



INFRASTRUCTURE
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Government of India

Interim Report of the High Level Committee Financing of Infrastructure





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Contents

1. Context	1
2. Investment in Infrastructure	
2.1 Review of Investment in Infrastructure during the Eleventh Plan	5
2.2 Projections of Investment for the Twelfth Plan	6
Annex-I: Assumptions Underlying the Investment Projections	13
3. Recommendations for Accelerating Investment	15
4. Reinventing IIFCL for a Larger Role	25
Annex-I: Reinventing IIFCL for a Larger Role	27

Tables

Table 1: Sector-wise Investments in Infrastructure	5
Table 2: Investment in Infrastructure as per cent of GDP	6
Table 3: Projected Investment in Infrastructure - Twelfth Plan	7

Interim Report of the High Level Committee on Financing Infrastructure

Context

1.1 The fast growth of the economy in recent years has placed increasing stress on physical infrastructure such as electricity, railways, roads, ports, airports, irrigation, water supply and sanitation, all of which already suffer from a substantial deficit in terms of capacities as well as efficiencies. The pattern of inclusive growth averaging 9 per cent per year can be achieved only if this infrastructure deficit is overcome and adequate investment takes place to support higher growth and an improved quality of life for both urban and rural communities.

1.2 Therefore, the Eleventh Plan envisaged an increase in investment in physical infrastructure from a level of about 5 per cent of GDP witnessed during the Tenth Plan to about 9 per cent of GDP by the terminal year of the Eleventh Plan, 2011-12. This was estimated to require an investment of Rs. 20,56,150 crore during the Eleventh Plan, at 2006-07 prices.

1.3 In his inaugural speech at the Conference on Building Infrastructure held in New Delhi on March 23, 2010, the Prime Minister observed that investment in infrastructure will need to expand to about US \$ 1 trillion during the Twelfth Plan period. He, therefore, urged the Finance Ministry and the Planning Commission to draw up a plan of action for achieving this level of investment. Further, the Approach Paper for the Twelfth Plan (2012-17) as approved by the National Development Council on October 22, 2011 states that the total investment in infrastructure would have to be over Rs. 45 lakh crore during the

Twelfth Plan period. In the Union Budget for 2012-13, the Finance Minister stated that during the Twelfth Plan period, investment in infrastructure will have to go up to Rs. 50 lakh crore, with half of this expected from the private sector.

1.4 Financing investments of this order will require a review of some of the existing policies as well as adoption of innovative ways of financing. In this backdrop, the Central Government set up the High Level Committee on Financing Infrastructure to make recommendations relating to policy initiatives that would enable the requisite flow of investment in infrastructure during the Twelfth Five Year Plan. The terms of reference of the Committee are as follows:

- (i) To assess the investment required to be made by the Central and State Governments, Public Sector Undertakings (PSUs) and the private sector in the ten major physical infrastructure sectors during the Twelfth Five Year Plan;
- (ii) To identify areas and activities to be financed by the government, PSUs and the private sector respectively;
- (iii) To suggest ways to enable the requisite flows of private investment in infrastructure including the creation of a supportive investor-friendly environment;
- (iv) To make recommendations on the role government could play in developing capital markets for intermediating long term savings for investments in infrastructure projects, including fostering appropriate institutional arrangements;

- (v) To examine the role of international capital flows in infrastructure financing and development, assess the nature of projects likely to receive such capital, and consider how such financing can be obtained, in a sustainable manner;
- (vi) To identify any regulatory/legal impediments constraining private investment in infrastructure, and make specific recommendations to facilitate their removal.

1.5 The constitution of the Committee is as follows:

Chairman

- (i) Shri Deepak Parekh (in honorary capacity, with status of Minister of State)

Member Convener

- (ii) Shri Gajendra Haldea, Adviser to Deputy Chairman, Planning Commission

Members

- (iii) Secretary, D/o Economic Affairs
- (iv) Secretary, D/o Financial Services
- (v) Chairman, Insurance Regulatory and Development Authority
- (vi) Chairperson, Pension Fund Regulatory and Development Authority
- (vii) Deputy Governor, RBI
- (viii) Chairman, State Bank of India
- (ix) Chairman, Life Insurance Corporation of India
- (x) Chairman, Power Finance Corporation

- (xi) Managing Director, ICICI Bank
- (xii) Managing Director, Infrastructure Development Finance Company Limited
- (xiii) Shri Uday Kotak, Kotak Mahindra Bank
- (xiv) Shri G.M. Rao, Chairman, GMR Group
- (xv) Shri Sanjay Reddy, Managing Director, GVK Group
- (xvi) Country Head, Goldman Sachs
- (xvii) Shri Madhav Dhar, Managing Partner, Traxis Partners

Special Invitees

- (xviii) Chairman, Railway Board
- (xix) Secretary, M/o Power
- (xx) Secretary, M/o Road Transport and Highways
- (xxi) Secretary, M/o Urban Development
- (xxii) Secretary, M/o Petroleum & Natural Gas
- (xxiii) Secretary, M/o Telecommunications
- (xiv) Secretary, M/o Water Resources
- (xxv) Chief Economic Adviser, M/o Finance
- (xxvi) Chairman, SEBI
- (xxvii) CSI & Secretary, M/o Statistics and Programme Implementation

1.6 The term of the Committee is up to March 31, 2013.

1.7 The Committee held seventeen meetings and discussed several issues. It made several recommendations to the Government on tax-related matters. Of these, the Government accepted the recommendations relating to reduction in withholding tax and continuation

and doubling of tax-free infrastructure bonds during 2012-13.

1.8 The Committee took note of the projections of investment made by the Planning Commission and discussed the policy measures that would be necessary for creating an enabling environment for the investment projections to fructify. In response to a request from the Planning Commission, the Committee is submitting this Interim Report for consideration of the Government.

1.9 Part II of this Interim Report indicates the investment during the Eleventh Five Year Plan and provides sector-wise projections of investment required to be made by the Central and State governments, Public Sector Undertakings (PSUs) and the private sector during the Twelfth Five Year Plan.

1.10 Part III contains sectoral recommendations for accelerating investment in infrastructure through creation of enabling environment.

1.11 Part IV contains the recommendations of the Committee on “Reinventing IIFCL for a larger role”.

Investment in Infrastructure

2.1 Review of Investment in Infrastructure during the Eleventh Plan

2.1.1 For addressing the infrastructure deficit, especially in critical sectors such as electricity, railways, roads, ports, airports, irrigation, water supply and sanitation, the Eleventh Five Year Plan (2007-12) had projected an investment of Rs. 20,56,150 crore (at 2006-07 prices) as compared to an investment of Rs. 9,16,076 crore realised during the Tenth Five Year Plan (2002-07). The latest available data suggests that the investment realised during the Eleventh Plan would be Rs. 19,44,796 crore (at 2006-07

prices), reflecting an achievement of about 95 per cent against the projected investment. This also represents an increase of 2.12 times as compared to the investment during the Tenth Plan.

2.1.2 The share of private investment in the Eleventh Plan is expected at 37.53 per cent as compared to 22.04 per cent realised during the Tenth Plan. The total investment in infrastructure during the Eleventh Plan is likely to be 7.22 per cent of GDP as compared to 5.02 per cent during the Tenth Plan. The sector-wise investments during the Tenth and Eleventh Plans are shown in Table-1.

Table 1: Sector-wise Investments in Infrastructure

(Rs. crore at 2006-07 prices)

Sector	Tenth Plan		Eleventh Plan (Provisional)
	Actual	Projections	Investment (%)*
Electricity (incl.NCE)	2,74,661	6,66,525	6,34,613 (95)
Roads & Bridges	1,52,616	3,14,152	3,61,822 (115)
Telecommunications	1,44,669	2,58,439	3,35,932 (130)
Railways (incl. MRTS)	1,03,493	2,61,808	1,95,422 (75)
Irrigation (incl. Watershed)	1,21,475	2,53,301	1,95,688 (77)
Water Supply & Sanitation	60,499	1,43,730	96,249 (67)
Ports (incl. Inland Waterways)	22,329	87,995	34,773 (40)
Airports	7,354	30,968	29,282 (95)
Oil & Gas pipelines	23,389	16,855	46,851 (278)
Storage	5,591	22,378	14,203 (63)
Total	9,16,076	20,56,150	19,44,796 (95)

*Figures in brackets indicate investment as a percentage of projections

2.1.3 It would be seen that while higher than projected investment has been achieved in telecommunications, roads & bridges, and oil & gas pipelines, the sectors which fell marginally short of the projected investment include electricity and airports. The sectors that face significant shortfalls include irrigation, water supply & sanitation, railways, ports and storage.

2.1.4 As shown in the Table 2 below, investment in infrastructure during the Eleventh Plan, reflects an average of 7.22 per

cent of GDP as compared to an average of 5.02 per cent during the Tenth Plan, thus marking an increase of about 2.20 percentage points of GDP between the two Plan Periods. This represents a significant shift, especially when viewed in the context of an underlying growth rate of about 8 per cent in the GDP as a whole. This sharp increase can be attributed largely to the rapid rise in investment by the private sector, which in turn was an outcome of the enabling environment fostered by the policy and regulatory framework.

Table 2: Investment in Infrastructure as per cent of GDP

(Rs. crore at 2006-07 prices)

Years	Tenth Plan (Actual)	Base Year of XI Plan (2006-07) (Actual)	2007-08 (Actual)	2008-09 (Actual)	2009-10 (Actual)	2010-11 (Actual)	2011-12 (RE)	Total Eleventh Plan
GDPmp	1,82,46,267	42,94,706	47,15,645	48,99,129	53,02,731	58,09,293	62,07,574	2,69,34,373
Public Investment	7,14,203	1,79,246	202,517	234,788	241,060	266,565	270,022	1,214,953
Private Investment	2,01,873	61,580	91,006	122,390	118,892	216,574	180,981	729,844
Total Investment	9,16,076	2,40,826	293,523	357,179	359,952	483,140	451,003	1,944,796
Investment as per cent of GDP								
Public Investment	3.91	4.17	4.29	4.79	4.55	4.59	4.35	4.51
Private Investment	1.11	1.43	1.93	2.50	2.24	3.73	2.92	2.71
Total Investment	5.02	5.61	6.22	7.29	6.79	8.32	7.27	7.22

2.2 Projections of Investment for the Twelfth Plan

2.2.1 The Committee requested the Planning Commission to make projections of investment in the ten major infrastructure sectors for the Twelfth Plan and indicate the respective shares of the Government, Public sector entities and the private sector. The

sector-wise projections were discussed in the Committee and some modifications were suggested. The projections have since been revised by the Planning Commission and are stated in Table 3 below. The Committee also noted the assumptions at Annex-I of this Part-II on the basis of which these projections have been made.

Table 3: Projected Investment in Infrastructure - Twelfth Plan

(Rs. crore at 2011-12 prices)

Sectors	Total Eleventh Plan	Twelfth Plan Projections					Total 12th Plan
		2012-13	2013-14	2014-15	2015-16	2016-17	
Electricity	8,04,361	2,45,901	2,70,335	2,97,246	3,26,888	3,59,545	14,99,914
Centre	2,60,561 (32.39)	76,794	86,009	96,330	1,07,889	1,20,836	4,87,858 (32.53)
States	1,99,992 (24.86)	52,505	57,230	62,381	67,995	74,115	3,14,226 (20.95)
Private	3,43,808 (42.74)	1,16,602	1,27,096	1,38,535	1,51,003	1,64,594	6,97,831 (46.52)
Non Conventional Energy	1,00,986	33,413	39,987	47,881	57,365	68,763	2,47,409
Centre	10,823 (10.72)	3,384	3,790	4,245	4,754	5,325	21,497 (8.69)
States	1,143 (1.13)	693	776	869	974	1,090	4,402 (1.78)
Private	89,020 (88.15)	29,336	35,421	42,767	51,638	62,348	2,21,510 (89.53)
Roads & Bridges	5,16,180	142,154	160,265	180,979	204,713	231,960	920,071
Centre	2,21,649 (42.85)	57,707	64,000	70,990	78,758	87,390	3,58,845 (39.0)
States	1,91,517 (37.02)	44,589	48,602	52,976	57,744	62,941	2,66,851 (29.0)
Private	1,03,014 (20.13)	39,858	47,664	57,012	68,211	81,629	2,94,374 (32.0)
Telecommunications	4,79,245	1,05,192	1,32,743	1,67,555	2,11,551	2,67,163	8,84,204
Centre	97,905 (20.43)	14,169	17,144	20,744	225,101	30,372	1,07,530 (12.16)
Private	3,81,340 (79.57)	91,023	1,15,599	1,46,811	1,86,450	2,36,791	7,76,674 (87.84)
Railways	2,31,705	60,364	71,738	86,372	1,05,797	1,32,472	4,56,743
Centre	2,21,197 (95.46)	55,907	64,293	73,937	85,028	97,782	3,76,946 (82.53)
Private	10,508 (4.54)	4,457	7,445	12,435	20,769	34,690	79,797 (17.47)
MRTS	47,086	12,633	15,108	18,580	23,590	30,983	1,00,894
Centre	24,458 (51.71)	5,488	5,982	6,520	7,107	7,747	32,844 (32.55)
States	16,730 (35.97)	4,410	4,807	5,239	5,711	6,225	26,392 (26.16)
Private	5,899 (12.32)	2,735	4,319	6,821	10,772	17,012	41,658 (41.29)
Irrigation (incl. Watershed)	2,79,359	71,867	78,335	85,385	93,070	1,01,446	4,30,103
Centre	16,602 (5.94)	4,361	4,753	5,181	5,647	6,155	26,096 (6.07)
States	2,62,758 (94.06)	67,506	73,582	80,204	87,423	95,291	4,04,007 (93.93)

Sectors	Total Eleventh Plan	Twelfth Plan Projections					Total 12th Plan
		2012-13	2013-14	2014-15	2015-16	2016-17	
Water Supply & Sanitation	1,37,310	34,145	37,382	41,017	45,161	49,978	2,07,684
Centre	51,067 (37.19)	13,047	14,221	15,501	16,896	18,416	78,080 (37.60)
States	85,581 (62.33)	20,816	22,689	24,731	26,957	29,383	1,24,576 (59.98)
Private	662 (0.48)	283	472	786	1,308	2,179	5,028 (2.42)
Ports (incl. ILW)	49,551	18,600	22,532	29,446	38,936	52,228	1,60,559
Centre	6,221 (12.55)	2,692	3,011	3,368	3,768	4,216	17,054 (10.62)
States	2,069 (4.18)	740	820	909	1,008	1,117	4,594 (2.86)
Private	41,261 (83.26)	13,984	18,701	25,169	34,161	46,895	1,38,910 (86.52)
Airports	41,773	7,177	9,458	12,725	17,427	24,212	71,000
Centre	13,850 (33.16)	2,289	2,390	2,495	2,605	2,720	12,500 (17.61)
States	1,326 (3.17)	250	309	382	473	585	2,000 (2.82)
Private	26,598 (63.67)	4,638	6,758	9,848	14,349	20,907	56,500 (79.58)
Storage	20,263	5,735	7,151	8,981	11,356	14,448	47,670
Centre	6,719 (33.16)	1,595	1,786	2,000	2,240	2,509	10,131 (21.25)
States	2,381 (11.75)	580	632	689	751	819	3,473 (7.28)
Private	11,163 (55.09)	3,560	4,733	6,291	8,364	11,119	34,067 (71.46)
Oil & Gas pipelines	66,838	11,979	15,033	20,019	28,685	44,460	1,20,175
Centre	34,150 (51.09)	9,298	10,414	11,664	13,064	14,631	59,071 (49.15)
States	4,758 (7.12)	775	868	972	1,089	1,220	4,925 (4.10)
Private	27,931 (41.79)	1,905	3,750	7,382	14,533	28,609	56,179 (46.75)
Total	2,774,657	747,976	860,067	996,188	1,164,539	1,377,658	5,146,427
Centre	9,65,200 (34.79)	246,729	277,792	312,976	352,857	398,098	15,88,452 (30.87)
States	7,68,253 (27.69)	192,865	210,316	229,355	250,125	272,786	11,55,446 (22.45)
Private	10,41,203 (37.53)	308,382	371,958	453,857	561,558	706,774	24,02,529 (46.69)
Total	2,774,657	747,976	860,067	996,188	1,164,539	1,377,658	5,146,427
Public	17,33,454 (62.47)	439,594	488,109	542,330	602,981	670,884	27,43,898 (53.32)
Private	10,41,203 (37.53)	308,382	371,958	453,857	561,558	706,774	24,02,529 (46.68)
GDPmp	3,84,24,885	94,75,703	1,02,33,759	1,11,54,797	1,21,58,729	1,32,53,015	5,62,76,003
Investment as % of GDPmp	7.22	7.89	8.40	8.93	9.58	10.40	9.14

Notes on Table 3:

1. *The above projections are based on 2011-12 prices. The investments in the Eleventh Plan have, therefore, been revised from 2006-07 prices to 2011-12 prices to enable a comparative assessment.*
2. *The GDPmp growth rates of 7 per cent and 8 per cent have been assumed for the years 2012-13 and 2013-14, while 9 per cent has been assumed for the remaining three years of the Twelfth Plan.*
3. *Figures in brackets indicate percentage share.*

2.2.2 As shown in the Table above, the total investment during the Twelfth Plan is projected at Rs. 51,46,427 crore compared to Rs. 27,74,657 crore during the Eleventh Plan (at 2011-12 prices). While the share of public investment is projected to decrease to 53.32 per cent from a level of about 62.47 per cent in the Eleventh Plan, the share of private investment is projected to increase to 46.68 per cent of the total investment as compared to 37.53 per cent during the Eleventh Plan.

2.2.3 The investment in infrastructure, as percentage of GDP is expected to witness a steady increase, reaching to 10.40 per cent of GDP in the terminal year (2016-17) of the Plan. The average investment for the Twelfth Plan as a whole is likely to be about 9.14 per cent of GDP as compared to 7.22 per cent during the Eleventh Plan. Electricity, roads & bridges, telecommunications and railway are the key infrastructure sectors accounting for

34 per cent, 18 per cent, 17 per cent, and 11 per cent of the total investment respectively.

2.2.4 In making the above projections, it has been assumed that budgetary allocations for different sectors would continue to grow at a steady pace. A CAGR of 9 per cent has been assumed in most cases. This implies that the actual allocation would grow by about 16-17 per cent per annum in nominal terms. Though the respective ministries have projected that their respective sectors would require larger budgetary allocations, such expectations are not likely to fructify on account of competing pressures from social sectors such as health, education and skill development as well as well as from rural development and livelihood support programmes. With the success of private participation during the Eleventh Five Year Plan, continued emphasis on private investment would be necessary for bridging the investment gap. Based on the above, the following sectoral projections have been made.

Electricity

2.2.5 Given the power shortages and the increasing demand for electricity, the total investment in the sector is projected at Rs. 14,99,914 crore during the Twelfth Plan, compared to Rs. 8,04,361 crore during the Eleventh Plan. The public and private sector investment is projected at Rs. 8,02,083 crore and Rs. 6,97,831 crore, respectively. The Central investment is expected to grow at a compound average growth rate (CAGR) of 12 per cent, while States' and private investments

are expected to grow at a CAGR of 9 per cent respectively, all at constant prices. A CAGR of 12 per cent has been assumed for the Central sector since most of the investment will be made by CPSUs such as NTPC, Powergrid and NHPC, who have the capacity to raise the requisite market borrowings.

Non-Conventional Energy

2.2.6 The total investment is projected at Rs. 2,47,409 crore during the Twelfth Plan, compared to Rs. 1,00,986 crore during the Eleventh Plan. The public and private sector investment is projected at Rs. 25,899 crore and Rs. 2,21,510 crore, respectively. The Central and States' investments are expected to grow at a CAGR of 12 per cent each, while the private investment is expected to grow at a CAGR of 20.7 per cent, all at constant prices. The private sector contribution is expected to grow rapidly driven by the growth of wind and solar energy projects.

Roads & Bridges

2.2.7 The total investment is projected at Rs. 9,20,071 crore during the Twelfth Plan, of which the Central and States' investments would be Rs. 3,58,845 crore and Rs. 2,66,851 crore respectively, accounting for about 68 per cent of the total investment. The private sector is projected to account for 32 per cent or Rs. 2,94,374 crore of the total investment. The Central investment is expected to grow at a CAGR of 12 per cent in view of the ability of NHAI to raise market borrowings for national highways. The States' investment is expected

to grow at a CAGR of 9 per cent on account of the renewed emphasis in the states to allocate more budgetary resources for state roads. The private investment is expected to grow at a CAGR of 20.8 per cent in Central roads and 16.6 per cent in States' roads, all at constant prices.

Telecommunications

2.2.8 Investment in telecom is projected at Rs. 8,84,204 crore during the Twelfth Plan as compared to Rs. 4,79,245 crore during the Eleventh Plan. The Public sector investment is projected to grow marginally at a CAGR of 21 per cent, while the private investment is projected to grow at a CAGR of 27 per cent (at constant prices) to reach at Rs. 7,76,674 crore as compared to Rs. 3,81,340 crore in the Eleventh Plan.

Railways

2.2.9 The total investment is projected at Rs. 4,56,743 crore during the Twelfth Plan as compared to Rs. 2,31,705 crore during the Eleventh Plan. Contributing to about 83 per cent of the total investment, the public sector investment is projected at Rs. 3,76,946 crore, while the private investment is projected at Rs. 79,797 crore during the Twelfth Plan. The public sector investment is expected to grow at a CAGR of 15 per cent, while private investment is expected to grow at a CAGR of 67 per cent, all at constant prices. The substantial increase in private investment is driven by the expected private participation in high speed corridors, redevelopment of

stations, private freight terminals, port and other connectivity projects and dedicated freight corridor project. The high CAGR of 67 per cent is also on account of a low base of the Eleventh Plan.

MRTS

2.2.10 The total investment is projected at Rs. 1,00,894 crore during the Twelfth Plan as compared to Rs. 47,086 crore during the Eleventh Plan. The Central and States' investments are projected at Rs. 32,844 crore and Rs. 26,392 crore, assuming a CAGR of 9 per cent each (at constant prices). The private sector is expected to grow at a CAGR of 57.9 per cent (at constant prices) and reach at Rs. 41,658 crore during the Twelfth Plan. Private investment is expected to be driven by various in metrorail projects in cities like Hyderabad, Gurgaon, Jaipur, Patna, etc., which are envisaged to be implemented through private participation.

Irrigation (incl. Watershed)

2.2.11 The total investment is projected at Rs. 4,30,103 crore during the Twelfth Plan as compared to Rs. 2,79,359 crore during the Eleventh Plan. Public investment is expected to grow at CAGR of 9 per cent (at constant prices), with the Central and States' investments reaching to Rs. 26,096 crore and Rs. 4,04,007 crore respectively, during the Twelfth Plan. Private investment in irrigation infrastructure has remained negligible as no serious efforts have been made so far to attract private participation.

Watersupply & Sanitation

2.2.12 The total investment is projected at Rs. 2,07,684 crore during the Twelfth Plan as compared to Rs. 1,37,310 crore during the Eleventh Plan. Accounting for almost 98 per cent of the total investment, Central and States' investments are projected to be Rs. 78,080 crore and Rs. 1,24,576 crore respectively. Private sector investment in the sector is projected at a modest Rs. 5,028 crore. Public sector investment is expected to grow at a CAGR of 9 per cent largely on account of the pressing deficit in this area, while private investment is expected to grow at CAGR of 66.5 per cent, all at constant prices.

Ports (incl. Inland Waterways)

2.2.13 The total investment is projected to grow nearly three time to Rs. 1,60,559 crore during the Twelfth Plan as compared to Rs. 49,551 crore realised during the Eleventh Plan. Of the total investment, Rs. 17,054 crore, Rs. 4,594 crore, and Rs. 1,38,910 crore are projected to be contributed by the Centre, States, and private sector respectively. In major ports, investments by the public and private sectors are expected to grow at a CAGR of 12 per cent and 48 per cent respectively. In non-major ports and inland waterways, public investment is expected to grow at CAGR of 12 per cent and 9 per cent respectively, while private investment is expected to grow at a CAGR of 29.4 per cent and 114.6 per cent, all at constant prices.

Airports

2.2.14 The total investment is projected at Rs. 71,000 crore during the Twelfth Plan, of which Rs. 14,500 crore and Rs. 56,500 crore are expected to come from the public and private sectors, respectively. The Central and States investments are expected to grow at a CAGR of 4.4 per cent and 23.7 per cent respectively, while private investment is expected to grow at a CAGR of 45.7 per cent, all at constant prices.

Oil & Gas Pipelines

2.2.15 The total investment is projected at Rs. 1,20,175 crore during the Twelfth Plan, of which Rs. 63,996 crore and Rs. 56,179 crore are expected to come from the public and private sectors respectively. Public investment is expected to grow at a CAGR of 12 per cent while private investment is expected to grow at a CAGR of 96.9 per cent, all at constant prices.

Storage

2.2.16 The total investment is projected at Rs. 47,670 crore during the Twelfth Plan, of which Rs. 13,603 crore and Rs. 34,067 crore are expected to come from the public and private sectors respectively. The Central and States' investments are expected to grow at a CAGR of 12 per cent and 9 per cent respectively, while private investment is expected to grow at a CAGR of 32.9 per cent, all at constant prices. The States may be able

to raise market borrowings through their respective warehousing corporations in order to take up a large programme of investment.

Assumptions underlying the Investment Projections

1. In making the projections for the Twelfth Plan, the Centre and States investment numbers for 2012-13 have been taken from the Union Budget 2012-13 and State Budget Proposals for 2012-13. For sectors, where the 2012-13 budgeted investment for the Central sector were less than a minimum growth of 9 per cent over the anticipated Central investment in 2011-12, a growth of 9 per cent has been assumed to calculate 2012-13 investment numbers. Similarly, for sectors, where the 2012-13 budgeted investment for the States sector was less than a minimum growth of 7 per cent over the anticipated States investment in 2011-12, a growth of 7 per cent has been assumed to calculate 2012-13 investment numbers.

2. For making the projections for the Central investment in irrigation (incl. watershed), water supply and sanitation, MRTS and inland waterways, which are funded through gross budgetary support from the Government of India, a constant growth of 9 per cent over 2012-13 numbers has been assumed for the remaining 4 years of the Twelfth Plan. For sectors such as electricity, roads, major ports etc., which are operationalised through PSUs that can raise extra budgetary resources, a CAGR of 12 per cent has been applied. For Airports, Telecommunications and Railways, growth rates of 4 per cent, 21 per cent and 15 per cent have been taken based on the assessment of their sectoral dynamics during the Plan.

3. For making the projections for the States' investment in power, roads, MRTS, irrigation (incl. watershed), water supply & sanitation,

inland waterways and storage, which are funded through gross budgetary support from the state governments, a constant growth of 9 per cent over 2012-13 numbers has been assumed for the remaining 4 years of the Twelfth Plan. For sectors such as non-conventional energy, non-major ports and oil & gas pipelines, which are operationalised through PSUs that can raise extra budgetary resources, a CAGR of 12 per cent has been assumed. For airports a CAGR of 24 per cent has been assumed.

4. In making projections for the private sector investment, the total private investment in the Twelfth Plan is projected to increase over the total anticipated investment in the Eleventh Plan. Each sector is assumed to increase at a different rate based on the assessment of its sectoral dynamics. Sectoral projections for the private investment during the Twelfth Plan are provided below:

4.1 In electricity and NCE, it has been assumed that private investment will grow by about 100% and 150% respectively.

4.2 For Central and States' roads, it has been assumed that private investment will grow by about 200% and 150% respectively, during the Twelfth Plan. For the telecommunications and oil & gas pipelines sectors, it has been assumed that private investment will grow by about 100% each.

4.3 Private investment projections in railways and MRTS are assumed to grow by 660 per cent and 610 per cent respectively during the

Twelfth Plan. The high growth rate reflects a greater thrust on the private sector participation in railways (incl. MRTS). In case of water supply & sanitation, private investment is projected to grow by 660 per cent during the Twelfth Plan. The private investment data collected by the planning Commission is provisional and do not reflect the actual extent of investment in the sector due to limitation of data collection. In case of ports (incl. ILW), airports and storage, private investment is projected to grow by about 240 per cent, 70 per cent and 200 per cent respectively.

5. To project the year-wise private investment during the Plan, a constant annual growth is calculated on 2011-12 to achieve the projected Twelfth Plan investments. The growth rate differs for each sector and is dependent upon the year-wise breakup of anticipated investment in the Eleventh Plan.

Recommendations for Accelerating Investment

3.1.1 Traditionally, infrastructure has been funded largely through public investment. However, the growing requirements of infrastructure can no longer be met by public funding alone as there are competing pressures on budgetary resources. As a result, reliance on private investment has grown and the share of private investment in the total investment in infrastructure has increased significantly from 22 per cent in the Tenth Plan to 38 per cent in the Eleventh Plan and is projected at 47 per cent during the Twelfth Plan.

3.1.2 In making the investment projections for the Twelfth Plan, Planning Commission has broadly indicated that budgetary allocations can be expected to increase by a compounded annual rate of about 9 per cent in real terms, which would mean about 16 per cent per annum in nominal terms. However, public sector undertakings could possibly raise comparatively larger resources through internal generation and market borrowings. After accounting for these projections of public investment, the balance remaining would have to be funded from private capital.

3.1.3 To mobilise the projected levels of private capital, it would be necessary to pursue reforms in several directions. Sustainable pricing of commodities and services, especially energy, would be necessary. The policy and regulatory framework for PPP would need to be reinforced, particularly in sectors like Railways which have been slow to reform. Privatisation and disinvestment would also be

necessary for substituting state-owned monopolies by competing entities.

3.1.4 In general, the Committee noted that the enabling environment needs to be improved significantly in order to mobilise the requisite levels of investment. Over-arching impediments such as delays in land acquisition and environmental clearances, taxation/GAAR related issues and regulatory uncertainties need to be addressed urgently. The proposal to introduce regulatory reforms through an over-arching legislation also needs to be implemented. In the absence of these measures, not only will future investments be constrained even the existing investments may be at risk in some cases.

3.1.5 The Committee has identified a number of sector-specific issues constraining investment in infrastructure, especially private investment. In doing so, the Committee noted that the projected investment of about Rs. 51 lakh crore cannot be taken for granted. On the contrary, it is likely to fall short significantly if a number of measures necessary for removing policy and implementation impediments are not taken within a short time-frame. The Committee has, therefore, identified some key areas for expeditious action and recommended measures which can be expected to spur investment during the Twelfth Plan. These are explained below.

POWER SECTOR

3.2.1 Reform of electricity distribution

(a) Rationalisation of Tariffs:

The distribution segment is approaching a financial collapse with the current level of losses exceeding Rs. 70,000 crore. The gap between the average cost of supply and tariff exceeds Rs. 1 per unit which results in a financial loss for every unit of power sold. If this situation continues, private investment in generation will shy away and the purchasers of electricity from power producers would be seen as lacking creditworthiness. In order to maintain the inflow of investment, tariffs will have to be set at sustainable levels while also improving the collection efficiency and reducing losses.

The Committee recommends restructuring and rescheduling of accumulated losses while establishing an arrangement where change in fuel price is a pass through and tariffs are revised when necessary. In addition, subsidies should be funded by the State Governments concurrently, and not by withholding payments of power producers or by short-term borrowings from the banking system or by creating regulatory assets.

(b) Adopt Public Private Participation (PPP) in distribution

Given the deteriorating financial health of Discoms, there is need to attract private investment for augmenting and modernising

the distribution systems and also for operating them efficiently on commercial lines. The Task Force on Public Private Partnership in the Distribution of Electricity, under the chairmanship of Shri B.K. Chaturvedi, Member, Planning Commission, has recommended a framework for PPP in the distribution segment, which should be adopted by the States for cities and larger towns in the first instance. The Central Government may provide Viability Gap Funding and other support for this purpose.

3.2.2 Coal supply

The shortage of coal is leading to power shortages and stranded power capacity while discouraging further investments. In the short-term, supply of coal may be increased by importing coal through STC/ MMTC or directly by the producers themselves. The increase in fuel costs will need to be passed on to the consumers concurrently lest it adds to the losses of Discoms.

It is important to recognise that imported coal is not an affordable option in the medium term. The Committee, therefore, recommends the adoption of PPP for coal production as Coal India Limited (CIL) alone cannot meet this mammoth challenge. Under the proposed PPP model, the coal mine as well the coal will remain in the ownership of the public sector, while the private partner will receive a mining charge on the coal mined. The sale of such coal will be undertaken by the public entity which grants the PPP concession.

In order to introduce healthy competition and eliminate incumbent resistance from CIL, the Committee recommends setting up of a new public sector undertaking (PSU) to award and manage the PPP concessions. The new company should be allocated mines, which either have all the required clearances or are in an advanced stage of getting such clearances. Existing mines of CIL, which are yet to be explored, may also be transferred to the new company. This arrangement can ramp up coal production quite rapidly and bring the much needed relief to the economy. A time-bound programme may be established for this purpose.

There are several cases where captive coal production is surplus to the requirement of designated projects. Considering the prevalent shortage of coal, the Committee recommends that a transparent policy framework may be announced for incentivising the mine owners to produce surplus coal and sell it at remunerative prices while protecting consumer interests. In the medium term, legislative changes may be undertaken to enable enhanced private participation.

3.2.3 Gas supply

Gas supply has been falling sharply during the last two years, leading to underutilisation of installed capacity. If this situation continues, several power stations will turn sick and this will not only impact the investors but also affect the banking system. The Committee recommends expeditious arrangements for import of gas, including its pricing and

allocation, so that power generation can be increased while protecting the investments made.

Given the high cost of imported gas, the Committee also recommends that gas-based power stations may be used only for peak hours until more gas is discovered or import prices fall. For this purpose, suitable adjustments may have to be made for loading the off-peak fixed charges on the power supplied during peak hours. This can easily be done through 'Time of Day' tariffs in accordance with international best practice. Further, gas-based power stations should be allowed to generate additional power freely and sell their high-cost surplus electricity to open access consumers for whom the opportunity cost may be higher in several cases. This would also save on power generation based on subsidised diesel.

The Committee further recommends that rationalisation of gas allocations and pricing of gas may be addressed within the next two months as further delay in doing so will only postpone the requisite imports of gas, thus reducing power supply as well as the viability of several gas-based power stations.

3.2.4 Introduction of Open Access and competition

The Electricity Act requires bulk consumers (above 1 MW) to buy electricity at market-determined prices as their tariffs cannot be regulated any longer. The Ministry of Power has already written to all the State

Governments, Regulatory Commissions, etc., asking them to abide by the law which mandates that such tariffs cannot be regulated by SERCs. As such, the SERCs should only fix the wheeling charge and open access surcharge in accordance with the Tariff Policy notified by the Central Government.

The Committee recommends that the States may be advised to enforce these provisions of law as a condition for further release of Central assistance, both under R-APDRP as well as under the proposed scheme for restructuring the debt of Discoms. In addition, 25 per cent of the Centre's discretionary allocation comprising 15 per cent of CPSUs' generating capacity may be made available for direct sale by CPSUs to open access consumers as recommended by the Task Force on Operationalising Open Access, headed by Shri B.K. Chaturvedi, Member, Planning Commission. This will not only introduce competition, but also help in attracting the much needed private investment in power generation as producers will be able to sell directly to bulk consumers in a competitive market as against their present reliance on financially unviable Discoms.

Owing to the high cost as well as unavailability of imported fuel, several generating companies are operating below capacity, resulting in a significant loss to the economy. The Committee believes that with open access in place, generating companies will be able to produce more electricity at market prices and sell directly to bulk consumers at mutually negotiated prices. This

would enable the generating companies to utilise their capacity while bulk consumers will be able to get uninterrupted power supply. This arrangement would also augment the earnings of Discoms through wheeling charges and open access surcharge.

3.2.5 Revision of Standard Bidding Documents

The extant Standard Bidding Documents for private power stations have caused several problems such as risks and costs associated with pricing of fuel and availability of fuel. Several existing and forthcoming projects are facing serious difficulties and may even become unviable. The Committee recommends a through revision of these standard documents so that the future investments are sustainable. For the past contracts, the Government should consider some readjustments to ensure sustainability of these projects.

HIGHWAYS

3.3.1 Expedite roll-out of PPP projects

The award of projects by NHAI has fallen short of targets during the past several years due to delays in the bid process. The award of projects also tends to be bunched during the last two months of the financial year. NHAI should draw up a month-wise plan to award 10,000 km in 2012-13. The programme should be placed in public domain and progress should be updated every month.

3.3.2 Execute projects through EPC contracts

The conventional item rate contracts are prone to high cost and time overruns. Planning Commission has formulated a model “Engineering Procurement and Construction” (EPC) contract which would minimise time and cost overruns. All new projects with low traffic density, which are not viable on BOT (toll) mode, may be executed through EPC contracts. The Committee recommends that EPC contracts for 5,000 km may be awarded in 2012-13.

3.3.3 Operationalise the Expressway programme

During the Eleventh Plan, against a target of 1,000 km of expressways, no progress could be made. The expressway programme may be rolled out expeditiously and the long-awaited Expressway Authority of India may be constituted to provide an impetus to the Expressway programme.

3.3.4 Implementation delays

Major constraints affecting the road development programme include implementation delays and lack of capacity within NHAI to re-orient itself from conventional contracts to the PPP discipline. The Committee recommends that institutional restructuring of NHAI should be completed within a specified time-frame, as already approved by the Cabinet.

TELECOMMUNICATIONS

3.4.1 Regulatory uncertainties

The Committee observed that the recent developments in telecom industry have increased policy uncertainties in this sector, which in turn have led to dampening of the investor sentiment. The Committee recommends that policies related to allocation, pricing and sharing of the spectrum allotted in the past need to be settled at the earliest to restore investors' confidence and ensure the needed investments.

3.4.2 Mergers & Acquisitions (M&A)

The policy related to mergers and acquisitions of telecom licensees should be rationalised in order to facilitate consolidation in line with international experience. This will also give a further boost to investment and competition.

3.4.3 Increase FDI limit to 100 per cent

The Committee noted that auction-based investment by foreign investors will require large infusion of equity by companies seeking to establish a pan-India presence. The present FDI limit of 74 per cent already allows foreign investors to exercise complete control over their telecom companies. In such a situation, finding Indian investors who are willing to invest large sums representing the remaining 26 per cent and yet take a minority stake constitutes a significant constraint in getting competitive foreign investment at the right valuation. In other infrastructure sectors

such as power, roads, ports etc., 100 per cent FDI is already permitted. The Committee, therefore, recommends that in order to get more competitive offers in the proposed auctions and also to enhance FDI, the said limit may be raised from 74 per cent to 100 per cent, especially as it may act as a barrier to competition and investment. Appropriate safeguards may, however, be built where necessary to address security concerns. The Committee also recommends that 2G licensees should be allowed to raise external commercial borrowings.

3.4.4 Increase penetration in rural areas

Telecom sector has witnessed a rapid growth during the Eleventh Plan period, with urban and rural teledensity reaching 170 and 39 respectively in March 2012. All consumers (through the respective licensees) bear a USO (Universal Service Obligation) charge of about 5 per cent which has led to the accumulation of a large corpus of over Rs. 20,000 crore. Since, connectivity is a form of empowerment, the Committee recommends that USO funds may be used for subsidising telephone connections to the rural population that has remained uncovered so far.

RAILWAYS

3.5.1 Turnaround of Indian Railways

Indian Railways is facing serious problems such as inadequate investment, diminishing efficiency, falling safety standards and

declining share in freight and passenger traffic. Some urgent measures are necessary for a turnaround of Railways. These are briefly explained below.

3.5.2 Rationalisation of passenger fares

The Committee recommends rationalisation of the prevailing uneconomic rail fares, which have not been revised for a decade. This will augment internal resource generation which is necessary for making investments in modernisation and expansion of the railway sector.

3.5.3 Private investment through PPP

The rigid organisational structure of the Railway Board is preventing it from raising the requisite resources for modernisation and expansion of the railways. It has also been unable to attract private investment which constitutes less than 5 per cent of its total investment. For want of investment, railways will continue to deteriorate. The Committee, therefore, recommends the following PPP initiatives to mobilise large volumes of investment in the Indian Railways:

- (i) Modernisation of Railway stations,
- (ii) Elevated suburban corridors in Mumbai,
- (iii) Development of new freight corridors,
- (iv) High Speed Rail projects, and
- (v) Manufacturing of diesel and electric engines, coaches and wagons.

3.5.4 Institutional restructuring of the Railway Board

While restructuring and modernisation has brought welcome changes in several sectors, the organisational structure of the Railway Board has retained its archaic form which is not conducive to efficient commercial operations. Being a monopoly, the Railway Board has so far stalled several basic reforms such as private participation and commercial accounting. The Committee recommends restructuring of the Railway Board on commercial lines to enable investments and growth in the railway sector which otherwise seems stagnant.

MRTS

3.5.5 Attract more private investment

Since metro projects are capital intensive, it would not be possible to take up more projects with the limited public funds available for this purpose. The success of PPP mode in attracting private capital has already been demonstrated in the Hyderabad and Mumbai MRTS projects, even though these projects are in early stages. The Committee recommends that forthcoming metro projects should be taken up through the PPP mode so that the available budgetary resources can be better leveraged for a larger programme of MRTS. Other forms of raising resources may also be considered.

IRRIGATION

3.6.1 Private participation in irrigation

The Committee noted that no serious efforts have been made to attract private participation in the irrigation sector in India. The model of USA where about 98 per cent of the dams have been built by the private sector could be explored in India through some pilot projects. Since part of the water from these dams would be allocated for industrial and urban purposes, user charges could be calibrated to improve viability. The Government could also provide the requisite grants to bridge the gap in financial viability of such projects.

Sprinkler and drip irrigation improves water use efficiency very significantly. Development of clusters of sprinkler/drip irrigation could be undertaken through PPP to provide a boost to growth in food production and farmers' income. The Committee recommends the adoption of PPP mode for financing medium and minor irrigation schemes, including sprinkler/drip irrigation.

WATER SUPPLY AND SANITATION

3.7.1 Private investment in water supply and sanitation

Investments in this sector have remained inadequate owing to the limitations of budgetary resources. There is a need to encourage private participation in upgrading and modernising urban water supply and

sanitation. However, the States and local authorities have been reluctant to adopt the PPP approach, nor are they able to rationalise the user charges and ensure supply of quality drinking water. The Committee recommends that PPP should be made an integral component of major projects in water supply and sanitation under JnNURM. This will not only attract the much needed investment, it will also improve the quality of drinking water supply and sanitation.

PORTS

3.8.1 Expedite awarding of projects

As against the target of 512 MMT, capacity addition in major ports during the Eleventh Plan was only 185 MMT. The non-major ports in the state sector performed relatively better by adding 257 MMT against the target of 347 MMT. The poor performance of major ports was due to award of only 20 PPP projects against a target of 49 projects during the Eleventh Plan. The Committee recommends that the Ministry of Shipping should expedite the award of PPP projects during the Twelfth Plan and the quarter-wise programme already announced for the current year may be implemented and monitored effectively. The Government should also encourage the establishment of new private sector ports with the help of State Governments.

3.8.2 Deregulation of tariffs

The existing method of fixing tariffs by TAMP is contrary to international best practice and

leads to various anomalies. This has also led to tariff differentiation between berths at the same port. The Committee recommends that since sufficient competition already exists in this sector, port tariffs may be deregulated.

3.8.3 Reduction in dwell time

Indian ports have a much longer dwell time as compared to the developed countries. This is an indicator of inefficiency leading to higher costs. Hence, there is a need to modernise the technology and processes to bring dwell time at par with international standards. The Committee recommends that the Government should announce a time-bound action plan for reduction in dwell time.

3.8.4 Capital dredging

Several Indian ports suffer from low drafts which prevent entry of large modern vessels. The Committee recommends that the Ministry of Shipping should accelerate the pace of capital dredging and where the project size is large, private participation may also be explored along with the provision of VGF, where necessary

INLAND WATERWAYS

3.8.5 Explore private participation

Given the huge growth potential as well as the paucity of budgetary resources, the Committee recommends private participation in the development and operation of inland waterways.

AIRPORTS

3.9.1 Expedite development of greenfield airports

The Committee recommends that the four Greenfield airports in Navi Mumbai, Goa, Kannur and Chandigarh, which have been identified for development through PPP, may be awarded in the current year without further delay.

3.9.2 Management and operations of metro airports

Kolkata and Chennai airports have been constructed by AAI with an investment of about Rs. 4,200 crore. It is generally recognised that AAI may not be able to maintain and operate these airports to world-class standards. The Committee, therefore, recommends that the operation and management of these airports, including the airside and city side facilities, may be undertaken through PPP, which should also provide for future expansion.

3.9.3 Management and operation of non-metro airports

AAI has not been able to realise the full potential of non-aeronautical revenues which has led to losses or higher user charges. Moreover, the levels of efficiency in the management and operation of newly constructed terminals need to be improved significantly. Many of these airports would also require further investments. The

Committee recommends that the development and operation of both airside and city side facilities at the 15 non-metro airports in Ahmedabad, Jaipur, Lucknow, Amritsar, Bhubaneswar, Coimbatore, Varanasi, Gaya, Udaipur, Guwahati, Tuticorin, Puducherry, Khajuraho and Pantnagar may be undertaken through PPP.

OIL AND GAS PIPELINES

3.10.1 Introduction of independent operators

The Committee recommends that the Ministry of Petroleum & Natural Gas (MOP&NG) may evolve a policy and regulatory framework, similar to that of transmission of electricity, for construction of oil and gas pipelines through independent operators, who should provide non-discriminatory access to all suppliers and consumers. This would help increase private investment in building a national grid of pipelines, which is presently a monopoly operation.

STORAGE

3.11.1 Create multiple windows for private investment

Huge shortage of storage capacity has caused a significant loss of food grains. Sole reliance on FCI as well as the absence of a viable model has hampered the creation of modern storage capacity. The Committee recommends that the programme for creating 2 MT of Silo storage through PPP may be implemented

expeditiously through FCI as well as the State Governments.

CONCLUSION

3.12.1 The Committee, recommends that a time-bound action plan may be drawn up to address the aforesaid recommendations, especially with a view to improving the enabling environment for private investment which is expected to finance about 47% of the projected investment during the Twelfth Plan.

3.12.2 The Committee wishes to emphasise that while there is considerable investor interest in several sectors, the roll-out of PPP projects has been quite slow. The project authorities do not seem to prepare an adequate shelf of projects, nor are they able award projects in time. As a result, investments have fallen short of targets. The Committee, therefore, recommends a monthly monitoring of project awards by the Cabinet Committee on Infrastructure, which may also go into the reasons for shortfall and take remedial steps.

Reinventing IIFCL for a Larger Role

4.1 India Infrastructure Finance Company Limited (IIFCL) was set up by the Government in 2006 to provide long-term debt for infrastructure projects since the commercial banks were unable to do so on account of their asset-liability mismatch. IIFCL has since provided loans to a large number of projects albeit on the same terms as banks, but with a marginal increase in the tenure of loans. To fund its lending programme, IIFCL has raised its funds against sovereign guarantees and not on the strength of its balance sheet. However, the benefits of sovereign guarantee have not been fully realised as IIFCL has largely duplicated the role of commercial banks, which was not its mandate.

4.2 With an anticipated debt gap of substantial proportions, funding of the proposed investment of US \$ 1 trillion during the 12th Plan may pose difficulties. It may, therefore, be necessary to mobilise funds from other sources such as insurance and pension funds, external debt and household savings. This would require the development of a vibrant bond market with sufficient depth. One of principal requirements for developing the bond market is an institutionalised mechanism for credit enhancement which would enable the inflow of debt funds at economic costs. With its experience in infrastructure financing, IIFCL is well suited to provide guarantees for bonds to be issued by private infrastructure companies.

4.3 Similarly, IIFCL can also play a significant role in providing subordinated debt

that would relieve some pressure from the growing requirements of equity.

4.4 Re-engineering the role of IIFCL from that of a normal lender to one who provides guarantees for bonds and also extends subordinated debt would make it a catalyst in channeling large inflows of additional funding for infrastructure projects.

4.5 In sum, IIFCL should not duplicate the services that are being provided by commercial banks. It should focus on providing services that commercial banks are unable to provide.

4.6 Key recommendations for reinventing and enlarging the role of IIFCL are given below. A detailed paper explaining the above may be seen at Annex-I of this Part-IV.

Key recommendations for action

a) IIFCL was set up to provide financial assistance which commercial banks and NBFCs are not able to provide. For this purpose, it enjoys exceptional support of the government in the form of sovereign guarantees and regulatory exemptions. It, therefore, follows that before engaging in any lending operation, it must satisfy itself that the same cannot be undertaken by commercial banks or NBFCs and that the sovereign's direct exposure is justified in a particular lending operation because it adds value that commercial banks or NBFCs cannot. By adhering to this principle, it will be able to act as the much needed catalyst for accelerating

the flow of additional resources to finance infrastructure projects.

b) IIFCL should substitute its direct lending operations by guarantee operations that would enable the flow of non-Bank long-term credit for infrastructure projects, especially, insurance and pension funds. The guarantee fee structure has been suggested in paragraph 11.6 of Annex-I. Where IIFCL undertakes direct lending, it should lend for tenures of 20 years or more since commercial banks are able to lend for tenures upto 15 years. Where the project does not require such long tenures, it should rely on commercial banks.

c) IIFCL should function under the regulatory oversight of RBI based on prudential norms and market principles. Instead of continuing to borrow solely on the strength of sovereign guarantees, it should start raising funds on the strength of its balance sheet. To provide additional equity to meet the capital adequacy norms, Government should provide callable capital equal to twice the subscribed equity and reserves of IIFCL. This would eliminate budgetary funding for the next several years.

d) IIFCL should provide subordinated debt for upto 10% of the approved project costs in accordance with its extant scheme of financing for PPP projects which normally have a compulsory buy-out. Such debt should carry a moratorium of at least 12 years on repayment of principal.

e) The present exposure limit of 20% of

approved project costs may remain unchanged. While upto 10% of project costs may be provided as subordinated debt, the remaining may be provided in the form of guarantees for long-term bonds. During the transition, IIFCL may continue to provide direct loans of upto 10% of approved costs until March 31, 2014.

f) In order to provide the requisite volumes of infrastructure lending, the limitations imposed by 'group exposure limits' should be removed because they were neither contemplated nor are they relevant for non-recourse lending to PPP projects which carry a guarantee of compulsory buyout by the respective project authority.

g) IIFCL may substitute its take-out financing scheme by an IDF as announced by the Finance Minister in his budget speech for 2011-12. It is noteworthy that RBI has since established the regulatory framework and two other IDFs have already been set up.

Reinventing IIFCL for a Larger Role

IIFCL was set up by the Government in 2006 to provide long-term debt for infrastructure projects since the commercial banks were unable to do so on account of their asset-liability mismatch. IIFCL has since provided loans to a large number of projects albeit on the same terms as banks, but with a marginal increase in the tenure of loans. IIFCL has raised its funds against sovereign guarantees and not on the strength of its balance sheet. However, the benefits of sovereign guarantee have not been fully realised as IIFCL has largely duplicated the role of commercial banks, which was not its mandate.

With an anticipated debt gap of substantial proportions, funding of the proposed investment of US \$ 1 trillion during the 12th Plan may pose difficulties. It may, therefore, be, necessary to mobilise funds from other sources such as insurance and pension funds, external debt and household savings. This would require the development of a vibrant bond market with sufficient depth. One of principal requirements for developing the bond market is an institutionalised mechanism for credit enhancement which would enable the inflow of debt funds at economic costs. With its experience in infrastructure financing, IIFCL is well suited to provide guarantees for bonds to be issued by private infrastructure companies.

Similarly, IIFCL can also play a significant role in providing subordinated debt that would relieve some pressure from the growing requirements of equity.

Re-engineering the role of IIFCL from that of a normal lender to one who provides guarantees for bonds and also extends subordinated debt would make it a catalyst in channeling large inflows of additional funding for infrastructure projects.

In sum, IIFCL should not duplicate the services that are being provided by commercial banks. It should focus on providing services that commercial banks are unable to provide.

1 Background

1.1 The Government established the India Infrastructure Finance Company Limited (IIFCL) in 2006 as a wholly owned company of the Government to provide long-term financing for infrastructure projects since the commercial banks were unable to provide long-term debt on account of their asset liability mismatch. It was envisaged that IIFCL would raise long-term resources on the strength of sovereign guarantees.

2 Resources of IIFCL

2.1 Government had initially provided a share capital of only Rs. 100 crore to IIFCL since its borrowings were to be raised against sovereign guarantees and not on the strength of its equity. However, the Government subsequently provided an additional Rs. 1900 crore as equity, in two tranches.

2.2 IIFCL has so far raised domestic borrowings of Rs. 16,691 crore comprising Rs. 1,000 crore from LIC, Rs. 1,500 crore under

NSSF Scheme and Rs. 14,191 crore through bonds. In addition, it has a line of credit from the World Bank (\$ 1.2 bn), ADB (\$ 1.2 bn) and KfW (Euro 50 mn), which is equivalent to about Rs. 12,300 crore (at Rs. 50 to a US \$). Thus, it has access to total borrowed resources of about Rs.29,000 crore, of which it has drawn Rs. 21,000 crore and disbursed about Rs. 20,400 crore till March 2012.

2.3 In 2008, a wholly-owned subsidiary of IIFCL, known as the IIFCL (UK) Ltd, was established in London with the objective of utilising the foreign exchange reserves of the RBI to fund off-shore capital expenditure of Indian companies implementing infrastructure projects in India. RBI has so far given a limit of US \$ 5 billion for lending by IIFCL (UK).

3 Sanctions/ Disbursements of direct lending

3.1 As on March 31, 2012, IIFCL has sanctioned loans aggregating Rs. 40,373 crore for 229 projects which involve a total investment of Rs. 3,52,047 crore. It has so far disbursed Rs. 7,223 crore to power sector, Rs. 7,080 crore to road sector, Rs. 340 crore to port sector, Rs. 808 crore to airport sector, Rs. 14 crore to urban infrastructure sector and Rs. 108 crore for other investments, aggregating Rs. 15,574 crore of direct lending. In addition, Rs. 4,168 crore has been disbursed under the refinance scheme while Rs. 635 crore have been disbursed under the takeout financing scheme. Thus, its total disbursements as of March 31, 2012 are 20,377 crore.

3.2 Till 31st March 2012, IIFCL (UK) has sanctioned loans amounting to USD 3.9 billion for 36 projects. It has so far disbursed USD 423.49 million to 5 projects.

4 Other Schemes

4.1 Takeout finance: In 2010, IIFCL initiated the Takeout Finance Scheme. Take out financing is an arrangement wherein the initial lenders transfer their loans to IIFCL for upto 50% of their total outstanding. In effect, this is a re-financing operation. Till 31st March 2012, IIFCL has sanctioned 33 projects for takeout financing of Rs. 4,871.17 crore against which Rs. 635 crore have been disbursed in 7 projects. Further during first two months of 2012-13, IIFCL has further sanctioned 434 crore and has further disbursed Rs. 443 crore, taking cumulating disbursements to Rs. 1078 crore.

4.2 Credit Enhancement: IIFCL is undertaking a few pilot transactions for credit enhancement, in association with ADB. Under this scheme, the bond issues of infrastructure project developers would be given partial guarantee by IIFCL so that their bonds reach a credit rating of AA. This would help attract long-term investors such as Insurance companies and Pension funds. IIFCL will undertake credit enhancement upto 40% of the total project cost and provide unconditional and irrevocable credit guarantee for upto a maximum of 50% of the amount of bond issuance. The first bond issue under this scheme is likely to be rolled out in June 2012 for an amount of Rs. 320 crore, of which IIFCL would guarantee 24%.

5 Tenure of loans

5.1 The sole rationale for setting up IIFCL was to provide long term debt which the commercial banks were unable to lend. However, IIFCL has so far lent for tenures which are only marginally higher than the loans given by commercial banks. IIFCL typically joins the consortium of lenders and provides loans just like any other Bank albeit with a tenure that may be longer by one or two years. In that sense, IIFCL is only supplementing Bank credit which was not its intended objective.

6 Overlap in Government exposure

6.1 IIFCL raises its funds on the strength of sovereign guarantees. Use of scarce sovereign guarantees for sustaining lending operations similar to normal banking operations requires some rethinking. It is noteworthy that when IIFCL was set up, the Government did not envisage provision of equity for capitalising IIFCL like any other financial institution. Instead it was decided to extend sovereign guarantees in order to enable IIFCL to raise debt without the requisite capitalization. However, as events have unfolded, the Government has provided equity as well as sovereign guarantees, which can be regarded as an overlap or duplication of Government support. It should be possible to leverage this support more optimally. As the volumes of IIFCL lending grow, it should be weaned away from government guarantees as it cannot continue to operate through sovereign guarantees for all times to come.

7 Role of IIFCL in Infrastructure Financing

7.1 IIFCL has mainly served as yet another non-banking financial institution (like IDFC) lending to infrastructure companies. Though its tenure of lending is marginally longer than Bank loans, it cannot be asserted that IIFCL has succeeded in fulfilling its objective of providing long-term debt for infrastructure projects.

7.2 In an era when the Government is distancing itself from market-based banking operations, the continuation of IIFCL as a wholly owned government company raising debt solely on the strength of sovereign guarantees for the purposes of typical bank-type lending could be regarded as an anachronism. Use of government-funded equity or sovereign guarantees merely to duplicate the role of existing financial institutions may not be regarded as a credible or sustainable intervention in the present environment. For IIFCL to continue as a government-led initiative in infrastructure financing, it should provide services that the market cannot otherwise provide.

8 Absence of bond financing

8.1 Bond finance is regarded as one of the important sources of financing as it enables infrastructure companies to avail of long tenure debt at fixed interest rates from sources other than Banks. However, the bond market in India has remained underdeveloped even though the equity market has developed quite

well. As a result, neither household savings nor long-term insurance or pension funds are being channelised through bonds to finance infrastructure projects. In particular, since infrastructure companies are typically regarded as 'below investment grade' until they become profitable, insurance and pension funds shy away from investing in their projects for the first few years.

8.2 To promote off-shore inflows of long-term debt, FIIs have been allowed to invest in bonds issued by infrastructure companies. However, FII investments have been very slow and as of December 31, 2011, only about 7% of the total limit of USD 25 billion has been utilised. This is mainly for want of investment grade instruments. If credit enhancement could be provided for bonds issued by infrastructure companies, it should be possible to accelerate the flow of foreign debt in financing infrastructure projects.

9 Role of IIFCL in developing the Bond market

9.1 If IIFCL can provide guarantees for specified infrastructure bonds, it would enable such bonds to be rated as 'investment grade'. These bonds should be able to attract insurance and pension funds, household savings and foreign debt. This initiative would also help in deepening the bond market which in turn should enable infrastructure companies to raise funds against bonds carrying a comparatively lower rating.

9.2 Presently, IIFCL lends for upto 20% of the approved project cost. Instead of extending plain vanilla loans as at present, IIFCL should use the same exposure for guaranteeing the bonds of infrastructure companies in order to raise their credit rating to 'AA' or 'AAA'. Such bonds should be able to attract large investible pools of funding which presently stay away on account of a high risk perception. This initiative should help enhance the flow of credit to supplement bank financing which is facing a growing stress in terms of exposure and head room.

10 Advantages of credit enhancement

10.1 The above approach to credit enhancement would lead to several advantages such as:

- (a) Increasing the flow of long tenure funding: Infrastructure companies will be enabled to issue long tenure bonds guaranteed by IIFCL, thus enhancing the flow of long-term debt for infrastructure projects.
- (b) Supplementing bank finance: Since bank finance is coming under increasing pressure, expansion of the bond market would help bridge the emerging debt gap in infrastructure financing.
- (c) Deepening the bond market: Availability of investment grade paper would expand the much-needed bond market at a rapid pace.
- (d) FII investment: With the availability of high-rated paper, the FIIs would also be attracted to make larger investments in infrastructure bonds.

11 Proposed approach

11.1 The Twelfth Five Year Plan envisages the doubling of investment in infrastructure from about Rs. 20 lakh crore to about Rs. 40 lakh crore (USD 1 trillion) at 2006-07 prices. The share of private investment is expected to rise from about Rs. 7 lakh crore to Rs. 22.5 lakh crore (at constant prices). This requires a fairly rapid expansion of the sources and volume of infrastructure financing. The role of IIFCL needs to be reviewed and reinvented to meet these emerging challenges.

11.2 As indicated above, IIFCL has been lending like any other financial institution, though it has been raising resources solely on the strength of sovereign guarantees and not on market and regulatory principles applicable to other financial institutions. Despite the provision of sovereign guarantees, IIFCL has not been able to achieve its stated objective of providing long tenure debt to infrastructure projects. Since sovereign guarantees are scarce and also subject to a cap under the FRBM Act, efforts should be aimed at leveraging the available guarantee space to the maximum, especially for raising long-term debt.

11.3 The role of IIFCL needs to be re-engineered with a view to expanding the inflow of long-term funds, especially from sources other than banks. To achieve this objective, IIFCL should discontinue direct lending to infrastructure projects and instead provide credit enhancement for bonds issued by infrastructure companies. The present limit on project-specific exposure of IIFCL may

continue, but instead of providing loans upto 20% of the total project cost of infrastructure projects, IIFCL may provide guarantees that would involve a similar exposure i.e. upto 20% of the project cost. Such guarantees should raise the credit rating of bonds to AAA or AA, thus enabling infrastructure companies to raise funds from the market, especially from sources that have not been exploited so far.

11.4 IIFCL should be encouraged to work on market principles and prudential norms under the regulatory oversight of RBI. Instead of relying solely on sovereign guarantees, it should also leverage its present capital for extending guarantees by way of non-fund exposure to individual project companies in lieu of its fund-based exposure. This would enhance the reach of IIFCL in enabling project sponsors to mobilise insurance and pension funds on the strength of credit enhancement provided by IIFCL.

11.5 In order to leverage the equity capital of IIFCL, the Government may provide callable capital equal to twice the subscribed equity of IIFCL. This would be similar to the equity structure of the World Bank. Such callable capital may be treated by RBI as capital for the purposes of determining capital adequacy. This arrangement would provide a fairly large space for IIFCL to expand its guarantee operations rapidly, which in turn would imply accelerated expansion of non-bank finance for infrastructure projects. In effect, IIFCL would become a catalyst in mobilising non-Bank finance for

infrastructure projects by providing the requisite guarantees.

11.6 The present limits on exposure to PPP and non-PPP projects may continue as per extant rules governing IIFCL operations. Guarantee fee to be levied on PPP projects that have a provision for compulsory buy-out by the Government may be fixed at about 1% per annum. In case of projects that do not provide for a compulsory buyout, the lending risks are significantly greater and they should carry a minimum guarantee fee of about 2.5% per annum. This rate may be amended from time to time, with Government approval, to respond to the prevailing risk perceptions and risk analysis.

11.7 Issuance of tax-free bonds for Rs. 30,000 crore during the last quarter of 2011-12 has established the feasibility and credibility of raising infrastructure finance through bonds. HLCFI had, therefore, recommended that the issuance of tax-free bonds may be doubled in 2012-13. In his budget speech for 2012-13, the Finance Minister has since announced tax-free bonds of Rs. 60,000 crore. The bond route, in different forms, needs to be expanded rapidly to support the USD 1 trillion projection for investment in infrastructure during the Twelfth Five Year Plan. Reinvention of IIFCL as a bond guarantee institution would lend great support to the Government's vision of infrastructure development.

11.8 The role of IIFCL in providing subordinated debt has not been leveraged so

far. Under the extant rules, upto 10% of the project costs can be supported by IIFCL in the form of subordinated debt that normally functions as quasi-equity. Given the large need for fresh equity to fund the investments during the 12th Plan, this window of IIFCL may be activated and fully leveraged. IIFCL should provide subordinated debt for upto 10% of the approved project costs with a moratorium of at least 12 years on repayment of principal. Approval of subordinated debt may not be linked to the debt exposure of the lead bank or any other institution, but its disbursement should be preceded by the borrower's equity contribution equal to at least 20% of the project cost. Further, the subordinated debt should be covered by the guarantee of compulsory buyout of the project by the respective project authority. IIFCL should be free to set its interest rate to address the risk perception.

11.9 Following the announcement of the Finance Minister in the budget speech for 2011-12, two Infrastructure Debt Funds (IDFs) have since been set up for re-financing the debt of infrastructure projects. Since these IDFs would raise resources from the market without a sovereign guarantee albeit with some credit enhancement by the Government, IIFCL may discontinue its scheme for take-out finance which solely relies on funds raised against sovereign guarantees. In case IIFCL wishes to engage in the business of refinancing, it should also set up an IDF under the extant regulations. This would restrict the exposure of the Government on account of sovereign guarantees currently being extended

to IIFCL for raising loans to finance its take-out initiative, which can now be substituted by the IDFs without a sovereign guarantee. In case IIFCL wishes to engage in take-out financing/ refinancing, it may also set up an IDF.

11.10 It appears that in several cases, the lending operations of IIFCL are constrained by the application of 'group exposure limits' and 'capital adequacy norms'. It is important to recognise that when IIFCL was set up by the Government with an equity capital of Rs. 10 crore, these constraints were not contemplated. For the first few years of its operations, IIFCL did not apply these restrictions while sanctioning project loans. Application of these limitations in the recent past has restricted the operations of IIFCL in a manner that was never intended. While capital adequacy requirements would not pose much difficulty if appropriate risk weights are assigned to each case, the application of group exposure norms needs to be done away with in the case of PPP projects, as they are based on non-recourse lending with no support from the balance sheets of group companies. Moreover, the contingent liability on account of project failure or continued default in debt service is borne by the project authority in the form of a compulsory buyout and as such, any reliance on the balance sheets of group companies is irrelevant. For these reasons, group exposure limits should not be applied to PPP projects, especially because of the pressing need to lend more to infrastructure companies acquiring new projects at a fairly rapid pace.

11.11 The above recommendations involve a paradigm shift in the operations of IIFCL and may take some time to stabilise. These recommendations may, therefore, be implemented after a period of six months to enable IIFCL and other stakeholders to reorder their priorities and approach to infrastructure financing.

12 Conclusion

12.1 In light of the above recommendations, the following course of action may be considered.

(a) IIFCL was set up to provide financial assistance which commercial banks and NBFCs are not able to provide. For this purpose, it enjoys exceptional support of the government in the form of sovereign guarantees and regulatory exemptions. It, therefore, follows that before engaging in any lending operation, it must satisfy itself that the same cannot be undertaken by commercial banks or NBFCs and that the sovereign's direct exposure is justified in a particular lending operation because it adds value that commercial banks or NBFCs cannot. By adhering to this principle, it will be able to act as the much needed catalyst for accelerating the flow of additional resources to finance infrastructure projects.

(b) IIFCL should substitute its direct lending operations by guarantee operations that would enable the flow of non-Bank long-term credit for infrastructure projects, especially, insurance and pension funds. The guarantee

fee structure has been suggested in paragraph 11.6 above. Where IIFCL undertakes direct lending, it should lend for tenures of 20 years or more since commercial banks are able to lend for tenures upto 15 years. Where the project does not require such long tenures, it should rely on commercial banks.

(c) IIFCL should function under the regulatory oversight of RBI based on prudential norms and market principles. Instead of continuing to borrow solely on the strength of sovereign guarantees, it should start raising funds on the strength of its balance sheet. To provide additional equity to meet the capital adequacy norms, Government should provide callable capital equal to twice the subscribed equity and reserves of IIFCL. This would eliminate budgetary funding for the next several years.

(d) IIFCL should provide subordinated debt for upto 10% of the approved project costs in accordance with its extant scheme of financing for PPP projects which normally have a compulsory buy-out. Such debt should carry a moratorium of at least 12 years on repayment of principal.

(e) The present exposure limit of 20% of approved project costs may remain unchanged. While upto 10% of project costs may be provided as subordinated debt, the remaining may be provided in the form of guarantees for long-term bonds. During the transition, IIFCL may continue to provide direct loans of upto 10% of approved costs until March 31, 2014.

(f) In order to provide the requisite volumes of infrastructure lending, the limitations

imposed by 'group exposure limits' should be removed because they were neither contemplated nor are they relevant for non-recourse lending to PPP projects which carry a guarantee of compulsory buyout by the respective project authority.

(g) IIFCL may substitute its take-out financing scheme by an IDF as announced by the Finance Minister in his budget speech for 2011-12. It is noteworthy that RBI has since established the regulatory framework and two other IDFs have already been set up.

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