

# **Towards Bank Financing of Urban Infrastructure**

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## *Abstract*

*Provision of quality urban infrastructure is an area of major concern for the Indian Economy. The financing of this component of infrastructure may turn out to be a somewhat tractable problem, even in the short to medium term. The present paper focuses precisely on this issue. In more recent times, however, several initiatives have been taken to ensure that greater devolution of political and economic power actually happens. Amongst them the 73<sup>rd</sup> and 74<sup>th</sup> Constitutional Amendment Bills have sought to give local government – municipalities and panchayats true measure of financial autonomy. Given the need for commercial funding or attracting funds from the capital market for urban infrastructure a large number of initiatives have been made in India, some in participation with the World bank and USAID. Attempts are being made to make the ULBs develop the required commercial outlook for private funding. The volume of debt and equity financing has grown significantly for concessions and some financing mechanisms have evolved, mostly syndicated bank loans arranged by foreign banks and, to a much smaller degree, bond financing. However in adapting these institutional practices to the Indian conditions will require several crucial modifications. In the context of 'universal banking' the existing financial institutions and commercial banks may be mandated to do the job, thereby saving the cost of setting up new institutions.*

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# **Towards Bank Financing of Urban Infrastructure**

**Abhay Pethe and Manju Ghodke**

## **1. Introduction**

In the past several years, the state of the nation's infrastructure has attracted considerable attention. We have seen wide ranging reforms at the policy level as the deficiency in our infrastructure has been recognised as one of the prime factors inhibiting the Indian economy from reaching a higher trajectory of growth. The gap between the required and available infrastructure in the country is well documented and publicly debated (See Rakesh Mohan Committee Report, and Indian Infrastructure Report 2001). The shortfall and funding requirements of sectors such as power, ports, telecom and roads are the flavour of many seminars and debates. Governments at the centre and state, regulatory commissions, financial institutions and foreign investors are working in these sectors at different levels and in great detail. At the same time however, an important segment of infrastructure, which is classified as 'urban infrastructure', is assuming alarming proportions. *Notwithstanding the usual rhetoric, it needs to be clearly appreciated that the future of India is urban and hence the problem needs urgent attention. We also believe that the financing of this component of infrastructure may turn out to be a somewhat tractable problem, even in the short to medium term.* The present paper focuses precisely on this issue.

Kick-starting infrastructure projects at the national and state levels are the priority of policy makers today. With state funding becoming increasingly difficult combined with huge lags in crucial investments in infrastructure attempts are being made to 'commercialise' this hitherto heavily subsidised government dominated sector. The onset of rapid reforms since 1991, led to considerable activity in terms of projects, policies, regulation and foreign collaboration particularly in areas of power, ports, roads and telecom. This level of activity is not evident in the area of urban infrastructure, the

demand for which is closely linked to the rapid growth in our urban regions and *hence* that in the Indian economy at large. While there have been stories of severe power shortages, uncollected garbage and untreated sewage are common occurrences, and so too are tales of heavily contaminated water and polluted air, not much is being done about it.

## **2. The Urban Scenario**

The urban sector in India today presents a huge problem. The explosive growth in urban India, resulting in the second largest urban population in the world after China has led to severe infrastructure constraints. Important areas of concern are water, transport, housing, electricity, health, sanitation and education. The fund requirements of these sectors clearly bring into sharp focus the large unmet demand for funds and the immediacy of kick starting this process. Many estimates are available, but whatever the correct source the needs are large. The growth of population and urbanisation is placing a heavy demand on all kinds of urban infrastructure and services and are posing serious impediments in enhancing productivity. Apart from deficiencies in terms of access to facilities, the operation and maintenance (O&M) of infrastructure leaves a lot to be desired. According to estimates of the Rakesh Mohan Committee the total funds required by urban infrastructure during the period 1996-2001 will be in the range of Rs. 800- 940 bn. In terms of sectoral requirement the annual investment need for urban water supply, sanitation and roads is estimated at about Rs. 28, 035 crore for the next 10 years. The central public health engineering (CPHEEO) has estimated the requirement of funds for 100% coverage of the urban population under safe water supply and sanitation services by 2021 at Rs. 172, 905 crore. Estimates by RITES indicate that the amount required for urban transport infrastructure investment in cities with population of 1 lakh or more during the next 20 years would be around Rs. 207, 000 crore. This transcends roughly to a total fund requirement of around Rs. 408,000 crore. According to another estimate, Rs. 300 bn maybe needed by India's cities on an annual basis, while the actual flow is just about 10% of this requirement. Government support in the form of plan outlay has not

kept pace with the growth in urbanisation (Table 1). The share of plan outlay on Housing and urban development has declined since the fifth Five year Plan.

**Table 1**

**Plan Outlay in Housing and Urban Development Sector**

<b>Plan</b>	<b>Total Outlay</b>	<b>Housing &amp; Urban Development</b>	<b>Percentage share in the total (Rs. in million)</b>
First Plan	20688	488	2.1
Second Plan	48000	1200	2.5
Third Plan	85765	1276	1.5
Annual Plan(1966-69)	66254	733	1.1
Fourth Plan	157788	2702	1.7
Fifth Plan	394262	11500	2.9
Annual Plan (1977-80)	121765	3688	3.0
Sixth Plan	975000	24884	2.6
Seventh Plan	1800000	42295	2.3
Annual Plan (1990-92)	1338350	3001	2.2
Eighth Plan	4341000	105000	2.4

Services in urban infrastructure are in the domain of municipal bodies or urban local bodies (ULBs) who are vested with a long list of functions delegated to them by the state governments under the municipal legislation. Traditionally the ULBs received funds through loans and grants from the central and state government for the purpose. Over time these sources of finance have been drying up and the ULBs have been asked to find their own funding. *In terms of legislation the passage of the 74<sup>th</sup> constitutional amendment has made way for the financial autonomy of these bodies.* There are around 3682 (11<sup>th</sup> finance commission) ULBs spread across the country. The quantum of funds required by them as discussed earlier are large and the need is to create the correct

medium through which funds from the capital market could be channeled into these activities. It needs to be noted that mere delegation of functions without backing in terms of resources is redundant. Fortunately this is being recognised even in the allocation criteria being set out by the 11<sup>th</sup> Finance Commission.

### **3. Our Governance Structure**

In India, since Independence, we have had, in theory, a 3-tier governmental system. We have the central government, the state governments and the local governments, i.e., the panchayats and municipalities. The devolution of political and financial powers has been sought to be enshrined in the Constitution and many committees like the Gadgil Committee and the 10 Finance Commissions constituted since Independence, the Sarkaria Commission and the highest standing committee – National Development Council – have all sought to balance the interests of different constituent parts of the Indian policy. In practice, however, in the first four decades of independence, there was an increasing centralisation of political, economic and financial powers. Perhaps, this was due to the importance of a centralized planning process, which was felt to be only method for a backward country to become industrialized.

In more recent times, however, several initiatives have been taken to ensure that greater devolution of political and economic power actually happens. Amongst them the 73<sup>rd</sup> and 74<sup>th</sup> Constitutional Amendment Bills have sought to give local government – municipalities and panchayats true measure of financial autonomy. Secondly, the traditional method of funding infrastructure through the SLR (Statutory Liquidity Ratio) bond route and other methods of preempting national savings by governments, appears to have lost steam. This is because on one hand there is a general move towards reduction in CRR and SLR requirements and on the other hand, banks are already holding more than the required SLR paper thus eliminating the bite of this particular regulatory measure. The general consensus is that private and local level initiative is increasingly required if infrastructure requirements are to be rapidly met in an efficient fashion. The beneficiary of infrastructure development is very often a local resident and the implementor of these

investments are local governments, which are generally constituted through an elective process. Local level initiative thus makes for greater transparency and accountability.

The Eighth Plan (1992-97) for the first time explicitly recognised the role and importance of urban sector for the national economy. The growth in urban population in the period 1991-2001 was 31.13% as against 17.97% for the rural areas. While growth rate of employment in the urban areas averaged around 3.8% per annum, it dropped to about 1.6% in the rural areas. Therefore, the urban areas have to be enabled to absorb larger increments to the labour force. The Plan identified the key issues in the emerging urban scenario:

- the widening gap between demand and supply of infrastructural services badly hitting the poor, whose access to the basic services like drinking water, sanitation, education and basic health services is shrinking
- unabated growth of urban population aggravating the accumulated backlog of housing shortages, resulting in proliferation of slums and squatter settlement and decay of city environment
- high incidence of marginal employment and urban poverty as reflected in NSS 43<sup>rd</sup> round that 41.8 million urban people lived below the poverty line

Given the need for commercial funding or attracting funds from the capital market for urban infrastructure a large number of initiatives have been made in India, some in participation with the World bank and USAID. Attempts are being made to make the ULBs develop the required commercial outlook for private funding. Different models of financing are being tried, such as direct access of capital market through the issue of municipal bonds (ULBs of Ahmedabad, Bangalore, Vijayvada and Ludhiana), implementation through the setting up of an SPV (Tirupur water supply and sewerage project), BOOT and BOT arrangement (Bangalore water supply), state level urban

development funds (TNUDF). and Tax intercept concept for loan servicing of ULBs (in Madhya Pradesh). The initiative and contribution of US FIRE(D) project needs especial mention in this regard.

#### **4. The Commercial Banks Interface**

In recent years, the banking industry has been undergoing rapid changes, reflecting a number of underlying developments, mainly advances in communication, increasing competition and closer linkages between the real and financial sector. These developments have manifold consequences for the institutional and systemic structure of the financial sector in general and banking in particular. Markets for risk have emerged in which exposures to specific market or credit risks can be bought and sold separately from the underlying financial assets. The business profile of financial institutions is also undergoing change. The service traditionally associated with 'banking' is being offered by institutions not normally characterised as banks, while banks have gradually made forays into non-banking activities. Mergers and takeovers of smaller institutions have led to the emergence of transnational conglomerates, offering services ranging from traditional commercial banking to investment banking and insurance.

*Given this dynamic backdrop, an issue of increasing bank exposure to the emerging sector of Urban infrastructure is being proposed in this paper.* There are three broad reasons for this. The first is the blurring of boundaries between institutions, the emergence of universal banks, which would necessitate banks taking longer exposures than hitherto. The other is the availability of funds in the banking system as many of its erstwhile borrowers are now disintermediating. The time is perhaps right for banks to take a view on this emerging sector. The third is the enormous opportunities of financing emerging from structured financial products, enabling the development of user driven models. Given the concern of banks about their capital adequacy norms, NPAs and competitive margins there are ways that banks could possibly consider participation in this segment. One approach would be direct funding as in any other industry. In the initial phases this could involve cherry picking of projects till such time that the ULBs develop



the required expertise and financial discipline and the lenders too develop experience of such lending. Participation could also be possible by combining with other intermediaries to lend to such projects.

Banks in India have been at the forefront of industrialisation and even today despite competition from other intermediaries are the larger repositories of funds in the economy. Currently, in the period April-Oct FY 01, the scheduled commercial banks had incremental aggregate deposits of Rs. 86, 682 cr, total credit of Rs. 32, 691 cr, investments of Rs. 45, 385 cr and cash balances of Rs. 13, 469 cr. Significantly the investment deposit ratio was as high as 40% (Oct 19, 01) against the required SLR of 25% on incremental deposits. Given this canvas of availability and use of funds, we would like to explore the possibilities of commercial bank funding of urban infrastructure.

Despite the growing significance of this segment of infrastructure, we do not see much activity of banks here. This is evident from the available data on banks deployment of credit. The current RBI classification of industry-wise deployment of incremental credit shows lending to the infrastructure sector at Rs. 4106 cr (FY 01) having quadrupled over Rs. 12 98 cr in (FY 00). In terms of share in total incremental credit, infrastructure accounted for a higher share of 21% in FY 01 (6% in FY 00). However as a proportion of outstanding credit the share of infrastructure has been 5% (July 28, FY 01). The RBI classification of data does not provide any information about banks having any exposure to urban infrastructure in particular.

An interesting point is that not all infrastructure projects are necessarily large. There are a vast range of small projects, which can be implemented in a span of 4 – 5 years which would be the comfortable time period for banks. Our financial system has had the experience of funding projects of this duration. The question that emerges is, as to why the banking system with over Rs. 1100, 000 crore of investible funds does not take exposure to the shorter end of infrastructure projects. Does it hinge on changes in the policy framework? Is universal banking the way out here? The entire focus of universal banking as suggested by the Narsimhan committee seems to be on financial institutions

converting themselves into banks and getting into activities at the short end. In the fitness of things the same corollary would apply to banks extending their activity in the long-end.

There is macro economic concern behind all this that should be highlighted. In the context of move towards ‘universal banking’, already there is evidence that there is convergence amongst the portfolios of commercial banks and the so-called development banks. The move is rapidly shortening the maturity of the portfolios of both. Whilst this is to be seen in the context of ALM requirements, from a macroeconomist’s perspective this is alarming. After all this will imply that the longer term finance requirements will remain unmet and will have serious repercussions on the productivity and growth of the real economy.

#### **4.1 The Categorisation of Projects for Bank Funding**

The first Category of projects could be those where the beneficiaries are identifiable and the benefits accrued to each beneficiary can be quantified. Examples here are telescopic rates for water supply and electricity and cross subsidy for public transport. The second category of projects would be those where beneficiaries are identifiable but the benefits accrued to each beneficiary are not quantifiable directly but can be estimated through indirect methods such as flat rate charges like toll on road / bridge usage. Both these categories could be commercially funded given the identifiable cash flows. The last category is of those projects where it is difficult to identify individual beneficiaries as well as to quantify the benefits accrued to the individuals or the groups of beneficiaries. Examples under this category are urban roads, street lighting and environmental improvement etc.

One major issue in all infrastructure projects is the difficulty of implementing the ‘user pays’ principle, which is the determining factor often for the commercial viability of projects. This could be achieved by looking at different segments of the project. Some financial institutions have devised certain innovative user pay instruments in the different sectors. In the case of water supply projects, cash generation is possible through charges

for advance registration, connection, enhancement of water tariff, Water benefit tax/water tax, betterment charges, development charges, and charges from water Kiosks. In the case of sewerage projects, funds could be generated from connection charges, sewerage cess Tax, conservancy tax, sale of renewable waste, sale of sludge and sale of nutrient rich wastewater. For the solid waste management projects funds could be derived from collection Charges, cess, sale of renewable waste, and fines for dumping waste. In the case of roads/fly-overs/ the possibilities are Toll Tax, and advertisements on roads/bridges. Such options are also available for airports and railway terminals. It is well to recognise that this is not merely a matter of finance but involve the larger problem of determination of 'political will'.

#### **4.2 Direct Funding by Banks in Urban Infrastructure – Indian Experience**

The cases mentioned below clearly bring out the possibilities of banks foray into funding urban infrastructure projects. Though the quantum of funds in the totality of bank lending may appear small it is nevertheless valuable evidence.

The Vadodara Municipal Corporation (VMC) for the first time explored bank funding when it took a loan from Corporation bank .in 1999 for modernising two existing sewerage treatment plants. The total cost of the project was Rs. 400 lacs of which f Rs. 213 lacs was the bank loan. The period was five years with quarterly repayment with VMC retaining the exit option. No security was offered except general lien on the investments of VMC in the Corporation Bank. After this successful transaction VMC approached the bank for the revamping of sewerage treatment plants. The second loan in the series was contracted with the Corporation Bank only for the construction of 50 MLD capacity water treatment plant at Nimeta. The estimated cost of the project was Rs. 800 lacs with the loan component of Rs. 500 lacs. The moratorium period was of nine months (July 99 to March 2000). The loan repayment period was seven years. The project was completed ahead of schedule. Again in this loan no security, mortgaged has been given except general lien on the investments of VMC in the Corporation Bank. The loan carried lowest interest rate possible based on PLR. VMC had the exit option in the

loan. Further VMC also took a loan of Rs. 300 lac from Corporation bank on the same terms and conditions for constructing water over-head tank for the sama area of Vadodara.

The VMC has also taken a loan from Bank of Baroda of Rs. 2000 lacs for developing 14 main arterial roads with all the facilities like central streetlight with divider, footpaths, cross-duct for passing service lines, storm water drainage etc at the cost of Rs. 3000 lacs. The interest rate is PLR plus a spread of 1%.

The Central Bank of India has given a loan of Rs. 1600 lacs to VMC for improving 40 major roads of the city and the modernisation of the sewerage treatment plant. The interest rate is PLR plus a spread of 50 basis points to be paid quarterly and on a reducing balance basis. VMC again had the exit option. This loan was backed by two securities, one, fixed deposits receipts at the rate of 10 % of outstanding loan amount marked with the specific lien and an escrow account. Other banks namely, Indian overseas bank and state bank of Saurashtra have also advanced loans to VMC for urban infrastructure projects.

### **4.3 Pooling of Risks**

Domestic borrowing by local governments for services and programs unrelated to privatization will continue to use a mix of domestic public and private creditor sources. A strong domestic capital market can work only where the creditworthiness of local governments improves. Creditworthy local governments should always be able to borrow from private banks and in some cases issue domestic bonds, but the majority of small local governments might still need to rely on municipal development funds and other central government sponsored financial intermediaries to finance infrastructure needs.

There are alternative ways of diversifying the risks of smaller government units through the use of bond banks, loan pools, and guarantees. These concepts, prevalent in industrialized countries, may be adopted to local situations on a country-by-country basis.

However, the hard work of developing the foundations for creditworthy local governments cannot be avoided. This entails credible accounting and management systems; independent auditing of financial results; multi-year capital and operating budgeting systems; sound financial management and performance evaluation of government services; pension and administrative reforms to control personnel expenditures; improved and transparent procurement procedures; transparent political structure; and elected decision-makers accountable to voters. These changes will take place over time. In the meantime domestic borrowing trends will change incrementally as local governments have better access to capital, but with creditors being more selective in choosing borrowers.

#### **4.4 Privatizations and Concessions**

Local governments look to the panacea of the private sector and concessions to provide their citizens with more efficient and hopefully cheaper services. However, the government still has a critical role to play in regulating the private companies and, from a financing perspective, to develop concession agreements that clearly allocate construction, commercial and political risks, and are transparent and well developed. Development of concession agreements goes hand in hand with the development of the legal and institutional regulatory environment required to control private service providers.

##### **4.4.1 Incentivising the Banks to Fund Urban Infrastructure Projects**

Considering the vast need for funds in this sector, proving incentives for such lending could have vast benefits. Some segment of urban infrastructure could be brought under the category of priority sector lending as was done with housing finance. This could even be done at the cost of eliminating some items of social sector. This flows from the argument that banks need to do banking first and then meet their social objectives. The policy push on tackling NPAs strengthens this argument.

#### **4.4.2 Development of Secondary Market for Bonds**

The major participation of banks in the area of urban infrastructure can be in the development of a vibrant secondary market for municipal paper. A number of committees had recommended the need for developing a strong municipal bond system for development of urban infrastructure. Despite the need for funds municipal bonds as a financial vehicle is still not widely used, as has been the experience of developed countries particularly the USA where municipal bonds account for 80% of the bonds market. Part of the reason is the unavailability of any secondary market in this instrument in India. The Rakesh Mohan committee in 1996 had recommended the development of a municipal bond system as part of the overall development of the capital market. The task force set up to assist SFCs also recognised the need to promote municipal bonds. The Ninth plan approach paper in 1997 also recommended the issue and trading of muni bonds.

Banks as primary dealers have been conducive to the secondary market activity of government securities. The same role could be extended to paper issued by ULBs which are technically the third layer of the government. In the beginning the paper of the financially stronger municipalities could be provided two way quotes. This would increase the demand for this paper thus encouraging more IPOs. Such a development would ensure better price discovery, improved risk diversification, and bring about trading activity. Activities in the municipal market can pick-up if there are motives in holding such paper. The motives could be broadly classified as: The arbitrage motive, which arises from variation in spread, maturity and credit. This requires skills, ability, incentive and desire to take advantage of the arbitrage, which is available with the banks. The Treasury operations motive which arises out of trading of temporary surplus liquidity. The Portfolio balancing motive, which arises out of mark-to-market, concerns and is the most important driver around the world. This would become the crucial motive in India, only when regulation will require all holders of debt to actively mark-to-market their portfolio. Last is the ALM motive - arising from mismatch in the portfolio. Banks

have a stake in all the above activities and hence their role in developing a secondary market for municipal paper would boost such activity.

In case of further deepening of the government securities market the RBI has already put in place certain institutional reforms. One such is the establishment of a clearing corporation with SBI as chief promoter. This would ensure mitigation of credit risk and would facilitate clearing and settlement of all transactions in money, government securities and foreign exchange markets. The other important development is the opening up of the repo market to bonds of PSUs and financial institutions. The setting up of a settlement fund and repeal of the Public debt act to simplify procedures in transactions and enable electronic transfer in demat an introduce order driven screen based trading. These institutional reforms could also be utilised for good rated municipal paper. The credit information bureau set up for the collection and dissemination of information on borrowers could be utilised to develop a database on ULBs as well.

## **5. The Current Models of Private Sector Participation (PSPs) – International Experience**

Experiences of urban infrastructure funding in the developed countries have thrown up a combination of models all aimed at some form of private – public partnership in projects. Broadly the models can be divided into two groups, one referring to the formal, large-scale, mainstream commercial sector, another referring to the informal, small-scale sector. Formal, large-scale PSP fall into the following models:

- The French model, actively promoted by the World Bank, can be found in Africa and other developing countries. A private commercial company enters into one or a combination of several possible contracts or arrangements with a host government. These range from the service contract, where the company is contracted to carry out a discrete technical or administrative task for the state provider, to concession arrangements, where the private contractor is involved in financing both the working capital for operating, maintaining and managing the whole system, and the

investment costs for expanding and/or rehabilitating the system. At the end of the concession period, the installations are handed over to the state, unless the contract is renewed. Concession arrangements have a longer life span than contractual arrangements, usually between 20-30 years compared to 3-12 years for the latter.

- The British model, which only exists in England and Wales. Under this arrangement, the state's infrastructure and assets are sold off to the private sector. The state then becomes responsible for the regulation and control of the new private monopoly.
- The Dutch model, common in Germany, the Netherlands, Belgium and the US. The water company's shares and infrastructure are owned by state agencies (municipal and provincial governments) but the company is autonomous, operates as a profit organisation and finances its operations through loans from commercial financiers as well as consumer charges.

Informal, small-scale PSP is receiving attention lately from the World Bank, who are starting to recognise the potential of these providers to deliver improved services to poor urban dwellers at low investment costs. Categories range from providers in permanent partnership with water utilities, franchisers of public baths/toilets, mobile water carters/truckers, entrepreneurs who bring piped water from their own or water utility sources to unserved communities or who build tertiary and secondary sewerage systems connected to the sewer company's mains.

### **5.1 Innovative Financing Mechanisms in Private Borrowing - International Experience**

One of the private borrowing techniques that has emerged in Latin America is a "tax revenue intercept" mechanism for securing bank loans. Municipalities in Argentina, Colombia and Mexico use some variation of this approach. In Argentina, provinces use tax revenues collected by the central government and distributed to the provinces as security for borrowing from private or state-owned banks. The tax revenues, generated primarily by federal income and value added taxes, are allocated to each province based



on a formula agreed upon between provincial and central government legislatures. The central government collects the tax and distributes it to the provinces' accounts at the state-owned national bank. This allows for an "intercept" mechanism wherein a creditor can have the national bank remit the debt service owed by the province to its own account at the national bank. Debt service on the private bank loan gets paid and the remaining taxes are then remitted to the province's account at the national bank. This mechanism has also been used by a province in Argentina to borrow from an international creditor. Lenders have a first lien on the tax revenues of the province. Another version of the intercept method as security for private bank loans has been developed in Colombia through the FINDETER program (*Financiera de Desarrollo Territorial, S.A.*).

In Mexico, a variety of the intercept method was recently used to secure payments to concessionaires for wastewater treated at their sewer treatment plants. Many municipalities and state governments have concessioned sewer treatment plants. Part of the security for the financing of the plants derives from a line of credit from the state development bank, BANOBRAS. In the event that a municipality is unable to pay the concessionaire for the plant's treated water, the concessionaire can draw down on a line of credit provided by BANOBRAS. BANOBRAS, in turn, could intercept the state's transfer revenues to repay the credit line in the event that the municipality did not repay it in a timely fashion. After the financial crisis in late 1994, BANOBRAS has not entered into new credit lines using this mechanism.

The volume of debt and equity financing has grown significantly for concessions and some interesting financing mechanisms have evolved, mostly syndicated bank loans arranged by foreign banks and, to a much smaller degree, bond financing. These projects have also spurred development of new domestic financing instruments, such as in the newly emerging regional Asia bond market, and in Mexico where, for instance, domestic capital markets provided bond funding for toll roads and other infrastructure concessions. A limited number of these bonds were underwritten by commercial and investment banks and targeted to high net worth local individuals. Demand for these bonds dried up as a result of the 1994 financial crisis demonstrating the fragile and illiquid nature of this market.

The most well known projects include the concessioning of the Mexico City and Buenos Aires water systems. These projects were financed with concessionaire equity and syndicated bank loans, the latter involving the participation of the IFC, and foreign and domestic banks. A large number of individual water and sewer treatment plants for cities and states have been concessioned in Mexico including Toluca, Tampico, Ciudad Juarez, Cancun, Puebla Puerto Vallarta, and others. The primary concessionaires are the Mexican construction companies often accompanied by participation by foreign British, French, and some US water companies. Most of these projects have used domestic bank financing, although a few have been negotiating with foreign institutional investors, such as G.E. Capital, to provide convertible debt financing (non-payment provisions which convert the debt to equity-a "pre-workout" or exit strategy).

The financial crisis in Mexico has significantly delayed the financing of many of these projects as banks re-assess their role in project financing. Banks are more cautious about lending to projects and will require greater security and risk coverage. For those projects that have payment defaults, the banks negotiate a debt restructuring with the government playing a crucial role in re-negotiating the concession agreement, especially the clauses related to the tariff structure. In one case, the government allowed the concessionaire to reduce the initial tariff but to have a large step-up when users were more able to pay. Flexible tariff structures and the active participation of the government regulatory body will become increasingly important for water and sewer concession financing.

### **5.3 Innovations in Organizational Structures**

Urban infrastructure could be funded through organizations based on the principles such as bond banks and bond pools. Such institutions already exist in developed countries like the U.S. and have been hugely successful. However in adapting these institutional practices to the Indian conditions will require several crucial modifications. The existing institutions merely serve the purpose from the point of view

of financial diversification of risk and basically are in the nature of cherry picking. In India there is a very limited scope for such an activity. Also to be meaningful and purposive, there will need to be a pooling of not so strong ULBs (with a view to diversification of project and financial risk) so that the developmental objectives are also served. The concept of muni-bonds will have to be enlarged to multi-ULB, project specific paper. This obviously needs detailing and fleshing out but our conjecture is that the idea is rather important. Two further points need to be made. One, that in the context of 'universal banking' the existing financial institutions and commercial banks may be mandated to do the job. This will save the cost of setting up new institutions. For this purpose concessions in regulations may be given to create incentives for financial institutions and commercial banks to deliver in this respect. Two, ultimately the objective is create healthy and thick secondary market for this kind of paper so that they may be held by individuals although, at the first instance, this will have to be achieved through the vehicle of PD type agents and institutional holdings.

### **5.3.1 Business Partners for Development**

Business Partners for Development (BPD) is a pilot programme, originally devised by the World Bank, in which private companies, civil society organisations and government agencies work together in a tripartite partnership. The proposition is that by working together they can serve poor people better than any of them could have done by working in isolation. This idea is being tried out in a number of sectors of which water and sanitation is one. The programme is quite new and substantial results are unlikely to come for another couple of years. By then it should be clearer as to whether these tripartite partnerships are indeed successful.

### **5.3.2 Water Co-operatives**

In the southern part of Latin America, water co-operatives operate in urban areas in Argentina and Bolivia. Though not strictly new (the largest urban water co-operative in the world, supplying 72,000 households, was formed in 1978 in Bolivia's second largest city), it is included here because it presents a different institutional framework for private urban water supply provision. Research by the World Bank and other institutions show

that the water co-operatives are efficient in terms of costs, reliability of water supply and water quality and have a faster investment turn-around compared to public utilities. The co-operative structure shields management from political interference and allows it to tender freely and administer external loan finance without legal delays.

### **5.3.3 Private-NGO-Community partnership**

In 1996, WaterAid provided support to an NGO based in Dhaka, Bangladesh to develop a model approach to the provision of safe water and sanitation in slum areas where residents have no legal right to the land. The key components of the model include organising and mobilising the community to identify a convenient site for a water point, to operate and maintain the water point, and to manage the operation. On behalf of the community the local NGO negotiated with the public landlord and the water agency for a connection to the mains supply and to build the reservoir tank. Households are charged a fixed rate for water taken away and another rate for bathing and washing clothes at the water point. The rates are calculated to cover the cost of the water bill, the salary of the caretaker and the capital cost for building the water point. The model shows the potential for urban authorities to use their resources to provide water and sewer trunk mains and for communities to use their resources to finance distribution systems and household connections in facilitating access by poorer communities to water supply and sanitation services more quickly.

## **6. Conclusion**

The Urban infrastructure sector in India needs active participation from financial intermediaries along with putting together enabling policies leading to development. Given the strong growth in urban conglomerates and its implications for development this paper has ventured to suggest the possible ways of enlisting participation from existing institutions such as banks which are better placed to take such an initiative. It is also more prudent in terms of time and cost saved in utilising the current set-up rather than the alternative of creating specialised institutions. In an era of universal banking such activities should definitely be put in place.

**Dr. Vibhooti Shukla Unit in  
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