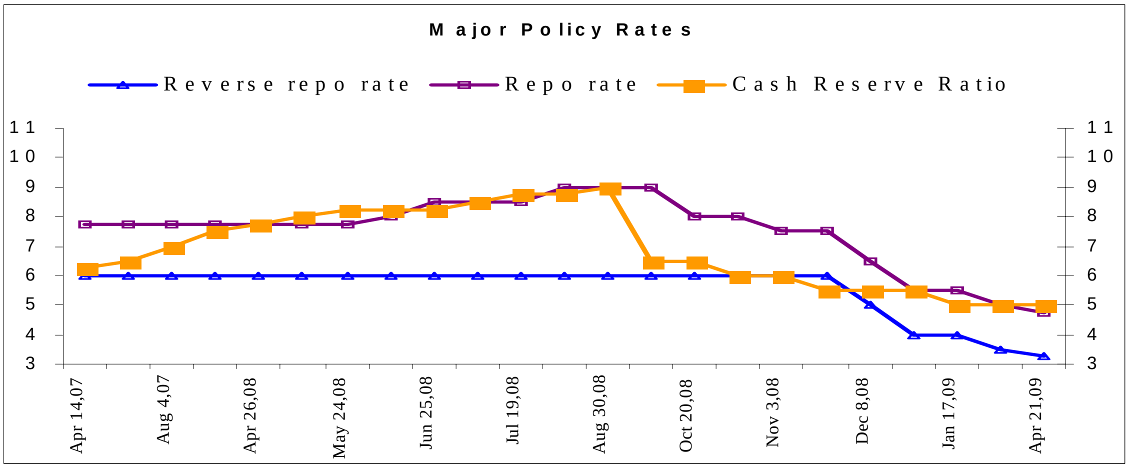
The major policy response to the crisis came in the form of loosening of the monetary policy and administering fiscal stimulus packages. There were a few other measures like relaxation of external commercial borrowing rules, raising the cap of FII investment in debt and permission given to India Infrastructure Financing Company Limited (IIFCL) in floating tax-free bonds for infrastructure funding, etc.

3.1 Monetary Measures

Monetary policy remained in the tightening mode till end-August 2009. In mid-September the central bank started relaxing liquidity but no cuts were made yet in policy rates. Inflation measured in terms of wholesale price index (WPI) peaked at 12.9 per cent in early August 2008 and remained high for some time. From mid-September to till end-October 2008 the economy was in the grip of a serious liquidity crisis and credit crunch as detailed earlier. The Reserve Bank of India (RBI) acted aggressively from mid-October to ease the situation by a series of rate cutting and liquidity injecting measures till April 2009.

Through successive steps, the RBI brought down cash reserve ratio (CRR) from 9 to 5 per cent, statutory liquidity ratio (SLR) from 25 to 24 per cent, the repo rate from 9 to 4.75 per cent and reverse repo rate from 6 to 3.25 per cent (Chart 7).

Chart 7: Monetary Policy Rate Changes



Source: Reserve Bank of India.

The RBI opened a special window for banks to lend to mutual funds, non-banking financial companies (NBFCs) and housing finance companies. The central bank also opened refinance facilities for banks, the Small Industrial Development Bank of India (SIDBI), the National Housing Bank (NHB), and the EXIM Bank. The RBI also introduced a liquidity facility for NBFCs through a special purpose vehicle (SPV), and increased export credit refinance. The actual/ potential release of primary liquidity by the central bank since mid-September 2008 has been massive at about Rs. 5617 billion amounting to about 9.5 per cent of GDP (Table 3). The RBI also made dollar swap arrangements for branches of Indian banks in the US and Europe facing shortage of dollar funds with the seizing up of the inter-bank markets there.

Table 3: Actual/Potential Release of Primary Liquidity since Mid-September 2008 (Rs. billion)

1	Cash Reserve Ratio (CRR) Reduction	1,600
2	Open Market Operations	801
3	MSS Unwinding /Buyback/ De-sequestering	1,555
4	Term Repo Facility (14 days)	600
7	Increase in Export Credit Refinance	266
6	Special Refinance Facility for SCBs (Non-RRBs)	385
7	Refinance Facility for SIDBI/NHB/EXIM Bank	160
8	Liquidity Facility for NBFCs through SPV	250
Total (1 to 8)		**5,617**
Memo: Statutory Liquidity Ratio (SLR) Reduction		400

Source: Reserve Bank of India.

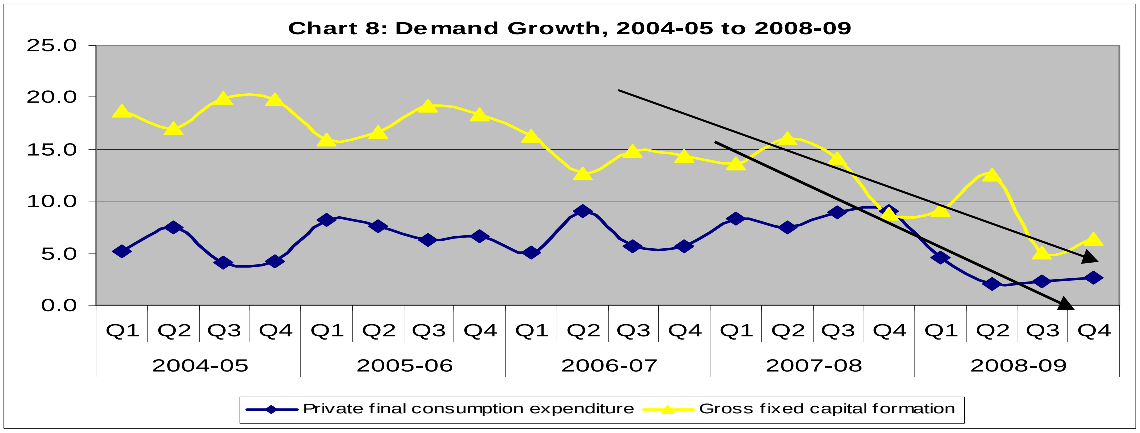
3.2 Fiscal Stimulus Packages

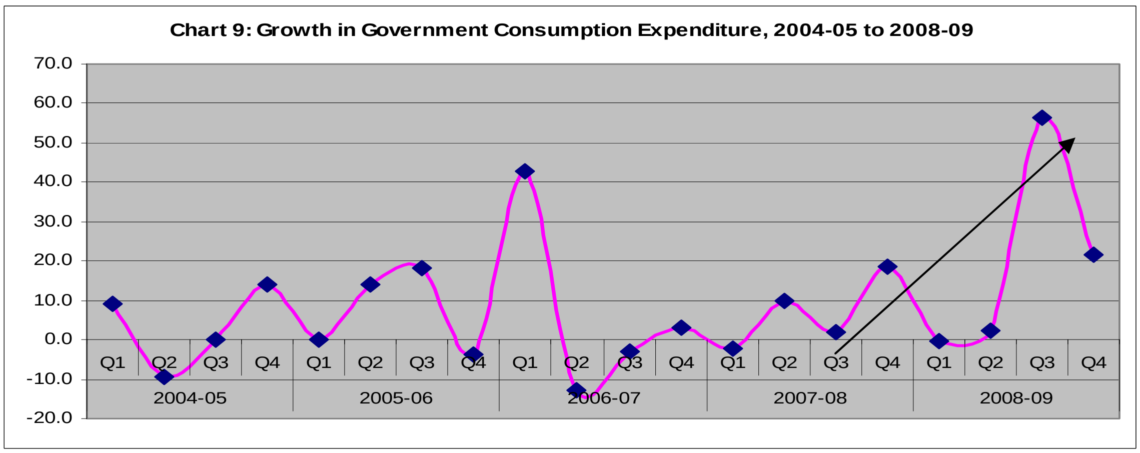
The central government announced three successive fiscal stimulus packages one in early December 2008, the second one in early 2009 and the last one in early March 2009. These included: across-the-board central excise duty reduction by 4 percentage points; additional plan spending of Rs. 200 billion; additional borrowing by state governments of Rs. 300 billion for plan expenditure; assistance to certain export industries in the form of interest subsidy on export finance, refund of excise duties/central sales tax, and other export incentives; and a 2 percentage-point reduction in central excise and service tax. The total fiscal burden for these packages amounted to 1.8 per cent of GDP.

The central budget 2008-09 announced in February 2008 showed a low fiscal deficit of 2.5 per cent of GDP. But the actual deficit turned out to be much higher due to salary hike for the government staff, debt waiver scheme for farmers, additional expenditure on rural employment scheme, duty reductions for petroleum products and revenue shortfalls due to slowdown in the economy. There were off-budget items like the issue of oil bonds and fertilizer bonds which are to be added to give a true picture of fiscal deficit. The combined fiscal deficit of the centre and states including the off-budget bonds is now estimated to cross 11 per cent of GDP for 2008-09, a huge rise from 2007-08 at about 5 per cent of GDP. Therefore, the total fiscal stimulus administered by India can be put at 6 per cent of GDP! Based on the budget presented in July 2009, the total fiscal deficit would remain at 11 per cent of GDP for 2009-10 as well.

4. Impact on the Economy

The growth in GDP moved down to 5.8 per cent (year-on-year) during the second half of 2008-09 from 7.8 per cent in the first half. This can be attributed partly to the decline in private consumption growth to just 2.5 per cent in the second half from and an already low growth of 3.3 per cent in the first half and an average consumption growth of 8.5 per cent in the whole of 2007-08 (Chart 8). Also, the growth in fixed investment declined to 5.7 per cent in the second half of 2008-09 from 10.9 per cent in the first half and an average of 12.9 per cent in 2007-08. The government consumption growth, on the other hand, rose steeply at 35.9 percent from just 0.9 per cent in the first half and 7.4 per cent in 2007-08 (Chart 9). The sharp rise in government consumption growth cushioned the sharp drop in aggregate demand and prevented a much sharper fall in GDP growth in the second half of 2008-09.





Source: Central Statistical Organization.

5. Growth Prospects, 2009-10

India's GDP growth came down to 6.7 per cent in 2008-09 from 9 per cent in the previous year. This drop in growth is the combined effect of monetary tightening till end-August 2008, high inflation (induced by the hike in world commodity prices) and the global crisis. The fiscal expansion in the second half of financial year provided some support and mitigated the contractionary impact of the other factors. The monetary easing in the second half of the year appeared to be too early to have any impact till the end of 2008-09.

5.1 Signs of Recovery

The current year, 2009-10 has shown some signs of recovery. Industrial output which virtually stagnated in the second half of 2008-09 has shown positive growth of 3.7 per cent in the first quarter of 2009-10. The group of six core industries consisting of power, coal, steel, cement, crude oil and refinery products has improved with its composite index growing at 4.8 per cent in the first quarter of 2009-10. The purchasing managers' index (PMI) has been above 50 (showing expansionary conditions) in the last few months. There has been a strong recovery of the stock market and a substantial rise in capital market mobilization from March 2009 onward. The Reserve Bank of India's "business expectations index" for July-September 2009 has crossed the neutral 100-mark. Also, corporate profits have recovered strongly in the last quarter of 2008-09 and the first quarter of 2009-10 with their growth at 15 per cent and 17.5 per cent respectively in contrast to sharp declines in the previous two quarters.

5.2 Some Strong Negative Signals

The sharp drop in exports and imports has continued at an average annual rate of 29 per cent and 35 per cent respectively during April-July 2009. Sales of commercial vehicles have declined at an average annual rate of 16 per cent during April-June 2009. Central government net tax revenue receipts have fallen by about 19 per cent per annuam in the first quarter of 2009-10 (Table 4).

Table 4: Growth in Selected Economic Indicators (% Change, Y-O-Y)

	2007-08 (Apr-Mar)	Apr-Aug 08	Sep-08	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	May-09	Jun-09
Industry	8.5	4.8	6.0	0.1	2.5	-0.2	1.0	0.2	-0.8	1.2	2.2	7.8
-Core industry	5.9	3.6	4.0	2.1	1.9	1.1	1.8	1.4	3.2	5.0	2.8	6.5
-Capital goods	18.0	8.3	20.8	4.2	0.5	6.6	15.9	11.8	-8.4	-7.3	-3.4	11.8
Exports	29.1	35.1	10.4	-12.1	-9.9	-1.1	-15.9	-21.7	-33.3	-33.2	-29.2	-27.7
Imports	35.5	37.7	43.3	10.6	6.1	8.8	-18.2	-23.3	-34.0	-36.6	-39.2	-29.3
-Non-oil imports	33.7	28.2	36.2	5.5	3.4	31.9	-0.5	-10.2	-18.9	-24.6	-25.4	-16.5
Railway freight traffic	9.1	8.6	8.2	-0.1	1.3	3.0	2.9	-0.9	4.1	3.1	2.4	9.6
Major ports traffic	11.9	8.7	1.1	-5.7	-4.6	0.0	-0.4	-5.2	-3.2	-1.7	-1.6	8.1
Commercial vehicle sales	6.2	3.9	-0.6	-34.9	-48.0	-58.2	-52.3	-34.4	-30.2	-13.0	-18.9	-15.1
Airport passenger traffic	21.2	-0.8	-14.0	-7.7	-13.6	-12.6	-11.0	-7.3	-11.8	-10.7	-3.7	
Central govt. net tax revenue	25.2	26.2	25.6	-13.5	-15.5	-25.5	-31.1	-4.1	4.8	-31.9	-11.0	-13.1
Capital raised in primary mkt.	45.1	-54.3	13.1	-74.6	3.0	-17.9	-48.3	-70.0	8.5	12.8	199.4	53.8
	2007-08 (Apr-Mar)	**Q3 07-08**	**Q4 07-08**	**Q1 08-09**	**Q2 08-09**	**Q3 08-09**	**Q4 08-09**	**Q1 09-10**				
Real GDP	9.0	9.3	8.6	7.8	7.7	5.8	5.8					
Corporate sales		17.7	25.9	36.9	35.8	13.1	-0.4	-6.3				
Corporate profit (3234 companies)		22.1	9.4	4.1	-26.3	-29.2	14.6	17.5				

Source: Economic Survey 2008-09, CSO, Ministry of Commerce, Controller General of Accounts & CMIE.

There is little evidence of a pick up in demand in the economy. While bank deposit growth remain high and rising, bank credit growth has been falling sharply (Table 5).

Table 5: Growth in Deposits and Credit by Bank Group (Annual Y-O-Y Growth as of July)		
Bank Group	**1-Aug-08**	**31-Jul-09**
	Deposits	
Public sector banks	23.1*	26.4**
Private sector banks	17.4*	6.7**
Foreign banks	20.9*	16.4**
All scheduled commercial banks	**20.6**	**21.8**
	Credit	
Public sector banks	26.3*	21.9**
Private sector banks	22.3*	4.2**
Foreign banks	33.3*	-7.1**
All scheduled commercial banks	**25.6**	**15.8**

* *As on 4 Jul 2008; ** As on 3 Jul 2009.*
Source: Reserve Bank of India.

While profit growth of the corporate sector had been good in the last two quarters, that did not reflect healthy sales growth. Companies had been able to show high profit growth as input and interest costs have fallen and there had been a rise in treasury incomes and asset sales. Growth in corporate sales turned negative in the last quarter of 2008-09 and increasingly so in the first quarter of 2009-10, indicating the persistence of low demand.

Further more, new investment announcements had fallen substantially during the first quarter of 2009-10 to less than a fourth of average in the previous four quarters (CMIE, 2009).

The central government budget for 2009-10 appeared to be expansionary. However, it projected an expenditure growth of only 13 per cent in 2009-10 as against 33 per cent in 2008-09. Revenue growth is projected at a higher rate of 9 per cent compared to the previous year's revenue growth of less than 4 per cent (Table 6). Therefore, it is more appropriate to say that there has not been much extra fiscal stimulus in 2009-10.

Table 6: Central Government Budget 2009-10 (Rs. Billion)

	2007-08 (Actuals)	2008-09 (RE)	2009-10 (BE)	%Change 3 over 2	%Change 4 over 3
1	2	3	4	5	6
1. Revenue Receipts (3+4)	**5419**	**5622**	**6145**	**3.7**	**9.3**
2. Gross Tax Revenue	5931	6279	6411	5.9	2.1
Corporation tax	1929	2220	2567	15.1	15.6
Income tax	1026	1226	1128	19.4	-8.0
Customs	1041	1080	980	3.7	-9.3
Excise duties	1236	1084	1065	-12.3	-1.7
Service tax	513	650	650	26.7	0.0
3. Net Tax Revenue (Net of States' Share)	4395	4660	4742	6.0	1.8
4. Non-Tax revenue	1023	962	1403	-6.0	45.8
5. Recoveries of Loans	51	97	42	90.2	-56.4
6. Other Receipts*	33	26	11	-21.4	-56.4
7. Total Expenditure*	**6772**	**9010**	**10208**	**33.0**	**13.3**
8. Revenue Expenditure	5944	8034	8972	35.1	11.7
Of which: Interest payments	1710	1927	2255	12.7	17.0
9. Capital Expenditure*	827	975	1236	17.9	26.8
10. Revenue Deficit (8-1)	**526 (1.1)**	**2413 (4.6)**	**2827 (4.8)**	**318.2**	**4.3**
11. Fiscal Deficit [7- (1+5+6)]	**1269 (2.7)**	**3265 (6.2)**	**4010 (6.8)**	**129.6**	**9.7**

**Excludes transactions related RBI transfer of State Bank of India to central government in 2007-08 (Rs. 355 billion) which is deficit neutral as equivalent amounts are shown on both receipts and expenditure sides.*
Note: Figures in brackets are per cent to GDP.
Source: Budget Documents, Ministry of Finance.

This year the progress of monsoon from June to mid-August 2009 indicates an all-India rain deficiency of over 25 per cent and a decline in the area sown for the summer crop at about 22 per cent. The direct impact of the crop failure on the GDP growth in 2009-10 could be anything between 0.5 and 1.5 percentage point. Taking the mid-point for the impact of the poor monsoon, the GDP growth for the current year could be a lot lower than last year, at about 5 per cent.

6. Policy Suggestions for Recovery

India's GDP growth rate had dropped from 9 per cent in 2007-08 to 6.7 per cent in 2008-09 and the global crisis has been one of the factors behind this growth slowdown. The growth is estimated to drop further to 5 per cent in 2009-10 due to the continued impact of global crisis and a crop failure. Huge fiscal deficits and rising public debt are likely to hamper recovery prospects by putting an upward pressure on interest rates. Monetary easing measures are yet to show results. Lending rates have not fallen much for so many reasons including the high lending risk premium. No further monetary easing is not expected as inflation is rising rapidly in the context of the failure of the monsoon.

The global economy while showing some signs of leveling off is not expected to recover strongly anytime soon. A vigorous recovery is predicated on the unwinding of the severe imbalances among deficit and surplus countries and the repair of the broken financial system of developed countries (Blanchard, 2009). Those may take years and India may not able to return to the 9 per cent growth path on the back of a global recovery.

Nevertheless, the Indian economy can recover fast if can get a big boost in domestic business and consumer sentiments which are badly shaken by the global crisis. This is very well possible by undertaking structural and procedural reforms as has happened in the early 1990s. Indian economy recovered swiftly after it was hit by the severe external payments crisis in 1991-92 leading to a collapse in its growth rate. Then a series of structural reform measures were undertaken by the central government which raised India's potential growth rate to about 7-8 per cent. There has been a talk about the "second-generation reforms" that are considered necessary to raise India's potential growth rate further to 9-10 per cent.

There are broadly five areas in which fresh reforms are needed:

1. Infrastructure
2. Education
3. Agriculture
4. Investment climate
5. Delivery of public services

The first item in the reform agenda is to organize massive investments in social and physical infrastructure. It is well known that infrastructure is a key binding constraint for India's growth and the government should press hard in changing policies and procedures to incentivise the private sector to build world class infrastructure in the power, roads, ports, airports, urban infrastructure, water and sanitation sectors. Public-private partnerships have been rightly identified as the way forward but the speed and efficiency of formulation, approval and implementation of projects have to be stepped up considerably.

Next is the reform of the education system at both school and university levels aimed at improving both access and quality. This sector requires radical reforms to eliminate barriers to entry and to create autonomy for curriculum modernization; it should be given flexibility in fixing salaries and fees structure and enabled to establish multiple and independent accreditation agencies as well as creation of conducive conditions for foreign and domestic investment, etc.

The third is to carry out reforms in the long-neglected agricultural sector. This has to be through a "root and branch" method at all stages, from input to output to marketing. A sensible approach is to end the open-ended farm subsidy system and to confine fertilizer, water and power subsidies to only marginal and small farmers owning up to 2 hectares of land.

Fourth is further regulatory reform. While the "license-control raj" has been significantly eroded as a result of reforms in the 1990s, there still remain significant obstacles to doing business in India. As shown by World Bank surveys on 'doing business', India ranks very low among countries on regulatory environment with regard to enforcement of contracts, payment of taxes, business closure, licensing, and property registration and in setting up a business. The government should substantially relax its "permit and approval" system by carrying out procedural reforms. The removal of regulatory constraints will substantially improve investment climate.

Fifth is reform in the quality of delivery of public services like education, health, poverty alleviation and employment generation. The government should empower the actual beneficiaries with direct transfer of money through cash vouchers and smart cards which could, on the one hand, plug leakages and, on the other, improve service delivery by not hindering the competitive market-based production system.

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