CHAPTER 8

The Requisites of Macroeconomic Stability

What a huge difference a few years can make! At the end of 2007, India was riding high. The previous five years had been remarkably benign, with super-fast growth of close to 9 per cent a year, accompanied by moderate inflation of around 5 per cent a year. The consolidated fiscal deficit had fallen from 9.2 per cent of GDP in 2002 to 4 per cent in 2007. The current account of the balance of payments had been in surplus, or in small deficit of around 1 per cent of GDP, throughout the period. After 2007, there was a sea-change (see Table 8.1). Inflation doubled to 10 per cent a year for the next six years. The fiscal deficit doubled to 8.2 per cent of GDP in 2008 and remained at an average level of 7.7 per cent until 2013.[1] The current account deficit increased, moderately at first, and then alarmingly to 4.1 per cent of GDP in 2011 and 4.7 per cent of GDP in 2012, the highest since independence. The annual growth rate fell to 6.7 per cent in 2008 and recovered to 8.7 per cent in the following two years, but crashed to around 5 per cent for five years from 2011.[2] It would be tempting to blame the global credit crisis of 2008 for this change of fortune. In truth, the global crisis and all the other usual suspects, such as droughts and high oil prices, were less important in causing India's dramatic macroeconomic decline than various critical domestic policy failures. It has become clear that India has as yet much to learn in the art of maintaining macroeconomic stability.

Table 8.1 MAJOR MACROECONOMIC INDICATORS 2003/4–2015/16

Year or Average of Years	(1)	(2)	(3)	(4)	(5)
	Growth (% p.a.)	Inflation (CPI) (% p.a.)	Fiscal Balance (% GDP)	CAB (% GDP)	RER (2004/5 = 100)
2003/4–2007/8	8.7	5.0	–6.2 (–6.6)	0.3	102.2
2008/9–2013/14	6.9	10.0	–7.8 (–8.1)	–3.1	107.9
2007/8	9.3	6.2	–4.0 (–4.6)	–1.3	109.2
2008/9	6.7	9.1	–8.2 (–9.9)	–2.3	99.7
2009/10	8.6	12.3	–9.4 (–9.6)	–2.8	105.0
2010/11	8.9	10.5	–6.8	–2.7	115.0
2011/12	6.7	8.4	–7.6	–4.2	113.2
2012/13	4.5 [5.4]	10.2	–6.8	–4.7	108.7
2013/14	4.7 [6.3]	9.5	–7.2	–1.7	105.5
2014/15	5.5 E [7.1]	5.9	–6.6	–1.4	111.2
2015/16	5.5 E [7.3]	5.0 E	–6.5 E	–0.9 E	114.5 E

Notes: E denotes author's guesstimates in column 1 and author's estimates based on the first 10 months' data in column 5. Column 1: Growth of real GDP at factor cost, 2004/5 series. The figures in square brackets give growth of real GDP at factor cost, 2011/12 series. Column 2: Annual rise in the CPI (IW) until 2010/11 and CPI (NS) from 2011/12, measured on an average-of-months basis. Column 3: Fiscal balance of consolidated government (i.e. central and state governments combined), excluding off-budget subsidies, as a proportion of GDP (the figures in brackets include off-budget subsidies, which were discontinued after 2009/10). Column 4: CAB refers to the current account of the balance of payments as a proportion of GDP. Column 5: RER refers to the level of the real effective exchange rate (36-country index with export-based weights), with base year 2004/5.
Sources: Columns 1, 2, and 4: Government of India (2015a); Column 3: Ministry of Finance (2015a); Column 5: Reserve Bank of India (2015).

MACROECONOMIC STABILITY

Macroeconomic stability is a pure public good that ranks with law and order and defence as a necessary condition for advancing national well-being. It means primarily 'internal balance', i.e. keeping inflation low and output close to its potential maximum. In addition, three other features are now generally included in a wider and longer-run definition of macroeconomic stability. These comprise a sound fiscal position ('fiscal balance'), a sound balance of payments position ('external balance'), and a sound asset-liability position of financial institutions ('financial balance'). Failure on these three fronts is likely sooner or later to lead to high inflation or collapse of output or both, in other words to macro-instability narrowly defined. This chapter examines where India stands on internal, external, and fiscal balance. (Financial balance is discussed as part of 'internal balance' to keep the length of the chapter within reasonable bounds.) Tables 8.1–8.6 provide data on the major macroeconomic variables of interest from 2003 onwards.

INTERNAL BALANCE: PRICE AND OUTPUT STABILITY

Low inflation is a prime objective of Indian macroeconomic policy not only for reasons that apply everywhere[3] but because there is in India a well-grounded concern that inflation hurts the poor.[4] Inflation is also a highly salient issue politically, and plays a major role in elections. Opinion polls have routinely confirmed that people regard inflation as the economic issue that worries them most. In consequence, India exhibits in an acute form the tension that characterizes all democracies on the subject of inflation. On the one hand, inflation is unpopular and votes have to be won, so democracy has a built-in barrier against inflation. On the other hand, democracy gives voice to many competing groups, so the government is tempted to throw money at problems. In India, until recently, this tension has always been resolved in favour of low inflation. But there are signs that such an outcome can no longer be taken for granted.

Inflation in India averaged around 8 per cent a year from 1960 to the mid-1990s (though punctuated by occasional short bouts of galloping prices). This was low to moderate by the standards of the day in developing countries.[5] It then fell to 5 per cent for a decade or so. There has been a marked change since then. From 2008 to 2013, it averaged 10 per cent a year, and was above 8 per cent in each of the six years.[6] Moreover, the world has now moved towards low inflation. By today's global standards, India no longer counts as a low-inflation country. From 2008 to 2013, India's 10 per cent inflation rate was far higher than the advanced countries' average of 1.9 per cent; and it was also well above the developing countries' average of 6.6 per cent (5.3 per cent in Asia, 6.5 per cent in Latin America, and 9.1 per cent in Sub-Saharan Africa)[7].

There is nothing mysterious about the origins of India's high-inflation spurts. They are generally sparked off by two kinds of supply shock. The first is a drought or, worse, a succession of droughts. Failure of the rains reduces production in agriculture, and raises the prices of food grains, other food articles, and agricultural raw materials. (Even now, only about half the country's cultivated area is irrigated.) The second familiar supply shock is a rise in the price of imported commodities on the world market. Of these, the most important is crude oil: three-quarters of the country's requirement of this essential input is met by imports. One or both of these shocks have started most of the high inflation episodes in the last 50 years, including the most recent one that began in 2008.[8]

What sparks inflation is quite different from what keeps it on the boil. Though a supply shock raises the price of, say, food or oil products, this leads to a *persistent rise in the overall price level* only if it spreads and gathers

strength due to the pressure of aggregate demand. If the economy is 'overheated', the inflationary impulse becomes generalized.[9] A wage-price spiral can then develop that is hard to break, especially if people begin to expect higher inflation and increase their wage and salary claims in order to protect their real incomes. To prevent these 'second-round effects', monetary policy has to keep excess demand and inflationary expectations in check. This is not easy because there can be unpleasant short-term trade-offs. A tight monetary policy can reduce growth for a time and put people out of work. This is painful but may be necessary to stop inflation getting out of hand. If a supply shock is the result of a temporary and reversible cause, for example a monsoon failure, there is obviously a case for doing nothing much except protecting consumers by importing more food or offloading it from a domestic buffer stock. Food prices may be kept reasonably stable thereby, and monetary and fiscal retrenchment avoided, until good harvests return to improve the supply situation.[10] But this may be a counsel of perfection. If the shock is severe, supply management cannot stem the tide of rising prices. Restrictive policies have to be introduced despite their unpopularity and their adverse effects on non-agricultural output, in order to curb inflationary expectations and prevent an inflationary explosion.[11]

In this simple sense, India's post-independence monetary policy has been quite sound. The authorities have tried to ride through supply shocks by increasing the availability of sensitive commodities via extra imports or releases from buffer stocks, but they have clamped down with monetary (and occasionally fiscal) retrenchment if there are clear signs that inflation is spreading to sectors not directly related to agriculture. Unfortunately, though this strategy served the country quite well in the past, it is no longer fit for purpose. This is because 'second-round effects' have become much more powerful than hitherto.

In today's world of low inflation, India's long-run inflation target should certainly be no higher than 4 or 5 per cent a year.[12] As in all countries, the primary responsibility for achieving this aim rests with demand management via monetary and fiscal policy. In India, fiscal policy is not a flexible instrument and the government tends to run large deficits. It follows that the burden of demand management has to be carried largely by monetary policy. Even so, demand management, on its own, will not achieve low inflation in India today (or at least not without intolerable cost). There are two systemic supply-side factors that create an inflationary bias. Firstly, there is the nature of state intervention in the food market. Such intervention is not necessarily a bad thing. In an economy that is subject to volatile swings in agricultural production, a price-stabilization scheme run by the government makes good sense. A responsible government may also quite rightly

wish to protect the poorest people against food destitution. How would these tasks be organized in a rational system? The government would assure farmers a 'procurement price' (in other words a price at it which it stands ready to buy food from them) that is equal to an average of market prices expected to rule in good and bad years, thereby shielding them from price instability. It would buy from farmers in good agricultural years and add to a buffer stock. It would sell from the stock (and import more) in drought years in order to lower market prices. In addition, the government would enable the poorest people to buy food at the stabilized market prices, by giving them an explicit income subsidy in cash or in food vouchers.

The food market in India is a far cry from this desirable scenario. The procurement prices at which the government guarantees to buy food from farmers are raised from time to time by large amounts even in bad years, and especially before elections. This tendency was strikingly in evidence while the UPA government was in power. In the two pre-election years of 2007 and 2008, and the election year of 2009, procurement prices of the major cereals (rice and wheat) increased by an average of 60 per cent. From 2006 to 2013, they rose 113 per cent.[13] Admittedly, some of these increases were undertaken to compensate farmers for input-cost increases in previous years, but the speed and scale of the changes were bound to drive food prices higher. (Since the government is a major buyer, procurement prices tend to set the level of market prices.) As regards help to the poorest people, the existing system attempts to do that by issuing ration cards to enable them to buy food through 'fair price shops' at 'issue prices' that are well below procurement prices. Issue prices are changed very infrequently, which means that the food subsidy tends to rise and add to the fiscal deficit. This makes the government reluctant to disgorge its accumulated food stocks even in bad years.[14] It is a crazy system but it persists because there is method in the madness: it suits the interests of the powerful farm lobby. The combination of the propensity to raise procurement prices spasmodically by large amounts (and never to reduce them), and the reluctance to offload food stocks, implies that the government tends to administer upward food-price shocks to the economy that are of its own making.[15]

The second systemic supply factor that has a bearing on inflation is that rigidities in supply chains tend to generate spikes in the prices of food articles that are disproportionately sharp in relation to the shocks that trigger them. The public distribution system (PDS) deals mainly with the major cereals: rice and wheat. 'Food articles' is a much wider category than cereals and includes milk, fish, eggs, meat, sugar, and vegetables. These non-cereal foods are major sources of protein and are becoming a

significant component of the typical consumption basket as incomes rise. Production of these items has not risen fast enough, and in several of the past few years, they have contributed more to the overall price rise than cereals. Like cereals, these commodities are vulnerable to negative supply shocks due to the weather and other factors. The food trade is cartelized, with many barriers to competitive entry erected by incumbent traders and the government.[16] Moreover, antiquated technology makes the conduit from farmer to retailer highly inflexible and inefficient. (It is estimated that half of the vegetables and fruits grown in the country rot before they reach the market.) As a result, supply shocks can have a large impact on retail prices and the cost of living. This makes it more likely that they will be passed on into wage demands and the overall price level, which increases the pressure on the government (and the central bank) to accommodate them by monetary expansion in order to avoid a slowdown of the economy.

How then should we think about the relative importance of supply factors, demand factors, and, as part of the latter, monetary policy, in achieving internal balance? It is useful to start with Milton Friedman's famous remark: 'inflation is always and everywhere a monetary phenomenon'. This is true in the restricted sense that the central bank can, with certainty, prevent inflation taking hold, provided that it is willing and able to tighten monetary policy *to any extent necessary, whatever the collateral damage*. But the stronger are the cost-push factors, and the demand stimuli that are not directly influenced by monetary policy, the fiercer the central bank has to be to rein in inflation, and the larger the short-run cost in terms of output and unemployment of doing so. And given these unpleasant side-effects, the bigger also is the temptation for the central bank not to clamp down and court unpopularity. This insight is important in understanding where India currently stands on the inflation issue.

High inflation from 2008 onwards had multiple causes. As usual, there were some adverse supply-side factors such as slow growth of agricultural production (compared with the previous five years), the sharp drop in production of food grains in 2009, the fall in production of food articles other than food grains in 2010, and the rise in oil prices from 2010, which was reinforced by rupee depreciation in 2011 and 2013. In addition, as noted above, government intervention in the food market, and rigid supply chains were inflationary forces in their own right. In the short run, these supply-side factors had to be taken as given. That shifts the focus to demand, which was also running high, as shown by several indicators. Firstly, large fiscal deficits, which had moderated in the five years before 2008, returned and continued thereafter. Secondly, the current account

deficit widened significantly, which shows that home demand was strong. Finally, rural demand was booming as a result of a sharp increase in wage growth. Rural farm and non-farm money wages grew at 17.2 per cent and 14.9 per cent a year respectively during 2008–2012, compared with 7 per cent and 4.9 per cent during 2005–2008.[17] This must be attributed (partly) to the rural employment guarantee programme, which helps to set a floor to rural wages.[18] More generally, formal and informal indexation in the economy has increased in recent years. To the pre-existing indexation of the incomes of sections of the organized workforce (through dearness allowance payments) has now been added indexation of minimum wages in the employment guarantee programme. In addition, government salaries are more frequently and generously revised by pay commissions, and the incomes of farmers are protected by frequent revisions in procurement prices.

What about the policy response? Its course can be seen in Table 8.2. Since fiscal policy was expansive, the job of demand-side inflation control was left to the Reserve Bank of India (RBI). Given the strength of both demand and cost-push forces, monetary policy would have had to be tough to be effective. Put bluntly, the RBI muffed it. It took a softly-softly approach to raising interest rates. It is nearly an iron law of modern economic policy that to bring inflation down, the real policy rate of the central bank should be positive and higher than it was previously. The RBI's response departed massively from this canonical prescription. The average real policy rate, which was about 1.8 per cent in 2003–2008, fell to a *negative* 3.0 per cent in the high inflation period of 2008–2013. (See Table 8.2).[19] Moreover, the policy reaction was slow. Interest rate increases began late in the day and were very gradual. They did not send a clear signal that the RBI meant business. While this was doubtless because it feared hurting investment and growth, it is surely no surprise that inflation proved to be persistent.[20]

The above analysis shows that India's sharp slowdown after 2011 was not due to monetary tightening. Its true causes are to be found elsewhere. The 'double dip' in advanced countries was one factor because it reduced demand for Indian exports.[21] But the single biggest proximate cause of the growth-recession was the collapse of domestic investment. In the strong boom from 2003/4 to 2007/8, real gross fixed capital formation (real GFCF) rose rapidly at a rate of 15 per cent a year. This fell to 7 per cent a year from 2008/9 to 2012/13 and further to 3.6 per cent a year thereafter. While the rate of growth of public GFCF halved from 2008/9 onwards, growth of corporate GFCF crashed from 29.6 per cent a year to virtually zero during 2008/9 to 2012/13. Table 8.3 shows the movement of GFCF. Corporate

Table 8.2 INFLATION, NOMINAL INTEREST RATES, AND REAL INTEREST RATES

Year	2003/4–2007/8 average	2008/9	2009/10	2010/11	2011/12	2012/13	2013/14	2008/9–2013/14 average	2014/15	2015/16
CPI Inflation	5.0	9.1	12.4	10.4	8.4	10.4	9.7	10.1	6.0	5.0 E
WPI Inflation	5.5	8.1	3.8	9.6	8.9	7.4	6.0	7.3	2.0	–2.5 E
Nominal Policy Rate	6.8	8.0	4.8	6.0	8.0	7.9	7.5	7.0	7.9	7.0 E
Real Policy Rate (CPI)	1.8	–1.1	–7.6	–4.4	–0.4	–2.3	–2.0	–3.0	2.9	2.0 E
Nominal Lending Rate	12.4	14.1	13.4	8.9	10.4	10.0	10.1	11.1	10.1	11.5 E
Real Lending Rate (CPI)	7.4	5.0	1.0	–1.5	2.0	–0.2	0.4	1.1	4.1	6.5 E
Nominal Deposit Rate	6.9	8.3	7.0	8.5	9.1	8.9	8.9	8.4	8.6	8.2 E
Real Deposit Rate (CPI)	1.9	–0.8	–5.4	–1.9	0.7	–1.5	–0.8	–1.6	2.6	3.2 E

Notes: i) The CPI index used is the CPI (IW) General Index until 2010 and the All-India CPI (NC) thereafter; ii) The WPI index is the All Commodities index; iii) All real rates of interest are defined as nominal rate minus ex post CPI inflation; iv) the nominal lending rate is an average of the lending rates of five major banks; v) the deposit rate is for bank deposits of three to five years; vi) E stands for author's estimates, based on the first ten months' data.
Sources: CPI and WPI inflation from Government of India (2015a). All nominal interest rates from Reserve Bank of India (2015).

Table 8.3 GROSS FIXED CAPITAL FORMATION (GFCF)

	Increase in Real GFCF (% p.a. at 2004/5 prices)				GFCF at current prices (% GDP at market prices)			
	Public	Corporate	Household	Total	Public	Corporate	Household	Total
2005/6–2007/8 (average)	15.8	29.6	2.9	15.4	7.7	12.9	10.9	31.5
2008/9–2012/13 (average)	7.2	0.3	15.9	7.1	7.9	9.8	13.7	31.4
2007/8	12.5	27.7	5.3	16.2	8.0	14.3	10.6	32.9
2008/9	12.0	–21.9	33.2	3.5	8.5	10.3	13.5	32.3
2009/10	5.6	9.3	7.7	7.7	8.4	10.2	13.2	31.7
2010/11	5.0	17.6	9.2	11.0	7.8	10.4	12.7	30.9
2011/12	–1.3	–0.1	31.9	12.3	7.1	9.4	15.2	31.8
					(7.4)	(11.2)	(15.7)	(34.3)
2012/13	14.6	–3.6	–2.6	0.8	7.8	8.5	14.1	30.4
	(2.6)	(13.2)	(–1.4)	(4.9)	(7.0)	(11.8)	(14.6)	(33.4)
2013/14	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	28.3
	(9.4)	(10.5)	(–5.4)	(3.4)	(7.0)	(11.7)	(12.9)	(31.6)
2014/15	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
	(14.5)	(13.7)	(–9.2)	(4.9)	(7.5)	(12.3)	(11.0)	(30.8)
2015/16	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
	(n.a)	(n.a.)	(n.a.)	(5.3)	(n.a.)	(n.a.)	(n.a.)	(29.4)

Notes: Figures in brackets are from the 2011/12 series of national accounts. All other figures are from the 2004/5 series of national accounts.
Sources: Government of India (2015a); Government of India, Central Statistics Office (2011); and Government of India, Central Statistics Office (2012, 2013, 2014, 2015, 2016).

investment performance was particularly bad in 2011 and 2012, when real corporate GFCF showed an *absolute decline*; and informal evidence does not show much improvement thenceforth.[22]

What accounts for the corporate investment famine, given that tough monetary policy is clearly not an explanation? Some analysts have argued that excessive government spending and borrowing 'crowded out' private investment.[23] While it is true that fiscal deficits were high after 2007, crowding out should have shown up in a rise in real interest rates. As seen above, this did not happen. Moreover, while the public deficit (i.e. public investment minus public saving) rose substantially in 2008 and 2009, it fell sharply in 2010 and increased only slightly thereafter, not nearly enough to cause a severe collapse of corporate investment.[24] In my view, the fall in corporate investment was only to a minor extent the result of high fiscal or public deficits. It was mainly 'autonomous', caused by other factors unrelated to crowding out.[25] The evolution of domestic savings and investment is shown in Tables 8.4 and 8.5 respectively.

Why did corporate investment collapse? The main explanation is surely that companies were hobbled by an overhang of debt. In the go-go years of 2003–2008, they had thrown caution to the winds, and over-committed themselves to new projects. A slowdown of the scorching pace of investment was quite natural when the boom was stopped in its tracks by the global crisis. But a sustained investment recovery was made very difficult because much of the massive rise in investment had been financed by debt rather than equity.[26] When the bubble burst in 2008, many companies pulled back at first but continued borrowing and investing in 2009 and 2010 to try and finish the projects they had started earlier, becoming in the process progressively more weighed down by debt. In the end, the need to deleverage became urgent in the face of stagnant demand, and necessitated the abandonment of ongoing projects as well as cancellation or postponement of new investment.[27] Indeed, the debt burden became so high that it has not yet been worked off and continues to inhibit an investment recovery to this day.

Another reason for the investment slowdown after 2011 was that the risk premium on investment went up. Two identifiable factors were involved. Firstly, the deterioration in the macroeconomic situation did not help. New investment was discouraged by the persistence of high inflation and the rise in current account and fiscal deficits, which suggested that the economy was running out of control. Secondly, governance problems took their toll. From 2010 onwards, the government got tangled up in the fallout from the revelation of various scams, notably in telecom and mining. Their exposure was a good thing for the future of Indian democracy

Table 8.4 GROSS DOMESTIC SAVINGS (% GDP AT MARKET PRICES)

	2003/4–2007/8 (average)	2007/8	2008/9	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
Household	23.2	22.4	23.6	25.2	23.1	22.8	21.9	n.a.	n.a.
						(23.6)	(22.5)	(20.9)	(19.1)
Financial	11.2	11.6	10.1	12.0	9.9	7.0	7.1	n.a.	n.a.
						(7.4)	(7.4)	(7.7)	(7.7)
Physical	12.0	10.8	13.5	13.2	13.2	15.8	14.8	n.a.	n.a.
						(16.2)	(15.1)	(13.2)	(11.4)
Corporate	7.2	9.4	7.4	8.4	8.0	7.3	7.1	n.a.	n.a.
						(9.5)	(10.0)	(10.8)	(12.7)
Public	2.9	5.0	1.0	0.2	2.6	1.2	1.2	n.a.	n.a.
						(1.6)	(1.3)	(1.3)	(1.2)
Government	–1.6	0.5	–2.8	–3.1	–0.5	–2.0	–1.6	n.a.	n.a.
						(–1.8)	(–1.6)	(–1.3)	(–1.1)
Public Enterprises	4.5	4.5	3.8	3.3	3.1	3.2	2.8	n.a.	n.a.
						(3.4)	(2.9)	(2.6)	(2.3)
Gross Domestic Savings	33.2	36.8	32.0	33.7	33.7	31.3	30.1	30.5	n.a.
						(34.7)	(33.8)	(33.0)	(33.0)
Foreign Savings	0.4	1.3	2.3	2.8	1.8	4.2	4.7	0.9	n.a.
						(4.3)	(4.8)	(1.7)	(1.2)
Gross Capital Formation	33.6	38.1	34.3	36.5	36.5	35.5	34.8	31.4	n.a.
						(39.0)	(38.6)	(34.7)	(34.2)

Notes: Figures in brackets are from the 2011/12 series of national accounts. All other figures are from the 2004/5 series of national accounts.
Sources: Government of India (2015a); Government of India, Central Statistics Office (2011); and Government of India, Central Statistics Office (2012, 2013, 2014, 2015, 2016).

Table 8.5 DOMESTIC CAPITAL FORMATION (% GDP AT MARKET PRICES)

	2003/4–2007/8 (average)	2007/8	2008/9	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
Gross Fixed Capital Formation	29.6	32.9	32.3	31.7	30.9	31.8 (34.3)	30.4 (33.4)	28.3 (31.6)	n.a. (30.8)
Public Sector	7.4	8.0	8.5	8.4	7.8	7.1 (7.4)	7.8 (7.0)	n.a. (7.0)	n.a. (7.5)
Private Sector	22.2	24.9	23.8	23.3.	23.1	24.7 (26.9)	22.6 (26.4)	n.a. (24.6)	n.a. (22.3)
Corporate	10.7	14.3	10.3	10.2	10.4	9.4 (11.2)	8.5 (11.8)	n.a. (11.7)	n.a. (12.3)
Household	11.5	10.6	13.5	13.1	12.7	15.2 (15.7)	14.1 (14.6)	n.a. (12.9)	n.a. (11.0)
Change in Stocks	2.7	4.0	1.9	2.8	3.5	1.9 (2.4)	1.7 (2.1)	n.a. (1.6)	n.a. (1.8)
Investment in Valuables	1.1	1.1	1.3	1.8	2.1	2.7 (2.9)	2.6 (2.7)	n.a. (1.3)	n.a. (1.5)
Errors and Omissions	0.3	0.1	–1.2	0.2	0.0	–0.9 (–0.6)	0.1 (0.4)	n.a. (0.2)	n.a. (0.1)
Gross Domestic Capital Formation	33.6	38.1	34.3	36.5	36.5	35.5 (39.0)	34.8 (38.6)	n.a. (34.7)	n.a. (34.2)

Notes: Figures in brackets are from the 2011/12 series of national accounts. All other figures are from the 2004/5 series of national accounts.
Sources: Government of India (2015a); and Government of India, Central Statistics Office (2011); and Government of India, Central Statistics Office (2012, 2013, 2014, 2015, 2016).

but the short-term economic effects were unhelpful. The output of critical materials was adversely affected. (For example, mine closures by court order led to a significant fall in the output of iron ore.) The government entered a period of policy paralysis. Ministers and civil servants became cautious and unwilling to make decisions.[28] The spate of scandals heightened public sensitivities over land acquisition and environmental impacts but the government was not able to put in place fair, transparent, and speedy systems for dealing with these issues. As a result, project approvals came to a standstill, and so did progress on economic reform. On top of all this, the government shot itself in the foot by undertaking various silly initiatives that sent the wrong signals, such as retrospective taxation of some foreign companies. It is not surprising that faced with these manifold governance issues, in addition to a debt overhang and yet another global slowdown from 2011, new investment dried up.[29] Be that as it may, it is clear that the severe slowdown from 2011 had very little to do with 'crowding out' or the stance of monetary policy. The RBI misunderstood the nature of the slowdown and kept monetary policy loose despite the surge of inflation. The upshot was that the country got both high inflation and low growth.

I conclude that Indian policy towards internal balance needs an overhaul. India must decide whether it is serious about keeping inflation low. If it is, it would imply signing up to the view, which I strongly support, that there is no long-run growth advantage to be had from an inflation rate above 4 or 5 per cent. It follows, given the spread of indexation, that the Reserve Bank will have to be tougher than hitherto in responding to inflation. Of course, other supporting policies could help to reduce the burden that falls on the RBI. It would help if fiscal deficits were lower and fiscal policy flexible enough to play its part in demand management. It would also help if the government took steps to boost the growth rate of agricultural production (including protein foods with high income elasticity of demand), adopted a rational buffer stock policy, and promoted modernization of the rigid supply chains for farm products (for example by introducing more competition and allowing foreign direct investment in multi-brand retail). However, when the chips are down, the buck always stops with monetary policy in the fight against inflation. Does this mean that India should adopt 'flexible inflation targeting', as recommended by the landmark Report of the Monetary Framework Committee (chaired by Urjit Patel) in 2014?[30] I am in favour of such a step. Inflation targeting would be a helpful, even a necessary (though by no means sufficient), move to keep inflation within acceptable limits. The Appendix to this chapter surveys briefly the debate on inflation targeting.

In the past two years (2014/15 and 2015/16), the Modi government has been in the saddle. Inflation has been falling despite two bad monsoons in succession, and is now running at around 5 per cent a year. Several ingredients have contributed. The sharp decline in world commodity prices, particularly the collapse in oil prices, has made a major contribution. The weakness of economic activity since 2011 has had an effect in slowing the growth of money wages, including rural money wages. The government has wisely released food stocks and reined in increases in procurement prices. And last but not least, monetary policy has been credibly anti-inflationary. As soon as R. Rajan came in as governor of the RBI in September 2013, he signalled a tougher approach. The policy rate was hiked in three steps to 8 per cent and remained at that level for 15 months even while inflation was coming down. It has since been lowered to 6.75 per cent, but continues to be in positive territory in real terms.[31] The RBI has signalled that a further reduction in the rate will depend in part on the fiscal stance of the central government in its budget for 2016/17. The hand of the RBI was strengthened by its agreement with the Finance Ministry in February 2015 that in effect ushered in a regime of inflation targeting. The inflation target was agreed to be 6 per cent for January 2016 and 4 per cent (with a band of +/– 2 per cent) for 2016/17 and thereafter.[32] Other attributes generally associated with inflation targeting, such as the formation of a 'monetary policy committee' to make interest rate decisions, have yet to happen. (Until then, interest rate policy is in the hands of the RBI governor.)

Though the RBI has been successful in bringing inflation under control, monetary transmission has faced problems. For example, the commercial banks have passed on only about half of the rate cut that the RBI initiated in 2015. One reason for this is some long-standing distortions in the system. The government-administered rates on small savings are only changed annually, and set a floor to bank deposit rates, which in turn set a floor to bank lending rates.[33] Smooth transmission of monetary policy requires that small savings rates should move in tandem with the policy rate. Other factors that impede transmission include a) interest rate subsidies that are given for various selected activities and b) the high level of the statutory liquidity ratio (SLR), which stipulates the minimum share (currently 21.5 per cent) of bank deposits that has to be placed in government securities.[34] These are all features of 'financial repression' that clearly need to be phased out. But this would require coordination between the government and the RBI. For example, the SLR could not be reduced without reducing government borrowing, i.e. the fiscal deficit. The point to note here is that the smooth operation of inflation targeting depends on improving the transmission mechanism for monetary policy.

Overall, the performance on the inflation front has been commendable. What about investment and growth? In this area, the outcome has not been nearly as good despite the large terms of trade gain (more than 2 per cent of GDP) from the crash in global oil prices. The slowdown of the economy that started in 2012/13 still continues, though the new national accounts figures (2011/12 series) produced by the Central Statistical Office (CSO) give a very much rosier picture. If the new numbers are to be believed, the sharp slowdown lasted only a year: the economy recovered in 2013/14 and grew at more than 7 per cent a year in the next two years (see Table 8.1). I find this dubious (and so do many other economists) without in any way doubting the integrity of the CSO. The culprit is probably the CSO's new methodology, which has many problems including the use of inappropriate price deflators. The issues involved are highly technical and cannot be pursued here. However, it is incontestable that the new national accounts numbers are totally at variance with other indicators of economic activity, most of which are growing well below the rates that would be observed in a vigorously expanding economy (and were observed during past periods of rapid growth). Industrial growth, as measured by the index of industrial production, has been extremely weak, indeed barely positive. Exports have shrunk substantially in absolute dollar value. Imports, including capital goods imports, are also showing significant negative growth. Growth of bank credit, especially to industry, has been very sluggish. Employment creation in the organized sector is practically at a standstill. The company universe shows very slow, if not negative, growth of sales revenue, as well as strongly rising interest and debt burdens, and stagnating profits. Crucially, corporate capital expenditure and investment are subdued. Investment proposals are running at less than a quarter of their levels in 2010 and 2011. At the same time, there is not enough forward movement in the revival of stalled projects. Agricultural output has been nearly flat for the past two years and there is growing agrarian distress. In other words, if the economy has indeed recovered and is growing strongly, this is not visible anywhere except in the national accounts statistics.[35] I would guess that in 2014 and 2015 the economy has been growing around two percentage points less than indicated by the CSO, i.e. at about 5.5 per cent a year.

Revival of investment is critical but is held up by two interrelated problems: the debt hangover faced by major companies due to erstwhile reckless borrowing, and the corresponding rise in bad loans in the banking system. Corporate leverage is so high and the interest coverage ratio so low in some sectors such as steel, construction, and infrastructure, that companies therein can only think of survival, not fresh investment. (As of now, among the emerging market economies, India has the highest debt-equity ratio

in the corporate sector.) The corporate sector accounts for three-quarters of banks' credit portfolios. So, as a mirror image of corporate weakness, the commercial banks, especially public sector banks (PSBs), have seen a steep rise in 'stressed assets' that has reduced their overall lending capacity, and their desire to lend, even to healthy companies.[36] Stressed assets of PSBs were 14 per cent of total advances in September 2015, accompanied by a sharp fall in bank profitability and the return on assets. This is not a good position for the banks to be in, if credit supply is to be available to finance rising investment.

The RBI has ordered the banks to clean up their books by March 2017, so they will have to 'recognize' bad assets and stop hiding them by accounting fudges. It has taken various other steps to deal with the bad loans problem such as allowing banks to take control of companies by converting unpaid loans into equity, and raising public consciousness about defaulting promoters. Thus far (December 2015), asset quality pressure has not eased at all, and the situation is likely to get worse before it gets better. The problem is so large and deep-seated that radical solutions may be required. Recognizing and providing for bad loans will inevitably mean losses for banks and a large blow to their equity capital; so, there will have to be a capital infusion (over and above what is required to fulfil the Basel 3 norms). Asking PSBs to raise more money in the market to shore up their equity will not be feasible until their balance sheets have been restored to normality. (These banks have been quoted at well below their book values for years: the market is only too well aware of their rank inefficiencies.) The government's planned capital infusions in the 2016/17 and future budgets are reckoned by knowledgeable observers to be grossly insufficient to meet the scale of the problem. However, if growth does not pick up soon, further recapitalization by the government will become unavoidable. It may help to set up a government-backed asset reconstruction company (a so-called 'bad bank') that would buy non-performing loans at a discount and get them off the banks' books quickly (but it would not avoid the need for recapitalization since the banks would take an equity hit) and focus on recovering value to the extent possible. A long-term solution would require not only recapitalization to solve the 'stock' problem of bad debt but also governance and ownership changes to deal with the 'flow' problem of improving the PSBs' income-earning capacity. Ways to do this have been discussed in Chapter 7.

An incidental lesson from the current macroeconomic situation is that 'microeconomic' inefficiencies can exacerbate macro problems. For example, corporate restructuring that is necessary for the revival of investment is more difficult than it needs to be because of India's highly cumbersome procedures for dealing with company distress, bankruptcy, and exit; and the

asset quality problems in the banking sector have been brought about in part by governance problems in PSBs, which led to unwise lending.

EXTERNAL BALANCE

Overall, India has had a good record on external stability since the 1991 reforms although, or because, its balance of payments policy has diverged from economic orthodoxy in a constructive way. The hallmarks of this policy were 'managed floating' of the exchange rate, and the use of some focused controls on short-term capital movements. (Direct and portfolio equity investments have been largely unrestricted but there have been some controls on debt inflows, particularly of the short-term variety.) This regime has helped to keep the current account deficit at modest levels most of the time, and to preserve financial stability while the economy was integrating rapidly with the rest of the world.

The rationale of India's choice of external payments regime merits some explanation, since there are many regimes to choose from.[37] One extreme option is a permanently fixed exchange rate combined with 'capital account convertibility' (CAC), i.e. completely free and unrestricted capital movements. This alternative is clearly unsuitable since exchange rate changes may be necessary to maintain the country's competitive position in the face of adverse shocks.[38] Moreover, a fixed exchange rate plus CAC would deprive the country of 'monetary autonomy', i.e. the ability of policymakers to set interest rates to suit domestic conditions.[39] A diametrically opposite option is a regime with 'clean floating' of the exchange rate plus CAC: the authorities bind themselves to keeping their hands off both capital movements and the foreign exchange market. Monetary autonomy would then be partially restored but at the cost of losing all control over the exchange rate.[40] The danger is that the exchange rate may settle at an inappropriate level. For example, exuberant and imprudent capital inflows may drive up the exchange rate to an excessively high level only to be followed by a large current account deficit, a panicky capital flight, and a painful correction. A third possible regime is an 'intermediate' exchange rate, somewhere between fixed and floating, combined with CAC. The problem with this regime is that it is vulnerable to attack. Any targeting of the exchange rate, even an exchange rate band or crawl, gives speculators a target to shoot at.[41] This invites currency crises, of which there were plenty of examples in the 1990s in East Asia, Latin America, and Russia. Monetary autonomy would also be lost in the bargain.

India's regime of 'managed floating' plus capital controls has been helpful in avoiding these various pitfalls. It has enabled the authorities to target the exchange rate from time to time to preserve trade competitiveness, while letting the market dictate the level of the exchange rate most of the time. At the same time, since the capital controls have been specific, not pervasive, they have allowed the economy to enjoy many of the benefits of free capital flows (while protecting it against movements of 'hot money').

Foreign exchange reserves have also played a major role in buttressing the payments regime. Since 1991, India has aimed to maintain a comfortable reserve position for precautionary purposes, and has mostly succeeded in doing so. A large stock of reserves cannot prevent a currency crisis if macroeconomic policy is grossly irresponsible. But it can help to ward off self-fulfilling speculative attacks.[42] A reserve-related instrument that the Indian authorities have used quite regularly to target the exchange rate is so-called 'sterilized intervention', whose operation can be explained as follows. Exchange-rate targeting involves buying or selling foreign exchange reserves. For example, to prevent an appreciation of the exchange rate (and a consequent worsening of trade competitiveness), the RBI has to sell rupees and buy dollars in the foreign exchange market. But the newly created rupees could raise prices and thus worsen competitiveness by another route, thwarting the object of the exercise. The trick to get round this problem is to 'sterilize' the rupee creation by selling government bonds. But the solution has limitations. It imposes a fiscal cost because the interest rate that the government pays on the securities sold is likely to be higher than that earned on the dollar reserves that are bought. Sterilized intervention, therefore, can only be applied in moderation, as a supplement to capital controls, not as a substitute for it.

The main reason for managing the exchange rate is to help preserve trade competitiveness and ensure that the current account deficit is modest. (There is also some persuasive evidence that mild undervaluation of the exchange rate boosts growth.) A current account deficit has to be covered by foreign borrowing. There is nothing wrong with this up to a point, if there are good investment opportunities beyond those that can be financed out of domestic savings. But persistent and large deficits make it more likely that the borrowing will go into unproductive expenditure. They also make it more likely that foreign lenders will cut and run if doubts arise about the country's ability or willingness to repay, or simply due to sudden changes in investors' risk appetite. The safe magnitude of the current account deficit is not a hard and fast number. I think that a target deficit of 2 per cent of GDP is about right. This allows for shocks that may raise it occasionally to double that figure. (In 2011 and 2012, a deficit of more than

4 per cent of GDP raised acute financing concerns.) This is more conservative than the 3 per cent of GDP target that was assumed in the 12th Five Year Plan but is justified by the uncertain international climate and the well-attested propensity of international investors to take fright in the face of high current account deficits.

My overall view is that a) India's payments regime has been fit for purpose; and b) when the RBI has departed from this regime, the results have been less than favourable. A few examples illustrate the point. The first is the dramatic East Asian crisis of 1997 when capital flight toppled the mountain of foreign debt that many countries in the region had accumulated. For several years previously, they had experienced huge capital inflows, attracted by the so-called 'East Asian Miracle'. But capital flows are not all alike. Direct foreign investment is fairly stable and bolted down but that cannot be said of 'hot money' that flows into banks and short-term bonds.[43] East Asia had embraced free capital mobility and allowed hot money to pour in. When it poured out, upheaval and chaos followed. The interesting point is that India came out of the crisis unscathed, even though its 'fundamentals', such as inflation and fiscal deficits, were much worse than in the crisis countries. The critical differences were two. In the crisis countries, unlike in India, there was a huge amount of short-term debt in relation to foreign exchange reserves. (In South Korea, short-term debt was as large as the reserves, in Indonesia it was twice the stock of reserves; in India, however, it was only 30 per cent of reserves.) India averted the crisis by avoiding an unstable debt structure, an outcome that was a direct result of maintaining controls on the volatile element of capital inflows.[44] The other difference relates to exchange rate policy. The crisis countries kept their exchange rates fairly closely tied to the dollar. In the years leading up to the crisis, they lost trade competitiveness, since they had higher inflation than their trading partners. Moreover, their declared policy of exchange rate stability induced complacency about exchange risk, and encouraged dollar-denominated foreign borrowing. During the same period, India altered its exchange rate frequently to compensate for a higher rate of inflation relative to trading partners, thereby keeping it roughly unchanged in 'real' terms. The pressure for appreciation, caused by large capital inflows in the permitted categories, was resisted by sterilized intervention conducted by the RBI.

Another more recent illustrative episode was the period of superfast growth from 2003 to 2007, when India attracted very large foreign capital inflows. The RBI governor Y. V. Reddy could have welcomed the inflows with open arms by relaxing capital inflow restrictions and letting the rupee appreciate in the foreign exchange market. This would have added to the prevailing 'feel good' sentiment by making imports cheaper.

A stronger rupee would have also been popular as a signal that India was on the way to becoming a major power. In the event, he was cautious. He retained the controls on inflows of 'hot money', so the debt structure did not become fragile. He did let the rupee strengthen, but nowhere as much as it would have in a free market. Instead, the RBI bought the dollars that were flooding in. India's reserves doubled between 2005 and 2007, from $150 billion to $300 billion. (The intervention was partially sterilized to prevent inflation.) When the global crisis broke in 2008, the reserves came in very handy. Not only did they serve to cover payments deficits but their very presence inspired confidence and prevented capital flight.

Since 2008, however, India's adherence to its payments regime has become more hesitant. D. Subbarao came in as RBI governor at a difficult time, only a week before the collapse of Lehman Brothers in September 2008. For India, the immediate effect of the global turmoil was that capital inflows dried up for six months. Subbarao responded with a mixture of running down reserves and letting the rupee depreciate. So far, his policy was entirely in consonance with Reddy's. Then, strong inward capital flows resumed because a) it looked as if the worst of the crisis was over and India had come out of it in better shape than many countries; and b) Western governments slashed interest rates to very low levels and started 'quantitative easing', which raised the relative return on Indian assets. At this point, Subbarao appears to have had a change of heart. Perhaps he thought that a stronger rupee would be good for damping down inflation. Perhaps he was persuaded by the reports of some government committees that had advocated moving towards a floating exchange rate. He turned away from Reddy's strategy of managing the rupee and allowed the exchange rate to be market-determined. In 12 months from April 2009, the rupee rose from $1 = Rs. 51 to $1 = Rs. 45, and remained around that level for another year. But Indian inflation was much faster than in other countries. The combined result of these two factors was that India's export competitiveness against its trading partners worsened sizeably. (Table 8.1 shows that the 'real effective exchange rate' [RER] appreciated by 10 per cent and remained at that level for two years. The RER measures competitiveness. A rise in the RER means a fall in competitiveness.) This contributed (along with other global and domestic factors) to the large widening of the current account deficit in 2011 and 2012 to well over 4 per cent of GDP,[45] and a slowdown in industrial growth.[46] Economic performance was also deteriorating for other reasons, as seen above. As a result, from August 2011, the rupee began to depreciate rapidly. Though a major crisis did not occur, the situation looked very threatening for a time, and a run on the rupee was on the cards. With the

benefit of hindsight, it is clear that Subbarao erred in pursuing a 'strong rupee' policy for two years.

An even more recent episode of departure from the payments regime has occurred during the governorship of R. Rajan. The RBI quite rightly put up a defence of the rupee during the 'taper tantrum' of 2013 (when there was capital flight in response to market expectations of an imminent rise in US interest rates) in order to combat a destabilizing speculative dynamic. Since then, however, the real exchange rate has been allowed to appreciate by about 10 per cent (see Table 8.1). This has surely played a part in the precipitous collapse of Indian exports in 2014 and 2015 (though the slowdown in world trade has obviously not helped). In 2015/16, on the basis of figures for the first ten months, exports are expected to show *negative* growth of around 15 per cent.[47] As it happens, the current account deficit has been low because of the combined effect on imports of domestic recession and a fall in the oil price. But imports will and should pick up when the economy recovers, so the negative export growth is very worrying. It appears that the RBI is no longer managing the exchange rate with an eye to trade competitiveness (or it would surely not have allowed the recent substantial real appreciation).[48] Another concern is the strong trend since 2010 towards liberalization of capital controls on external commercial borrowing by companies and banks, and debt flows more generally, including inflows of foreign money into government securities. This kind of borrowing, unlike foreign direct and portfolio equity investment, makes the country more vulnerable to the roller-coaster of capital movements. It also makes exchange rate management more difficult. Further liberalization of capital inflows into bank loans or bonds would be a bad idea at this juncture.[49]

The bottom line is that India should be wary of abandoning its tried and tested policy of managing the exchange rate to maintain export competitiveness, with the help of targeted capital controls,[50] and sterilized intervention, as and when necessary. It would be unwise to change this policy framework until rapid export growth is more secure, and fiscal consolidation, financial regulation, and clean-up of the banking system are much further advanced.

FISCAL BALANCE AND FISCAL REFORM

India's fiscal problem has 'macro' and 'micro' aspects. The 'macro' part is about making the fiscal position sustainable by reducing the size of government deficits and debt. The 'micro' part, which is about moving towards a more efficient structure of taxes, and changing the composition and

effectiveness of government expenditure, does not, strictly speaking, belong in a chapter about macro-policy. Even so, it is addressed briefly in this section (in addition to the macro-aspects of fiscal policy) because it arises naturally and is, moreover, critically important for inclusive growth.

The meaning and rationale of fiscal sustainability needs some explanation. Like any economic entity, the government has to be solvent if it is to function. It can borrow and go into debt to cover the 'fiscal deficit', i.e. the difference between revenue and expenditure. However, if the debt is excessive, or thought to be escalating rapidly, borrowing becomes more expensive. In the extreme, the government would find it impossible to borrow. It would then have to repudiate the debt directly, or print money at an ever faster rate to cover its deficits, which is tantamount to reneging on the debt indirectly by inflating it away. Hyperinflation and debt repudiation are of course classic recipes for social and political chaos. A wise government should keep deficits and debt low because any suspicion that it has a solvency problem can raise borrowing costs in the present and bring the day of reckoning forward.[51] But avoiding insolvency is not the sole reason for fiscal prudence. Large government deficits are undesirable, even if solvency is not in question, because they can result in lower growth via 'crowding out' of non-government activity. If the government's deficit goes up, its extra demand in the credit market raises interest rates. This discourages private investment spending, which in turn reduces the growth rate.[52] If net exports are crowded out, the economy gets into external debt; and if that becomes excessive, the country becomes vulnerable to a balance of payments crisis.

There is an important qualification to the above analysis. Running a fiscal deficit or surplus affects aggregate demand. Measures to cut the deficit may have a contractionary effect on national income and output. Indeed, it may be necessary to run a higher deficit in order to prevent or counteract a recession or slowdown in economic activity. (In a deep recession, 'crowding out' would not be an issue.) Thus, governments have to walk the tightrope of balancing short-run fiscal flexibility with long-run fiscal sustainability. Nonetheless, if the solvency position is in doubt, even the freedom to use the deficit for short-run demand management becomes restricted or disappears altogether.

Economic theory gives little guidance about the optimum level of government debt. But experience indicates that high public debt levels are associated with macroeconomic crises and low growth. India's net public debt ratio of around 70 per cent of GDP is not in safe territory.[53] Before the global credit crisis of 2008, the eurozone and the UK aimed at debt ratios of 60 per cent and 40 per cent respectively; and though these targets have been massively overshot during and after the credit crisis, they have

certainly not been abandoned. It would be prudent to reduce India's public debt ratio to about 50 per cent of GDP over a time-horizon of, say, 10 years. The fairly slow adjustment is to guard against the danger that fiscal compression could have a depressing effect on growth of output.

Reducing the debt ratio is primarily a matter of controlling fiscal deficits. And in doing so, the revenue or current deficit is an object of special interest since capital spending has the virtue of being growth-promoting. Table 8.6 shows the course of revenue deficits and aggregate fiscal deficits in recent years. The Fourteenth Finance Commission (14th FC) has recommended, in its 'road map for fiscal consolidation', achieving a consolidated revenue surplus of 1 per cent of GDP by 2019/20.[54] This would, according to the Commission's calculations, reduce the consolidated debt ratio by about 7 per cent of GDP, while simultaneously a) accommodating an increase in consolidated capital expenditure of 2 per cent of GDP and b) reducing the consolidated fiscal deficit by about 0.6 per cent of GDP. The resulting numbers in 2019/20 would be as follows: consolidated fiscal deficit: 5.7 per cent of GDP (centre: 3 per cent; states 2.7 per cent)[55]; consolidated revenue deficit: –1.0 per cent of GDP (centre: 1 per cent; states: –2 per cent); consolidated debt ratio 58 per cent of GDP (centre: 36 per cent; states: 22 per cent).

The above road map looks quite reasonable, neither too lax nor too tough. However, adhering to it will not be easy. Firstly, the starting point is somewhat worse than assumed by the 14th FC. The central government deficit

Table 8.6 REVENUE AND FISCAL DEFICITS OF THE CENTRE, STATES, AND CONSOLIDATED GOVERNMENT (% GDP AT MARKET PRICES)

	Centre		States		Consolidated	
	RD	FD	RD	FD	RD	FD
2002/3	4.3	5.7	2.1	3.9	6.4	9.2
2007/8	1.1	2.5	–1.0	1.5	0.1	4.0 (4.6)
2008/9	4.5	6.0	–0.3	2.3	4.2	8.2 (9.9)
2009/10	5.2	6.5	0.4	3.0	5.7	9.4 (9.6)
2010/11	3.2	4.8	–0.2	2.0	3.0	6.8
2011/12	4.4	5.8	–0.3	2.4	4.1	8.2
2012/13	3.9	5.2	–0.2	2.1	3.7	7.2
2013/14	3.3	4.6	–0.1	2.5	3.2	7.1
2014/15	2.9	4.1	–0.5	2.3	2.5	6.4
2015/16	2.5	3.9		2.5 E		6.4 E

Notes. RD and FD refer to Revenue Deficit and Fiscal Deficit respectively. Figures in brackets show the consolidated fiscal deficit, inclusive of off-budget items, (these were brought on-budget from 2010). Negative figures denote surpluses. The figures for 2015/16 are estimates by the author.
Source: Ministry of Finance (2015a).

in 2015/16 was 3.9 per cent of GDP, not 3.6 per cent, because the government decided to depart from the 14th FC road-map in order to increase public investment, on the justifiable ground that private investment was weak. The combined debt ratio in 2015/16 was probably 70 per cent of GDP, not 65 per cent, as assumed by the Commission.[56] Moreover, the demands on the government treasury look formidable in the light of the recommendations of the Seventh Pay Commission, the recapitalization requirements of the banking system, and the takeover by the states of the debts of the electricity distribution companies ('discoms'). Secondly, the future environment promises to be different from the recent past in one major respect. From 2008 onwards, fiscal consolidation was meagre but this did not stop the debt ratio falling from 80 per cent of GDP in 2008/9 to 68 per cent in 2014/15. This is because high inflation eroded the value of the debt. Now, India has a formal inflation target. If inflation were maintained in the next five years at the targeted 4 per cent, the burden of reducing debt would fall very much on fiscal adjustment proper. The RBI's commendable efforts to maintain a positive real deposit rate, and to unwind financial repression, will tend to keep the government's real borrowing rate positive as well, say at around 3 per cent, unlike the six inflationary years from 2008, when it was zero or negative.

Reduction of the debt ratio will thus be more challenging than hitherto.[57] Even so, it is surely high time that India stopped its past practice of repeatedly postponing genuine fiscal consolidation. (For example, the Fiscal Responsibility Act of 2003 has been paused or amended several times. In effect, its fiscal deficit target of 3 per cent of GDP for the central government has not been reached 12 years after it was first adopted.)[58] It would be desirable to revamp the Fiscal Responsibility Act and define fiscal deficit goals not as fixed ratios to GDP but as bands within which these ratios must lie. Government action to achieve fixed targets runs the risk of being pro-cyclical. Permissible bands would allow cyclical considerations to be taken into account and give the government less of an excuse to breach fiscal road-maps. That said, fiscal consolidation is bound to be painful though necessary.

Reducing the fiscal deficit to a safe level is an important aim of a desirable fiscal policy but not its sole aim. Given the objective of inclusive growth, fiscal adjustment also has to be of the right quality. This has implications for both the tax structure and the pattern of government expenditure. In the pre-reform days, rates of direct tax used to be punitive. Now they are very reasonable (the top marginal rate is 31 per cent, which is below most European countries). As a result, compliance has improved and the yield of direct taxes has risen since 1991.[59] Even so, the ratio of overall tax revenue to GDP is only slightly higher than

20 years ago.[60] This is because of the sharp fall in tariff revenue in the last two decades: customs duties have been reduced, justifiably, to secure the benefits of trade liberalization. The rest of the indirect tax system is undergoing a major shift towards a uniform goods and services tax (see Chapter 6). This promises to be a big step towards making the country a single market, so the effect on revenue will be positive in the long run; but the near-term revenue effect is likely to be neutral, while the new system settles down.

An increase in the revenue productivity of the tax system will require widening of the tax base and reduction in the multitude of exemptions secured by special-interest groups. For this, enactment of a goods and services tax is of course a first-order priority. Another obvious, though politically difficult, avenue for widening the tax base is taxation of agricultural incomes, which is constitutionally a state subject. Powerful farm lobbies have seen to it that agricultural income is untaxed. In addition to depriving the government of tax revenue from agriculture, this has also led to tax evasion by people falsely declaring non-agricultural income to be agricultural. An agreement between the centre and the states to tax agricultural incomes is long overdue. Its absence is one reason among others for the appallingly low base of the personal income-tax, which is paid by only 40 million people (3 per cent of the population, and around 15 per cent of households). One of the objectives of tax policy must surely be to ensure in the next decade that at least a third of households pay income tax (even if many were to do so at a low rate). Though doing so is politically popular, finance ministers should resist the temptation to raise the minimum tax threshold faster than the growth rate of per capita GDP, as has happened regularly in the past. A broader tax base could also be obtained by pruning the multitude of exemptions and concessions in the tax code, which serve no useful purpose and cause evasion and avoidance.[61]

Reduction of government expenditure is essential for fiscal consolidation in India. But the objective of rapid and inclusive growth implies increased government spending on those aspects of infrastructure investment, social protection, and social enablement that should not be left wholly to private initiative. To achieve significant reduction in revenue deficits along with expenditure increase in these essential areas, two features of the economy have to be corrected that prevail even after more than 20 years of economic reform, and serve neither efficiency nor equity: a) a superabundance of dysfunctional subsidies and b) an excessive degree of state ownership of business enterprises.

Explicit subsidies mainly go to food, fuel, and fertilisers and currently constitute around 1.7 of GDP.[62] The need and scope for reduction, even abolition,

of fertiliser and fuel subsidies was discussed in Chapter 6. Commendably, in 2013, the UPA government began the process of reducing diesel subsidies in small steps each month. The NDA government continued this policy and was able to eliminate the diesel subsidy in 2014 by taking opportunistic advantage of the sharp fall in global oil prices in that year. Subsidies on other fuel products such as cooking gas and kerosene still remain.

Food subsidies represent the difference between the cost incurred by the Food Corporation of India (FCI) in procuring, storing, and distributing food grains and the 'issue prices' at which they are sold to poor consumers through the 600,000 'fair price shops' of the PDS.[63] But it is widely acknowledged that the PDS leaks all over the place. Well over half the grain released by the FCI does not reach poor households because it is diverted to the open market or because many genuinely poor people do not have ration cards, while many non-poor people do. The food subsidy bill could be significantly reduced by directly subsidizing poor consumers to buy food at market prices by means of cash transfers (directly into bank accounts).[64] As discussed above in the section on 'internal balance', government buffer stocks could still be operated to moderate fluctuations in food prices, purchases, and sales being made through normal commercial channels. But most of the elaborate, inefficient, corrupt, and expensive machinery of the PDS could be wound up (except in remote areas). Unfortunately, the UPA government went in the opposite direction by enacting the Food Security Act. This has widened the category of food subsidy recipients to 67 per cent of the population. Even if this were justified on equity grounds, the introduction of a scheme that continues to rely on the leaky PDS to distribute food seems extremely unwise. Food subsidies, already close to 1 per cent of GDP, may thus rise further.

The explicit subsidies are only the tip of an iceberg. We must also take account of the massive hidden subsidies which permeate the provision of goods by the state (leaving aside genuine public goods where free provision is the appropriate course). If prices should reflect the true economic costs and benefits of different products and activities, the Indian subsidy system is a blatant denial of this principle. It is inefficient and regressive and leads to inappropriate usage of resources, and under-investment. As alluded to in Chapter 6, and discussed further in Chapter 10, very large fiscal savings could be secured by winding up the hidden subsidies on goods other than pure public goods, more than enough to compensate poor people for the loss of subsidies and, in addition, give them sizeable income supplements.

Another potential avenue for moderating the fiscal deficit is to reduce government interest payments, which are as much as 4 to 5 per cent of GDP, by retiring debt. The obvious way to do this is to sell central and state government public sector enterprises, with accompanying regulation, where

necessary, to prevent abuse of monopoly power. The value of central PSEs alone is estimated to be 40–45 per cent of GDP.[65] Of course, privatisation of a PSE improves the true fiscal position only if the sale price exceeds the present value of future dividends foregone by the government, in other words if the enterprise would be more profitable if it were privately owned. In many cases, this would be virtually certain (see Chapter 7). It should easily be possible, over say five years, to shave at least 1 per cent of GDP off government interest payments by a well-designed programme of privatisation, even if government ownership were retained in appropriate areas. Other potential revenue-raising and expenditure reducing measures are discussed in Chapter 10.

Deep fiscal adjustment is critical for the success of India's search for prosperity. By 'deep adjustment', I mean one that embraces both a reduction in the fiscal deficit *and* a change in the composition of public expenditure towards social and environmental protection, social enablement, and investment in physical infrastructure. The technical possibilities are enormous but progress has been very slow. It is obviously the nature of the political system and its balance of forces that prevents India from achieving radical fiscal adjustment. The objective of rapid, stable, and inclusive growth will be gravely endangered unless this deadlock can be broken.

APPENDIX TO CHAPTER 8

Inflation Targeting

In this chapter, I have espoused the adoption of 'flexible inflation targeting' (FIT) in India. This appendix contains a brief discussion of the relevant issues.

The core rationale of inflation targeting is that there is no long-run growth benefit from inflation above a threshold rate. Many research studies have shown that in India this threshold rate is around 4 per cent a year. It makes sense, therefore, that the inflation target should also be 4 per cent a year (with a range of 2 per cent on either side for temporary deviations). The consumer price index (CPI) is a good index to define the inflation target because it is widely watched and understood, and acts as a major factor driving inflation via 'second-round effects' (see below). It also stands to reason that inflation targeting should be 'flexible' in the sense that the speed of approach to the inflation target should be left to the discretion (within limits) of a 'monetary policy committee' that oversees inflation targeting, acting via the RBI. This would enable the RBI to reduce the short-run output cost of hitting the inflation target. The monetary policy committee, chaired by the Governor of the RBI, would have on it independent economists and government representatives, in addition to RBI officials. As Chapter 8 explains, this regime is now effectively in operation in India, though statutory backing is yet to come, and a monetary policy committee is yet to be appointed.

Several objections have been levelled against FIT for India. The first objection is that around half of the CPI consists of food and fuel prices, which are driven by factors such as droughts, import costs, and administered prices. While this is true, the fact remains that increases in the CPI caused by exogenous factors can propagate an overall inflationary spiral because a) the CPI is used as a base for wage bargaining and indexation and b) the movement of the CPI strongly affects inflationary expectations, which are critical to the inflation dynamic, and these 'second round effects' *are* amenable to the influence of monetary policy. It may be prudent, therefore, to take pre-emptive monetary policy action to moderate 'second-round effects' as soon as the CPI registers a rise in inflation that threatens to breach the inflation target. Moreover, even food prices are not completely outside the reach of monetary policy since agricultural costs of

production, especially rural money wages, are sensitive to the strength of demand for goods and labour in the non-rural economy.[66] In India's current environment of growing indexation, the traditional tactic of avoiding tough monetary policy, and simply waiting for the exogenous drivers to go away, will no longer suffice to combat inflation. (However, by the same token, the output cost of bringing down inflation may well be greater in the future than in the past. In other words, India will unavoidably face a sharper short-run trade-off between inflation and growth than hitherto.)

The second objection to FIT is that it would not work in the presence of the 'fiscal dominance' that arguably prevails in India. It is indeed true that if the government were profligate and regularly forced the central bank to print money to finance its deficits, inflation targeting would not work. But such an extreme scenario does not represent Indian reality. *Direct* monetary financing of deficits does not exist in India. It is the case, however, that fiscal deficits are excessive; and it is also true that, in the present dispensation, there can be *indirect* monetary financing of deficits since the RBI may be required to conduct open market operations to prevent a rise in the government's borrowing costs.[67] Other manifestations of indirect fiscal dominance in an extended sense (or equivalently of 'financial repression') are a) government capture of bank deposits via the statutory liquidity requirement, b) administered interest rates on small savings, and c) interest rate subsidies for selected activities. All these factors constrain monetary policy and/or impede its smooth transmission. However, none of them are significant enough to make monetary policy powerless, and they should and could be reformed while the inflation targeting regime is in operation. They are not reasons to give up on inflation targeting but reasons to improve its functioning by eliminating the distortions. As regards the fiscal deficit, if it were too expansionary, the logic of the regime implies that monetary policy would be tightened, if necessary, to hit the inflation target. This would also have the side-benefit of exposing the government to scrutiny. In other words, while it is certainly necessary to end fiscal dominance, inflation targeting may reinforce the pressure to end it.

The third objection to FIT is that it would be inconsistent with exchange rate management, which may be required to maintain export competitiveness and a safe current account deficit. It is true that if the short-term interest rate were the only monetary policy instrument, it could not achieve both an inflation target and an exchange rate target; so, if there is an inflation target, the exchange rate would have to float cleanly. But an inflation targeting regime for India would not be faced with this dilemma, if it retained sterilized intervention and focused capital controls on hot money movements as

weapons of monetary policy. With these two additional instruments, inflation targeting would be compatible with managed floating.

The fourth objection to FIT is that it ignores financial stability (e.g. prevention of asset price bubbles), which is also an important objective. But financial stability is best pursued by using macro-prudential instruments. It is only on very rare occasions that it would be necessary to aim off-target on inflation to maintain financial stability, and the central bank could be given the power to do so (and explain itself).

Of these objections, the presence of fiscal dominance is the most pertinent. It is sometimes encapsulated in the view that FIT is 'either unnecessary or insufficient'. If there is a political and social consensus in favour of low inflation, FIT is unnecessary; and if such a consensus is missing, FIT is insufficient. But this view is much too extreme. The fact is that, in common with many countries, both the Indian public and the Indian government hold inconsistent views: they want low inflation but they are also reluctant to pay the price of getting inflation down. FIT is designed precisely to deal with such a situation by delegating monetary policy to the central bank, which is given an explicit inflation target. The idea, in other words, is that the government should tie its own hands the better to achieve its own objective of low inflation.

NOTES

1. Note that the fiscal deficit inclusive of 'off-balance sheet items' was 4.6 per cent of GDP in 2007 and 10 per cent of GDP in 2008. Many off-balance sheet items were brought explicitly into the budget after 2010.
2. According to the new (2011/12 series) of national accounts, the growth rate fell to 5.4 per cent in 2012 but recovered to an average of nearly 7 per cent in the next three years. I think, along with many other observers, that the new numbers overestimate growth since 2012 (see below).
3. For example, there is plenty of international evidence that high inflation is inimical to growth. One reason is that higher inflation also tends to be more volatile inflation, and volatile inflation makes investment riskier. Another problem with high inflation is that it worsens external competitiveness. Exchange rate depreciation could offset this but only by adding a further inflationary stimulus.
4. The poor tend disproportionately to have non-indexed incomes.
5. From 1960 to 1980, India's consumer-price inflation was around 7–8 per cent a year. The average for non-oil developing countries as a whole was twice as high, and it was even higher for Latin American countries.
6. This is inflation of the CPI (consumer price index). Average inflation of the wholesale price index (WPI) was somewhat less: 7.6 per cent a year. The divergence is accounted for mainly by 2009, a year in which the higher weight for

food in the CPI and the higher weight for fuel in the WPI made a big difference. In that year, food prices rose sharply and world oil prices fell sharply, so the WPI rose only 3.6 per cent but the CPI increased 12.4 per cent.

7. These numbers are from IMF (2014).
8. In this sentence, high inflation is defined as inflation of wholesale or consumer prices of 10 per cent or more for two or more successive years. For a close analysis of previous high-inflation episodes, e.g. 1965–66, 1972–74, 1979–81, and 1991–96, see Joshi and Little (1994, 1996).
9. This has been the case in most high-inflation episodes in the past. For example, in 1972–74, there was a rapid expansion of money supply and public expenditure, in part due to the war with Pakistan in 1971; in 1991, demand was running high due to large government deficits in the preceding years.
10. Of course, imports of food cannot check rising food prices if world prices of food also happen to be high.
11. Restrictive policies reduce non-agricultural output because wages and prices are not flexible downwards in modern industry and services. However, even though prices do not fall, the rate of rise in prices is checked.
12. A little inflation greases the wheels of the economy, and promotes growth, by facilitating relative wage and price adjustments without having to undergo absolute wage and price reductions that are very hard to engineer in modern economies. But there is also a lot of evidence that as inflation rises, it impedes growth, by introducing uncertainty into investment decisions. The above two opposing considerations lead to the notion of an 'optimal' rate of inflation, defined as the threshold rate of inflation beyond which the *net* growth benefit from inflation declines. Several studies have tried to identify the critical threshold for India. (For references to these, see RBI 2014a.) The consensus view is that the 'optimal' rate of inflation for India is around 4–5 per cent a year. A different and independent argument for low inflation is that inflation hits the poor hard, since they are less able to hedge against it than the well-off.
13. These numbers were calculated from data on minimum support prices given in Table 26 of Reserve Bank of India (2015). See also Bhalla (2011).
14. The underlying reasoning is nonsensical because stocks, once acquired, are a sunk cost; so, from a fiscal point of view, not selling is equivalent to selling at a zero price. Another reason for the reluctance to sell at a low price is the fear of round-tripping: traders could buy food cheaply from the government and sell it back to the government at the guaranteed procurement price. But this is a problem only because the government stands ready to buy at a high price in a bad year, which is plainly foolish.
15. There is also hard evidence that the present method of making cheap food available to the poorest is hopelessly ineffective in that the 'distributed' food does not reach the intended beneficiaries. This aspect is pursued below and in Chapter 9. Here, my focus is on the fact that government intervention in the food market creates an inflationary bias, quite apart from its ineffectiveness in subsidizing poor people.
16. This was all supposed to change with the reform initiated in 2003 of laws that regulate agricultural markets. But the states, under the influence of the vested interests of traders, have dragged their feet in making the appropriate amendments and implementing them. Agricultural Produce Marketing Committees, originally set up to protect farmers, have been captured by middlemen.

17. See Mohanty (2010).
18. Raghuram Rajan, governor of the RBI, made the important point that monetary policy is not irrelevant to moderating rural wage growth. A relative rise in rural wages has become necessary for the rural sector to compete for labour, which increasingly has non-rural opportunities. But this can result in a wage-wage spiral if the growth of non-rural wages is not kept in check by monetary policy to restrain non-rural demand (see Rajan 2014).
19. The real policy rate is defined here as the nominal policy rate minus ex post CPI inflation. A more appropriate definition would be the nominal policy rate minus expected CPI inflation. On the latter basis, the RBI's stance would look even looser since household expectations of inflation, as measured by RBI surveys, were above actual inflation. With a WPI measure of inflation, the RBI's interest rate policy would look somewhat less loose but nevertheless much looser than in 2003–2008.
20. In the immediate aftermath of the global crisis, the policy rate was reduced from 9 per cent in August 2008 to 4.75 per cent in April 2009, where it remained for a whole year though inflation was 10 per cent, perhaps because the RBI was taken in by the small rise in the WPI, as explained in n.6. It was then increased in 13 'baby steps' to 8.5 per cent from March 2010 to October 2011. Real lending rates charged by banks for company borrowing also fell (see Table 8.2): the average real lending rate fell from 7.4 per cent in 2003–2008 to 1.1 per cent in 2008–2013. The same story applies to bank deposit rates. Table 8.2 shows that the average real deposit rate (for three- to five-year deposits) fell from 1.9 per cent in 2003–2008 to *minus* 1.6 per cent in 2008–2013. All these reductions in real interest rates were the opposite of what was needed to cool demand, given the supply-side and demand-side rigidities in the economy. (Moreover, negative real deposit rates had another undesirable effect. They led to a reduction in household financial savings in favour of buying gold, as discussed below.) Note that in addition to the policy rate, the RBI has other instruments of monetary policy, e.g. the cash reserve ratio (CRR). The CRR was lowered from 9 per cent to 5 per cent in 2008. Thereafter its variations have been fairly minor. It has certainly not been used in a restrictive fashion.
21. Worsening competitiveness also played a part in the slowdown of Indian exports (see below).
22. This statement is at variance with the new national accounts figures (2011/12 series). But the new figures do not accord with most other evidence (see below).
23. See Kapur and Mohan (2014).
24. See Joshi (2014).
25. For further elaboration, see Joshi (2014).
26. See Nagaraj (2013). Nagaraj's otherwise excellent article overstates the direct importance of *foreign* capital in causing the debt-fuelled investment boom of 2003–8, as evidenced by the low level of the current account deficit during the period. Foreign capital inflows were certainly large (8 to 10 per cent of GDP annually) but they went mostly into reserve accumulation. They did, however, indirectly stimulate domestic investment by accelerating bank credit (since sterilization was inadequate). For another excellent analysis of recent macro-economic policy and outcomes, see Acharya (2012).
27. This suggests that it would have ideally been sensible to moderate the boom by a tougher monetary or fiscal policy before 2008.
28. One immediate result was a sharp increase in subsidies because necessary rises in administered prices of oil products and fertilisers were not implemented.

Infrastructure, particularly power, continued to be a major bottleneck. In the boom years, many power plants had been initiated. But when they came on stream, their customers, viz. the state electricity boards, were in even worse shape than before and could not afford to pay. Fuel linkages for power plants also continued to be a major problem. There were shortages of coal because the long-standing problems of coal pricing and the inefficiency of Coal India had not been corrected. Gas supply was inadequate because of an unresolved dispute between the government and Reliance.

29. Even so, these supply-side problems cannot all be blamed on post-2008 policies. It is tempting but wrong to regard the previous five years (2003–2008) as a model of good policymaking. Firstly, it would have been sensible to moderate the boom by sterilizing more aggressively the foreign inflows that were taken into the reserves. In the event, money supply expanded very rapidly. Secondly, the large fiscal consolidation was less impressive than it appears; it would look much less impressive if it were cyclically adjusted. Thirdly, there was not much supply-side reform: the boom bred complacency.
30. See Reserve Bank of India (2014a).
31. A major policy issue in 2015/16 was whether the RBI should have brought policy interest rates down still further to spur flagging investment. Its salience was sharpened by the fact that inflation, as measured by the wholesale price index (WPI), was negative throughout the year, implying sharply positive real interest rates on that basis. In my view, the RBI was right to stick to its guns. Firstly, the WPI is not a true producer price index. Secondly, the huge fall in the price of oil and other commodities implied that companies were facing much lower input costs and correspondingly better profit opportunities. Thirdly, the WPI is definitely not the relevant inflation index for producers of services, which constitute half the economy. Fourthly, the CPI is the right index to target as far as the RBI is concerned because it is CPI inflation that drives second-round effects. Fifthly, the RBI had targeted inflation lower than 6 per cent in January 2016, and the credibility of the new inflation anchor depended on achieving that target successfully.
32. According to the agreement, the RBI would be deemed to have failed if inflation were outside the band for three successive quarters. In the event of failure, it would have to explain itself to the government.
33. Banks fear that if they offered lower deposit rates than the rates on small savings, there would be an outflow of deposits.
34. See Reserve Bank of India (2014a) and Lahiri and Patel (2016).
35. See Aiyar (2016) and Shah (2015, 2016).
36. 'Stressed assets' = non-performing assets + restructured assets.
37. For a more detailed analytical assessment of India's external payments regime, see Joshi (2003a, 2003b, 2008) and Joshi and Sanyal (2004).
38. With a fixed exchange rate, any desired improvement in the competitive position would have to come about by price reductions across the board. This would be very costly and painful since it would, in practice, entail a drop in employment and output.
39. With a fixed exchange rate, capital account convertibility and perfectly mobile capital, home interest rates cannot differ from foreign interest rates.
40. The restoration is only partial. Evidence shows that domestic financial conditions are strongly affected by global financial cycles through credit

channels, whatever the exchange rate regime. See Rey (2015) and Klein and Shambaugh (2013).

41. By targeting the exchange rate, the authorities commit to buy or sell foreign currency in unlimited amounts to defend the target. But international speculators have much greater resources in their hands than a country's authorities, so a defence is unlikely to work against determined speculation.
42. How large should the stock be? There is no precise answer. But old benchmarks like 'reserves equal to three months' imports' or 'reserves equal to all debt due to mature in a year' do not provide an adequate margin of safety in today's world of highly mobile capital. In 2007, just before the global crisis India's foreign exchange reserves were around 25 per cent of GDP and proved to be an adequate and safe level. On this basis, the safe level would now be around $500 billion, compared with the existing stock of about $350 billion.
43. Inflows into equity markets are betwixt and between. They are less unstable than hot money because changes in the prices of equities act as a brake on large sales, but they are less stable than direct investment. In the event, they proved to be highly unstable in the East Asian crisis.
44. For details, see Joshi (2003a).
45. Another important contributing factor was the fall in household financial savings and their diversion to holding gold (gold imports increased enormously). This is because inflation was high and the RBI's interest rate policy led to a negative real rate for financial savings. The fall in financial savings can be seen in Table 8.4. The rise in 'investment' in gold can be seen in Table 8.5 under 'valuables'.
46. Technical note: It is often claimed on the basis of econometric estimation that the price elasticity of demand for Indian exports is quite low (for example see Rangarajan and Mishra 2013 and Kapur and Mohan 2014). In my opinion, this result is the result of estimating export equations that mix up demand and supply. Robust elasticity estimates require a structural model in which export demand and supply equations are estimated in a simultaneous equation framework. Joshi and Little (1994) did this for the period 1960–1990 and found a short-run price elasticity of demand for exports greater than one, and a long-run price elasticity of demand of three (with 80 per cent of the long-run effect coming through within two years), across a wide range of specifications. Admittedly, these estimates are now quite old and need to be updated.
47. Growth of non-oil exports is also negative, although not quite as bad. More generally, export growth has been dismal for the past four years. While the world trade environment has been unfavourable, part of the explanation surely lies in the bias towards appreciation of the real exchange rate from 2010.
48. Admittedly, this would have placed a somewhat greater burden on interest rate policy in fighting inflation but in my view that would have been a price worth paying.
49. See Subramanian (2009, 2012a).
50. Capital controls overlap with prudential regulatory instruments and there is no hard and fast distinction between the two.
51. A solvency problem would also lead to capital flight and a sovereign credit downgrade in global capital markets.
52. This assumes that growth receives a bigger boost from private investment than from government expenditure. This is often, though not invariably, the case.

53. The combined domestic and external debt of central and state governments is about 70 per cent of GDP in 2015/16. This figure *understates* public debt because it excludes a) the domestic debt of non-financial public sector enterprises and b) non-government public and publicly guaranteed external debt. (Indeed, one could argue that a large part of the entire external debt of India, which is around 20 per cent of GDP, is a contingent liability of the government.) But it also *overstates* public debt since India's foreign exchange reserves count as public assets and should arguably be subtracted to give an accurate estimate of public debt. I ignore these complexities here and assume that the net public debt ratio is the same as the government debt ratio: around 70 per cent of GDP.
54. The 'revenue deficit' means total revenue minus current expenditure. According to the 14th FC, the adjustment would have to be done by the centre because the states were reckoned to be in revenue surplus already (see Fourteenth Finance Commission (2015), Chapter 14, and Table 14.1). 'Consolidated' means 'the aggregate figure for centre and states combined'.
55. The 14th FC road map brings the centre's fiscal deficit to 3 per cent in 2016/17, i.e. well before 2019/20. But the centre departed from the road map in 2015/16 with a fiscal deficit of 3.9 per cent rather than 3.6 per cent, postponing the date by which a 3 per cent deficit would be reached to 2017/18.
56. The consolidated debt ratio in 2014/15 was estimated to be 68 per cent of GDP in Ministry of Finance (2015a). It would be somewhat higher in 2015/16 because, in that year, the consolidated primary deficit was about 2 per cent of GDP, and the real interest rate on government borrowing in that year exceeded somewhat the real growth rate of the economy.
57. Even so, it should not be massively challenging because the real growth rate of the economy will almost certainly exceed the real rate of interest on government borrowing (2015/16 was an aberrant year in which the GDP deflator fell and, in consequence, the real rate of interest on government borrowing was unusually high). With moderate fiscal consolidation, e.g. as envisaged by the 14th FC, the debt ratio would fall.
58. Between 2001 and 2003, India's consolidated fiscal deficit averaged 9.4 per cent of GDP, even higher than in the crisis year of 1991. In 2003, the Indian parliament passed a Fiscal Responsibility Act, which required the central government to balance its revenue budget and bring its fiscal deficit down to 3 per cent of GDP in five years; and many state governments passed similar such Acts. The timetable was roughly on track from 2004 to 2007, helped by an unexpected speeding up of growth to 9 per cent a year, which boosted tax revenues substantially. But it was then blown apart by a pre-election public spending spree in 2008, when subsidies, social expenditures, and government salaries were raised and rural debts waived. (A further stimulus came from fiscal expansion undertaken to combat the headwinds from the global crisis, but that was quite small.) The consolidated fiscal deficit (inclusive of off-balance-sheet items such as oil bonds) ballooned to 9.9 per cent of GDP in 2008, the year of the global crisis. This relaxed fiscal stance must have helped to limit the fall in the growth rate of GDP to 6.7 per cent in that year. Growth rebounded to 8.7 per cent a year for the next two years but the average deficit remained high at around 8 per cent of GDP. While the increase in the deficit in the crisis year of 2008 was understandable, even desirable, its continuation at a high level along with the growth rebound was not. As a result, when growth fell sharply in 2011–14, there

was not much space left for expansionary counter-cyclical policy. This shows the importance of low deficits and debt to enable the government to 'keep its powder dry'.

59. The tax authorities have also made some progress in deploying information technology to increase the efficiency of direct tax collection.
60. The ratio of total tax revenue to GDP was around 16 per of GDP at the end of the 1980s and is about 17.5 per cent now.
61. See Govinda Rao (2016).
62. These three subsidies amounted to 2.5 per cent of GDP until quite recently. The decline is largely due to the fall in world oil prices, which has enabled a painless reduction in fuel subsidies. All food subsidies, and most fertilizer and fuel subsidies, are now shown in the budget. 'Off-budget' subsidies were significantly reduced in 2011 but some remain.
63. Issue prices are infrequently revised and bear little relationship to the costs incurred by FCI. One of the reasons for the FCI's high costs is that it carries excessive stocks (see the section on 'internal balance' above).
64. This issue is examined further in Chapter 10.
65. See Kelkar (2011). In addition, there are state PSEs. Central and state governments also own a lot of underutilized prime land, which could be sold.
66. See Rajan (2014).
67. Simple explanation: A higher fiscal deficit adds to the demand for credit and therefore raises the interest rate on government borrowing. If the government wants to prevent the latter, it can ask the RBI to conduct an 'open market operation' whereby the RBI prints money and uses it to buy government bonds in the market. The result: an unchanged interest rate but a larger money supply.