

Mobilizing Financing for Urban Infrastructure

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Introduction

Since the 1990's, when credit restraints to public sector started to control public indebtedness, Caixa Econômica Federal has developed new ways and models to urban infrastructure financing in Brazil. Aiming at understanding the context wherein those new models are inserted, this work is divided in three parts. The first part briefly presents existing limitations of lending to public sector. The second part describes Brazilian infrastructure services features, focusing on water supply and sanitary sewerage service. The third part discusses financial mobilization perspectives based on the possibility of public-private participation.

1. Limitations to infrastructure-related expenditure

The control of public expenditures with infrastructure is basically exercised through the following restrictions:

- The Fiscal Responsibility Act (2000) sets forth public finances rules oriented to accountability in fiscal management, through actions that prevent risks and correct deviations likely to affect public accounts balance, where are outstanding planning, control, transparency and accountability, as basic assumptions.
- The limit imposed to financial institutions to grant credit to public sector entities and institutions, established in 45% of each financial institution's Net Asset (2001).
- Global threshold to public sector indebtedness, extremely reduced, established by Brazilian National Monetary Council, pursuant to annual goals for primary surplus.

Nevertheless, presidents of Latin American countries, especially President Luiz Inácio Lula da Silva of Brazil, and President Vicente Fox of Mexico, are personally concerned about the issue and have claimed at IMF – that holds agreements with both countries – the exclusion of public investments, mainly related to infrastructure, of physical goals, without damaging fiscal balance. Some IMF¹ technicians agree on the exaggeration of using to Latin America statistics that cover all the public sector, mixing corporations that are productive and those with adverse balance, with no distinction. Therefore, IMF is analyzing the possibility of withdrawing public enterprises with good corporative governance, understanding that good commercial orientation provides guarantees against fiscal risk. Those enterprises would be free to make business decisions, with no need to take into consideration fiscal surplus.

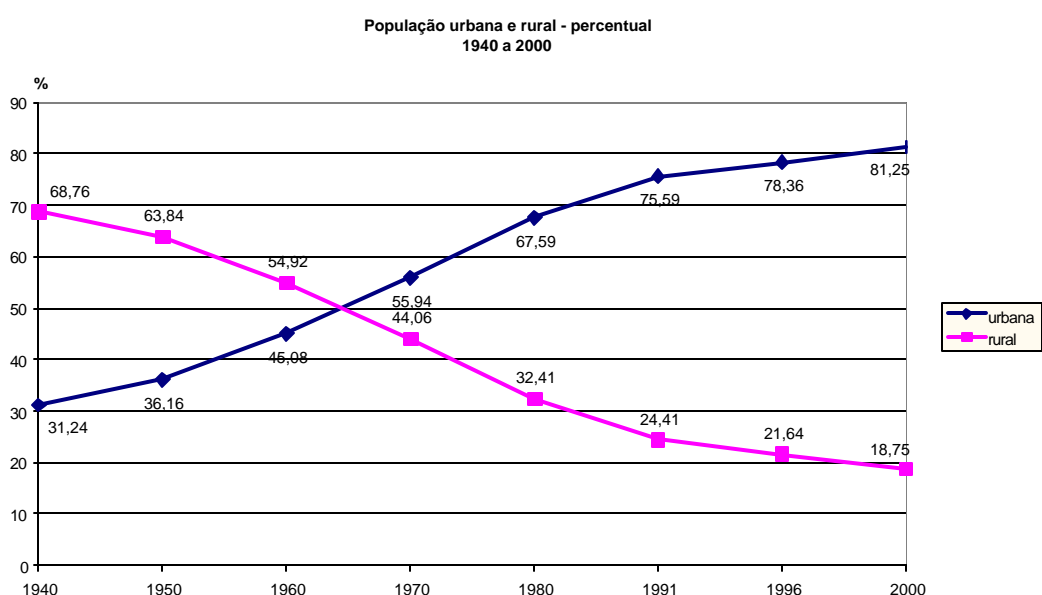
¹ Richard Hemming and Teresa Ter-Minassian “ Possible new approaches to fiscal account” in Finance& Development, December 2004

2. Characteristics of Infrastructure Services in Brazil

2.1- Institutional model

Brazilian population grew from little more than 10 million inhabitants in 1872, when the first demographic census was held in the Country, for more than 90 million inhabitants, over one century. This demographic growth was followed, as of the 1940's, by a fast urbanization process. If in 1940 two thirds of population used to live in rural areas, in the 1980 census this situation had reverted, and two-thirds were in the city, as shown below:

Urban and rural population – percentage
1940 to 2000



Source: IBGE, Demographic Censuses

In 1967, Brazilian urban population was 43.3 million inhabitants. Out of these, 22.8 million were served by water supply services. Since water services were very expensive and irregular, only 35% of urban population was considered as served by good-quality supply services. Concerning sewerage services, the situation was even worse, since only few great cities were supplied with those services, which covered population only partially. The duty of developing water supply and sewerage networks was assigned to municipalities.

The quick urbanization process in Brazil, and consequent need of furnishing Brazilian cities with basic sanitation services, led Government to establish a financing system to the sector, considered as essential requirement to provide regular and sufficient resources to that sector.

The institutional model of services delivery, named PLANASA, supported by consistent national system involving centralized planning, ruling, development and financing

standard, allowed the country to extraordinarily expand services in the 1970's and 1980's – a period of strong population and urbanization growth.

This success may be gauged by quick expansion of population beneficiary of federal programs of investment in water supply and sewerage systems. In 1970, 54% of urban domiciles were served by water supply services. In 1980, the percentage increased to 76% and in 1990, to 88%. Although reporting more modest results, sewerage services increased from 22% of urban domiciles in 1970 to 39% in 1980 and 45% in 1990. Because of resources provided to the sector by State Public Utilities on Basic Sanitation, municipalities started joining the system and, in 1984, it reached about 71% of Brazilian municipalities.

Among basic principles that grounded sanitation policy, the following are outstanding:

- Selection of States with geographic and political-administrative bases to implement programs under the responsibility of State Basic Sanitation Public Utilities, in charge of executive and operational aspects of water and sewerage services. This concentration in a single Public Utility for each State intended, on one hand, reduce costs and, on the other hand, comprehensive services to all urban areas, including poorest ones, due to a system of global feasibility through cross- subsidies.
- Self-sustainability of services, through tariff-based revenues. Tariff-based revenue should be considered for the Public Utility as a whole, regardless the cost of each system management, and should be enough to cover operation and maintenance costs, added with debt service (amortization of principal and loan interests).
- Private initiative participation, through project companies, consultants, contractors, material and equipment industries.

Problems faced by the Plan mainly resulted from the principle of financial self-sustainability, which assumed a situation of economic growth. It is worth recalling that PLANASA was conceived in an environment of fast economic expansion. GDP for 1970/73 experienced increment always over 10% a year, reaching 14% in 1973. Therefore, in 1973 GDP was 90% higher than in 1967. In the 1980's, the country faced a macro-economic instability period, which hindered long-term plans and indexing tariffs. The extreme inflation growth in the 1980's led to adopting control measures, such as contention of tariffs and prices of goods produced by public sector. Thus, water and sewerage services fees were no longer at levels suitable for financial self-sustainability.

If economic crisis is the most visible aspect of the system crisis, in political terms, the emerging re-democratization picture led to changes on Brazilian economic and social policies. Government started discussing sanitation policy with broad participation of several segments involved in the issue. The main criticism to PLANASA is its centralizing feature that, when excluding the participation of municipal local governments and consumers, hinders them from influencing over local problems solution.

Because of previous policy, Brazilian institutional model of services is still mainly organized at regional scope, with 25 mixed economy societies, controlled by States,

rendering services to 70% of Brazilian municipalities and 77% of urban population in the country.

2.2 Current Situation of Sanitation Services

Currently, Brazilian sanitation services provision is worrying, due to huge deficit of water and sewerage services, besides the deficit features such as: concentration at poorest population segments; concentration at less developed regions and municipalities; and high deficits of sewerage services.

In the 1990's, the pace of sanitation services expansion, considered as crucial, was slower than for previous decades, resulting in reduced growth of coverage.

Concerning expansion of services coverage along the last three decades, it was not enough to meet accelerated population growth and migration of those populations from rural to urban areas. Currently, Brazilian cities have 42.1 million permanent urban domiciles², out of which 4.4 million (10.4% of domiciles) are not linked to public systems of drinkable water supply, and 18.8 million (44.7% of domiciles) are not served by sewerage networks. Most deficit is concentrated on lower income populations – monthly family income by domicile of up to five minimum wages (about US\$ 430)³ – corresponding to 84.9% of domiciles at this income range with no water supply, 76.7% with no sewerage services. Concerning territorial distribution, deficit is concentrated on smallest municipalities and less developed regions in the country, as well as on rural areas and surroundings of major cities.

Another relevant aspect that characterizes deficit is related to low level of sewerage treatment; out of total sewerage collected, only 35.3 % are treated⁴, while the remaining is directly launched to environment, with no treatment, equivalent to sewerage generated by 51% of Brazilian urban domiciles.

In brief, demand is concentrated at income range with less disposition to pay and high need for investments such as, for example, water supply at semi-arid region and sewerage collection and treatment to social segments that cannot afford paying fees.

Further to impacts on public health – with incidence of related diseases and high indexes of child mortality – and on environment – through water pollution -, the picture of insufficient sanitation services also entails important economic impacts resulting from lack of services – such as, for example, limited expansion of tourism activity at coastal areas, restriction to the implementation of undertakings at unhealthy environments, or insufficient water supply and sanitary debris collection and treatment, additionally to decreased activities at material and equipment industries, and sector services.

² Source: IBGE, National Survey of Domicile Samplings (PNAD – 2003).

³ 1US\$ = R\$ 3,00. Along this work, this is the value to be used, corresponding to average value of dollar in 2004.

⁴ Source: IBGE, National Survey on Basic Sanitation (PNSB – 2000).

2.3 The Challenge of Universalizing Sanitation Services

To achieve universal sanitation services, considering annual population growth in standards appropriate to current Brazilian developmental stage, estimates for the sector point out the need of committing US\$ 41,3 billion – annual average amount of US\$ 4.13 billion or around 0.88% of GDP – to meet water supply and sewerage deficit along 10 years. If this goal is expanded to 20 years, estimates are of US\$ 59.3 billion⁵ – annual average of US\$ 2.96 billion, or the equivalent to 0.63% of GDP. In order to universalize service with waste collection; annually replace 20% of existing fleet; implement sanitary landfill at municipalities with population under 1.5 million inhabitants; close waste dumping sites at municipalities with population up to 100,000 inhabitants, investments required reach US\$1.86 billion⁶, along 10 years.

Nevertheless, along the last few years investments were limited to only 0.25% of GDP, on one hand due to limitations to credit to public sector – imposed since 1999 -, budgetary restraints and lack of effective regulatory tools to induce efficiency and investments intake.

On the other hand, there is still the urgent need for reinvigorating services providers, inclusive by developing new management and partnership models, in order to expand the capacity of leveraging and making investments. Along the last few years, increase on revenues of public utilities is lower than inflation rates, and in percentage inferior to increase on the number of users.

Services coverage⁷, concerning total population, correspond to:

- Water supply: 89,3%
- Sewerage services: 55,36%
- Waste collection: 96,5%

In relation to operational conditions of water and sewerage service providers, Brazil reports high index of losses, almost 41%, and low level of hydrometering, leading to poor operational efficiency.

Sanitation sector typically works through projects with long-term return, leading to the need for long-term financing (8 to 15 years). Major sources of resources are:

Non-Onerous Resources:

Federal Budget Allocation (States/Municipalities)

Environmental Facilities (Example: Program on Sewerage Purchase by Brazilian Regulatory Agency on Waters - ANA)

⁵ Source: Ministry of the Cities

⁶ Source: Ministry of Environment

⁷ Source: IBGE

Onerous Resources:

Employment Compensation Fund (FGTS), through financing granted by CAIXA and other Financial Agents.

Resources from Fund for Generation of Employment and Security of Unemployment (FAT), through financing by Brazilian Bank of Social Development (BNDES) and other Financial Agents.

Multi-Lateral Organizations (IDRB, IDB, JBIC, etc.).

Stock Market.

Private Resources:

Private Capital (Privatization, Grant/BOT or Public-Private Partnership)

3 Public-Private Partnership

3.1 New Law

Brazilian National Congress approved and the President of the Republic enacted, on 28 December 2004, the Law that implements Public-Private Partnerships.

Based on the observed need of huge investments in infrastructure to induce growth, and since Governments do not have enough resources to required investments, this law shall encourage private initiative towards complementing necessary investments. In this kind of partnership, private sector is in charge of totally financing the work and, only after its completion, starts receiving amortization for investment made. Public Administration may set performance goals as condition for releasing remuneration to private partner.

Public-Private Partnerships allow for broad range of investments, and there is no limitation concerning nature of projects to be implemented, meeting demands in fields such as public security, housing, basic sanitation and road or electric power infrastructure.

Among main features of PPP contracts, there are:

- Contracts will be valid for no less than five years, and may last up to thirty-five years, and shall establish legal links to implement or manage, partially or totally, services, undertakings and activities of public interest, where private partner will be in charge of financing and executing the object.
- Minimum amount of contracts is US\$ 6.67 million
- Government partners will rely on innovative grants, such as pegged revenues and special funds, capitalized with public appropriations and goods, such as Federal Government real estates. A granting fund of private nature and own assets will be established, where Federal Government's, state-owned enterprises' and foundations' participation will be limited to US\$ 2 billion.
- Payments shall be in cash, through non-tax credits, grant of rights in face of public administration or award over public goods.
- Besides granting preferential payment, the project foresees that encumbrance may be liquidated in favor of the institution that financed the project, as guarantee to loan made.
- To quality projects selection and allow due follow-up of its execution, a managing institution will be established, in charge of providing flexibility to process management, allow for overcoming eventual bureaucratic barriers and reinforcing control and transparency systems.
- There is a minimum limit for participation of private initiative of 30% in each Project, in order to prevent the undertaking from being fully financed by Public Power, whether through BNDES or pension funds of state enterprises.
- All projects are subject to the Brazilian National Treasury previous opinion, granting that Federal Government annual expenses with PPP do not overcome 1% of its tax-related revenues, something about US\$ 1.33 billion.

The project expects to provide investments of about US\$ 12 billion, foreseen in the 2004 – 2007 Pluri-Annual Plan. For these investments, a portfolio of priority projects to Federal Government was established, covering the fields of infrastructure and electric power. This portfolio has been presented to national and foreign investors.

Other important aspects of the project recently approved by Brazilian National Congress concern:

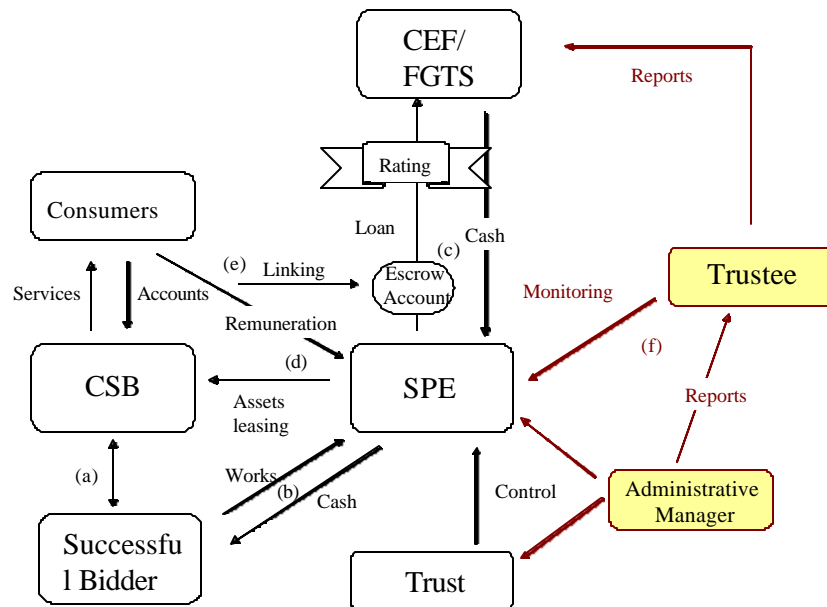
- Hiring procedures shall comply with Fiscal Responsibility Law;
- Legal provisions set forth that PPP contracts payment shall be granted priority;
- Additional payment guarantees are to be established through specific funds of public assets;
- Financing will be facilitated by Brazilian National Bank of Economic and Social Development - BNDES, multilateral banks and capital markets.

3.2 Models Developed by CAIXA

In fact, the creation of financial model as structured operations took into consideration a political-cultural movement towards acknowledging State's financial incapacity in making all investments required for Brazilian sustained development. Therefore, a Bill was proposed, inviting private initiative to participate in this sustained development, as partner of Public Administration.

Hence, models presented herein are – or could be – integral part of projects implemented under partnership of public and private sectors, since ruled product exists (some State laws on PPP) and new Federal ruled product, both contemplating structured actions to allow for infrastructure and environmental sanitation projects.

THE MODEL OF ASSETS LEASING.



In this model, there are the following steps:

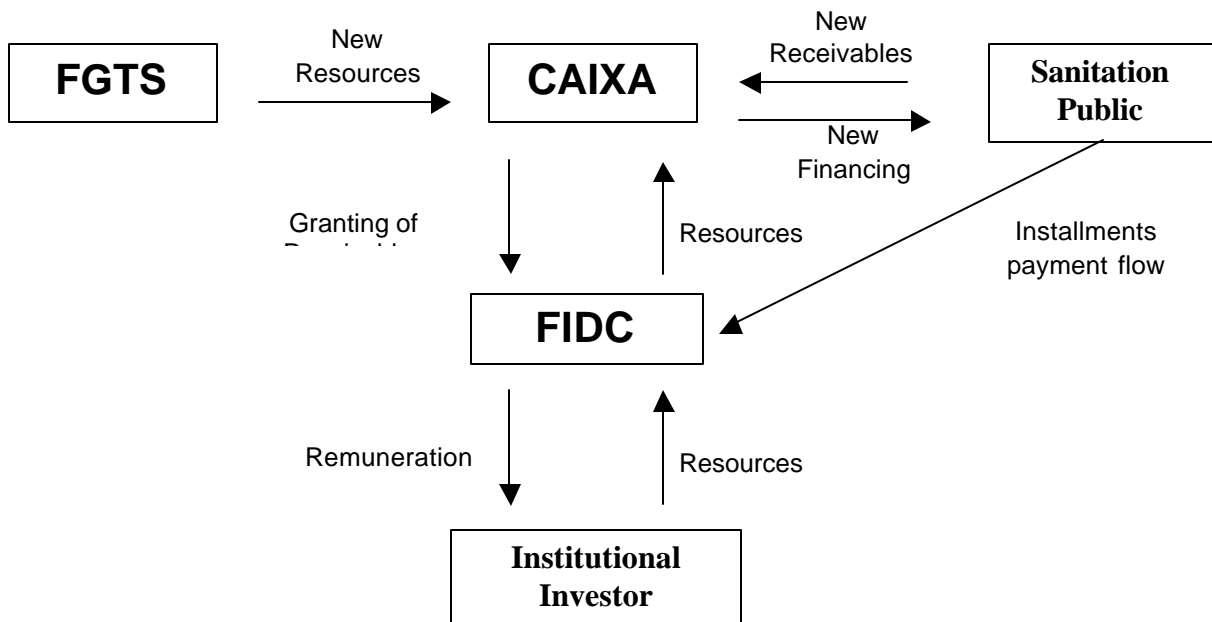
- The Basic Sanitation Public Utility (CSB) carries out a bidding process to LEASING an ETE/ETA (treatment units for sewerage or water), preceded by required construction. It should be stressed that bidding process is for LEASING instead of construction.
- Successful bidder (consortium or not) establishes a specific purpose society (SPE) to be the owner of the asset to be leased to CSB.
- Stock control (or of quotas of capital) of SPE may be directly exercised by successful bidder or through a Trust.
- Leasing payment is made by segregating receivables from CSB, duly audited with known rating provided by corporation internationally renowned in this sector.
- SPE requires financing to the work, informing that its payment capacity is supported by rentals (rights to credit) to be received from CSB.
- Receivables (water bills) provided by CSB, as rental payment to SPE, after duly selected and separated, are directly granted to financing agent, as payment to financing.
- The whole operation is constantly monitored by a Trustee (Administrative Manager), with broad powers of financial management in the operation.

- By the leasing end, matching with financing end, the good (ETA/ETE) is automatically aggregated to the land granted by CSB to construction and, then, necessarily becomes integral part of public asset.

Using this model, some contracts by CAIXA, as financial agent of FGTS resources, are urged. One of them is the sanitary sewerage system in a region of Campinas, municipality of the State of São Paulo, to be operated by Municipal Sanitation Public Utility - SANASA. The borrower is a Society of Specific Purpose - SPE, made up by 5 enterprises. The investment, amounting to US\$ 11.7 million, represents an important contribution towards cleaning the Capivari River Basin. It shall benefit 62 thousand inhabitants, by improving their quality of life, besides opening opportunities for implementing new building lots and generate jobs during works and at operation stage.

Another example concerns expanding sanitary sewerage in the cities of Salvador and Lauro de Freitas, State of Bahia, to be operated by the State Public Utility on Waters and Sewerage – EMBASA. This company is developing the Business Plan and the Leasing Call for Bid for executing works of interception and station of previous conditioning. Expected investment amount to US\$ 50 million and shall promptly benefit of 485,605 inhabitants.

THE MODEL THROUGH FIDC.



Stages:

- CSB tariffs originate Receivable Funds - FIDC.
- These Funds - FIDC shall issue quotas to be provided to investors.
- FIDC capitalization, by means of quotas absorption by investors, shall allow of making investments in projects selected by CSB.

Additionally to these models, CAIXA has financed private operators through the Program of Financing to Private Sanitation Concessionaires - FCP/SAN. This governmental program is aimed at financing private initiative, undertakings oriented to improve sanitary conditions at urban areas, by increasing coverage and improving basic sanitation services. As example, is outstanding the enactment, on 15 December, of a BOT (Build Operate Transfer) Project with the Sanitation Public Utility at the Municipality of Mauá - ECOSAMA, in the State of São Paulo. The investment, amounting to US\$ 19 million, is for building a modern station of sewerage treatment, which will have as effluent the reuse water to the used by consumers of the Petrol-chemical Pool. The enterprise holds partial grant, limited to sanitary sewerage and management of commercial system, representing an important feature of grant, since it shall also comprise services of connection and billing water provided by municipal independent agency (*autarquia*) responsible for the municipality's supply.

The contract will benefit over 300 thousand inhabitants. Out of the investment amount, US\$ 14.2 million correspond to lending and the remaining US\$ 4.8 million to ECOSAMA counterpart contribution.

3.3 Draft Bill that established the National Basic Sanitation Policy

As highlighted in item 2.1, sanitation sector was evidencing loss in its financing capacity since the 1980's, when State public utilities failed in adjusting their management in face of deterioration of their financial capacity, due to inflationary process. In the years following the Real Plan, the Public Utilities tried to recover their financial capacity and tariff reality, but most failed mainly because their maintained previous managerial practices associated to the lack of a regulatory framework capable of introducing incentives of efficiency.

Sanitation issue was retaken under leadership of President Luiz Inácio Lula da Silva, in a more comprehensive way, with broad discussion among civil society. Thus, the draft bill being prepared by an inter-ministerial work group sets forth guidelines for basic sanitation public services, besides establishing the National Policy on Basic Sanitation -PNS.

It is worth noticing that the concept of sanitation was expanded towards more contemporaneous view of environmental sanitation, comprising water supply; collection, treatment and disposal of sewerage and solid wastes, additionally to remaining actions and services of urban cleaning; pluvial waters management; conditions that maximize promotion and improvement of living conditions at urban and rural means.

Granting power was defined as municipal, thus facilitating feasible ways of public or private management.

Furthermore, the draft bill introduces incentives to establishment of municipal consortia in both metropolitan and non-metropolitan areas, in the even of scale economy.

A National Sanitation System - SISNASA, coordinated by the Ministry of the Cities, will be established to formulate, follow-up and assess the implementation of Brazilian National Basic Sanitation Policy and National Plan on Environmental Sanitation. Government proposes to establish clear rules to the sector, such as tariffs fixing, work plans and investment goals. For that, a national seminar was held on 31 August 2004, preceded by 10 regional seminars, at major Brazilian capital cities, which gathered ideas and suggestions by all segments of the sector.

Therefore, it is expected that, in 2005, Brazil may rely on a regulatory framework to the sector, focused on tariff policy, incentives to efficiency, universalization with efficacy, and private capital intake.