REPORT OF THE WORKING GROUP ON SAVINGS FOR THE ELEVENTH FIVE YEAR PLAN (2007-08 TO 2011-12)

Planning Commission
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Contents

Foreword

The Eleventh Five Year Plan aims at faster and more inclusive growth. Indian economy has been recording robust performance with a growth rate in excess of 8.0 per cent per annum during 2003-04 to 2005-06. The strong growth envisaged during the Eleventh Five Year Plan is to be achieved in an environment characterised by strong macro-economic fundamentals, sustained by services and manufacturing sectors and duly supported by agriculture sector. This ensures the growth process to be more broad-based and enduring with less volatility. Although, factors like increasing degree of global integration, enhanced quest for competitiveness and efficiency and evolving favourable demographic composition impart natural strength to our economy, higher mobilisation of required resources to finance a higher growth trajectory assumes critical importance.

Keeping the above factors in view, the Working Group on Savings set up by the Planning Commission has made an attempt to project the likely savings rate during the Eleventh Plan period. At the present juncture, a host of financial reforms consciously implemented in a well thought out sequence are leading to further financial deepening as also financial inclusion. Factors such as shift in preference pattern in savings instruments, turnaround in public sector savings, concern regarding business cycle and its impact on corporate savings and volatility in international fuel prices render it really a complex task for the Group to arrive at an acceptable estimate of savings. However, with the intimate knowledge and expertise of the Members of the Working Group and other experts with whom the Group had interacted, the Group could arrive at a realistic savings estimate for the Eleventh Five Year Plan. The savings estimate arrived at by the Group broadly indicates that the goal of achieving faster and more inclusive growth as enshrined in the Eleventh Five Year Plan Draft Approach Paper is not an arduous task to achieve.

I take this opportunity to thank all the Conveners and Members of the Sub-Groups for the meticulous work performed by them, which had culminated into the final Report. I also thank the Member Secretary, Members of the Secretariat and all the Members of the Working Group on Savings for their valuable contribution in finalising the Report. I place on record my appreciation for the initiative taken by the Officers, who assisted the Secretariat *viz.*, Dr. Deba Prasad Rath, Director; S/Shri P. K. Nayak, L. Lakshmanan, Assistant Advisers; Vanlalruata Fanai and Dr. Kumarjit Mandal, Research Officers and all the staff members of the Division of National Income, Savings and Flow of Funds (DNISFF), Department of Economic Analysis and Policy, Reserve Bank of India, Central Office, Mumbai, in bringing out the Report.

(**Rakesh Mohan**)
Deputy Governor
December 5, 2006

Summary of the Projections
Projection of Savings for the 11th Plan Period in the Four Growth Scenarios: Timeline

Scenario I: 7.0 per cent GDP Growth

(Per cent)

Item	2007-08	2008-09	2009-10	2010-11	2011-12	Avg. (2007-12)
I. Household Saving (a+b)	23.1	23.6	24.1	24.6	25.2	24.1
a) Physical Saving	12.4	12.6	12.8	13.1	13.3	12.9
b) Financial Saving (Net)	10.7	11.0	11.2	11.6	11.9	11.3
II. Private Corporate Saving	5.6	5.5	5.4	5.6	5.8	5.6
III. Public Saving	2.7	3.8	3.9	4.1	4.1	3.7
IV. Current Account Deficit (-)	1.6	1.5	1.4	1.3	1.1	1.4
V. Gross Domestic Saving (I+II+III)	**31.4**	**32.9**	**33.4**	**34.3**	**35.1**	**33.4**

Scenario II: 8.0 per cent GDP Growth

(Per cent)

Item	2007-08	2008-09	2009-10	2010-11	2011-12	Avg. (2007-12)
I. Household Saving (a+b)	23.1	23.7	24.2	24.8	25.5	24.3
a) Physical Saving	12.4	12.7	12.9	13.2	13.4	12.9
b) Financial Saving (Net)	10.7	11.0	11.3	11.7	12.0	11.4
II. Private Corporate Saving	5.6	5.5	5.4	5.6	5.8	5.6
III. Public Saving	3.2	4.3	4.3	4.3	4.3	4.1
IV. Current Account Deficit (-)	1.9	2.0	2.1	2.2	2.4	2.1
V. Gross Domestic Saving (I+II+III)	**31.9**	**33.5**	**33.9**	**34.7**	**35.6**	**34.0**

Scenario III: 8.5 per cent GDP Growth

(Per cent)

	2007-08	2008-09	2009-10	2010-11	2011-12	Avg. (2007-12)
I. Household Saving (a+b)	23.2	23.8	24.3	24.9	25.6	24.3
a) Physical Saving	12.4	12.7	12.9	13.2	13.5	12.9
b) Financial Saving (Net)	10.7	11.1	11.4	11.7	12.1	11.4
II. Private Corporate Saving	5.7	5.5	5.5	5.7	6.0	5.7
III. Public Saving	3.3	4.4	4.4	4.4	4.4	4.2
IV. Current Account Deficit (-)	1.9	2.2	2.4	2.7	2.9	2.4
V. Gross Domestic Saving (I+II+III)	**32.2**	**33.7**	**34.2**	**35.0**	**36.0**	**34.2**

Scenario IV: 9.0 per cent GDP Growth

(Per cent)

Item	2007-08	2008-09	2009-10	2010-11	2011-12	Avg. (2007-12)
I. Household Saving (a+b)	23.2	23.8	24.4	25.0	25.7	24.4
a) Physical Saving	12.5	12.7	13.0	13.2	13.5	13.0
b) Financial Saving (Net)	10.7	11.1	11.4	11.8	12.2	11.4
II. Private Corporate Saving	5.7	5.5	5.5	5.7	6.0	5.7
III. Public Saving	3.7	4.8	4.8	4.8	4.8	4.6
IV. Current Account Deficit (-)	2.3	2.7	2.8	2.9	3.0	2.8
V. Gross Domestic Saving (I+II+III)	**32.6**	**34.1**	**34.7**	**35.5**	**36.5**	**34.7**

Projection of Gross Domestic Saving – Sectoral and Overall Saving for Eleventh Five Year Plan (2007-08 to 2011-12)

(Per cent)

Item	2004-05*	Real Gross Domestic Product Growth			
		Scenario 1 at 7.0 per cent	Scenario 2 at 8.0 per cent	Scenario 3 at 8.5 per cent	Scenario 4 at 9.0 per cent
I. Domestic Private Saving	26.8	29.7	29.9	30.0	30.1
(a) Household Saving	22.0	24.1	24.3	24.3	24.4
(i) Physical Saving	11.7	12.9	12.9	12.9	13.0
(ii) Financial Saving	10.3	11.3	11.4	11.4	11.4
(b) Corporate Saving	4.8	5.6	5.6	5.7	5.7
II. Public Sector Saving	2.2	3.7	4.1	4.2	4.6
III. Gross Domestic Saving (I+II)	29.1	33.4	34.0	34.2	34.7
IV. Current Account Deficit (-)	1.0	1.4	2.1	2.4	2.8
V. Gross Domestic Capital Formation	30.1	34.8	36.1	36.6	37.5
Memo items:					
I. Eleventh Plan Approach Paper Projection (Rates of Gross Domestic Saving)		27.1	29.6	31.0	32.3
(i) Household		20.1	20.5	20.7	21.0
(ii) Corporate		5.0	5.5	5.8	6.1
(iii) PSEs		3.1	3.1	3.0	2.8
(iv) Government		-1.1	0.5	1.5	2.4
II. (i) Agriculture Sector		Estimated Ground Level Credit (disbursements) for the agricultural sector is Rs.16,40,000 crore during the Eleventh Five Year Plan. (Average growth rate of 17.0 per cent per annum).			
(ii) Small and Medium Enterprises Sector		Estimated incremental working capital flows during the Eleventh Plan period are Rs.1,67,989 crore. (Average growth rate of 16.8 per cent per annum). Estimated incremental term loan flows are Rs.1,48,720 crore for the Eleventh Plan period. (Average growth rate of 24.1per cent per annum).			

* Quick Estimates.

Report of the Working Group on Savings for the Eleventh Five Year Plan (2007-08 to 2011-12)

Section I: Introduction: Composition and Terms of Reference of the Working Group

It is recognised that high domestic savings and investment rates are central growth factors and as such, sustenance of high and stable rates of growth in an environment of stable prices will require a strong domestic resource base during the Eleventh Five Year Plan period (2007-08 to 2011-12). Therefore, it is critical to assess, whether savings that can be mobilised from the constituent sectors of the domestic economy are adequate to sustain the envisioned growth rates. Along with the potential foreign savings, this estimate would provide a critical input that will enable Planners to secure objective insights about the magnitude of investment that could be available for achieving the growth rates targeted over the plan period. The present Working Group has been constituted by the Planning Commission to undertake an objective and scientific estimation of the magnitude of savings during the Eleventh Five Year Plan period. The composition and Terms of Reference are given below.

I.1 Composition

Planning Commission, Government of India, vide their Office Order No. 3/1/2005 – FR dated May 19, 2006 constituted a Working Group to undertake the above exercise. The constitution of the Working Group is as follows:

1.	**Dr. Rakesh Mohan**, Deputy Governor, RBI.	**Chairman**
2.	Dr. Pronab Sen, Principal Adviser, Planning Commission.	Member
3.	Dr. Ashok Lahiri, Chief Economic Adviser, Department of Economic Affairs, Ministry of Finance.	Member
4.	Shri Ramesh Kolli, Deputy Director General, CSO.	Member

5. Dr. Eroll D'souza, Professor, IIM, Ahmedabad. — Member

6. Mr. Suman K. Bery, Director General, NCAER. — Member

7. Dr. Ashima Goyal, Professor, IGIDR. — Member

8. Dr. Subir Gokarn, Executive Director & Chief Economist, CRISIL. — Member

10. Dr. Ajay Shah, Consultant. — Member

11. Dr. Arvinder S. Sachdeva, Director (PPD), Planning Commission. — Member

12. Dr. C.P. Chandrasekhar, Professor, JNU. — Member

13. Dr. Y.S.P. Thorat, Chairman, NABARD. — Member

14. Representative from SIDBI. — Member

15. **Dr. R.B. Barman,** Executive Director, RBI. — **Member Secretary**

I.2 Terms of Reference of the Working Group

1. To estimate domestic private savings, physical and financial and their components in light of the policy and structural changes in the financial sector;
2. To estimate the flow of foreign savings, through foreign direct investment, portfolio investment, suppliers' credit, ECB and in terms of its categories (debt/equity) and its tenure;
3. To estimate flow of external aid and its components (loan/grant);
4. To estimate the public sector draft on private savings keeping in view the fiscal sustainability and commitments under the Fiscal Responsibility Act; and
5. To estimate resources available for private investment and the likely flows for SME and Agriculture.

I.3 Proceedings of the Working Group

The first meeting of the Working Group was held on July 15, 2006 at the Reserve Bank of India, New Delhi. The deliberations in this meeting were focused on the following core areas:

- Important issues to be considered by various Sub-Groups while undertaking the estimation exercise for their respective areas;
- Number of Sub-Groups that are needed to be formed to undertake estimation of savings at a disaggregated level. Whether there is any need to constitute a separate Sub-Group to estimate the likely flows of private investment for SME and agriculture sectors?
- Composition (decision on nomination of members) of various Sub-Groups;
- The 'broad approach and plan of action' to be followed to initiate the exercise of the estimation of savings during the Eleventh Plan period.
- An important issue that was highlighted by the Chairman for discussion was the need to take into consideration the broad transformation that has been taking place in the behaviour of savings over the decades, in general, with a specific focus on the trends in the past five years and the possible impact of such behaviour on the future quantum and composition of the savings.

Based on the discussions, it was decided to constitute five Sub-Groups (as detailed in the Annex-II). Accordingly, five Sub-Groups were constituted for estimation of:

(i) Household sector savings;
(ii) Private corporate sector savings;
(iii) Public sector savings;
(iv) Foreign savings; and
(v) Flow of private investment for SME and agriculture sector.

I.4 Terms of References for the Sub-Groups

The following terms of references were prescribed for the Sub-Groups:

(i) Household Sector

- To review the developments and likely behavioural pattern during the Plan period;
- To estimate the household sector savings in light of the policy and structural changes in the financial sector; and
- To explain the procedures followed for estimation.

(ii) Private Corporate Sector

- To review the developments and likely behavioural pattern during the Plan period;
- To estimate the private corporate savings in light of the policy and structural changes in the financial sector; and
- To explain the procedures followed for estimation.

(iii) Public Sector

- To review the developments and likely behavioural pattern during the Plan period;
- To estimate the public sector draft on private savings keeping in view the fiscal sustainability and commitments under the Fiscal Responsibility Act; and
- To explain the procedures followed for estimation.

(iv) Foreign Savings

- To review the developments and likely behavioural pattern during the Eleventh Plan period;
- To estimate flow of external aid and its components (loan/grant);
- To estimate the flow of foreign savings, through foreign direct investment portfolio investment, suppliers credit, ECB and in terms of its categories (debt/equity) and its tenure; and
- To explain the procedures followed for estimation.

(v) Flow of Private Investment for SME and Agriculture Sector

- To estimate resources available for private investment and the likely flows for SME and agriculture sectors; and
- To explain the procedures followed for estimation.

I.5 Proceedings of the Sub-Groups

The Sub-Groups held meetings at diverse points of time and discussed issues that were pertinent to their terms of reference.

Sub-Group on Household Sector Savings

The Sub-Group on 'Household Sector Savings' met thrice under the convenership of Dr. R. Kannan, Principal Adviser, DEAP, RBI and in the third meeting on October 27, 2006, the Report was adopted after due deliberations. Secretariat for this Sub-Group was provided by the Division of National Income, Savings and Flow of Funds (DNISFF), Department of Economic Analysis and Policy, Reserve Bank of India, Mumbai.

Sub-Group on Corporate Sector Savings

The Sub-Group on 'Corporate Sector Savings' met twice under the convenership of Dr. R. B. Barman, Executive Director, RBI and in the final meeting on October 26, 2006, the Report was adopted. The Department of Statistical Analysis and Computer Services (DESACS), RBI, provided the secretarial support to the Sub-Group.

Sub-Group on Public Sector's Draft on Private Savings

The Sub-Group on 'Public Sector's Draft on Private Savings' under the convenorship of Dr. Pronab Sen, Principal Adviser, Planning Commission, Government of India met thrice and the Report was adopted in the third meeting on November 8, 2006. The Planning Commission, Government of India, New Delhi, provided the secretarial support to the Sub-Group.

Sub-Group on Inflow of Foreign Savings

The Sub-Group on 'Inflow of Foreign Savings' under the convenorship of Shri R.C. Srinivasan, Economic Adviser, Ministry of Finance, held three meetings and the Report was adopted in the third meeting on September 25, 2006. The Secretarial support to the Sub-Group was provided by the Division of International Finance, Department of Economic Analysis and Policy, Reserve Bank of India, Mumbai.

Sub-Group on Flow of Resources to Agriculture and SMEs

This Sub-Group met four times under the convenorship of Dr. Y.S.P. Thorat, Chairman, NABARD and the Report was adopted. The secretariat to the Sub-Group was provided by the NABARD and SIDBI.

Section II: An Analysis of Recent Trends in Savings in Indian Economy

II.1 Domestic savings – Concept and importance

India continues to remain one of the highest savers among the emerging market economies. Gross Domestic Saving (GDS) of the Indian economy constitutes savings of public, private corporate and household sectors. The estimates of savings both at overall and sectoral levels are finalised and disseminated by Central Statistical Organisation (CSO). At the sectoral level, savings estimates for the public sector are prepared by CSO, while Reserve Bank of India (RBI) prepares savings estimates for the private corporate sector on the basis of its company finance studies. The savings of the household sector are estimated separately under financial assets and physical assets. RBI takes the responsibility of estimating the household savings in financial assets, while CSO estimates the household savings in physical assets. The methodology for compilation of these estimates of saving and investment has been described in the CSO's publication 'National Accounts Statistics: Sources and Methods, 1989'.

In India, it is the household sector which occupies a position of dominance over the other institutional sectors like private corporate sector and the public sector in terms of generating saving. This sector is defined to comprise individuals, non-government non-corporate enterprises of farm business and non-farm business like sole proprietorships and partnerships, and non-profit institutions. According to the 'Sources and Methods', for the estimation of savings, the household sector is defined to represent the rest of the economy after excluding the organised segments of the economy – namely public and private corporate sectors - and it is in this sense that the household sector includes unincorporated enterprises apart from pure households. The savings of the household sector in physical assets are not estimated independently. CSO estimates the household investment and transfers the same to the account of household saving in physical assets. As a result, the estimates of household savings in physical assets and household investment are the same estimated through ‘Commodity Flow Approach’. The household financial savings emanate from the economy-wide Flow of Funds (FOF) accounts.

II.2 Overview and Importance of Savings for Emerging Market Economies like India – Theoretical underpinnings

The subject on inter-country experiences regarding the linkages among saving, investment and growth has received attention, of late, with proliferation of literature on savings marking the resurgence of interest in themes of capital accumulation, technological progress and economic growth – a shift away from the 1980s and the early 1990s when discourse on macroeconomic issues was dominated by concerns with short-term stabilisation and adjustment. There has now emerged a new consensus that better living standards and the elimination of poverty – elements of inclusive growth - must be based on the sustained expansion of output, which requires the accumulation of capital and its corresponding financing to the extent possible from domestic sources. Inter-country experiences with regard to the links amongst saving, investment and growth appear complex, divergent and country specific with the conclusion that the positive effect of saving on growth is more straight-forward, and higher saving raises the growth rate of output by increasing capital accumulation.

II.2.1 Determinants of Saving

There are competing paradigms in the analysis of savings. According to the life-cycle model, an accumulation for retirement is the primary motive for saving (Modigliani and Brumberg, 1954; Modigliani, 1986; Ando and Modigliani, 1963). The saver aims at smoothing consumption across one's life span in the face of any expected or unexpected fluctuation in the level of income and consequently was a net saver during his/her working years and a dis-saver in the post retirement life. The changes in private saving over time and across countries is usually analysed in the light of this hypothesis because of its universal applicability and inherent flexibility for incorporating subsequent behavioural changes. On the basis of 1950's data for a limited group of countries, Modigliani concluded - *"In summary, all the evidence supports both quantitatively and qualitatively the role of the two principal variables suggested by the life cycle model, productivity growth of income and age structure of the adult population."*

According to Modigliani and Sterling (2003), major determinants of inter-country variation in the saving rate include differences in the rate of growth of per capita income as the share of higher-saving groups rises in the population, length of retirement and demographic variables relating to the age structure of the population. The Keynesian (General Theory, 1936) theory that the prime determinant of saving is income has withstood the test of time, while empirical evidence does not corroborate the ability of other variables like interest rates, inflation and tax rates (Jappelli and Pistaferri, 2002) to influence savings. The results show that income and wealth variables affect saving strongly and in ways consistent with standard theories. Inflation and the interest rate do not show clear effects on saving, which is also consistent with their theoretical ambiguity as shown in a World Bank Study by Klaus Schemidt-Hebbel, et al (1992) covering the countries: Botswana, Colombia, Ecuador, Honduras, Republic of Korea, Philippines, Paraguay, Thailand, South Africa and Taiwan. Another factor which influences savings is the need for liquidity to meet the exigencies of life, the perceived risk being the loss of labor income (Amromin, 2005). The saved corpus acts as a buffer against the same. However, as precautionary savings needs to be liquid, they are often held in the form of non-productive assets like cash, jewellery and precious metals. Further, savings for precaution serve dual purpose. In the event, the contingencies do not absorb the money they are bequeathed (Dynan, Skinner, Zeldes, 2002). Edwards (1995) argued that with other things given, savings rate could be higher where income is more volatile, as it will induce people to save during plentiful years to provide for hard times.

A critical factor influencing savings in low income countries like India is life-time expenditures like housing, consumer durables and sometimes for setting up small businesses (Athukorala and Sen, 2002). An empirical study on the pattern of Indian saving had indicated that India's demographic transition in the last 30 years has contributed to an increase in the saving in India (Loayza and Shankar, 2000).

In a nutshell, the major determinants of savings that can be identified from a perusal of the existing literature are as follows:

- GDP growth (+) (Masson, Bayoumi, and Samiei, 1998)
- Income and Wealth (+) (Klaus Schemidt-Hebbel, Steven B.Webb, and Giancarlo Corsetti, 1992)
- Demand for Liquidity (+) (Amromin, 2005)
- Income Volatility (+) (Edwards, 1995)
- Real interest rate (+) (Masson, Bayoumi, and Samiei, 1998)
- Level of per capita income (+) (Masson, Bayoumi, and Samiei, 1998; Athukorala and Sen, 2001)
- Rate of inflation (+) (Athukorala and Sen, 2001)

- Spread of banking facilities (+) (Athukorala and Sen, 2001)
- Age Structure/Dependency Ratio (-) (Leff, 1969; Modigliani, 1970)

In the context of the above theoretical determinants of savings, the following are the factors that could lead to the achievement of higher savings and growth during the Eleventh Plan period in India:

- India's macroeconomic performance improved significantly over the last two decades, in general, and since the initiation of economic reforms in the early 1990s, in particular, creating conditions that are conducive to encourage higher savings.

- The real GDP growth in the past few years – particularly in the last three years – has been commendable, averaging an annual growth in excess of 8 per cent, driven by services and manufacturing sector. The synergy between these two sectors is expected to help the Indian economy achieve higher level of growth. The present growth momentum is also facilitated by buoyant resources base reflected in rising domestic saving and investment. The emerging trends are in favour of a continuation of the growth momentum observed in the last three years. A 'virtuous circle' of growth and savings, that appears to be already underway, is likely to continue for some years to come.

- With its population accounting for 16.0 per cent of the global population, India is expected to benefit from the 'demographic dividend', as huge pool of younger population enter into the labour force and gainfully employed in production, generating a larger national income. Further, a higher aggregate growth rate of the economy can be expected to generate higher employment level. The acceleration in the growth of services and manufacturing sectors are expected to have a stronger impact on job creation.

- India has made substantial progress in human development over the years, along with substantial reduction in poverty following sustained and high economic growth in the post-reform period and improvement in the literacy rates. India's HDI increased from 0.513 at the beginning of 1990s to 0.571 at the end of 1990s and further to 0.618 by 2005-06, indicating continuous improvement in HDI. The launching of the National Rural Employment Guarantee Scheme on

February 02, 2006 is expected to play an important role in improving the Human Development Index.

- In spite of wide variations in the incidence of poverty across States and the rural-urban divide, there has been an impressive decline in poverty in the country as a whole. There was a significant decline in poverty between 1977-78 and 1999-2000 with the proportion of people living below the poverty line decreasing from 51.3 per cent to 26.1 per cent. The reduction of poverty is expected to help in addressing the problems of rural unemployment as well as provide an impetus to demand in the economy.

- Globally and across most countries, inflationary levels softened substantially between the 1980s and 1990s and inflationary pressures have generally abated even further during the current decade, which is also true for India. Compared to earlier oil shocks, inflation pressures from the recent hike in oil prices remained modest reflecting a variety of factors such as stable inflationary expectations, fall in intensity of oil usage, and, in case of many emerging market economies, less-than-complete pass-through of oil prices.

- The financial sector reforms in India, introduced since 1992-93, have led to a series of financial innovations, which ultimately lowered the transaction costs and provided better returns to the investors. This has, in turn, led to an increasing monetisation of the economy as evidenced by rising bank deposits and other indicators, greater availability of and household recourse to credit and helped to boost household financial savings during the 1990s.

II.3. Recent trends in savings in India

The rate of gross domestic savings (GDS) *i.e*. GDS as a proportion of Gross Domestic Product at current market prices (GDPCMP) has more than doubled from an average of around 10.0 per cent in the 1950s to over 23.2 per cent in the 1990s. It scaled a peak of 25.1 per cent in 1995-96. After dipping to 23.6 per cent in 2001-02, it recovered to 26.1 per cent in 2002-03 and reached a new peak of 29.1 during 2004-05. This rate of GDS at 29.1 per cent is the highest saving rate ever achieved in India since 1950-51 (Table 1).

Table 1: Decadal Trends in Saving Rates

(Per cent of GDPCMP)

	1950s	1960s	1970s	1980s	1990s	2000-01 to 2004-05	2000-01	2001-02	2002-03	2003-04	2004-05
1	2	3	4	5	6	7	8	9	10	11	12
Gross Domestic Saving	**10.0**	**12.6**	**17.5**	**19.4**	**23.2**	**26.3**	**23.5**	**23.6**	**26.5**	**28.9**	**29.1**
1. Private Corporate Sector	1.0	1.5	1.6	1.8	3.7	4.2	4.1	3.6	4.1	4.4	4.8
2. Public Sector	1.8	2.8	3.7	3.0	1.0	-0.2	-1.8	-2.0	-0.7	1.0	2.2
3. Household Sector (a+b)	7.2	8.4	12.2	14.6	18.5	22.4	21.2	22.0	23.1	23.5	22.0
a. Financial saving [(i) to(vi)]	**1.9**	**2.7**	**4.6**	**6.8**	**10.0**	**10.6**	**10.2**	**10.8**	**10.3**	**11.5**	**10.3**
(i) Currency	0.5	0.7	0.9	1.1	1.2	1.2	0.7	1.2	1.2	1.5	1.3
(ii) Net deposits	0.2	0.6	1.6	1.9	3.2	2.9	3.4	3.1	3.0	3.3	1.7
(iii) Shares and debentures	0.3	0.4	0.2	0.6	1.3	0.3	0.4	0.2	0.2	0.1	0.3
(iv) Net claims on Government	0.3	-0.1	0.1	0.9	1.0	2.5	1.8	2.2	2.3	2.8	3.3
(v) Life insurance funds	0.2	0.3	0.5	0.7	1.1	1.8	1.6	2.0	1.7	1.8	2.0
(vi) Provident and pension funds	0.4	0.8	1.3	1.6	2.2	2.0	2.3	2.0	2.0	1.9	1.8
b. Saving in physical assets	**5.2**	**5.7**	**7.6**	**7.8**	**8.5**	**11.7**	**11.0**	**11.2**	**12.7**	**12.0**	**11.7**

Source: Central Statistical Organisation

- **Household Sector:** Household saving is composed of both financial and physical savings. As a percentage of GDP at current market prices, the rate of savings of the household sector increased from around 7.0 per cent in the 1950s to over 18.0 per cent in the 1990s. In 2004-05, it stood at 22.0 per cent. Since the 1950s, the household sector is holding a predominant share in the GDS. Its share in the GDS increased from an average of 71.7 per cent in the 1950s to nearly 80 per cent in the 1990s; it had further increased to 93.4 per cent in 2001-02 and declined thereafter. By 2004-05, its share stood at 75.7 per cent. Household sector continues to remain the major contributor to GDS. Since 2000-01 the household sector has shown a preference for saving in the form of physical assets, which could be attributed partly to the soft interest regime in recent years. Increase in the rate of household saving in physical asset in recent years reflects booming construction activities mainly of housing and accelerated industrial activities requiring machinery and equipments.

- *Financial Saving of Household Sector:* The share of financial savings in the total household savings (comprising savings in the form of 'currency', ‘net deposits', 'shares and debentures', 'net claims on government', 'life insurance funds' and 'provident and pension funds') had increased from around 25.0 per cent in the 1950s to around 55.0 per cent in the 1990s, and stood at around 47.0 per cent in 2004-05. As a percentage of GDPCMP, the rate of financial saving increased from less than 2.0 per cent in the 1950s to 10.0 per cent in the 1990s. After increasing to 11.5 per cent in 2003-04 from 10.3 per cent in 2002-03, it stood at 10.3 per cent during 2004-05. After financial liberalisation, with more efficient financial intermediation, greater opportunities for diversification across financial assets and market related returns, financial saving has gained increasing importance (RBI, 2003). Within financial assets, there has been a change in the preference of saving instrument in recent years.

- *Physical saving of Household sector:* Savings in physical assets consist of net addition to physical assets of the households, comprising investment in 'construction', 'machinery and equipments' and 'change in stocks'. The share of savings in physical assets in the total savings of the household sector declined from more than 70.0 per cent in the 1950s to just over 45.0 per cent in the 1990s. However, it again increased to 55.2 per cent by 2002-03. By 2004-05, it stood at 53.3 per cent. As a percentage of GDPCMP, household sector savings in physical assets steadily increased from 5.2 per cent in the 1950s to 7.6 per cent in the 1970s and further to 8.5 per cent in the 1990s. It increased further to 12.7 per cent during 2002-03 but declined thereafter. By 2004-05, it stood at 11.7 per cent.

- **Private Corporate Sector:** The rate of savings of the private corporate sector also showed a steady increase from 1.0 per cent of GDPCMP in the 1950s to 1.8 per cent in the 1980s and further to 3.7 per cent in the 1990s mainly due to better performance of joint stock companies. By 2004-05, it stood at 4.8 per cent of GDPCMP. In terms of composition, the share of the private corporate sector savings in the GDS also increased from 10.2 per cent in the 1950s to around 16.0 per cent in the 1990s. By 2004-05, the share of private corporate sector in GDS increased further and stood at 16.6 per cent. During the period 1999-2000 to 2004-05, non-financial companies on an average accounted for about 85.0 per cent of the gross savings of the sector. Financial companies covering private banking and insurance companies accounted for 4.0 per cent and the rest was accounted for by cooperative banks and societies including a few quasi-corporate bodies. In terms of GDP at CMP, gross savings of the private corporate sector was about 4.4 per cent in the Ninth Plan, which increased to 4.8 per cent during the first three years of the Tenth Plan. The rate of saving in private corporate sector followed upward momentum for the last three years. From a low of 3.6 per cent in 2001-02, it increased to 4.8 per cent in 2004-05, reflecting higher retained earnings resulting from higher profit. This has been reflective of increase in profitability in terms of gross and net profit margin in 2004-05 over the previous year. Further, there has been substantial decline in interest burden (interest to gross profit ratio), accompanied by decline in effective tax rate (tax provision to profit before tax) in the private corporate sector during 2004-05 as compared with the previous year.

- **Public Sector:** The rate of savings of the public sector, which witnessed an increasing trend till the 1970s, started declining thereafter, and turned negative since 1998-99, owing to sharp deterioration in the saving of the government administration department. However, from 2003-04 onwards savings of public sector turned positive again, reflecting mainly the outcome of the implementation of Fiscal Responsibility and Budget Management Act, 2003 (FRBM Act). The rate of public sector saving increased from 1.0 per cent in 2003-04 to 2.2 per cent in 2004-05, owing to improvement in non-departmental enterprises saving and decrease in public authorities dis-savings. In terms of composition, there was a continuous decline in the share of the public sector savings in the GDS since the 1960s, and it turned negative from 1998-99 onwards till 2002-03. By 2004-05, the position improved and it stood at 2.2 per cent. There has been a turn-around in public sector savings from five consecutive years of negative savings rate during 1998-99 to 2002-03, to positive during 2003-04, mainly reflecting the outcome of the implementation of FRBM Act. Public sector saving rate increased further to 2.2 per cent in 2004-05 from 1.0 per cent in 2003-04, resulting from lower dis-saving by public authorities as well as improvement in non-departmental enterprises savings.

Cross-country comparison of GDS and investment rates for select Asian countries is given in Table 2 and Table 3, and Box 1.

Table 2: Saving Rates in Select Asian Countries

(Per cent)

	2003			2004			2005		
	Private	Public	Total	Private	Public	Total	Private	Public	Total
1. Bangladesh	17.4	1.2	18.6	18.2	1.3	19.5	18.7	1.4	20.1
2. India	27.9	1.0	28.9	26.8	2.2	29.1	..	..	..
3. Indonesia	18.5	3.7	22.3	20.5	2.6	23.0	20.0	2.8	22.8
4. Malaysia	20.4	16.1	36.5	20.1	17.2	37.3	21.2	15.9	37.1
5. Thailand	9.3	7.7	30.9	10.6	7.7	31.6	..	..	..
6. Pakistan	19.1	1.5	20.6	15.0	3.7	18.7	12.5	2.6	15.1
7. Sri Lanka	19.0	-3.3	15.7	19.7	-3.9	15.9	19.9	-2.7	17.2
8. Bhutan	..	..	42.7	..	..	47.7	..	..	..
9. China	..	..	37.8	..	..	38.7	..	..	..
10. Hong Kong	..	..	21.9	..	..	21.8	..	..	20.5
11. Maldives	..	..	49.2	..	..	44.8	..	..	..
12. Singapore	..	..	43.9	..	..	47.0	..	..	48.6

.. Not available.

Source:

1. For Bangladesh, Bangladesh Bank, Annual Report, 2001-02, 2003-04 and 2004-05.
2. For India, Central Statistical Organisation, National Accounts Statistics, India.
3. For Indonesia, Bank Indonesia, Annual Report, 2005.
4. For Malaysia, Bank Negara Malaysia, Annual Report, 2004 and 2005
5. For Thailand, Bank of Thailand, http://www.bot.or.th/bothomepage/databank/EconData/EconFinance/index04e.htm
6. For Pakistan, State Bank of Pakistan, Annual Report FY 2002, FY 2004 and FY 2005.
7. For Sri Lanka, Central Bank of Sri Lanka, Annual Report, 2002, 2003 and 2005.
8. For Bhutan, China, Hongkong, Maldives and Singapore, World Bank Online Database, http://devdata.worldbank.org/dataonline/

Note:

a. For Malaysia saving rate refers to gross national saving as percentage of GNP.
b. For Thailand and Pakistan saving rate refers to gross national saving as percentage of GDP.
c. For Thailand, break-ups pertain to net national saving and will not add up to the totals.
d. For Bangladesh, India, Sri Lanka saving rate refers to GDS as percentage of GDP.

Table 3: Investment Rates in Select Asian Countries

(Per cent)

Country	2003			2004			2005		
	Private	Public	Total	Private	Public	Total	Private	Public	Total
1. Bangladesh	17.2	6.2	23.4	17.8	6.2	24.0	18.5	5.9	24.4
2. India	18.9	6.5	27.2	20.0	7.2	30.1	..	..	..
3. Indonesia	13.4	5.4	18.9	18.0	3.8	21.8	18.7	3.3	22.0
4. Malaysia	12.0	24.5	36.5	17.7	19.6	37.3	16.2	20.9	37.1
5. Thailand	17.5	6.5	24.9	19.3	6.7	27.1	..	..	31.6
6. Pakistan	12.2	4.3	18.2	11.6	5.2	18.6	11.6	4.7	18.0
7. Sri Lanka	17.0	5.3	22.3	22.8	2.2	25.0	22.3	4.2	26.5
8. Bhutan	..	..	57.9	..	..	61.0	..	..	..
9. China	..	..	37.8	..	..	38.7	..	..	..
10. Hong Kong	..	..	21.9	..	..	21.8	..	..	20.5
11. Maldives	..	..	27.2	..	..	34.0	..	..	..
12. Singapore	..	..	15.7	..	..	19.4	..	..	18.6

.. Not available.

Source: *1. For Bangladesh, Bangladesh Bank, Annual Report, 2001-02, 2003-04 and 2004-05.*
2. For India, Central Statistical Organisation, National Accounts Statistics, India.
3. For, Indonesia, Bank Indonesia, Annual Report 2005.
4. For Malaysia, Bank Negara Malaysia, Annual Report, 2004 and 2005.
5. For Thailand, Bank of Thailand, http://www.bot.or.th/bothomepage/databank/EconData/EconFinance/index04e.htm and Asian Development Outlook 2006.
6. For Pakistan, State Bank of Pakistan, Annual Report FY2002, FY 2004 and FY 2005.
7. For Sri Lanka, Central Bank of Sri Lanka, Annual Report, 2002, 2003 and 2005.
8. For Bhutan, China, Hongkong, Maldives and Singapore, World Bank Online Database, http://devdata.worldbank.org/dataonline/
9. The investment rate for Bhutan, China, Hong Kong, Maldives and Singapore pertain to gross capital formation.

Box 1: Recent Investment and Saving Trends within East Asia

A dominant factor in the 'miracle' of East Asian growth has been the extremely high domestic saving. The possible explanations for this high saving range widely from non-economic justification related to culture and ethnicity, demographics and government policies, to economic factors like financial market imperfections, and high interest rates. The explanation provided by Adams and Prazmowski (2003) pinpoints the growth of income and favorable demographic features as the prime causes of high East Asian savings. Based on the basic premise of the life-cycle hypothesis of consumption of Modigliani that economic agents set their current and expected saving-income ratios so as to equate life time income to life time consumption, Adams and Prazmowski (2003) have reasoned that growth induces an increase in the consumption standards of the economic agents even during their retirement, which compels them to save more during the phase of working life. In addition to it if the population is predominantly in the working age, with lower dependency ratio, that provides further impetus to higher savings. In their cross-country studies the authors have found evidence to that effect.

Since the mid 1990s, the global distribution of current account balances has changed substantially. Along with the sharp increase in the current account deficit in the US, there has been a significant widening of the current account surpluses in many countries, including Japan and China. In addition, there has been a marked shift from persistent current account deficits to large current account surpluses in the rest of the east Asia region. The large movements of the current account positions in this region have mainly reflected reductions in its investment to GDP ratio; the change in the region's saving ratio has had only a small effect.

The profile of investment in each country shows that cyclical fluctutations can be traced to construction investment in the region. Looking forward, it seems unlikely that overall investment will soon return to the pre Asian crisis any soon. If the level of saving remained high, the region's current account surplus would be expected to stay. But following the Asian crisis, the saving ratio in the other East Asia region declined only marginally, as government spending was curtailed and households maintained high rates of saving in the face of lower economic growth and the absence of extensive social assistance systems.

The level of construction investment in the region has been fairly volatile. A large part of the 1990s construction boom was for residential building, particularly in Indonesia, Thailand and Singapore, and significant real estate speculation in these countries spread quickly to retail and office buildings. The cyclical fluctuations in construction sector affected most countries. Construction investment increased sharply in Korea, Indonesia and Thailand in the late 1980s and early 1990s, and the subsequent decline was especially large in Indonesia and Thailand. The construction cycle was also pronounced in Singapore, reflecting in part the timing of large public infrastructure projects. In contrast, the initial run-up in construction spending was more modest in Hong Kong, although the decline was large as a result of the recession following the Asian crisis. The Philippines and Taiwan largely missed the 1990s boom and thus also a sharp subsequent decline. Thailand experienced the largest increase and then decline in non-construction investment among the East Asian countries.

Although economic theory suggests that developing regions should have current account deficits, since the mid 1990s the aggregate current account of the other east Asia region has been in surplus. A large decline in investment has been the main factor behind this development, of which around two-thirds represents the decline in construction spending that occurred following the Asian crisis. Looking forward, while there are reasons to expect that the region's current account surplus will decline, this will probably occur only gradually. On the one hand, the current share of non-construction investment to GDP in the East Asia region is low compared with its historical level. While critical infrastructure projects seem set to proceed in some countries, the construction investment ratio for the region seems unlikely to return to the levels in the early 1990s.

Select References

1. 'Recent Investment and Saving Trends Within East Asia', 2006, Reserve Bank Bulletin, Reserve Bank of Australia, April.

2. F. Gerard Adams, Peter A. Prazmowski, 2003, 'Why are saving rates in East Asia so high? Reviving the life cycle hypothesis', Empirical Economics, 28, pp. 275-289.

II.4 Overall savings in a macroeconomic framework

The Working Group had considered it desirable to estimate the savings in a macro framework and compare with the aggregate estimate of savings arrived at by various Sub-groups. While this exercise could be done adopting a variety of approaches, the Group had preferred an 'elasticity-based approach' with respect to GDPCMP. The regression of GDS on GDPCMP from 1995-96 to 2004-05 provides an elasticity of 1.17. The results are furnished in Table 4. However, it may be noted that the aggregate estimate of savings arrived at by various Sub-Groups and the estimation arrived at for the aggregate savings using the above approach would vary. This is due to the fact that the growth phenomenon, which is unfolding for the Indian economy is unprecedented. Therefore, any mechanical forecasting exercise based on past trends in the data is not expected to capture the future growth trajectory during the Eleventh Five Year Plan. Therefore, the regression based forecasting attempted for the gross domestic saving, while indicating the direction of the likely movement does not go in alignment with the forecasts of the Sub-Groups, which have taken note of the structural changes and the changing profile of the economy at this crucial juncture.

Table 4: Projection of Gross Domestic Saving

(Per cent)

	7 per cent GDP Growth	8 per cent GDP Growth	8.5 per cent GDP Growth	9 per cent GDP Growth
Range (Initial year-Terminal Year)	30.7 – 33.0	30.8 – 33.3	30.9 – 33.4	30.9 – 33.6
Average	31.9	32.0	32.1	32.2

Section III: Estimation of savings by the Sub-Groups

A brief outline of various issues that had rendered the estimation process complex is highlighted in this section. The estimates furnished by various Sub-Groups are presented. Details, in terms of assumptions made, methodological framework adopted and the estimation results on savings for respective sectors have been summarised.

Since the estimations of savings by the Sub-Groups are made in a period of change, it may be mentioned that these are contingent on performance of the private sector and responses of the economy to the policy measures. Savings rates can be expected to be higher towards the end of the Eleventh Plan, allowing more investment to be planned for then. Moreover, public spending may have to be counter-cyclical, stepping up if private sector falters. The estimates of capital flows underline this point again, since they depend on interest rate differentials and exchange rates.

III.1 Issues considered by the Sub-Groups

Household Sector Savings

The household sector Sub-Group while estimating the savings of household sector faced an intricate issue with regard to financial savings of household sector. The estimates of financial savings of the households are showing a decline over the recent years whereas the physical savings are showing an increasing trend. However, logically, with financial deepening and move towards financial inclusion the financial savings should go up. It remained a puzzle for the Sub-Group. In this context, the following needs to be mentioned. Firstly, the way the financial savings are estimated in India, the financial liabilities of the household sector are reduced from the gross financial assets, while physical savings may be financed by such financial liabilities. Hence, for comparative purposes, it may be useful to look at gross financial savings vis-à-vis physical savings and as shown in chart 1 and Table 5, the former has consistently outpaced the latter.

Chart 1: Financial and Physical Savings of Household Sector

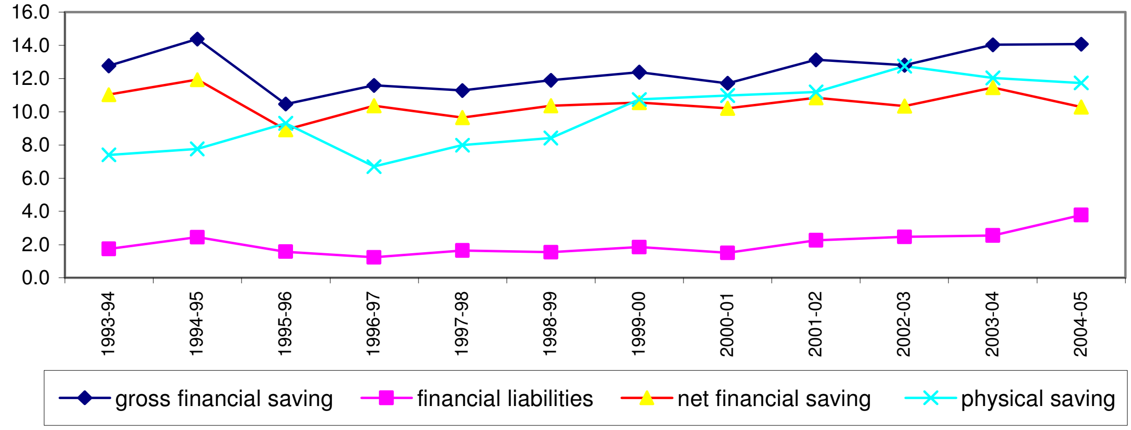

Table 5: Financial and Physical Savings of Household Sector

(Per cent)

Items	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05
1. Gross Financial Savings	12.8	14.4	10.5	11.6	11.3	11.9	12.4	11.7	13.1	12.8	14.0	14.1
2. Financial Liabilities	1.7	2.4	1.6	1.2	1.6	1.5	1.8	1.5	2.3	2.5	2.6	3.8
3. Net Financial Savings (1-2)	11.0	11.9	8.9	10.4	9.6	10.4	10.5	10.2	10.8	10.3	11.5	10.3
4. Physical Saving	7.4	7.8	9.3	6.7	8.0	8.4	10.7	11.0	11.2	12.7	12.0	11.7

Further, looking at retail portfolio of commercial banks, as percentage to GDP at current market prices it has been observed that the housing loan component of retail loans from the banks increased from 3.2 per cent of GDPCMP in 2003-04 to 4.3 per cent of GDPCMP in 2004-05 while that of other components decreased during the same period. During the same period, the rate of household financial saving (net) also registered a decline (Table 6).

Table 6: Retail Credit from Banks

(Per cent)

Sr. No.	Item	Per cent to GDP at Current Market Prices		
		2003-04	**2004-05**	**2005-06**
1	Housing Loans	3.2	4.3	5.1
2	Consumer Durables	0.2	0.1	0.1
3	Credit Card Receivables	0.2	0.3	0.4
4	Auto Loans	3.2	1.1	1.7
5	Other Personal Loans	6.8	2.7	3.4
Total Retail Loans		**13.7**	**8.5**	**10.6**
Total Loans and Advances of SCBs		**31.3**	**36.0**	**41.8**

Source: Report on Trends and Progress on Banking in India, RBI.

A second issue that came into focus was that, going by the conventional wisdom, if the corporate sector's saving is going up, the household sector's savings need to come down, to the extent that unincorporated entities, constituting a part of the household sector, get incorporated and such savings are reflected as corporate savings. An examination of the data since the 1950s shows a declining trend in the share of unincorporated sector. If this trend continues, as to be expected, the share of household savings as a percentage of GDP may decline correspondingly with a rise in corporate sector saving (Table 7 and Chart 2).

Chart 2: Shares of Unincorporated and Incorporated sectors in GDS

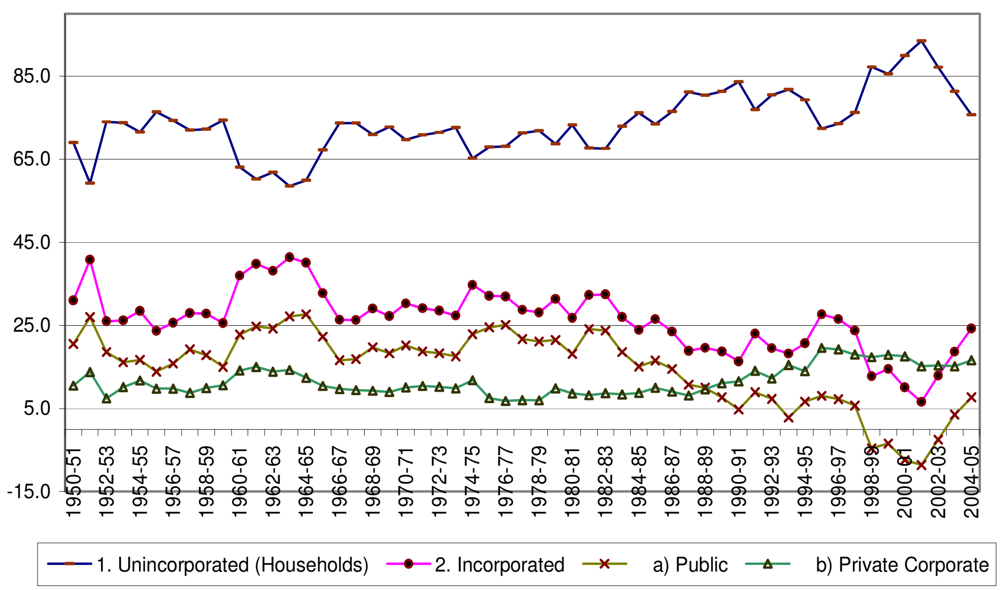

Table 7: Shares of Unincorporated and Incorporated Sectors at GDS

(Per cent)

	1950-51 to 1959-60	1960-61 to 1969-70	1970-71 to 1979-80	1980-81 to 1989-90	1990-91 to 1999-00	2000-01 to 2004-05	2000-01	2001-02	2002-03	2003-04	2004-05
1. Unincorporated (Households)	71.7	66.2	69.8	75.0	79.7	85.5	89.9	93.4	87.1	81.3	75.7
2. Incorporated	28.3	33.8	30.2	25.0	20.3	14.5	10.1	6.6	12.9	18.7	24.3
a) Public	18.1	22.1	21.2	15.9	4.4	-1.5	-7.5	-8.6	-2.5	3.5	7.6
b) Private Corporate	10.2	11.8	9.1	9.1	15.9	16.0	17.5	15.2	15.4	15.2	16.6
3. Gross Domestic Saving	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Central Statistical Organisation.

Corporate Sector

The major issues considered by the Sub-Group while projecting corporate sector savings include: (a) higher GDP growth, productivity improvement *vis-à-vis* a declining role of savings, (b) classification of corporate finance into sectors, like infrastructure, services, *etc.*, in order to capture the regional disparities of GDP growth, (c) lack of theoretical models on the behaviour of corporate savings, (d) role of business cycles of the economy *vis-à-vis* corporate performance, (e) interest rate scenario, (f) movements in ICOR, (g) movements of corporate tax rate, (h) FDI inflows, (i) stock performance and (j) credit flow to private sector.

Public Sector

The important issues that were taken into account to project public sector savings by the Sub-Group include: (a) Impact of the Proposed 6th Pay Commission Award, (b) Reduced surpluses of public sector enterprises particularly in the oil sectors, (c) Adherence to FRBM Path that requires to eliminate Central and State revenue deficits by 2008-09/2009-10, (d) Non-availability of information on the deficits of the Central and State Governments, which has bearing on public sector savings and (e) gross market borrowings and their impact on public sector savings.

Foreign Savings

The Sub-Group faced with the issue of sustainability of current account deficit (CAD) as it is important to consider whether the desired level of foreign savings is consistent with the medium-term sustainability of the external sector. More precisely, the upper bound of the foreign savings desirable from the viewpoint of higher output growth is to be determined by the sustainable level of the CAD for an economy. The composition of the financing pattern of current account is also a matter of concern for the Sub-Group. Financing of CAD may worsen from the projected baseline levels on account of global oil demand and persistence of demand supply imbalances over the medium-term. However, the Sub-Group's estimations have been arrived at broadly against a stable global economic environment.

Assumptions

While the Working Group assumed a rate of growth of 8.5 per cent as a working estimate during the Eleventh Five Year Plan, the Sub-Groups were expected to build up multiple scenarios for the growth rates of 7.0, 8.0, 8.5 and 9.0 per cent, respectively].

Further, it was assumed that inflation would be in the range of 4.5 to 5.0 per cent. It needs to be highlighted that the Working Group has taken note of the fact that owing to the productivity gains in recent times, the services sector has been going through a phase of low inflation. For instance, the communications sub-sector is experiencing a phase of negative inflation. Since the GDP deflator captures services sector, the inflation estimates based on GDP deflator is lower compared to the inflation estimates based on WPI as shown in Table 8.

Table 8: GDP Implicit Price Deflators (IPD) and WPI

2001-02		2002-03		2003-04		2004-05		2005-06 (AE)	
IPD	**WPI**	**IPD**	**WPI**	**IPD**	**WPI**	**IPD**	**WPI**	**IPD**	**WPI**
2.8	3.6	3.6	3.4	4.0	5.5	4.0	6.5	4.1	4.4

However, for exercises relating to savings estimation GDP deflator is considered as an appropriate index. In the absence of GDP deflator based inflation during the Eleventh Five Year Plan, the Sub-Groups have worked on the basis of WPI-based inflation, which is projected to be 5.0 per cent as outlined in the Approach Paper.

III.2 Sub-Group on Household Sector: methodology and results

The Sub-Group's projections are based on the following assumptions:

1. Real GDP would grow at an average annual rate of 7.0, 8.0 , 8.5 and 9.0 per cent, respectively as per four scenarios of the Approach Paper; and

2. Average annual rate of inflation would be 5.0 per cent as indicated in the Eleventh Plan Approach Paper.

While making projection, the Sub-Group had taken into account a plethora of issues, which have a potential bearing on the magnitude of household savings. First, financial deepening and its impact on household savings: The issue of financial deepening and its impact on household savings assumes importance in the Sub-Group's medium-term assessment in view of expected further financial deepening. Theoretical/empirical works on financial deepening (McKinnon, 1973 and Shaw, 1973) have propounded two major propositions: first, growth of real money balances augurs well for economic growth and saving; second, the growth of an economy depends, in part, on the degree of financial development or financial intermediation. In other words, there will be more investment in the economy through the financial system. Proxying financial deepening (FDEEP) as M3-GDPCMP ratio, the Sub-Group's empirical assessment reveals that household saving rate - overall (HSRATE) as well as financial savings (FINSRATE) - as expected, have positive significant association with financial deepening[1]. Although income growth and financial deepening can be expected to raise household savings, if the households' recourse to credit maintains its present upward trend, it might hamper the process of accumulation of productive asset base.

Equation 1

$$\underset{(2.92)}{\text{HSRATE} = 3.90} + \underset{(9.77)}{0.27 * \text{FDEEP}} + \underset{(3.23)}{0.52 * \text{AR}(1)}$$

HSRATE = 3.90 + 0.27 * FDEEP + 0.52 * AR(1)
t-values (2.92) (9.77) (3.23)

Adj. R^2 = 0.93, DW = 1.97, Mean = 16.09, SD = 3.85

Equation 2

FINSRATE = 0.23 + 0.09 * FDEEP + 0.47 * FINSRATE(-1)
t-values (0.36) (2.87) (2.98)

Adj. R^2 = 0.84, DW = 2.22, Mean = 7.68, SD= 2.51

Second, certain issues were considered on the basis of an instrument-wise analysis of the households' latest available savings data (*i.e.*, for 2005-06) and the emerging trends in preference pattern for the households:

- As a proportion to GDPCMP, household saving in bank deposits increased from 5.1 per cent in 2004-05 to 7.8 per cent in 2005-06, responding to factors like rise in interest rates, extra efforts put up by banks to raise

[1] We follow the general to specific modeling procedure of Hendry, as adopted by Athukorala and Sen, and we get the following results after dropping the insignificant variables from the regression (detailed trail runs are placed separately):

$$\Delta \text{HSRATE} = 0.03 + 0.13 * \text{GY} + 0.00 * \text{RID}_{t-1} - 0.00 * \text{INF} - 0.15 * \text{HSRATE}_{t-1}$$
(2.34) (2.18) (2.34) (-3.23) (-2.75)

R^2=0.39 Adj R^2 = 0..30 DW = 2.2

Long-run (steady-state) effects on savings rate:

Income growth	0.87
Real interest rate	0.00
Inflation rate	0.00

Results from the above error correction regression frame suggests that while the effects of interest rate and inflation rate on household savings rate are negligible, income growth has perceptible impact on household savings rate.

deposits to fund the credit demand and higher return to the savers (at 9 per cent per annum) that Senior Citizen's Deposit Scheme (which started on August 02, 2004) is providing. The Government has provided fiscal incentives in the budget for the fiscal year 2006-07 - tax relief under Section 80cc. It is expected that households will increase their preference for bank deposits in the medium term, with the policy focus on financial inclusion and greater coverage of rural and semi-urban areas under banking facilities.

- The saving of the household sector in 'shares and debentures' increased from 0.2 per cent in 2004-05 to 0.8 per cent in 2005-06, responding to higher resources mobilisation through the public issues, congenial investment climate and strong corporate profitability, as well as strong mobilisation recorded by mutual funds (other than UTI) in view of associated higher returns along with tax benefits to investors. The Sub-Group expects that this upturn is likely to continue.
- Investment in 'Claims on Government' has registered a fall from Rs.1,06,420 crore in 2004-05 to Rs.86,755 crore in 2005-06 due to a variety of reasons. Changes in provisions governing small saving instruments under claims on Government are expected to have an impact on the household savings for such instruments in the medium term. With greater penetration of products like insurance and other competing instruments, small savings may face stiff competition.
- Contractual savings are on the rise since the 1990s and during 2001-02 to 2004-05. Contractual savings are maintaining their levels achieved so far at 4 per cent of GDP. Among the instruments of contractual savings it is observed that while the share of claims on life insurance has been increasing, the share of provident funds has been experiencing a decline. It is expected that contractual saving would continue to increase with the pension reforms that are under way and several policy-initiatives that have been taken to encourage insurance penetration through private insurance companies.
- On the liability side, there is an increase in household financial liabilities, with retail loans and advances from banks constituting a dominant proportion. It may be noted that loans and advances to the household sector

from banks increased from 3.6 per cent in 2004-05 to 5.0 per cent in 2005-06 - an increase of 1.4 percentage points. This is reflective of broad-based strengthening of economic activities, in general, and pick up in agriculture and housing credit, in particular, spurred by attractive tax incentives. Further, there has been a surge in the retail loans, attributable, in turn, to growing middle class with high disposable income, education and personal loans and increased availability of credit cards loans[2].

Whether the present dominance of physical savings over financial savings for the household sector will continue in future is an issue that needs consideration, keeping in view of the current economic developments like booming residential property market, increasing loan financing for housing, favourable demographic features of the economy, high salaries in sectors (like IT, finance and BPOs) with young skilled employees earning and having higher saving potentials and savers considering real estate investment as a hedge against inflation. The rising trend of household physical savings that is the case in Indian economy recently could possibly be explained by a host of factors, namely, (a) non-residential component of physical assets, which have been presumably contributed by the unincorporated business enterprises that are included in the household sector. The size of the unincorporated business enterprises is about 40 million at present; (b) ***High Salaries in Some Sectors***: In recent years the IT, finance and BPOs have emerged as the booming sectors of the economy. The young skilled employees of these sectors earn incomes which are much higher than the average incomes of the other lines of employment in the organised sectors (of course, the unorganised sector is kept out of the purview as no authentic data base is available). These high income net worth individuals have much higher savings compared to the rest of the working force. They prefer to invest this saving in the real estate; (c) ***Real Estate Investment as Inflation Hedge***: The investment in real estate has been the destination of savings of the people in recent times particularly since 1999-2000. The average risk-averse wage-earners prefer residential investment as it would provide them with better inflation hedge compared to any financial assets; and (d) ***Increasing Loan Financing for Housing***: Increasing liquidity supply from banks and

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[2] As per the Annual Policy Statement for the year 2006-07, the share of advances to 'individuals' increased from about 10 per cent of total bank credit in March 2002 to nearly 25 per cent in January 2006. Housing loans also increased by 29.1 per cent and accounted for 14.6 per cent of incremental non-food credit.

financial institutions provide easy access to the housing loan at a reasonable interest rate. This is an added incentive for the younger high net worth wage-earners to go for housing investment.

The likely effects of Sixth Pay Commission were considered which will be effective during the Eleventh Five Year Plan period. There would be an impact on public savings and increase in the household savings as already evidenced from the effect of the past awards. However, the quantification of this effect is difficult at this stage. One way to quantify the effect would be to apply Muhleisen (1997)'s procedure where he estimated the degree by which public saving would affect private saving through the Ricardian equivalence effect. Judging from the estimated long-run relationship between private and public savings, the offset factor could be as low as 25 to 30 per cent. This estimate was comparable with other studies for developing countries that have found widely varying offset factors, ranging from close to zero to around 50 per cent.

The Sub-Group endeavoured to get an offset coefficient by running a simple OLS. In this case, the estimated coefficient was around 0.4, but with low statistical significance. This is not unexpected given the fact that our sample, which starts from 1970-71, already incorporates the effects of two pay commission awards which are generally like short-term shocks. Therefore, the regression is unable to capture the effects of this shock.

As a result of the Pay Commission awards, select instruments of household financial savings are expected to experience a rise and the effect is expected to peter out in two or three years subsequent to the award as was the in the past. A visual examination of the data from 1996-97 - the year when the Fifth Pay Commission award became effective - reveals that in 1997-98 the public savings recorded a decrease of 0.4 percentage point while the household savings recorded an increase of 0.6 percentage points (Table 9). In 1998-99, the public savings decreased by 2.3 percentage point, while the household savings increased by 1.2 per cent. In 1999-00, the increase in the public savings was by 0.1 percentage point, while the household savings have increased by 2.5 per cent. From 2000-01, the effect of the award of the Fifth Pay Commission has tapered off, reflecting the temporary nature of such Pay Commission's award.

Table 9: Household and Public Savings Rates

(Per cent)

	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01
Household Savings	17.4	17.0	17.6	18.8	21.3	21.2
Increment		1.2	0.6	1.2	2.5	-0.1
Public Savings	2.0	1.7	1.3	-1.0	-0.9	-1.8
Decrement		(-)0.3	(-).4	(-)2.3	0.1	-0.9
Bank Deposit	3.3	3.7	4.8	4.5	4.2	4.5
Provident and Pension Funds	1.9	2.2	2.1	2.6	2.8	2.3
Life Insurance Funds	1.2	1.2	1.3	1.3	1.5	1.6
Physical Saving	8.6	6.3	8.5	9.0	10.7	11.0
PDI Growth Rate	13.7	18.8	11.1	16.7	10.3	9.2

Note: Increment/decrement refers to percentage point change over the previous year.

From the analysis of data in Table 9, we see that, on average, if there is a one percentage point decrease in public savings, the household savings is expected to increase by one percentage point.

Estimation Methodology

The methodology followed was to base the projections on elasticities of the instrument-wise savings of the household sector with respect to Gross Domestic Product at current market prices (GDPCMP). On the basis of the instruments' projections based on the elasticities with respect to GDPCMP provides for accounting the preference pattern changes across instruments that occur endogenously in the economy responding to relative returns, growth dynamics as well as policy changes that happen from time to time, especially if one takes such elasticities over different time ranges. The Group had also felt the necessity of augmenting this method with a judgmental approach - especially for instruments like bank deposits, shares and debentures and Claims on Government – so as to take cognizance of the nascent trends that are beginning to emerge as per the preliminary data for 2005-06.

Results

On the basis of detailed projections, the summary position of instrument–wise household saving projections is provided in Table 10 and Table 11 for the four growth scenarios as indicated in the 11th Plan Approach Paper.

Table 10: Projection of Household Sector Savings for the 11th Plan Period

(Per cent of GDP at CMP)

Item	Actual 2003-04	Actual 2004-05	Actual 2005-06	Projected for 2007-08 to 2011-12: Scenario 1 (Growth 7 per cent)	Scenario 2 (Growth 8 per cent)	Scenario 3 (Growth 8.5 per cent)	Scenario 4 (Growth 9 per cent)
Instruments of Financial Saving							
1. Currency	1.5	1.3	1.5	1.6	1.6	1.6	1.6
2. Bank Deposits@	5.7	5.3	7.8	7.0	7.2	7.2	7.3
3. Non-Bank Deposits	0.1	0.1	0.1	0.1	0.1	0.1	0.1
4. Life Insurance Funds	1.9	2.1	2.4	3.3	3.3	3.4	3.4
5. Provident & Pension Funds	1.9	1.8	1.7	2.3	2.3	2.3	2.3
6. Claims on Government	2.8	3.3	2.5	3.0	3.0	3.0	2.9
7. Shares and Debentures	0.3	0.2	0.8	0.7	0.8	0.8	0.8
8. Units of UTI	-0.2	0.0	-0.2	-0.2	-0.2	-0.2	-0.2
9. Trade Debt	0.0	0.0	0.0	0.0	0.0	0.0	0.0
A. Gross Financial Saving (1 to 9)	**14.0**	**14.1**	**16.7**	**17.7**	**18.0**	**18.1**	**18.3**
B. Financial Liabilities	**2.6**	**3.8**	**5.2**	**6.5**	**6.7**	**6.7**	**6.8**
C. Household (Net) Financial Saving (A-B)	**11.5**	**10.3**	**11.5**	**11.3**	**11.4**	**11.4**	**11.4**
D. Household Physical Saving	**12.0**	**11.7**	**N.A.**	**12.9**	**12.9**	**12.9**	**13.0**
E. Household Saving (C+D)	**23.5**	**22.0**	**N.A.**	**24.1**	**24.3**	**24.3**	**24.4**

N.A. Not Available.

@ Bank Deposits include deposits with commercial banks, co-operative banks and societies and trade debt (net).

Note: The data pertaining to 2003-04 and 2004-05 are sourced from National Accounts Statistics (NAS) 2006, CSO while the data for 2005-06 are sourced from RBI Annual Report 2005-06.

Table 11: Projection of Household Sector Savings for the Initial and Terminal Years of the 11th Plan Period in the Four Growth Scenarios

(Per cent of GDP at CMP)

Item	Scenario 1 (Growth 7 per cent)			Scenario 2 (Growth 8 per cent)			Scenario 3 (Growth 8.5 per cent)			Scenario 4 (Growth 9 per cent)		
	2007-08	2011-12	Avg.	2007-08	2011-12	Avg.	2007-08	2011-12	Avg.	2007-08	2011-12	Avg.
Instruments of Financial Saving												
1. Currency	1.4	1.7	1.6	1.4	1.8	1.6	1.4	1.8	1.6	1.4	1.8	1.6
2. Bank Deposits	6.2	8.0	7.0	6.2	8.2	7.2	6.2	8.3	7.2	6.3	8.4	7.3
3. Non-Bank Deposits	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
4. Life Insurance Funds	2.8	3.8	3.3	2.8	3.9	3.3	2.8	4.0	3.4	2.9	4.0	3.4
5. Provident & Pension Funds	2.1	2.5	2.3	2.1	2.5	2.3	2.1	2.5	2.3	2.1	2.5	2.3
6. Claims on Government	3.1	2.8	3.0	3.1	2.8	3.0	3.1	2.8	3.0	3.1	2.8	2.9
7. Shares and Debentures	0.5	1.1	0.7	0.5	1.2	0.8	0.5	1.2	0.8	0.5	1.2	0.8
8. Units of UTI	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2
9. Trade Debt	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
A. Gross Financial Saving (1 to 9)	**15.9**	**19.7**	**17.7**	**16.0**	**20.2**	**18.0**	**16.1**	**20.4**	**18.1**	**16.1**	**20.6**	**18.3**
B. Financial Liabilities	**5.3**	**7.8**	**6.5**	**5.3**	**8.1**	**6.7**	**5.4**	**8.3**	**6.7**	**5.4**	**8.5**	**6.8**
C. Household (Net) Financial Saving (A-B)	**10.7**	**11.9**	**11.3**	**10.7**	**12.0**	**11.4**	**10.7**	**12.1**	**11.4**	**10.7**	**12.2**	**11.4**
D. Household Physical Saving	**12.4**	**13.3**	**12.9**	**12.4**	**13.4**	**12.9**	**12.4**	**13.5**	**12.9**	**12.5**	**13.5**	**13.0**
E. Household Saving (C+D)	**23.1**	**25.2**	**24.1**	**23.1**	**25.5**	**24.3**	**23.2**	**25.6**	**24.3**	**23.2**	**25.7**	**24.4**

Avg. Average

Household saving has two broad components *viz.* saving in physical assets and saving in financial assets. The aggregate household savings (HS) are obtained by adding up these two components. This yields an average household sector saving rate of 24.1 per cent under scenario 1 (with an assumed growth rate of 7.0 per cent), 24.3 per cent under scenario 2 (with an assumed growth rate of 8.0 per cent), 24.3 per cent under scenario 3 (with an assumed growth rate of 8.5 per cent) and 24.4 per cent under scenario 4 (with an assumed growth rate of 9.0 per cent) during the Eleventh Five Year Plan period, *i.e.*, 2007-08 to 2011-12.

It may be noted that estimation of household savings, its instruments as well as future projections, are beset with complexities, especially in an economy that is undergoing structural changes in its real and financial sectors. Importantly, what needs to be recognized is that measurement of savings does affect its estimation. Until such time as it is feasible to fully measure household income and expenditure, household physical savings in assets should be adjusted by the expenditure undertaken to acquire those assets (financial liabilities). This is more in line with conceptual definitions of savings and will give a better picture of financial deepening and intermediation. Secondly, contractual savings are in a crucial stage of evolution with greater entry of private participation in insurance business providing innovative contractual products. Thirdly, preference pattern of households is also evolving in respect of bank deposits. In view of the above and the complex interplay of a number of variables impacting on savings, like income distribution, interest rates, tax policies, demographic profile, changing savings behaviour of different age groups of population, changing pattern of consumption, life style and changing preference pattern between physical and financial savings, the Working Group has projected household savings under certain assumptions based on past trends as well as emerging trends. Therefore, the procedures currently adopted for estimation of household savings and its projection needs a relook, as we move along.

III.3 Sub-Group on Private Corporate Sector Savings: Methodology and results

The private corporate sector comprises: (i) non-government non-financial companies, (ii) commercial banks and insurance companies working in private sector, (iii) co-operative banks, credit societies and non-credit societies, (iv) non-banking financial companies in the private sector and (v) quasi-corporate bodies.

Saving is defined as the excess of current income over current expenditure. Net saving (NS) is defined as retained profits of private corporate business sector adjusted for non-operating surplus/deficit. Retained profits are those which are ploughed back into business after making commitments to depreciation provision for various fixed assets, debts (in the form of interest payments), government (tax provisions) and to share-holders (dividends). Non-operating surplus/deficit (NOP) comprises (a) profit/loss on account of (i) sale of fixed assets, investments, *etc.*, and (ii) revaluation/devaluation of foreign currencies, (b) Provisions no longer required written back, (c) insurance claims realized, and (d) income or expenditure relating to the previous years and such other items of non-current nature. Depreciation provision (DEPR) at book value as provided in the profit/loss account is added to the net saving to obtain the gross saving (GS).

Projections have been worked out separately for the constituents of the sector (private non-financial companies, co-operative banks and societies (including quasi-corporate bodies), private commercial banks and insurance and other financial companies (covering financial and investment companies) under the four growth assumptions. In the process, ratio approach has been adopted for non-financial corporate sector, while past trends in growth and ratios have been adopted for financial sector. Methodology followed for projecting the savings of each of the major constituents of the private corporate sector is discussed below.

Commercial Banks, Insurance Companies, Cooperative Banks/Societies and Other Quasi-Corporate Bodies

In view of the small share of private commercial banks, cooperative banks/societies and other quasi-corporate bodies in gross savings of the private corporate sector, the estimates have been worked out based on past trends. It is assumed that the gross savings of the private commercial banks and insurance companies would increase by 25.0 per cent and 30.0 per cent, annually (for the alternative growth rates of GDP at 7.0-8.0 per cent and 8.5-9.0 per cent) during the Plan Period. Corresponding depreciation for these institutions is also assumed to rise by 6.0 per cent and 7.0 per cent, respectively. The gross savings and depreciation of cooperative banks and societies (including quasi-corporate bodies) are assumed to rise by 10.0 per cent each, annually during the 11th Plan period for the GDP growth of 7.0-8.0 per cent. However, these are expected to grow by 15.0 per cent and 12.0 per cent, respectively, for both the GDP growth of 8.5 per cent and 9.0 per cent.

Financial and Investment Companies

This component of the private corporate sector includes HDFC and other financial and investment companies. Based on the past trends, the main income of these companies is assumed to grow by 15.0 per cent each for the years, 2005-06 and 2006-07. It is observed in the past that the retained profits-main income ratio varied in range of 3.5 to 20.4 per cent during 2001-02 to 2004-05. Assuming continued good performance in the next two years, the retained profits of these companies are assumed to form about 20.0 percent of main income for the years, 2005-06 and 2006-07. Based on the growth in gross savings observed in the past in sample companies, the growth in savings is assumed at 20.0 per cent per annum for the GDP growth of 7.0-8.0 per cent and 25.0 per cent per annum for the GDP growth of 8.5-9.0 per cent during the 11th Plan period. Corresponding growth in depreciation is assumed to be 5.0 per cent and 6.0 per cent, respectively.

Non-Financial Companies

Under ratio approach, the trends observed in sales, and in certain ratios like profits before tax (PBT) to sales, tax provision to PBT, *etc.* in the recent past formed the guiding factors in assuming the ratios for the non-financial private corporate sector during the Plan period. Besides, various factors, such as the expectations for a better performance leading to higher retained profits to profits after tax (PAT), further rationalisation of corporate tax rates have also been considered in projecting different parameters for the sector. At the first stage, growth in sales of non-financial corporate sector is projected based on a simple regression model (with explanatory variables as growth in GDP, and a business cycle dummy) covering period 1980-81 to 2004-05.[3] The database on sales is based on the sample companies covered in the public and private limited non-financial companies published by DESACS, Reserve Bank of India. From the projected sales data, the profits before tax (PBT) is worked out based on PBT to sales ratio. Based on the trend observed in the recent past, the PBT-sales ratio is assumed to be 10 per cent for the Plan period. The tax provision to PBT ratio during 2003-04 and 2004-05 has been around 28 per cent and we expect same rate to persist

[3] The time dummy is defined as follows: It takes value 1 for all the years in (1976 to 1981), (1988 to 1991), (1995 to 1997), (2004 to 2008) and 2012. For remaining years, it is assumed to be zero.

during the Plan period. Similarly, dividend-payout ratio is assumed to be around 35.0 per cent based on the past trend. The non-operating surplus in the year arising from the business transactions of the previous years is assumed to be around 0.5 per cent of sales for the Plan period. In addition, depreciation to sales ratio is assumed to be around 5.0 per cent through out the Plan period.

Results

Projected savings for the private corporate sector, based on the alternative scenarios is presented in Table 12. Gross savings of the private corporate sector are projected to be around 5.67 per cent (in terms of GDP at current market prices) during the 11th Plan period.

Table 12: Gross Savings Rate of the Private Corporate Sector for Eleventh Plan Period - Ratio Approach

(As a per cent to GDP at current market prices)

Alternative Scenarios	Average for the Plan Period
1. GDP growth at 7.0 per cent	5.56
2. GDP growth at 8.0 per cent	5.56
3. GDP growth at 8.5 per cent	5.67
4. GDP growth at 9.0 per cent	5.68
Note: Inflation is presumed to be 5.0 per cent.	

III.4 Sub-Group on Public Savings: Methodology and results

Public sector, comprising the Central government, State governments, Central Public Sector Undertakings (CPSUs) and State Level Public Enterprises (SLPEs), claims a substantial proportion of private savings to finance not only public investment, but a sizeable part of government's consumption expenditure. This public sector's claim on private savings, also known as public sectors' draft on private savings, has three components; namely (a) Gross Fiscal Deficit of Centre & States/UTs, (b) Extra Budgetary Resources (EBR) of CPSUs and SLPEs and (c) Disinvestments. Of these, the Gross Fiscal Deficit (GFD) is the major component.

The public sector savings projections had assumed an annual inflation rate of 5.0 per cent during the Eleventh Plan. So far as the growth trajectory is concerned, the Government finance has been projected under four growth scenarios such as 7.0, 8.0, 8.5

and 9.0 per cent, respectively. It is also recognized that enactment of FRBM legislation both at Centre and State level puts limit on the borrowings of both the Centre and the States as well as on revenue expenditure of both level of governments. Considering the implication of FRBM under the present structure of government finance, the projections of the Government finances with the following variations have been attempted:

i. FRBM target of RD and GFD to be realised by the year 2008-09 as in the enacted legislation, RD has been taken as the binding constraint, the revenue-capital mix of the plan expenditure is fixed;
ii. FRBM target of RD and GFD to be realised by the year 2008-09 as in the enacted legislation, both RD and GFD have been taken as the binding constraint, the revenue-capital mix of the plan expenditure is allowed to change on a year to year basis;
iii. The target year of realising FRBM constraint on GFD and RD is shifted by two years to 2010-2011, RD has been taken as the binding constraint, the revenue-capital mix of the plan expenditure is fixed;
iv. The target year of realising FRBM constraint on GFD and RD is shifted by two years to 2010-2011, both RD and GFD have been taken as the binding constraint, the revenue-capital mix of the plan expenditure is allowed to change on a year to year basis.

Methodology

Projection of Central Government finances for Eleventh Five Year plan(EFP) has been based on the budget estimate of 2006-07 of Central government. Projection has been made separately for various components of revenue receipt, non-debt capital receipt and non-plan expenditure of the Central government. The upper limit of the Central government borrowing is exogenously given and Plan expenditure (Gross Budgetary Support (GBS) for Plan) has been taken as residual.

In this exercise, it is assumed that the capital expenditure to GBS ratio is fixed at 22.0 per cent. It may be noted that the gross budget support to plan under central finance is substantially revenue loaded, with the revenue expenditure component of GBS being more than 80.0 per cent at present. The fixed ratio assumption confirms to the fiscal stance under which (a) plan programme/schemes are to be operationalised under similar guidelines as those during the Tenth Plan and (b) Central Plan transfers to the States follow similar pattern that was adopted during the Tenth Plan. In this case, the revenue balance would come under pressure since the GBS with fixed capital ratio has a very large revenue component. The way to bring down the revenue deficit would be to compress the GBS resulting to a level of fiscal deficit, which is much below the FRBM specified level of 3.0 per cent of GDP.

It is recognized that in order to sustain the high growth of the order envisaged in the Eleventh Plan Approach Paper, there is a need to step up the capital expenditure. However, Government borrowing has been constrained by the FRBM legislation, which mandates the net borrowing of the government (fiscal deficit) to be reduced to 3.0 per cent of GDP and revenue deficit to be zero by the year 2008-09 and also subsequently to be contained within 3.0 per cent of GDP. According to the current trends, fiscal targets are attainable although the revenue deficit is higher than the FRBM stipulation. Part of this problem is due to the fact that the revenue expenditure component in the Plan is on an increasing trend (Table 13).

Table 13: Combined Plan Revenue Expenditure of the Centre and States

Year	Combined Plan Revenue Expenditure (Rs.Crore)	As % of GDP
1996-97	49,446	3.6
1997-98	53,205	3.5
1998-99	61,495	3.5
1999-00	68,353	3.5
2000-01	76,391	3.6
2001-02	88,906	3.9
2002-03	97,208	4.0
2003-04	103,851	3.8
2004-05	128,679	4.1
2005-06	163,020	4.6

Note: Data for 2004-05 relate to accounts of the Centre and revised estimates of States. Data for 2005-06 relate to Revised estimates of Centre and budget estimates of States
Source: Budget documents of the Centre and States

Results

The combined Gross Fiscal Deficit of Centre and States under alternative growth rate scenarios with the assumption of fixed capital ratio to gross budget support (GBS) varies within a range of 3.5 per cent of GDP to 4.1 per cent of GDP as indicated in Table 14 below. **On average, the Government finances would claim about 3.5 to 4.1**

percent of GDP during the Eleventh plan from the private savings. This is comparable to the projection of made by the Sub-Group for the Tenth plan under 8.0 per cent growth rate scenario (3.76 per cent of GDP was projected as governments' draft from the private sectors saving during the Tenth Plan). The corresponding revenue deficit of the Government works out to be within the range of 0.2 per cent to 0.15 per cent of GDP. In this case, capital ratio of GBS being fixed at 22.0 per cent for the Centre and 50.0 per cent for the States, revenue deficit target becomes the binding constraint and total Plan outlay is compressed much below the level that is required for macroeconomic consistency.

Table 14: Combined GFD, RD and Plan Outlay – Centre & States - Eleventh Plan Under Alternative Growth Scenarios

(**Fixed Capital ratio of GBS**)

Growth target	7.0 per cent	8.0 per cent	8.5 per cent	9.0 per cent
Plan outlay	4.86	5.48	5.83	6.25
Fiscal Deficit	3.50	3.78	3.93	4.10
Revenue Deficit	0.20	0.20	0.19	0.15

Under varying Capital ratio to GDP assumption, both levels of government would be in a position to borrow at the ceiling level of GFD. **Therefore, the combined GFD would remain at 5.72** per cent **of GDP for all the growth rate scenarios as indicated in Table 15 below and Government finances would claim about 5.72** per cent **of GDP during the Eleventh plan from the private savings.** The total plan outlay of the Centre and States together, in this case has improved much and works out to vary within a range of 6.85 per cent to 7.7 per cent of GDP. The corresponding revenue deficit of the Government is maintained within the FRBM constraint of 0.2 per cent of GDP on average in the Eleventh plan.

Table 15: Combined GFD, RD and Plan Outlay - Centre+States - Eleventh Plan Under Alternative Growth Scenarios

(**Changed Capital ratio of GBS**)

Growth target	7.0 per cent	8.0 per cent	8.5 per cent	9.0 per cent
Plan outlay	6.85	7.20	7.39	7.69
Fiscal Deficit	5.72	5.72	5.72	5.72
Revenue Deficit	0.20	0.20	0.20	0.20

(a) Draft of Public Sector on Private Savings

In India, the public sector traditionally has been the deficit sector obtaining resources from the surplus private sector particularly the households. The public sector comprises: i) government administration, ii) departmental enterprises and iii) non-departmental enterprises. Conceptually, the draft of the public sector on the savings of the private sector can be derived in two ways, v*iz.,* a) savings-investment approach and b) financing approach. Operationally, the draft of the public sector can be derived by aggregating the following three components:

- Gross Fiscal Deficit of the government sector (including government administration of and departmental commercial undertakings (DCUs) of the Centre and States);
- Extra-budgetary resources of DCUs and non-departmental public enterprises (NDPEs) of the Central and State governments;
- Disinvestment by the Central and State governments.

The past trends indicate that the draft of public sector on private savings has declined from 11.4 per cent of GDP in the 9^{th} Plan period to 10.1 per cent in 10^{th} Plan period primarily on account of narrowing down of Gross Fiscal Deficit of the Centre and States.

Projections for the 11^{th} Plan

Assumptions and results

i) The Centre and States would adhere to the targets set under respective fiscal responsibility legislations.
ii) Extra-budgetary resources of DCUs and NDPEs are assumed to remain at around 2 per cent of GDP based on the trends analysis.
iii) Disinvestment is assumed to be nil.

Table 16: Public Sector's Draft on Private Savings

(per cent of GDP)

Year	Gross Fiscal Deficit (Combined)	Extra Budgetary Resources (Centre)	Extra Budgetary Resources (States)	Disinvestment	Total
1	2	3	4	5	6
2007-08	6.0	1.2	0.8	0.0	8.0
2008-09	5.6	1.2	0.8	0.0	7.6
2009-10	5.6	1.2	0.8	0.0	7.6
2010-11	5.7	1.2	0.8	0.0	7.7
2011-12	5.7	1.2	0.8	0.0	7.7
Average	**5.7**	**1.2**	**0.8**	**0.0**	**7.7**

The draft of public sector on private savings would also narrow down to 7.7 per cent of GDP for the 11th Plan from 10.1 per cent of GDP during the 10th Plan (Table 16). However, it may be noted that as the disinvestment is assumed to be zero, in the event of any disinvestment in future, the public sector's draft on private savings would increase to that extent. Further, the implementation of the Sixth Pay Commission (SPC)'s recommendations may affect the savings of the public sector if the revenue buoyancy does not offset the incremental effect in expenditure.

(b) Public Savings

According to the National Accounting System followed in India, the public sector savings is derived by aggregating the savings of three sub-sectors of the public sector i) government administration, ii) departmental enterprises and iii) non-departmental enterprises. The Economic and Functional Classification (EFC) of the Government of India provides the estimates of the savings of Central Government including the details of the gross savings of Government administration, net profits of DCUs and depreciation provisions of DCUs. The gross savings of the Central Government is the difference between receipts and expenditure in the current accounts of the Government administration (Account 1) DCUs (Account 2) of the EFC.

Revenue Deficit and Savings of the Government - Accounting Relationship: Historically, the revenue deficit of the Central Government as per the Budget varies from the estimates of gross savings as published in the EFC. The differences arise due to reclassification of budgetary items of receipts and expenditure in the EFC to estimate the gross savings of the Government. In particular, in order to derive the savings/dissavings of Government administration, the following main adjustments (apart from contra entries) need to be made:

i. Netting out expenditures of capital nature from revenue expenditure and adding defence capital outlay to arrive at current expenditure.

ii. Netting out foreign grants transferred to capital account and adding back profits of DCUs.

It may be noted that since the EFC of the State budgets are not readily available, the exercise of arriving at government administration savings from revenue deficit could not be undertaken in respect of State governments. On account of above adjustments, revenue deficit of the Government happens to be more than dissavings of the Government administration.

The trends in public sector savings across its various categories are presented in Table 17. The public sector savings, which were negative since 1997-98, turned positive from the year 2003-04.

Table 17: Public Sector Saving Rates

(Per cent of GDP)

	Public Sector	*of which* Public authorities	Government Administration	Departmental enterprises	Non-departmental enterprises
1	2 =(3+6)	3 =(4+5)	4	5	6
1997-98	1.3	-2.1	-2.8	0.7	3.4
1998-99	-1.0	-4.5	-5.1	0.6	3.5
1999-2000	-0.9	-3.8	-5.0	1.2	3.0
2000-2001	-1.8	-4.7	-5.5	0.8	2.9
2001-02	-2.0	-5.5	-6.0	0.6	3.5
Average	**-0.9**	**-4.1**	**-4.9**	**0.8**	**3.3**
2002-03	-0.7	-4.7	-5.2	0.5	4.0
2003-04	1.0	-3.1	-3.7	0.5	4.2
2004-05	2.2	-2.2	-2.7	0.5	4.4
2005-06	3.2	-1.2	-1.7	0.4	4.4
2006-07	3.9	-0.5	-1.0	0.3	4.4
Average	**1.9**	**-2.3**	**-2.9**	**0.5**	**4.3**

Projections for 11th Plan

The projections for the public sector savings for the 11th Plan are made under four growth scenarios *viz.*, 7.0 per cent, 8.0 per cent, 8.5 per cent and 9.0 per cent.

Assumptions:

- The Centre and States would adhere to the targets set under respective fiscal responsibility legislations i.e. revenue deficit will be nil by 2008-09 for the Centre and States and be at that level for the remaining period of the Plan.

- While it is desirable that measurement of the revenue deficit needs to be consistent with the Economic and Functional Classification that provides estimates of Government savings, in practice there is a conceptual difference between the revenue deficit and Government savings/dissavings as per the Economic and Functional Classification. Taking a conservative view, it is assumed that this difference would be of the order of 0.2 per cent of GDP.

- The savings of DCUs are assumed to decline to 0.3 per cent of GDP in the 11th Plan period as BSNL has become an NDPE.

The above three assumptions are common to all the growth scenarios.

- It is also assumed that there will not be any investment in new public sector projects during the Eleventh Plan period. In view of the higher GDP growth, it is assumed that without any fresh investment into new projects, the existing public enterprises would maintain the projected savings. It may be mentioned that the projected saving level for non-departmental enterprises is lower than the current level due to the fact that there is a perceptible decline in the non-departmental enterprises' share in overall GDP since 2002-03 from 12.5 per cent to 11.5 per cent in 2004-05.

Based on the above assumptions, the projections of public sector savings rate, on an average, worked out to 3.7 per cent (under 7 per cent growth scenario), 4.1 per cent (under 8 per cent growth scenario), 4.2 per cent (under 8.5 per cent growth scenario) and 4.6 per cent (under 9 per cent growth scenario). Details of the four scenarios of the projections of public sector savings are set out in Table 18.

Table 18: Projections of Public Sector Savings for 11th Plan: Alternate Scenarios

(Per cent of GDP)

Scenario 1: Growth Rate 7.0 per cent

Year	Revenue Deficit	Government Administration	Departmental enterprises	Public Authorities	Non-department enterprises	**Public Sector**
1	2	3	4	5=(3+4)	6	**7=(5+6)**
2007-08	1.1	-0.9	0.3	-0.6	3.3	**2.7**
2008-09	0	0.2	0.3	0.5	3.3	**3.8**
2009-10	0	0.2	0.3	0.5	3.4	**3.9**
2010-11	0	0.2	0.3	0.5	3.6	**4.1**
2011-12	0	0.2	0.3	0.5	3.6	**4.1**
Average	**0.2**	**0.0**	**0.3**	**0.3**	**3.4**	**3.7**

Scenario 2: Growth Rate of 8.0 per cent

Year	Revenue Deficit	Government Administration	Departmental enterprises	Public Authorities	Non-department enterprises	**Public Sector**
1	2	3	4	5=(3+4)	6	**7=(5+6)**
2007-08	1.1	-0.9	0.3	-0.6	3.8	**3.2**
2008-09	0	0.2	0.3	0.5	3.8	**4.3**
2009-10	0	0.2	0.3	0.5	3.8	**4.3**
2010-11	0	0.2	0.3	0.5	3.8	**4.3**
2011-12	0	0.2	0.3	0.5	3.8	**4.3**
Average	**0.2**	**0.0**	**0.3**	**0.3**	**3.8**	**4.1**

Scenario 3: Growth Rate of 8.5 per cent

Year	Revenue Deficit	Government Administration	Departmental enterprises	Public Authorities	Non-department enterprises	**Public Sector**
1	2	3	4	5=(3+4)	6	**7=(5+6)**
2007-08	1.1	-0.9	0.3	-0.6	3.9	**3.3**
2008-09	0	0.2	0.3	0.5	3.9	**4.4**
2009-10	0	0.2	0.3	0.5	3.9	**4.4**
2010-11	0	0.2	0.3	0.5	3.9	**4.4**
2011-12	0	0.2	0.3	0.5	3.9	**4.4**
Average	**0.2**	**0.0**	**0.3**	**0.3**	**3.9**	**4.2**

Scenario 4: Growth Rate of 9.0 per cent

Year	Revenue Deficit	Government Administration	Departmental enterprises	Public Authorities	Non-departmental enterprises	**Public Sector**
1	2	3	4	5=(3+4)	6	**7=(5+6)**
2007-08	1.1	-0.9	0.3	-0.6	4.3	**3.7**
2008-09	0	0.2	0.3	0.5	4.3	**4.8**
2009-10	0	0.2	0.3	0.5	4.3	**4.8**
2010-11	0	0.2	0.3	0.5	4.3	**4.8**
2011-12	0	0.2	0.3	0.5	4.3	**4.8**
Average	**0.2**	**0.0**	**0.3**	**0.3**	**4.3**	**4.6**

In the absence of an exact relationship between the combined revenue deficit of the Government and the Government savings, the Government savings could be estimated through the observed relationship between the two variables over the past years. It may be noted that the public sector savings projected above does not vary over the years, because the revenue deficit is taken as an exogenous policy variable under the FRBM constraint.

The projections worked out in this note indicate that public sector savings would improve **to around 3.7-4.6 per cent of GDP** in 11th Plan under different growth scenarios from 2.2 per cent in 2004-05 (for which latest data are available). The draft of public sector on private savings would also narrow down to 8.2 per cent of GDP for the Eleventh Plan from 10.1 per cent of GDP during the Tenth Plan. The implementation of Six Pay Commission (SPC)'s recommendations may affect the savings of the public sector if the revenue buoyancy does not offset the incremental effect in expenditure.

III.5 Sub-Group on External Sector Savings

Estimation methodology: Modeling Current Account Balance

The determination of foreign savings (CAD) over a medium-term horizon in a more open macroeconomic framework has been examined in a model based approach by the Sub-Group. Projections for the current account balance have to be built upon a host of domestic and external macroeconomic indictors, financial variables and policy instruments. This would require estimating a combination of structural and behavioural relationships for the major components of foreign savings, broadly within the framework of current and capital account transactions. A brief discussion on the model-based approach to estimating foreign savings is set out below.

(i) Net exports of goods and services are conventionally regarded as injection of external demand supplementing aggregate domestic demand. In India, the typical situation is that, given the supply constraints, some part of domestic demand is satisfied externally, *i.e.*, through imports. For countries with limited degree of external openness and continued reliance on sustainable current account targets, foreign capital inflows can meet the financing of net import demand and help in achieving other macro economic objectives such as reserve adequacy.

(ii) Beginning with the trade account, merchandise *exports* are postulated to be determined by world demand conditions (represented by world GDP), domestic export prices *i.e.,* price faced by the foreign buyer, and the world export prices that generate the incentive for export production. The exchange rate effect on exports is captured by the variable of domestic export price (*i.e.,* export prices deflated by nominal exchange rate). It may be mentioned that given the shifting pattern of India's trade with the faster growing economies of Asia, the foreign trade of India is expected to rise at a relatively faster trade. With progressive reduction in tariffs and access to cheaper inputs, competitive technology and Indian companies' overseas acquisitions for acquiring the supply chain and the markets, India's trade is likely to rise at a faster pace.

Exports= f (World GDP, Domestic export price, world export price)

(iii) With regard to the impact of Special Economic Zones (SEZs) on exports, it has been observed that the international standard in terms of gestation lag for SEZ investments is 4-5 years. In other words, such investments being planned/made at present would result in higher additional exports, earliest by 2010-11. The Sub-Group, therefore, felt that the impact of the SEZs presently being planned or set up, on additional export and import during the medium term might not be significant for the Eleventh plan period. Further, it is possible that some of the additional export capacity required to sustain the normal projections in exports could also be located in these SEZs, given the current fiscal incentives. For instance, the total projected increase in exports in 2010-11 is to the tune of USD 30,000 million, while the total full year impact of the SEZs is estimated at USD 5000 million, which can easily be subsumed into the former.

(iv) Import demand has been estimated separately for oil and non-oil imports. *Oil imports* are posited to be determined by non-agricultural GDP and crude oil prices. *Non-oil import* demand is taken to be a function of manufacturing GDP[4], import prices and manufacturing WPI (to explain the relative attractiveness of imports *versus* domestic substitutes), and effective tariff (lower tariff rates are expected to result in higher imports).

Oil Imports = f (Non agricultural GDP, crude oil prices)

Non-Oil Imports = f (Manufacturing GDP, import prices, Manufacturing WPI, Tariff)

[4] Non-oil imports are closely linked to manufacturing GDP as a predominant part of non-oil imports in the form of capital goods and industrial raw materials which directly enter the manufacturing process.

(v) Private Transfers reflect the income receipts from the Indians staying abroad. These are assumed to be determined by one period lagged value and changes in nominal exchange rates.

Net Pvt Transfers = f (US GDP, Net Pvt Transfers{-1}, exchange rate)

(vi) Services exports (receipts) could be expected to increase with the increase in income of advanced countries as they can spend more on imports of software and other services. Further, the receipts will go down with the increase in exchange rates as the cost of services will increase for the foreigners. Thus,

Services Receipts = f (US GDP, exchange rate)

(vii) *Services imports* will increase with the increase in domestic GDP and exchange rate depreciation.

Services Payments = f (GDP, exchange rate)

(viii) *Investment income receipts* depend on the deployment of foreign currency assets (FCA) by the RBI. Thus, investment income receipts would be determined by the level of FCA and interest rate on medium term US Government bonds.

Investment Income Receipts = f (FCA, interest rate on US Govt. bond)

(ix) Investment income payments represent the servicing of capital account transactions (both debt and non-debt) in the form of interest, profits and dividend. Therefore, investment income payments will be determined by external debt and exchange rate as depreciating Indian rupee will increase the repayment liability in rupee terms.

Investment Income Payments = f (External Debt, exchange rate)

(x) From the above behavioural equations the *invisibles*, *net,* can be calculated as:

Invisibles (net) = Net Pvt Transfers + [Services Receipts - Services Payments] + [Investment Income Receipts - Investment Income Payments]

(xi)Again, the current account balance is obtained through the following transformations:

CAB = (X-M) + Invisibles (net)

Modeling Capital Inflows

Net capital flows can also be modeled as a mirror of the external resource balance in the current account with an adjustment for changes in reserves and other transactions. An empirical exercise can be undertaken to estimate the major components of capital flows *e.g.,* foreign direct investment, external commercial borrowing and NRI deposits (Table 20).

(i) FDI inflows were modelled to depend upon growth in domestic GDP, as the increase in domestic income due to better performance of different sectors, attract FDI to India.

Inward FDI = f (Inward FDI {-1}, GDP)

(ii) Non-resident deposits depend upon the income of the Gulf countries (since a large proportion of these deposits are from the Gulf countries), and the interest rate differential between India and abroad.

NRI Deposits = f (NRI {-1}, Interest rate differential, Gulf Income)

(iii) External Commercial Borrowings are hypothesized to depend upon rate of interest in India, debt service ratio and imports.

ECB Inward = f (Debt service ratio, Imports, Rate of Interest)

(iv) Other components of capital flows *viz.,* External Assistance, portfolio flows, FDI outflows, Short term credit, non-NRI banking capital are estimated based on their trend.

(v) External assistance and ECB outflows follow the existing repayment schedule and also take into account the repayment for fresh borrowings.0

Results:

Table 19: Projections of CAD: Alternative Scenarios for the Eleventh Plan (Averages for the Plan Period)				
Items	*Scenario I* *GDP 7.0 per cent*	*Scenario II* *GDP 8.0 per cent*	*Scenario III* *GDP 8.5 per cent*	*Scenario IV* *GDP 9.0 per cent*
1	2	3	4	5
Real GDP Growth Rate (per cent)	7.0	8.0	8.5	9.0
Average Inflation Rate (per cent)	5.0	5.0	5.0	5.0
Crude Prices, Indian Basket (US$ pb)	72.5	72.5	72.5	72.5
Exports	15.3(17.0)	15.3 (17.8)	15.5(18.6)	15.7(19.3)
Oil Import	5.1(10.6)	5.2 (11.5)	5.3(13.2)	5.3(13.3)
Non-oil Import	17.5(18.5)	17.7 (20.1)	18.0(21.1)	18.4(23.0)
Trade Balance/GDP (per cent)	-7.3	-7.9	-7.8	-8.0
Invisible Balance/GDP (per cent)	5.9	5.4	5.4	5.2
of which : Pvt Transfers	3.0 (13.3)	3.0 (13.3)	3.0 (13.3)	3.0 (13.3)
Services	3.8 (26.9)	3.4 (23.9)	3.4(22.0)	3.3 (22.0)
Investment Income	-0.9 (21.0)	-1.0 (21.0)	-1.0 (21.0)	-1.1 (21.0)
Current Account Balance/GDP (per cent)	**-1.4**	**-2.5**	**-2.4**	**-2.8**

Note: 1. Figures are rounded-off to the first digit.
2. Figures in brackets are growth rates.
3. Under scenario I, invisible balance marginally rises due to high elasticity of services imports to GDP (2.5). Thus, with a moderation in real GDP growth, services demand slows down and payments decline more than proportionally.

Table 20: Net Capital Flow Estimates 2007-08 to 2011-12: Alternative Scenarios (Averages for the Plan Period)

Items	*Scenario I GDP 7.0 per cent*		*Scenario II GDP 8.0 per cent*		*Scenario III GDP 8.5 per cent*		*Scenario IV GDP 9.0 per cent*	
	US $ billion	***per cent to GDP***	***US $ billion***	***per cent to GDP***	***US $ billion***	***per cent to GDP***	***US $ billion***	***per cent to GDP***
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
FDI, net	9.8	0.7	10.7	0.8	12.6	0.9	14.1	1.0
NRI deposits	8.7	0.6	8.7	0.6	8.7	0.6	8.7	0.6
ECBs/FCCBs	10.5	0.8	10.5	0.8	10.5	0.8	10.5	0.8
of which: *Disbursement*	20.0	1.5	20.0	1.5	20.0	1.5	20.0	1.5
Repayment	9.5	0.7	9.5	0.7	9.5	0.7	9.5	0.7
Portfolio	7.1	0.5	6.7	0.5	8.4	0.6	8.5	0.6
External Assistance, net	1.6	0.1	1.6	0.1	1.6	0.1	1.6	0.1
Non-NRI Banking Capital	2.1	0.2	2.1	0.2	2.1	0.2	2.1	0.2
Short Term Credit, net	2.8	0.2	2.8	0.2	2.8	0.2	2.8	0.2
Net Capital Flows	42.6	3.1	43.1	3.2	46.7	3.4	48.3	3.5
Memo:								
Stable Flows*	32.7	2.4	33.6	2.5	35.5	2.6	37.0	2.7

* Stable flows are defined to represent all capital flows excluding portfolio flows and short term credit.
Note: Figures are rounded-off to the first digit.

In sum, although the average level of net capital flows under the different scenarios would be 3.1-3.5 per cent of GDP, the stable capital flows would be relatively lower between 2.4-2.7 per cent of GDP. Looking from the point of view of sustainability of higher CAD and their financing through normal capital flows, it would be appropriate to contain the CAD between 2.0 to 2.5 per cent of GDP. Considered from the angle of financing CAD, higher GDP growth would simultaneously entail the need to encourage relatively longer-term capital flows. Specifically among the long-term flows, the net FDI inflows would need to be raised to around 1.5 per cent of GDP from the present level of 0.7 per cent to meet the additional financing requirements of high growth (Table 19 and Table 20).

III.6 Sub-Group on SME and Agriculture

(a) Agriculture

Agriculture continues to be crucial for the country's economy as it generates about 20 per cent of India's GDP and provides employment to nearly two-third of its population. A buoyant agricultural sector is, therefore, necessary to ensure food security, provide livelihood to a large proportion of the workforce, contribute to the growth of the economy by producing wage goods, raw material for industry, goods for export, generate surpluses and provide markets for non-agricultural goods. To achieve 11th FYP expectations of growth of Indian economy, agricultural production will have to grow steadily at the rate of 4 per cent per annum. However, the growth in the agriculture and allied sector has shown a secular decline after the 8th plan period. It fell from 4.7 per cent during the 8th plan period to 2.1 per cent in the 9th plan and then plummeted to 1.8 per cent in the 10th plan. One of the reasons for the low growth in agriculture sector may be the declining share of this sector from 5.2 per cent during 8th FYP to 4.9 per cent during the 9th FYP and further to 3.9 per cent in the 10th FYP in total plan allocations over the period.

Targeted Eleventh Plan growth (at 8.5 per cent) warrant a growth of at least 3.9 per cent in the agriculture sector, which would presuppose private sector investment and credit flow to agriculture. Government has accorded thrust for enhancing the Ground Level Credit (GLC)[♠] flow. The doubling of credit within 3 years starting from 2004-05, would have implication on the projections of GLC in agriculture. As against the average growth of 16 to 17 per cent during the 1990s, the envisaged growth in the programme was more than 30 per cent per year. Though the level of achievement is staggering, sustainability of the pace of growth is in doubt on account of two counts *viz*., the capability of the sector to absorb the credit addition and the capacity of the credit purveying institutions, especially cooperative sector as a supplier. Credit absorption capacity of the rural sector depends on factors such as proper agriculture infrastructure, availability of suitable technology, extension services, marketing facilities, transportation, storage, *etc*. The role of state governments, therefore, is of high importance in achieving the target especially in providing suitable infrastructure/extension support for facilitating enhanced credit flow to agriculture. Considering the colossal importance of credit, especially institutional credit, suitable planning/projection of the ground level credit flow need to be addressed. The focus of the agriculture credit during the 11th FYP period will be a broad-based and inclusive growth in GLC for a sustainable and technology lead growth of the sector.

[♠] Ground Level Credit refers to the credit purveyed by commercial banks, rural financial institutions like co-operative banks and regional rural banks and other agencies.

Estimation methodology

The methodology adopted for estimation of GLC in agriculture is as follows:

1. Projections based on various GDP growth rates (Term Structure wise).
2. Projections based on the capacity of the credit institutions (Credit supply constraint approach).
3. Projections based on trend (Trend rate of growth approach).
4. Projections based on trend in ratio of GLC to GDP in Agriculture.

Assumptions:

(a) ICOR is 3.95 as assumed for the 11th FYP

(b) Agriculture grows at 3.9 per cent.

Results

Based on the above approaches and taking into account the likely investment in agriculture sector by agricultural corporates, the estimated Ground Level Credit (GLC) flow is shown in Table 21.

Table 21: Estimate of GLC in Agriculture based on Various Approaches

(Rs. crore)

Approach.	**2007-08**	**2008-09**	**2009-10**	**2010-11**	**2011-12**	**GLC(11th FYP)**	**CAGR (per cent)**
1	268130	299355	334012	372460	415112	1689069	18
2	234912	280663	330474	384342	442266	1672657	17.8
3	240295	278624	316952	355281	393609	1584761	15.8
4	226218	268470	315368	367051	423561	1600668	16.1
projection	242000	282000	324000	370000	420000	1640000	17.0
YoY increase (per cent)	20	17.5	15.6	14.1	12.9	17.0	

Total GLC to agriculture sector is projected at Rs.16,40,000 crore for the Eleventh Plan, indicating an annual compounded growth of 17.0 per cent as compared to Rs.6,39,330 crore of expected GLC during the Tenth Plan period.

(b) SMEs Sector

In India, the small-scale sector has remained high on the agenda of the Government since independence. The special thrust to this sector has been consistent with multiple objectives of employment generation, regional dispersal of industries and as a seedbed for entrepreneurship. The contribution of SSIs has been remarkable in the industrial development of the country. It has a share of over 40 per cent of the gross industrial value added in the economy. About 44.0 per cent of the total manufactured exports of the country are directly accounted for by the SSI sector. In terms of employment generation, this sector is next to agriculture sector, employing approximately 295 lakh people. Currently, the number of SSI units is estimated to be over 123 lakh in India. Investment in this sector accounted for about Rs.188,113 crore while this sector' output was valued at Rs.471,244 crore in 2005-06. The SME sector produces a wide range of products, from simple consumer goods to highly precision and sophisticated end products.

Methodology

SME sector requires funds of two types, *viz.* long term capital and working capital. The Sub-Group adopted two approaches for estimation of working capital: (a) the first approach based on empirical relationship or regression between working capital and production consistent with (i) GDP of 8.0 per cent and SSI growth of 11 per cent, (ii) GDP of 8.5 per cent and SSI of 12 per cent and (iii) GDP of 9.0 per cent and SSI of 13 per cent, and (b) the second approach based on the assumption of doubling the credit with a minimum 20 per cent annual growth rate.

For estimating term loan requirements for the SME sector and its sub-sector, the Sub-Group adopted two approaches: (a) based on regression analysis and (b) institutional capacity.

Results

The working capital estimates for SMEs (Directive Approach) based on GDP growth of 9.0 per cent are shown in Table 22.

Table 22: Working Capital Estimate (outstanding) for SMEs during the 11th Five Year Plan

(Rs. Crore)

Plan	SCB Advances to TDSSI	Working capital by NSIC and SSIDCs	Total working capital to NDSSI	Total Working capital to ME	SME
(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)=(4) + (5)**
i) Average outstanding	**159229**	**5751**	**204976**	**29391**	**2344367**
ii) Outstanding as at end of the Eleventh Plan	**211913**	**7776**	**272918**	**38885**	**311803**
iii) Average growth rate	**16.8**	**17.8**	**16.8**	**18.20**	**16.8**
Incremental Flows (Outstanding at the end of 10th and 11th Plans) 311803 -143814					**167989**

The term loan/fixed capital requirement for the SME sector for the Eleventh Five Year Plan based on institutional capacity approach are shown in Table 23 under different scenarios. The average annual increase in term loans during Eleventh Plan works out to 24.1 per cent.

Table 23: Projected Term Loans (Incremental) based on Institutions Capacity

Plan period	**Scenario 1** Growth rate of 8.0 per cent **(Rs. crore)**	**Scenario 2** Growth rate of 8.5 per cent **(Rs. crore)**	**Scenario 3** Growth rate of 9.0 per cent **(Rs. crore)**
Eleventh Plan	1,39,808	1,43,915	1,48,720

In sum, on the basis of the projections as above, the Ground Level Credit requirements for the agricultural sector has been worked out at Rs.16,40,000 crore for the Eleventh Five Year Plan, a growth rate of an average 17.0 per cent per annum . For the SME sector, the estimated incremental working capital provided by the scheduled commercial banks during the Eleventh Five Year Plan would be at Rs.1,67,989 crore, which amounts to a growth rate of an average 16.8 per cent per annum. The incremental flow of term loan to the SME sector is estimated at Rs.1,48,720 crore, which translates into a growth rate of an average 24.1 per cent per an for the Plan period.

IV. Summing up - Overall projected savings for the Eleventh Five Year Plan

Summing up the Sub-Groups' assessments, the final position that emerges are given in Table 24 and Table 25 below:

Table 24: Projection of Savings for the 11th Plan Period in the Four Growth Scenarios: Timeline

Scenario I: 7.0 per cent GDP Growth

(Per cent)

Item	2007-08	2008-09	2009-10	2010-11	2011-12	Avg. (2007-12)
I. Household Saving (a+b)	23.1	23.6	24.1	24.6	25.2	24.1
a) Physical Saving	12.4	12.6	12.8	13.1	13.3	12.9
b) Financial Saving (Net)	10.7	11.0	11.2	11.6	11.9	11.3
II. Private Corporate Saving	5.6	5.5	5.4	5.6	5.8	5.6
III. Public Saving	2.7	3.8	3.9	4.1	4.1	3.7
IV. Current Account Deficit (-)	1.6	1.5	1.4	1.3	1.1	1.4
V. Gross Domestic Saving (I+II+III)	**31.4**	**32.9**	**33.4**	**34.3**	**35.1**	**33.4**

Scenario II: 8.0 per cent GDP Growth

(Per cent)

Item	2007-08	2008-09	2009-10	2010-11	2011-12	Avg. (2007-12)
I. Household Saving (a+b)	23.1	23.7	24.2	24.8	25.5	24.3
a) Physical Saving	12.4	12.7	12.9	13.2	13.4	12.9
b) Financial Saving (Net)	10.7	11.0	11.3	11.7	12.0	11.4
II. Private Corporate Saving	5.6	5.5	5.4	5.6	5.8	5.6
III. Public Saving	3.2	4.3	4.3	4.3	4.3	4.1
IV. Current Account Deficit (-)	1.9	2.0	2.1	2.2	2.4	2.1
V. Gross Domestic Saving (I+II+III)	**31.9**	**33.5**	**33.9**	**34.7**	**35.6**	**34.0**

Scenario III: 8.5 per cent GDP Growth

(Per cent)

	2007-08	2008-09	2009-10	2010-11	2011-12	Avg. (2007-12)
I. Household Saving (a+b)	23.2	23.8	24.3	24.9	25.6	24.3
a) Physical Saving	12.4	12.7	12.9	13.2	13.5	12.9
b) Financial Saving (Net)	10.7	11.1	11.4	11.7	12.1	11.4
II. Private Corporate Saving	5.7	5.5	5.5	5.7	6.0	5.7
III. Public Saving	3.3	4.4	4.4	4.4	4.4	4.2
IV. Current Account Deficit (-)	1.9	2.2	2.4	2.7	2.9	2.4
V. Gross Domestic Saving (I+II+III)	**32.2**	**33.7**	**34.2**	**35.0**	**36.0**	**34.2**

Scenario IV: 9.0 per cent GDP Growth

(Per cent)

Item	2007-08	2008-09	2009-10	2010-11	2011-12	Avg. (2007-12)
I. Household Saving (a+b)	23.2	23.8	24.4	25.0	25.7	24.4
a) Physical Saving	12.5	12.7	13.0	13.2	13.5	13.0
b) Financial Saving (Net)	10.7	11.1	11.4	11.8	12.2	11.4
II. Private Corporate Saving	5.7	5.5	5.5	5.7	6.0	5.7
III. Public Saving	3.7	4.8	4.8	4.8	4.8	4.6
IV. Current Account Deficit (-)	2.3	2.7	2.8	2.9	3.0	2.8
V. Gross Domestic Saving (I+II+III)	**32.6**	**34.1**	**34.7**	**35.5**	**36.5**	**34.7**

Table 25: Projection of Gross Domestic Saving – Sectoral and Overall Saving for Eleventh Five Year Plan (2007-08 to 2011-12)

(Per cent)

Item	2004-05*	Real Gross Domestic Product Growth			
		Scenario 1 at 7.0 per cent	Scenario 2 at 8.0 per cent	Scenario 3 at 8.5 per cent	Scenario 4 at 9.0 per cent
I. Domestic Private Saving	26.8	29.7	29.9	30.0	30.1
(a) Household Saving	22.0	24.1	24.3	24.3	24.4
(i) Physical Saving	11.7	12.9	12.9	12.9	13.0
(ii) Financial Saving	10.3	11.3	11.4	11.4	11.4
(b) Corporate Saving	4.8	5.6	5.6	5.7	5.7
II. Public Sector Saving	2.2	3.7	4.1	4.2	4.6
III. Gross Domestic Saving (I+II)	29.1	33.4	34.0	34.2	34.7
IV. Current Account Deficit (-)	1.0	1.4	2.1	2.4	2.8
V. Gross Domestic Capital Formation	30.1	34.8	36.1	36.6	37.5
Memo items:					
I. Eleventh Plan Approach Paper Projection (Rates of Gross Domestic Saving)		27.1	29.6	31.0	32.3
(i) Household		20.1	20.5	20.7	21.0
(ii) Corporate		5.0	5.5	5.8	6.1
(iii) PSEs		3.1	3.1	3.0	2.8
(iv) Government		-1.1	0.5	1.5	2.4
II. (i) Agriculture Sector		Estimated Ground Level Credit (disbursements) for the agricultural sector is Rs.16,40,000 crore during the Eleventh Five Year Plan. (Average growth rate of 17.0 per cent per annum).			
(ii) Small and Medium Enterprises Sector		Estimated incremental working capital flows during the Eleventh Plan period are Rs.1,67,989 crore. (Average growth rate of 16.8 per cent per annum). Estimated incremental term loan flows are Rs.1,48,720 crore for the Eleventh Plan period. (Average growth rate of 24.1 per cent per annum).			

* Quick Estimates.

The economy is witnessing an increasing trend in gross domestic savings as a proportion of GDP since 2001-02, with the savings ratio having increased from 26.5 per cent in 2002-03 to 28.9 per cent in 2003-04 and further to 29.1 per cent in 2004-05. The rise in savings has been witnessed across all the constituent sectors, the sole exception being household sector for 2004-05 which witnessed a decrease form 23.5 per cent in 2003-04 to 22.0 per cent in 2004-05. Keeping the above trends in view, the major features that are emerging from our overall assessment of the projected savings across constituent sectors and as indicated in Table 25 are as follows:

As of household sector savings, our projections of household financial savings for 2007-08 to 2011-12, under the growth scenarios of 7 to 9 per cent, place the rate of household savings in the range of 24.1 to 24.4 per cent, with household financial and physical savings projected in the ranges of 11.3 to 11.4 per cent and 12.9 to 13.0 per cent, respectively. Keeping the household financial savings at 11.5 per cent of GDP for 2005-06, the projections point towards the evolving virtuous circle of growth and savings that appears to be already underway, and importantly, is likely to continue for some years to come on account of the factors, like:

(a) a continuation of the growth momentum observed in the last three years. The Draft Approach Paper for the 11th Plan suggests that the economy can grow between 8 and 9 per cent per year on a sustained basis provided appropriate policies are put in place. With population growing at 1.5 per cent per year, this would ensure that per capita income would double in ten years;

(b) the household savings rate will increase with accelerated income growth, particularly with the reinforcement of benign demographic dynamics. With the 'dependency ratio' on the decline and the growth rate on the rise, the proportion of people in the working age group will not only be higher but will also have much higher incomes to save from than the preceding generations;

(c) the 'demographic dividend' will also pay off in terms of a larger and younger labour force gainfully employed in production, and generating a larger national income, particularly in a world where many countries are transiting to ageing societies;

(d) financial sector liberalisation being one of the components of economic reform packages that have been implemented especially to enhance medium to long-term growth, is expected to further deepen the financial sector and increase the savings mobilisation by providing incentives and avenues for wealth holders to shift the composition of their wealth portfolios from non-reproducible tangible assets to reproducible tangible assets and financial assets, which are more liquid and directly available for investment purposes (partly to be financed by greater availability of and household recourse to credit); and

(e) on the front of human development and poverty, as per the United Nations Development Programme's (UNDP) Human Development Reports, the value of the Human Development Index (HDI) – a composite indicator based on income, education and health – has increased consistently over the years. This augurs well for the household savings.

As of the private corporate sector savings, our projections for 2007-08 to 2011-12, under the growth scenarios of 7 to 9 per cent, place the savings in the range of 5.56 to 5.67 per cent. Responding to buoyant growth, sales, greater FDI easing the financing constraints on domestic firms, as also benefiting from the cyclical upswing in the economy, this would be an improvement over the recent trends as between 2002-03 and 2004-05, corporate savings have moved in the range of 4.07 to 4.84 per cent of GDP.

As of the public sector savings, the public sector draft on private savings is expected to decline to 7.7 per cent during the Eleventh Plan. The savings of the public authorities is projected to be 0.3 per cent of the GDP, which does not vary under alternative growth scenarios. As regards the savings generated by non-departmental enterprises, they are projected in the range of 3.4 to 4.3 per cent. Public sector savings, thus, are placed at 3.7 to 4.6 per cent during the Eleventh Plan period, compared to the actual savings in the range of -0.7 per cent to 2.2 per cent during 2002-03 to 2004-05.

As of the external sector savings, CAD is projected in the range of 1.4 to 2.8 per cent, while average level of net capital flows under the different scenarios would be 3.1 to 3.5 per cent of GDP.

Savings projections and the likely growth scenario

Overall GDS, projected in the range of 33.4 to 34.7 per cent points to a strong and buoyant domestic resource base for the growth process during the Eleventh Plan period, which can finance an investment to the extent of 34.8 to 37.5 per cent of GDP to achieve a growth rate in the range of 7.0 to 9.0 per cent.

The projections, as above, obtained by the Working Group points out to an optimistic growth scenario during the Eleventh Five Year Plan. Going by the estimated savings and investment levels obtained for alternative growth scenarios, the current ICOR of around 4.0 can support growth rates ranging between 8.7 per cent to 9.4 as shown in Table 26 below:

Table 26: Growth rate corresponding to projected savings rate (2007-08 to 2011-12)

Item	Scenario 1	Scenario 2	Scenario 3	Scenario 4
Saving Rate (as per cent of GDP)	33.4	34.0	34.2	34.7
Investment Rate (as per cent of GDP)	34.8	36.1	36.6	37.5
ICOR	4.0	4.0	4.0	4.0
Derived Growth Rate (Per cent)	8.7	9.0	9.2	9.4

On the whole, the overall macroeconomic environment in the country is fairly conducive to generate and sustain high levels of savings and investment that might provide the resource base for attaining a higher growth trajectory as envisioned in the Eleventh Five Year Plan Approach Document.

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Annex I

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Dr. K.L. Prasad, Additional Economic Adviser, DEA
Ms. Ishita Tripathy, Assistant Adviser, EDMU, DEA
Shri J.K. Rathee, EO, DEA
Ms. Vidya Mahambare, Manager, CRISIL, Mumbai
Smt. Deepa Srivasthava, Regional Director, RBI, Delhi
Dr. K. S. Ramachandra Rao, Principal Adviser, DESACS, RBI, Mumbai
Shri Partha Ray, Executive Assistant to DG (RM), RBI, Mumbai
Shri Paradeep Maria, Director, DESACS, RBI, Delhi
Dr. Praggya Das, Asst. Adviser, DESACS, RBI, Delhi
Smt. Asha Kannan, Director, DEAP, RBI, Mumbai
Shri Ramesh Golait, Asst. Adviser, DEAP, RBI, Mumbai
Shri Raj Rajesh, Research Officer, DEAP, RBI, Mumbai
Shri Rajan Goyal, Director, DEAP, RBI, New Delhi
Ms. Chinngaihlian, Research Officer, DEAP, Delhi
Shri Pankaj, Research Officer, DEAP, Mumbai
Shri Radhey Shyam, Director, DESACS, RBI, Mumbai
Dr. Seema Saggar, Assistant Adviser, DESACS, RBI, Mumbai
Dr. G. P. Samanta, Assistant Adviser, DESACS, RBI, Mumbai
Dr. Abhiman Das, Assistant Adviser, DESACS, RBI, Mumbai
Dr. Kaushik Bhattacharya, Assistant Adviser, DESACS, RBI, Mumbai
Shri M.S. Adki, Research Officer, DESACS, RBI, Mumbai
Smt. Rekha Misra, Assistant Adviser, DEAP, RBI, Mumbai
Smt. Sangita Misra, Research Officer, DEAP, RBI, Mumbai
Shri Harendra Behera, Research Officer, DEAP, RBI, Mumbai
Dr. A.K. Bandhopadhyay, CGM, NABARD
Dr. A.S.Paul, GM, NABARD
Shri Gopakuamaran Nair, AGM, NABARD
Ms. Madhrima Sen, AM, NABARD
Shri R. K. Das, GM, SIDBI
Smt. Renuka Mishra, Asst. Director, Office of the DC (SSI)

Annex II

ToR and Membership of Sub-Groups

Sub-Group on Household Sector Saving

Terms of Reference of the Sub-Group are as follows:

- To review the developments and likely behavioral pattern during the 11th Plan Period;
- To estimate household savings - physical and financial and their components - in light of the policy and structural changes in the financial sector;
- To explain the procedures followed for estimation.

Members of the Sub-Group are:

1.	Dr. R. Kannan, Principal Adviser, DEAP, RBI, Mumbai	Convener
2.	Shri Ramesh Kolli, Deputy Director General, CSO, New Delhi	Member
3.	Mr. Arvinder Sachdeva, Director, Planning Commission	Member
4.	Mr. M.C. Singhi, Adviser, Ministry of Finance, New Delhi	Member
5.	Dr. Ashima Goyal, Professor, IGIDR, Mumbai.	Member
6.	Ms. Ritu Anand, SBI, Mumbai.	Member
7.	Dr. B. K. Pradhan, IEG, Delhi.	Member
8.	Dr. Amaresh Dube, NCAER, New Delhi.	Member
9.	Dr. H. Sadhak, LIC, Mumbai.	Member
10.	Shri A. Viswanathan, Central Provident Fund Commissioner, New Delhi.	Member

Sub-Group on Private Corporate Sector Saving

Terms of Reference of the Sub-Group are as follows:

- To review the developments and likely behavioral pattern during the 11th Plan Period;
- To estimate the private corporate savings in light of the policy and structural changes in the financial sector;
- To explain the procedures followed for estimation.

Members of the Sub-Group are:

1.	Dr. R. B. Barman, ED, RBI, Mumbai.	Convener,
2.	Shri Ramesh Kolli, DDG, CSO, New Delhi.	Member
3.	Shri Rohit Sarkar, Consultant, Planning Commission.	Member
4.	Mr. M.C. Singhi, Adviser, Ministry of Finance.	Member
5.	Dr. Joseph Abraham, Ministry of Company Affairs, New Delhi	Member
6.	Dr. B. K. Bhoi, Economic Adviser, SEBI, Mumbai	Member
7.	Dr. Ajay Shah, Consultant.	Member
8.	Dr. Subir Gokarn, Executive Director & Chief Economist, CRISIL.	Member
9.	Dr. Mahesh Vyas, CMIE, Mumbai.	Member,

Sub-Group on Public Sector's Draft on Private Sector Saving

Terms of Reference of the Sub-Group are as follows:

- To review the developments and likely behavioral pattern during the 11th Plan Period;
- To estimate the public sector draft on private savings keeping in view the fiscal sustainability and commitments under the Fiscal Responsibility Act;
- To explain the procedures followed for estimation.

Members of the Sub-Group are:

1.	Dr. Pronab Sen, Principal Adviser (PPD), Planning Commission, New Delhi	Convener
2.	Shri K.U.B. Rao, Adviser, RBI, Mumbai	Member
3.	Shri Ramesh Kolli, DDG, CSO.	Member
4	Dr. Pinaki Chakraborty, Sr. Fellow, NIPFP.	Member
5.	Mr. M.C. Singhi, Adviser, Ministry of Finance.	Member
6.	Prof. Pulin B Nayak, University of Delhi.	Member
7.	Mr. C.R.Sundara Murthy, Addl.Controller and Accountant General.	Member

Sub-Group on Inflow of Foreign Saving

Terms of Reference of the Sub-Group are as follows:

- To review the developments and likely behavioral pattern during the 11th Plan Period;
- To estimate flow of external aid and its components (loan/grant);
- To estimate the flow of foreign savings, through foreign direct investment; portfolio investment, suppliers credit, ECD and in terms of its categories (debt/equity) and its tenure;
- To explain the procedures followed for estimation.

Members of the Sub-Group are:

1.	Shri R. C. Srinivasan, Economic Adviser, MoF, New Delhi.	Convener
2.	Mr. Suman K. Bery, Director General, NCAER, New Delhi.	Member
3.	Dr. R.K. Pattnaik, Adviser, RBI, Mumbai.	Member
4.	Dr. R.Kavitha Rao, Sr. Fellow, NIPFP, New Delhi.	Member
5.	Dr. Archana S. Mathur, Director (PPD), Planning Commission, New Delhi.	Member
6.	Shri Amitendu Palit, ICRIER, New Delhi.	Member
7.	Dr. Abheek Barua, Chief Economist, ABN AMRO Bank, Mumbai.	Member
8.	Dr. B.K.Bhoi, Adviser, SEBI, Mumbai.	Member

Sub-Group on Flow of Private Investment for SME and Agriculture Sector

Terms of Reference of the Sub-Group are as follows:

- To review the developments and likely behavioral pattern during the 11th Plan Period;
- To estimate resources available for private investment and the likely flows for SME and Agriculture;
- To explain the procedures followed for estimation.

Members of the Sub-Group are:

1.	Dr. Y. S. P. Thorat, Chairman, NABARD, Mumbai.	Convener
2.	CMD, SIDBI.	Member
3.	Prof. Romar Correa, Industrial Economics, Mumbai University.	Member
4.	Shri A.K.Padhy, Addl. DC, SSI.	Member
5.	Shri P. Sesh Kumar, Ministry of Small Scale and Agro Industry.	Member
6.	Shri Rohit Sarkar, Planning Commission.	Member

***