

The Global Financial Crisis and Short-run Prospects for India

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ABSTRACT

This paper provides an overview of the impact of the global financial crisis (GFC) on the Indian economy. It identifies the channels through which the GFC has impacted the Indian economy and evaluates the stimulus packages that have been put in place by the government of India. Finally, the paper examines short run prospects for the Indian economy in light of the GFC and the economy's recent dynamism.

Key words: Global Financial crisis, Economic downturn, Stimulus packages, India

JEL classification: E20, E66, F43, O11

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I. Introduction

The on-going global financial crisis (GFC) has cast a shadow over the global economy with world output and trade forecasted (by the IMF) to shrink in 2009. This is the first time such contraction has taken place since the end of the Second World War and represents a major challenge for policymakers apart from the immense hardship it is inflicting on working households who are losing their jobs and/or their homes on an unprecedented scale and experiencing deep wealth loss.

There are some special characteristics of the current recession. Unlike recent episodes of recession this is not just a case of an asset bubble bursting with implications for some financial institutions and an accompanying contraction of demand which could be addressed by automatic stabilizers on the fiscal side and a monetary policy that cut interest rates. This recession is a far more complicated entity. First, there was an asset bubble caused by a glut of savings in the global economy (coming largely from China) and the US's inexhaustible appetite for debt. Thus the savings glut which led to low interest rates largely financed excessive US consumption — not investment. This led to a substantial hike in asset prices (particularly home prices), aided and abetted by the commodities boom following strong growth performance in emerging economies — particularly India and China and the development of complex financial instruments, e.g., derivatives, largely unregulated that raised asset prices — particularly mortgage based loans — to high levels. The debt spiral that this resulted in has been well discussed in the literature — suffice it to say that when bad mortgage debt started being recalled (the so called subprime crisis) it was quickly realized that there was a general credit crisis following from the existence of vast sums of questionable (toxic) assets in the balance sheets of banks and other financial institutions. As a result, the collateral backing of many credit advances started being questioned and credit froze. Despite aggressive rate cutting by central banks in all the major countries the cost of borrowing skyrocketed. This led to a collapse of demand and rising unemployment — all in a vicious demand spiral. Appendix 1 to this paper briefly chronicles the development of the current crisis.

Thus, as distinct from most recessions in the recent past the current deep recession represents a combination of many factors. First, it began as a crisis of debt and of asset price inflation. Second, it represents a regulatory crisis. The explosion of complex (and unregulated) financial instruments in a high debt environment exacerbated the crisis of

debt. Following immediately from this and, third, it represents a massive imbalance in the global economy and a credit crunch. Fourth it represents a collapse of demand and, following from that rising unemployment. Finally, the rising unemployment exacerbates the debt crisis as people are unable to pay off debts. This also completes a vicious cycle. Hence, a number of factors are influencing the current downturn. Further, these factors reinforce each other and it would be necessary to address each of them if the global economy has to recover from its present malaise. A piecemeal approach is unlikely to work. A stimulus package consisting of enhanced government expenditure and tax breaks represents a boost to aggregate demand and will not work by itself. If bank balance sheets are still bedevilled with toxic assets the money handed out to people through the stimulus package will be deposited in banks. But if banks are not inclined to lend this money out the multiplier effect of the stimulus package will be frozen in its tracks.

Hence, it is important to underscore the fact that there exists a multiplicity of reasons for the current global financial crisis with some of these reasons having feedback effects on each other. In light with the Mundell–Tinbergen Assignment Principle we need to have at least as many independent policy tools as policy objectives. In this particular case, policy needs to work independently on: (i) stabilizing the balance sheets of banks to rid them of toxic assets, (ii) facilitating growth of credit by guaranteeing deposits and by lowering the cost of credit (interest rate and margins reduction), (iii) stimulating demand; (iv) buttressing social safety nets for the unemployed and making automatic stabilizers more efficient; (v) putting into place more comprehensive regulation of financial instruments and enhanced international cooperation in this area; and (vi) ensuring that global imbalances of the sort preceding the current crisis never happen again. This is a tall order but unless action is taken on all these fronts the global economy can run into another crisis albeit with a much larger level of debt. If global imbalances persist or if effective regulation of financial instruments is not forthcoming the global economy is at risk of facing another crisis in the not too distant future. At that time, however, the world economy will be saddled with a much larger debt due mainly to the many large bailout and stimulus packages. Hence, it is imperative that progress be made on all these fronts. However, some policies should, logically, precede others, e.g., banks should be stabilized before fiscal stimuli are put into place.

II. Evidence on the Impact of the Global Financial Crisis on India¹

The record of economic growth (annual rate of growth of real GNP) in independent India has been uneven. Until about 1980 growth rates were low and subject to considerable volatility. This record has improved since then.² India's growth performance since 2000 is sketched in Table 1. In particular, this table provides updated figures on recent economic growth. Economic growth in 2007–08 was a high 9 per cent despite the fact that the sub-prime crisis had already begun impacting the US and some other major economies. However, there was a steady drop in growth rates during the first three quarters of 2008–09. Government forecasts economic growth to be of the order of 7.1 per cent during 2008–09.

Table 1: India Growth Rates of Real GDP (%)

Sector	2000–01 to 2007–08 (average)	2005–06	2006–07	2007–08	2008–09 (1 st quarter)*	2008–09 (2 nd quarter)*	2008–09 (3 rd quarter)*	2008–09 (advanced estimates)*
1. Agriculture & Allied Activities	2.9 (20.9)	5.9 (19.6)	3.8 (18.5)	4.5 (17.8)	3.0	2.7	-2.2	2.6
2. Industry	7.1 (19.6)	8.0 (19.4)	10.6 (19.5)	8.1 (19.4)	6.9	6.1	2.4	4.8
2.1 Mining & Quarrying	4.9	4.9	5.7	4.7	4.8	3.9	5.3	4.7
2.2 Manufacturing	7.8	9.0	12.0	8.8	5.6	5.0	-0.2	4.1
2.3 Electricity, Gas & Water Supply	4.8	4.7	6.0	6.3	2.6	3.6	3.3	4.3
3. Services	9.0 (59.6)	11.0 (61.1)	11.2 (61.9)	10.7 (62.9)	10.0	9.6	9.9	9.6
3.1 Trade, Hotels, Restaurants, Transport, Storage & Communication	10.3	11.5	11.8	12.0	11.2	10.7	6.8	10.3
3.2 Financing, Insurance, Real Estate & Business Services	8.8	11.4	13.9	11.8	9.3	9.2	9.5	8.6
3.3 Community, Social & Personal services	5.8	7.2	6.9	7.3	8.5	7.7	17.3	9.2
3.4 Construction	10.6	16.2	11.8	10.1	11.4	9.7	6.7	6.5
4. Real GDP at factor cost	7.3 (100)	9.4 (100)	9.6 (100)	9.0 (100)	7.9	7.6	5.3	7.1

Source: Reserve Bank of India unless otherwise stated. * Ministry of Finance, Government of India.

¹ Throughout this paper dollar figures refer to US \$. I have used the exchange rate of Rs. 50 = \$1.

² See, Jha. R. (2008), 'The Indian Economy: Current Performance and Short-term prospects', in R. Jha (ed.) *The Indian Economy Sixty Years After Independence*, Basingstoke, UK and New York: Palgrave Macmillan.

There is some apprehension — at the present time based only on conjecture — that the fourth quarter growth figures may be overestimates so that growth in 2008–09 may be lower than 7.1 percent. Several other indicators have also pointed toward a slowdown in the economy. Industrial growth during April–January 2008–09 was 3.0 per cent as compared to 8.7 per cent during the corresponding period in 2007–08. Similarly M3 growth as of 13 February 2009 was 19.9 per cent as compared to 21.6 per cent last year and the annual rate of inflation in terms of WPI was 0.44 per cent for the week ended 7 March 2009, indicating slackening of demand. As a result of the fiscal stimulus packages put in place the fiscal deficit during April–January 2008–09 was 174.3 per cent higher than the corresponding period in 2007–08 and the revenue deficit was 278.0 per cent higher, indicating pressures on the fiscal deficit and a departure from the FRBM. However, net tax revenue to the centre during April–January 2008–09 was higher by 1.6 per cent compared to the corresponding period in 2007–08.

As a consequence of the global liquidity squeeze, Indian banks and corporates saw their external sources of funding drying up. Hence, demand for credit spilled over into the domestic market, bringing domestic financial and credit markets under pressure. Some of the funds borrowed internally were begin converted in dollars to meet the overseas debt servicing obligations of the corporates. This put the rupee under pressure and there was a significant depreciation of the home currency. Foreign exchange reserves fell as some of these were used to defend the rupee against the dollar.

India's trade data for January 2009, the latest available, showed a 16 per cent drop in exports and 18 per cent decline in imports and would appear to reinforce the slowdown story. However, this drop was in dollar terms. Trade data, when denominated in rupees showed positive growth in exports and still healthy growth in imports. Further, project imports grew as much as 170 per cent in dollar terms in January 2009, showing that corporate India has not stopped investing despite the downturn and higher cost of capital. This trend is indeed confirmed by the third quarter GDP data released by the Central Statistical Organization. Exports in dollar terms during April–January 2008–09 grew by 13.2 per cent whereas imports increased by 25.3 percent. Gross fixed capital formation continued to be in excess of 33 per cent of GDP at current market prices in October–December 2008.

Clearly, Indian industry expects the slowdown in the domestic economy to be short-lived, and does not want to be caught unprepared when the recovery begins. Over a shorter horizon, rupee exports grew 12 per cent, 22 per cent and 4.3 per cent in November, December and January, even as the corresponding dollar figures were negative. Clearly, rupee depreciation is responsible. But from the point of view of the domestic economy, the rupee figure retains its significance. Exports of goods and services grew 20 per cent in the third quarter, in rupee terms, even as imports rose 32 per cent. Recession in the developed markets would continue to hit merchandise exports and even service exports in the near term. However, as industrialized country companies try to get their act together, it seems likely that India's outsourcing industry would pick up steam again.

On a more firmly optimistic note, the collapse of commodity prices has helped slow the pace of growth of the trade deficit, bringing it below \$100 billion for April 2008–January 2009. The oil import bill has been slashed and accounts, preponderantly, for the 18 per cent decline in imports. Non-oil imports, too, have contracted but only 0.5 per cent in January. In rupee terms, non-oil imports grew 23 per cent in January 2009, down from the 64 per cent in December 2008. Within this category, project imports — no matter how these are measured — have been growing vigorously. Hence, the trade data reveal an economy that is still performing reasonably well, rather than of one that is slipping into deep recession. A key reason for this is the strong dynamism of the Indian economy, key elements of which we explore in the next section.

III. Key Drivers of Economic Growth in India

India's growth rate has been accelerating for the past 25 years or so. Hence, there is considerable momentum in the Indian economy. Contributing to this acceleration is a broad series of reforms including financial sector reforms, increased globalization and widening and deepening of product and financial markets. The impact of such reforms gets reflected in key indicators such as market capitalization of the stock market, the technology and transparency of transactions, the sets of instruments traded, balance sheets of financial institutions and the degree of openness of the economy. Concurrently a benign FDI policy framework has permitted greater tie-ups in high technology areas

for production for domestic as well as external markets. I now list some key factors (in a growth accounting sense) that have led to the current surge in economic growth in India and have the potential to sustain or even accelerate this growth rate.

Productivity Growth

The higher GDP growth rate beginning in the 1980s has been accompanied by a sharp acceleration in total factor productivity growth (Table 2).

Table 2: Sources of Growth in India: Aggregate and by Major Sectors (% pa)

Aggregate Economy							
Period	Output	Employment	Output per worker	Contribution of			
				Physical capital	Land	Education	Factor productivity
1978–04	5.4	2.0	3.3	1.3	0.0	0.4	1.6
1978–93	4.5	2.1	2.4	1.0	-0.1	0.3	1.1
1993–04	6.5	1.9	4.6	1.8	0.0	0.4	2.3
Agriculture							
1978–04	2.5	1.1	1.4	0.4	-0.1	0.3	0.8
1978–93	2.7	1.4	1.3	0.2	-0.1	0.2	1.0
1993–04	2.2	0.7	1.5	0.7	-0.1	0.3	0.5
Industry							
1978–04	5.9	3.4	2.5	1.5		0.3	0.6
1978–93	5.4	3.3	2.1	1.4		0.4	0.3
1993–04	6.7	3.6	3.1	1.7		0.3	1.1
Services							
1978–04	7.2	3.8	3.5	0.6		0.4	2.4
1978–93	5.9	3.8	2.1	0.3		0.4	1.4
1993–04	9.1	3.7	5.4	1.1		0.4	3.9

Source: Bosworth and Collins (2007³).

Table 2 presents data for the period 1978–2004 and the two sub periods: before reforms (1978–93) and after reforms (1993–04). Aggregate productivity growth, driven mainly by a pick up in service sector productivity growth, picked up considerably during 1993–04 — in fact it more than doubled between 1978–93 and 1993–04. Agricultural growth has stagnated except for the ‘green revolution’ phase of 1978–93.

³ Bosworth, B. & S. Collins (2007), ‘Accounting for Growth: Comparing China and India’, NBER Working Paper no. 12943, Cambridge, Massachusetts.

Rodrik and Subramanian (2004) examine⁴ a number of possible explanations for this rise in productivity growth. Such explanations include Keynesian type demand-led expansion in the 1980s, the advent of the Green Revolution, and external and internal liberalization. However, they find empirical support for attitudinal changes in governments in the mid to late 1980s. These administrations, it is argued, began viewing private investment and enterprise more favorably and modest reforms were initiated. This had salutary effects on manufacturing sector productivity and later had substantial spillover effects. Such beneficial synergies were helped by the climate of deregulation and delicensing started in the early 1990s. Other authors have placed a much stronger emphasis on the role of the post 1991 reforms and downplayed the role of policy initiatives of the 1980s.⁵ To be sure, financial sector reforms began only in 1993 and are yet to be completed.

Improvements in Labour Supply

India's labour supply is undergoing fundamental changes. In 2000 the proportion of the Indian population in the working age group (15–64 age bracket) was 60.9 per cent. The UN's Population Division has projected that this ratio will surpass the proportion of Japanese in this age group by 2012 and climb to over 66 per cent in 30 years. At that time it is poised to overtake China's population in the same age group.

At the same time a quiet revolution is taking place in nutritional status in India with calorie and other macro and micro nutrient deficiency on the decline. According to the 2001 Census during the period 1991 to 2001 the literacy rate climbed from 51.54 per cent to 65.38 per cent in the aggregate, from 63.3 per cent to 75.85 per cent for males and from 38.79 to 54.16 per cent for females. Thus India's labour force is younger, better nourished and has more skills than before. These changes imply substantial

⁴ Rodrik, D. and A. Subramanian (2004) 'From Hindu Growth to Productivity Surge: The Mystery of the Indian Growth Transition' available at <http://ksghome.harvard.edu/~drodrik/indiapaperdraftmarch2.pdf> Accessed 17 April 2009.

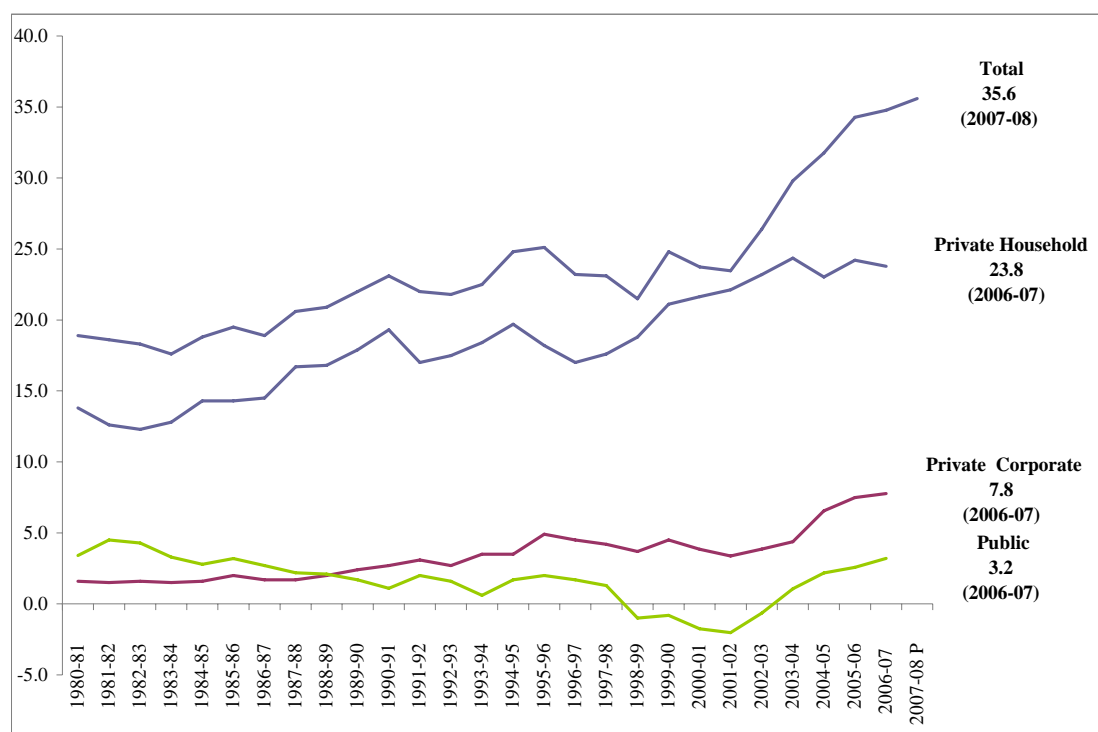
⁵ There has been a debate of sorts about whether attitudinal changes in the government bureaucracy or actual policy changes are better explanations for the acceleration in economic growth in India. In a country with an autarkic trade regime and a highly centralized administrative structure, attitudinal changes may well be the hardest to make. Hence, both policy measures as well as attitudinal changes should be regarded as essential as well as complementary explanations for this surge in the rate of growth.

quality improvements in the India's labour force. Economic theory and international experience leads us to believe that this will lead to sharp rises in labour productivity and an upward shift in the trend long run rate of growth of the Indian economy.

Higher Savings and Investment for Enhanced Economic Growth

Central to the growth success story has been a steady rise in India's saving and investment rates (Figure 1).

Figure 1: Gross Domestic Savings
(% of GDP)

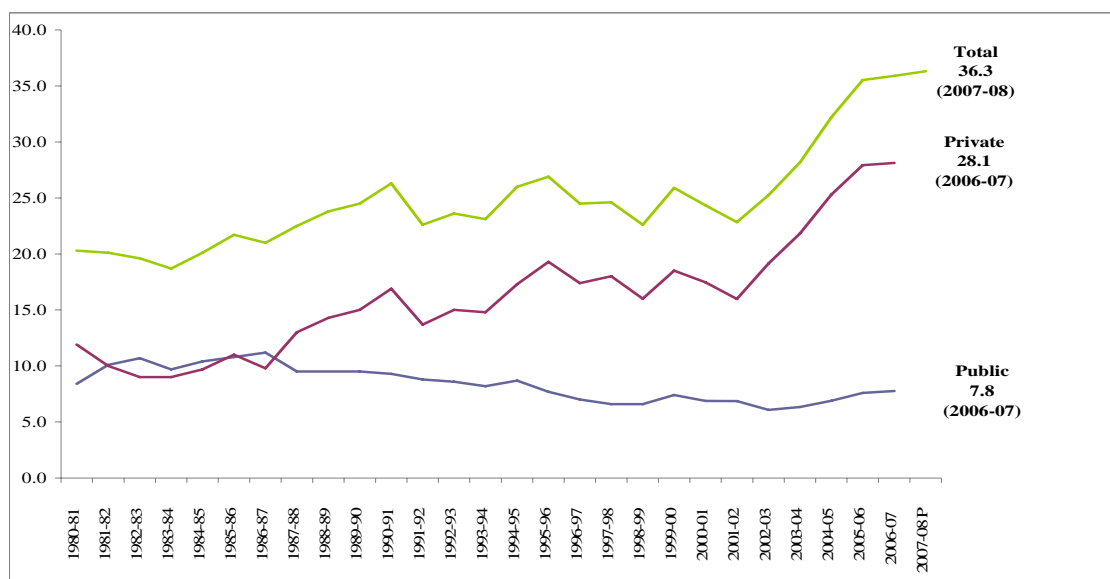


Source: Reserve Bank of India

Savings have risen from 23.4 per cent of GDP in 2000–01 to 35.4 per cent in 2007–08.

During the same period investment rose from 24 per cent of GDP to 36.3 per cent of GDP (Figure 2), indicating a marginal current account deficit. Public sector saving turned positive in 2003–04 indicating improved tax and budgetary performance. With 36.3 per cent investment in 2007–08 India was able to obtain 9 per cent GDP growth whereas China obtains 9 per cent growth with investment rates of over 40 per cent. Thus the productivity of capital is higher in India than in China.

Figure 2: Gross Investment
(% of GDP)



Source: Reserve Bank of India

Falling Fiscal deficits and rising public savings

As India seeks to accelerate its growth rate even further, raising the saving and investment rates by lowering fiscal deficits will be key. India needs to streamline public subsidies and increase tax revenues in order to reduce, if not eliminate, public dissaving in order to boost economic growth. In recent times, particularly since 2003, India's fiscal deficit situation has improved (Figure 3) and tax revenues have gone up (Figure 4).

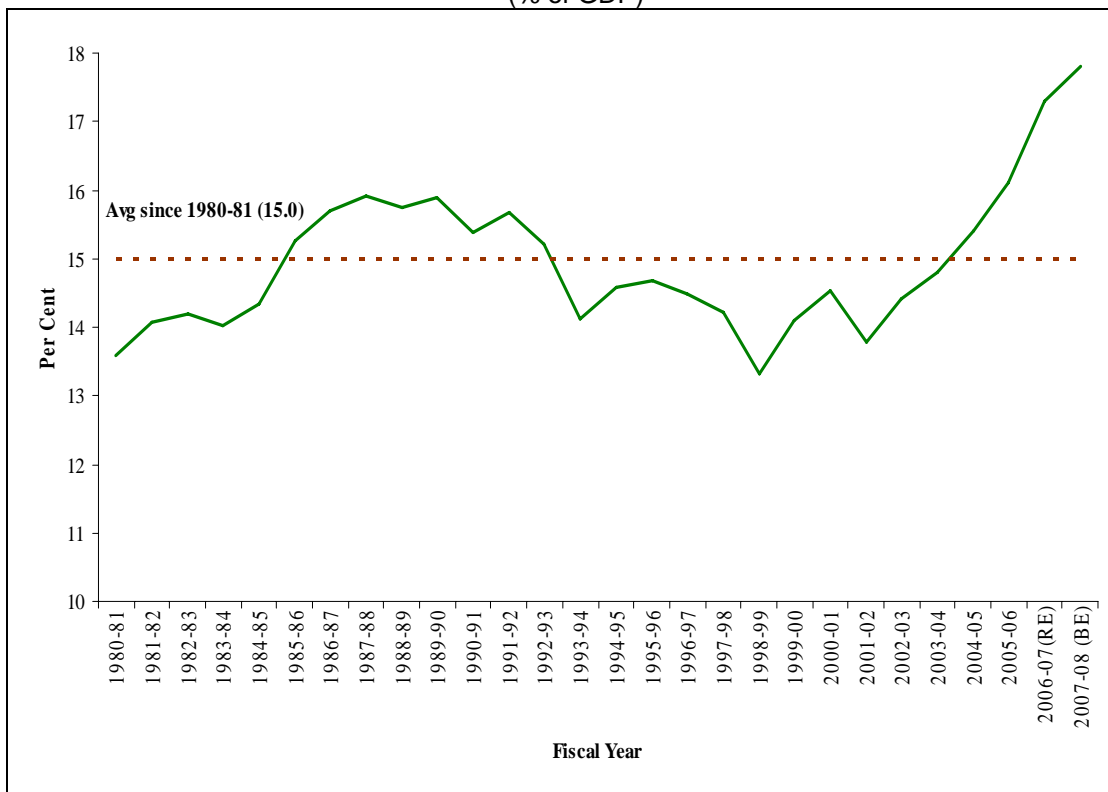
Though fiscal deficits have been coming down successive reductions have become harder to achieve. It is clear that the government's goal of achieving zero revenue deficit by 2009 will not be achieved. Concurrently public debt has climbed to over 80 per cent of GDP. External debt is low, with a large share in long term debt. Hence pressures on the exchange rate because of high external debt are minimal. In addition India's foreign exchange rate reserves in February 2009 were US\$238.715 billion.

Figure 3: Fiscal Deficits: Consolidated Center and States
(% of GDP)



Source: Reserve Bank of India

Figure 4: Tax Revenue: Centre and States
(% of GDP)



Source: Reserve Bank of India

India's External Sector Performance

The recent acceleration in India's economic growth has been associated with greater economic integration with the global economy. India missed the first phase of trade liberalization in the post-War period but is has not done so this time around. Indian manufacturing tariffs are now low by world developing country standards: 12.5 per cent and Indian anti-dumping appears to be slowing down. India is far less dependent on tariffs for government revenue but agricultural tariff reduction has not kept pace with industrial tariff liberalization. A necessary but not sufficient condition for it to be reversed would be agricultural protection cuts in developed countries. India's exports have surged⁶ and India's export basket is geared towards high value added items such as engineering goods (Table 3).

Table 3: Commodity Composition of India's Exports

Commodity Group	Share (%)					Cumulative annual growth rate 2000-01 to 2004-05	Growth rate (in US \$ terms) %			
	2000-01	2005-06	2006-07	April-September			2005-06	2006-07	2006-07	2007-08
				2006-07	2007-08					
1. Primary Products, of which	16.0	15.4	15.1	13.5	13.4	16.9	18.9	19.8	18.5	16.7
Agriculture & allied	14.0	10.2	10.3	9.5	9.3	9.0	19.8	23.5	24.7	15.1
Ores & Minerals	2.0	5.2	4.8	4.0	4.1	49.9	17.4	12.6	6.0	20.6
2. Manufactured Goods, of which	78.8	72.0	68.6	68.4	67.4	15.3	19.6	16.9	18.1	15.9
Textiles incl. RMG	23.6	14.5	12.5	12.9	11.1	4.3	20.4	5.7	33.5	1.2
Gems & Jewellery	16.6	15.1	12.6	12.7	13.0	16.8	12.8	2.9	-0.6	20.4
Engineering goods	15.7	20.7	23.3	22.8	23.5	25.4	23.4	38.1	48.1	21.2
Chemicals & related products	10.4	11.6	11.2	11.1	10.4	21.7	17.3	19.1	28.4	10.2
Leather & leather Manufactures	4.4	2.6	2.4	2.4	2.3	5.5	11.1	12.1	7.7	12.7
Handicrafts (incl. carpet handmade)	2.8	1.2	1.1	1.1	0.8	-5.3	30.3	4.1	5.2	-14.5
3. Petroleum, Crude & products (incl. coal)	4.3	11.5	15.0	16.5	17.9	38.7	66.2	59.3	106.2	27.6
Total exports	100.0	100.0	100.0	100.0	100.0	17.0	23.4	22.6	27.3	17.6

Source: Economic Survey Government of India 2007-08

⁶ India's exports grew at 28.2 per cent and 29.8 per cent in 2004 and 2005 respectively compared to 21.2 per cent and 13.9 per cent for world exports, 27.3 per cent and 21.8 per cent for developing country exports and 35.3 per cent and 28.4 per cent for China for the two years.

India's imports have also been growing rapidly and are highly skewed towards petroleum products and capital goods (Table 4).

Table 4: Commodity Composition of India's Imports

Commodity Group	Share (%)					Cumulative annual growth rate 2000-01 to 2004-05	Growth rate (in US \$ terms) %			
	2000-01	2005-06	2006-07	April-September			2005-06	2006-07	2006-07	2007-08
				2006-07	2007-08					
Food & Allied Products	3.3	2.5	2.9	2.3	2.2	24.3	-4.7	42.4	-5.8	26.6
1. Cereals	0.0	0.0	0.7	0.1	0.1	16.1	36.8	3589.6	803.8	-55.5
2. Pulses	0.2	0.4	0.5	0.3	0.5	38.0	41.3	53.8	9.6	92.8
3. Edible Oils	2.6	1.4	1.1	1.2	1.2	17.2	-17.9	4.2	-11.8	32.9
Fuel (of which)	33.5	32.1	33.2	36.3	33.6	18.5	44.8	29.0	39.8	18.0
4. POL	31.3	29.5	30.8	33.8	31.0	17.5	47.3	30.0	41.2	16.9
Fertilizers	1.3	1.3	1.6	1.7	1.9	17.2	59.4	52.4	54.4	48.2
Capital Goods (of which)	10.5	15.8	15.4	13.1	13.2	28.9	62.5	21.8	44.3	28.3
5. Machinery except electrical & machine tool	5.9	7.4	7.5	8.1	8.2	26.2	49.0	24.9	39.5	28.3
6. Electrical Machinery	1.0	1.0	1.1	1.1	1.1	25.6	25.9	30.3	37.9	28.6
7. Transport Equipment	1.4	5.9	5.1	2.1	2.5	57.7	104.2	6.8	55.7	51.2
Others (of which)	46.3	43.7	43.8	37.8	40.4	23.5	21.1	24.6	-2.8	36.4
8. Chemicals	5.9	5.7	5.2	5.6	5.2	23.6	23.2	14.1	13.2	19.8
9. Pearls, precious & semi precious stones	9.6	6.1	4.0	4.1	4.2	18.3	-3.1	-18.0	-32.8	30.6
10. Gold & Silver	9.3	7.6	7.9	7.7	10.3	24.5	1.5	29.4	-3.1	71.0
11. Electronic Goods	7.0	8.9	8.6	9.0	8.9	29.9	32.5	20.6	34.0	26.2
Grand Total	100.0	100.0	100.0	100.0	100.0	22.2	33.8	24.5	23.5	27.7

Source: Economic Survey Government of India 2007-08

India's trade balance, although substantially in the red, has been covered by inflows from Non Resident Indians and software exports leading to more modest current account deficits. This along with substantial foreign exchange reserves ensures reasonable macroeconomic stability.

IV. Channels through which the GFC has impacted India

Against the background of section III there should be reasons to believe that India should be impacted, minimally, if at all by the GFC. However, there has been a significant impact, which necessitates an explanation.

D. Subbarao, Governor of RBI, in a speech⁷ in February 2009 dealt at length on the issue. His argument is essentially as follows. There are at least two reasons why one should expect the GFC to have minimal impact on India. First, the Indian banking had no direct exposure to the sub-prime mortgage crisis. Indeed, no Indian bank has had to be rescued — nor has there been any need for deposits guarantee. Second, India's growth, as argued above, is largely based on domestic consumption and domestic investment. External demand as measured by merchandise exports account for less than 15 per cent of India's GDP.

However, Subbarao argues, the Indian economy has globalized rapidly during the past few years. In terms of openness to international trade the ratio of exports plus imports to GDP increased from by more than 50 per cent in the 10 years from 1997–98 to 2007–08 (from 21.2 per cent of GDP to 34.7 per cent of GDP). Furthermore, the growth of financial integration has been even more rapid. During the same 10 year period (1997–98 to 2007–08) the ratio of total external transactions (gross current account flows plus gross capital account flows to GDP) increased by more than 100 per cent from 46.8 per cent in 1997–98 to 117.4 per cent in 2007–08. Furthermore, corporate borrowing from external sources has also increased significantly. In 2007–08, for example, India received capital inflows to the extent of 9 per cent of GDP as against a current account deficit of 1.5 per cent of GDP.

As a consequence three different channels of the impact of GFC on India can be identified. The first is the financial channel — the growing integration of India's financial markets with global financial markets, as argued above, indicates that Indian financial institutions would necessarily get impacted by the turmoil in global financial markets. Second, and as also argued above, the growing trade links between India and

⁷ Subbarao, D. (2009), 'Impact of the Global Financial Crisis on India: Collateral Damage and Response', Tokyo.

the rest of the world indicates that exports would decline quite sharply. This impact has been most seriously felt in India's buoyant services (including business process outsourcing) and high value added manufacturing sectors. A final avenue through which the crisis impacted India can be described as the confidence channel. Although Indian banks and financial institutions continued to function in an orderly fashion, the tightened global liquidity situation following from the failure of Lehman brothers in September 2008 had a follow-on effect and increased the risk-aversion of several banks and other lending institutions.⁸

Thus, there is a slowdown in India's growth performance — but not a collapse. India instituted three stimulus packages in response to the slowdown in demand:

Details of various stimulus measures announced by the government are given in Appendix 2.

Taken together, the measures put in place since mid-September 2008 have ensured that the Indian financial markets continue to function in an orderly manner. The cumulative amount of primary liquidity potentially available to the financial system through these measures is about Rs.390,000 crore (78 billion dollars) or 7 per cent of GDP. This sizeable easing has ensured a comfortable liquidity position starting mid-November 2008 as evidenced by a number of indicators such as the weighted average call money rate, the overnight money market rate and the yield on the 10-year benchmark government security. Commercial banks have responded to policy rate cuts by the Reserve Bank of India by reducing their benchmark prime lending rates. Bank credit has expanded too, but slower than last year. The RBI's rough calculations show that, on balance, the overall flow of resources to the commercial sector is less than what it was last year indicating that even though bank credit has expanded, it has not fully offset the decline in non-bank flow of resources to the commercial sector.

⁸ See Subbarao, D. (2009), 'India — Managing the Impact of the Global Financial Crisis', Reserve Bank of India, Mumbai. Speech delivered to the Conference of Indian Industries on 26 March.

V. Conclusions

The short-run outlook for the Indian economy is unclear. Real GDP growth has shown strong signs of slipping. Even the most dynamic service sector has been facing a slowdown. Exports and industrial growth are down as is credit offtake.

The stimulus packages announced by the government and the Reserve bank of India have had their desired effect. For example, the Indian auto industry, which was heading towards a decline recorded positive growth of 0.71 per cent in total vehicle sales in fiscal 2008–09. In terms of components of the auto industry domestic passenger car sales rose by 1.31 per cent to 1, 219,473 up from 1,203, 733 units in the previous year, similarly sales of two wheelers recorded positive growth. There is widespread optimism that the services and manufacturing sector will also record reasonable growth. The sharp fall in the rate of inflation⁹ has provided room for more aggressive interest rate cuts by the Reserve Bank of India. India's banking system remains robust, although the burden of servicing the larger debt because of the stimulus packages will not be insignificant. Furthermore, although equity markets have registered steep declines the wealth impact on domestic residents is limited since a large number of Indians do not participate in equity markets.

Assuming that the global economy starts picking up in 2009–10, which it shows some signs of doing, and provided developed countries do not resort to widespread protectionism,¹⁰ the Indian economy should be in a good position to register a strong comeback. Given that the stimulus packages have already imposed a significant fiscal burden, the new central government would need to eschew undue populism, failing which high fiscal deficits could again restrict India's growth between potential as was the case in the mid to late 1990s. However, the chances of this happening are lower now. The Indian economy has certainly grown in terms of sophistication and depth since the 1990s. On balance, there is reason to be guardedly optimistic about the Indian economy in the short run.

⁹ But food prices remain high.

¹⁰ However, this expectation may be belied.

**Appendix 1:
A Brief Chronology of the Global Financial Crisis 2007–**

The Lauder Institute of the University of Pennsylvania provides a detailed chronology of the Global Financial Crisis. See

<http://lauder.wharton.upenn.edu/pdf/Chronology%20Economic%20%20Financial%20Crisis.pdf> (Accessed 25th March 2009)

A Brief Chronology of the GFC 2007–08

1. In early 2007 default rates on subprime mortgages begin to rise in the US.
2. In June 2007 two hedge funds associated with investment bank Bear Stearns reported huge losses resulting from their operations in the subprime market.
3. In July 2007 rating agencies began to downgrade bonds based on subprime mortgages. IKB, a German bank, ran into difficulties with its portfolio of US securities.
4. In August 2007, the French bank BNP suspended three of its mutual funds due to illiquidity. The European Central Bank injected 95 billion euros into the repurchase market. The Federal Reserve Board also took emergency measures to enhance liquidity. Despite these efforts spreads on interbank overnight lending rose very sharply. The Fed cut the rate at which it lends to banks by 0.5 per cent to 5.75 per cent and warns that the credit crunch could be a risk to economic growth.
5. In September 2007 the rate at which banks lend to each other rises to its highest level since December 1998. The Bank of England gave exceptional support to the British mortgage bank Northern Rock. This bank did not hold significant US securities, but relied heavily on borrowing in the short-term market, then frozen. The Fed cut its interest rate again. The Bank of England injected £10 billion into the economy through auctions, after previously refusing to inject any funds.
6. In October 2007 the Swiss bank UBS announced huge losses of \$3.4 billion. Merrill Lynch unveiled a \$7.9 billion exposure to bad debt.
7. In December 2007 the Bank of England cut interest rates to 5.5 per cent. There was coordinated and unprecedented action by 5 leading central banks to offer billions in

loans to commercial banks all over the world. There was a \$20 billion auction from the US Federal Reserve and \$ 500 billion from the European Central Bank.

8. In January 2008 there was a rush to withdraw money from Scottish Equitable prompting delays of up to 12 months. Global stock markets suffered their biggest loss since 11 September 2001. The Federal Reserve Board cut interest rates to 3.5 per cent.

9. In February 2008 the Bank of England cut interest rates to 5.25 per cent. The British government nationalized Northern Rock.

10. In March 2008 the Federal Reserve made \$200 billion of funds available to banks to improve liquidity. Bear Stearnes was bought by JP Morgan Chase in a deal brokered by the Federal Reserve Board.

11. In April 2008 the Bank of England cut interest rates to 5 per cent. Confidence in the UK housing market fell to its lowest level in 30 years.

12. In April 2008 the Bank of England announced a plan a £50 billion plan to permit banks to swap bad assets with government bonds. Royal Bank of Scotland announced a £12 billion rights issue and a plan to write off £5.9 billion in debt. The first annual fall in house prices was recorded in the US.

13. In May 2008 the Swiss bank UBS announced a rights issue of \$15.5 billion to cover some of the \$37 billion it lost to assets linked to the US mortgage debt.

14. In June 2008 Barclays announced a plan to raise £4.5 billion in a share issue to bolster its balance sheet. Qatar raised its stake in British bank to 7.7 per cent.

15. In July 2008 US federal regulators seize Indy Mac Bank. This is the largest thrift in the US to fall. Price of a barrel of oil reached a record \$147.50. Financial authorities stepped in to assist America's two largest lenders — Fannie Mae and Freddie Mac. The two institutions were owners or guarantors of \$5 trillion worth of home loans. House prices in Britain fell by 8.1 per cent — their biggest annual fall since the Nationwide began its housing survey in 1991. In August this fall was confirmed to be of the magnitude of 10.5 per cent in a year.

16. In August 2008 the global banking giant HSBC announced a 28 per cent fall in half year profits. The investment bank BNP Paribas froze two of its funds because of liquidity concerns. The European Central bank pumps 203.7 billion euros into the market.

17. In September 2008 the £ hit new lows against the euro and the dollar. The ECB cut its growth forecast for 2009 to 1.2 per cent from 1.5 per cent but left the interest rate unchanged at 4.25 per cent. The FTSE index notched up its steepest weekly decline since July 2002. The US unemployment rate rose to 6.1 per cent. Fannie Mae and Freddie Mac are rescued. Manufacturing output in the UK fell sharply. Lehman Brothers announced it is looking to be sold after reporting \$ 4 billion in losses. The British government nationalized trouble mortgage lender Bradford & Bingley. Crisis erupts in Iceland. Lehman Brothers is allowed to close.

18. In October 2008 the US Congress passed a \$700 billion asset bailout bill and the UK Treasury announced a £500 billion bailout bill and the IMF announced emergency plans to bailout governments affected by the financial crisis. Recession gets deeper in Asia, particularly Japan. The British government announced that it would pump billions of pound sterling in a number of banks. Former Fed Chairman, Alan Greenspan, admitted that he had been 'partially wrong' in his hands-off approach to the banking industry. The UK economy was officially in recession.

The Federal Reserve cut its interest rate by half a point. Deutsche Bank reported steep falls in profits and write-downs. The chief of Merrill Lynch resigned.

19. In November 2008 China announced a two-year \$586 billion stimulus package. The Bank of England cut its interest rate to 3 per cent, the lowest since 1955 and the ECB lowered its interest rate to 2.75 per cent. The US Treasury announced investment of \$ 40 billion in preferred stock of AIG, adjusting the terms of the existing credit line and its amount. Fannie Mae lost \$29 billion on write-downs. US Treasury Secretary scrapped the original troubled asset relief program. There was an international summit in Washington to reinvent the global financial system. Japan passed officially into recession. Citigroup was bailed out. The IMF approved a \$7 billion loan to Pakistan. The EC unveiled an economic recovery plan worth 200 billion euros. China's central bank cut interest rates by more than a full percentage point. The Chinese economy began

to slow. Auto makers in Japan and the US posted huge losses. The viability of some household brands such as General Motors is threatened. Japan's industrial output kept falling.

20. In December 2008 a US recession was confirmed. The recession was estimated to have begun in December 2007. London Scottish Bank went into administration. France unveiled a 26 billion euro stimulus plan. The European Central Bank and central banks in England, Sweden and Denmark slash interest rates. The Euro zone entered recession. The German parliament passed a 31 billion euro stimulus plan. The Reserve Bank of India cut short term interest rates. Joblessness rose sharply in the US and the three largest US carmakers — GM, Ford and Chrysler — asked for bailouts. The Government of India unveiled a \$60 billion dollar (5 per cent of GDP) to stimulate the economy. The Reserve Bank of India cut interest rates for the third time in two months. The Bank of Canada lowered its benchmark interest rate to the lowest level in 50 years. Citigroup announce widespread job losses. South Korea's central bank cut interest rates and China reported a fall in exports in seven years. Bank of America announced 35,000 job losses. Russia headed for a recession. The Russian central bank spent \$161 billion defending the rouble but was unsuccessful and had to devalue the currency twice in one week. US consumer prices fell and the threat of deflation loomed large. The Japanese central bank cuts interest rates from 0.3 per cent to 0.1 per cent. — the Japanese economy was confirmed to be in recession. US treasury unveils a \$6 billion plan to rescue GMAC but the plan turned out to be unsuccessful.

21. In January 2009 US budget deficit was estimated to be \$1 trillion. Later in the year this estimate was revised to \$2 trillion. The Bank of England cut interest rates to 1.5 per cent the lowest in its 315 year history. 2.6 million workers were registered as unemployed in the US alone. It was reported that the UK economy shrank by 1.5 per cent in the last three months of 2008. Gold became a safe haven for ravaged investors and gold prices started to rise. The German Chancellor Angela Merkel unveiled an economic stimulus package worth about 50 billion euros. China overtook Germany to become the world's third largest economy. Citigroup unveiled plans to get split into two entities. A new bailout for the UK financial system was announced control over lenders was to be increased. Saudi Arabia's central bank cut two key interest rates as Arab economies started to slow down. Bank of Canada cut its benchmark rate to 1 per cent —

the lowest in 50 years. Unemployment in the UK came close to 2 million persons. Chinese economic growth fell to 9 per cent in 2008 — the lowest in seven years. The UK enters recession officially. Indeed the pace of the UK economy's shrinking was the fastest in 26 years. Unemployment kept rising steadily across the world. The French and German governments announced stimulus packages.

22. In February 2009 the Australian government announced a \$26.5 billion stimulus package. The Reserve Bank of Australia cut interest rates to 3.25 per cent the lowest level in 45 years. The EU and Canada warned that a clause in the US economic recovery package could promote protectionism. The Bank of England cut its interest rate to 1 per cent. German industrial output registered a record fall. The US Congress approved a \$787 billion economic stimulus package. Euro zone GDP dipped at annualized 5.9 per cent in the fourth quarter of 2008. The French government announced that it would spend up to 5 billion euros to recapitalise its banking sector. The Dow Jones Index fell to its lowest value in 12 years. Data from US and Japan suggested that the downturn has turned into the worst slump since the 1930s.

23. In March 2009 Japan's parliament passed legislation to give cash hand-outs to every resident in order to boost the recession-hit economy. Australia's economy shrank for the first time in eight years. The European Central bank cut its interest rates to 1.5 per cent, the lowest since it started setting euro rates in January 1999. The unemployment rate in the US jumped to 8.1 per cent. Satyam approved to sell 51 per cent stake. Japan's current account recorded its largest deficit on record reaching \$1.8 billion. This was the first deficit in 13 years. The World Bank estimated that the global economy will shrink for the first time this year since World War II. The White House assured China that its \$1 trillion in investments in the US are safe, despite the economic downturn. Finance Ministers from the G20 group of rich and emerging nations pledged to make a 'sustained effort' to pull the world economy out of recession.

24. In April 2009 leaders from the G-20 countries (19 major countries + the European Union) gathered in London to discuss the contours of a global response to the financial crisis. Major regulatory measures and additional funding for the IMF were among the policy measures advanced.

Appendix 2: Summary of various stimulus measures announced by the Government

Several stimulus measures were announced by the Government of India in response to the GFC. The first such measure, the Sixth Pay Commission, was a routine policy measure and not in response to the GFC as such. The Pay Commission recommended an across the board increase in the salary of employees of the central government. This would be followed in due course by state governments announcing comparable salary increases for their own employees. The burden of the additional payout was computed to be Rs. 1.57 trillion (\$31.4 billion at current market exchange rates) during 2008–09. This represents 40 per cent of the payout. The rest 60 per cent is to be paid out in 2009–10.

The first stimulus package announced in December 2008 envisaged the following (mainly fiscal) measures:

- i) Additional plan, non-plan expenditure of Rs.300,000 crore (Rs.3 trillion/\$60 billion) in four months
- ii) Parliament nod to be sought for Rs.20,000 crore (Rs. 2 trillion/\$40 billion more toward plan expenditure
- iii) Across-the-board cut of four per cent in the ad valorem central value-added tax
- iv) Interest subvention of two per cent on export credit for labour intensive sectors
- v) Additional allocations for export incentive schemes
- vi) Full refund of service tax paid by exporters to foreign agents
- vii) Incentives for loans on housing for up to Rs.500,000, and up to Rs.2 million
- viii) Limits under the credit guarantee scheme for small enterprises doubled
- ix) Lock-in period for loans to small firms under credit guarantee scheme reduced
- x) India Infrastructure Finance Co allowed to raise Rs.100 billion through tax-free bonds
- xi) Norms for government departments to replace vehicles relaxed

xii) Import duty on naphtha for use by the power sector is being reduced to zero

xiii) Export duty on iron ore fines eliminated

xiv) Export duty on lumps for steel industry reduced to five percent

A second stimulus package (comprising mainly monetary and credit policy measures) was announced in January 2009 . Key elements of this package were as follows:

- i) An SPV would be designated to provide liquidity support against investment grade paper to Non Banking Finance Companies (NBFCs) fulfilling certain conditions. The scale of liquidity potentially available through this window would be Rs.25,000 crores/\$50 billion.
- ii) An arrangement would be worked out with leading Public Sector Banks to provide a line of credit to NBFCs specifically for purchase of commercial vehicles.
- iii) Credit targets of Public Sector Banks were revised upward to reflect the needs of the economy. Government would monitor, on a fortnightly basis, the provision of sectoral credit by public sector banks.
- iv) Special monthly meetings of State Level Bankers' Committees would be held to oversee the resolution of credit issues of micro, small and medium enterprises by banks. Department of MSME and Department of Financial Services would jointly set up a Cell to monitor progress on this front.
- v) The guarantee cover under Credit Guarantee Scheme for micro and small enterprises on loans was increased from Rs 5 million to Rs 10 million with a guarantee cover of 50 per cent. In order to enhance flow of credit to micro enterprises, it was decided to increase the guarantee cover extended by Credit Guarantee Fund Trust to 85 per cent for credit facility upto Rs 0.5 million. This will benefit about 84 per cent of the total number of accounts accorded guarantee cover.
- vi) State Governments are facing constraints in financing expenditure because of slower revenue growth. To help maintain the momentum of expenditure at the state government level, states will be allowed to raise in the current financial year

additional market borrowings of 0.5 per cent of their Gross State Domestic Product (GSDP), amounting to about Rs 30,000crore/\$ 60 billion, for capital expenditures.

vii) India Infrastructure Finance Company (IIFCL) was authorized to raise Rs 10,000 crores/\$20 billion through tax free bonds by 31 March 2009 for refinancing bank lending of longer maturity to eligible infrastructure bid based PPP projects. This would enable the funding of mainly highways and port projects on hand of about Rs 25,000crore/\$50 billion. To fund additional projects of about Rs 75,000 crore/\$150 billion at competitive rates over the next 18 months, IIFCL would be allowed to access in tranches an additional Rs 30,000crores/\$60 billion by way of tax free bonds once funds raised in the current year are effectively utilized.