Chapter 3

The baseline scenario and its implications

3.1 Process for medium term planning and projections

The medium term fiscal planning process undertaken in this report has been organised as two sets of projections: a ‘baseline scenario’ and a ‘reforms scenario’.

To discuss the scale of new policy initiatives that are required for attaining the FRBM targets, the first step is the ‘baseline scenario’. This consists of a portrayal of the outcomes that are likely to come about under conventional policies and trends.

The estimate of the revenue deficit in 2008-09 in the baseline scenario is a key foundation for thinking about what new efforts need to be made to overcome this gap. Towards this end, we seek to make projections from 2005-06 till 2008-09, for all major components of revenue receipts and revenue expenditures, so as to obtain an estimate of the revenue deficit in 2008-09 under the baseline scenario.

This magnitude guides the quest for policy proposals on revenue and expenditure, which could remove this gap. Projections are made till 2008-09 about the impact of these policy proposals. These projections are termed the ‘reforms scenario’.

It should be emphasised that in any effort of medium-term fiscal planning and policy formulation, there are significant innate uncertainties about future events, and about the numerical consequences of alternative policy scenarios. Ex post, it will always be the case that reality diverges from these baseline estimates. At the same time, there is a need to form a ‘best judgment’ in fully articulated numerical terms, in order to envision the future and make sound decisions.

In this report, these have been done using a combination of empirical models, and the judgments of the committee. There will, innately, be many differences of opinion about the details of these projections. At the same time, there will also be a certain cancelling out of errors.

3.2 Interpretation of the baseline scenario

The baseline scenario reflects the outcomes that will obtain under ‘business as usual’, where the four years from 2005-06 till 2008-09 are similar to recent years in terms of progress on policy and administration.

The baseline scenario does *not* seek to portray the consequences of ‘doing nothing’, of freezing on policies and administration as of 2004-05. It captures the expected impact of *continuing to make progress on policies and administration at the rate that has prevailed in recent years*. Roughly speaking, such baseline projections for the next five years should be interpreted as the predictions for outcomes that would obtain if the *pace of reforms to policies and administration in the next five years was the same as that which came about in the last five years.*

This interpretation of the baseline scenario applies on both revenues and expenditures. In both cases, the projections for the baseline scenario assume conditions, and rates of change, comparable to those that have prevailed in recent years.

As befits any medium-term fiscal planning effort, a series of assumptions are required in pinning down the baseline scenario. They are documented in detail in this chapter.

3.3 Assumption about nominal GDP growth

One assumption that has a considerable impact on fiscal planning is that about nominal GDP growth. To the extent that we focus on fiscal consolidation expressed as per cent of GDP, errors in forecasting nominal GDP do tend to cancel out. However, there are other channels through which the nominal GDP assumption does affect the accuracy of projections.

Figure 3.1 shows the historical experience with nominal GDP growth, and the GDP deflator, from 1980 onwards. In the recent six years, the average nominal GDP growth has been 10.4%.

Table 3.1 Baseline GDP at market prices

(Rs. crore)

Year	GDP	Growth (%)
2003-04	27,72,194	
2004-05	31,04,857	12.00
2005-06	34,77,440	12.00
2006-07	38,86,039	11.75
2007-08	43,32,934	11.50
2008-09	48,20,389	11.25

Under the baseline scenario, which assumes that important fiscal reforms do not take place, it is expected that the revenue deficits would be large enough to yield a continually increasing Debt/GDP ratio. This is expected to have a deleterious effect upon growth in the medium term, through higher interest rates, crowding out of investment, poor credit rating, and lack of investor confidence. These would adversely affect GDP growth. Hence, the baseline scenario envisages a tapering off of GDP growth from current rates of 12 per cent per year to a rate of 11.25 per cent per year by 2008-09.

Table 3.1 shows the numerical values for projected nominal GDP obtained under this assumption. This shows that in 2004-05, each percentage point of GDP corresponds to about Rs.31,000 crore. This is expected to grow to about Rs.48,000 crore in 2008-09.

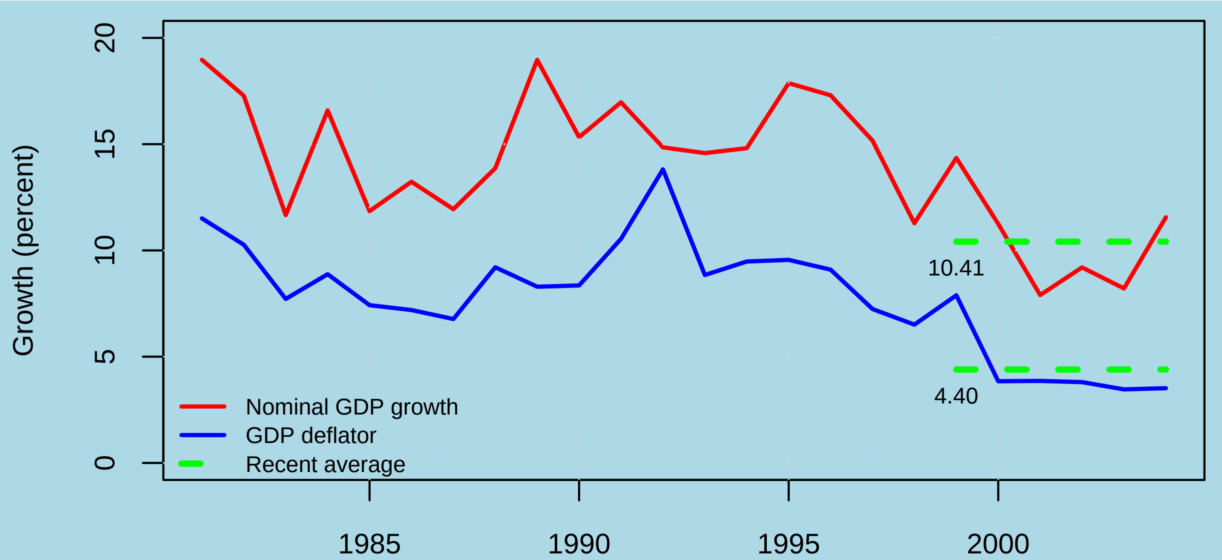
3.4 Baseline expenditure projections

Plan expenditure is projected to grow at the five-year historical growth rate, of 12.82%.

Defense expenditure is projected to grow at the five-year historical growth rate, of 8.73%.

Interest payment expenditures are projected based on the existing stock of debt, and an

Figure 3.1 Nominal GDP growth, and GDP deflator



assumption that the secondary market yield curve will stay at existing levels. The existing weighted average interest rate works out to 8.25% per annum. This is projected to drop as old securities mature, and new securities are issued at the lower interest rates which are now prevalent.

Projections for subsidies reflect the existing status of policy decisions about the removal of subsidies. The food subsidy is expected to grow at -5% per annum, thanks to better inventory management and lower interest rates. The fertiliser subsidy is expected to grow at the rate of 5% per year.

Other non-plan expenditure is expected to grow at the rate of 6% per year.

3.5 Baseline revenue projections

In each aspect of taxation, we need estimates of future tax buoyancies, i.e. the percentage change in tax revenues per unit percentage change in the tax base. For example, if we think of manufacturing GDP as the tax base of excise collections, then a buoyancy of 0.75 would imply that a 10% growth in nominal manufacturing GDP is expected to yield a 7.5% growth in excise collections.

These buoyancy estimates are critical to the baseline scenario. Empirical analysis, which provides the basis for the revenue projections in the baseline case, is presented in Appendix A.

Tax projections have been worked out based on historical trends of tax collections. The projections focus on the *trend* of growth in tax collections. There are always year-to-year fluctuations, owing to random factors, which take actual outcomes away from trends.

In the case of personal and corporate income tax, future tax projections assume that the recent experience with tax buoyancies will be repeated in the next four years.

Excise revenues are usefully classified into two components: Petroleum-Oil-Lubricants (POL) and non-POL. In the case of POL, it is assumed that the ratio of excise on POL to GDP will stay constant in the future. In the case of non-POL, it is assumed that the recent experience with tax buoyancy of roughly 0.5 will be repeated in the next four years.

In the case of customs duties, it is assumed that while GDP will grow at 12% nominal per annum, customs collections will only grow by 6% per annum. This is expected to come about through a combination of (a) reduction in tariffs with (b) growth in the import/GDP ratio. Under this framework, customs tariffs will drop to 15% of gross tax collection by 2008-09.

In the case of non-tax revenues, interest receipts are assumed to decline due to prepayment under the State Debt Swap scheme, pre-payment by Central PSUs and continuation of existing interest rates. It is assumed that dividends and profits paid by RBI and public sector corporations will drop by 5% per year.

Other non-tax receipts, including user charges, are projected to grow at the GDP rate; i.e. they are expected to have a buoyancy of 1.

It is assumed that devolution to states, of total gross tax collections, will take place using proportions that prevail today.

Table 3.2 summarises the baseline tax projections (in levels) and Table 3.3 re-expresses these values as per cent of GDP.

The projections imply considerable buoyancy (1.87) of direct tax. This is expected to yield a growth in the Tax/GDP ratio from 3.73% in 2003-04 to 5.76% in 2008-09.

The picture on indirect taxes is more sombre. Service tax is projected to have a buoyancy of 1 after 2004-05, and thus stay at 0.44% of GDP. The phasing out of protectionism, and a move towards ASEAN tariff levels, will lead to a drop in customs from 1.78% of GDP in 2003-04 to 1.41% of GDP in 2008-09. The poor buoyancy of non-POL excise in recent years is expected to give a drop in excise collections from 3.33% of GDP in 2003-04 to 2.92% in 2008-09. These addup to a drop in indirect tax collections from 5.47% of GDP in 2003-04 to 4.77% in 2008-09.

3.5.1 Non-tax revenue

Non-tax revenue forms an important constituent of revenue receipts of the Union Government. In the decade of nineties, non-tax revenue constituted between 24.1 per cent to 29.3 per cent of total revenue receipts of the Union Government. The principal components of non-tax revenue are interest receipts, dividends and profits, receipts from telecom sector and range of user charges levied by the Government. The interest receipts accrue to the Union Government from loans and advances made to State and Union Territory Governments, public sector companies, railways and others. Dividends primarily accrue to Government from payouts made by public sector companies and banks and dividends from RBI.

Table 3.4 shows the evolution of the components of non-tax revenue from 1990-91 to 2004-05. Interest receipts have steadily fallen in importance from 73 per cent to 52 per cent over this period. Dividend receipts have shown a significant increase, owing to the issue of guidelines on dividend payout, and now contribute over one-fifth of non-

Table 3.2 Baseline tax projections (Rs. crore)

This table shows tax projections, under the baseline scenario, expressed in crore rupees.

	2003-04 (RE)	2004-05 (BE)	2005-06	2006-07	2007-08	2008-09	Growth 0405-0809	Buoyancy
Direct taxes	103,400	137,000	154,258	188,283	229,066	277,667	21.84	1.87
Income tax	40,269	50,009	58,458	69,842	83,299	99,000	19.71	1.68
Corporation tax	62,986	86,846	95,800	118,441	145,767	178,667	23.19	1.98
Indirect taxes	151,523	175,823	178,298	193,764	210,988	229,743	8.68	0.74
Excise	92,379	107,699	107,897	117,791	128,733	140,691	8.78	0.75
Customs	49,350	53,500	55,281	59,039	63,288	67,843	6.57	0.56
Service tax	8,300	14,000	15,120	16,934	18,967	21,244	20.68	1.77
Gross tax collection	254,923	312,823	332,556	382,047	440,054	507,410	14.76	1.26
Education cess	0	4,910	5,599	6,432	7,408	8,542		
Total gross taxes	254,923	317,733	338,155	388,479	447,463	515,952	15.03	1.28
GDP at market prices	27,72,194	31,04,857	34,77,440	38,86,039	43,32,934	48,20,389	11.70	

Table 3.3 Baseline tax projections: Per cent to GDP

This table shows tax projections under the baseline scenario, where all values are expressed as per cent to GDP.

(Per cent to GDP)

	2003-04 (RE)	2004-05 (BE)	2005-06	2006-07	2007-08	2008-09
Direct taxes	3.73	4.41	4.44	4.85	5.29	5.76
Income tax	1.45	1.61	1.68	1.80	1.92	2.05
Corporation tax	2.27	2.80	2.75	3.05	3.36	3.71
Indirect taxes	5.47	5.66	5.13	4.99	4.87	4.77
Excise	3.33	3.47	3.10	3.03	2.97	2.92
Customs	1.78	1.72	1.59	1.52	1.46	1.41
Service tax	0.30	0.45	0.43	0.44	0.44	0.44
Gross tax collection	9.20	10.08	9.56	9.83	10.16	10.53
Education cess		0.16	0.16	0.17	0.17	0.18
Total gross taxes	9.20	10.23	9.72	10.00	10.33	10.70

Table 3.4 Evolution of sources of non-tax revenue

(Figures in Rs. crore; percentages in brackets)

	1990-91	1995-96	2000-01	2004-05
Interest Receipts	8,730	18,419	32,811	36,950
	(73)	(65)	(59)	(49)
Dividends	774	3,248	13,575	18,875
	(6)	(12)	(24)	(25)
Telecom Receipts	5	1,362	1,614	6,327
	(0)	(5)	(3)	(8)
Others	2,467	5,162	7,947	13,264
	(21)	(18)	(14)	(18)
Total	11,976	28,191	55,947	75,416

tax revenue. Insofar as telecom receipts are concerned, they have shown a sharp increase from a nominal amount of Rs.5 crore in 1990-91 to Rs.6,044 crore in 2004-05. These are primarily derived from revenue sharing arrangements with telecom service providers.

Over the next few years, interest receipts are expected to be sluggish in view of the softening interest rate regime. This aspect is reinforced by the States Debt Swap and pre-payment of Central loans. Dividend receipts are also expected to decline in view of the reduction in ownership by Government of public sector companies. In the case of user charges, realignment of these charges to cover cost may lead to additional non-tax receipts, but the benefit on this account is not expected to be considerable.

3.6 Projections about capital receipts

Projections about capital receipts are required in order to make projections about future interest payments, which are a function of the future evolution of the debt stock.

Non-debt capital receipts consist primarily of repayment of loans to the Union Government and receipts from disinvestment. Recovery of loans is projected to decline each year keeping in view the prepayment of loans by State Governments and PSUs. Disinvestment receipts have been assumed to be stable at the value chosen for 2004-05 BE, of Rs.4,000 crore per year.

3.7 Baseline projections and their interpretation

Using these assumptions, the baseline projections are shown in Table 3.5 (in levels) and Table 3.6 (percent to GDP).[1] The main features of these baseline estimates may be summarised as follows.

The baseline projections envisage a steady improvement in net tax revenues, from 6.77% to GDP (2003-04 RE) to 7.91% of GDP in the last year. At the same time, non-tax revenues are projected to drop to 1.51% of GDP. Putting these together, revenue receipts are projected to drop from 9.49% to GDP (2003-04 RE) to 9.42% of GDP in the last year.

Non-plan expenditure is expected to drop sharply, from 11.04% of GDP (2003-04 RE) to 8.84% of GDP in the terminal year. This reflects a combination of lower interest payments, a smaller expenditure on defence (as per cent of GDP) and smaller subsidies (as per cent of GDP).

The baseline assumptions are about envisaging ‘business as usual’, and hence they do not envisage reforms in plan expenditure, which is anticipated to marginally increase from 4.69 per cent of GDP in 2004-05 to 4.89 per cent of GDP by the end of the period.

Expressed in terms of revenue versus capital expenditures, capital expenditure is expected to be roughly stable, going from 2.34% of GDP (2003-04 RE) to 2.65% of GDP in the terminal year.

Figure 3.2 shows deficit projections under

[1] The provisional actuals for 2002-03 and the revised estimates for 2003-04 exclude transactions relating to repayment to NSSF under the Debt Swap Scheme.

Table 3.5 Fiscal projections under baseline scenario (Rs. crore)

This table shows fiscal projections under the baseline scenario, expressed in crore rupees.

(Rs. crore)

	2003-04 (RE)	2004-05 (BE)	2005-06	2006-07	2007-08	2008-09
GDP	27,72,194	31,04,857	34,77,440	38,86,039	43,32,934	48,20,389
Gross tax revenue	254,923	317,733	338,155	388,479	447,463	515,952
Revenue receipts	263,027	309,322	323,538	360,480	404,021	454,202
Tax revenue, net to centre	187,539	233,906	248,990	286,659	330,787	381,418
Non-tax revenue	75,488	75,416	74,548	73,821	73,234	72,784
Capital receipts	164,626	168,507	189,891	199,719	203,130	207,909
Recoveries of loans	18,023	27,100	13,395	12,725	12,089	12,089
Other receipts	14,500	4,000	4,000	4,000	4,000	4,000
Borrowings and other liabilities	132,103	137,407	172,496	182,994	187,041	191,420
Total receipts	427,653	477,829	513,430	560,198	607,151	662,111
Non-plan expenditure	306,146	332,239	349,175	374,886	398,082	426,239
Interest, debt servicing	124,555	129,500	143,970	158,659	173,427	188,393
Defence	60,300	77,000	71,762	78,027	84,839	92,245
Subsidies	44,707	43,516	44,497	43,924	39,883	39,672
Grants, loans to States,UTs	15,850	19,576	21,181	22,450	23,797	25,225
Other non-plan expenditure	60,734	62,647	67,765	71,827	76,136	80,704
Plan expenditure	121,507	145,590	164,255	185,312	209,069	235,872
Total expenditure	427,653	477,829	513,430	560,198	607,151	662,111
Revenue expenditure	362,887	385,493	414,214	451,945	489,825	534,164
Capital expenditure	64,766	92,335	99,214	108,252	117,325	127,945
Revenue Deficit	99,860	76,171	90,676	91,466	85,804	79,963
Fiscal Deficit	132,103	137,407	172,496	182,994	187,041	191,820

the baseline scenario. The deficit projections under these baseline assumptions are: a revenue deficit of 1.66% of GDP in the terminal year, and a 3.98% gross fiscal deficit. Accomplishing the goals of the FRBM hence involves finding ways to eliminate this projected revenue deficit of 1.66% of GDP in 2008-09. In addition, the fiscal deficit needs to be brought below 3 per cent of GDP.

Table 3.6 also shows that from 2005-06 till 2008-09, the annual improvement in the revenue deficit fail to achieve the minimum requirement of 0.5 per cent per year. In addition, in 2005-06, the decline in the fiscal deficit is likely to be inferior when compared with the minimum requirement of 0.3 per cent per year. This issue is highlighted in Figure 3.3.

The strategy for fiscal consolidation, required in order to achieve the FRBM targets, will need to emerge with policy proposals which improve upon these baseline projections, and address these four deficiencies of the baseline scenario: (a) Achieving the requirement of no revenue deficit by 2008-09, (b) Achieving a fiscal deficit of below 3 per cent of GDP by 2008-09, (c) Improving the revenue deficit

Figure 3.2 Deficit projections under baseline scenario

The graph shows projections for the revenue deficit and the fiscal deficit under the baseline scenario. The FRBM Act requires the elimination of the revenue deficit by 2008-09, and the FRBM Rules require that the fiscal deficit should be below 3 per cent of GDP by 2008-09. Both these requirements are violated under baseline projections.

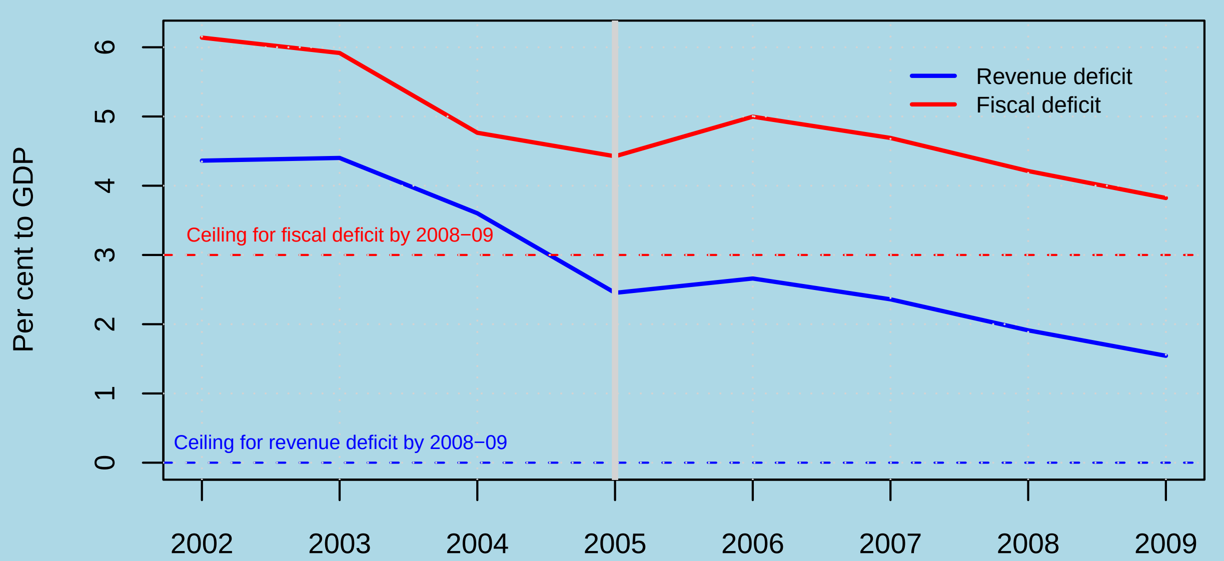


Figure 3.3 Improvements in deficits under baseline scenario

The FRBM Rules require that the revenue deficit should be reduced by 0.5 percentage points every year, and that the fiscal deficit should be reduced by 0.3 percentage points every year. The graph shows one-year changes in the two measures of the deficit under the baseline projections. Several of these projected one-year improvements fail to achieve the goals set by the FRBM Rules.

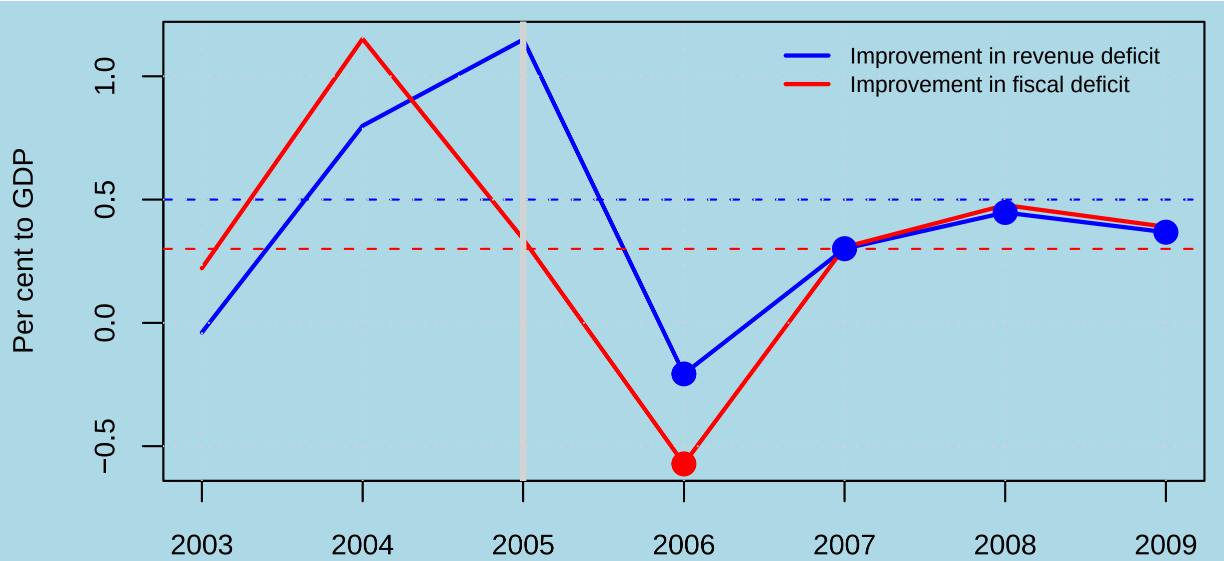


Table 3.6 Fiscal projections under baseline scenario (Per cent to GDP)

This table shows the full set of fiscal projections under the baseline scenario, expressed as per cent of GDP. This suggests that under prevailing trends, the revenue deficit will drop to 1.54 per cent of GDP in 2008-09, and the fiscal deficit will drop to 3.82 per cent of GDP.
The values in the table which are inconsistent with the FRBM Act or with the FRBM Rules are shown in *italics*. The goal of this report is to identify these inconsistencies and propose policy directions through which these inconsistencies can be addressed.

(Per cent to GDP)

	2003-04 (RE)	2004-05 (BE)	2005-06	2006-07	2007-08	2008-09
Gross tax revenue	9.20	10.23	9.72	10.00	10.33	10.70
Revenue receipts	9.49	9.96	9.36	9.31	9.32	9.42
Tax revenue, net to centre	6.77	7.53	7.20	7.41	7.55	7.91
Non-tax revenue	2.72	2.43	2.16	1.91	1.53	1.51
Capital receipts	5.94	5.43	5.46	5.14	4.38	4.31
Recoveries of loans	0.65	0.87	0.39	0.33	0.28	0.25
Other receipts	0.52	0.13	0.12	0.10	0.09	0.08
Borrowings and other liab.	4.77	4.43	4.96	4.71	3.80	3.98
Total receipts	15.43	15.39	14.76	14.42	13.46	13.74
Non-plan expenditure	11.04	10.70	10.04	9.65	8.98	8.84
Interest, debt servicing	4.49	4.17	4.14	4.08	3.82	3.91
Defence	2.18	2.48	2.06	2.01	1.96	1.91
Subsidies	1.61	1.40	1.28	1.13	0.92	0.82
Grants, loans to States,UTs	0.57	0.63	0.61	0.58	0.55	0.52
Other non-plan exp.	2.19	2.02	1.95	1.85	1.76	1.67
Plan expenditure	4.38	4.69	4.72	4.77	4.47	4.89
Total expenditure	15.43	15.39	14.76	14.42	13.46	13.74
Revenue expenditure	13.09	12.42	11.91	11.63	11.20	11.02
Capital expenditure	2.34	2.97	2.85	2.79	2.26	2.65
Revenue Deficit	3.60	2.45	2.61	2.35	1.98	*1.66*
Change	0.80	-1.15	*0.16*	*-0.26*	*-0.37*	*-0.32*
Fiscal Deficit	4.77	4.43	4.96	4.71	4.32	*3.98*
Change	-1.15	-0.34	*0.53*	*-0.25*	-0.39	-0.34

by atleast 0.5 per cent every year and (d) Improving the fiscal deficit by atleast 0.3 per cent ever year.

A striking feature of the baseline scenario is that revenue receipts are expected to be lower in 2008-09 as compared with 2004-05, owing to poor growth in indirect taxes which (in turn) stems from the expected decline in customs duties and the poor buoyancy of excise collections which has been historically observed. Hence, the reduction in the revenue deficit that is observed in the baseline scenario flows from an even sharper reduction in revenue expenditures: 166 per cent of the overall fiscal correction falls upon a reduction in revenue expenditures to GDP.