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NATIONAL CAPITAL REGION PLANNING BOARD PROJECT

Medium Term Strategic Evolution and Borrowers Assessment

SITUATION ANALYSIS REPORT

Submitted To :

Asian Development Bank

National Capital Region Planning Board

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Final Report : VOLUME - III

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ABBREVIATIONS

ADB	Asian Development Bank
BR	Buildings and Roads
DE	Debt Equity
EIL	Engineers India Limited
ESMS	Environment and Social Management System
FDI	Foreign Direct Investments
FIL	Financial Intermediation Loan
FRBM	Fiscal Regulation and Budget Management
GDP	Gross Domestic Product
GNTCD	Government of the National Capital Territory Delhi
GoH	Government of Haryana
GOI	Government of India
GoR	Government of Rajasthan
GoUP	Government of Uttar Pradesh
HUDA	Haryana Urban Development Authority
IA	Implementing Agency
IR	Involuntary Resettlement
IT	Information Technology
JNNURM	Jawaharlal Nehru National Urban Renewal Mission
MOUD	Ministry of Urban Development
NBFC	Non Banking Financial Institutions
NCR	National Capital Region
NCRPB	National Capital Region Planning Board
NEERI	National environmental Engineering research Institute
OM	Operation Manual
OP	Operating Policies
PFDF	Pool Finance Development Facility
PHED	Public Health Engineering Department
PPP	Public Private Partnership
PRI	Panchayat Raj Institution
PWD	Public Works Department
RF	Resettlement Framework
RIDCOR	Rajasthan Infrastructure Development Corporation
RIICO	Rajasthan Industrial Infrastructure Development Corporation
RITES	Rail India technical and Economic Services
ROE	Return on Equity
ROI	Return on Investments
RP 2021	Regional Plan 2021
RP	Resettlement Plan
SADA	Special Area Development Authority
SEBI	Securities and Exchange Board India
SEZ	Special Economic Zone
TNUDF	Tamil Nadu Urban Development Fund
UIDSMT	Urban Integrated Development of Small and Medium Towns
UIT	Urban Improvement Trust
ULB	Urban Local Body
WAPCOS	Water and Power Consultancy Services

AN OVERVIEW OF THE REPORT AND RATIONALE FOR THE PROJECT

Rationale: National Capital Region Planning Board (NCRPB) is uniquely positioned as both a planner and financier of one of India's fastest growing regions – the National Capital Region (NCR). Rapid growth has inevitably increased the demand for infrastructure and the consequent demand for debt finance in the region. The current rates of growth of the economy around NCR and participating States is over 7% and this region attracts one of the highest levels of foreign direct investments. These investments are linked to opportunities by way of creation of special economic zones in the region as well enhancing the Corridor and linked development as part of the proposed Delhi-Mumbai Infrastructure Corridor (Section 2). The Regional Plan 2021 (RP 2021), and the sub regional plans underway anticipate capital cross sectoral investments of INR 1937520 Millions over the plan period. These sectoral investments are expected to result in infrastructure outcomes in the sectors identified in the plan as can be seen in the (**Table 1.1**). The implementation of the RP 2021, and achievement of these sector goals form the core mission of the NCRPB.

Review of NCRPB's mandate as per the Act, financing levels, technical support as a planner and its positioning in the context of the proposed loan indicate that NCRPB's best position will be that of a financier of relevance and planner of significance. The significance of being a Planner of significance will be in terms of being a proactive planner of relevance (Table 3.2) across regional, sub regional and local level and a financier of relevance where NCRPB will be critical in terms of fostering growth. In other words, focus on implementation of the Regional Plan 2021 (RP 2021).

The resources needed for achieving these goals imply a need to blend scarce government grants with market finance which NCRPB has been doing successfully. However, many of these investments generate large external economies, and are lumpy investments with long gestation periods. This implies the need for long tenor finance which multilateral finance is in a better position to provide.

From the above perspectives, the proposed assistance from ADB's beyond the financial resources, will support and provide the institutional expertise in the infrastructure sector in the Asian region, its strengths in transferring best practices and its capacity to crowd in domestic private resources for infrastructure.

Agencies Preparedness: While NCRPB has been financing investment over the years, NCRPB is in the process of repositioning itself. The basic vision of NCRPB is in terms of being a financier of relevance and planner of significance. The business plan and model developed for NCRPB reviewed three options. Option 1 of business as usual, option 2 in terms of a progressive growth in being a FI and using the project as a vehicle to achieve the objective and Option 3 being a full scale financial intermediary. As outlined NCR has taken the first steps in moving away from the business as usual model and a full-scale FI would mean legislative amendments and NCR may not be competitive in terms of financing and would also mean moving away from being a planner. The recommended option (Section 4.0, Option 2) is in terms of:

i. Planner of relevance in the case of regional and sub regional actions and financier of relevance at the Local Level of entities (**Table 2.2**)
ii. Move from unlimited lliability, administered credit pricing and low leverage
iii. Fills an institutional vacuum and provides niche market for NCRPB

NCRPB, in line with positioning as per suggested option 2:

i. has from the point of view of being a proactive planner, intends streamlining the loan process to incorporate an initial screening process (See Fig 1) to support development of ideas and concepts to the next level of DPR and implementable packages. This would also involve supervision by NCR or agency for high value complex projects and monitoring during project and post project output/outcome assessment;
ii. is in the process of creating a project development facility to support project development and implementation (**See Volume 1 Chapter 4**);
iii. is facilitating a seamless travel across the region through simplified travel permit requirements for commercial vehicles and
iv. promoting State specific regional investment programs in the areas of water supply and waste management

The States/ Implementing/ borrowers have also embarked on policy decisions to:
i. seek NCRPB's investment support for areas falling within NCRPB
ii. integrate infrastructure across states, wherever it is of regional significance and
iii. seek technical assistance support for project and management improvements

1.0 Background and Context

1.1 Institutional Framework and Objectives

1. National Capital Region Planning Board (NCRPB) was set up as a statutory body by an Act of Parliament in 1985 with two major objectives, namely, spatial planning in the NCR region consisting of 33,000 sq. kms situated in 3 states of Uttar Pradesh (UP), Rajasthan, Haryana and Delhi and second, reduce migration into Delhi. The Act also provides for NCRPB to provide financing for projects. By mandate NCRPB is a planner and financier of the investments identified in the plan. NCRPB functions under the Central Ministry for Urban Development.

1.2 Planning: Performance and Prospects

2. In 2003, NCRPB formulated the Regional Plan (Regional Plan 2021) in the core sectors of transportation, power, water and sanitation and solid waste with an investment requirement of INR 19,37,520 Millions. The Regional Plan is itself not a detailed investment plan but has indentified normative investment needs and provides guidance on development norms and potential infrastructure necessary from both a growth (transport, power) and an environmental perspective (water and sanitation, solid waste)

Table 1.1 Regional Plan Investment Needs

SECTOR	Rs in Millions					
	2002-07	2007-12	2012-17	2017-21	TOTAL	Share
Transport	100000	91410			191410	9.88%
Power	293350	165690	505700	552690	1517430	78.32%
Water	26370	39550	39550	26370	131840	6.80%
Sewerage	12480	29130	24970	16640	83220	4.30%
Solid waste	5450	3410	2720	2040	13620	0.70%
Total					**1937520**	**100.00%**

3. Based on the Regional Plan (2003) the Sub regional plans are under preparation and only on finalization will provide an overview of the manner in which the RP has been translated in terms of regional development actions and implementable investments. However, the Teams' understanding is that sub projects will emerge from sectoral plans[1], city level Master Plans and City Development Plans[2]. This implies that the traditionally larger borrowers of NCRPB such as Urban Development Authorities will have limited planning functions at the city level, while the relatively smaller borrowers like municipalities or possibly special area development authorities/ project agencies, could be expected to have greater planning roles devolved. This institutional shift would

[1] Haryana PHED formulated a Draft Haryana Water Supply and Sanitation Plan. Since the input studies in formulating the Regional Plan, NCR Planning Board, in 2009 has progressed substantially in developing a Transport Sector Plan (2009) and as well as a Water Supply and its Management (2009).

[2] City Development Plans have been formulated for Faridabad and Meerut

be an important determinant of NCRPB's goals as both a planner and financier. Since the input studies in formulating the Regional Plan, NCR Planning Board, in 2009 has progressed substantially in developing a Transport Sector Plan (2009) and as well as a Water Supply and its Management (2009).

4. Beyond the preparation of Regional Plan (RP) and coordinating special studies, the NCRPB's current planning (including the Regional Cells) activities are primarily limited to ensuring that the development projects posed for its financing conform to the RP. This compliance check is expected to be carried out by the NCR Cell in the States and a certificate from the borrower. This implies that investments made by States and other national agencies such as NHAI or central power agencies within the region but using other sources of finances are not checked for compliance. Further, as it is not mandatory for the States to communicate the nature of investments made in the region there are no records of assets created nor an updated estimate of the physical gap with reference to the norms laid out in the RP. Further still, apart from the compliance check, the inter-state connectivity of investments have not usually been pursued as part of the appraisal or lending program. For example, even if one state (Haryana) has a policy of connecting all roads to those laid in another (Rajasthan) to its borders, NCRPB has not seized the opportunity to fashion a reciprocal agreement across states.

5. In sum, the regional plan and follow up actions, in the current form can neither be a basis for a land use plan nor an investment strategy for the region. Nor is there an active program to transform the sector goals of the regional plans into an active investment profile. Going forward, there is a need for a clear monitoring mechanism which produces an overview of annual targets and performances of asset creation, both in order to bring greater relevance for future planning as well as reporting back to stakeholders on the entity's progress in reaching its objectives.

1.3 Financing: Performance and Prospects

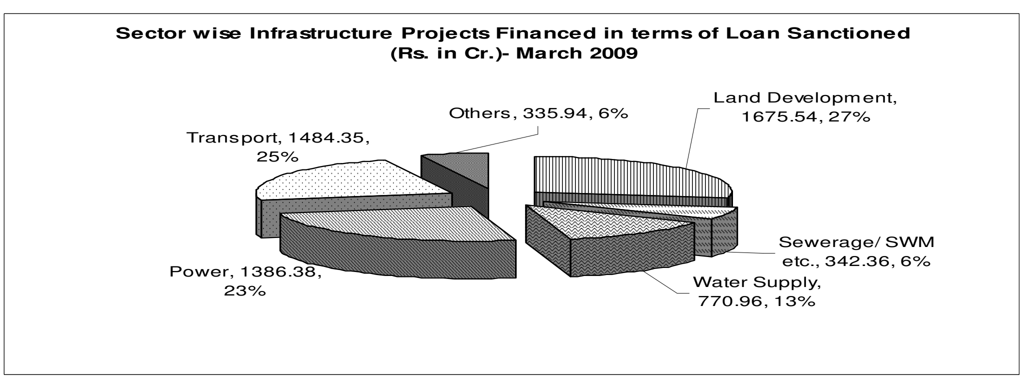
6. As a financier, NCRPB is to facilitate financing of the investments in the region, and in pursuance of this, the Board has provided loans to 230 projects (part of the regional plan) at a cost of Rs 59950 Millions (Sanctioned). These loans have been advanced out of grants received from GOI, Delhi Govt, internal accruals and market borrowings. The loans are either guaranteed by state governments or escrowed and are advanced at a concessional interest rate of above 100-200 bps below states borrowing costs. The interest rates and tenor are fixed by MOUD. The projects themselves are demand driven and do not necessarily pick up those with maximum traction for achieving coherence in investments in the region, nor provide backward linkages where growth has occurred.

Table 1.2: Sub-region wise break up of projects financed by the NCRPB (as on March, 2009)

(Rs. in Millions)

S.No.	States	Status	No. of projects	Estimated cost	Loan sanctioned	Loan released by NCRPB
1	Haryana [including CMA-Hissar]	Ongoing	103	88670	35410	19480
		Completed	39	18440	6760	5890
	Sub Total		**142**	**107110**	**42170**	**25370**
2	UP [including CMA- Bareilly]	**Ongoing**	8	7590	5170	3390
		Completed	45	13730	4110	3550
	Sub Total		**53**	**21310**	**9280**	**6940**
3	Rajasthan [including CMA-Kota]	**Ongoing**	3	9620	2140	2140
		Completed	23	3260	1290	1260
	Sub Total		**26**	**12880**	**3440**	**3400**
4	NCT-Delhi	**Ongoing**	2	5210	3100	3100
		Completed	0	0	0	0
	Sub Total		**2**	**5210**	**3100**	**3100**
5	CMA –Patiala in Punjab	**Ongoing**	2	1260	950	740
		Completed	1	190	10	10
	Sub Total		**3**	**1450**	**960**	**750**
6	CMA –Gwalior in M P	**Ongoing**	1	300	220	220
		Completed	3	1040	790	790
	Sub Total		**4**	**1340**	**1010**	**1010**
	Total	**Ongoing**	**119**	**112640**	**46990**	**29070**
		Completed	**111**	**36650**	**12970**	**11500**
	Grand Total		**230**	**149290**	**59950**	**40570**

7. Since 1985 when it was set up, most projects financed are towards land development, power and transport (See **Fig 1** for the list of projects financed in **Annex 1**). Since the appraisals for these projects were not based on techno economic or financial feasibility reports it is difficult to ascertain the economic returns which have been achieved or the backward and forward linkages which the private sector growth in the region has fuelled. However, in the recent past there has been a reduction in exposure to land development based projects.



8. As for geographical distribution of investments, Haryana accounts for (67%) while Rajastan (7.3%) Delhi (11%) and UP (12 %). The impact of these investments on migration need to be assessed if Delhi is to continue to be a contributor as well as the investments made in the magnet towns which appear to be a negligible.

Table 1.3: Distribution of Financing By States (as on March 30 2009)

State	Area (sq. Km)	% to total	Loans used (incl repaid INR Millions)	% of total	Loans Disbursed INR in Millions (Ongoing)	% of total
NCT – Delhi	1483	4.42	3100	7.64	3100	10.66
Haryana	13413	39.95	25370	62.53	19480	67.01
Rajasthan	7829	23.32	3400	8.38	2140	7.36
Uttar Pradesh	10853	32.32	6940	17.11	3390	11.66
Punjab/MP (CMA)			1760	4.34	960	3.31
Total	**33578**	**100**	**40570**	**100**	**29070**	**100**

9. Since many loans are covered by State (Bank) guarantees or based on state budgets for repayments, detailed financial appraisals are not undertaken. Repayments of NCRPB loans have been strong, with no default. As regards delay, it is negligible in terms of number and value **(See Table 1.4 for the current loans outstanding).** NCRPB has raised INR from the debt market on private placement basis at an average of 100 to 150 bps over GOI securities on the basis of an AAA rating.

Table 1.4 Loan Outstanding as on March end 2009

Name of State	Amount (Rs Millions)
Uttar Pradesh	1952.60
Haryana	15749.10
Rajasthan	2108.90
Madhya Pradesh	137.90
Delhi	2405.40
TOTAL	**22353.90**

10. The NCRPB is not a financial intermediary regulated by RBI guidelines for **an NBFC (See Annex 2) nor is regulated by SEBI un**der the company's act. It is primarily a fund which blends GOI grants (not accounted for as equity or contribution) with market borrowings and lends out to the state governments. The administrative costs of the entity are met separately by a MOUD grant and hence there is no difference between gross and net spreads. Hence the extent that these costs matter, they have to be accounted for as an implicit GOI subsidy. The pricing of these loans are uniform and fixed below NCR's borrower's costs of funds. Repayments for these projects depend substantially on user charges (10-20%) with the balance from tax revenue of State governments.

11. If NCRPB is to expand in size, moving out of the guarantee umbrella, then its capital structure and pricing policies will be limiting. On the other hand, if the Fund expands, through market borrowings, its weighted cost of funds would increase and hence not be superior in tenor or pricing to competitive sources.

12. Given these stylised facts on the planning and financing functions, the continued institutional development of the NCRPB is one of the principal project objectives of the ADB line of credit. It is envisaged that the NCRPB will move beyond its current functions of a passive responder to debt demands to include those that enable it to become a long term sustainable institution of regional relevance. It is expected to contribute to the planned developments of the region by operationalizing the RP as well as perform the functions of a financial intermediary. NCRPB's evolution is expected to support the increasing need for long tenor debt finance for environmental infrastructure arising from rapid growth in the region.

13. Towards the objective of a sustainable financial intermediary, NCRPB would need to provide, on the one hand, sufficient security to its potential lenders (possible insurance and pension funds) and on the other, a systemic, cost-effective, repeated-access source of debt for smaller environmental investments. Towards the objective of being a planner of relevance NCRPB would need to transform the broad goals of the RP into an active sectoral investment plan and seek to catalyze these investments with the concessional finance it receives from the national budget as well the loan from Asian Development Bank (ADB).

14. This twin business proposition is the subject of this situation analysis – its principal motivation is to identify the opportunities and constraints for making efficient planning and intermediation and planning possible in the NCR region. Accordingly, an assessment has been done of the demand for debt finance in the region, the competitive positioning of NCRPB over a medium term period of 5 years and the business strategy to be adopted to position itself as a planner of relevance. This is the basis for the size and composition of the ADB line of credit for a financial intermediary operation to support the above-mentioned objectives with reference to ADB's norms for FI operations.

1.4 Purpose

15. As mentioned, the purpose of this volume is to explore and examine medium term options for the NCRPB in its attempt to link the regional plan with domestic sources of debt. This includes identification of business opportunities, options for its corporate structure, and a mechanism for NCRPB to provide debt for the rapidly growing environmental infrastructure in the region. If a practical reform option which allows NCRPB to transform itself into a planning and financial institution of relevance for the region can be presented, then the next steps for all stake holders become clear. On the other hand, if there are constraints (legal, ownership or market imperfections) which limit NCRPB, then from a policy perspective, it might be better to recognize the gaps, and plan to move forward as and when the macro conditions are more conducive. The report attempts to provide a basis for taking that decision on the next steps. We provide three broad options for NCRPB institutional positioning.

1.5 Report Organization

16. After this introductory section, this situation report is organized as follows:

17. The Second section describes the current financing situation in NCR region. First, an estimate has been made of the debt demand in the region from potential borrowers for implementing the regional plan objectives. Based on the demand, a typology of three types of infrastructure and the financing demands they generate has been formulated. First, the large scale investments with specialised regulations (Power, NH etc) where the materiality of NCRPB is unlikely to be high but its coordinating and planning roles are significant, second, medium scale investments with high regional impacts (connectivity investments across states, environment investments) where both the planning and financing role of NCRPB could be material, and third, city level environmental and growth infrastructure, where NCRPB's financial materiality could be expected to be high relative to its planning function especially after the 74th constitutional amendment. Based on this typology, sources of finance have been indicated to define the financing gap, if any and asses the materiality of NCRPB planning and financing from the regions perspective. This should help in understanding the gaps which NCRPB could be expected to fill and hence form the basis of a concrete business plan for the 5 year medium term.

18. Third section, using the demand analysis of the section Three, an assessment of NCRPB's competitive positioning has been established and also defines NCRPBs business options, focusing on the reforms required if NCRPB's business model is able to fill the financing gap, and specific manner in which the ADB's line of credit assist the entity move towards an institution of relevance for the region

19. Section Four presents an overview of design of the Financial Intermediary and the next steps to be taken by NCRPB

20. Section Five presents an overview of two critical elements of FI process viz., Safeguards and procurement as these are issues that will be critical in the event of NCRPB co-financing projects and are functions not being focused on substantially as part of the ongoing process. While technical, economic and financial appraisal are critical, these are addressed to an extent by NCRPB and will be further strengthened as part of the design of appraisal process and institutional structure.

2.0 Demand for Finance and NCRPB's Regional Impact

2.1 Purpose

21. The approach to this section is as follows: firstly, an estimate of the demand for debt finance in the NCR has been made, secondly, sources of supply (governmental and commercial) have been identified and thirdly, an assessment of NCRPB's competitive positioning has been arrived at. The objective is to help in addressing the question as to whether there is a finance gap in the region, and, can NCRPB address this gap in a sustainable manner. In the event NCRPB cannot bridge the Gap, the changes that would be required.

22. Discussions with NCRPB and the borrowers suggests that there is a niche market for a pipeline of investment which generates scale economies through linkages identified through a planning process rather than the current model of ad-hoc passive responses to state level demands. The output of this section is a discussion of potential internal business steps which NCRPB need to take to position itself as a proactive creator of integrated infrastructure, if it chooses to take up the business of seeking regional coherence of infrastructure investments as its goal.

2.2 Demands for Debt: Project Prototypes, Costs and Means of Finance

23. A study of the RP suggests that there are three types of infrastructure contemplated –first, regional level large investments in power, highways etc, second, inter state connectivity and the environment investments and third city level urban investments. These have been estimated as INR 1937520 Millions. While this is macro assessment, NCR as well as the States have defined sectoral investments needs. Prominent among them being a Sector Plan for Water by PHED Haryana, Water Investment for the region by NCRPB (2009) and a Transport Sector Plan for NCR by NCRPB (2009).

Table 2.1 Regional Plan Investment Outlay

	Rs in Millions					
Sector	**2002-07**	**2007-12**	**2012-17**	**2017-21**	**Total**	**Share**
Transport	100000	91410			191410	9.88%
Power	293350	165690	505700	552690	1517430	78.32%
Water[3]	26370	39550	39550	26370	131840	6.80%

[3] **Water Investment plan**: Total investment corresponding to the drinking water demand of 11,984 mld is estimated to be Rs. 131,830 millions comprising production and distribution components. However, this does not include the cost of long distance conveyance e.g., canal and pipeline. Further, the investment corresponds to only the drinking water component while it appears to have overlooked its own projection of an equal quantity of demand from the industrial sector. The fund requirement is based on the assumption that average coverage offered by current infrastructure is around 50%. The estimated investment is spread over four distinct Five year Plans from 2002 to 2021 in a ratio of 20:30:30:20.

	Rs in Millions					
Sector	**2002-07**	**2007-12**	**2012-17**	**2017-21**	**Total**	**Share**
Sewerage[4]	12480	29130	24970	16640	83220	4.30%
Solid Waste	5450	3410	2720	2040	13620	0.70%
Total					**1937520**	**100.00%**

24. In this typology, NCRPB is, at best, likely to be a co financier in the power and highway sector (Regional) although it would need to monitor and strengthen its facilitating role as a planner **(Table 2.2)**.

Table 2.2 Possible Sectoral Financing Options

		Regional		Sub Regional		Local	
	Areas	**Planning**	**Financing**	**Planning**	**Financing**	**Planning**	**Financing**
	Investment Program						
1	Highway	H	L	H	L		
2	Power Generation	L	L	L	L		
3	Transmission and Distribution	L	L	L	L		
4	Regional development- DMIC and other regional initiatives	H	L	H	L		
	Infrastructure						
	Common Industrial Infrastructure						
	Logistics Hub						
5	Water Resource/ Conservation	H	L	H	H		
6	Waste Water Management-Domestic	L	L	H	H		
7	Waste Water Management-Industrial	H	L	H	H		
	Collection						
	Transfer						
	Treatment						
	Disposal						
8	Water Supply			H	L	M	H
	Source Development						
	Transmission						
	Distribution						
9	Solid Waste Management			H	M	M	H
	Collection						
	Transfer						
	Treatment						
	Disposal						
10	Other Municipal Services			H	M	M	H
11	Urban Transport			H	M	M	H
	Network-Roads, Footpath, and						

[4] **Waster Water Investment plan**: For the projected volumes of around 7,000 mld of sewage the Regional Plan 2021 estimates total fund requirements of the order of Rs. 8,3220 millions. Out of this, the component of laying of sewerage pipeline and installing pumping stations, etc. is estimated to cost Rs. 3,4680 millions while the sewage treatment component is estimated to cost Rs. 4,8540 millions respectively. The total investment is distributed in the ratio of 15:35:30:20 over the four distinct Five Year Plans over 2002 to 2021 period.

		Regional		Sub Regional		Local	
	Areas	**Planning**	**Financing**	**Planning**	**Financing**	**Planning**	**Financing**
	Investment Program						
	Lighting						
	Signalling						
	Area Traffic Control						
	Bridges and other Grade separators						
	Terminals- Truck, Bus, Multi Modal						
	Parking						
	Specific Elements of Metro/ Railways						
12	Information Technology	M	L	H	H	H	H
	Network-WAN and LAN						
	Hardware						
	Application Software Design						
12	**Policy/ Activities**						
a	Regional Water Resources Conservation	H		H			
b	Regional Transport Policy/ Access/ Connectivity/ Barriers	H		H		H	
c	Regional Waste Water Management	H		H			
d	Regional Municipal Solid Waste Management- Disposal	H		H		H	
e	Regional Municipal Industrial Waste Management- Disposal	H		H		H	
f	Pooled Financing	H		H		H	
g	Regional development- DMIC and other regional initiatives	H		H		H	
h	Sub regional/ City Master Plans and City Development Plans	H		H		H	
i	Transaction Advisory for PPP	H		H		H	
j	All Sub Project, Planning, Design, Supervision and Management	H		H		H	

25. Regarding the second category, namely inter-state connectivity (Sub Regional) and environmental investments it would appear from the regional plan that NCRPB's role would be more significant as a financier, incentivising investments by various states to achieve coherence in the region. State roads which connect across states, aquifer and green belt protection investments would be typical examples requiring both detailed planning as well as substantial investments.

26. In terms of city level investments – environment enhancing as well as growth promoting – where the materiality of NCRPB financing is expected to be high and planning relatively medium to high, especially after the 74th CA. These small and medium sized environment projects would include; wastewater (pumping stations, branch and main sewers, sludge and slurry treatment) water (trunk and distribution pipelines, pumping stations, treatment), solid waste management (collection, transfer stations and landfills), disposal of biomedical wastes, hazardous waste and minor afforestation and parks. The use of State budget as a fall back would be appropriate in this context, given the externality argument.

27. Size of these projects (based on lending by NCRPB for its current projects) ranges from INR 40 Millions to INR 40000 Millions. While the size of lending is from INR 20 Millions to INR 5000 Millions. The balance of project cost (to the extent of 25%) is typically from state government grants of about 15%-20%. Currently the guarantee mode of financing makes an analysis of project cash flows redundant with repayments being state responsibility.

28. However this method of financing is limiting and not in consonance with major GOI urban sector programs such as JNURM which encourage at the O&M being recovered. Further, this guarantee mode would crowd out the much needed stronger state support needed for category 2 above. Therefore, if NCRPB moves to a more modern system (non-guarantee) of financing, and assuming a loan period as 15-20 years, the repayments for these projects depend upon fees (70-80%) and taxes (20-30%). Long term loans are vital for project financing because they allow the fees to be escalated slowly, with connection (in the case of water and sewers) growth. It is useful to bear in mind the fees per capita required for debt service would be higher in smaller municipalities as compared with larger cities, These facts would suggest the need for 5 year financing strategy dovetailed with other grants in the system for NCRPB loans to be viable and indeed provide a stable pipeline.

29. On the other hand, these facts suggest that NCRPB would be less effective as an originator of PPP projects. Since most of the NCRPB investments need long tenor debt, it follows that the repayment period would be almost the same as the concession period. This low tail situation would tend to reduce both the returns on equity as well as scope for rescheduling which might arise on account of fiscal stress or slower than expected growth in fees. This feature suggest that private equity investments in these projects are difficult to attract, unless they are promised a target rate of return and are also awarded the construction contract. Further, both debt and equity finance face the traditional risks of dependence on multiple sources - fees from users, collected by municipalities and tax revenues.

30. Given these project characteristics, the growth in sustainable demand for these environment projects would critically depend on continued fiscal strength (grants are 15-20% of project costs), income growth (permitting higher user charges and tax revenues) and potential debt financiers - NCRPB and others.

31. The questions of relevance are; first, what is the expected debt demand for these projects, second, which institutions provide this debt and at what terms, and third, are the potential grants which make these projects viable on a non guarantee mode. The answers to these questions would help in identifying the current finance gap for these projects, and the instruments which could augment supply.

2.3 Debt Demand: Long list and Short list Analysis

32. Demand for debt for all three categories are estimated by using NCR's plans for environmental investment from 2009 to 2011 (NCR and SFC estimates) and selected projects from the three sample municipalities where the demand study was conducted. (Ghaziabad, Faridabad and Meerut). These municipal projects are included as it is expected that they would receive priority grant support from JNURM. For example, based on Haryana's plan for augmenting water

and Sanitation, the requirements for NCR area would be $ 10 Million per year. There has been a demand for investments in priority infrastructure and this adds to $ 645 Million. This excludes the ongoing demands for Transport and Water related investments being defined as part of NCR's initiatives for the region. This includes the ongoing efforts as part of Part B of an ongoing TA which involves preparation of a Master Plan and DPR for select sub project. However, it is expected that NCRPB will also build a pipeline of projects using TA resources in areas where NCR is of relevance (Category II) as well as responding to development plan based needs at the municipal / Panchayat level and pooling viable bodies and promote sub regional infrastructure.

33. In any event, it appears that given NCRPB current levels of operation demand is unlikely to be a constraint. The challenge would be to ensure investment coherence at the planning stage, by a concrete multi-sectoral investment plan for the region with an identified means of finance and detailing the tariff and grant covenants for the implementation. This is expected to be NCRPB's niche role – something which private sector financiers would have little incentive or authority to put in place and which pure planning entities have no authority to ensure an investment follow up

2.4 Sources of Supply- Debt

34. To recall, the kind of debt these small projects need are long tenor from an affordable fee point of view. However, long repayment periods would tend to limit equity, unless the interest rates are low. Given these demand features, we examine if there are other sources of finance which provide a systemic access for this kind of debt for suburban municipalities in the NCR region.

35. It would appear from **Table 2.3**, NCRPB is well placed, only State Bonds being more attractive on pricing and NCRPB at least as competitive as HUDCO. Cursory analyses of the alternative sources allow the following inferences:

Table 2.3 Comparative Financing Options

Financial Institution	Interest Rates	Remarks
PFC	11% to 11.50% per annum	All Loans are subject to a reset clause (ie. PFC has a right to review the interest rate after 3 years
HUDCO	9.50% to 11.25% depending on rating	Floating rate linked to Base Rate (Now BR is 12.50%)
HUDCO	10.50% to 12.25%	Fixed Rate
NCRPB	8.25%	Priority infrastructure projects viz. Water supply, sewerage, sanitation, drainage, storm water drain, and Roads, ROBs and Flyovers
NCRPB	9.50%	Land development for residential/industrial/Commercial projects and other Infrastructure Projects
State Bonds	8.05%	10 year State Development Loans

36. HUDCO does provide similar tenor loans, but its average loan size appears large relative to smaller environment projects debt needs. The transaction costs for HUDCO of these smaller projects with a project cost size of INR 100-200 million might be high.

37. Other GOI institutions include IIFCL, which has a focus on PPP's. It would appear that there are strong analytical and practical reasons as to why PPP's would be difficult in this sector. The presence of externalities, low initial tariffs and limited size of small and medium towns would

inhibit equity returns, especially if the concession periods and the tenor of the debt are similar. JNURM currently advocates equity PPP's for financing both environmental and growth infrastructure at the city level. This institutional setting of financing local infrastructure through high-equity project companies with limited returns is likely to be a constraint for local governments. (**Annex 3 for a detailed discussion on equity and debt PPP's as options).**

38. State bonds also have low financing cost but these are allocated on an adhoc basis and do not represent a systemic access for municipalities governments for smaller projects for capital investments and are indeed a source for states to fulfil its SFC obligations Further still, it is unlikely that environmental infrastructure can predominantly be financed by this method. There is some ambiguity on the strength of the commercial banks in this market; anecdotal evidence suggests that most municipalities' governments do not access banks. In any event, most commercial banks do not lend long, and also seek credible guarantees.

2.5 Main Findings

39. There is a robust demand for debt financing for smaller environment and connectivity projects of around INR 400000 Million (RP-2001) and a defined pipeline of $ 645 Million. These projects need long tenor financing on account of inability of higher user charges at initial stages of asset operation and limits on availability of current taxes. However, longer repayment periods reduce the potential for equity if returns are not guaranteed in the pricing The governmental sources of debt are limited and adhoc, while commercial sources face the same limitations as NCRPB - dependency on municipalities or governments for repayments with little appraisal of the same, and the lack of credible project equity sponsors. In addition, commercial banks or specialised institutions except for IIFCL would appear more focussed on financing and refinancing PPP's.

Table 2.4 NCR Project Pipeline- Short Term

Sector	**Share**	**in Mill $**
Solid Waste Management	4.2	27.23
Sewerage and Drainage	4.4	28.51
Water Supply	11.9	76.88
Urban Transportation	22.7	146.54
Regional Transportation	22.7	146.61
Power Distribution and Transmission	9.5	61.20
Land Development and Housing	24.6	158.86
Total	**100.00**	**645.83**

40. The prospects for financing this class of infrastructure could definitely improve, if low equity- high debt projects, can be financed by pooling these demands (reducing transaction costs and risks) by an intermediary with access to long term insurance and pension funds. Whether NCRPB can position itself to fill this gap, is the question we turn to in the next section

3.0 NCRPB: Business Options and Competitive Positioning

3.1 Objectives

41. In this section, based on previous discussions on demand and the competitive positioning of NCRPB, to answer two questions: First, can NCRPB evolve into a Planning Authority and Financial Intermediary of relevance for the region, and, if so the practical reform steps given institutional and market challenges? Second, from a regional perspective, are coherence in planning and sustainable financial intermediation needed, and if so, what would be an appropriate design from the region and state governments standpoint.

3.2 NCRPB's Current Status: Legal Framework, Business Model and Outcomes

3.2.1 Legal Framework

42. To recall, NCRPB is a statutory body under an Act of Parliament. In terms of its primary function of planning, its authority flows from the Act and has been upheld as binding on states and local authorities by the Supreme Court. As regards its financing function, the Fund is neither a NBFC regulated by the RBI nor a company within SEBI's supervision.. As such, issues of capital adequacy, provisioning norms and pricing restrictions do not apply as with other lenders in the private sector (IDFC) nor ones in the public sector (HUDCO, IDBI, IIFCL)

43. As the NCRPB does not have share capital (company format) or contribution (Trust format) grants received from GOI are accounted for as and lent out along with reflows. Up till March 31, 2009 the entity has lent out INR 29073 millions (around $ 620 Million) for 119 ongoing projects and has no default. The lending is usually on a State or bank guarantee mode with little financial appraisal of the repayment capacities of the borrowers or projects. The need for a state guarantee from non state government entity (such as a UDA) is required by the Rules under the Act. The entity has also structured third party no default escrows with Banks as additional security measures.

3.2.2 Business Model and Project Outcomes

44. A study of its financing business show the following stylised facts:

i. **High variability in its annual lending** – both sanctions and disbursements, which suggests that demand for financing is not emanating from sub regional plans which have been operationalized into a detailed sectoral investment plan but on demand driven fashion.

ii. **Sectoral composition**: NCRPB's lending by happenstance has been to sectors such as Power (where one would have expected its materiality to be low in the context of the capital financing) and also to UDA's which have been primarily public sector real estate land banks, where once again the materiality of NCRPB's financing would have been low. On the other hand sectors such as water and sanitation or even roads which promote connectivity in the region, the lending has been low, sectors where the expectation of the materiality of the financing would have been high.

Table 3.1 Sectoral Share In NCRPB's Loan Disbursement

Sector		As of March 31, 2009
	Loans INR Millions	**Share**
Power	9720	33%
Water & Transport	10976	38%
Land & Others	8377	29%
Total	29073	100%

iii. **State wide disbursements**: presents wide variation with Haryana accounting for (67%) followed by Uttar Pradesh (12%) . These variations even adjusted for the area or population in the region belonging to each state does suggest that investments have not been even. Of course, since the entity does not track infrastructure investments with other sources of finance it would be difficult to conclude that infrastructure investments by the UP, Rajasthan portions of the region are under invested.

iv. **Pricing and tenor of the loans**: The entity itself has priced its loans with an average spread of 250 basis points over the last three years and these rates would probably compare with states borrowing rates (**Table 2.3)**. This policy of implicit subsidies through the NCRPB mechanism would need to be balanced with the benefits generated from its investments. And there is also the issue as to whether interest rate subsidies are the best mechanism for addressing these externalities rather than a straightforward direct grant for projects which promise regional outcomes.

v. **Leverage**: The entity has a capital adequacy in excess of 100% as compared with industry standards of 15% and RBI requirements of 12% applicable for a FI, indicating an extremely underleveraged balance sheet and with little additionality for the budgetary resources which are being ploughed in by GOI.

vi. **Legal framework arising out of the 74th CAA**: Several traditional borrowers, namely the UDA's could be expected to lose their relevance with respect to city development planning and NCRPB will have to work with a new set of clients to ensure coordination in investments, especially environmental ones across states. At present this coordination role has been limited even for NCRPB financing. For example the Roads financed by NCRPB still needs connectivity on the Rajasthan side and similarly Industrial pollution treatment needs complementary investments on Rajasthan and Haryana side to protect the aquifer.

vii. **Effectiveness of the counter magnet strategy**: Available NSS data shows that net migration is of the order of 37.1% during the last decade that NCRPB has been in place, a rate that cannot be judged as having slowed due to development of magnets. International experience suggests that except for China and perhaps apartheid South African cities, net migration into cities where economic growth has been strong have rarely been mitigated by satellite development far away. In this context, NCRPB might like to re-look at its counter magnet strategy and the attendant role of Delhi within its lending policies.

45. The above seven stylised facts would suggest that NCRPB has tended to respond to demand driven projects without an underlying analysis of the regional impacts and tended to mimic private sector lenders in securing it's lending by strong credit enhancements and maintaining its spreads. This lending model is unlinked to its core RP where an investment trajectory would be focussed on generating the maximum backward and forward linkages (both in terms of growth and environment infrastructure).The question of relevance is then is an appropriate lending cum planning model and is it sustainable? If not, then from a regional standpoint, it is important to identify potential medium-term strategic options including a larger role for NCRPB as a project developer of regional significance.

3.2.3 NCRPB's Financial Evaluation

1. Before looking at various options available to NCRPB in deciding its future course, an analysis of NCRPB's finances and compliance with various requirements of RBI and ADB has been carried out. The coverage includes its appropriate capital structure, pricing, the associated lending policies and procedures, and security mechanisms. The analysis also has used ADB OM (D6/BP) read with (H1/OP) so that NCRPB and ADB can determine key components of the line of credit in a manner which aids the institutional development of NCRPB and an effective implementation of the Regional Plan

2. The purpose of this section is to provide a stylised set of facts which would help in NCRPB determine its appropriate capital structure, pricing, the associated lending policies and procedures, and security mechanisms.

3. At present, NCRPB as a Fund is authorised to provide finance for the implementation of the RP. As up till now Rs 40570 Millions for 230 projects have been disbursed as loans (including completed projects) with a current weighted average cost of 6.55 % pa and earning a weighted average return of 6.60%pa currently. Pricing of NCRPB loans is at an average of 6.60% % per annum at 10 year tenor and is determined by MOUD on the recommendation of NCRPB. These loans are below market rates for state borrowings by 1 to 2% and hence an implicit interest subsidy of at least 100 bps. Further, as of March 2009, NCRPB has managed to attract INR Rs 4650 Millions of private debt with a leverage ratio of 0.23:1

4. The transition from an underleveraged, administered pricing, sovereign risk based entity to a more limited liability, flexible pricing and recourse based financial intermediary motivates this section. The principal purpose is to describe the existing situation and hence identify the gaps which could determine the content of the proposed TA loan and line of credit. On the lending side, the discussion is focussed on the internal processes needed to make the transition from the current business model of a demand driven, passive financier of scattered infrastructure investments to a more coherent and active financier of investments which generate regional growth impacts, needing public finance on account of regional externalities.

Current Business Model: Capital and Pricing

5. At present, NCRPB, draws up its expected investment needs for a 5 year horizon based on its expected pipeline and seeks resources (much like other GOI entities) through the planning commission and subsequently approved in the GOI budget for MOUD. This process is described in Office Memorandum No. F/No. 2(1) Pers/E-Coord/OB/2005 dated December 12, 2006. The Board submits the revised budget estimates for the current year and budget estimates for the next financial year by around mid-September of each year. NCRPB's admin costs are about INR 25.0 millions and these are met separately.

6. As for pricing, on receipt of grant funds from Government of India and Government of Delhi, which are considered to be free of cost, pricing of loans continues to be based on the rates approved by GOI. Thus the current interest rates of 8.25% for Water supply, sewerage, roads, etc. and 9.50% for power, transport and land development have been fixed on the aforesaid basis. While these lending rates do provide NCRPB with a revenue surplus, this is only due to the fact that grant funds have not been costed for fixing the interest rates. A comparison of the lending rates of NCRPB, Power Finance Corporation (PFC) and Housing & Urban Development Corporation Limited (HUDCO) would indicate that the current rates of NCRPB are the cheapest in the market. Based on these features of its current business model, a financial model has been developed**.** The key features of current practice are:

i. Continued interest rate subsidies from GOI through Grant Financing without return expectations
ii. Administered Pricing at sub market unrelated to States borrowing costs or calculation of ERR to justify the subsidy at a sub project level
iii. Support for a pipeline of demand driven projects with State Budgets as the predominant recourse for repayments

Current Business Model: Security Mechanisms

7. NCRPB's loans are primarily to either State Governments or to parastatals with bank escrow of cash flows as security. Hence there is no collateral to be valued.

8. Also, NCRPB does not finance the cost of land incurred by the borrower. While in most of the cases of financing, NCRPB is the only lender, in the recent past, a large number of loans have been provided based on escrow account and also where there are other lenders. In such cases, the security is on a pari passu with project debt and consequently, repayment would be on par with all other secured lenders.

9. With regard to the capital structure of the project, while in case of loans to State Governments and parastatals the issue is not relevant, in case of loans to public sector companies, NCRPB does not specify any requirement except to maintain its policy of financing only upto 70% of project cost.

10. As part of its guidelines, NCRPB is empowered to sanction loans to State Governments, to State Governments with a counter magnet area and the local authorities, urban development

authorities, housing boards and such other authorities of the State Government responsible for implementing the sub-regional plans and project plans or for developing the counter magnet area. It is seen that NCRPB lends a substantial part of its funds to State Governments (which do not need any security), while NCRPB does take security for lending to parastatals. It could in the nature of State Government guarantee, escrow account or mortgage of assets, etc. However, as per the Capital Adequacy Ratio (CAR) norms of RBI, different securities would trigger different risk weightages for assessment of capital requirements.

11. Considering that most of the loans of NCRPB are to State Governments, the CAR of NCRPB as of date is much more than that stipulated by RBI. The table below gives the current CAR

Table 3,2 NCRPB Statement As Per March 31, 2009 Rs in Millions

Borrower		**Exposure**	**Risk**		**Risk**	
			Weight	**(A)**	**Weight**	**(B)**
Loans To State Govt - No Gty Required		8747.1	0.00	0.00	0.00	0.00
State Government Guaranty		193.2	0.20	38.6	0.20	38.6
State Government Guaranty & Escrow		3055.1	0.20	611.0	0.20	611.0
Escrow Agreement		10259.7	1.00	10259.7	0.20	2051.9
Mortgage		98.8	1.00	98.8	0.20	19.8
Cash & Bank Balances						
Risk Weighted Assets		22353.9		11008.2		2721.0
A	Total Capital	20337.3				
	Risk Weighted Assets	11008.2				
	CRAR	185%				
B	Total Capital	20337.3				
	RISK WEIGHTED ASSETS	2721.36				
	CRAR	747%				

12. The above table shows that, as against the RBI minimum CAR of 12% which is to be maintained by a Financial Institution, NCRPB's CAR is at least 185% and at most 747%. This indicates a situation of abnormal prudence, indicating underleverage of scarce central government grants.

Current Business Model and Organization:

13. The existing organization structure can be seen at end of this Annex. Here in this section we identify the current finance functions being performed and comment on some process changes which may be required if the business volumes are expected to grow in volumes and quality. We comment on four major finance functions:

- NCRPB accounting and audit
- Sub Project Financial Appraisals
- Project Loan Accounting and Repayments
- Risk management resources and investments.

14. The current project cycle is schematically shown below It is seen that there is modest appraisal of projects from a financial perspective and very rarely are project DCF's or risk assessments worked out. This is to be expected, as most loans repayments are based on State budgets and there is little purpose in carrying out detailed project level cash flows when little depend upon them. If however NCRPB moves to a capital structure of limited liability and relies more on resource rasing based on pooled revenue streams of different borrowers, then the appraisal function needs to incorporate standard financial analysis.

15. Current staffing indicates paucity of capacity in the project appraisal, monitoring and financing areas. This has put pressure on NCRPB's capacity to handle the increasing project proposals. Consequently, the initial appraisal of projects brought by various borrowers to NCRPB for financing has been outsourced to external agencies like Engineers India Limited (EIL), NEERI, etc. While it may be prudent to use external agencies for project evaluation during the past few years, in future, when NCRPB's scale of operations are expected to increase further, it would be beneficial for NCRPB to develop in house capacity to manage the borrowers end to end, i.e., project appraisal, documentation, project monitoring, project financing, etc. Such an approach would also provide fiduciary comfort. Considering NCRPB's borrowing programme, internal capacity building to manage projects across various sectors is essential for its effective performance of its lending function.

5. **NCRPB's financing: Lending Terms and Procedures**

16. Currently, NCRPB extends term loans of 10 years tenor with a 2 year moratorium. NCRPB's loans are fixed for the tenure of the loan and interest is charged at annual rest.

17. During the past few years, NCRPB's borrowings and lending have been on fixed rate interest basis. This coupled with the availability of own funds, NCRPB has been lending to its borrowers on a fixed rate basis. If NCRPB is to move towards a market based intermediary, there is an increasing possibility that a substantial portion of incremental borrowing would be on a floating rate basis. In such a scenario, NCRPB also needs to move away from fixed rate lending to floating rate lending to its borrowers. The floating rate may be fixed based on the yield curve of ten year Government of India Securities. The rate may be an average of three months or six month yield of 10 year G-Sec s. This move to floating rates would protect NCRPB against any adverse movement of the interest rate on its borrowings. The loan documents need to incorporate a clause for reset of interest rates after a certain number of years. (NCRPB's bonds also have a put and call option at the end of 7 years). The borrower should also be liable to pay over due interest in case of default in payment of interest or principal on time.

Risk Management:

18. As a financial intermediary, NCRPB would be exposed to several risks, namley, credit, market, liquidity, operational, legal, compliance and reputation risks. A risk management framework is needed to ensure that various risks are understood, measured and monitored and mitigation measures put in place. Further, given that NCRPB is likely to broaden its resource base there is also a need for an Asset Liability Management (ALM) framework. The main features of this are:

i. **Tenor Risk:** As NCRPB gets into borrowings of various maturities and loans also of different maturities, it is not always possible to match both the borrowing and loan maturities. Currently, NCRPB bond portfolio is of 10 year duration (bullet repayment at the end of 10 years) with a put/call option at the end of 7 years. The ADB finance which NCRPB proposes to access is likely to be of 25 years duration with a moratorium of 10 years.

As against this, the current lending period of NCRPB is 10 years with a moratorium of 2 years (8 years repayment). It has been suggested to NCRPB that as infrastructure sector needs cheap funding over long tenor, NCRPB should consider lending to this sector for a period of at least 15 years with at least 3 years moratorium. This increase in tenor would however need an active Asset Liability management framework so that the tenor mismatch between borrowings and loans does not lead to either a resource crunch or major idle cash which generates negative spreads.

ii. **Foreign Currency Risk:** Considering ADB's funds would be FX denominated and for a long duration (25 years) and that NCRPB's borrowers do not have the capacity to borrow in FX (as their revenues are in Rupees and consequently, cannot take FX risk themselves), NCRPB needs to put in place a mechanism to mitigate this FX risk.

The most common way of mitigating this risk is to swap the FX for Rupees with a Bank, wherein NCRPB provides the FX to the Bank while the Bank lends to NCRPB in Rupees. This would in turn enable to continue its lending in Rupees to its borrowers.

While entering into such a swap arrangement, NCRPB needs to address the following two issues:

A Interest Rate: ADB's loan would be based on the London Inter Bank Rate. Typically, when a Bank swaps Dollar loan to Rupee, a FX loan based on LIBOR would in turn be lent to NCRPB at the Prime Lending Rate. However, NCRPB could also negotiate for a better swap arrangement to reduce its cost of funding.

B Tenor: As indicated earlier, ADB's loan is for a 25 year period, whereas no counter party for swap might be willing to take such a long exposure. Consequently, swaps are normally done for a period of about 10 years, after which NCRPB would need to arrange for a fresh swap.

NCRPB's lending policies should address these risks related to interest rate and swap costs when it lends FX funds to its borrowers in Rupees.

iii. **Interest Rate Risk**

NCRPB also needs to move away from fixed rate lending to floating rate lending to its borrowers. The floating rate may be fixed based on the yield curve of ten year Government of India Securities. The rate may be an average of three months or six month yield of 10 year G-Sec s. This move to floating rates would protect NCRPB against any adverse movement of the interest rate on its borrowings.

iv. **Liquidity Risk**

One of the risks which is likely to arise in the lending business is the liquidity risk. This risk arises when while commitment to lend has been made, due to inability of borrower to raise further capital/debt or absence of reverse cash flows, the institution is unable to meet its commitment. This risk can however be managed by always having liquid cash based on business projections and raising sufficient funds in advance.

8. **Exposure Norms**

19. Currently, with almost all the loans of NCRPB either directed to State Governments or to parastatals, NCRPB has not enunciated any exposure limits for its loan portfolio.

Norms applicable for Financial Institutions
Normally, a Financial Intermediary's exposure limits are evaluated with regard to:

- Single borrower limit
- Single group of borrowers limit
- Limits of sectoral lending

Reserve Bank of India has laid down detailed guidelines for exposure limits for financial intermediaries. A synopsis of the same is given below:

Category of Borrower	Exposure Limit
Single Borrower	15% of capital funds (Tier 1 and Tier 2 capital)
Single Borrower including additional credit exposure for financing Infrastructure projects	20% of capital funds (Tier 1 and Tier 2 capital)
Single Borrower including Infrastructure project finance and specific Board approval	25% of capital funds (Tier 1 and Tier 2 capital)
Borrowers belonging to a group	40% of capital funds (Tier 1 and Tier 2 capital)
Borrowers belonging to a group including additional credit exposure for financing Infrastructure projects	50% of capital funds (Tier 1 and Tier 2 capital)
Borrowers belonging to a group including Infrastructure project finance and specific Board approval	55% of capital funds (Tier 1 and Tier 2 capital)

20. **Sectoral norms:** With regard to the exposure norms for sectors, RBI has indicated that the financial intermediaries may also consider fixing internal limits for aggregate commitments to specific sectors, e.g. textiles, jute, tea, etc., so that the exposures are evenly spread over various sectors. These limits could be fixed by the banks having regard to the performance of different sectors and the risks perceived. The limits so fixed may be reviewed periodically and revised, as necessary.

21. In the instant case of NCRPB, all the loans are provided only to either State Governments and/or parastatals. Consequently, NCRPB currently does not have any norms either for borrowers

or sectors. It is also pertinent to point out that given its current organisational structure of having been set up by a specific Act of Parliament, NCRPB does not come under any Regulatory Authority as far as various norms are concerned and consequently, none of the norms enumerated above are applicable to it. However, an analysis was made of the NCRPB's loans was carried out with specific focus on the regional concentration and the results have been summarised in the table below:

22. An analysis lending by States indicates that a while Haryana constitutes only 40% of the land area of the NCR, its total borrowings is in excess of 60%, while in case of States like Rajasthan and Uttar Pradesh, their borrowings percentages of the total are much lower than the proportion of land. While at one level this data shows that Haryana has been proactive in borrowing monies in order to finance development, it also indicates that there could be a disproportionate deployment of finance.

23. In view of the above, however, NCRPB may consider having some internal norms regarding State exposure so that a balanced development of various areas under the NCR may be achieved. However, if at anytime in the future NCRPB provides loans based on project risk and is in need of formulating internal guidelines for exposure norms, a copy of the Reserve Bank of India Master Circular on Exposure Norms dated July 1, 2009 is appended herewith as Annex 2.

9. NCRPB's financials: Sources, Applications and Ratios

24. The evaluation covered the following:

- Receipt of grant funds from Government of India and Government of Delhi
- NCRPB's principal and interest receipt track record and provisioning policies for Non Performing Assets (NPA)
- NCRPB's own borrowed funds profile

25. A summary of NCRPB's financial position is given below:

ANALYSIS OF NCRPB FINANCES

NATIONAL CAPITAL REGION PLANNING BOARD — **RS IN MILLIONS**

BALANCE SHEET AS AT 31.3.2009

	CORPUS/CAPITAL FUND & LIABILITIES		**AS AT 31.3.2009**		**AS AT 31.3.2008**		**AS AT 31.3.2007**		**AS AT 31.3.2006**		**AS AT 31.3.2005**
1	NCRPB FUND (CAPITAL FUND/CORPUS)		20052.3		18229		15651		14001.3		12516.2
2	BOND REDEMPTION RESERVE		285								
3	MARKET BORROWINGS		4651		2000				3871.5		3871.5
	TOTAL		**24988.3**		**20229**		**15651**		**17872.8**		**16387.7**
	ASSETS										
5	FIXED ASSETS		11.3		12.7		13.9		16		17.1
6	INVESTMENTS OF PF/NPS		13.3		12.4		11.8		11.5		10.6
7	CURRENT ASSETS, LOANS & ADVANCES										
A	LOANS TO BORROWERS	22353.9		17711.7		12734.2		10622.7		8955.1	
B	CASH & BANK BALANCES	1818.3		1729.3		2500.2		6947.8		6990.1	
C	INCOME ACCRUED	330.9		264.1		209		242.2		321	
D	OTHER ADVANCES, ETC	619.9		566.4		780.8		435		381.6	
		25123		**20271.5**		**16224.2**		**18247.7**		**16647.8**	
	LESS: CURRENT LIABILITIES	-159.3	24963.7	-67.6	20203.9	-598.9	15625.3	-402.4	17845.3	-287.8	16360
	TOTAL		**24988.3**		**20229**		**15651**		**17872.8**		**16387.7**

NATIONAL CAPITAL REGION PLANNING BOARD — **RS IN CRORES**

INCOME & EXPENDITURE ACCOUNT FOR THE YEAR ENDED MARCH 31, 2009 (CONSOLIDATED)

	INCOME	**2008-09**	**2007-08**	**2006-07**	2005-06	2004-05
1	INTEREST EARNED FROM LOAN PORTFOLIO	1321.5	949.2	740.8	660.9	809.3
2	OTHER INTEREST EARNED	80.2	191.8	374.2	475.4	381.7
3	GRANT IN AID FROM MOUD	23.5	18.7	19	17.7	18.3
4	OTHER INCOME	10.7	0.9	6	1.1	0.2
	TOTAL	**1435.9**	**1160.6**	**1140**	**1155.1**	**1209.5**
	EXPENDITURE					
4	EXPENDITURE ON BORROWINGS	217.7	38.5	157.2	391.3	413.9
5	OTHER EXPENDITURES	59.3	44.1	34	30.9	111.3
6	PROVISIONS	50.6	0	319.1	246.9	261.3
		327.6	82.6	510.3	669.1	786.5
	SURPLUS	**1108.3**	**1078**	629.7	486	423
7	TRANSFER TO BOND REDEMPTION RESERVE	285				
8	**TRANSFER TO NCRPB CORPUS**	**823.3**	**1078**	**629.7**	**486**	**423**

ANALYSIS — **ALL RUPEES IN MILLIONS**

RATIOS	**2008-09**	**2007-08**	**2006-07**	**2005-06**	**2004-05**
NET WORTH	20337.3	18229	15651	14001.3	12516.2
MARKET BORROWINGS	4651	2000	0	3871.5	3871.5
DEBT : EQUITY RATIO	**0.23 : 1**	**0.11 : 1**	**0.00**	**0.28 : 1**	**0.31 : 1**
LOANS OUTSTANDING	22353.9	17711.7	12734.2	10622.7	8955.1
TOTAL ASSETS	24988.3	20229	15651	17872.8	16387.7
AVERAGE LOANS AT YEAR END	20032.8	15222.95	11678.45	9788.9	9042.2
YIELD ON AVERAGE LOAN AMOUNT	**6.60%**	**6.24%**	**6.34%**	**6.75%**	**8.95%**
AVERAGE MARKET BORROWINGS AT END	3325.5	1000	1935.75	3871.5	4924.25
EXPENDITURE ON MARKET BORROWINGS	217.7	38.5	157.2	391.3	413.9
COST OF BORROWINGS	**6.55%**	**3.85%**	**8.12%**	**10.11%**	**8.41%**
AVERAGE NET WORTH	19283.15	16940	14826.15	13258.75	11847.2
RETURN ON AVERAGE NET WORTH	**5.75%**	**6.36%**	**4.25%**	**3.67%**	**3.57%**
RATIO OF NON PERFORMING LOANS TO LOANS	**NIL**	**NIL**	**NIL**	**NIL**	**NIL**
(ie. NO DEFAULTS IN PAYMENT OF PRINCIPAL OR INTEREST)					

DETAILS OF DEBT RAISED BY NCRPB AS OF 31.3.2009 AND COST OF DEBT

	RS IN MILLIONS		**WT**	**WEIGHTED COST**
NCRPB TAXABLE BONDS 2018	2000	8.98%	0.43	3.86%
NCRPB TAXABLE BONDS SERIES I 2018	2651	9.15%	0.57	5.22%
TOTAL	**4651**			**9.08%**

26. Main Findings

1 NCRPB's financial position is robust with a very low gearing and the D:E ratio analysis indicates a ratio of 0.23:1, which is a very low gearing for a financial intermediary indicating inefficient use of scarce government grants
2 With such a low D:E ratio, NCRPB's return on net worth is only about 5.75%. This is also due to its loans being charged low interest rates as these loans are for financing infrastructure development.
3 The yield from its loan portfolio is only 6.6%, which indicates that NCRPB is a low cost lender to its borrowers. It is accepted that NCRPB's interest rates on loans are the cheapest among its peer group on account of the in built subsidies..
4 NCRPB has not had any defaults in either payment of principal or interest by its borrowers and consequently, has maintained a NIL NPA provisioning.
5 With a view to increase the availability of funding for financing, NCRPB has been raising Bonds in the market on a periodical basis. The basis for the resource raising is not asset quality or strength of revenue streams but the framework which allows all NCRPB liabilities be that of the sovereign. As of March 31, 2009, a sum of Rs 4651 millions is outstanding on this account. Earlier, it had borrowed and also successfully repaid Bonds aggregating Rs 8985.5 millions over a period of time. Credit Rating agencies have rated NCRPB's bonds as AAA and consequently, NCRPB has been able to raise funds at interest rates of about 8.5% to 9% during the recent past.
6 Considering its policy of lending only to State Governments and to parastatals, and as it is being monitored by any Regulator, NCRPB has not laid down any exposure norms for lending.

27. **Capital Adequacy with reference to the National Regulatory framework (RBI guidelines) and Bank for International Settlements guidelines**.

28. As indicated earlier, NCRPB has been set up by an Act of Parliament and consequently, does not come within the purview of the RBI as regarding various norms which are stipulated for financial intermediaries like Banks, Financial Institutions, etc.

29. However, with a view to benchmark industry best practices, an analysis of NCRPB's capital adequacy has been done vis a vis RBI's guidelines on capital adequacy. Currently, RBI has migrated towards Basel II guidelines. However, to ensure smooth transition from Basel I norms, RBI has recommended a parallel run of both Basel I norms and the revised Basel II norms to be disclosed for the year ending March 31, 2009.

30. Basel II norms **(formed by Bank for International Settlements) for capital adequacy norms for Banks**

i. As per RBI requirement, financial institutions should maintain a minimum Capital to Risk-weighted Assets Ratio (CRAR) of 912% on an ongoing basis.

ii. A bank should compute total CRAR in the following manner:
a. Eligible total capital Funds

b. Credit Risk Weighted Assets (CRWA) + Market Risk WA + Operational Risk WA

31. **Capital Charge on Credit Risk:** The direct loan/credit/overdraft exposure of Banks to the State Governments and the investments in State Government securities will attract zero risk weight. State Government guaranteed claims would attract 20% risk weight. Claims on public sector entities would attract risk weights similar to corporates.

32. Claims on corporate shall be risk weighted as per the ratings assigned by the rating agencies registered with the Securities Exchange Board of India (SEBI) and accredited by the RBI. The following table indicates the risk weight applicable to claims on corporate:

Domestic Rating Agency	AAA	AA	A	BBB	BB & below	Unrated
Risk Weight	20%	30%	50%	100%	150%	100%

33. A detailed note on CAR has been given in Section 3 above. Thus as can be seen, as against the RBI minimum CAR of 12% which is to be maintained by a Financial Institution, NCRPB's CAR is at least 185% and at most 747%. This is however due to its loans being predominantly to the State Governments which do not require any risk allocation. However, in future, when NCRPB would have to lend to projects based on project risk, this comfortable CRAR could come down to more realistic levels just like any other financial intermediary. A copy of the Master Circular of RBI dated July 1, 2009 is enclosed for information as Annex 2.

34. **Accounting Standards and Audit:** The International Accounting Standards (IAS) which would be applicable to NCRPB (if applied as part of benchmarking of best practices) are the following:

IAS 1 Presentation of Financial Statements
IAS 16 Property, Plant and Equipment
IAS 18 Revenue
IAS 19 Employee Benefits
IAS 20 Accounting for Government Grants and Disclosure of Government Assistance
IAS 23 Borrowing Costs
IAS 24 Related Party Disclosures
IAS 26 Accounting and Reporting by Retirement Benefit Plans
IAS 30 Disclosures in the Financial Statements of Banks and Similar Financial Institutions – **Superseded by IFRS 7 effective 2007**
IAS 32 Financial Instruments: Presentation – Disclosure provisions superseded by IFRS 7 effective 2007
IAS 37 Provisions, Contingent Liabilities and Contingent Assets
IAS 38 Intangible Assets
IAS 39 Financial Instruments: Recognition and Measurement

35. A review of the significant accounting policies adopted by NCRPB indicates that they are generally in accordance with the applicable IAS. According to IAS 1, a company has to prepare a complete set of financial statements comprising of:

(a) a statement of financial position as at the end of the period;
(b) a statement of comprehensive income for the period;
(c) a statement of changes in equity for the period;
(d) a statement of cash flows for the period;
(e) notes, comprising a summary of significant accounting policies and other explanatory information; and
(f) a statement of financial position as at the beginning of the earliest comparative period when an entity applies an accounting policy retrospectively or makes a retrospective restatement of items in its financial statements, or when it reclassifies items in its financial statements.

36. IAS 1 also specifies that an entity may use titles for the statements other than those used in this Standard. A review of NCRPB's Annual Accounts for the year ended March 31, 2009, shows that all the applicable statements stipulated by IAS 1 have been prepared by NCRPB. While the annual accounts itself is generally in accordance with the Standards, only in case of retirement benefits has NCRPB not followed the applicable IAS.

37. The Revised Accounting Standard 15 was issued in the FY 2007-2008. According to that standard, the retirements benefits needs to be provided on the basis of actuarial liability. Also the liability which has been ascertained upto the first date of the financial year (1.4.2008) should be charged off to the Capital Fund and only the liability for the FY 2008-2009 has to be charged off to Income & Expenditure statement for the year (the funds to meet this provision has been transferred from the Income & Expenditure (Plan). This is the transitional provision as per the standard. However, the NCRPB has charged off the entire liability in the current year Income & Expenses Account (Notes to Accounts point number 6 (a)). Since they have a Corpus Account, the liability upto 31.3.08 should have been set off in the corpus /capital accounts and only the liability for the year 2008-2009 should have been routed through the Income & Expenditure Account. Except for this, there is no materially significant variation between the applicable IAS and the NCRPB accounts statement for the year 2008-09.

38. However, going forward, as a financial intermediary and depending on the organisation structure which NCRPB decides to adopt, all the applicable IAS need to be adopted by it and the accounting statements need to be prepared in accordance with such IAS.

39. Currently, NCRPB does not have any subsidiaries and also does not have guarantees outstanding to any entities to whom it has disbursed funds. With reference to related party transactions, a view could be held that the loan approval committees have various State representatives and participating in the deliberations approving loans to organisations in their own States could be interpreted as a conflict of interest (and would also be a related party transaction). However, in our opinion, the term "related party" transaction is to be monitored in a corporate context where related party transactions could lead to diversion of funds. However, the ownership of the Government of India or a State Government is different from a corporate ownership in that the funds are for use in development of various infrastructure and consequently, the risk of funds being misused is fully mitigated.

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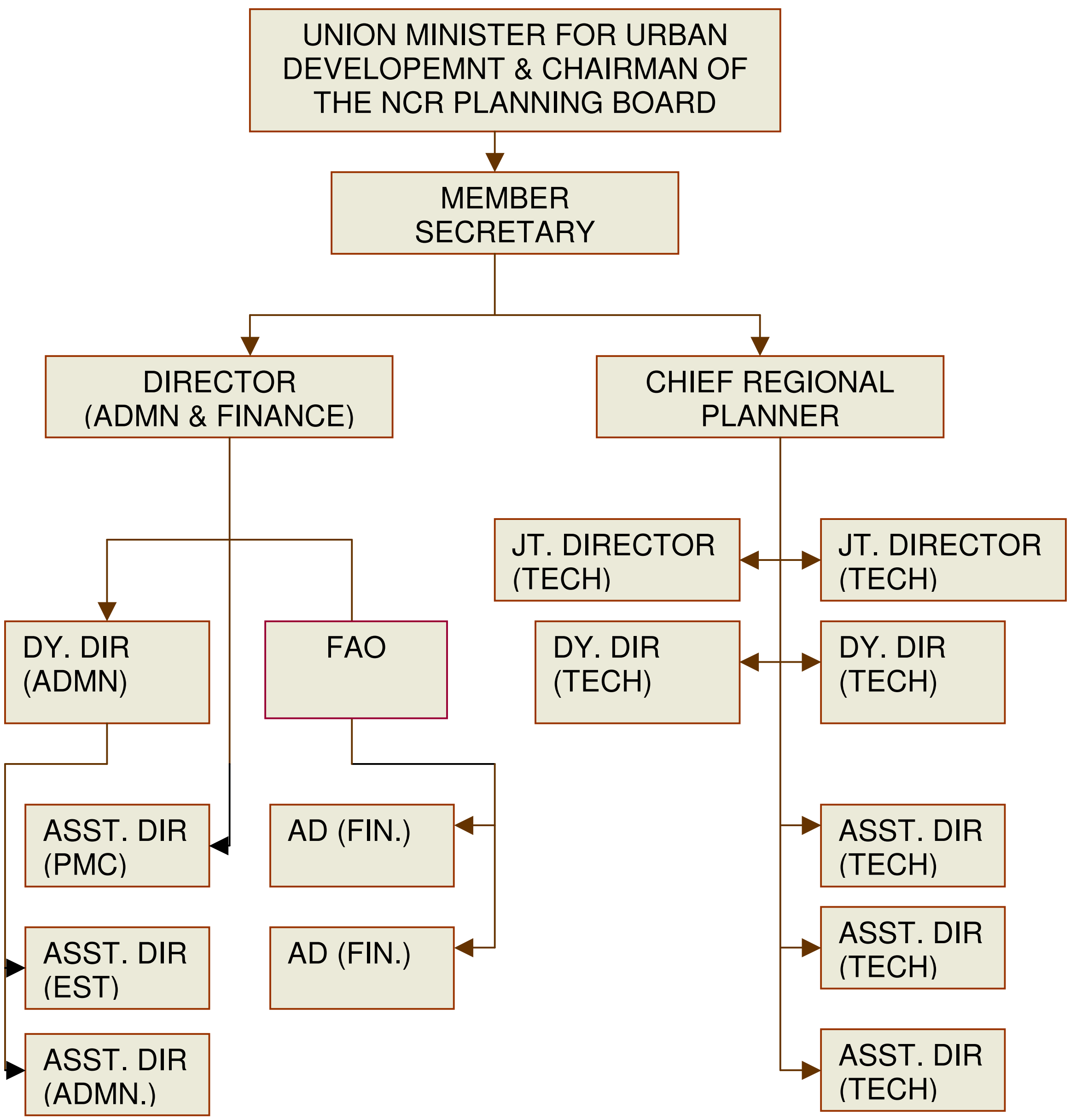
40. NCRPB does not currently have any contingent liabilities related to its shareholding nor substantial credit exposures to its affiliates/subsidiaries, etc. However, its lending portfolio has to necessarily to the State Governments and parastatals within the NCR region and consequently, all its lending are to State Governments and parastatals, and that too with adequate security, either risk domiciled on State Governments or other forms of security like mortgage and/or escrow accounts . While some of the lending could become Non Performing Assets due to defaults, it would not be appropriate to term such loans to other government owned/controlled institutions as having a negative effect on its financial standing.

41. **Corporate Governance structure of NCRPB** - Review the structure and composition of the board of directors, the selection process that is used and the members terms of reference. The organisation structure of the NCRPB is given below.



The Senior officials of the NCRPB are given below:

Sl.No	Name	Designation
1.	Dr. Noor Mohammad	Member Secretary
2	Shri Rajeev Malhotra	Chief Regional Planner
3	Shri R.K. Karna	Director (Admin & Finance)
4	Shri J.N. Barman	Joint Director (Tech.)
5	Shri R.C. Shukla	Joint Director (Tech.)
6	Shri Jitendra Agrawal	Dy. Director (Admn.)
7	Shri P.K. Jain	Finance & Accounts Officer
8	Shri Nabil Zafari	Dy. Director (GIS)
9	Smt. Anjali P. Roy	Assistant Director (Tech)
10	Ms. Meenakshi Singh	Assistant Director (Tech)
11	Shri Aqeel Ahmed	Assistant Director (Tech)
12	Shri Abhijeet Samanta	Assistant Director (PMC)
13	Shri Raghu Nath	Assistant Director (Estt.)- Retired on 30.9.08
14	Shri Harsh Kalia	Assistant Director (Admn.)
15	Shri D.K. Verma	Assistant Director (Finance)
16	Shri S.K. Katariya	Assistant Director (Estt.)
17	Shri Shireesh Sharma	Assistant Director (Finance)

42. The Board of NCRPB has been constituted as per the National Capital Region Planning Board Act, 1985 and consequently consists of a mix of Ministers of Government of India, Chief Ministers of constituent States, and various other persons connected with the development of NCR. All the Board members are nominated as per the Act and consequently hold office in accordance with the Act and their nomination conditions. Therefore, the management of the NCRPB is governed by the NCR Planning Board Act, 1985 and needs to evaluated within this requirement.

43. **NCRPB audit policies:** As indicated earlier, NCRPB's significant accounting policies, where appropriate, are generally in accordance with the IAS. NCRPB's audit is conducted by the office of the Comptroller and Auditor General of India and the audited accounts are placed before the Parliament once audit is completed.

44. **NCRPB's compliance to ADB's requirements**

Table 3.6 Compliance of NCRPB to OM's and the Next Steps in Progression Towards an FI

OP Requirements	Norms of RBI/ Regulator for Banks/FIs	Existing Situation	Next Steps/ Road Map requirements
(i) financial soundness as evidenced by adequate capital, asset quality, liquidity, and profitability		At present NCRPB has no regulator and is governed by its own Acts and controls imposed by GOI regulations	However, as NCRPB (apart from its planning function) also acts as a financial intermediary, it would be necessary to follow the prudential norms stipulated by Reserve Bank of India or any other appropriate Regulator so that NCRPB gains strength as a Financial Intermediary
Capital Adequacy	Minimum 12%	As most of the loans of NCRPB are to the State Governments for which zero risk weightage needs to be provided, and certain other loans are also only to State Government agencies (with State Government guarantees) where only 20% risk weightage needs to be provided, the Capital to Risk Weighted Assets Ratio (CRAR) of NCRPB is almost in excess of 100%.	As against a CRAR of 12%, NCRPB has a very high CRAR due to mostly lending only to State Government/agencies. In future when NCRPB proposes to lend to borrowers based on project risk/asset security, the Capital Adequacy norms would be applied and then NCRPB would need to monitor the CRAR very closely in order to meet the prudential norms for a financial institution.
Asset Quality	NPA's and Provisioning	Till date there has been no defaults and consequently, no provisioning for Non Performing Assets have been made.	In future when NCRPB proposes to lend to borrowers based on project risk/asset security, a more substantive credit appraisal of the borrower needs to be undertaken by NCRPB and cash flows of the project need to be monitored such that no/less provisioning is required due to payment defaults.
Liquidity	RBI norm of SLR of 24% (of their Net	NCRPB's liabilities are only long tenure Bonds.	As and when NCRPB accesses more debt (in

OP Requirements	Norms of RBI/ Regulator for Banks/FIs	Existing Situation	Next Steps/ Road Map requirements
	Demand and Time liabilities) and CRR of 5% (of the Banks's deposits)	Also, NCRPB is creating a Bond Reserve for one such Bond issue. Even otherwise, with a low D:E ratio, and a comfortable reverse cash flow from repayments and interest payments, coupled with no defaults till now, NCRPB's liquidity position is comfortable. Loan to Deposit ratio of NCRPB would be 100% indicating a good liquidity position	various forms), it would be appropriate to follow the prudential norms of the RBI stipulated for a Bank/FI as NCRPB effectively also performs the lending functions of a Bank. Hence meeting such prudential norms would provide strength to the operations of NCRPB
Debt Equity Ratio	NA	While there is no guideline of D:E Ratio for Banks/FIs, the CRAR (as explained earlier) needs to be met. As indicated earlier, NCRPB's CRAR is in excess of 100% due its asset profile.	With Own funds of Rs 20337.3 millions and Debt of Rs 4651 millions (as of March 31, 2009) the D:E position is only 0.23: 1 which gives a lot of scope for raising additional debt. Typically, financial intermediaries like Non Banking Financing Companies, Banks, etc. leverage their own funds at least 5 to 8 times. Consequently, NCRPB can raise substantial debt in future in order to channelise funds for development (During 2009-10, NCRPB has raised additional Bonds of Rs 1349.0 millions at 8.68% p.a.)
ROI and ROE	NA	As NCRPB's D:E ratio is very low and it finances infrastructure at a low rate of interest, its Return on Equity is only 5.75% pa	A Financial Intermediary's ROE can only increase with increased leverage. While average cost of borrowings is 6.55% p.a., the weighted average cost of funds is only 1.69% p.a. due to low D:E ratio. The average yield on loans is 6.60% p.a giving a

OP Requirements	Norms of RBI/ Regulator for Banks/FIs	Existing Situation	Next Steps/ Road Map requirements
			margin of about 4.91% p.a. However, as the D:E ratio increases due to raising of additional debt, the WACC would go up reducing the margin earned from lending However, as leverage increases due to additional borrowings, the absolute net earnings of NCRPB would increase provided the interest rates on loans are maintained or increased based on the cost of capital. Therefore, NCRPB needs to leverage its Owned Funds in order efficiently use scarce resources.
(ii) adequate credit and risk management policies, operating systems, and procedures;			
credit and risk management policies,		NCRPB has no risk management framework as most of the loans are guarantee backed and no financial due diligence of sub project cash flow is carried out. **Interest Rate Risk**: At present the interest rate risk is marginal as almost 80% of the funds on lent are grants from GOI/Delhi Government and only a small portion has been raised from the Market. Further NCR's borrowing and loans are on fixed terms and consequently the interest rate risk is negligible.	With reduced dependence on State Government backed projects and increased lending to projects based on project risk, NCRPB capabilities would need to be enhanced to include credit risk evaluation, Asset Liability management, etc. Apart from a detailed review of project cash flows, the interest rate risk and maturity risk of both NCRPB's borrowings and its lending need to be managed such that the Assets and Liabilities are matched on these fronts.
Operating systems, and procedures		NCRPB being a Board under the Government of India, appropriate operating systems and	NCRPB would however need to implement much stronger systems and procedures in case of increased borrowing

OP Requirements	Norms of RBI/ Regulator for Banks/FIs	Existing Situation	Next Steps/ Road Map requirements
		procedures are being followed for budgeting, periodical review of performance vs budget, loan sanctions, raising of finance, etc.	and also lending in order to scale up its business model in the area of Financial Intermediation
(iii) compliance with prudential regulations, including exposure limits;		Being an entity not regulated by any entity, loans are guaranteed and financing is demand responsive, there has been no need for any exposure norms.	However, with increasing access to market borrowings and also to Multilateral borrowings, there is a need to comply with the prudential norms for financial intermediaries of the RBI, other Regulators and also of the Lending agencies, if any so that NCRPB emerges as a strong Financial Intermediary.
(iv) acceptable corporate and financial governance and management practices including, among other things, transparent financial disclosure policies and practices		The management of NCRPB is being carried out as stipulated in the Act and regulations and follow basic principles of governance. Further the Audit of accounts are carried out by CAG and Placed in the Parliament.	Current disclosures however are not adequate if evaluated from a regulatory disclosure perspective for a Financial Intermediary. NCRPB needs to adopt the appropriate disclosure requirements stipulated for Banks/FIs by RBI or other relevant regulatory agencies in order to meet this requirement
(v) sound business objectives and strategy and/or plan;		The development policy of NCRPB is governed by the Regional Plan and is not backed by a business plan reflecting the entities capital investment program.	
(vi) autonomy in lending and pricing decisions		As per Rules of the NCRPB, interest shall be charged at such rate as may be specified by the Board for any particular loan or for the class of loans concerned and the rate of interest prescribed by the Government from time to time shall	A more dynamic lending and pricing mechanism needs to be implemented to operate as a Financial Intermediary in the market place derive the benefit of interest rate and foreign exchange rate movements and also any other matter. Pricing decisions also need to be project risk specific and any

OP Requirements	Norms of RBI/ Regulator for Banks/FIs	Existing Situation	Next Steps/ Road Map requirements
		invariably be adopted by the Board.	other matter relevant to pricing.
(vii) adequate policies, systems, and procedures to assess and monitor the economic, social, and environmental impact of subprojects in accordance with parameters established by ADB for this purpose.		NCRPB has appointed external agencies to evaluate the Detailed Project Reports submitted by the IAs and submit report to the NCRPB. This report includes assessment of the financial and technical aspects of the proposal.	
Financial intermediaries should have or build up capacity for mobilizing domestic resources.		NCRPB has over the last two years raised Rs4651 millions as Bonds from institutional investors. Salient features are given in Annexure 1	Based on the past experience it is felt that NCRPB has the requisite capability to raise finance in the domestic markets.
Use of ADB Funds		Currently capacity to repay is not assessed as majority of the projects are backed by State Guarantees. However the ongoing ADB TA's are addressing the issue and enhancing the capacities of NCRPB and borrowers in appraisal.	The Project financing will be based on an economic and financial appraisal of sub project and an tariff / rate reforms based on an agreed timeframe.
Re-lending rates from the borrower of the ADB FIL to the financial intermediary should have local cost anchors		Currently NCRPB rates are below market rates as it blends GOI and Government of Delhi's contributions with market borrowings.	Will be decided based on WACC and, lending policy and considerations related to risk appraisal of the proposal including factoring foreign exchange risks applicable to FI Loans (Examine possibility of GOI bearing Exchange Risks).

3.3 Strategic Options

46. For NCRPB to perform it's planning and lending functions there appear to be at least three strategic options:

i. to continue its current normative planning approach mixed with state guarantee backed financing;
ii. become an institution of relevance for the region, both from a planning and financing perspective and
iii. evolve into a FI along with its role of a planner.

3.3.1 Option One: Normative Planning and Demand Driven Financing

47. The first option, namely continue the existing business model with marginal improvements in its planning and financing role. This would involve expediting the sub-regional plans, moving towards appraisal based lending with a mix of guarantees and recourse to revenues and taxes and on the institutional side strengthening the regional networks. The ADB line of credit would essentially support the continuance of NCRPB as supplier of lower cost credit allowing blends of tenor and pricing with GOI grants. Concurrently NCRPB would need to have in-built a system of developing investment programs supported by ready to go contracts, so that impacts are created in the region in a systematic basis and also to avoid potential negative spreads arising from the ADB loans.

48. The merits of this approach include the lack of need to change internal structure or require major changes from the borrowers. The demerits could be a lack of sustainability of the present model after the ADB line of credit, a growing dissonance between the planning framework and emerging new paradigms after the 74th CA and JNURM type investment follow up. There could also be an increasing mismatch and reluctance of states to support higher volumes of guarantee backed financing (especially in the context of the FBRM's) which could adversely affect NCRPB's balance sheet growth and hence becoming a lender of relevance for the region. The financial projections under this assumption are at Annex 4.

3.3.2 Option 2: Strategic Planner and Financier of Relevance

49. A second option is to use the ADB line of credit to attempt to transform into a proactive creator of planned and sustainable infrastructure by leveraging on its strengths and identifying its niche market both as a planner (project developer) and as a financier. NCRPB's two core strengths are first, the strength of its regulatory framework, mandate from an Act of Parliament, subsequent conformity by states and a representative high level management structure. Second, it's under leveraged balance sheet which allows considerable flexibility in its financial operation, both in terms of pricing and tenor.

50. Given these strengths, NCRPB's niche market is in position to develop a strong pipeline of coordinated investments across sectors in the region, (given its strengths) and also tie up a means

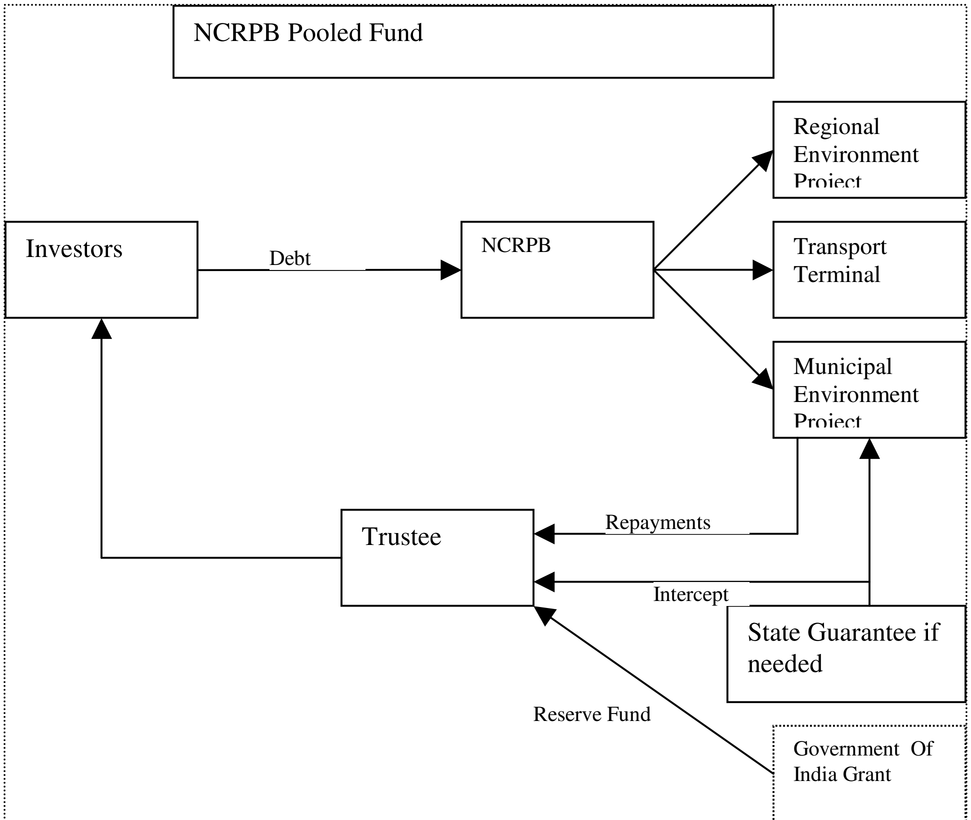
of financing these investments over the medium term. This financing strategy would use the typology developed earlier be varying degrees of planner and financier across investments type. For example, in the NH, power and railway sectors (Category I) , NCRPB would be the planner which identifies strong economic impacts due to complementarities of multi sector investment and leave the major share of financing to specialized financial intermediaries (such as PFC, REC, IRFC etc) currently operating in the sector. At the other end of the spectrum, NCRPB would be less of a planner, use the CDP's at the city level but function more of a financier blending its debt finance with other grants such as JNNURM and eventually pooling these demands into marketable debt instruments. In the case of Category II, namely interstate connectivity – both environmental and transport (ground water, multimodal transport etc) NCRPB would play a significant planning role in identifying this investment and an equally strong role in facilitating finance.

51. This niche market is at present an institutional vacuum in the region which NCRPB is perhaps best positioned to occupy. Pure private sector lenders such as IDFC would find a planning role difficult and the need for financing facilitator for smaller projects unprofitable. Pure national level public sector lenders, such as HUDCO and IIFCL lack the regional strengths of NCRPB management structure and availability of grant finance.

52. In order to operationalize this strategy, NCRPB would need a 5 year business plan with an identified stream of backward and forward linkage investments across the three Categories and a means of finance for the same. It would also have to move away from the current demand driven project financing which would at any point of time lead to unbalanced financing across the region, as is currently the situation with respect to the shares of Haryana in the region

53. It would also need to begin its non-guarantee mode of financing by earmarking a portion of its grants as a credit enhancement (such as a debt service fund) so that the leverage situation improves and work with states and municipalities to institute rate covenants and partial intercepts of SFC grants. This gradual move from a heavily capitalized –under leveraged entity to a relatively leaner capital structure with recourse less to guarantees and more towards revenue streams of borrowers both from projects and local taxes could be assisted by ADB (IFC Muni Fund etc) through its products such as PCG's and complimentary assistance through its sub sovereign window.

Option 2: Moving Towards a Limited Liability, Low Cost Financier of Relevance



54. From a sustainability perspective, NCRPB would have to eventually depend on domestic sources of debt to finance infrastructure demands of the regional plan. Towards this objective NCRPB could use the ADB line of credit (and the TA Loan) to position itself as a link between domestic debt markets and regional demands by moving away from an unlimited GOI liability and State Government budget backed program to a structure leveraging GOI grants more efficiently through a debt service fund as in Pooled Financing Structures.

55. The following features of this structure merit attention for at least four reasons

56. First, since repayments are dependant on borrower's cash flows, without recourse to NCRPB the capital requirements need be kept at a minimum – this automatically has the effect of eliminating dividend expectations from the pricing of credit. The legal steps in this regard would include escrow formalization, constitution of DSRF as well as state level intercepts for special pooled offerings. **(See the discussion on US Bond Banks and the WSP pooled offering in Annex 5)**

57. Second, the lack of dividends in pricing would enable the entity to compete with other capitalized lenders in both the public and private sector such as HUDCO and IDFC which need to price in returns.

58. Third, regular offerings based on a planned pipeline can pool different financings with different risk profiles, allowing a common rating of the pool which individual projects on account of size may not be able to access a rating or market finance.

59. Fourth, GOI has set up a PFDF which makes this possible at the state level and has even contributed finance to the DSRF's. The synergies for the NCR region cannot be difficult to operationalize.

3.3.3 Option 3 – Planning and Full Fledged FI

60. A third option would be to continue the Guided Planning Approach and enlarge its financial sophistication, both in terms of products as well as its internal capital structure. For example, NCRPB could continue the mandate of finalizing its sub regional plans while moving towards standardized structures of an FI.

61. The key points to consider would be the competitive positioning of this approach. It could be argued that even if NCRPB adopts a more conventional legal structure for lending – namely as an NBFC or even under the Trust Act, without recourse to GOI there appears little comparative advantages. There is also an issue of treating grants made by Delhi in case of such capital structuring. Further, in the event that NCRPB does focus on this option, there would be little advantages accruing to the NCRPB. Most lenders, including IIFCL would be willing to offer a wider range of products and it would appear a modified NCRPB would be in no better position than national level entities with respect to the cost of funds.

62. To sum up, NCRPB might like to consider these strategic choices and decide on its present business model – access criteria, pricing – for NCRPB to be an institution of relevance. On the other hand, given the relative small size of NCRPB's operations in relation to the estimated demands, it is worthwhile to consider the design of efficient intermediation from the regions perspective.

3.3.4 Evaluation of Suggested Options

Some of the major assumptions for evaluation of the different options are as follows:

I Lending Volumes FY (0):

A. Analysis of past five years of disbursements of NCRPB was made and it found that the Cumulative Average Growth Rate (CAGR) for the last five years was 21.5% pa. A table for the same is given below:

Year On Year Growth Of NCRPBs Disbursements **(Rs in millions)**

Year	Disbursements Million.	Growth %		CAGR
2003-04	2740.80			
2004-05	2757.20	1.01		21.50%
2005-06	3649.50	1.32		
2006-07	4164.60	1.14		
2007-08	7053.80	1.69		

Year	Disbursements Million.	Growth %		CAGR
2008-09	7230.60	1.03		

The loan disbursement during the next 5 years is as below
:

Growth In Loan Disbursement					Rs In Millions	
Particulars	**2008-09**	**2009-10**	**2010-11**	**2011-12**	**2012 – 13**	**2013 - 14**
Year On Year Growth		22%	22%	22%	22%	22%
Loan Disbursement	7230.00	8820.60	10761.10	13128.60	16016.90	19540.60

In case of both Option ! and 3 (Current Business Model and Conventional FI), a uniform growth of 22% is disbursement has been assumed year on year. However, in case of Option 2I, (Regional Player), it is assumed that NCRPB would gradually move towards a Pooled Financing route in which case, the year on year growth is slightly different as the loan disbursements would be predicated by the quantum of Debt Service Reserve allocated by NCRPB for security based lending. However, it is seen that in FY2020, the growth of loan portfolio over FY 2011 is about 8 times in case of Option II while it is about 8.25 times in case of Options I and III.

B An analysis was also made of the quantum of loans which had been sanctioned by NCRPB (upto the end of each year) and the amount of disbursement made against these sanctions. It has been found that a healthy pipeline for next year's disbursement is available which can be used for meeting next year's target for disbursement. A table for the same given below:

Year On Year Status Of NCRPB's Business Pipeline (Rs in millions)

Year	Pipeline Sanctioned	Disbursed This Year	Cumulative Disbursed	Pipeline For Next Year
2005-06	21716.6	3649.5	11968.1	9748.5
2006-07	26725.7	4164.6	15447.4	11278.3
2007-08	16926.3	7053.8	14136.3	2790
2008-09	46989.6	7230.6	29073.5	17916.1

`An analysis of the above table shows that NCRPB maintains a healthy pipeline of sanctions which can be disbursed in the following year. For instance, the Pipeline for 2009-10 amounts to Rs 17910 millions, out of which even if it disburses 50% of pipeline, it can meet the growth rate mentioned earlier. While these projects in pipeline for disbursement may not meet ADB norms of sub lending, a separate pipeline of projects has been developed by the consultants for disbursement using ADB funds. A summary of ADB pipeline projects is given below (and a detailed listing of these ADB pipeline projects are given as Attachment)

Summary Of ADB Pipeline Projects For DPRs And Feasibility Reports Are Being Prepared By Consultants

Sector	Share	In Mill $
Solid Waste Management	4.2	27.23
Sewerage and Drainage	4.4	28.51
Water Supply	11.9	76.88
Urban Transportation	22.7	146.54

Sector	**Share**	**In Mill $**
Regional Transportation	22.7	146.61
Power Distribution and Transmission	9.5	61.20
Land Development and Housing	24.6	158.86
Total	**100.00**	**645.83**

C REGIONAL PLAN 2021

An analysis was also made of the sectoral funds requirement as per Regional Plan 2021 made by the NCRPB. This also reveals the substantial funds which are required for development of the NCR and considering these requirements, NCRPB's funds support for such development would continue to be non substantive and consequently, the business plan assumptions would not be difficult to meet. A summary of the funds requirement of the Regional Plan 2021 is given below:

					Rs in Millions		
Sector		**2002-2007**	**2007-12**	**2012-17**	**2017-2021**	**TOTAL**	
Transport		100000	91410			191410	9.88%
Power		293350	165690	505700	552690	1517430	78.32%
Water		26370	39550	39550	26370	131840	6.80%
Sewerage		12480	29130	24970	16640	83220	4.30%
Solid Waste		5450	3410	2720	2040	13620	0.70%
			TOTAL			**1937520**	**100.00%**

Thus a perusal of the aforesaid data indicates that NCRPB would be able to achieve the projected growth rate of 22% pa. Thus the business plan expects NCRPB to achieve a growth rate 22% pa during the next 10 years in each of the 3 **Options** enumerated above. Consequently, while the loan disbursement would increase by 22% year on year, the loan disbursements every year would be same across the 3 **Options**. However, the quantum of disbursement of funds for individual sectors would be dependent on the business objective as per each of the 3 **Options**. The table below gives the proportion of disbursement which each sector would get from NCRPB as loan:

Sectoral Break Up Of Disbursement For Each Option

	Option I	**Option II**	**Option III**
	Business As Usual	**Regional Player**	**Financial Institution**
Sectoral Break Up Of Disbursement	% to Total	% to Total	% to Total
Water & Sewerage/Solid Waste	11%	70%	25%
Transport, Land And Others	48%	15%	15%
Power	41%	15%	40%
TOTAL	**100%**	**100%**	**100%**

While in **Option** I, the sectoral disbursements are expected to be maintained in the same proportion as last year, in case of **Options** II and III, sectors like water and sanitation are expected to get increased focus and would get a higher credit flow while sectors like power and transport, which have other lenders in the sectors, would decrease in proportion. Especially in case of Option II, the objective that 70% of NCRPB's incremental loans would be to the water and waste water sectors is likely to be gradually achieved in 5 years.

II Sectoral Composition

Based on the above analysis, our projections for the sectoral composition is as follows:

Option 2:

1. Sectoral disbursements: NCRPB's sectoral concentration would gradually shift from power and transport to water and waster water over the next five years.

Sector/Year	Current	2009-10	2010-11	2011-12	2012-13	2014-15
Water, waste water and solid waste	11%	15%	25%	35%	45%	70%
Power	41%	40%	35%	35%	35%	15%
Transport, land development	48%	45%	40%	30%	25%	15%

1 Creation of Debt Service Reserve Fund (DSRF): With a view to facilitate credit enhancement of pooled funding mechanism, NCRPB would initiate a DSRF. As it is an existing lender with lending commitments, the DSRF can be set up over a period of time. The objective is to create a DSRF equal to its Grant funds over a period of four years in equal proportion. This DSRF can inturn be invested in Government of India Securities, which would then be provided as credit enhancement to prospective lenders as a credit enhancement measure.

2 Raising of Pooled Bonds: With the creation of DSRF, it is assumed that NCRPB can leverage the DSRF at least 4 times for raising finance from the market. However, raising funds equal to 4 times DSRF is achieved over a period of 5 years. The table below gives the manner in which this is achieved:

Rupees in Millions

	2010-11	2011-12	2012-13	2013-14	2014-15
Leverage	1	1.5	2	3	4
Amount of DSRF	5667	12536	20700	30271	33041
Cumulative amount raised	5667	18804	41401	90814	132165

One of the benefits of this structure is that NCRPB can move away from raising money in its books based on GOI guarantee stated in the Act to an active financial intermediary linking debt markets with regional financing demands of infrastructure. This gradual shift should assist NCRPB transform itself into a limited liability company over a period of time.

III Capital Structure:

A Base Case: In this Option, the grant funds and the accumulated internal accruals would continue to provide cost free funds to NCRPB to enable lending at a reduced interest rate.

B **Regional Player**: In this Option too, the grant funds and the accumulated accruals would continue to provide cost free funds to NCRPB to enable lending at a reduced interest rate.

C **Financial Institution**: In this Option, consequent to the corporatisation, capital funds and accumulated internal accruals as of the date of the conversion may either need to be returned or allotted as share capital to the constituents who have contributed capital.

One issue in this instance which needs to be resolved is whether, apart from allotting shares to GOI for its contribution and its share in reserves, shares need to be allotted to Government of Delhi towards its share.

IV Pricing

Again, the organisation structure and objective are expected to play a major role in pricing of the products by NCRPB. A detailed discussion is on each of the 3 Options is given below with respect to pricing:

A **Base Case** – Business as usual:

Under this Option, lending continues to be demand driven and interest rates continue to be based on rates approved by the Government of India. With receipt of grant funds from Government of India and Government of Delhi, which are considered to be free of cost, pricing of loans continues to be based on the rates approved by GOI. Thus the current interest rates of 8.25% for Water supply, sewerage, roads, etc. and 9.50% for power, transport and land development have been fixed on the aforesaid basis. While these lending rates do provide NCRPB with a revenue surplus, this is only due to the fact that grant funds have not been costed for fixing the interest rates. A comparison of the lending rates of NCRPB, Power Finance Corporation (PFC) and Housing & Urban Development Corporation Limited (HUDCO) would indicate that the current rates of NCRPB are the cheapest in the market. A table below brings out the difference in the interest rates among the three lenders enumerated above

:

Financial Institution	Interest Rates	Remarks
PFC	11% to 11.50% per annum	ALL Loans are subject to a reset clause (ie. PFC has a right to review the interest rate afte 3 uears
HUDCO	9.50% to 11.25% depending on rating	Floating rate linked to Base Rate (Now BR is 12.50%)
HUDCO	10.50% to 12.25%	Fixed Rate
NCRPB	8.25%	Priority infrastructure projects viz. Water supply, sewerage, sanitation, drainage, storm water drain, and Roads, ROBs and Flyovers
NCRPB	9.50%	Land development for residential/Industrial/Commercial projects and other Infrastructure Projects

Thus, while NCRPB is cheaper than PFC and HUDCO, due to its low volume of lending especially in the power sector (as compared to the requirement of the sector), it is not able to set the tone for compliance by the borrower.

As NCRPB is cheaper than PFC and HUDCO, there is still a possibility that it can charge more to its borrowers in the power and transport sectors and still sustain its lending programme in these sectors. However, for sectors such as water and sanitation where the capacity to pay of households is limited, NCRPB could charge a lesser interest rate to make them more viable. However, in the Base Case Option, the existing interest rates have been taken for analysis.

B Regional Player: In this Option, NCRPB is expected to use the ADB line of credit to attempt to transform into a proactive creator of planned and sustainable infrastructure by leveraging on its strengths and identifying its niche market both as a planner and as a financier. This is expected to result in the charging of differential rate of interest for different sectors.

NCRPB is expected to provide credit enhancement through the DSRF and leverage this fund to raise pooled finance from various lenders at rates much cheaper than market. Except for intermediation costs, NCRPB is not expected to charge a premium for onlending, as in this Option, the providers of grant funds do not have any dividend expectations, and consequently, any internal accruals can be used for increasing the DSRF component. st.

C Financial Institution: In this Option, NCRPB is expected to convert into a company and would also need to meet the regulatory requirements of RBI, SEBI, etc. Also, with the grant funds being converted into equity capital and the appropriate number of shares having been allotted to GOI and GOD, there could now be an expectation of dividend by these shareholders. Consequently, any pricing decision by NCRPB in this Option, would need to price equity at the appropriate cost (say, equivalent to 10 year GOI G Sec yield) so that the pricing of its loan portfolio is based on a realistic costing of its own funds and borrowed funds.

	Base Case	**Regional Player**	**Financial Institution**
Sectoral Break Up Of Disbursement	**Interest**	**Interest**	**Interest**
Sewerage/Solid Waste	8.25%	6%	6%
Water supply	8.25%	6%	6%
Transport	9.50%	6%	10%
Power	9.50%	9%	10%
Land development & others	9.50%	9%	11%
Total	**9.36%**	**7.50%**	**9.24%**

As against the aforesaid interest rates charged to customers, NCRPB's Weighted Average Cost of Capital (WACC) in each of the Options is as follows:

Base Case : 7.48%
Regional Player : 7.33%
Financial Institution : 6.61% (post tax)

The WACC includes a notional costing of equity funds at 7.05% pa (equivalent to 10 year GOI G Sec yield recently.

V. Assumptions on Security: Current and Assumptions

Current: As part of its guidelines, NCRPB is empowered to sanction loans to State Governments, to State Governments having a counter magnet area and the local authorities, urban development authorities, housing boards and such other authorities of the State Government responsible for implementing the sub-regional plans and project plans or for developing the counter magnet area. While NCRPB lends a substantial part of its funds to State Governments (which do not need any security), NCRPB does take security for lending to parastatals. It could in the nature of State Government guarantee, escrow account or mortgage of assets, etc. However, as per the Capital Adequacy Ratio (CAR) norms of RBI, different securities would trigger different risk weightages for assessment of capital requirements.

Considering that most of the loans of NCRPB are to State Governments, the CAR of NCRPB as of date is much more than that stipulated by RBI, even though NCRPB does not have regulatory authority overseeing its lending function and consequently, is not required to calculate the CAR.

Assumptions

For the purpose of the preparation of Business Plan, it is assumed (for all the three Options except for pooled funds, where NCRPB would not be lending but facilitating intermediation) that while 50% of loans would be given to the State Governments, the balance 50% would be lent against securities like escrow account, etc. which need a 20% risk weightage.

V Borrowings: Apart from its Capital Funds and its internal accruals, NCRPB has been raising monies in the Indian Bond market over the last few years with a view to meet its loan disbursement commitments. All the earlier borrowings have been repaid with the following Bonds issued in the past 2 years remaining outstanding. A synopsis of the borrowings as of March 31, 2009 is given below:

Year of mobilisation	Title	Date of allotment	Amount Rs in Millions.	Coupon rate (pa)	Tenor	Redemption Date
2007-08	NCRPB Taxable Bonds (2018)	14.2.2008	2000.00	8.98	10 years (with 7 year put/call option)	14.2.2018
2008-09	Taxable NCRPB Bond Series I (2018)	18.2.2009	2651.00	9.15	10 years (with 7 year put/call option)	18.2.2019
	TOTAL		**4651.00**			

The funds requirement during the next 5 years is expected to be met out of ADB loan of $ 150 million and further borrowings in the Indian Bond market. It is expected that the Fx loan of US $ 150 million would be swapped into a fixed interest bearing Rupee loan. The ADB loan has been considered as Rs 7500 millions (at an average US $ 1 = Rs 50) at a interest rate of 7.50% pa.

The ADB loan has been considered to have a 20 year tenor with a 5 year moratorium and a 15 year repayment.

The Bonds which are expected to be raised are to be raised at the same coupon rate of 8.68% pa, the rate at which NCRPB raised Rs 1391 millions recently. The Bonds have been assumed to have a uniform bullet repayment schedule at the end of 10 years.

It is however, recommended that in order to do prudent Asset Liability management, NCRPB incorporate a clause in the loan agreement to the effect that NCRPB has the right to reset interest once in 3 years or any other in order to manage interest rate risk. The other aspects of Assets Liability management are dealt with in later paragraphs.

In the financial model, it is assumed that where the subprojects are eligible for ADB lending, ADB loan would be drawn down first, with other ineligible projects being funded with own funds and Bond funds.

VI Other Financial Assumptions:

a. Income Tax: It is assumed that in case of Options I and II, NCRPB would be exempt from payment of Income Tax (as it is currently) while once it converts into a Company, it would need to pay Income Tax on its net income. Income Tax is assumed at 33.99%.

b. Loan Reserve: In Options I and II, NCRPB is not required to provide for any loan loss reserve as a reserve against future defaults as it does not come under the purview of any regulator. However, once NCRPB converts into a Company (and becomes a Financial Institution), it would need to follow prudent norms and consequently, it would need to create a loan loss reserve. It is assumed that it creates a loan loss reserve of 2% of outstanding loan portfolio.
c. Expenses incurred on raising borrowings: It is assumed that NCRPB incurs a cost of 0.50% in raising additional borrowings.
d. Overheads: Currently, NCRPB gets a separate grant for meeting its administrative and personnel expenses and consequently, it does not charge off these expenses to the income and expenditure account of the Plan scheme. Consequently, this assumption has been maintained in both Options I and II.
e. All loans are given for a 15 year period with a 3 year moratorium and 12 year repayment.

However, in case of Option III, it has been assumed that overheads amounting to 0.25% of amount of loan outstanding would be incurred by NCRPB, as it would need to incur such expenditure as a company as it would need to show these expenses in its accounts.

VII **Receipt Of Funds From GOI AND GOD**: It is assumed that both GOI and GOD would contribute a sum of Rs 500 millions each per year to NCRPB as capital accretion. However, while in the case of Options I and II, these contributions would increase the Capital Funds, in case of Option III, NCRPB would need to issue fresh shares to GOI and GOD in lieu of receipt of such funds.

VIII **Grant Funds**: In case of all 3 Options, a sum of Rs 100 millions each year has been allocated for appointing consultants for facilitating execution of various sub projects, enhancement of capacity of NCRPB and institutional borrowers, etc. This fund would be transferred to the GOI who will administer the facility.

IX A summarised table of the various options and the assumptions for each of the options is given below:

	ASSUMPTIONS			
1	**Option**	**I**	**II**	**III**
		BUSINESS AS USUAL	**REGIONAL PLAYER**	**CORPORATE LENDER**
	Business Strategy	NCRPB does business as usual by lending monies available, both from grant funds and ADB and other sources	NCRPB transforms itself as a intermediary for structuring and organising and domiciling pooled funds for infrastructure funding In this model, over a period of time, NCRPB builds creates a Debt Service Reserve Fund out of a part of	NCRPB's business focus remains as usual with a proviso that it is now liable to meet all guidelines of RBI, create a loan loss reserve, pay corporate income tax, and also need to meet all other accounting and other norms stipulated by various regulators

	ASSUMPTIONS			
1	**Option**	**I**	**II**	**III**
		BUSINESS AS USUAL	**REGIONAL PLAYER**	**CORPORATE LENDER**
			its Grant funds and enables ULBs, Other agencies pool their requirement and raise bonds at attractive rates. In the process, NCRPB shifts the risk of these funding on to the bond subscribers but provides them with the DSRF as security. The DSRF also is invested and earns interest at 10 year Gsec rates. By shifting risk to borrowers, NCRPB can also shifts away from GOI guaranteed structure and move towards corporatisation with full limited liability at a later date.	
	Organisation Structure	Organisation structure remains the same and continues business as usual and sectoral proportion remains as in the previous year and interest rates are also as per existing rates - Unlimited Liability of GOI remains	Organisation structure remains the same but shifts focus to sectoral approach with increasing focus on water, wastewater etc. and also lends to these sectors at a cheaper interest rate than other sectors	Organisation is restructured as a company and becomes a Financial Institution. The business focus is as in Scenario II The company is effective April 1, 2010
	Capital Structure	Remains the same	Remains the same	As it has become a company, NCRPB reclassifies capital fund as Share Capital and issues

	ASSUMPTIONS			
1	**Option**	**I**	**II**	**III**
		BUSINESS AS USUAL	**REGIONAL PLAYER**	**CORPORATE LENDER**
				Equity shares to GOI and Govt of Delhi as per their contributions their share in the internal accruals till March 31, 2010.
5	Loan Disbursement Growth Rate	22%		22%
	This is based on the past 5 years Compounded			
6	Annual Growth Rate of NCRPB's disbursements			
7	Contributions assumed from GoI and Go Delhi			
8	at Rs 500 millions each every year			
9	Government of India 10 year G Sec yield	7.05%	7.05%	7.05%
10	Rate of Income tax	0.00%	0.00%	33.99%
	Loan Loss Reserve (of outstanding loans)	0.00%	0.00%	2.00%
11	Overheads considered as % of loan outstanding Separate Grant	0.00%	0.25%	0.25%
12	Cost of equity for Weighted Average Cost of Capital	7.05%	7.05%	7.05%
	- same as 10 year GOI G Sec			
	Interest rate risk	Passed on to borrowers	Passed on to borrowers	Passed on to borrowers
	Fx risk on ADB borrowing	Swapped into Rupees	Swapped into Rupees	Swapped into Rupees

X **Main Findings:** A detailed summary of the Business Plan for all the three Options are given below:

FINANCIAL YEAR ENDED MARCH 31,	2011	2020	2011	2020	2011	2020
RUPEES IN MILLIONS						
	Option I	Option I	Option II	Option II	Option III	Option III
*	Business as usual	Business as usual	Regional Player	Regional Player	Financial Intermediary	Financial Intermediary
Balance Sheet						
Capital (Including Free Reserves)	25372.5	71590.9	25072.4	56511.5	24412	53669.3
Total Debt	10500.0	214300	17667.3	267758.2	11000	231200.0
Total Liabilities	35872.5	285890.9	42739.7	324269.7	35412.0	284869.3
Total Loans Outstanding	34468.3	284589.6	35990.0	270412.2	34468.3	284589.6
Fixed Assets & Investments	24.6	24.6	5691.9	49936.2	24.6	24.6
Closing Balance Of Cash And Equivalents	1379.6	1276.7	1057.8	3921.2	919.1	255
Total Assets	35872.5	285890,9	42739.7	324269.7	35412.0	284869.3
Income And Expenditure Statement						
Interest Income	2220.2	21557.9	2055.9	21750.7	2209.4	21275.8
Interest Income On Surplus	88.9	94.7	84.9	105.7	64.7	35.2
Total Income	2309.0	21637.7	2140.8	21856.4	2274.1	21311.0
Interest Expense	539.3	14477.6	539.3	16099.3	539.3	15684.1
Expenditure Incurred On Raising Borrowing	22.5	242.5	30.0	0.0	25.0	257.5
Overheads	0.00	0.00	68.6	57.3	6.86	575.6
Loan Loss Reserve	0.00	0.00	0.00	0.00	140.7	1086.6
Tax	0.00	0.00	0.00	0.00	510.0	1260.0
Transfer To Grant Fund	100.0	100.0	100.0	100.0	100.0	100.0
Total Expenditure	661.8	14820.1	737.8	16256.6	1383.6	18963.9
Net Income Over Expenditure	1647.3	6817.6	1403.0	5599.8	890.5	2347.0
Debt : Equity Ratio	0.41	2.90	0.41	3.29	0.45	4.23
Capital Adequacy Ratio	736%	257%	735%	234%	708%	192%
EARNINGS PER SHARE Of Rs 10 Each (On 200.52 Cr Shares)					0.44	1.27
Interest Spread Ratio	0.36%	0.80%	0.20%	0.29%	0.50%	0.66%
Earnings Spread Ratio	5.41%	2.82%	5.26%	2.15%	5.36%	2.20%
Gross Interest Margin	311.04%	50.72%	302.20%	37.53%	303.03%	36.23%
Net Margin	248.92%	49.68%	241.43%	36.60%	101.94%	14.64%

Average Cost Of Borrowings	8.05%	7.48%	8.05%	7.48%	8.05%	7.51%
Average Gross Return On Loans	7.17%	8.37%	7.01%	7.87%	7.14%	8.26%
Less: Average Cost Of Funds	1.74%	5.55%	1.74%	5.72%	1.77%	6.06%
Less: Other Costs As % Of Total Funds	0.31%	0.04%	0.31%	0.04%	2.57%	1.21%
Net Return On Capital Employed (Assets)	5.10%	2.78%	4.95%	2.11%	2.79%	0.99%
Return On Equity	6.85%	10.39%	6.65%	8.60%	3.81%	4.88%
WEIGHTED AVERAGE COST OF BORROWING (Post Tax)	8.52%	8.53%	8.52%	8.53%	5.63%	5.64%
Weighted Average Cost Of Capital (Post Tax)	7.48%	8.15%	7.48%	8.19%	6.61%	5.91%
Weighted Average Lending Rate	9.36%	9.36%	8.80%	8.80%	9.24%	9.24%
Loan Loss Reserve (As A % Of Loan Outstanding)	0.00%	0.00%	0.00%	0.00%	2.00%	2.00%
Income Tax Rate	0.00%	0.00%	0.00%	0.00%	33.99%	33.99%
Sectoral Break Up Of Disbursement	% OF	Interest	% OF	Interest	% OF	Interest
	TOTAL		TOTAL		TOTAL	
Sewerage/Solid Waste	4%	8%	10%	6%	10%	6%
Water Supply	7%	8%	15%	7%	15%	6%
Transport	14%	10%	15%	9%	15%	10%
Power	41%	10%	40%	9%	40%	10%
Land Development & Others	34%	10%	20%	11%	20%	11%
	1.00	9.36%	1.00	8.80%	1.00	9.24%
Adb Loan Assumptions						
Adb Loan Tenor	20	YEARS				
Moratorium	5	YEARS				
Years Of Repayment	15	YEARS				
Interest	7.50%	PA				
Government Of India G Sec 10 Year Rate	7.05%					
Required Lending Margin	2.00%					
Minimum Weighted Average Lending Rate	9.05%					
Actual Weighted Lending Rate	9.36%		8.80%		9.24%	

63. The key findings of evaluation of the three options are as follows (see summary table at end of this paragraph)

i. Option III (Financial Institution) results in additional costs to the company (Income Tax, Loan loss provision, etc.). Consequently, with the cumulative disbursements remaining almost the same across options, net income would come down drastically as compared to other options (due to additional costs). In 2019-20, while Income over Expenditure in case of Option I (O I) is Rs 6818 millions and Option II (O II) it is Rs 5599 millions, in case of Option III (O III) it is only Rs 2347 millions.

ii. The reduced net income, in turn, would result in increased borrowings (to meet the same disbursements) leading to increased D:E ratio. In 2019-20, D:E ratio for O I is 2.99:1, and for O II it is 4.74 :1(as more than 5 times leveraging of net owned funds though pooled funds route) :, in case of O III, it is 4.31:1.

iii. While there is no concept of Earnings Per Share (EPS) for options O I and O II, in case of O-III, the EPS goes up from Rs 0.44 per share of Rs 10 in 2010-11, to only Rs 1.17 per share of Rs 10 in 2019-20. All other financial ratios are also uniformally worse in case of O-III as compared to O I and O II. Thus, from an investors viewpoint, this is very low and consequently, there is no distinct advantage in converting into a Company (and a Financial Institution)

iv. A comparison of O I and O II indicates that reason for the difference between the two options is only the business principle with O I following the existing business model (of being primarily demand driven and increased lending rates for power and land development, which sectors also have a higher proportion of lending) whereas in case O II, a proactive role in following a sectoral approach with a shift of 70% lending to water, waste water, transport and sanitation sectors at a competitive lending rate with the balance of 30% being lent to power and land development sectors.

v. In such a situation, where more lending to water and related sectors is done at a cheaper interest rate, while the various financial indicators are marginally lower in case of O II as compared to O I, as the objective is to transform NCRPB into a proactive creator of planned and sustainable infrastructure by leveraging on its strengths and identifying its niche market both as a planner and as a financier, option O II is the business model to adopt.

vi. As indicated earlier, in Option II, NCRPB's focus is to create sustainable infrastructure by creating a Debt Service Reserve and act as a facilitator and arranger of funds under the pooled financing approach while moving away from a GOI guaranteed lender to a limited liability organisation. This model would result in NCRPB being a lender of consequence in developing of base level infrastructure in water, waste water and transport sectors. Consequently, the preferred option for NCRPB is to follow the Option II model.

vii. While adopting O II as the model, it would however be appropriate if NCRPB attempts to benchmark itself with other leading FIs while also adhering to the relevant regulatory guidelines, even though technically, NCRPB may not need to follow these guidelines.

viii. While adopting O II as the model, it would however be appropriate if NCRPB attempts to benchmark itself with other leading FIs while also adhering to the relevant regulatory guidelines, even though technically, NCRPB may not need to follow these guidelines.

ix. The ABD could also participate in the development of the pooled finance market by providing a partial credit guarantee in raising of these monies. This would go a long way in developing this product.

Considering that all the borrowers of NCRPB have revenues only in Rupees, NCRPB would need to swap the Fx loan being provided by ADB to be in a position to onlend in Rupees to the borrowers. However, ADB could probably consider lending to NCRPB as Rupee loans through its Domestic Currency loans. This would go a long way in reducing costs for NCRPB.

3.3.5 Preferred Option for NCRPB

64. The demand analysis shows the high unmet debt demands for both large and small scale growth and environmental infrastructure, capital intensive investments such as power, transportation as well as water and waste water treatment. There is also the need for smaller investments in connection systems, solid waste collection. Further, a study of existing sources of debt in the region confirm the premise that existing institutions would be unable to meet the demands of planned coordinated investments across sectors and states in a manner which is as effective as what NCRPB's management and GOI grants policy enables NCRPB to do if it chooses.

65. Given this situation, the design of intermediation has two primary objectives, low cost finance for small and medium environment infrastructure, and planning coherence which maximizes backward and forward linkages in the region. The basic considerations for the design are:

i. Specialization: A study of international experience suggests that both developed and developing economies have designed specialized intermediaries. The possible reasons for this could be on account of the nature of lending itself – non collateral based, high transaction cost, and the dependence of debt service from a variety of sources – taxes, fees and grants. This type of lending activity is not the main line of business for commercial banks – usually collateral based, short term lending. International experience in using commercial banks for municipal lending have also not made headway from an open access point of view – the Land bank in Philippines, Caixa in Brazil, etc. Therefore the first decision point would perhaps be whether NCR needs a specialized intermediary, with a primary focus on small and medium size environment projects in its lending and large projects which promote growth in its planning.

ii. If a specialized intermediary is a preferred option, then the question of ownership. From an outreach and open access perspective, international experience would suggest that stronger state supported structures such as the US Bond Banks, or even partial ownership such as TNUDF, would tend to provide stronger security structures such as escrows and intercepts. It is seen that NCRPB's structures themselves have many of these built in. A well designed mechanism should be able to attract longer term domestic capital- insurance and pension funds.

iii. Cost of credit: State ownership in specialized intermediaries tend to eliminate dividend expectations and hence make possible infrastructure at lower costs, relevant for communities where income levels constrain the ability to pay.

iv. Fourth is the emerging policy environment in India (especially the PFDF) regarding local government borrowing. The advantages of a low equity base and recourses limited to local governments and project revenue streams would tend to mitigate the often perceived risks of directed lending which state owned institutions are prone to. Given these factors, it would appear that the evaluation of NCRPB options could be an opportunity to define an intermediation design for the region which is self sustaining-

66. Some of the next steps in this design are required decisions which are listed below.

- Ownership and capitalization (low equity-strong security versus strong balance sheets subject to standard regulatory requirements on capital adequacy, provisioning)
- Planning – Normative Guided Planning versus Investment Plans with a Means of Finance
- Debt and Grant Funds: Policies and Procedures (Policies moving from Guarantee towards Credit enhancements and Rate covenants)
- Role of Multilaterals (on lending of lines of credit versus partial credit guarantees for potential market borrowing of the entity)

67. From an operational perspective, Option 2 (Financier of Relevance) will be the preferred case and the initial design of NCRPB Project based on this case are presented in the next section.

4.0 Intermediation Design: Debt and Grant Funds

4.1 Objectives

68. The situational analyses has suggested that the strategic options for NCRPB are threefold, namely the current business model, a planner and financier of relevance and finally a free standing financial intermediary. The observations are that the current business model is of little relevance to the region, both from a planning and financing perspective and the current capitalisation and pricing issues would make the prospects of NCRPB emerging as a free standing FI as relatively unviable. On the other hand, our demand analyses (Section 3) and NCRPB's competitive positioning (Section 4), the niche position for NCRPB will be as a catalyst for operationalizing and financing an infrastructure investment growth path in the region.

69. To recall, NCRPB is typically faced with a typology of infrastructure as identified in the RP – namely, first, large scale (NH, Power etc) where planning effort is of greater relevance than financing, second, interstate connectivity of growth and environment infrastructure where NCRPB's planning and financing role would be equally important and finally smaller urban investments where NCRPB's financing would be of greater relevance than its planning role. It is recommended that an entity with a lean capital structure (WSP and US Bond Banks) is of greater relevance to the Indian situation where low income populations constrain the ability to raise charges quickly and hence make dividend expectations difficult to be realised as in heavily capitalized structures. This implies the need for NCRPB to design repayment based on revenue streams of the borrowers than guarantees.

4.2 Debt Fund: Financing Typology, Pricing, Lending Volumes

70. Given the twin objectives of planning and financing the plan, NCRPB would need in place a capital structure which makes possible the typology of financing referred to and indicative exposure norms so as to ensure coherence of investments. NCRPB also needs to move away from the current limiting security mechanisms, for all three types and price risk accordingly so that after the ADB line of credit is over, NCRPB is able to link up with the domestic debt market in a more sustainable fashion.

71. Based on these premises, namely a flat capital structure, exposure related to sector and pricing related to risk, **(See Appendix 36).** As for its pricing policies, it might be appropriate for NCRPB to benchmark its lending at an appropriate spread over year G-sec as determined by the average of 10 year G- Sec prices during the year, unless these movements are volatile.

72. The table below provides a 5 year projection of debt demand by category which NCRPB can expect to facilitate and finance. The rationale for these estimates come the second section on debt demands. The implications of this volume of lending on NCRPB's income statements and balance sheet can be seen in **Annex 4**.

73. The assumptions behind the model include that NCRPB would be able to in a year or so, operationalize its RP into investment packages by type and have a well defined means of finance

organised for these investments. The further assumption of note is that NCRPB would utilize the ADB line of credit for this purpose and these loans especially the municipal loans would be capable of being securitised and blended into major GOI schemes such as JNNURM and PFDF.

74. The results of this model as compared with models 1 and 3 shows the importance of acting strategically and fixing a roadmap especially if external funding with commitment charges are being incurred. Some of this strategic shift needs technical assistance both for NCRPB as well as for borrowers which, is the purpose of the Grant Fund **(TA Loan**) to which we turn to next.

4.3 TA Facility: Objectives, Sources and Expected Outcomes:

75. The TA Facility would finance:

- Project Preparation and implementation support for activities that will have regional impacts
- Costs of structuring finance packages such as rating, etc
- Capital grants which directly have an impact on women and poverty alleviation arising out of migration- interventions which improve female labour conditions in construction contracts

76. The TA Facility is expected to be of an initial size of INR 100 millions and be partly financed by the ADB line and would be sustained by earmarking 10 % of NCRPB profits on annual basis, subject to a maximum of Rs 100 millions per annum, unless the Board decides otherwise. The process guidance for accessing the TA Facility and its approval process is outlined in Annex 6 and a monitoring mechanism such that performance is measured by the number of feasibility reports transformed into real life investments is also suggested.

77. In substantive terms some suggestions on a methodology of moving away from a Normative RP as is now to an active detailed 5 year investment trajectory is suggested in **Annex 4.**

4.4 Role of ADB

78. From ADB's, perspective this project could be expected to address two key development objectives. First is to design an appropriate institutional mechanism for a fundamental sector problem – namely planning for regional growth in a Regional (Metropolitan context) and Second is the financial sector objective of assisting a domestic institution move away from the presently limiting guarantee backed financing to a structure more linked with India's debt markets. NCRPB is a formal legal structure with all stakeholders represented on the Board, a situation unlike several other metropolis and regions where the problems of the centre and periphery have to be handled in informal structures. From a design perspective, Option 2 of a balance between a planner of regional significance and a financier with a progression towards a financial intermediation by adopting prudent lending and investment norms in the medium term would help the objectives of NCRPB.

79. As next steps, NCRPB will need to:

i. review the suggested option
ii. finalize the pipeline for the project and construct a typology of its expected financing over the next five years and
iii. begin to design credit enhancements (and utilize those existing in the system) and rate covenants with borrowers at least in category 3 where the policy framework and such support as PFDF is already available at the state level.

80. The TA's role in this process would be to help structure these mechanisms. Some of the outputs subsequent to discussions with NCRPB and ADB would be in terms of defining the Lending Policies and Procedures and design of an institutional framework. While current institutional structure is limited to address technical, procurement and safeguards, the proposed structure would include induction of staff to oversee:

i. Project development and technical appraisal (Environmental and Growth Infrastructure),
ii. Procurement - as review of packages from borrowers would be one of the responsibilities and
iii. Safeguards basic requirements.

81. The basic structure of NCRPB (PMU) would be supported by a compliment of specialist consultants (need based). The structure and composition as well as the Scope of work will be defined as part of outputs of the TA Loan and will also be reflected in the Operating Procedures of NCRPB Project.

5.0 Situation Analysis- Project Appraisal Process

82. The scope of this section is to provide an overview of two critical issues as far as the Project Development and appraisal process is concerned (A detailed description of processes and operating procedures is under preparation **Proposed Appendix 33**). The issues relate to Safeguards administration and that of procurement. A detailed assessment will also be presented as part of the Institutional Assessment of NCRPB's borrowers.

5.1. Existing Processes

Preliminary Scrutiny of DPRs

83. NCRPB receives Detailed Project Reports (DPR) from its clients, and scrutinizes these reports to ensure compliance with the Regional Plan 2021. Confirming consonance, it is then sent for appraisal to the appropriate appraisal agencies.

Appointment of Appraisal Agencies

84. NCRPB has an empanelled set of national institutions. On receiving the DPRs, NCRPB issues Terms of Reference (TOR) and one institution gets selected to appraise the DPRs. These institutions conduct the appraisal and send their recommendations to NCRPB. In the process, they consult with the borrowers for any clarifications.

Appraisal Reports

85. **Loan Sanction and Documentation**. Loan applications are also submitted along with the DPR. However, as per current practice, loan applications for lending are received only after appraisal and recommendation by the national institutions is completed. Loan documentation is concluded upon approval of the loan by the **Project Sanctioning and Monitoring Group (PSMG).**

86. **Disbursements**. Advance payments are made throughout the project period. The first advance is made immediately after the loan agreements and security documents are signed. The next advance is made based on projection made in the DPR, and only after obtaining the 'Utilization Certificate" for the previous instalments.

- Every tranche is treated as a separate loan, and therefore approvals are obtained from PSMG and separate agreements are entered for each tranche.
- NCRPB monitors the progress of the projects by visiting respective sites before release of subsequent instalments.

87. **Completion of projects**. NCRPB obtains project completion certificate from the implementing agencies once the project ends.

5.2 Project Appraisal Process

88. **Social Safeguards:** In order to understand the current practices regarding social safeguards followed in NCRPB, a consultation was carried out based on a checklist. The major observations based on these consultations are the following:

89. While NCRPB has financed projects requiring land acquisition in the past, the DPR's indicate land acquisition requirement but do not provide Status of land acquisition. As such resettlement plans are not a requirement under the LA procedure of States. NCR expects the States to comply with the provisions of LA Act and does not have a policy on resettlement and rehabilitation.

90. **Process and Management:** The overall appraisal in NCRPB is done by the Joint Director, with inputs from the State Coordinators. As such the scrutiny of LA issues by NCRPB and the review by external agency of Land Acquisition status is limited. While NCRPB insists on a DPR for approval of the projects, completion of land acquisition is not a requirement. This is unlike the requirements for approval by ADB and the Department of Economic Affairs. Though the TOR for review agencies includes review of LA, the current situation is such that the review agencies rarely carry out this task. Due to limited review of LA/RR issues, NCRPB has not suggested any implementing agency to rework on the LA/RR part in the DPR.

91. **Impact/ Lessons:** While NCRPB is aware of delays in implementation due to LA, there have been no systematic evaluation of project delays nor has this been reflected in the appraisal processes of NCR. The Draft prepared as part of Part A and C indicates the need for an initial screening of proposals.

92. **Environmental Concerns:** The concerns on the environmental appraisal are similar to that of social appraisal. The States are expected to comply with National and State environmental requirements and are also expected to obtain necessary clearances from the State Pollution Control Board to set up facilities and operate them. The Joint Director (Planning) is responsible for technical appraisal and the base for his appraisal also includes the review report submitted by external consultants. As with social safeguards, It is the clients responsibility to comply with requirements and clearances are not mandatory for placing the project before the PMSG for approval.

93. Overall, the requirements are limited in terms of LA/ R&R and the staff capacity or review agency's focus on these issues is limited. Form this perspective, NCRPB to implement the ADB Loan will need a "policy on resettlement and rehabilitation", in tune with the national policies (especially the National Policy for Resettlement and Rehabilitation, 2007) or those of international agencies such as the Asian Development Bank, management framework and overcome capacity constraints.

94. The capacity constraints in the first instance of NCRPB will be overcome by designating a "Safeguards Officer"- who will have overall responsibility of review of safeguards issues. Further the TOR's for consultants (Planning, Design and implementation) will address safeguards issues

and the contracts of contractors will also be designed to reflect progress on (more for environment).

95. To serve this mandate, NCRPB will need to stimulate activities that will lead to investment projects that are oriented towards meeting the Regional Plan's environmental priorities. To carry out these activities, NCRPB has to build the required staff capacity on environmental aspects – both internal core as well as external advisory - to envision, lead and co-ordinate such activities. To begin with, one of the planners should be dedicated to co-ordinate work related to these regional environmental priorities. NCRPB should also have access to Technical Assistance (TA) using which baseline and project preparation studies could be done. **Annex 7** provides a brief description of the regional environmental challenges, indicates why coordinated action is the only effective and sustainable one, and outlines the actions required of the NCRPB.

Procurement:

96. As per the present processes and mandate, NCRPB reviews the implementation schedule and procurement plans are not a requirement. The borrowers follow respective State procedures for invitation of Bids for goods, works and services. It is proposed that NCR anchor review of procurement plans and packages of borrowers. This would involve strengthening the staffing to include a procurement specialist to coordinate and review all procurement aspects under the project.

97. A review of the Country Procurement Assessment by the World Bank, indicates that the principles of procurement are based on broad principles of financial propriety in incurring government expenditures including expenditure in the procurement of goods and services and the procuring agencies expand these into detailed rules and procedures, primarily the PWD's and other's depending on needs. Even the Tender Transparency Act's broadly lay down the principles than specific documents or procedures in tendering. Agencies such as Planning Commission and NHAI have evolved model documents.

98. The basic framework of rules and procedures require open tenders, open to all qualified firms without discrimination, use of non discriminatory tender documents, public bid opening and selection of the most advantageous tender taking all factors (preferably pre-disclosed) into consideration. Restricted or limited tenders are permitted if the value is small or only limited suppliers are available and single tenders are permitted in the case of urgency, small value, and proprietary and in other exceptional circumstances. In this respect, the basic procedural framework is no different from Bank Guidelines and other good models of public procurement. The issue is that as many agencies handle public procurement, most of them have added or modified the same, some consistent with the basic philosophy of non discriminatory open tendering, but many bending the basic principles to an uncomfortable degree. The Bank's view is that since the genesis is the 'finance rules' and not a law, nothing prevents them in this exercise, nor has the auditor anything to say unless it finds fraud or malpractice or impropriety.

99. Some of the issues in the States, negotiation is practiced routinely and contracts are divided up among many or all the bidders resulting in quality and integration issues. Use of annual 'rate contracts which get extended year after year on some excuse or other is common. While the

system of two covers exist, beyond negotiations and need for registration, the key issue is in delay of opening of financial bids and in decision making, resulting the contract being unviable for the contractors.

A review of procurement carried out in the States (for the IA's) and the quality of procurement varies with the departments. The Power sector has a centralized procurement cell where as the in case of other State departments the procurement is delegated to different levels within the department based on State Financial Rules. Interestingly the PWD of Haryana, the owner of State Roads has transferred the design and implementation function to the State Roads and Bridge Corporation. This agency has implemented projects using ICB procedures. However some of the key observations are no clear procurement plan. The key parameters reviewed for a sample IA are as follows (Details See Appendix 18)

Summary Procurement Assessment

Aspect	ADB's Procurement Principle	Assessment
Transparency Open competition:	In most cases, international competitive bidding (ICB), properly administered, and with the allowance for preferences for domestically manufactured goods as provided for in the financing agreement.	**Transparency** Though there are no rules for transparency fixed by the Government there are guidelines issued for publication in news papers. Moreover notifications are made on Government Web Site and publication of Notice Inviting Tender (NIT) in the website is commonly practiced. e- Tendering is not yet an established procedure in any of the IA. On transparency ie on wide publicity of NIT, is well established and secondly, information on the schedule of rates for the items. For works of value up to Rs 100 Mn, single cover Government Departments and undertakings adopt the % tender system making known the estimated rates for the item and the total estimate value put to tender. For larger value of works item rate tender only adopted. But the contractor generally understands the estimated value through EMD amount requested for. The areas of concern are: non publishing the results of the award including non award or making known the looser Bidders the reason for the same, providing opportunity to the Bidders to complain through

Aspect	ADB's Procurement Principle	Assessment
		established procedure for grievance redress before and after the tender, forum to register complaints on the discriminating behavior between the Bidders. If the above grievances of the Bidders not attended it may invite litigation in the Court of Law. Faridabad- Works costing more than Rs 50 Million will need to be advertised in the papers, communicate to registered contractors and display in the website.
Eligibility	Any conditions for participation shall be limited to those that are essential to ensure the bidder's capability to fulfil the contract in question. ADB does not permit a borrower to deny the participation of a bidder for reasons unrelated to its capability and resources to successfully perform the contract.	The eligibility criteria are found to be evenly poised to provide opportunity to the target market. There are some subjective criteria which could be refined are made quantifiable. The present system of eligibility is based on registration. However the IA's are aware ADB's system of open bids.
Fraud and Corruption	ADB's anticorruption policy requires borrowers (including beneficiaries of ADB financed activity), as well as bidders, suppliers, and contractors under ADB-financed contracts to observe highest standard of ethics to be anti corruptive.	There is generally a clause for Fraud and Corruption. The description on fraud and corrupt practices as per ADB guidelines is not found
Procurement Plan	As part of the preparation of the project the borrower shall prepare and, before loan negotiations, furnish to ADB for its approval a procurement plan.	The procurement planning is totally absent. Though IA's are aware of the list of activities the need for planning has not been felt. Reasons for plans not being followed are due to non availability of resources in a timely manner and delays in approval of works and packages.

Aspect	ADB's Procurement Principle	Assessment
Two-Stage Bidding	In the case of turnkey contracts or contracts for large complex facilities or works of a special nature or complex information and communication technology, it may be undesirable or impractical to prepare complete technical specifications in advance. In such a case, a two-stage bidding procedure may be used, under which un- priced The borrower has the option to use the two-envelope procedure with single-stage or two-stage bidding. In the single-stage, two-envelope procedure.	In the case of turnkey contracts or contracts for large complex facilities or works of a special nature the two stage systems are adopted with Lump Sum Contract pricing. Other than Government Departments the Two Envelop system is followed irrespective of the value of Tender. Higher value of Purchases by Electricity corporation especially for equipments like Transformers is based on Two Cover System.
Timely notification	Timely notification of bidding opportunities is essential in competitive bidding.	Timely notifications are provided for and the Bids are issued on the prescribed dates as far information gathered.
Prequalification of Bidders	Prequalification may be necessary for large or complex works, or in any other circumstances in which the high costs of preparing detailed bids could discourage competition.	Pre qualification criteria are fixed following guidelines prescribed by Govt or concerned authorities and that is suggested by the Central Vigilance commission, This requires fine tuning. CVC issues Guide Line Memorandums to be Central Govt. and undertakings based on the discrimination complaints on the Procurement Entity. One such Memo dated 17-12-2002 provides guidelines on various Pre Qualification Criteria and another memo Dtd. 7-5-2004 says that they shall not be restrictive to prevent fair competition
Post qualification of Bidders	If bidders have not been prequalified, the borrower shall determine whether the bidder whose bid has been determined to offer the lowest evaluated cost has the capability and resources to effectively carry out the contract as offered in the bid. The criteria to be met shall be set out in the bidding documents, and if the bidder does not meet them, the bid shall be	Post qualification of Bidders If bidders have not been pre qualified. This is not followed, as in the case of single cover system the tenders are issued to registered contractors only. The practice of issuing tenders only to the registered contractors is to be dispensed with. The list is meant to provide information on the known number of Contractors

Aspect	ADB's Procurement Principle	Assessment
	rejected. In such an event, the borrower shall make a similar determination for the next lowest evaluated bidder.	/Suppliers/Consultants only. The qualification criteria targeting the required market have to be in the Tender. Whether it is single cover or two cover bid the responsiveness of the Tender has to be decided before comparing the Price for the determination of the Lowest Bid price. Otherwise though there is openness in tender call there is a limiting factor in issuing the Tender to the prospective Bidders.
Same information to all	All prospective bidders shall be provided the same information, and shall be assured of equal opportunities to obtain additional information on a timely basis.	This is generally made available.
Unit Price or Lump Sum	Bidders for civil works contracts shall be required to quote unit prices or lump sum prices for the performance of the works, and such prices shall include all duties, taxes and other levies. Bidders shall be allowed to obtain all inputs (except for unskilled labor)	The Bid prices called for as unit price or % Premium / Discount This type of Tender is called for by Govt. Departments In this tender the estimate rate of BOQ Item is given and the bidder quotes the overall premium/discount on the total value put to Tender Lump Sum tender is practiced only for Turn- key System tenders. The other for of Tender generally called is Item Rate Tender. In this the Bidder is to quote the rates for all the Items of BOQ and the cost of item for the given quantity. The sum total of the items cost is the price of the Bid
Price Adjustment	The bidding documents shall clearly indicate whether price adjustments are allowed in the event changes occur in major cost components of the contract such as labor, equipment Materials	In higher valued Tender this clause is provided for. The latest CPWD Procedure is best suited for this purpose. The PA clause is to provide compensation amount payable to or discount by the Contractor consequent to the increase/decrease of Market price of Material, Labor and fuel. By this

Aspect	ADB's Procurement Principle	Assessment
		provision the contractor will be able to quote at current market price without any provision for future escalation which he has to do on educated guess. The variation is generally based on price index variation between the quarterly rate prevailing on the date of tender and the period of actual execution. However the payment has to be paid as per agreed program period rather than actual execution
Liquidated Damages and Bonus Clauses	2.41 Provisions for liquidated damages or similar provisions in an appropriate amount shall be included in the conditions of contract when delays in the delivery of goods, completion of works or failure of the goods or works to meet performance requirements would result in extra cost, or loss of revenue or loss of other benefits to the borrower.	Liquidated damages Clause is adequately provided for in the high value procurement contract conditions. Compensation event and bonus are to be provided for to make the conditions on even platform for the Client and the Contactor / Supplier as well.
Force Majeure	The conditions of contract shall stipulate that failure on the part of the parties to perform their obligations under the contract will not be considered a default if such failure is the result of an event of force majeure as defined in the conditions of contract.	At present it is there as a formality in the high value procurement
Applicable Law and Settlement of Disputes	The conditions of contract shall include provisions dealing with the applicable law and the forum for the settlement of disputes.	Arbitration Clause is normally provided for
Bid Evaluation	The borrower shall prepare a detailed report on the evaluation and comparison of bids setting forth the specific reasons on which the recommendation is based for the award of the contract.	Detailed report is found to be absent in many cases.
Domestic Preferences	At the request of the borrower, and under conditions to be agreed under the financing agreement and set forth in the bidding documents, a margin of preference may be	

Aspect	ADB's Procurement Principle	Assessment
	provided in the evaluation of bids	
Post qualification of Bidders	If bidders have not been prequalified, the borrower shall determine whether the bidder whose bid has been determined to offer the lowest evaluated cost has the capability and resources to effectively carry out the contract as offered in the bid. The criteria to be met shall be set out in the bidding documents, and if the bidder does not meet them, the bid shall be rejected. In such an event, the borrower shall make a similar determination for the next lowest evaluated bidder.	
Award of Contract	The borrower shall award the contract, within the period of the validity of bids, to the bidder who meets the appropriate standards of capability and resources and whose bid has been determined (i) to be substantially responsive to the bidding documents and (ii) to offer the lowest evaluated cost.	Specified
Publication of the Award of Contract	Within two weeks of receiving ADB's "no objection" to the recommendation of contract award, the borrower shall publish in 38 Referred to as "lowest evaluated bidder" and "lowest evaluated bid," respectively, an English language newspaper or well-known and freely accessible website	This is not done by any of the IA. As a matter of transparency this has to be mandatory.
Lack of Competition	Lack of competition shall not be determined solely on the basis of the number of bidders. Even when only one bid is submitted, the bidding process may be considered valid, if the bid was satisfactorily advertised and prices are reasonable in comparison to market values	In as much as the wide publicity of NIT is established. As per ADB guide lines Single tender can be considered so long as quoted rates are reasonable as compared to the market rate .
Community Participation in	3.17 Where, in the interest of project sustainability, or to achieve	

Aspect	ADB's Procurement Principle	Assessment
Procurement	certain specific social objectives of the project, it is desirable in selected project components to (a) call for the participation of local communities and/or nongovernmental organizations (NGOs) in the delivery of services, or (b) increase the utilization of local knowhow and materials, or (c) employ labor-intensive and other appropriate technologies.	
Negotiation	Left to the desecration of the Borrower	Generally the Implementing Agencies resort to negotiation with L1 except HSRBDC following WB procedure. The CVC Memo Dtd 3rd March, 2007 States "As post tender negotiations could often be a source of corruption, it is directed that there should be no post-tender negotiations with L-1, except in certain exceptional situations". Still there is hesitancy to stop negotiation on the fear that the contractor may form a cartel and quote more..

Annex 1 List of Ongoing Infrastructure projects with loan assistance from NCRPB (upto Mar-09)

(Amount in Rs. Millions)

S.No.	Name of the Projects	Implementin g Agency	Estimated cost	Loan Sanctioned	Actual Loan Amount released
	Haryana Sub Region				
	Power Sector				
1	Strengthening and Upgradation of Sub-transmission & Distribution Network ,Gurgaon	DHBVNL	401.60	301.20	250.00
2	Strengthening of sub-transmission and distribution network, Bawal, Dharuhera, Pali (Gothra), Buroli, Kosli and Rewari (District Rewari)	DHBVNL	230.50	172.90	172.90
3	Strengthening of sub-transmission and distribution network, Sohna, Nuh, Ferozepur Jhirka, Taoru, Manesar, Pataudi, Farukhnagar & Badshahpur (distt.Gurgaon)	DHBVNL	144.40	108.30	108.30
4	Loss Minimisation and Strengthening of Distribution system being fed from 132 KV substation Khokhrakot Rohtak, kalanaur and Sampalaunder SE 'OP' Circle, UHBVNL, Rohtak by proposing 6 no. 33KV sub stations	UHBVNL	125.30	94.00	0.00
5	Scheme to set up five(5) sub stations with capacity of 33Kv at Bal Bhawan (rohtak), Trtauli, Kharawar, Sampla Road (Jhajjar) and Dubaldhan	UHBVNL	102.00	76.50	0.00
6	Creation of power infrastructure in Gurgaon & Bahadurgh, Haryana	HVPNL	899.10	674.30	674.30
7	Reinforcement of Power infrastructure in Gurgaon and Rewari districts	HVPNL	92.70	69.50	69.50
8	Project for creating power infrastructure in Haryana subregion of NCR	HVPNL	1174.50	820.10	696.00
9	Strengthening of Transmission & Distribution Network in Rohtak Circle by Uttar Haryana Bijli Vitran Nigam Ltd.	UHBVNL	111.10	83.30	75.70
10	Scheme for strengthening power infrastructure in NCR area of Haryana – Augmentation of Transmission Works,	HVPNL	815.60	611.70	244.70

S.No.	Name of the Projects	Implementing Agency	Estimated cost	Loan Sanctioned	Actual Loan Amount released
11	Scheme for HVDS/LVDS & Reallocation of meters under DHBVN in NCR area	DHBVNL	1384.70	1038.50	415.40
			5481.60	**4050.40**	**2706.90**
	Other Sector				
12	Construction of 200 bedded hospital in Sector-10, Gurgaon (Phase-I)	HUDA	120.80	90.60	15.00
13	Strengthening of Municipal Fire Services in 16 Towns,Haryana	HSCB	70.00	52.50	52.50
14	Shifting of Milk Dairies from municipal limits in 6 Towns, Haryana	HSCB	130.70	98.00	98.00
			321.50	**241.10**	**165.50**
	Sewer Sector				
15	Solid Waste Disposal & Repair of Roads in 16 Towns, Haryana	HSCB	565.60	424.20	212.10
16	Providing Master Sewerage Scheme for Trunk Sewer No. 4 Urban Estate, Gurgaon	HUDA	241.40	180.00	45.00
17	Revamping of Sewerage System and Sewage Treatment Works in Faridabad, Haryana	Municipal Corporation of Faridabad (MCF)	1038.30	233.60	175.20
18	Development of Sewerage System and Construction of two STPs at Rohtak town.	PHED, Haryana	442.50	331.90	331.90
19	Providing sewerage system and STP for Samalkha Town, Haryana	PHED, Haryana	81.00	60.80	12.20
20	Providing sewerage facilities in Palwal, Haryana	PHED, Haryana	97.60	73.20	43.90
21	Providing sewerage system for new colonies in Hodal Town, Haryana	PHED, Haryana	119.40	89.50	53.70
22	Augmentation and Extension of Sewerage Scheme in Sohna town, Haryana	PHED, Haryana	58.50	43.90	8.80
23	Providing Sewerage facilities in Rewari Town, Haryana	PHED, Haryana	122.40	91.80	18.40
24	Extension of Sewerage System in new colonies of Panipat town	PHED, Haryana	36.60	27.50	5.50
25	Providing sewerage system to new approved colonies in Gohana Town, Dist Sonipat, Haryana	PHED, Haryana	27.20	20.40	12.20

S.No.	Name of the Projects	Implementing Agency	Estimated cost	Loan Sanctioned	Actual Loan Amount released
26	Extension of sewerage system and treatment of sewage in Bahdurgarh, Dist Jhajjar	PHED, Haryana	172.10	129.10	97.60
27	Extension of sewerage system and treatment of sewage in Beri, Dist Jhajjar	PHED, Haryana	70.80	53.10	15.00
28	Extension of sewerage system and treatment of sewage in Kalanaur, Rohtak District	PHED, Haryana	66.90	50.20	27.10
29	Extension of sewerage system and treatment of sewage in Bawal, Dist Rewari	PHED, Haryana	62.90	47.10	21.20
30	Providing sewerage scheme & Treatment Plant for Sampla Town,Dist.Rohtak	PHED, Haryana	94.20	70.70	22.50
31	Extension of sewerage scheme and treatment of sewage in Meham Town , District Rohtak	PHED, Haryana	96.50	72.40	18.00
32	Providing sewerage facilities in village kosli, Bhakli and Railway station area of Kosli, Dist. Rewari	PHED, Haryana	87.00	65.30	29.40
33	Extension of sewerage system and treatment of sewage in Ganaur, Dist Sonepat	PHED, Haryana	150.80	113.10	28.20
34	Providing sewerage scheme & Treatment Plant for KharkhodaTown,Dist.Sonepat	PHED, Haryana	65.00	48.80	18.00
35	Augmentation & Extension of Water Supply and Sewerage facilities in various towns of Haryana[8 projects included]	PHED, Haryana	715.50	536.60	536.60
			4412.10	**2762.80**	**1732.30**
	Land Development Sector				
36	Development of Industrial Estate, Ph. IV at Kundli	HSIDC	1222.90	603.70	603.70
37	Development of Industrial Zone Sector 34-35, Gurgaon, Haryana	HSIDC	3666.50	860.00	860.00
38	Development of Sector-44/47 (Resd.) at Faridabad	HUDA	563.70	422.80	335.30
39	Development of Sector-2 (Resd.) at Bahadurgarh	HUDA	441.30	248.10	170.10
40	Development of Sector-62 (Residential) at Faridabad	HUDA	655.20	472.80	398.10
41	Development of Sector-65, Faridabad	HUDA	663.30	478.60	402.40

S.No.	Name of the Projects	Implementing Agency	Estimated cost	Loan Sanctioned	Actual Loan Amount released
42	Development of Sector-27, Gurgaon	HUDA	239.10	168.10	123.10
43	Development of Sector-28, Gurgaon	HUDA	162.50	114.50	85.20
44	Urban Renewal Project at Deuba Colony, Faridabad	MCF	389.60	90.20	90.20
45	Urban Renewal Project at Bapu Nagar, Faridabad	MCF	252.70	58.50	43.90
			8256.80	**3517.20**	**3112.00**
	Water Sector Projects				
46	Providing water supply and sewerage for Phases II, III and IV Industrial Model Township Manesar, Gurgaon	HSIDC	2154.00	1615.50	100.00
47	Providing Master Water Supply Scheme of distribution main Zone-3 (Ph-III) Urban Estate, Gurgaon	HUDA	238.00	178.50	15.00
48	Augmentation of rural drinking water supply for Mewat region- Phase- I, Haryana	PHED, Haryana	2059.10	1544.30	1544.30
49	Augmentation of drinking water supply for Rohtak district, Haryana	PHED, Haryana	212.50	159.30	159.30
50	Augmentation of drinking water supply for Jhajjhar district, Haryana	PHED, Haryana	312.20	234.10	234.10
51	Augmentation of drinking water supply for Gurgaon district (Non-Mewat), Haryana	PHED, Haryana	117.20	88.00	88.00
52	Augmentation of drinking water supply for Rewari district, Haryana	PHED, Haryana	184.20	138.10	138.10
53	Augmentation of drinking water supply for Sonepat district, Haryana	PHED, Haryana	349.40	261.90	261.90
54	Augmentation of drinking water supply for Faridabad district, Haryana	PHED, Haryana	195.50	147.00	142.10
55	Augmentation of drinking water supply for Panipat district, Haryana	PHED, Haryana	250.00	187.50	156.30
56	Augmentation of Water Supply in Rohtak, Haryana	PHED, Haryana	590.00	442.50	442.50
57	Augmentation of Water Supply in Palwal, Haryana	PHED, Haryana	201.50	151.10	90.60
58	Augmentation of water supply in Hodal Town	PHED, Haryana	43.00	32.30	19.30
59	Laying of Internal water distribution system in Rewari town, Haryana	PHED, Haryana	52.10	39.10	39.10
60	IInd water works newly developed area in wester side of Rewari town,	PHED, Haryana	166.50	124.90	56.20

S.No.	Name of the Projects	Implementing Agency	Estimated cost	Loan Sanctioned	Actual Loan Amount released
	dist. Rewari				
61	Augmentation and Extension of Water Supply in Ganaur, Dist Sonipat	PHED, Haryana	277.40	208.00	166.50
62	Augmentation and Extension of Water Supply in Bahadurgrh, Dist. Jhajjar	PHED, Haryana	244.50	183.40	118.50
63	Augmentation and Extension of Water Supply in Beri, Dist Jhajjar	PHED, Haryana	82.50	61.80	48.80
64	Augmentation and Extension of Water Supply in Kalanaur, Dist Rohtak	PHED, Haryana	70.70	53.00	24.90
65	Augmentation of water supply scheme at Sampla Town (3 Villages) in Rohtak District	PHED, Haryana	103.00	77.30	22.50
66	Augmentation and extension of water supply in Meham Town, District Rohtak	PHED, Haryana	124.80	93.60	75.00
67	Augmentation and Extension of Water Supply in Kharkhoda town,Dist.Sonepat	PHED, Haryana	139.10	104.30	75.00
68	Augmentation of drinking water supply scheme for villages Kosli, Bhakli and railway station area of Dist.Rewari @ 110 LPCD	PHED, Haryana	37.20	27.90	12.60
69	Augnentation of water supply in Gohana Town	PHED, Haryana	424.50	258.40	73.60
70	Water Suply at Sohna Town & Rojka Meo Industrial Area,Sohna	PHED, Haryana	653.40	245.00	29.90
			9282.30	**6656.80**	**4134.10**
	Transport Sector project				
71	Improvement of Jahazgarh Chhuchhakwas Dadri Road (SH20)(Km 73.100 to Km 95.150)	PWD (B&R), Haryana	393.70	295.30	295.30
72	Construction of Road from Northern Bye-pass Rohtak to NH-71 (to be used as slip road), in Rohtak district	PWD (B&R), Haryana	40.40	30.33	30.30
73	Wiidening and strengthening of road from NH-71 to NH-10 via Singhpura Kalan to Singpura Khurd, Bahujamalpur in Rohtak district	PWD (B&R), Haryana	62.36	46.77	46.80
74	Construction of 2 lane Road Over Bridge in lieu of level crossing No. 45-A/T-3 at Km. 60/6-7 near Hailly Mandi Kulana Road East cabin on	PWD (B&R), Haryana	153.14	57.60	57.60

S.No.	Name of the Projects Delhi- Rewari Section	Implementing Agency	Estimated cost	Loan Sanctioned	Actual Loan Amount released
75	Construction of 2 lane Road Over Bridge in lieu of level crossing No. 25B at Km. 31/8-9 on Delhi Rewari Railway Line on Gurgaon Daulatabad Section	PWD (B&R), Haryana	160.50	60.43	60.40
76	Construction of 2 lane Road Over Bridge in lieu of level crossing No. 28 on Delhi Rewari Section at crossing of Gurgaon Farrukh Nagar Jhajjar road at Gurgaon.	PWD (B&R), Haryana	181.10	68.10	68.10
77	Improvement of Gurgaon Farrukhnagar Jhajjar Road (SH 15A) (Km 5.5to km 45.25)	PWD (B&R), Haryana	929.80	697.40	269.20
78	Improvement of Rohtak kharkhoda Delhi Road (SH 18) (Km 10.2 to km 40.76)	PWD (B&R), Haryana	738.00	553.50	213.70
79	Project for widening and Strengthening to 10 Mtr. of Hodal Nuh Pataudi Patauda road km. 0 to 96.20 up NH-71 (MDR No. 132) in Faridabad, Mewat, Gurgaon and Rewari District.	PWD (B&R), Haryana	2398.70	1799.00	534.20
80	Four laning, widening and strengthening of Gurgaon – Nuh – Rajasthan Border (SH-13)(Km 7+200 to 95+890)	PWD (B&R), Haryana	3479.70	2609.80	741.50
81	Construction of 2 lanes ROB at Bahadurgarh on L.C No. 23-C in Km 29/2-3 on Delhi Bhatinda Railway line crossing Bahadurgarh Nahara Road in Jhajjar District	PWD (B&R), Haryana	113.20	84.90	84.90
82	Construction of Bypass in Kharkhoda in Sonepat district	PWD (B&R), Haryana	167.40	125.55	125.55
83	Improvement of MAM NH 10 road by providing widening of carriageway, footpath and drainage from Km 70.100 to 79.200 in MC limit Rohtak	PWD (B&R), Haryana	320.80	240.60	195.00
84	Improvement of Sampla Jhajjar Road (SH 20) (Km 44.12 to km 65.46)	PWD (B&R), Haryana	339.90	254.90	104.30

S.No.	Name of the Projects	Implementing Agency	Estimated cost	Loan Sanctioned	Actual Loan Amount released
85	Improvement of Sonepat kharkhoda Sampla Road (SH 20) (Km 10.125 to km 43.4)	PWD (B&R), Haryana	540.62	405.50	178.80
86	Widening and Up gradation of Rai Nahra Bahadurgarh Road (MDR 138) (Km 0.00 to 37.3960)	PWD (B&R), Haryana	723.10	542.30	233.10
87	Construction of two lane ROB at I.C no. 58B on Delhi- Bhatinda Railway line and 1B on Rohtak Gohana Panipat ' Railway Line at RD 1.20 km of circular road, Rohtak	PWD (B&R), Haryana	288.40	123.80	123.80
88	Construction of 4 lane RoB at level crossing No. 61A on Delhi- Bhatinda Railway line at Rd. 89.7 Km of Rohtak- Bhiwani road	PWD (B&R), Haryana	365.30	208.60	208.60
89	Construction of 2 lanes RoB at level crossing no. 59A on Delhi-Bhatinda railway line at Rohtak	PWD (B&R), Haryana	246.81	100.20	100.20
90	Improvement (4 laning) of Murthal Sonipat Road (SH 20) (Km 0.0 to km 10.125)	PWD (B&R), Haryana	276.20	207.20	108.10
91	Improvement by way of four laning of Rewari Kot Kasim Road upto NH-8, Shahjahanpur Rewari road upto 6 km., Rewari Narnaul Road (SH26), Rewari Mohindergarh Road, Rewari Dadri road upto proposed bypass	PWD (B&R), Haryana	1060.70	795.50	38.00
92	Improvement by way of four laning of Jhajjar Dhaur Beri road	PWD (B&R), Haryana	293.40	220.00	10.00
93	Improvement by way of four laning of Dighal Beri Jhazgarh road.	PWD (B&R), Haryana	428.60	321.40	14.00
94	New construction of roads from Kaluka to NH-8, Sheoraj Majra to Sangwari, Barriawas to NH-8, Rojka to Asadpur, Bikaner to Gurukawas, Rewari Jhajjar road to Rewari Narnaul road via Rewari Dadri road	PWD (B&R), Haryana	414.00	310.50	18.00
95	Two land ROB at Railway crossing no. 19-C on Subana Kosli Nahar Kanina road near Kosli Railway Station at Rewari Hisar Bhatinda Railway line km. 28 1/2 in Rewari District.	PWD (B&R), Haryana	194.70	79.70	30.00

S.No.	Name of the Projects	Implementing Agency	Estimated cost	Loan Sanctioned	Actual Loan Amount released
96	Proposed 2 lane ROB at level crossing no. 42 at Samalkha Chullana road at RD 1.00 km. in Panipat District	PWD (B&R), Haryana	212.40	87.50	52.50
97	Improvement of roads from BKP road upto GA road	PWD (B&R), Haryana	535.80	402.60	20.10
98	Improvement of roads from Palwal Hathin road to Uttawar Sikrawa to Bhadas road	PWD (B&R), Haryana	600.20	450.10	15.20
99	Improvement of Hodal Punjana Nagina Road	PWD (B&R), Haryana	821.20	615.90	30.90
100	Project for improvement and construction of road in Jhajjar circle of NCR sub Region - Bahadurgarh Chhara Dujana Beri Kalanur road	PWD (B&R), Haryana	1286.50	964.90	42.40
			17766.60	12759.80	4050.60
	Haryana Sub Total		45520.90	29988.10	15901.30
	Uttar Pradesh Sub Region				
	Land Development Sector				
101	Ganga Nagar Residential scheme Phase III	MDA	404.60	301.80	301.80
102	Kalindi Kunj residential scheme, Bulandshahr, UP	BKDA	573.50	332.70	332.70
103	Ganga Nagar residential scheme, Bulandshahr	BKDA	334.50	250.90	207.00
104	Anand Vihar Housing Scheme at Hapur	HPDA	1784.00	1338.00	500.00
			3096.60	2223.40	1341.50
	Transport Sector project				
105	Construction of Modern Bus Station at Sahibabad (Kaushambi), Distt. Ghaziabad	UPSRTC	160.00	120.00	90.00
106	Transport Nagar Scheme, Bulandshahr, UP	BKDA	337.10	206.50	177.90
			497.10	326.50	267.90
	Power Sector				
107	Strengthening of Transmission & Distribution Network of Meerut Division by UPPCL	UPPCL	2998.90	2248.90	1404.00
			2998.90	2248.90	1404.00
	UP Sub Total		6592.61	4798.80	3013.40
	Counter Magnet Areas				
	Land Development Sector				
108	Integrated Township Project, Patiala	PUDA	662.40	496.80	288.00

S.No.	Name of the Projects	Implementing Agency	Estimated cost	Loan Sanctioned	Actual Loan Amount released
109	Ram Ganga Nagar residential scheme in Bareilly	Bareilly Dev. Authority	993.70	370.00	370.00
			1656.10	866.80	658.00
	Power Sector				
110	Setting up of a coal based Thermal Power Project under stage I for 1200 MW (2 x 600 MW) in Hisar District, Haryana	HPGCL	42586.50	5000.00	3300.00
111	Kota Thermal Power Station(KTPS) extn unit 7, stage V(1x195 MW) Coal, Based Power Project	RRVUNL	8800.00	1600.00	1600.00
112	Improvement & Upgradation of Sub transmission of distribution network in Hisar	DHBVNL	400.10	300.10	165.00
			51786.60	6900.10	5065.00
	Sewer Sector				
113	Extension & Augmentation of Water Supply, Sewerage & Solid Waste Mgmt, Patiala	PUDA	599.30	449.50	449.50
			599.30	449.50	449.50
	Water Sector Projects				
114	Water Supply Scheme for Gwalior, Madhya Pradesh	SADA, Gwalior	296.50	222.40	222.40
115	Augmentation & Extension of Water Supply/Sewerage Scheme in Hissar	PHED, Haryana	159.30	119.50	119.50
			455.80	341.90	341.90
	Counter Magnet Areas-Total		54497.90	8558.30	6514.39
	Delhi Sub Region				
116	Establishment of Abbatoir and Rendering Plant, Ghazipur	MCD	1100.00	600.00	600.00
117	Construction of MCD Office and Civic Centre, New Delhi	MCD	4105.60	2500.00	2500.00
			5205.60	3100.00	3100.00
	Rajasthan Sub Region				
118	Transmission Project of RVPN pertaining to the Rajasthan Sub Region of NCR.	RVPNL	476.10	283.60	283.60
119	220 KV GSS Khushkera and LILO of 220kv Neemrana-Bhiwadi (PG) line at khushkhera, Alwar.	RVPNL	347.70	260.80	260.80
			823.80	544.40	544.40
	Grand Total		112640.80	46989.60	29073.50

HVPNL- Haryana Vidyut Prasaran Ltd

DHBVNL- Dakshin Haryana Bijli Vitaran Ltd
UHBVNL- Uttar Haryana Bijli Vitaran Ltd.
RVPNL- Rajasthan Vidyut Prasaran Ltd
UPPCL- U.P. Power Corporation Ltd
HPGCL- Haryana Power Generation Corporation Ltd.
RRVUNL- Rajasthan Rajya Vidyut Utpadan Nigam Ltd.
PHED, Haryana- Public Health Engineering Department, Haryana
PWD (B&R), Haryana- Public Works Department (Building & Roads), Haryana
MCF- Municipal Corporation of Faridabad
HSCB- Haryana Slum Clearance Board
MCD- Municipal Corporation of Delhi
HSIDC- Haryana State Industrial Development Corporation
HUDA- Haryana Urban Development Authority
PUDA- Patiala Urban Development Authority
BDA- Bareilly Development Authority
HPDA- Hapur Pilkhua Development Authority
BKDA- Buland Sahr- Khurja Development Authority
MDA- Meerut Development Authority
SADA, Gwalior- Special Area Development Authority, Gwalior
UPSRTC- U.P. State Roads Transport Corporation

Annex 2: Reserve Bank of India Non Banking Financial Institution Guidelines

Annex 3: Public Private Partnerships for Urban Infrastructure

Indian Experience

1.1 Background

In this Annexure we discuss the opportunities for PPP's in urban infrastructure, in the context which NCRPB operates. The purpose of this annexure is to provide the sectoral background for NCRPB to design its business plan if it chooses to engage with PPP's both as a lender and as a facilitator. Given its capital structure and legal framework, it is unlikely that NCRPB can be a potential equity investor. The focus of the discussion is therefore the institutional framework which is in operation, and whether this likely to change materially. We define institutions as a set of rules for mobilizing finance, creating infrastructure and paying for the use of the assets over time. An essential precondition for clarity in rules is to identify who is the issuer (of a debt or concession) and who is responsible for repayments and under what conditions?–Is it the municipality or the state or a combination of both? Do the rules attempt identification of the issuing entity and clarify roles and responsibilities? Or are they deliberately left to be decided on case by case basis, and if so the logic? These institutional questions motivate this section

For discussion purposes, we divide the Indian experience into pre and post 74th CA, as this legislation is often considered as representing major political and economic structuring of responsibilities and powers, creating new opportunities and challenges for commercial equity and debt financing. Further, national grant programs such as JNURM explicitly require the implementation of the reforms of CA 74th as its conditions. We then identify the key constraints for both debt and equity in the post 74th period, providing a basis for potential policy at three levels- national, state and local government.

The main argument is that old methods of financing (guarantee- backed HUDCO style) is inappropriate and unsustainable in the post CA 74th scenario, and modern methods of financing have yet to emerge, resulting in considerable confusion in this interregnum. At the same time, half hearted attempts in promoting sustainable debt (PFDF) coupled an attachment to equity PPP's have not improved the prospects for sustainable financing.

1.2 Traditional Financing: guarantee backed HUDCO style (1950-1991)

During the period (1950-90), the sources of municipal debt have been usually limited to State Governments or institutions such as LIC, HUDCO on the basis of guarantees issued by the state. For example, in Tamilnadu, up until 2003, municipal debt raised on this basis would constitute roughly 75% or INR 7000 millions. Two key institutional features of this kind of financing are; first, the lack of clarity at the municipal level – on the size, terms of the loan and the repayments which such borrowings entail, and second, the assets being created by parastatals with no involvement of the municipality and with no parastatal responsibilities other than construction. This ad hoc method of financing has led to several water and sanitation schemes – which were used suboptimaly and with periodic write offs of the debt. For example, HUDCO backed water supply schemes in Salem led to considerable procurement of pipes and equipment but little water and limited municipal involvement. A similar situation prevails with respect to sewerage schemes undertaken in Trichy and Tirunelveli.It is not surprising that most of these loans to municipalities of around INR 5000 millions were written off subsequently. This guarantee method of financing continues to be the dominant mode in India today especially in the environment investments.

There are several reasons as to why this kind of financing is unsustainable, unknown contingent liabilities on the State Governments, lack of ownership of the municipality in the construction and maintenance of the asset etc. From an institutional perspective the lack of clarity on the assignment of responsibilities over mobilizing finance, asset creation and repayment is best suited to a situation where municipalities were bureaucratically administered as indifferent service providers of the state instead of proactive creators of infrastructure. It is dysfunctional after the 74^{th} CA which provides for elected leadership of municipal governments. However while the 74^{th} has changed the political basis of municipal governance, it is has not been accompanied by financial reform.

A quick assessment of the 74^{th} from our perspective, namely the rules for mobilizing finance shows that it has not achieved much, nor could it be expected to do so. After all, national constitutions are not expected to write down rules for financing. In the US, the Waste Water Act 1970 specified standards, and the Pooled financing rules were separate enactments to facilitate investments. In South Africa, while the IGFR specifies responsibilities for fiscal transfers the MFMA is a separate enactment for municipal financing. So it is but natural that if municipalities were to be politically empowered and held responsible for investments as specified in schedule 12, there would have to be enabling policy for financing. The 74^{th} CA, in all fairness, did mandate a SFC – to ensure rational and stable fiscal transfers – and there is little tracking of this performance at the national level. So there is a policy vacuum on financing which has now been filled by programs such as JNURM mandating that municipalities should attempt equity PPP's to qualify for its grants. As our discussion of the conceptual framework in section 2 shows, in the absence of stable demand conditions equity PPP's are likely to fail. And most have. We now turn to an overview of the Indian debt and equity experiences.

1.3 Modern Financing (Post 1990)

1.3.1 Mobilizing Debt

While the dominant source of finance for urban infrastructure, especially environmental – has been the guarantee backed, there have been significant attempts at a micro level, to move to more rational mobilization strategy at the level of cities and states. Mirroring global trends, in India too, especially since the 1990's, larger cities such as Ahmedabad, Hyderabad Nagpur and Bangalore have raised debt for municipal infrastructure by accessing capital markets based on credit ratings through issuing debt instruments of varying tenure on a non-guarantee mode.

City And Rating	Amount (Inr Mill)	Purpose
Ahmedabad-1 AA-	1000	Water and Sanitation
Ludhiana AA+	100	Water and Sanitation
Bangalore A-	1250	City Roads
Nasik AA	1000	Water and Sanitation
Nagpur AA	500	Water and Sanitation
Madurai A+	300	By pass

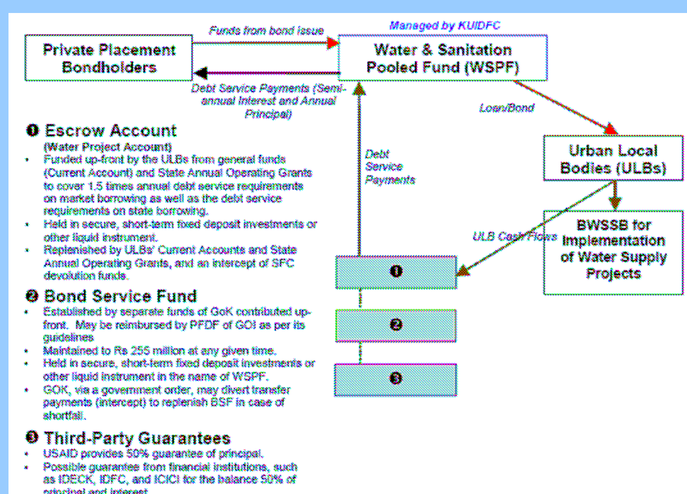
Ahmedabad-2 AA	1000	Water and Sanitation
TNUDF AA+	1100	Municipal Infrastructure
Water Fund-TN AA	300	Water and Sanitation

Further still, smaller municipalities have used pooled financing structures to a more sustainable method of financing. Clearly in states such as Tamilnadu and Karnataka, where demand side reforms have tended to be better – rational and predictable transfers, improved empowerment for municipal governments have found it easier to raise market finance at low costs on non-guarantee mode and where the borrower- lender relationship is well defined

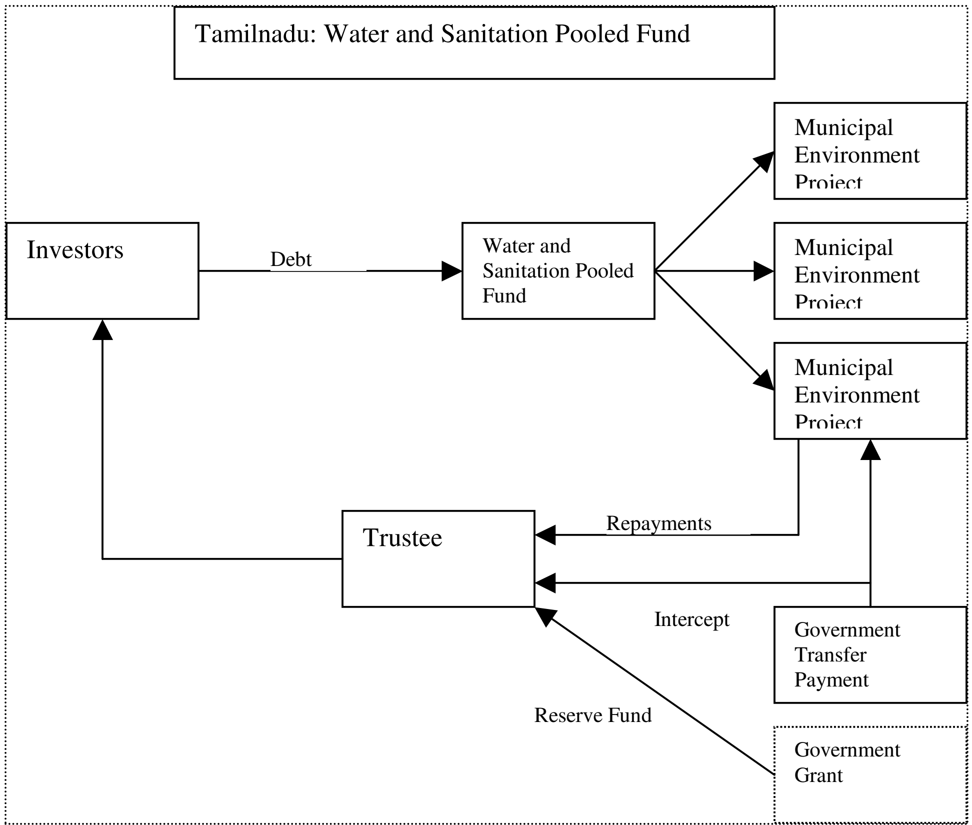
Box 1: Bangalore-Financial Structuring Of Water Supply Project

The project promoted by Bangalore Water Supply and Sewerage Board, KUIDFC and USAID's FIRE project supported the Board in pooling the demands of local bodies and enabled them raise resources from the Market.. The fund manager is KUIDFC, a State Level financial intermediary and the security arrangements consist of an Escrow, Bond Services fund and guarantee by USAID. The total cost of the project is Rs. 3400 M and the sources of funds include:

Citizen Contribution	35%
Government Grants	22%
Municipal Bonds	30%
Subordinated Loans	13%



In Tamilnadu, based on the recognition to lower costs for environmental projects, especially in small and medium towns, the state government set up Water and Sanitation Pooled Fund, as a trust with limited equity, and eliminating dividend expectations. This trust, with little recourse to the capital, relied on credit enhancements of a debt service reserve fund and repayment from borrower's taxes and fees. The average size of projects was USD 1 million (drinking water connections, pumping stations etc) and by aggregating these demands into a pool, raised USD 10 million through a bond issue (rated as AA at a spread of about 70 bps over state government borrowing cost). A study of the bond issue of WSP shows that domestic private debt can finance environment infrastructure at low costs, if sufficient attention is given to the design of the intermediaries' capital structure, and security packages.



Most independent observers would agree that Tamilnadu's performance in opening up access for environmental infrastructure was on account of three enabling factors; first, the major reforms which allowed local governments to borrow, rationalization of revenue transfers, second, the deepening of the Indian debt market, which enabled longer term finance from insurance and pension companies to invest, and third, the availability of IBRD credit which facilitated blending with local finance. Of these, the critical catalyst was the institutional reform since the mid 1990's

These major urban sector reforms, provided for greater powers for local governments to design, finance and create infrastructure. A major aspect of the reforms was to rationalise fiscal decentralization ensuring that revenue streams of local governments were more stable and predictable. On the supply side, it was recognised that with along with enhanced powers and responsibilities local governments needed a sustainable financing mechanism which could raise resources from domestic markets. A key first step towards this objective was to enable the intermediary to pool these demands so as to enable them to access long term debt finance

Based on the Tamilnadu and Karnataka experience the national government set up a Pooled Finance Development Fund, and initiative which promised much but delivered little. There are probably several reasons as to why PFDF has never taken off.

First, it coincided with the JNURM program which placed an emphasis on equity PPP's and a set of reforms which do not directly address fundamental constraints for revenue streams of municipalities to improve. JNURM's reform agenda – reduction of stamp duties, elimination of rent controls and urban land ceiling – are based on the model that rapid growth in housing which these reforms were expected to generate would somehow get infrastructure financed. Needless to say this has not happened – nor is it likely to. Rent control is a fact of life at best in a few cities – in Chennai it covers less than 2% of housing stock – and the expectation that this elimination would improve the financial status of cities is a bit farfetched.

Second, JNURM has definitely improved the flows of grant finance on an unprecedented scale. Prior to JUNRM, a plethora of GOI schemes were either restricted in geography (Mega Cities Program) or thinly spread such as the AUWSS, neither of which had much impact. Therefore the pressure to search for finance was quite intense, JUNURM has successfully removed the pressure and at the same time eroded the incentives to leverage.

Third and more difficult to document is the prevailing policy preference for equity PPP's driven both by national policy as well as ideological preferences of international financial institutions which have now given up on these preferences. For example the WB India water policy 1996 states clearly that equity PPP's are the preferred option for the water sector. Fortunately the WB itself has moved away from such a position both conceptually (see a sober assessment of PPP's) and practically – WB now finances municipal owned water supply in small towns outside Bangalore. National policy could also be expected to follow suit with time lag

1.3.2 Modern Financing (Post 1990)

Equity PPP's: Macro Perspective

We now turn to evaluate the performance of equity PPP's first from a macro perspective of their materiality (quantum of finance mobilized) and their institutional underpinnings (who has taken the risks). We use the findings from two studies (WB) and Fitch (2009). As to be expected these macro studies do not provide an insight into institutional questions but do substantiate the main findings of international experience – the relative insignificance of urban equity PPP's in all infrastructure PPP's, and their immateriality in the context of urban investments.

Data from the WB study shows the low materiality of equity PPP's in infrastructure as a whole and the relative insignificance of urban PPP's which have mobilized significant amounts of finance.

At a macro level, there is the data from the World Bank study (Harris and Tadimalla 2008) which undertook a detailed review of financing patterns and trends and the constraints to expanding PPP financing as perceived by market participants. This study provides financial information 104 projects accounting for 73 percent ($1150 million) of the total project value. The main findings include:

First, is the financing. In 1995–2007 senior debt accounted for 68 percent of project financing, equity (25 percent), subordinated debt (3 percent), and government grants (4 percent), typically “viability gap” grants provided during construction to PPPs deemed economically desirable but not financially viable.

Second, about 70 percent of the debt was provided by commercial banks, four-fifths of this by public sector banks. The rest of the total debt financing came from institutional lenders (around 23 percent), with 5 percent provided by the International Finance Corporation. Bond markets were used sparingly. The use of subordinated debt also remains limited.

Third as for equity, more than 80 percent came from project developers, with the next largest contributor being the public sector. Strategic investors made direct equity investments in the special-purpose vehicles established to implement the PPPs for only nine projects in the sample. These investments totalled almost $167 million (6 percent of the total equity), most of it in the airport sector. Equity investments by financial institutions provided the rest.

Fourth, is the rising share of senior debt and the declining share of equity which has led to rising debt-equity ratios. One explanation for this trend is that commercial banks have become more comfortable with PPPs, particularly in the road sector, and are therefore willing to have senior debt make up a larger share of project financing.

Fifth, there is evidence suggesting that projects with viability gap grants have higher gearing than those without them. While the evidence is inconclusive, there are some indications that lenders and developers view grants as substituting for the equity infusion needed during construction. The few projects involving a negative grant—a payment by the PPP to the government—also have a higher ratio of senior debt to equity, suggesting that these payments are being financed by debt borrowed by the PPP project.

These findings taken together, suggest that much of the money mobilised is debt from public sector commercial banks and as a consequence they would bear most of the risks of project renegotiations. We now turn to the second macro study, conducted by Fitch ratings (Fitch 2009), which shed light on the future prospects of these projects. The main findings of the Fitch analysis show:

First, Fitch anticipates that many of the projects which would complete construction over the next few years will face either interest reset or loan refinancing dates during the critical stage of obtaining government approval for operations.

Second, the pricing of project risks has varied over time, and depends more on the availability of capital and the nature of sponsor-bank relationships than on a broader and more rigorous evaluation of project fundamentals.

Third, almost all of the rated projects are still subject to construction and completion risk, which naturally constrains the current ratings profile. Project cash flows are highly susceptible to construction delays, economic cycles and interest rate risk, the latter due to the frequent interest reset periods of the loans.

Two rated projects have seen considerable changes from their original plans due to construction and completion risk and this includes the Chennai Water Desalination (CWD) – the only urban equity PPP in the sample. Fitch's remarks on this are likely to be of relevance to other urban equity PPP's sharing as they do common design defects.

Chennai Water Desalination Ltd. Saw commencement of construction delayed for nearly 18 months as a result of not being able to secure environmental clearances. Consequent delays in ordering equipment from European manufacturers, and the depreciation of the Indian rupee against the euro resulted in escalated project costs. Contingency provision of approximately INR108m may not be totally adequate to meet cost escalation even from the revised levels, and there could be a need for a dose of additional capital infusion in the form of debt and/or equity.

To sum up, a macro review of the equity PPP's performance show three facts – fragile financial structures, large component of debt usually from public sources, and limited private mobilization of finance. Further, equity PPP's do not seem to have reduced completion risks which public infrastructure has often been prone to, nor have they brought in the expected managerial efficiencies in asset creation or maintenance. These macro studies do not provide an in-depth understanding of institutional issues – of risks and responsibilities and we use a case study approach to assess the costs and benefits from a public interest perspective.

1.4 Case Studies

We look at four case studies, two environmental investments and two roads and transportation to get a better understanding of institutional issues – local capacities to mobilize private finance and repay over time. We have taken these projects from Tamilnadu and expect that the lessons they throw up have relevance for situations elsewhere.

Madurai Ring Road

Madurai like many growing cities needed to decongest its city by building a by pass– separate long and short distance, passenger and freight. The city borrowed INR 180 millions at 15% and built a 18 km by pass in 24 months, and serviced the debt through tolls. Once the cash flows started, Madurai reduced its interest costs by securitizing its loans by means of a AA rated bond at 12.5%. This example of private debt financing of publicly owned infrastructure demonstrates three facts: first, efficiency in construction is not unknown in city governments, second, till date there has been no delay in repayments and third, from a public interest perspective, the costs of capital is the lowest when compared with similar NHAI projects executed at the same time, as dividend expectations are removed from the cash flows.

Karur Bridge

Karur town had been trying to finance an inner city bridge, and managed to let out a concession on competitive basis for a 15 year period to ECCI. The bridge was completed on time and was successfully servicing debt and equity till the state government without jurisdiction cancelled the concession. The subsequent government compensated ECCI.

Tiruppur Water Supply

Like many rapidly growing towns, Tirruppur's demands for water and sanitation have increased – around 120 mld. As with other Indian towns the current methods of handling liquid waste – both domestic and industrial – cause substantial damage to the environment. NTADCL – equity PPP – with GOI, GOTN, IL & FS, Mahindra, and Tiruppur exporters as shareholders set up an INR 13000 millions water and sanitation project in 2002. The project still does not have a functioning sewerage system, has run into huge losses, and debt ahs been restructured. The majority of the losses have accrued to the public sector lenders, (IDBI) and the state government whose debt service reserves have been run down. To sum up, there has neither been implementation efficiency (30 months versus 4 years), financial success nor improved services.

Box 2: Tiruppur Water Supply Project

- The project cost of Rs 10230 millions was financed through with a debt : equity ratio of 1.5 : 1

	Rs Mill	in $ Mill
Equity	3230	77
Sub Ordinate Debt	870	21
Debt	6140	146
Total	10230	244

- A comprehensive security package comprising of :
  - Assignment of project agreements & step in rights
  - Charge on assets
  - Charge on receivables (post O&M expenses)
  - Charge on residual insurance proceeds
- Securing Cash Flows
  - Raw water quantity & quality : A lean period fund established by GoTN with initial corpus equivalent to six months revenue
  - TM receivables : Irrevocable letter of credit equivalent to one month receivables; all water receivables escrowed into a special account (3 months reserves) and charged to NTADCL
  - Industry receivables : Guarantee from local banks equal to 3 months receivables

Alandur Sewerage

Alandur is an excellent example of a small city (pop 25,000 HH), which has completed a sewer system INR 300 millions within a record time of 24 months, raised market finance and user charges of INR 90 millions (INR 5000 from 18000 HH) before award of contract. This financial innovation was copied in neighbouring towns, probably making the point that genuine innovations coming from below have greater spread effects than exhortations based on attachment to unproven models.

Table 1: Means of Finance

Category	Amount in Rs. million (US$)	% of total
Grants		
TNUIFSL/Gap funding by GoTN	30 (673,552)	9
TUFIDCO	10 (224,517)	3
Loans		
TNUIFSL	40 (898,069)	12
TUFIDCO	160 (3,592,277)	47
User contribution		
Deposits (estimated*)	80 (1,796,138)	23
Interest from deposits	20 (449,035)	6
TOTAL	**340 (8 million)**	

** User contribution so far: Rs. 150 million*
Source: Alandur Municipality

Table 2: Fees and Charges

Connection charges (non-refundable deposits)	Amount per connection in Rs. (US$)
Domestic (before 01.02.2000)	5,000 (112)
Domestic (after 01.02.2000)	6,000 (135)
Commercial	10,000 (224)
Industrial	10,000 (224)

Highlights

- A well-planned communications strategy has led to good community response to the project.
- A 'Willingness to Pay' survey showed that about 97 percent of the people wished to have the sewer connection and would like to pay for it.
- People who were unable to pay the deposits on their own were given the option of loans from local banks on nominal interest rates.
- People were also given the choice to pay in two installments over a year.
- The construction of community toilets was taken up after need assessments by Alandur Municipality or on demand from slum dwellers. This option helped extend sanitation services to the poorest segment of the population which could not afford the non-refundable deposit and could not connect to the system.

Source: Water and Sanitation Program, Jan 200

1.5.Main Findings of the Case Studies

1. Equity PPP's have mobilized little private finance as compared with debt PPP's. If the frequent debt restructuring (endemic in equity PPP contracts) are accounted for, equity PPP's have been harsh on public finances, creating contingent liabilities over an uncertain time period

2. At a micro level there appears to be little efficiency gains (construction and cost overruns) in equity PPP's as compared with debt PPP's.

3. Equity PPP's have also not been catalysts for institutional change by distributing risks and responsibilities in an unsustainable manner between the public and the private sector.

These are unsurprising conclusions, as they mirror international experience and follow from a conceptual understanding of the nature of these public goods. The surprising fact is the continued insistence of the equity PPP framework despite considerable scepticism across the world, other emerging economies (South Africa) and even international financial institutions such as the World Bank. Probably Indian policy changes with a lag.

1.5. Policies and Institutional Change – Indian Context

International experience suggests that coordinated action between different levels of government is needed if cities are to be provided access to systemic financing. Given the underlying asymmetry of information between lenders and borrowers, a potential market failure situation, leading to moral hazard and adverse selection is likely to, and has most probably, emerged. For a significant debt market the need for a regulatory framework for municipal debt, specifying transparent rating criteria, removal of fiscal distortions and deepening of the capital markets, by encouraging tradability, are actions to be taken by the Central Government. At the State level, municipal reform, by way of specified cost recovery mechanisms and benchmarks for permissions to borrow are necessary steps in developing a market where private capital flows can finance public infrastructure.

And in a country of India's size there is bound to be variety in the pace of both urbanization as well as institutional responses. For example, the framework for own source revenues vary significantly, in some states there is considerable freedom to vary these at the city level, whereas in others (Shillong) several part of the city properties are outside the jurisdiction of the city government. A similar situation prevails with reference to user charges – in Chennai, part of the water charges are collected by the local government while some is collected by the Utility Company. Further still, there is considerable variation at the state level on the stability and reliability of fiscal transfers.

These major institutional issues are the most significant determinant of the capacity to attract private capital – debt or equity. Unless private capital can predict future revenue streams with some confidence the flow of finance will obviously be limited. Policies which strengthen the demand side are clearly needed. Schematically,(Table four), policies which improve supply (as in cell C) would do little when demand conditions are unstable. For example if fiscal transfers in Bihar are unstable, more debt or equity funds are unlikely to be effective. Similarly if demand conditions are stable in Karnataka (as in Cell B), this is of little use if there is limited supply of long tenor capital.

		Supply Conditions	
		Stable	Unstable
Effective Demand	Stable	A	B
	Unstable	C	D

Table Three: Finance Outcomes
Source:

It would have been useful for a national program such as JNURM to target major institutional reforms on the demand side – rational transfers, authority to raise finances and define jurisdictions..

The present situation is one of weak demand conditions leading to unstable revenue streams which do not allow private debt or equity supply into the sector. This is coupled with functional and geographic fragmentation – increasing the counterparty risks. The rational policy response is to strengthen the institutional framework – stable intergovernmental fiscal flows, improved definition of municipal responsibilities and powers and thereby reducing functional and geographic fragmentation.

Indian experience has shown where municipalities are trusted, and given powers to create, design, finance and pay for its use over time have shown remarkable powers to deal with institutional infirmities. The Alandur example in the environment sector and the Madurai road in the transport sector demonstrate the value of investing in local government and the setting up of the PFDF by GOI was a policy movement in this appropriate direction of keeping the faith in local government. However PFDF has not taken off and the policy direction has been more towards the equity PPF's especially after the JNURM launch. Equity PPP's are perceived as requiring fewer tough institutional choices – especially as risks are diffused through the system, whereas debt PPP's require strong policies for devolution which is always more difficult given the status quo.

The question as to when policy focus turns to responding to institutional reform would in India, depend as elsewhere, on the relative strengths of ideas and vested interests in making change possible. Normally policy in India is based on the assumption that the greater the degree to which financial structures are reshaped to the image of those prevailing in developed countries the more resilient they will become. The paradox is that urban financial structures in the US and Europe represent a model of private debt financing of publicly owned infrastructure and not equity PPP's.

It is also understandable that empowerment of local governments is often held back by vested interests in the status quo. Empowerment of municipalities and strengthening of a debt system (such as PFDF) would imply greater autonomy and powers for local governments. This also implies reduced powers for higher levels of government and state-owned entities such as water parastatals that do not have democratic accountability at the local level. This is a situation where those who have powers to make change possible have little incentive, and those who have the incentives have little power. The rate and spread of infrastructure creation could well depend on how this situation emerges..

Annex 4 Urban Infrastructure Financing- Intermediation: National and International Experience

1.1 Background

Rapid economic growth in small and medium cities inevitably leads to increased demand for investments in growth-inducing infrastructure –roads, transport systems, as well as, environmental investments such as water and sanitation. Environmental assets are capital intensive, long gestation investments, and inevitably generate externalities across municipal boundaries. Further, their long life provides benefits over time. This public good characteristic (joint consumption) implies that user charges by themselves can rarely be expected to cover capital costs, maintenance and depreciation. Therefore, subventions are either needed as grants in the capital financing or subsidized interest rates. Further, given that benefits accrue over time, (for example, waste water plants usually have a life of over 20 years, and growth in connections takes time) long term debt is a preferred instrument over equity, especially in situations where user charges are low and can be increased only gradually.

The high capital costs makes obvious the proposition that budgetary resources would have to leverage private financing, ideally low cost, long term debt. Fortunately, on the supply side, economic growth also generates high savings rates, and the potential supply of finance to match the demand. However this potential supply (from private commercial sources) usually perceives these environment debt demands as difficult to finance for at least two reasons. First, the relatively small size of these loans imply higher transaction costs, and second, the multiple sources of debt service of these projects – taxes, user charges with varying risk profiles. Hence the need for intermediation by pooling demands, thereby reducing risks and transactions costs. International experience indicates that national governments have responded to these needs by designing intermediaries for linking these growing city-environment needs with the supply of long term domestic capital. In most countries the design challenge is the trade-off between low –equity, strong repayment structures which allow lower interest rates versus more capitalised entities which allows lenders recourse to the balance sheet of the entity.

From a financing perspective, urban infrastructure investments can be divided into three categories. The first are investments which are more in the nature of public goods – parks, city roads etc which need recourse to taxes to service debt. Second, investments more private in nature – water and waste water, solid waste – where fees, taxes and grants can be used to service debt. The third category is for pure revenue projects like toll roads where the recourse is directly to users. Since all these assets require non-collateral financing, and depend on future taxes and user charges, the major driver of these investments is economic growth.

International experiences of developed countries in designing financing mechanisms for urban investments have usually been either a capital market approach as in the US, or a more commercial bank approach as in Europe. However, in both cases, the access to finance takes place through the design of specific intermediaries – the bond banks in the US and Dexia, Kommuninvest (Sweden) or the Norwegian Municipal Bank in Europe. Intermediation has probably been necessary for at least two reasons – the small size of the loans relative to capital market transactions (the city of New York uses the NYSEFC – an intermediary for its small loans) and the advantages of lower transactions costs and pooling of risks.

In developing economies, especially since the 1990's, cities have been in the midst of three major trends – globalization requiring investments in high quality infrastructure, decentralization of responsibilities without matching financial powers to local governments, and migration. These trends have often induced greater attention to developing sustainable financing mechanisms for both environmental and growth infrastructure at the city level. The design of intermediation varies from pure state owned entities such as Finditer (Columbia), private ownership (INCA), and public-private ownership (TNUDF). Many of these entities have used multilateral credit to on-lend longer term finance which is domestically in short supply, and then later on, as local markets mature, blend multilateral credit with domestic debt.

1.2 Objectives

This section reviews relevant international experience in financial intermediation. The focus is on the access provided for urban environmental debt finance for small and medium cities. Three types of intermediation models are studied, - TNUDF, INCA and the US Bond banks- as these structures differ in ownership and affects access, pricing and recourse to credit enhancements. We also study the European experience, where state owned intermediaries have been the dominant source of financing. The utility of these models are evaluated from a NCRPB perspective, both the legal framework and the NCRPB business model. The main purpose is to identify from international experience the similarities and differences with NCRPB. This would help answer the question as to whether the NCRPB can evolve into financial intermediary or major legal and business changes are needed.

1.3 India: TNUDF

1.3.1 Background

The Indian state of Tamilnadu, the third most urbanised state, with the most number of small and medium towns had in partnership with WB set up in 1988 a Municipal Urban Development Fund (MUDF) fully owned by the state government to provide debt finance for small and medium cities. There was a clear need for the revolving fund – a sustainable, open access mechanism for financing outside of the state government budget, based on clear lending criteria.

The need for a revolving debt fund arose on account of rapid growth in small and medium towns and ad-hoc methods of providing debt finance through state governments. There were obvious difficulties in appraising, borrowing on behalf of, and selecting eligible projects at the state level and the ensuing ad-hoc nature of these decisions. It was also perceived that an independent, appraisal and recovery system could potentially provide an institutional mechanism for debt finance for these needs, as and when, private financing became easier to access.

MUDF operated for eight years, disbursing unsecured loans of about USD 50 million to 70 small and medium towns for all categories of urban infrastructure. MUDF also provided grants to local governments for project preparation, developing financial operating plans and updating financial statements, which make it easier for lenders to appraise risks. An evaluation of the MUDF portfolio showed that investments in environmental civic amenities- drinking water distribution, city roads had positive impacts, allowing local governments to enhance taxes and debt. On the other hand the majority of its "revenue" projects, bus stands etc, were unable to service debt purely from project revenues. In any event, debt repayment over the 8 years of operation was 98% considered high by Indian standards at that time. This experience demonstrated that a fund operating on commercial principles could provide a systemic access for repeated financing needs of small and medium cities. And that local government could profitably use modern tools of financial planning to manage their finances and repay debt from taxes and user charges.

In 1996, the state government carried out major urban sector reforms, which included greater powers for local governments to design, finance and create infrastructure. A major aspect of the reforms was to rationalise fiscal decentralization ensuring that revenue streams of local governments were more stable and predictable. On the supply side, it was recognised that with along with enhanced powers and responsibilities local governments needed a sustainable financing mechanism which could raise resources from domestic markets. A key first step towards this objective was to enable the intermediary to pool these demands so as to enable them to access long term debt finance.

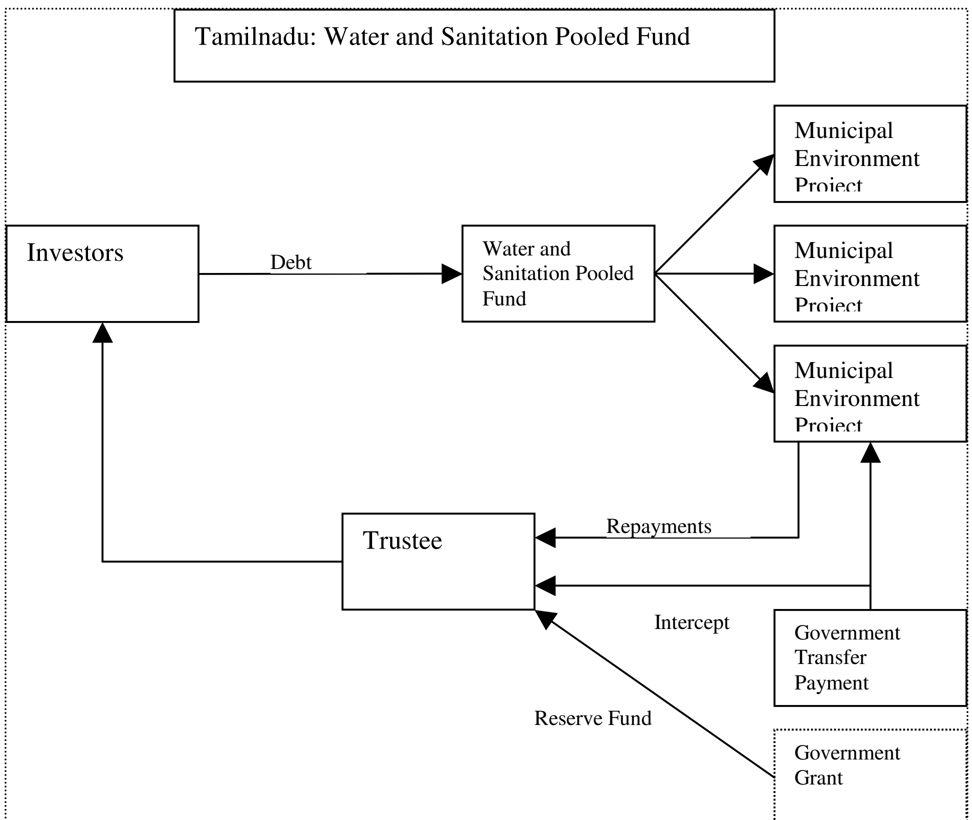
Encouraged by the MUDF repayment experience and its open access lending criteria, the state government with the assistance of the World Bank invited three private sector financial institutions to contribute equity into a Trust. The main purpose of expanding the ownership was the belief fashionable at that time, that better management efficiencies are located in the private sector. It was also expected that financial institutions could use TNUDF as a mechanism for expanding their operations into a new market. Apart from TNUDF, the government also set up a fully owned "Grant Fund" to finance modernization of accounts, detailed investigations for major investments. The government's share of profits in the debt fund was the source of financing for the grant fund.

1.3.2 Structure, Lending Policies and Performance

TNUDF was established as a Trust in 1996, a legal structure that allowed borrowings from markets and also increase in its own equity capital as the business demands grew. The management of the Trust was by an Asset Management Company owned both by government and the financial institutions. The Lending Policies and Procedures required borrowers to conform to viability and debt service ratios and open up escrow accounts for loan repayments. TNUDF borrowings and lending were at fixed rates, and in local currency, thereby avoiding currency and interest rate risks.

TNUDF disbursed around USD 100 million in its first three years to around 120 local governments for environment and other infrastructures, with water and sanitation constituting a rising share of the portfolio. The Fund declared dividends to its shareholders and maintained a 100% recovery rate. During 2001-04, a period of fiscal stress at the state and municipal levels, the lending decreased, picking up during 2004-07 when the fiscal situation improved. On the resources side the Fund raised USD 35 million, 15 years tenor, in two bond offerings on the basis of an AA+ rating at about 70 bps above the state borrowing rate. The fund was also able to securitize its assets and raise market finance.

Based on its lending to the environment sector, and recognizing the need to lower costs for these projects, the state government set up Water and Sanitation Pooled Fund, as a trust with limited equity, and eliminating dividend expectations. This trust, with little recourse to the capital, relied on credit enhancements of a debt service reserve fund and repayment from borrower's taxes and fees. The average size of projects was USD 1 million (drinking water connections, pumping stations etc) and by aggregating these demands into a pool, raised USD 10 million through a bond issue (rated as AA at a spread of about 70 bps over state government borrowing cost). A study of the bond issue of WSP shows that domestic private debt can finance environment infrastructure at low costs, if sufficient attention is given to the design of the intermediaries' capital structure, and security packages.



1.3.3 Assessment and Relevance for NCRPB

Most independent observers would agree that TNUDF's performance in opening up access for environmental infrastructure was on account of three enabling factors; first, the major reforms which allowed local governments to borrow, rationalization of revenue transfers, second, the deepening of the Indian debt market, which enabled longer term finance from insurance and pension companies to invest, and third, the availability of IBRD credit which facilitated blending with local finance. The relevance for NCRPB is examined from two perspectives, NCRPB's evolution and a regional level.

As a reform option for NCRPB, there are several factors which limit the relevance of the TNUDF situation. These include differing regulatory frameworks across states, greater variety in sectors covered in the RP, and a business model of criteria-based lending, as opposed to guarantee backed. However, this perceived lack of relevance has to be balanced by the following; first, NCRPB lending (if it has to expand in volumes) also depends on local governments' performance for its repayments, and second, NCRPB has itself structured security packages such as escrows. Third, NCRPB's current portfolio (like TNUDF) seems to indicate a niche market, a loan size which commercial sources would find difficult to directly finance.

There is also the opportunity of using ADB line of credit to blend with local sources of finance, and move towards risk based lending. For example, TNUDF's main systemic contribution was to facilitate local commercial financing – starting with direct on lending of IBRD credit, then blending this long term money with shorter local sources. This transition had the effect of utilizing IBRD loans to introduce private commercial debt without compromising the needs of the sector, and second, provide confidence of multilateral presence to attract private capital into a new market.

From a regional perspective, it would appear that the NCR (smaller and medium towns), have debt demands of a size and nature which private local sources would find risky, and hence need a specialised intermediary.

1.4 South Africa: INCA

1.4.1 Background

INCA is a private debt fund, and was created after the new national government took over after the apartheid regime. At that time, the major political changes led to fears of flight of private capital from the municipal market, and special measures were needed to retain the confidence of major private sector banks. Against this background, INCA was created as a consortium of major private sector banks with the objective to support the South African municipal bond market, and provide debt finance for local government units, parastatals and private companies involved in infrastructure. The original shareholders, included First Rand Bank (now the First National Bank) and three other major South African institutional investors, as well as two international investment organizations, the Commonwealth Development Funds (British) and DEG (a German Development Agency). Together, these organizations contributed R50 million (about $8 million at that time). The ownership has diversified over time and now includes more South African "empowerment companies," which have progressively increased their ownership in the fund. INCA's initial objective was to provide liquidity in a municipal bond market that had been altered significantly in the context of major political changes.

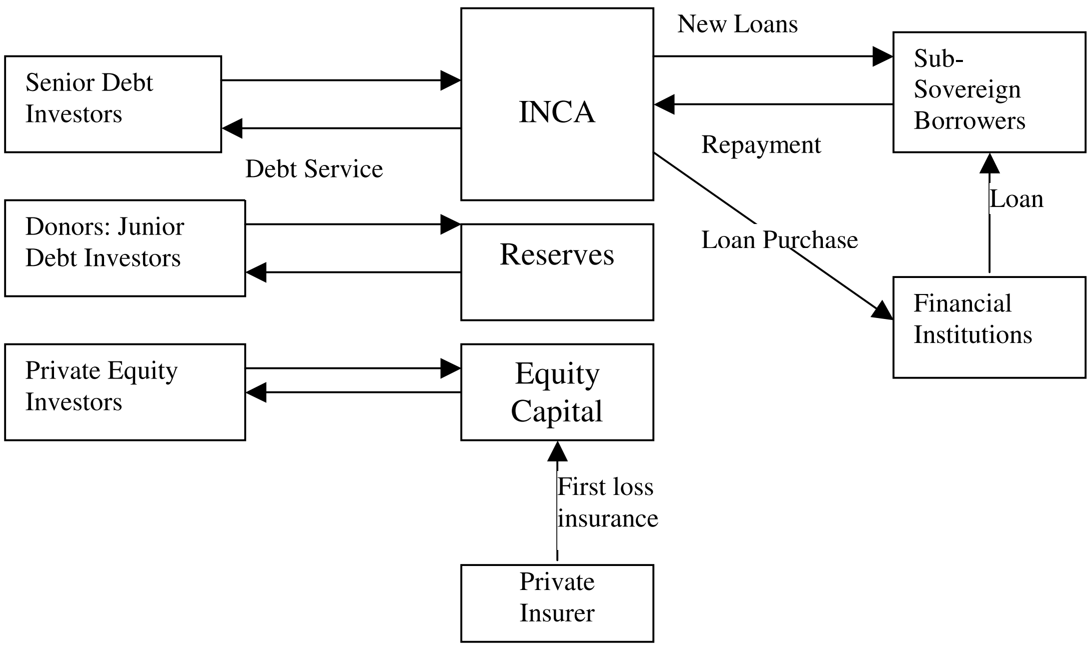
1.4.2 Structure, Lending Policies and Performance

Since the late 1990's, INCA has raised debt from the South African market amounting to R1.1 billion in senior bonds, and also issued subordinated debt to international development agencies, the proceeds of which were not loaned out, but were added to the reserves. This accretion to reserves allowed INCA to reach out access to smaller municipalities.

Over time, INCA has shown a steady increase in direct loans largely attributable to lower transaction costs for smaller municipalities, and after initial ambiguities on remedies to handle defaults. Further, the enactment of the Municipal Finance Management Act (MFMA) has provided clear rules for municipal debt, including legal remedies for default. Further still, the Inter Governmental Fiscal Rules (IGFR) provides a rational and stable system of fiscal transfers, enabling lenders to predict revenue streams of municipalities with reasonable confidence. In addition, was growth in municipal, own-source revenue which made debt service possible.

INCA has also established "bad loan" workout organization, NEWCO with USAID providing subordinated capital with a small direct loan of $10 million to INCA in 1998. NEWCO's structure allows for a restructuring of doubtful debt by stretching the maturities and lowering interest rates.

INCA: Structure and Flow of Funds



1.4.3 Assessment and Relevance for NCRPB

INCA has filled the gap caused by the uncertainties in the South African municipal market at the time of new government formation by successfully offsetting the exit of private lenders from the market. Further, INCA has diversified its portfolio to smaller and medium sized municipalities and used legal remedies for debt recovery, thereby bringing confidence in the municipal market.

From a NCRPB standpoint, INCA is an example of open-access intermediary serving smaller municipalities, based on strict lending criteria. INCA has also successfully used international development assistance in its capitalization. The significant points of differences with the NCRPB situation are the legal framework for debt recovery, entity financing as opposed to financing concessions, and the pricing freedom that INCA enjoys. For example, INCA has successfully used the existing legislation to recover dues from municipalities, by going to court. Further, INCA finances municipalities not projects, and has recourse to strong security packages factors quite different from the Indian legal framework and NCRPB's likely continuance in the Public Sector.

1.5 THE US Bond Banks

1.5.1 Background

Bond banks were created in the U.S. for three distinct purposes; first, to provide access to the capital markets for small municipal governments, second, to reduce transaction costs through the pooling of projects and third to raise domestic debts at the lowest possible cost to borrowers and hence taxpayers. A private ownership / dividend paying structure are not designed in this structure. Complementing the bond banks are the State Revolving Funds (SRF's) specially designed for water and sanitation investments and mandated by environmental regulations of the Waste Water Act passed in the 1970's. The SRF's was the financing tool to assist local governments finance this environment infrastructure by leveraging state grants with domestic debt.

1.5.2 Structure, Lending Policies and Performance

In the US model, there are no shareholders as bond banks are created by state law to link capital markets and smaller municipal projects. These "banks" do not demand or require private ownership for this intermediary function. State enabling legislation provides bond banks with the power to incur debt, make loans, pledge collateral and undertake other activities necessary to access capital markets on behalf of local governments. Further, the bond banks finance projects with a focus on the impact of a project's financing on taxpayers while Commercial bank lending which target a rate-of-return on capital.

The key feature of the financing is the legal structure of the transaction and not the balance sheet of the issuer. In evaluating a bond bank financing, investors and rating agencies look to the rights and remedies provided to bondholders in the trust indenture, the credit enhancement facilities, and the structure of the financing rather than a bond bank's balance sheet. The upshot of this is the lack of limitation of capital for raising debt.

An essential feature is the involvement of Federal / State Governments in water & sanitation financing through state revolving funds ("SRFs"). These funds receive seed capital from the national government, are highly effective at leveraging private sector financing for local clean water infrastructure projects. Under this model, SRFs place seed capital in reserve accounts designed to credit enhance financings to pooled local projects. As repayments of local loans flow back to investors, the SRFs are able to redeploy their seed capital to credit enhance new projects.

There are several forms of pooled financing or bond bank programs that share similar operational characteristics. These banks can either sell bonds in the market or use the proceeds to purchase bonds from local governments, or several communities can pool their issues into one larger bond offering by a special bond bank. In both examples, the repayment obligations of the local borrowers are pledged as security for the bonds.

Different security structures have been developed for the more than 25 pooled lending programs in the United States. The issues that influence financial structures include (1) composition of the loan portfolio, (2) target loan rate of the portfolio, (3)method of providing state support, (4) state laws, among others in “reserve account” programs, additional liquidity is created by placing funds in special reserve accounts for each project in a pool. These additional reserves, which in some cases have equalled 50% of outstanding principal of individual loans in a pool, provide an increased cushion above the standard debt-service reserve (usually one year debt-service payment) provided by borrowers. Interest earned on the reserve accounts is frequently used to provide subsidy income to local borrowers.

The unique feature of these systems is first, the capacity of the States to leverage their loan funds in the municipal bond market, with more than one-half of the States now leveraging their funds, collectively accounting for $8.8. Billion or 36% of the funds in the lending pool. Further, the loans serve a broad spectrum of the population. In 2205, communities of over 100,000 have received 43% of loan funds with mid-sized communities in the 10,000 to 100,000 range accounting for 35% of the loans, and 22% of the loan dollars have gone to small communities of under 10,000 in population. Conversely, of the 5,680 loans made thus far, 58% were made to communities under 10,000 in population.

This system has provided loans well below market rates for municipal borrowers, with loan rates range from zero interest to a few hundred basis points below market. For example SRF lending is at 2.5% to 3.5% below the average revenue bond index and in 1996 the average revenue bond yield was 6.01%; the mean average SRF loan rate was 3%.Fourth, long gestating projects in water and waste water the data shows that of total wastewater treatment SRF financing, $9.4 billion, or almost 50%, has been for secondary treatment, and $3.0 billion (16%) went to advanced treatment Most importantly the system has survived default because of its bottom-up approach to pricing essential urban infrastructure services

1.5.3 Assessment and Relevance for NCRPB

The attractiveness of this model, for the Chinese situation is that the Bond banks (like the TNUDF) are at the state level, allowing for regional differences, appropriate in a large federal country. Further, as the legal framework for municipal borrowing is undergoing reform in India, the Bond Bank structure has some near-universal features which are essential for the urban environment sector. First, is the linkage they provide to long term financing sources (insurance and pension) and second, the low cost loans made possible by a low capital base.

As the procedures for municipal debt issuance get strengthened in India, NCRPB could with a flat balance sheet, be able to blend IBRD loans with market finance. Also needed are the recourses and credit enhancements. For example, NCRPB (could pool the debt demands of smaller projects and raise market finance. Assuming that these would be of an 8 year term, these loans’ could be blended with IBRD (20 years) to provide borrowers attractive terms .IBRD loans can then be used for creating a new domestic market, rather than mere on-lending. NCRPB already has in place several of the security packages – escrows and contributions to debt service reserves. NCRPB‘s evolution into this type of intermediary requires a legal structure which articulates NCRPB’s capital, pricing and recourse to security packages.

1.6 The European Experience

The European experience indicates that the major source of debt finance for local governments are met by specialized institutions, although some of these local governments have succeeded in raising resources directly from bond issues in the market. However, even in these cases, the issuing local governments are large entities with greater financial powers than average. The data indicates that if direct borrowing or borrowings through specialized institutions coexist, the choice between the two would rest on the size of the city and its balance sheet

The legal framework in Europe usually requires approvals for raising debt either through banks or from bond markets. In 9 out of 15 countries central / state approval is required before acceptance of credit facilities, and in five (Germany, Australia, the Netherlands, Ireland and Luxembourg), local governments are not permitted to borrow in foreign currency. However, with the introduction of Euro (the domestic money for 11 countries,) this restriction has eased. Further, some national legislation restricts borrowings to fund investment: Austria, France, the United Kingdom and Denmark where borrowed funds are restricted to sectors such as energy, sewerage and waste management.

Most European countries have defined a weighting framework to control borrowing – as for example, Denmark (new debt <25% of the annual investment expenditure), Italy (interest expenses <25% of the previous year's budget), Portugal (annual debt repayment <25% of the Financial Equilibrium Fund) – some have fixed ceilings on the debt annual amount (Austria, Germany, the UK), others control the balance of the local budget (France). Borrowing is, by far, less controlled for most Central European local authorities, although recent attempts have shown a greater emphasis on well defined rules.

The main features of the European experience suggests that

- Issuance of bonds is, an access route for mainly large cities
- Intermediaries financing the majority of debt demand arising from small and medium cities.
- Approval processes required for raising debt, and in some cases sectoral restrictions
- Specialized financial intermediaries with sizeable market share. Are typically state owned

To sum up, the US and European experience represent two types of intermediation models, namely, a commercial bank and capital market approach. Both models link city – financing needs with domestic debt through intermediation, usually set up with public ownership. The capital market model, more prevalent in the US, takes out the dividend expectations by eliminating recourse to the intermediary in case of default. The cities are directly connected with the debt market with their future cash flows used to service debt. Since these decisions to borrow have societal implications, local governments have an extended process to secure the consent of the governed. The main advantage of this direct market access through pooling is that costs of credit are kept low. The European experience is more a commercial bank approach with banks taking on lending risks with adequate capitalization and prudential provisioning norms. A comparison of water tariffs across developed countries shows significant differences. Further research would be needed to confirm that the major cause of these differences is financing costs.

Water Charges for the lowest Income Group Households
Selected Countries: 2001-02

Country	Percent of income
England and Wales	3.66
Scotland	2.44
Hungary	2.53
Netherlands	2.38
Mexico	3.84
USA	0.66

Source: OECD: World Water Needs Paris 2004

However, the differences between the two approaches can be overstated. In the UK, for example, the government-owned, “ Public Works Loan Board” is a lender of last resort, thus providing an effective ceiling to interest rates and many of the commercial lenders to cities in Europe, such as Kommunivest in Sweden and the Norwegian Municipal Bank are predominantly public owned. Even Dexia, now a commercial entity had city governments as its shareholders

The evolution of these intermediaries indicates that the legal framework has evolved through a process of trial and error. For example, in the United States, major inter-city infrastructure was financed by individual states borrowing from capital markets in London. There were defaults, and hence the beginning of a regulatory framework for local currency borrowing from domestic markets in the mid 19th century. .Data from Europe with the exception of UK shows that foreign borrowings have declined over the period 1900-50. The shift to domestic sources is due to economic growth, and conscious policy that emerged as a result of experience with defaults on foreign borrowings. Major policy changes also followed regulation.

Regulation and financing innovations have also followed a challenge-response type of path. For example, financing tools have evolved as environmental regulations have become more demanding. In the 1970’s, the US Environment Protection Act, requiring the cleaning up of wastewater made possible the setting up of SRFs, while in Europe, the Accession Conditions, prompted the setting up of grant funds for wastewater treatment investments in the eastern European countries.

1.7 Conclusions

A limited survey of international experience shows certain obvious commonalities on the demand and supply sides of financing small and medium town’s environmental infrastructure. First, international experience suggests the need for private, long term debt to finance these investments. Second, intermediation has been specifically designed by state policy, albeit in widely varying historical circumstances. Third, all intermediaries provide support for smaller local governments for project preparation. Fourth, the cost of credit varies (as is to be expected) inversely with the strength of state support, and the allowable security packages. Fifth, both INCA and TNUDF have used multilateral longer term finance to connect with the domestic debt market. Sixth, these intermediaries all provide open-access criteria based lending. Finally all successful intermediation lend to entities, and not to “revenue generating” projects.

From a NCRPB standpoint, the first issue is the business model. Given GOI grant support over the past and substantial spreads earned through reflows, NCRPB needs to decide between a low –equity model and a capitalized, commercial bank approach. This would allow lower pricing and stronger security packages.

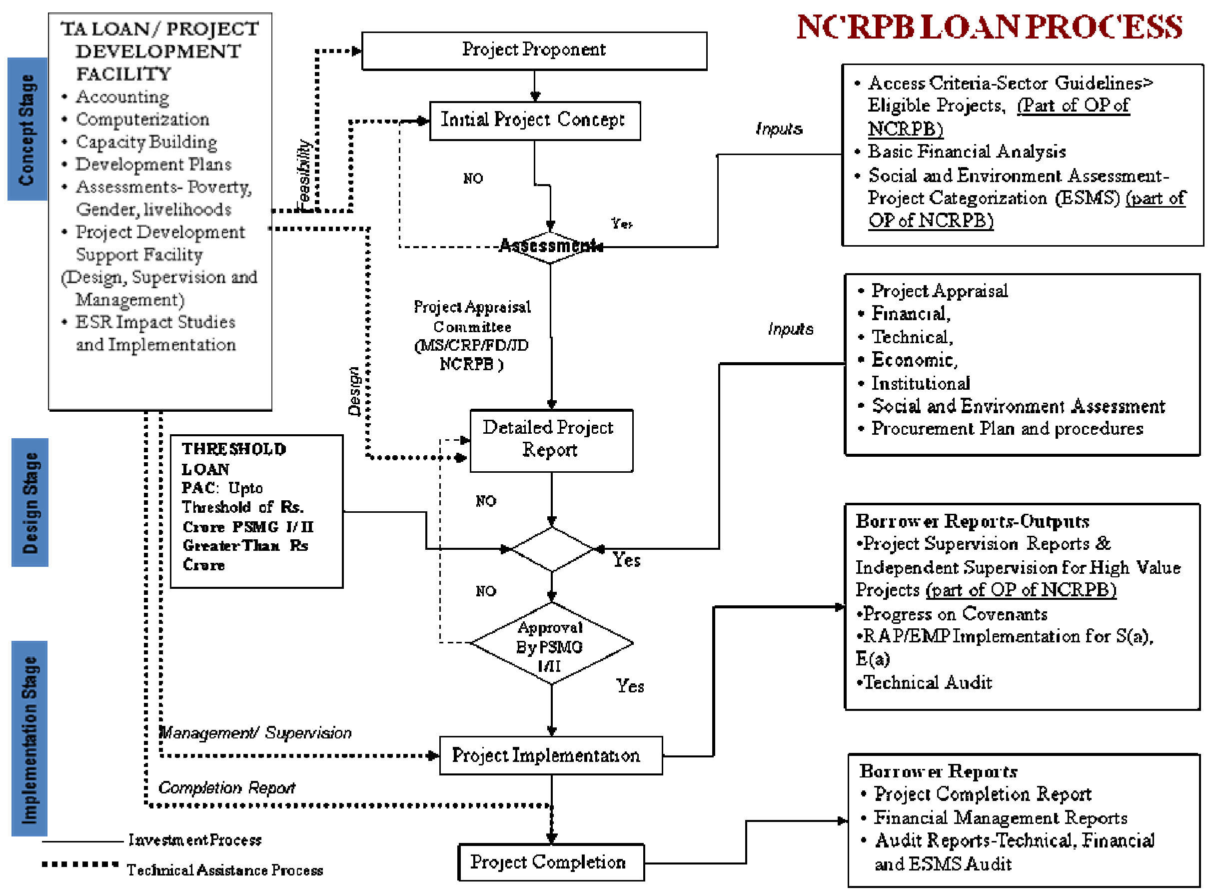
Second, is the choice between guarantee-financing and entity financing. At present, there are limitations on non-guarantee financing. If this situation changes, then, NCRPB would be well-positioned to pool small loans. In that Option, NCRPB would need to establish mechanisms where loans can be made to non-revenue projects, especially, if it expects to become a lender of relevance for district government financing needs

Third, develop lending criteria that makes RP implementation the primary focus, and complement this with grant support for accounting improvements and project preparation. NCRPB at presents relies on guarantees, partly on account of its inability to assess local government risk. This is clearly limiting, and to achieve larger volumes, NCRPB would also need to provide technical assistance.

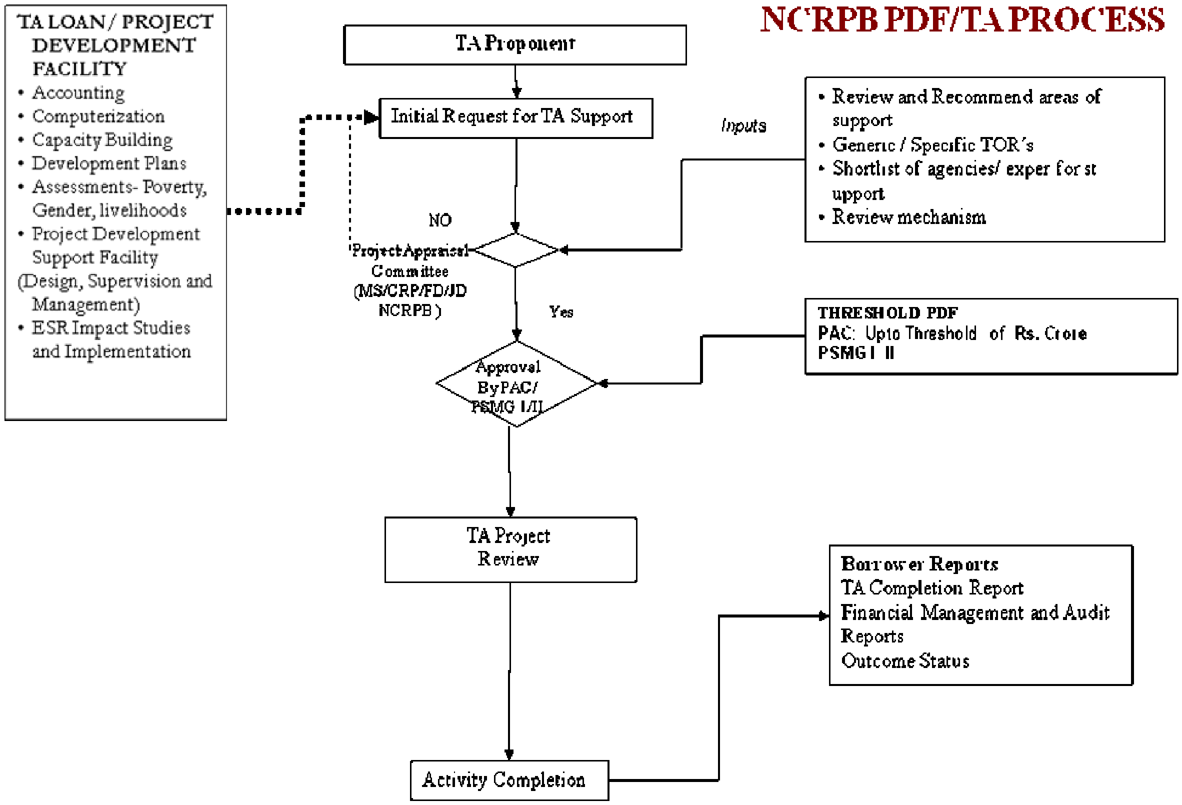
To sum up, the central question as to whether NCRPB can, and should evolve into a lending institution of scale and relevance, would depend on the demand for debt finance in the NCR region, and its capacity to develop a investment trajectory out of a normative type plan

Annex 5 Process Guidelines

Proposed Loan Administration Process



Proposed TA / Grant Administration Chart



Annexure 6 Regional environmental challenges

Environmental and Social Aspects in the Regional Plan

1. **Existing situation**: In 2003, NCRPB prepared the Regional Plan, which was meant to be the basis for the development of the region. As a part of this Regional Plan, environmental priorities for the region were also identified in a separate chapter. Air pollution, water pollution, solid waste and afforestation were identified as priorities. Also, the need for better co-ordination between NCR agencies was identified as required. Land was identified as the most crucial and critical environmental issue. Policies and strategies were proposed to reduce the impacts of various land use activities and improve the environmental conditions of the region. Specific eco sensitive areas / zones in the NCR were identified as required for conservation / protection.

2. To meet these environmental priorities, NCRPB has been facilitating planning / policy level changes, e.g. NCRPB is facilitating the extension of CNG for public transport in the NCR and this will bring about a sizeable reduction in the air pollution levels in the region. Similarly, NCRPB is exploring the identification of suitable wastelands that could be used for sanitary landfills in order to address NCR's major problem of solid waste disposal. However, none of these initiatives or activities has translated into investment projects that would bring out about a perceivable / tangible reduction in the impacts or the improvement in the environmental conditions. In other words, it does not appear that any follow-up action in terms of facilitating / financing investment projects was taken to realize the Regional Plan's environmental priorities.

3. **Future scenario**: NCRPB is uniquely placed to address complex environmental challenges that necessarily require a regional action. In other words, initiatives that requires the co-operation of the different NCR states to realize the environmental goals and bring about sustained benefits for the region as a whole. Such regional, coordinated action is imperative particularly in an environmental context, as environmental quality knows no state boundaries. If such coordinated action is not done, the good work done by one NCR state (e.g. improving air quality) can be easily eroded by another NCR state through its environment-unfriendly policies and practices. Therefore, internalizing the environmental externality needs to be done necessarily in a regional manner for these initiatives to bring long-term, sustainable benefits.

4. **Social Aspects**: The Plan by and large has a social objective of improved quality of life through stipulation of norms for environmental and social services and land use regulations based on general principles of safety. There are three local environmental challenges – water, air quality and waste – that are best addressed through a regional coordinated approach in order to arrive at a long-term sustainable solution. These are briefly described here and an outline of NCRPB action required is also included.

<u>Water</u>: There are two basic inter-connected issues: (i) water availability and (ii) water quality. Surface water sources from rivers / streams are limited and these pass through different states in the NCR region, ground water is being abstracted from aquifers that know no state boundaries, both surface and groundwater are being contaminated due to industrial activities in certain

stretches / locations in different states and this reduces the availability of good quality water. Resolution of availability of good quality water requires coordinated regional action for it to be a sustainable one. Clearly, this is a complex regional environmental challenge that requires an organization like NCRPB to proactively lead, plan and coordinate activities.

Air quality: Deteriorating air quality in the NCR is attributed to urban transport emissions, industrial air pollution and natural dust. Various apportioning studies have been done and continue to be done to determine the contribution from these various sources. In the NCR, there are contributions to the negative air quality of the region from the different states in the region. For instance, the initiative to convert all public transport to CNG in the state of Delhi is a good one but will be short-term and not sustainable if the region as a whole does not move to CNG. NCRPB has already initiated action in this regard. The same is true for industrial air pollution as well. Certain point sources of air pollution in the NCR are key contributors to the air pollution problem in the region. Similarly, wind movements and directions contribute to the generation of dust that results in increased air pollution. Here again, restoring the ambient air quality of NCR requires coordinated regional action for it to be a sustainable one. Clearly, this is a complex regional environmental challenge that requires an organization like NCRPB to proactively lead, plan and coordinate activities.

Waste management: Both industrial and municipal waste is being generated across the region and in the different NCR states. Whereas efforts to minimize waste has to be done by the respective states at the point of generation, overall waste management (particularly, transport and disposal) can be made more effective through a coordinated approach among the different NCR states. The basic philosophy is that waste – once generated – should travel the least distance before reaching its final point of disposal. If this is done solely based on the state boundaries, then sub-optimal solutions may result. Generally, disposal sites are identified if these are waste lands and have natural depressions that can be filled with wastes. These sites are not easy to identify, not always found in each state and often distances to these sites can be really long. Commonly, transfer stations are located in order to break long travel distances and streamline waste transport planning. Integrated waste management in the NCR requires coordinated regional action for it to be a sustainable one. Clearly, this is a complex regional environmental challenge that requires an organization like NCRPB to proactively lead, plan and coordinate activities.

Required NCRPB action: Undertaking a baseline study to (i) identify how each of the NCR states are presently addressing these problems issues in NCR and (ii) analyze how the individual state-level actions are mutually enriching or debilitating when NCR is considered as a region, and (iii) determine the set of interventions – policies, programmes and projects – that will be required for coordinated action in the region. With regard to policies and programmes, NCRPB should undertake the advocacy work using the political and bureaucratic strength that it has through its Board. For the identified projects (to be proposed by the different implementing agencies) in the set of interventions, provide assistance in the preparation of the initial project concept and detailed project report to begin with, and provide partial finance to the investment project to facilitate their implementation.