



Presentation to USAID Infrastructure Workshop

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Implementation Models for Revolving Fund Programs

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Largest, Most Successful Public-Private Partnership in the World

- Where is PPP working in the water sector?
- The U.S. water system
- 95% of all water and wastewater service providers in the US are publicly owned
- 95% of all public water system infrastructure investments are financed by the private sector
- The private sector through the purchase of revenue bonds (project finance) provide 20-25 year financing for projects
- This is done with a focus on keeping tariffs affordable
- Financial engineering is the key to lower financing costs
- Developed sustainable credit enhancement facilities that revolve and grow over time

State Water Revolving Funds are Key Component of the PPP System

- Established by States to facilitate financing of smaller-scale municipal projects
- Provide project development assistance to local governments on an “as needed” basis to make projects bankable
- In effect rent their project development and financial structuring skills to local water utilities for limited periods of time
- Mobilize private sector investment while keeping costs of financing at affordable levels
- Both leverage government funding and reduce costs of financing
- Serve as a conduit between local projects and capital markets
- Bundle projects for financing to reach critical size to attract investors and mitigation risk through
- Owned and managed by state authorities
- Leveraged over \$50 billion USD of private sector financing for small-scale projects in last 10 years.



Pooled Financing Commons Characteristics

- Standardized documentation
- Uniform underwriting criteria
- Umbrella credit enhancements

Management/Ownership of Bond Banks

Professional and competent management must also:

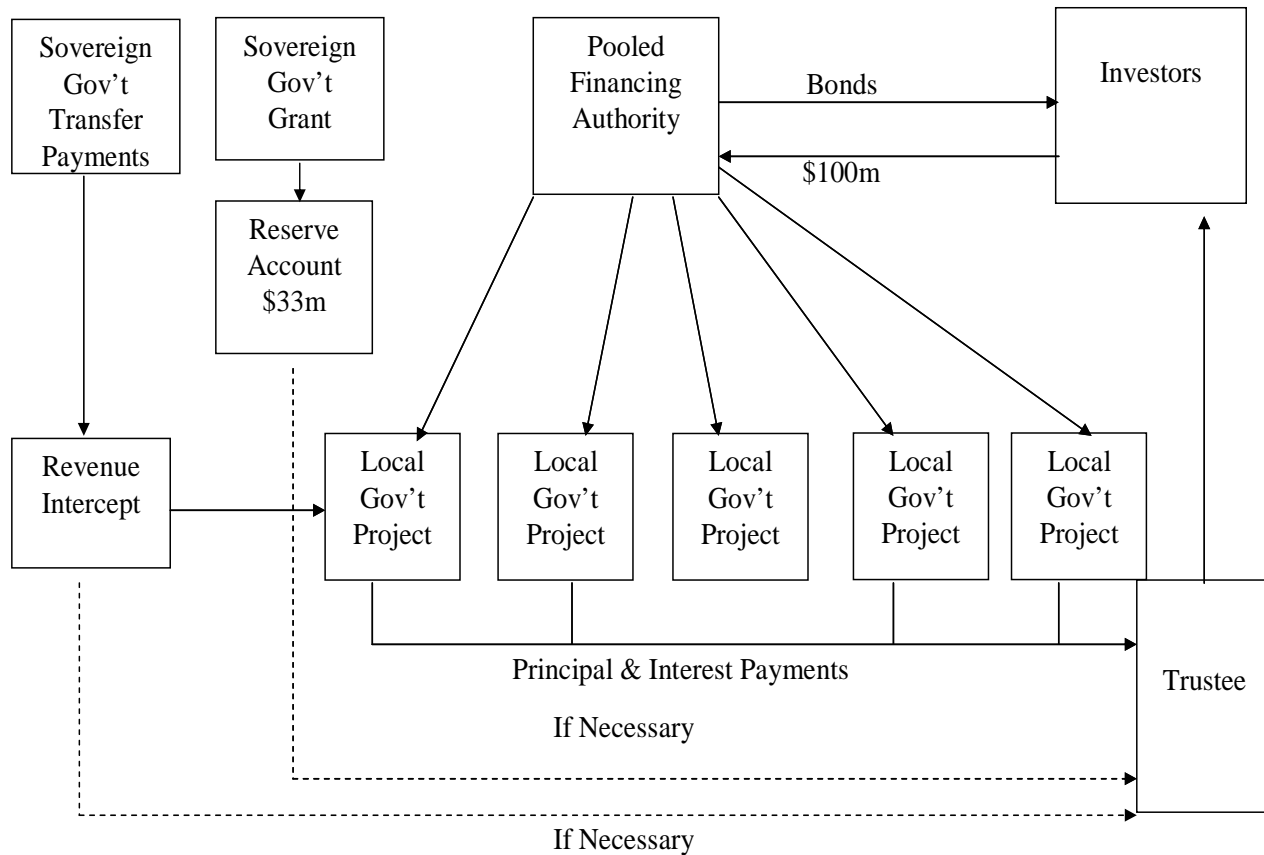
- Be free of political influence and experienced in financial transactions
- Effectively evaluate projects against established criteria
- Work effectively with investors/rating agencies
- Earn the trust of local governments
- Public entities not private banks/no equity



Key Issues for Investors

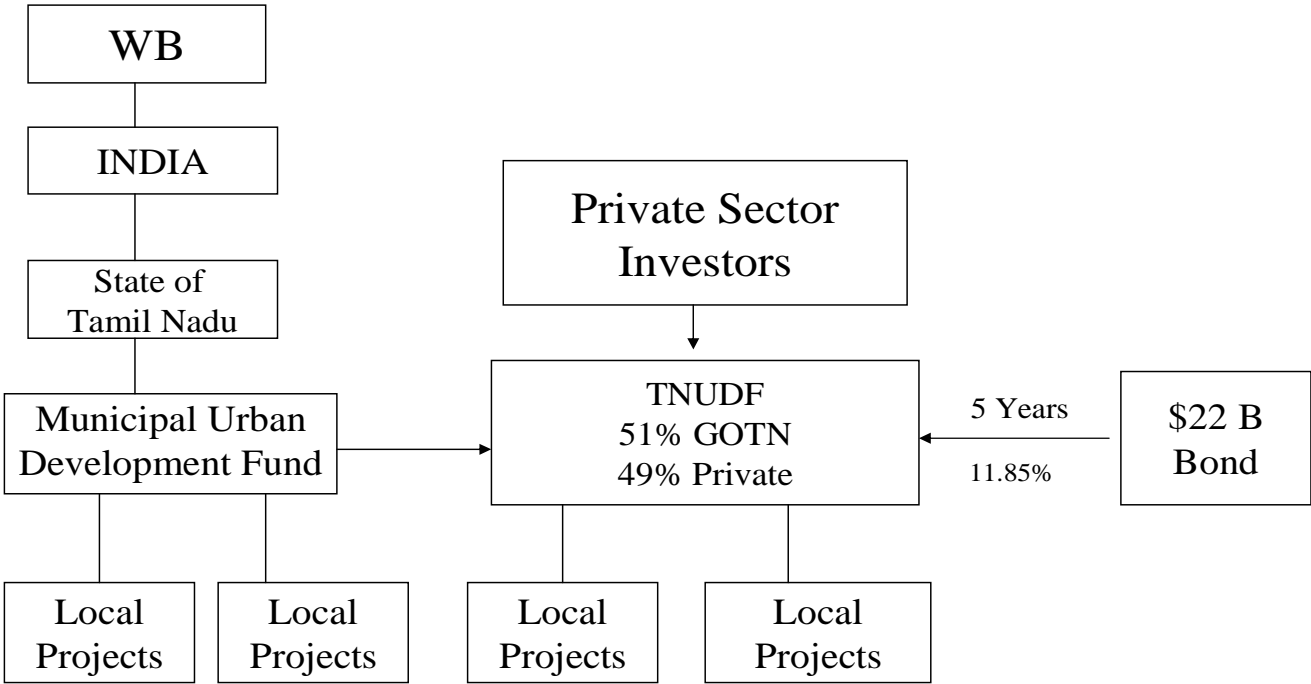
- Legal architecture of pooled financing program
 - Enabling legislation
 - Loan Agreements with local governments
 - Master Trust
 - Credit Enhancement Agreements
- Management capabilities of institution

Simplified Flow of Funds for Pooled Financing 100 Million



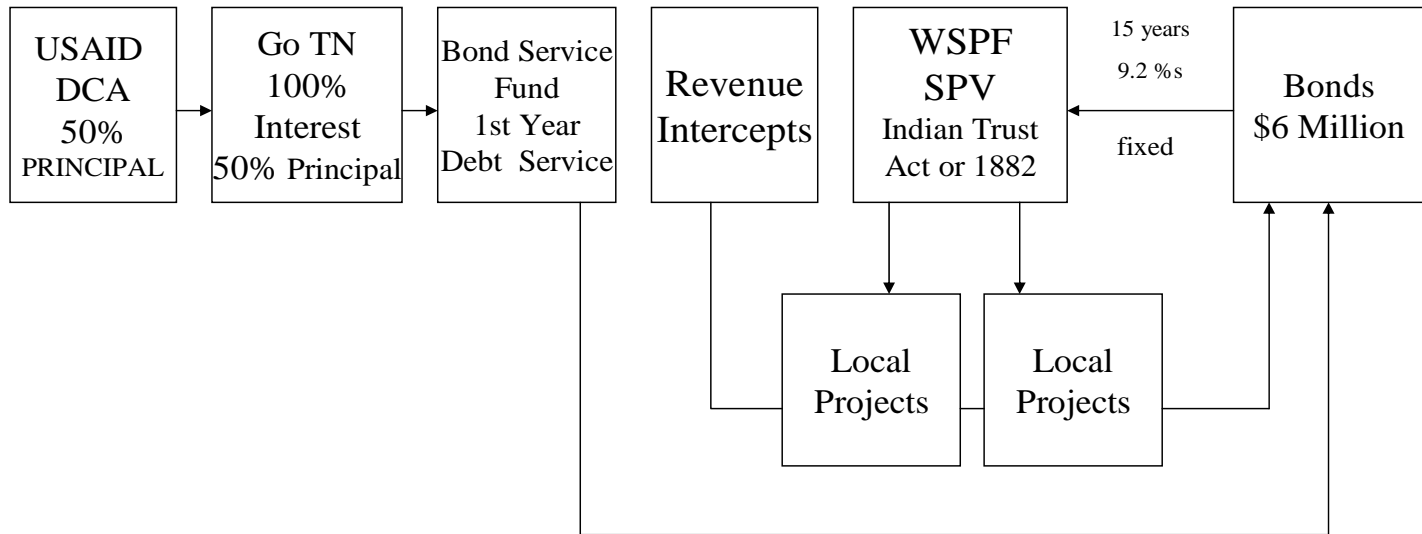
TAMIL NADU
On-Lending Model
First Bond Offering

INDIA

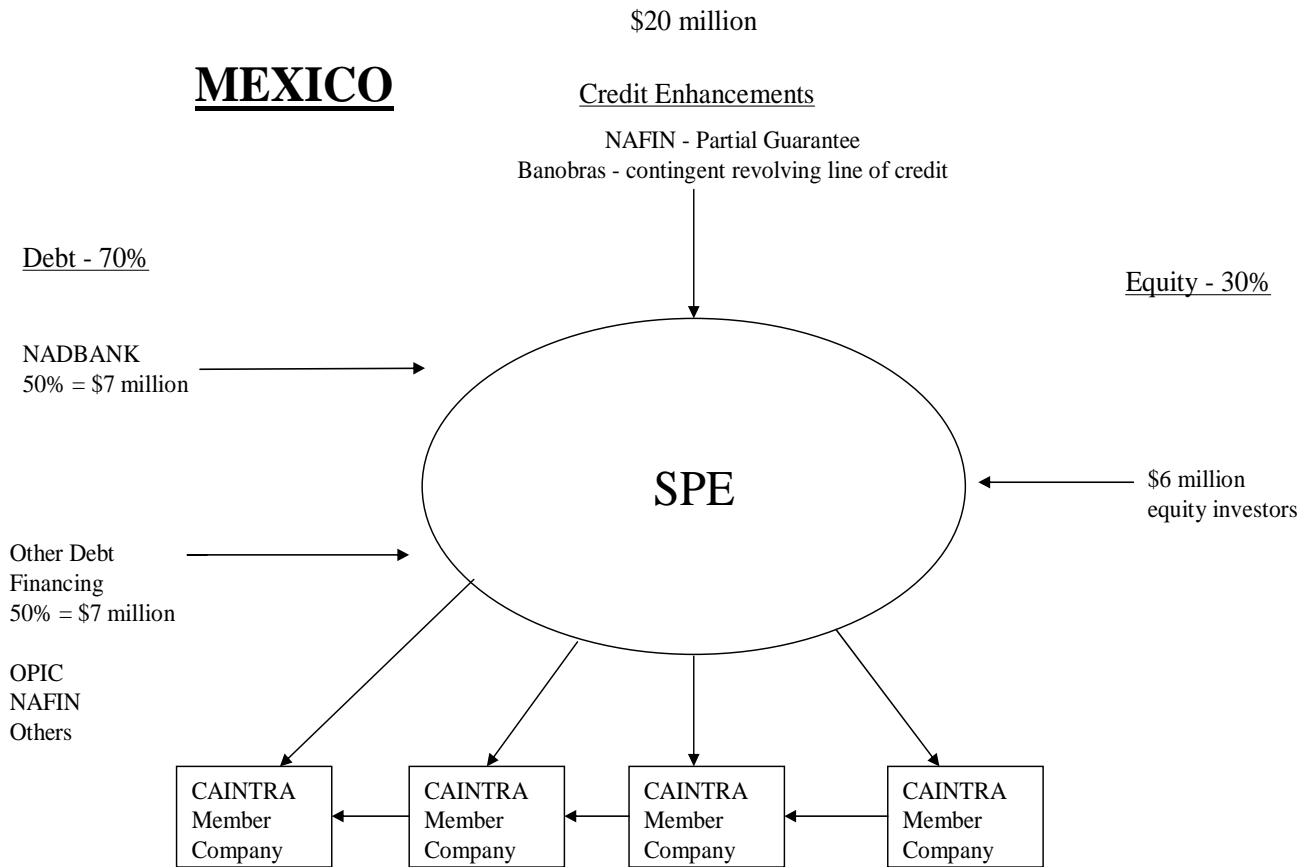


INDIA

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Second Bond Offering



CAINTRA - Finance Structure



Innovative Application of Sate Revolving Model for Infrastructure Funds

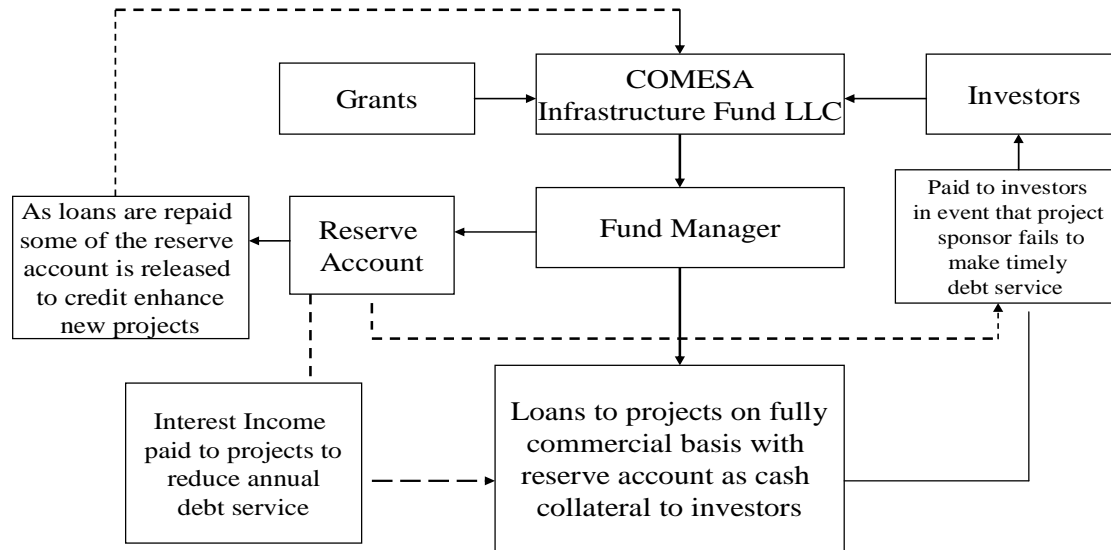
- Infrastructure investment funds are a growing source of potential financing for local water projects
- Global infrastructure fundraising topped \$34bn last year - nearly double 2006's level - and nearly seven times the \$5.2bn raised in 2005
- The world's 20 largest funds have nearly \$130bn under management, 77 per cent of it raised over the past two years, with about 63 per cent from new entrants, according to McKinsey & Company.

Characteristics of Infrastructure Funds

- These funds generally involve private sector investors who collectively capitalizing a fund for specific investment purposes to be administered by a fund managed – usually a private sector management firm
- Each fund has underwriting criteria that individual projects must meet to qualify for investments
- Investment fund managers have greater project financing expertise and experience than local banks
- Investment fund managers may seek to obtain grant or other special assistance for particular projects but on a one-off basis
- However, combining investor resources with grant funding is not a core competence or focus of investment fund managers
- There is a need to combine state revolving fund concepts to combine donor resources within investment fund structures to mobilize private sector financing on affordable terms
- Does not require investment funds to compromise investment decisions or unduly enrich private investors with donor grants
- Allows for greater flexibility in individual project financial design

Water Infrastructure Fund Models

Option I: Reserve Account Model



Cash Flow Projections for the Reserve Fund Model

Project Financing (US\$ thousands)							
	100,000.00						
Year	1	2	3	4	5	10	20
Project Financing	100,000.00	98,612.12	97,057.70	95,316.74	93,366.88	79,493.19	11,953.46
Annual Debt Servicing	13,387.88	13,387.88	13,387.88	13,387.88	13,387.88	13,387.88	13,387.88
Payment on Principal	1,387.88	1,554.42	1,740.95	1,949.87	2,183.85	3,848.69	11,953.46
Remaining Balance at Year End:	98,612.12	97,057.70	95,316.74	93,366.88	91,183.02	75,644.50	0.00
Reserve account	33,333.33	32,870.71	32,352.57	31,772.25	31,122.29	26,497.73	3,984.49
Interest Income	2,666.67	2,629.66	2,588.21	2,541.78	2,489.78	2,119.82	318.76
Effective Annual Debt Service	10,721.21	10,758.22	10,799.67	10,846.10	10,898.09	11,268.06	13,069.12
Funds Available for Future Projects	0.00	462.63	518.14	580.32	649.96	1,145.44	3,557.58
Total Portfolio	100,000.00	101,387.88	102,942.30	104,683.26	106,633.12	120,506.81	188,046.54

Comparative Debt Service Table on a 100 Million Loan

Term	Interest	Annual Payment	Total Payment
7 yrs	13%	21.8 M	152.8 M
7 yrs	8%	18.7 M	130.9 M
7 yrs	6%	17.5 M	122.7 M
15 yrs	13%	15.2 M	227.7 M
15 yrs	8%	11.5 M	172.0 M
15 yrs	6%	10.1 M	151.9 M

Balloon Payment Model

Year	1	2	3	4	5	10	11	20
Project Financing	\$80,000.00	\$77,825.24	\$75,582.65	\$73,274.01	\$70,901.60	\$58,204.28	\$0.00	\$0.00
Annual Debt Servicing - 10 years	(\$13,019.63)	(\$13,019.63)	(\$13,019.63)	(\$13,019.63)	(\$13,019.63)	(\$13,019.63)	\$0.00	\$0.00
Annual Debt Servicing - 20 years	(\$9,396.77)	(\$9,396.77)	(\$9,396.77)	(\$9,396.77)	(\$9,396.77)	(\$9,396.77)	(\$9,396.77)	(\$9,396.77)
Payment on Principal - 20 year	(\$2,174.76)	(\$2,242.58)	(\$2,308.64)	(\$2,372.41)	(\$2,433.33)	\$536.00	\$0.00	\$0.00
Financing - Remaining	\$77,825.24	\$75,582.65	\$73,274.01	\$70,901.60	\$68,468.27	\$58,740.29	\$0.00	\$0.00
Balloon Payment Reserve	\$33,000.00	\$34,980.00	\$37,078.80	\$39,303.53	\$41,661.74	\$55,752.81		
Reserve Interest Income	\$1,980.00	\$2,098.80	\$2,224.73	\$2,358.21	\$2,499.70	\$3,345.17		
Funds Available for Balloon Pay	\$34,980.00	\$37,078.80	\$39,303.53	\$41,661.74	\$44,161.44	\$59,097.97	\$893.69	\$85,465.16
Balloon Reserve + Financing Contribution							\$10,290.52	\$94,861.99
Project Financing							\$125,000.00	\$98,282.41
Annual Debt Servicing							(\$14,682.45)	(\$14,682.45)
Payment on Principal							(\$2,182.45)	(\$4,046.18)
Financing Remaining							\$122,817.55	\$94,236.24
Total Loan Portfolio Cumulative	\$80,000.00	\$80,000.00	\$80,000.00	\$80,000.00	\$80,000.00	\$80,000.00	\$205,000.00	\$205,000.00
Interest Rate Applicable to Loan		10%						
Interest Rate Applicable to Reserve		6%						
Percent at Investor Financing		100%						
Percent at 0% Financing		0%						
Number of Years		10						
Number of Years - Option Two		20						