

India

Two years of above-trend growth are causing inflation. Optimism over growth prospects has brought high capital inflows and currency appreciation pressure. Manufacturing and construction growth have stimulated a voracious appetite for credit, which in turn complicates attempts to control the money supply.

Agricultural stagnation is the key structural challenge. Rising food prices contribute to inflation. Stagnation also widens inequality, as industry accelerates and services pull on robustly. It also raises pressures to transfer land out of agriculture into industry, and highlights the importance of industrial job creation for growth, labor absorption, and poverty reduction. Yet land transfer from agriculture to industry implies significant worker displacement, and has caused serious social unrest.

With inflation high, and serious structural hurdles for the economy to overcome, the Reserve Bank of India finds itself in a precarious position. It must damp expenditures in the short run, while also ensuring adequate credit supply to promote manufacturing and agricultural investments in the medium term.

However, interest rates have risen, construction growth has already tapered, and the rupee is appreciating slightly. Agricultural planting has responded to rising prices. These trends will help moderate inflation. A soft landing therefore appears likely.

Economic performance

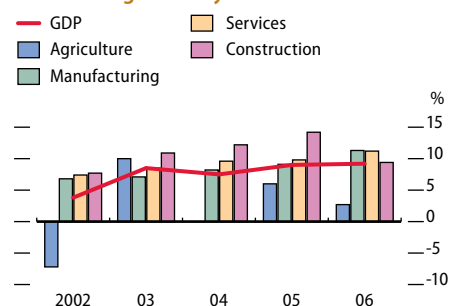
Robust growth momentum continued in FY2006 (April 2006–March 2007). After rising by 9.0% in FY2005, GDP is set to grow by 9.2% in FY2006. India's trend growth rate is estimated at 8–8.5% (see *Asian Development Outlook 2006*).

Four important characteristics emerge from the growth episode of recent years (Figure 2.16.1). First, growth is accelerating. Second, over the past few years, the manufacturing growth rate has caught up with that of services. Despite this, the services sector, given its 55% share of value added (compared to industry's 26%) continues to push up the aggregate pace. Third, construction—whose performance we report separately, given its important role in the Indian story today—has been through a boom that now appears to be ending. Indeed, construction in 2004 employed roughly 6% of the labor force, up from a more typical 3% in 1993. Fourth, agricultural performance remains subdued, with growth declining in the first half of FY2006.

Construction and home sales have soared since 2002, and demand for capital and consumer goods—especially consumer durables (Figure 2.16.2)—has followed. Demand for basic and intermediate goods has also grown with construction. Each of these developments has increased pressure to expand industrial capacity. The National Council of Applied Economic Research's October business confidence survey reveals particularly high levels of capacity utilization in the capital goods sector (Figure 2.16.3). These high levels feed back into capital goods demand.

Booming industry and construction raised gross domestic investment to 33.8% of GDP in FY2005 (Figure 2.16.4), an upward trend that appears

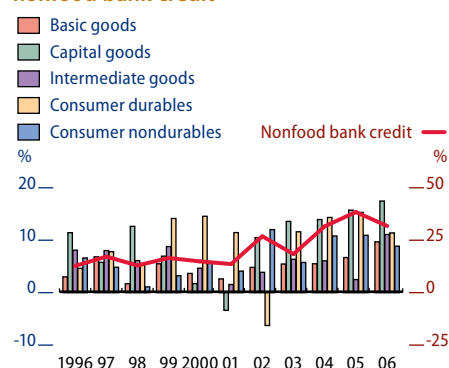
2.16.1 GDP growth by sector



Source: Central Statistical Organisation, available: <http://mospi.nic.in>, downloaded 2 March 2007.

[Click here for figure data](#)

2.16.2 Growth in industrial output and nonfood bank credit



Note: 2006 data are for the first 3 quarters only.

Source: CEIC Data Company Ltd., downloaded 10 March 2007.

[Click here for figure data](#)

to be continuing despite slowing construction. This investment surge has been met by a simultaneous expansion in bank credit. Figure 2.16.2 (above) shows that India's manufacturing take-off coincided with a positive turnaround in the growth of bank credit. Table 2.16.1 demonstrates the extraordinary rate of credit expansion, which has gone into real estate (commercial and residential), infrastructure, and export industries—engineering products, textiles, and chemicals (Figure 2.16.5). An expansion in retail credit has been pushing up consumption as well.

Given the importance of high investment for continued manufacturing growth, provision of liquidity therefore remains a monetary policy priority. However, the high rate of credit growth is causing problems. First, frenetic lending by banks has, at least until recently, confounded attempts to rein in the money supply. Second, excessive lending for long-term real estate transactions appears to have led to maturity mismatches between banks' assets and liabilities. Specifically, according to some estimates, bank deposits have an average maturity of 2–3 years, while rapidly growing housing loans mature in 7–8 years. Some banks seem to feel that they are overinvested in real estate.

The impact of monetary growth and excess demand for nontradable goods and assets (especially real estate) is already being felt. Wholesale price inflation began rising in May 2006, reaching an annualized rate of 6.0% in the third week of January 2007. Consumer price inflation is higher still. While this was initially driven by booming international energy prices, and by still-ascendant food price inflation, recent figures show that burgeoning manufactured goods price inflation is now contributing as much as food and fuel prices combined (Figure 2.16.6). Given tight manufacturing and supporting infrastructure capacity, and the significant time lags involved in augmenting it to meet rising demand, manufacturing is overheating.

Prices of wheat, pulses, milk, and condiments and spices—supply has been tight for all of them—are the chief culprits of food price inflation (Figure 2.16.7). In response to these and other inflationary trends, the federal Government introduced a raft of measures including the elimination of duties on imports of wheat, pulses, edible oils, and sugar; a ban on wheat exports; modifications in the management of public food-stocks including suspension of the futures market; and reductions in regulated retail prices of gasoline and diesel charged by the government-owned oil-marketing companies.

Unfortunately, these measures have met with limited success, as some key global commodity prices have risen on adverse agro-climatic conditions. Prices in the world wheat market have risen faster than domestic prices. Nevertheless, help may be on the way, with rising prices prompting increases in the area under cultivation for wheat, pulses, and coarse cereals.

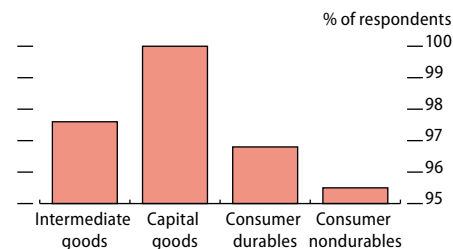
Faced with demand-led inflation, the Reserve Bank of India (RBI) needs to damp expenditures. However, in doing so, it will be important not to reduce the credit available for expanding manufacturing capacity more than is necessary to contain inflation. These capacity expansions are vital for enhancing growth potential in the medium to long term. Thus, credit provision needs to be curtailed, but also redirected away from overactive real estate markets. RBI is pursuing this redirection by

2.16.1 Credit growth rate by sector, October 2006, %, year on year

Retail	34.3
Housing	32.3
Commercial real estate	83.9
Industry, including	24.8
Infrastructure	23.2
Metals	34.6
Textiles	34.2
Engineering	15.3
Chemicals	26.9
Food processing	23.6
Construction	49.5
Agriculture	30.8

Source: Reserve Bank of India, available: www.rbi.org.in, downloaded 7 February 2007.

2.16.3 Views on capacity utilization: close to or above optimal level, October 2006

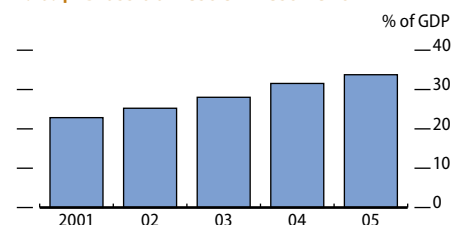


Note: Data refer to share of respondents viewing capacity utilization as close to or above the optimal level.

Source: National Council of Applied Economic Research, *Business Expectations Survey*, October 2006.

[Click here for figure data](#)

2.16.4 Gross domestic investment



Source: Central Statistical Organisation, available: <http://mospi.nic.in>, downloaded 7 February 2007.

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requiring banks to hold additional reserves equal to 2% of the value of their outstanding commercial real estate loans. This figure used to be 1%. Such adjustments are an important form of prudential regulation.

Continued high growth in money supply driven by commercial credit during FY2006 prompted RBI to raise policy rates (Figure 2.16.8). However, these rate changes proved inadequate, perhaps because inflation rose faster than some nominal interest rates, leading to a fall in real interest rates. Alternatively, the failure of rate increases to quickly curb credit growth could simply reflect long lags in responses to monetary policy changes. In any event, high growth in bank credit and money supply continued unabated.

Figure 2.16.9 shows stock prices on a tear, which began in 2002 and accelerated further from 2004. Other asset classes, especially property, display similar trends. In the context of corrections in asset prices in most Asian economies in early March, and the reassessment of risk that appears to be driving it, these trends are a source of concern.

Against this background, RBI has expressed serious concerns that the economy is overheating. Consequently, and triggered by the need to sterilize exchange rate interventions in response to a further surge in foreign capital inflows in October–November 2006, the central bank raised the cash-reserve ratio by 100 basis points between December and March. Even these measures appear to have been inadequate, and money supply grew at 20.4% year on year to the first week of January. Thus RBI raised the short-term policy rate again by 25 basis points, and has not ruled out further monetary tightening in the coming months.

Robust demand for credit, higher policy rates, and a rising credit-to-deposit ratio have driven up interest rates, on both deposits and lending. Anticipating tighter liquidity conditions, commercial banks lifted deposit rates by 25–125 basis points and prime lending rates by 75–150 basis points between April 2006 and January 2007.

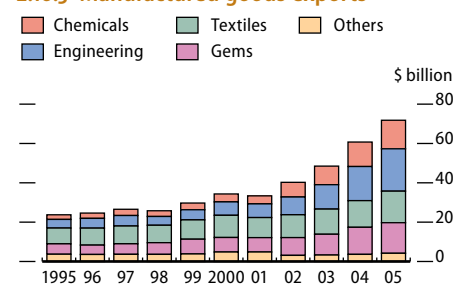
With the loanable funds market tightening, fiscal discipline matters greatly for ensuring that firms seeking to expand industrial bottlenecks are not crowded out.

In this context, it is helpful that rapid growth has boosted revenues greatly, providing ample fiscal space for large increases in expenditures while sustaining fiscal consolidation. The federal budget for FY2007 has been prepared against a background of high inflation and a comfortable foreign exchange reserves position. It also marks the beginning of the 11th Five-Year Plan.

Despite additional expenditure commitments for various social sector programs and rural infrastructure, the federal Government could sustain the momentum of fiscal consolidation. Both the current (revenue) and gross (overall) fiscal deficits as shares of GDP are marginally lower than the targets in FY2006, and the Government expects them to decline further in FY2007. The fiscal deficit is projected to fall to 3.3% of GDP, from 3.7% in FY2006.

Reviving agricultural productivity and output remains a priority area in the budget. A raft of measures has been introduced for strengthening irrigation and facilitating financial inclusion of farmers. On the revenue front, rationalization of indirect taxes continues, with the budget bringing down peak customs duties from 12.5% to 10.0%.

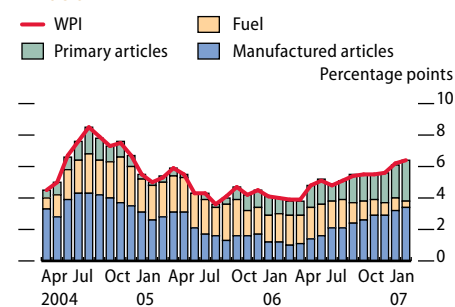
2.16.5 Manufactured goods exports



Source: CEIC Data Company Ltd., downloaded 1 March 2007.

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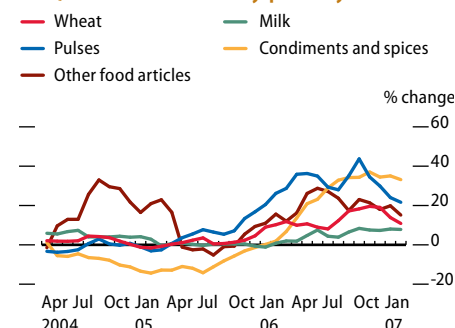
2.16.6 Contributions to wholesale price inflation



Source: Reserve Bank of India Database on Indian Economy, available: <https://cdbmsi.reservebank.org.in/cdbmsi/servlet/login/>, downloaded 8 March 2007.

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2.16.7 Price trends of key primary articles



Source: Reserve Bank of India Database on Indian Economy, available: <https://cdbmsi.reservebank.org.in/cdbmsi/servlet/login/>, downloaded 8 March 2007.

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The budget also presents two sets of options for using India's growing foreign exchange reserves (Figure 2.16.10) to finance improvements in infrastructure. Whether and how to reinvest reserves has been widely debated. The immediate difficulty with actually doing so is that, in most cases, rupees would have to be released against foreign currency being returned to the country to purchase domestic inputs. So RBI, already running out of options for controlling money supply and inflation, would have even more liquidity to mop up. Further, demand for rupees by infrastructure investment firms would contribute to rupee appreciation.

The first option presented in the budget neatly sidesteps these complications by requiring foreign exchange reserves, borrowed by foreign subsidiaries of the publicly owned Indian Infrastructure Finance Corporation Limited (IIFCL), to be applied only to expenditures on *imported* inputs for infrastructure projects. Thus the reserves would never be converted into rupees or stimulate local demand. The key limitation of this approach is that most infrastructure inputs are not imported.

The second option would essentially permit foreign IIFCL subsidiaries to borrow RBI's foreign exchange reserves and use them as collateral for larger international loans. These loans could then be applied to domestic infrastructure investments denominated in rupees. Clearly, this option runs into the above monetary problems head on, as would any large foreign direct investment inflows.

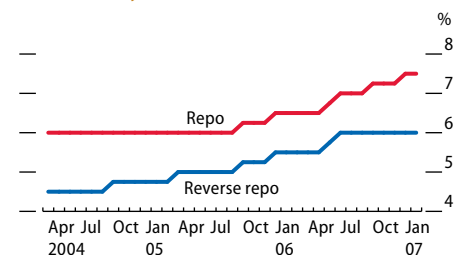
The schemes raise other concerns. IIFCL is a government-owned company, so its borrowings add to the liabilities of the Government. In the context of consolidating the budget, it must therefore be recognized that the Government is borrowing from RBI through the IIFCL. The advisability of such schemes depends on the view taken of the role of foreign exchange reserves accumulation. There are two main perspectives on this.

First, foreign exchange may be accrued for prudential reasons. If this is what reserves are for—and this is clearly RBI's position—then it is institutionally appropriate that RBI, which has been appointed to manage India's overall monetary risks, should be the arbiter of how much accumulation of reserves is “adequate.” It is particularly important not to undermine RBI's autonomy as it attempts to navigate the economy toward fuller capital account convertibility.

Second, foreign exchange may be accruing as part of an effort to use exchange rates to maintain the competitiveness of exports. This is consistent with the fact that RBI has had to actively build up reserves, while remaining active in the foreign exchange market. If this is the case, then foreign exchange accumulation involves a tax on imports. Therefore this plan is tantamount to using a tax on imports to finance infrastructure. This is a policy whose relative merits the Government could debate, but it is not clear why RBI should be involved.

States' finances have improved significantly, after worsening during the second half of the 1990s (Table 2.16.2). This deterioration led to growing recognition of an urgent need to improve their finances. State governments adopted specific expenditure and revenue reform measures, and set aside funds to cover their contingent liabilities. These steps have been institutionally enshrined in fiscal responsibility legislation. The states are also undertaking measures to control rising pension liabilities.

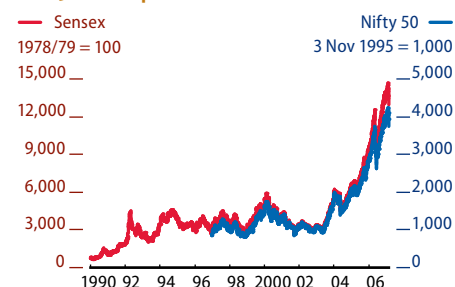
2.16.8 Policy rates



Source: CEIC Data Company Ltd., downloaded 8 March 2007.

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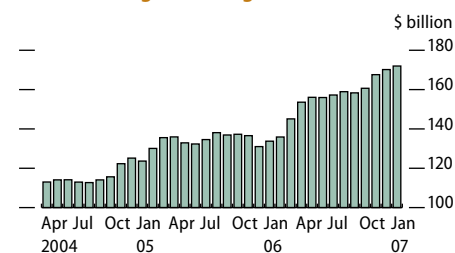
2.16.9 Stock price indexes



Source: Reserve Bank of India Database on Indian Economy, available: <https://cdbmsi.reservedbank.org.in/cdbmsi/servlet/login/>, downloaded 10 March 2007.

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2.16.10 Foreign exchange reserves



Source: CEIC Data Company Ltd., downloaded 1 March 2007.

[Click here for figure data](#)

2.16.2 Major indicators of state finances (% of GDP)

	1995–1997	1998–2003	2004–2006
Gross fiscal deficit	2.8	4.3	3.0
Revenue deficit	1.0	2.5	0.5
Capital outlay	1.4	1.5	3.7
Revenue expenditure	12.3	13.5	13.0
Debt	21.4	29.1	32.7

Source: Reserve Bank of India, available: www.rbi.org.in, downloaded 7 February 2007.

Yet these improvements are threatened by several forces. The first is impending public pay increases. The federal Government has appointed a Pay Commission to review public salaries, and states are likely to follow suit. Some already have (Karnataka and Punjab). The second is that the era of easy borrowing seems to be over. Although existing debts have been restructured, bringing down the interest rates assessed on them, new debts will incur higher interest. The federal Government therefore needs to keep a strict vigil on states' borrowing programs. Finally, the pressure to generate larger resources for India's 11th Five-Year Plan, coupled with complacency facilitated by strong recent growth, is reducing the constituency for fiscal discipline.

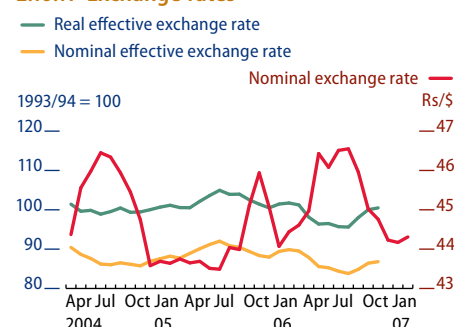
Domestic overheating has been forcing RBI to raise interest rates. As a consequence, surges in capital inflows are leading to rupee appreciation pressure. Indeed, the real effective exchange rate has risen in recent months (Figure 2.16.11). Export growth has declined, and the current account deficit is rising. The balance-of-payments data presented below reflect these forces.

While goods exports grew 23% in the first half of FY2006, imports grew by 25%, widening the merchandise trade deficit to \$35 billion (Figure 2.16.12). This deficit was significantly offset by robust inflows from invisibles, which included earnings from services such as software exports and business services (Figure 2.16.13), as well as transfers from nonresident Indians. The combined current account deficit therefore rose to \$11.7 billion from \$7.2 billion in the first half of FY2005. India ran a current account surplus in FY2003, when the latest growth acceleration began.

Pursuing growth opportunities, net foreign direct investment (at \$4.2 billion) exceeded net portfolio capital inflows in the first half of FY2006 for the first time in several years. Net capital inflows were \$19.3 billion during the same period. The surplus in the capital account is mainly attributable to foreign (direct and portfolio) investment (\$5.8 billion), commercial borrowing (\$5.1 billion), deposits by nonresident Indians (\$2.0 billion), banking capital (\$1.1 billion), and short-term credit and other capital (\$4.9 billion). Thus, even with a large current account deficit, sizable capital inflows led to foreign exchange reserves accumulation of \$8.6 billion.

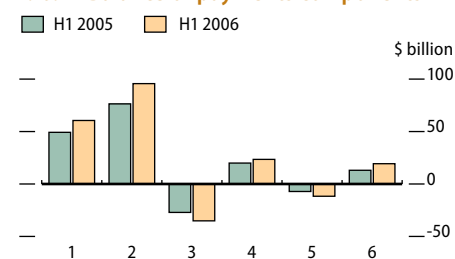
Economic prospects

The performance described above highlights a fairly broad and overactive domestic demand base for the economy in FY2006, with public expenditures, investment, and household spending all contributing. RBI

2.16.11 Exchange rates

Source: Reserve Bank of India Database on Indian Economy, available: <https://cdbmsi.reservedbank.org.in/cdbmsi/servlet/login/>, downloaded 5 March 2007.

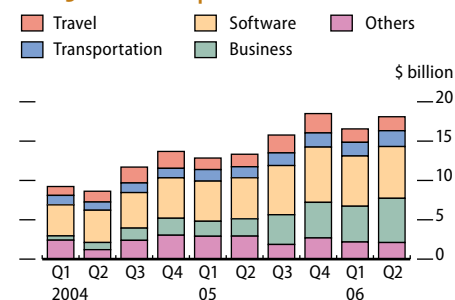
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2.16.12 Balance of payments components

Note: 1 = exports; 2 = imports; 3 = trade balance; 4 = net invisibles; 5 = current account balance; 6 = capital account.

Source: Reserve Bank of India, available: www.rbi.org.in, downloaded 7 February 2007.

[Click here for figure data](#)

2.16.13 Services exports

Source: Reserve Bank of India Database on Indian Economy, available: <https://cdbmsi.reservedbank.org.in/cdbmsi/servlet/login/>, downloaded 1 March 2007.

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has responded with policies intended to slow demand growth, and has indicated a willingness to tighten further.

The following forecasts rest on five major assumptions. First, there is no sudden decline in fiscal discipline. Second, monetary conditions tighten further. Third, agricultural productivity proceeds at its usual, plodding pace. Fourth, with the softening of international oil prices, the Government does not pursue further increases in diesel, kerosene, and cooking-gas prices. Fifth, RBI permits a modest appreciation of the rupee in real effective exchange rate terms.

Rising interest rates in FY2007 will have subtle and wide-ranging consequences, mediated, most importantly, through property development. As liquidity becomes scarce, banks are beginning to reexamine lending practices, which will lead to scaled-back lending for construction and housing loans to allow them to deal with the emerging maturity mismatch. Construction has already decelerated significantly in FY2006. Consumer credit should also come under pressure as banks reallocate loanable funds.

This loss of construction momentum is likely to persist through early FY2007, with knock-on effects for other components of demand. Spending on consumer durables, which has benefited from the construction and sale of new homes, will continue to slow in FY2007. Interest rate rises will also induce consumers to delay consumption, further reducing consumer durables demand. Manufacturing investment will be slightly restrained as falling demand for durables and new homes eases pressure to add industrial capacity. Rising costs of borrowing will also have a direct effect on manufacturing investment, despite good corporate earnings in the current year.

These restraints on demand growth from home buyers, manufacturing investors, and consumers will be accompanied by fiscal discipline, so domestic demand growth will be limited overall. Modest rupee appreciation will contain export growth. However, import growth will remain moderate as well, due to easing demand growth.

These forces are expected to moderate growth rates, bringing aggregate growth down to 8.0% in FY2007, closer to potential (Figure 2.16.14). The correction will not be sharp, in large measure because several drivers will continue to hold sway: industrial capacity remains tight, militating for high investment; key consumption goods markets are expanding, independent of new homes sales—including the sale of consumer durables for homes already built or construction under way; and demand for exports remains healthy, though with some deceleration. Thus despite a firm monetary position, momentum should ensure a soft landing.

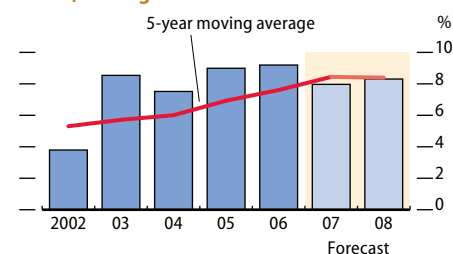
With aggregate demand back in control, interest rates are likely to stabilize and turn down slightly by FY2008. Growth that year should return to around 8.3%, as interim relief offered by the Federal Pay Commission is expected to buoy consumer spending, and as spending strengthens in the new interest rate environment. Specifically, construction is likely to pick up slightly. A large portion of the huge rise in bank lending to real estate in FY2006 was used to finance land acquisition. Future demand for commercial real estate is currently unpredictable, reflecting the uncertain future trajectory of interest rates

2.16.3 Selected economic indicators

	2007	2008
GDP growth	8.0	8.3
Wholesale price inflation	5.0	5.0
Current account balance (% of GDP)	-2.2	-2.2

Source: Staff estimates.

2.16.14 GDP growth



Sources: Central Statistical Organisation, available: <http://mospi.nic.in>, downloaded 2 March 2007; staff estimates.

[Click here for figure data](#)

and inflation. Therefore, while construction on some lands has been put on hold, it is likely to restart as the cost of funds becomes more conducive to long-term investments.

Against this background, wholesale price inflation is expected to soften and then remain steady at 5.0% in FY2007 and FY2008 (Figure 2.16.15). Inflationary pressures are seen weakening on four factors. First, and most important, the tighter monetary position will limit demand expansion. Second, as a result of rising agricultural prices, the acreage under cultivation has increased, and good *rabi* (spring) harvests are expected. Third, already-high agricultural prices in FY2006 will sap some of their upward momentum in FY2007. And finally, cuts in import duties on key commodities, including edible oils, will help.

Realized performance may depart from this outlook for four key reasons. The first is the potential for an excessive contraction of credit availability. This could be due to unexpected fiscal laxity, particularly in noninvestment expenditures, or an overly severe monetary response, which would beat back investment, lowering growth.

Second, with food stocks still low, the possibility of further supply shocks in the 2007 *kharif* (autumn) harvest, or beyond, present important risks. Food supply management policies therefore need to be urgently improved to reduce price volatility. Minimum support prices are too low, buffer stock targets are not being filled, and measures to augment food stocks through imports have failed. A purely monetary solution to price increases will not work if food prices resume their acceleration.

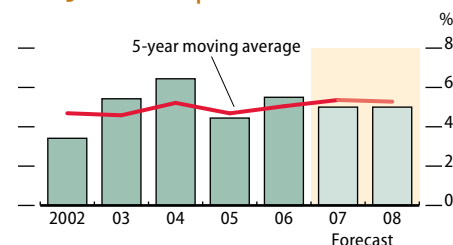
Third, export growth has started to decline (Figure 2.16.16). This is especially true of manufactured exports, and could reflect real exchange rate appreciation. Declining exports in the short run, however, are not an economic risk—simply a potential deviation from forecast. Given excess demand in the economy, some real appreciation is expected, and a little less exuberance on the external account will help the economy to rebalance. With foreign investors confident in India's growth prospects and a solid stock of currency reserves, balance-of-payments reversals are unlikely. Active management of real exchange rates is therefore unnecessary. RBI should therefore focus on limiting short-term exchange rate volatility.

Fourth, inflated asset prices—both for real estate and equities—might fall rapidly. This would suck the air out of hot consumer spending, as wealth falls. It would also make it more difficult to raise funds for new investment on the equity market. And this would also create significant uncertainty regarding the forward path of interest rates, investment, and ultimately growth.

Development challenges

The Government envisages growth rates of 8.5% over the next 5 years with little inflation. Agriculture provides only 18.5% of GDP, and agrarian growth has slipped to 3.0% over the last 6 years. With industry and services, which make up 81.5% of output, growing fast at anywhere between 7% and 11%, the performance of agriculture is not arithmetically important for aggregate growth. For example, if agricultural growth rates doubled, GDP growth would edge up by a mere 0.5%. It is therefore tempting to focus on industry, and less capital-intensive services, when seeking growth.

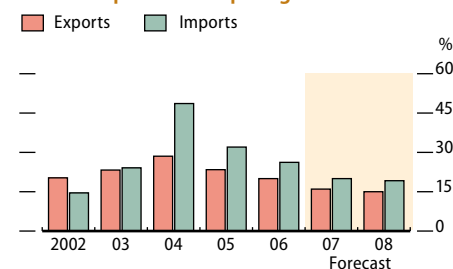
2.16.15 Wholesale price inflation



Sources: Reserve Bank of India Database on Indian Economy, available: <https://cdbmsi.reservebank.org.in/cdbmsi/servlet/login/>, downloaded 8 March 2007; staff estimates.

[Click here for figure data](#)

2.16.16 Export and import growth



Sources: Reserve Bank of India, available: www.rbi.org.in, downloaded 7 February 2007; staff estimates.

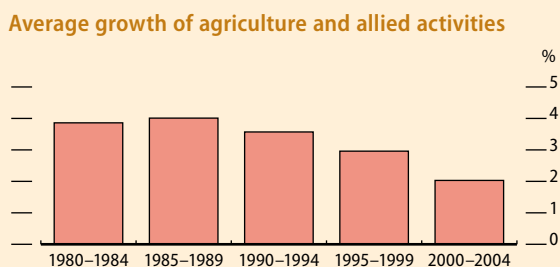
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However, the arithmetic belies far more serious matters. Agriculture and related activities employ around 60% of India's labor force (or 115 million farming families), so stagnation in agricultural productivity will put poverty reduction on hold. India's food security situation is also deteriorating alongside farmers' incomes. What is to be done?

Box 2.16.1 delineates the key forces stifling agriculture, and argues that diversifying products into cash crops, improving foodgrain yields in lagging states, and scaling up agriculture a little will help. The last will probably accelerate the rate of labor displacement out of agriculture. Substantial job creation, particularly in India's infrastructure-scarce factories, is therefore urgent. But unfortunately, meager farm incomes leave little by way of profits to invest in rural industry. This helps to

2.16.1 Agriculture in transition

Agricultural performance in the past decade has been erratic, while growth in agriculture and allied activities has been slowing since the mid-1980s (box figure).



Source: Mathur, A., S. Das, and S. Sircar, "Status of Agriculture in India: Trends and Prospects." *Economic and Political Weekly*, 30 December 2006–5 January 2007, pp. 5327–36.

Three primary reasons for the agricultural slowdown have been falling levels of public investment, especially in irrigation; steady deterioration of the public institutions that provide credit, inputs, and research and extension services to farmers; and environmentally unsustainable production practices (aggravated by subsidies, output pricing, and marketing policies). For example, while 39% of central Punjab enjoyed water table depths of less than 5 meters in 1973, none does today. Each of these factors adversely impacted yields of principal crops. Rice yields in 2002 were 2,915 kg/hectare compared with 3,448 in Bangladesh, 9,135 in Egypt, and 7,372 in the United States. Wheat yields, at 2,770 kg/hectare, compare poorly with 3,885 in the People's Republic of China, 7,449 in France, and 8,043 in the United Kingdom.

Reviving the performance of agriculture is therefore the major challenge of the 11th Five-Year Plan. The strategy rests on two pillars: increased public investment in rural infrastructure, and reforms and incentives facilitating diversification into high-value crops.

However, agricultural diversification is held back by structural rigidities.

- Marketing arrangements need to be revamped to deal with monopsony, rent seeking, and waste. Private sector competition can help in this regard. Private investment is also crucial for stimulating downstream food processing and extension research to support horticultural growth.
- The absence or poor condition of supporting infrastructure, such as cold storage, hampers the process of diversification. Moreover, the shift to animal husbandry and dairy is constrained by, for example, lack of green fodder, grazing land, and proper supply-chain facilities.
- Better extension and research services are required to adapt new agricultural activities to regional conditions, and help farmers connect to domestic and foreign markets.

Corporate contract farming is often an effective facilitator of agricultural diversification. However, land consolidation is inexorable under contract farming, and distressed farmers, many of whom are heavily indebted, may sell out despite having no alternative livelihood. Notwithstanding the obvious merits of freedom of choice, landlessness in the context of high underemployment can put serious strains on the social fabric.

Agricultural diversification carries significant productivity benefits, but it may have implications for food security. The Government faces a choice: either procure food for national buffer stocks on international markets while providing farmers with decent income alternatives; or, in the name of food security, do not assist farmers in diversifying into higher value-added cash crops when profitable. The latter, through neglect, would implicitly require farmers, among India's poorest people, to bear the burden of providing national food security.

Certainly, interventions that would increase productivity in both cash crops and foodgrains, and enhance farmers' ability to choose between the two in response to market conditions, would be the preferred outcome.

explain why large orchestrated industrialization is being attempted, with state involvement, in rural areas through the development of special economic zones (SEZs).

Such industrial developments demand more agricultural land and even greater labor displacement. Unsurprisingly, these prospects are raising tensions, particularly among landless agricultural laborers who fear a loss of livelihood and expect little by way of compensation. The challenge, therefore, is to simultaneously boost agricultural productivity, while creating enough manufacturing and other nonagricultural employment opportunities that are suited to those pushed out of agriculture.

While India's agrarian crisis has unfolded slowly but relentlessly, the dynamics of employment have shifted recently. Table 2.16.4 shows that employment growth has quickened over the last 5 years. It has done so among both men and women, and those living in rural and urban areas. Further, the data show that casual labor, with its attendant risks (food insecurity for one) is stagnant. Rather, the new jobs have gone to the self-employed and regular employees.

Moreover, employment growth has picked up in most activities. The only two activities identified in Table 2.16.4 where it has slowed ("Trade, hotels, and restaurants," and "Transport, storage, and communications"), have nevertheless grown robustly. The data appear to reveal a rebalancing of employment growth, with industrial employment growing faster, and growth rates in services regressing toward the mean. Indeed, in the last 5 years, industry overtook services in terms of employment growth.

However, those aggregate calculations neglect important details regarding the types of jobs, the locations of those jobs, and the education levels of prospective employees. A large proportion of Indians are illiterate (24.7% of men and 46.3% of women, according to the 2001 census), and many of them are older and supporting families, so educating them belatedly may be difficult. Therefore, a particularly serious concern is whether the economy can generate the types of jobs that would hire the educationally disadvantaged.

The following analysis uses numbers calculated from the National Sample Survey's employment datasets drawn in 1993/94 and a somewhat thinner sample drawn in 2004. At least in so far as the *quantity* of jobs created is concerned, the analysis indicates that these concerns regarding the less educated are somewhat misplaced.

Table 2.16.5 presents the estimated number of new employees in manufacturing and services, by education level. It shows that manufacturing has created more employment for the less educated than has services. Of new manufacturing jobs, 69.6% went to workers without secondary degrees, compared with only 45.6% in services. The four most prolific job creators, which account for 74% of new manufacturing jobs created between 1999 and 2004 are textile products (including apparel);

2.16.4 Overall employment growth rates, %

	1993/94– 1999/2000	1999/2000– 2004
Rural male	1.0	1.9
Rural female	0.2	3.2
Rural persons	0.7	2.4
Urban male	2.6	3.7
Urban female	1.0	6.2
Urban persons	2.3	4.2
Total male	1.4	2.4
Total female	0.3	3.7
Total persons	1.0	2.8
Nature of employment		
Self employed	0.4	4.3
Regular employed	2.3	3.6
Casual labor	1.5	-0.1
All	1.0	2.8
Sector employment		
Agriculture	0.1	1.5
Mining and quarrying	-2.8	2.4
Manufacturing	1.6	5.0
Electricity, water, etc.	-4.7	3.1
Construction	6.4	8.2
Industry	2.4	5.8
Trade, hotels, and restaurants	6.3	3.9
Transport, storage, and communications	5.3	4.9
Other services	-0.7	3.5
Services	2.9	3.9
All sectors	1.0	2.8

Source: National Sample Survey reports of 1993/94, 1999/2000, and 2004.

2.16.5 Net new job creation in manufacturing and services, 1993/94–2004

Education level of new employees	Manufacturing		Services		All new employment	
	Total new jobs	% of new jobs	Total new jobs	% of new jobs	Total new jobs	% of new jobs
Less than primary	826,767	6.15	1,301,377	4.52	-7,225,836	-10.32
Primary	3,003,227	22.34	3,716,948	12.90	18,020,414	25.74
Middle	5,523,520	41.08	8,103,174	28.13	29,331,773	41.90
Secondary	1,750,110	13.02	4,019,009	13.95	11,042,178	15.77
Higher secondary	718,377	5.34	3,384,852	11.75	6,668,285	9.52
Postsecondary	1,624,252	12.08	8,277,945	28.74	12,171,631	17.39
Total	13,446,253	100	28,803,305	100	70,008,445	100

Note: Figures were calculated from National Sample Survey raw data, which were scaled to accurately reflect the size of the Indian population, per the central statistical organization. Scaling factors were 14.6% in 1993/94 and 14.0% in 2004.

Source of raw data: National Sample Surveys 1993/94 and 2004 employment rounds.

nonmetallic mineral products; wood, wood products, furniture, and fixtures; and beverages, tobacco, and related products. Fewer than 20% of workers in each of these sectors have completed secondary school.

The upshot is that as the less educated are squeezed out of agriculture, generating jobs for them will be significantly easier if these education-unintensive manufacturing subsectors continue to grow well.

The analysis so far does not reveal whether the low-skill jobs are being generated in the formal or informal sector. It is likely that much of the manufacturing in the four subsectors identified above is carried out by small enterprises in the informal sector. It follows that the new less-educated manufacturing workers might not enjoy the high levels of labor productivity that come with organizational scale. This is consistent with a study by IMF researchers, who have noted low rates of less-educated job creation in the *formal* manufacturing sector, which implies that these jobs must be predominantly in the informal sector.

In this environment, where farm incomes are falling; where the bulk of job creation is in self-employment and traditional services; and where those low-skill workers able to find manufacturing jobs are in the informal sector, provision of social safety nets becomes a major challenge. Workers without medical insurance, reliable savings mechanisms, and limited access to credit to finance investments and smooth consumption are particularly vulnerable to adverse economic shocks.

This challenge is magnified by the large disparities between agricultural and industrial land productivity, which are creating pressure in land markets. Governments have begun promoting the redevelopment of farmland with the aim of creating SEZs which are intended to assist industrial developers seeking to bypass infrastructure and administrative bottlenecks. As detailed in Box 2.16.2, the creation of SEZs involves a series of measures that are fiscally costly, potentially diverting industry away from other areas, and bring states' land-acquisition powers to bear in markets where land ownership is either poorly defined, or carries significant external effects. Given that large numbers of agricultural laborers who have no title to these lands nevertheless depend upon them for sustenance, the issue is exceptionally emotive.

However, manufacturing is not the only activity placing demands on land. As argued in Box 2.16.1 above, farmers face strong incentives to move land into the production of cash crops. However, agricultural diversification has obvious implications, as diversification may exacerbate India's deteriorating food self-sufficiency situation, as well as inflation.

Well-targeted interventions are required that seek to identify and remove the very distinct barriers to agricultural productivity growth in different states. Foodgrain yields can be increased significantly in agriculturally lagging states, whereas diversification is required to enhance farm income in more agriculturally advanced regions. As the Government has chosen to pursue self-sufficiency in foodgrains as a way of ensuring food security, it must strive to ensure that farmers receive adequate support for their role in making the policy work. While the budget has set aside funds for this, improving systems for delivering services to farmers remains the bottleneck.

Each of these trends shows clearly that as India's modern sectors steam ahead of the traditional sectors, social tensions are brewing,

2.16.2 Special economic zones

A special economic zone (SEZ) permits a set of units to operate in a well-defined area where policy measures (which are not generally applicable to the rest of India) promote certain economic activities.

These zones offer high-quality infrastructure facilities and support services, and allow duty-free imports of capital goods and raw materials. In addition, they offer attractive fiscal incentives and investor-friendly institutional services such as simpler customs, banking, and other procedures.

The SEZ Act of 2005 provides a raft of incentives to attract firms. These include: fiscal incentives; tax concessions; establishment of free trade and warehousing zones; reliable infrastructure services, including power, warehousing, and transport; establishment of a single-window authority for each SEZ to impart greater administrative autonomy and reduce bureaucratic costs; and designation of special courts and a single enforcement agency to ensure speedy trials.

Fifteen SEZs were already operational prior to the SEZ Act. The central Government had given formal or in principle approval to 403 applications for setting up new SEZs as of 20 October 2006. Investments of about Rs1 trillion with an employment potential of over 500,000 are expected from the new SEZs over the next 3 years. The central Government has, however, put all new SEZ approvals on hold until the following issues are resolved.

The pros and cons of SEZs are very difficult to weigh. Nothing of this scale and with this particular

set of administrative arrangements and subsidies has been attempted before in India. Clearly, SEZs present an opportunity to provide potential investors with better infrastructure and greater bureaucratic efficiency. Nevertheless, valid criticisms of subsidies to SEZs deserve consideration.

First, with firms already eager to invest (but for the infrastructure and bureaucratic problems), providing enclaves that meet these needs might be enough to stimulate investment. Tax breaks may therefore be unnecessary. Second, SEZ tax inducements are expensive, and come at a time when government is struggling to provide adequate infrastructure in the wider economy.

Third, special tax exemptions always risk opening up loopholes for tax evasion. And fourth, subsidies can undermine both investment and existing firms located outside the SEZs. These firms suffer two disadvantages—worse infrastructure and higher taxes.

Serious concerns have also been expressed with regard to the people displaced by land acquisition. Important issues include: the kind of land to acquire for SEZs; the extent of state involvement in selecting and taking land; how to provide land losers with financial stakes in SEZs; and how to retrain economically displaced people, especially landless agricultural workers for jobs in SEZs.

Indeed, some of the loudest political opposition to SEZ projects comes from the landless, who may not receive lasting compensation for land conversion and who lack the capital to become self-employed.

mediated as ever through tight markets for land and food, and slack markets for labor.

The Government is in a position to play a crucial role in alleviating these tensions. It can do so by assuring appropriate compensation packages for displaced workers; retraining schemes to permit displaced workers to qualify for jobs on SEZs; and most important, infrastructure support for creating and locating manufacturing jobs more organically. More directly, it can help tackle the tensions through well-targeted investments to improve agricultural productivity.

This pursuit of geographically distributed industrialization and agricultural productivity growth requires significant resources to expand infrastructure. For this reason, some economists have urged the Government to suspend its fiscal discipline targets. Yet the historical data suggest that fiscal laxity is at least weakly associated with slower growth in India. Given high capacity utilization and the rising costs of borrowing today, it would be unfortunate if government borrowing crowded out private investment. Therefore, the Government must continue its fiscal consolidation efforts to create fiscal space for infrastructure financing, and continue to explore alternative mechanisms for such financing.