



**Ministry of Cities  
National Secretariat of Environmental Sanitation**

**Ministry of Finance  
Secretariat of the National Treasury**

**The Funding of Basic Sanitation in 2003/2004: The Pilot of a new approach for public investment in  
Brazil?**

December, 2004

*There is an important deficit in investments in basic sanitation in Brazil, worsened in many cases by the inefficiency of expenditure in the sector in the 1990s, as identified in certain areas by the Union's General Control Agency - CGU. In 2003, Government introduced new criteria for the approval of projects in this domain, particularly in the case of Financing Schemes (budgetary resources). The emphasis on the economic sustainability of projects introduced new practices in the sector, including through the dissemination of Agreements aimed at the Improvement in Performance, focusing on the best use of the existing infrastructure in connection with the expansion of this infrastructure. Within this new environment, contracts were entered into for circa R\$ 3 billion, which indicates the possibilities of providing a new dimension to investments in infrastructure in Brazil, both in quantity and in quality. The profitability identified in these projects suggests that the exceptional treatment given to these operations proved advantageous from the economic and social point of view, and prudent from the fiscal point of view.*

**1. Introduction**

The sanitation sector in Brazil presents serious deficiencies in the delivery of services to the population, particularly to the low-income population. The national rates of water supply and sewage services are still very far from universal coverage<sup>1</sup>. In addition, as a result of the unequal distribution of investments among states and among regions of the same state or municipality, the non-met demand concentrates in the peripheral areas of large cities, in the smaller municipalities and in rural areas.

The lack of sanitation has important economic and fiscal ramifications. It worsens the problems of poverty-related diseases and contributes for the increase of government expenses with public health<sup>2</sup>, in

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<sup>1</sup> Investments in basic sanitation in the last 10 years correspond, in annual terms, to 0,25% of GDP. The coverage of services in terms of the urban population corresponds to 89,3% in the case of water supply, to 53,6% in terms of sewage collection and to 25,6% in terms of sewage treatment.

<sup>2</sup> A recent study carried out by the World Health Organisation (Hutton & Haller, 2004), called "*Evaluation of the cost and benefits of water sanitation improvements at the global level*" indicates that, in developing countries, the return provided by sanitation projects is of about US\$ 5 to US\$ 28 for each US\$ 1 invested. Furthermore, the expenditure in sanitation generates positive externalities in public health, such as the prevention of at least 80% of the cases of typhoid fever, a reduction of 60 to 70% of cases of trachoma and eschistosomosis and

addition to increasing environmental contamination and jeopardising the use of water resources, with consequent costs in terms of the treatment of the environment.

Traditionally, the sanitation sector has remained under the supervision of the public sector, with little participation of the private sector. In the framework inherited from the 1970s, the federal government has been operating mainly with budgetary public funds of the Ministries of Health, Cities, Integration and the Environment in order to mitigate the most serious problems (Table 1). On the other hand, the lack of the regulatory framework still inhibits the participation of the private sector in the investments necessary for the expansion of services<sup>3</sup>.

Starting from the end of 2003, a relatively greater volume of budgetary resources (Financing Schemes) has been allocated to the institutional improvement of the provider companies and to the expansion of services offered. This effort has taken place through the incorporation of new elements of technical decision-making for the allocation of public funds, which should substantially change the historical quality standard of the outcomes of public interventions.

**Table 1**  
**Federal Expenditure with Sanitation, per body**  
**Brazil, 1995 to 2002 (\*)**

<b>Body</b>	<b>1995</b>	<b>1966</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>Total</b>
Sepurb/Sedu (**)	55.6	920.3	892.1	573.0	281.5	225.3	294.6	97.4	3,339.7
Ministry of Health	143.9	118.5	300.2	465.9	557.9	338.0	1,736.7	655.3	4,316.4
Ministry of the Environment	-	9.6	-	349.5	-	35.0	199.8	54.1	648.0
Ministry of Integration	-	-	-	-	-	73.3	163.9	30.5	267.7
FGTS	345.5	329.3	936.8	1,759.9	836.0	422.2	166.5	146.6	4,942.7
<b>Total</b>	<b>545.0</b>	<b>1,377.7</b>	<b>2,129.0</b>	<b>3,148.3</b>	<b>1,675.3</b>	<b>1,093.7</b>	<b>2,561.5</b>	<b>984.0</b>	<b>13,514.5</b>

Source: SIAFI/SOF and GSF-IPEA/DIPOS. Preparation: IPEA/DIRUR.

(\*) Constant prices, monthly deflated by IGP-DI of FGV

(\*\*) Current structure of the Ministry of Cities. Up to 1998 (Sepurb) was under the Ministry of Planning. From 1999 to 2002 (Sedu) was under the Presidency of the Republic.

The importance of the change in the standards of use of the resources in the sector is well illustrated by the report prepared by the internal-control body of the federal public sector (the Union's General Control Agency - CGU) in 2003<sup>4</sup>. The report indicates that, in the circa 250 municipalities visited, 52% of the works

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the prevention of 40 to 50% of the cases of bacillus-induced dysenteries, amoebae diseases, gastroenteritis and skin diseases. For Brazil, studies of the Ministry of Health show that circa 700 thousand hospital admissions are brought about every year by diseases related to the absence or insufficiency of basic sanitation.

<sup>3</sup> Currently, the contributions made by society in processes of public consultation are being incorporated to the bill that establishes the regulatory framework of the sector, which should be ready to be tabled at the National Congress before the end of this year.

<sup>4</sup> The Report indicates that in 60 works, or 15,3% of those inspected, serious indications of prejudice for the exchequer or inadequate reporting were identified. In these cases, the CGU requested the initiation of administrative procedures by the Union's Audit Court - TCU to assess the accountability for omission or irregularity. The process brought about the reformulation of the standards of Funasa, which hired 50 new sanitary engineers and entered into an agreement with the Federal Savings Bank - CEF for the joint supervision of municipality works funded with federal resources. This was the first of the seven

of water supply and 60,5% of those of sewage services presented irregularities or improprieties in the payment, in the bidding procedures or in the reporting. As much as 132 problems were identified in 270 works of water supply and sewage services scheduled to be carried out with resources of the budgets of 1999 and 2000 through Funasa. One of the most worrying findings deriving from the work of the CGU was that 28,4% of the works of water supply and of sewage services were not previously assessed or followed by Funasa.

Starting from 2003, the use of budgetary resources has been geared to projects that are economically feasible and that generate revenue enough for the amortisation of the funding and the further maintenance of services. There has also been a reformulation in the case of budgetary resources, where preference has been given to projects that present economic and financial sustainability, although the keynote in the use of these resources is the optimisation of the return from the social point of view. Pursuant this purpose, the actions of the Ministries have been co-ordinated and budgets have been integrated in order to more efficiently meet the demand for resources from the budget of the Union.

## **2. Guidelines for the use of budgetary resources based upon technical criteria and for the improvement of the process of selection**

One of the problems of the system in force prior to 2003 was the lack of emphasis on the economic sustainability of many projects. In addition to occasional waste related to the destination of the budget scattered in parliamentary amendments, often beneficiary municipalities are not in a position to guarantee, later on, sufficient cash flow for the maintenance of the stations of water collection and/or treatment and sewage built, due to the lack of forecast of a process of institutional reinforcement of the service provider. In addition, the allocation of federal resources was not related to performance targets both of service providers and of projects. Thus, the improvement of the operational performance of the sector was not guaranteed, even where works were completed.

Starting from 2003, and especially in 2004, a series of criteria and general guidelines was adopted for the efficient destination of public funds. The main innovations implemented in order to qualify the expenditure in sanitation, whether with budgetary resources or not, were:

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recommendations of the report. There are 4 thousand agreements pending assessment. This assessment is important, according to observers of the political process, because the Ministry of Health is the champion of among the recipients of amendments by members of Congress to budgetary appropriations proposed by the Executive Branch. Out of over R\$ 500 million in amendments in the domain of health proposed every year, an important part of these resources is used in actions of Funasa, deemed by members of Congress one of the bodies recording the highest percentage of releases, since the resources of health may not be blocked by virtue of the constitutional linkage. Works under the supervision of Funasa are normally low-cost, which allows for benefiting several municipalities with average appropriations of R\$ 150 thousand, which renders the counterpart of municipalities relatively small, corresponding to 5% of the value transferred by the federal government. Even so, 40% of the works inspected did not have municipality counterparts, as provided for in the agreement, and one out of each 10 was interrupted or had not even started. The inspection also indicated hints of over-billing in one out of each five works.

i) the requirement of carrying out the choice of the initiatives supported or funded *by means of a Process of Public Selection of Proposals*, with the previous publicising of the selection requirements and criteria, and in full transparency in the application of the regulation.

ii) the adoption of technical criteria for the choice of projects to be funded or supported by government, more specifically:

- a) the linkage of the provision of resources to the regularisation of the situation of the concession;
- b) the requirement of the collection of a specific fee or tariff for the service, as appropriate;
- c) the requirement of a minimum degree of institutionalisation so that the proponent may have access to the resources;
- d) the requirement of the verification of the full implementation of works previously funded or supported with resources of the Union and carried out by the Borrower<sup>5</sup> ;
- e) the linkage of access to resources to minimum levels of efficiency in the delivery of services by the borrower<sup>6</sup>; and
- f) the focus of expenditure in more densely populated areas and with more possibilities of exploitation of economies of scale and of scope of services (Metropolitan Regions, for example).

In addition to these criteria, progress was made in the preparation of the project as a guideline for the classification of projects for the purpose of access to resources. Priority was given to proposals having their basic and executive projects ready, with a view at reducing the period of return of the capital allocated. This attribution of priority is also efficient since it reduces the chances of projects already completed to become obsolete with a consequent burden for the public sector. A second component was the attribution of priority to initiatives in which the counterpart of the proponent (state or municipality) is higher. This approach was aimed at increasing the scope of use of the federal or budgetary resources made available.

iii) the formalisation of Agreements aimed at the Improvement of Performance (AMD) with the borrowers, specifying a set of efficiency and effectiveness indicators in terms of the delivery of services and establishing targets to be achieved by the service provider. The formalisation of these agreements is a pre-condition for access to resources of the Union and implies putting together a system for monitoring the evolution of the indicators agreed upon and for assessing the achievement of targets. Non-compliance of targets may both interrupt the transfer of resources and prevent the proponent from having access to new resources while the terms agreed upon are not fulfilled. This mechanism is being used for ensuring access to budgetary resources

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<sup>5</sup> In the event of the existence of works previously paralysed, not initiated or completed without regular operation, the proponent may not access the new resources, pending regularisation of such situations;

<sup>6</sup> In 2004, in the process of public selection of proposals for budgetary resources, the rates of physical losses and of billing in the water-supply service were used as efficiency indicators for the delivery of services.

in 2003 and 2004, but it should be also included as a requirement for the granting of budgetary resources by the Union.

iv) and, a clear apportionment of competences among the different bodies that intervene in sanitation issues, in the sphere of the Union, including planning, construction, the consolidation and the management of Multi-Sectoral Sanitation Programmes in the Multi-Year Plan (PPA). The advantages of this measure are:

- a) to build an environment of co-operation among the bodies involved, overcoming a history of competition and even, in some cases, of institutional predatory antagonism, which did not encourage the qualification of governmental interventions in the sector;
- b) to create minimum conditions for the specialisation of technical teams and for the resumption of the sectoral planning of the initiatives, including the creation of a joint of um system for the monitoring and assessment of interventions and of the performance of the institutions involved; and
- c) to prevent the overlapping of competences and parallel actions, which bring about distortions and inefficiency

### **3. Resolution CMN number 3.153/2003 as a tool for the use of budgetary resources linked to the commitment vis-à-vis improvements in the performance of service providers**

In late 2003, by means of a Resolution of the National Monetary Council (Resolution CMN number 3.153), the amount of credit available to states and municipalities and their respective companies within the domestic financial system was increased by up to R\$ 2,9 billion for contracts related to operations exclusively meant for the funding of projects geared to works of environmental sanitation, such as:

- i) water-supply works, meant for the improvement and the expansion of the coverage and/or production capability of water-supply systems, including studies and projects related to ventures in this modality;
- ii) sewage-service works, meant for the improvement and the increase of the coverage of sewage services and/or the appropriate treatment and final destination of the effluents, including studies and projects related to ventures in this modality;
- iii) treatment of solid waste, meant for putting in place facilities for the appropriate final destination of urban solid waste and for the elimination of waste dumps and for the recovery of areas degraded due to the inappropriate disposal of urban solid waste, including studies and projects related to ventures in this modality; and
- iv) institutional development, meant for the implementation of a programme of operational improvement and cost and loss reduction, with a view at increasing the efficiency of water-supply, sewage-service and urban garbage-collection agents.

This decision represented an important step for the organisation of the sector, for, starting from it, the transfer of resources from the Union has to comply with the guidelines concerning institutional development, the increase of the efficiency of service providers and the economic sustainability of projects. The necessary conditions were established:

i) the technical assessment by the Ministry of Cities for the previous fitting of projects to the criteria established;

ii) the presentation of evidence to the Ministry of Cities - in the case of funding schemes for water-supply or sewage-service works - of the actual operation of service providers chartered as autonomous agencies, public enterprises, mixed-economy societies, delegate or concessionaire regularly hired and implementing policies aimed at the recovery of the costs of services, through the effective entry of legally instituted tariffs or fees and apt to provide coverage to the financial charges and to ensure the amortisation of the loan at issue;

iii) the presentation of evidence to the Ministry of Cities, in the case of funding schemes for the final destination of solid waste, for the policy of recovery of the costs of services, through the effective entry of legally instituted tariffs or fees, and a certificate of the capability to cover the financial charges and to ensure the amortisation of the loan at issue;

iv) the signature of an Agreement aimed at the Improvement of Performance (AMD) with the National Secretariat of Environmental Sanitation (SNSA) of the Ministry of Cities, pursuant the terms and conditions of an appropriate Normative Instruction, establishing the purpose, operational and financial performance indicators and penalties for partial or total non-compliance of the targets agreed upon, including the impediment of access to new financing schemes or the suspension of the disbursements, pursuant the guidelines discussed in section 2, above, of this note. For operations hired starting from the enactment of Resolution 3.153/2003, the signature of agreements and the achievement of the targets established in the AMD are mandatory conditions for the disbursements of resources. There has also been a reinforcement of the criteria provided for in the Agreements aimed at the Improvement of Performance, with special attention for the promotion of the institutional and operational efficiency of the sanitation companies.

**PICTURE 1**  
**NEW OPERATIONAL-FINANCIAL CRITERIA IN AGREEMENTS AIMED AT**  
**THE IMPROVEMENT OF PERFORMANCE**

INDICATOR	DEFINITION OF THE INDICATOR
Indicator of Cash Sufficiency	$\frac{\text{Total Collection}}{\text{Expenses with Exploitation} + \text{Service of the Debt (amortisation, interests and foreign-exchange variation)} + \text{Fiscal or Tax-related Expenses (ref. DTS)}}$
Rate of Revenue Evasion	$\frac{\text{Total Operational Revenue} - \text{Total Collection}}{\text{Total Operational Revenue}}$
Days of Billing Committed to Receivables	$\frac{\text{Balance of the Credit of Receivables}}{\text{Total Operational Revenue}}$
Rate of Losses per Connection	$\frac{\text{Volume of Water (Produced + Treated Imported - Service)} - \text{Volume of Water Consumed}}{\text{Quantity of Active Water Connections}}$
Rate of Billing Losses	$\frac{\text{Volume of Water (Produced + Treated Imported - Service)} - \text{Volume of Water Billed}}{\text{Volume of Water (Produced + Treated Imported - of Service)}}$
Rate of Water Measurement	$\frac{\text{Quantity of Active Water Connections Micro-measures}}{\text{Quantity of Active Water Connections}}$
Rate of Macro-Measurement	$\frac{\text{Volume of Water Macro-measured} - \text{Volume of Treated Water Exported}}{\text{Volume of Water Made Available for Distribution (VD) (3)}}$
Rate of Productivity of the Whole Personnel (equivalent)	$\frac{\text{Quantity of active connections (Water + Sewage)}}{\text{Equivalent quantity of total personnel}}$

An important consequence of the measures implemented by the federal government was the incorporation of “best practices” and mechanisms of incentive to the efficiency recommended world-wide. Indeed, it was noticed that the criteria and procedures adopted by the Ministry of Cities and included in the Resolution of the CMN are in tune with procedures aimed at the improvement of performance and quality in service that guide programmes proposed in the past by the World Bank to create “pilots” in the sector, such as, for example, the Programme of Modernisation of the Sanitation Sector (PMSS-II).

The outcome of the work of the Ministry of Cities in the design and implementation of the process of selection for the funding programme was, therefore, the highly successful dissemination of new mechanisms of assessment, applicable to all projects to be funded, and of technical criteria pertaining to the improvement of the quality of the investment in infrastructure in environmental sanitation, in line with or beyond some practices adopted in operations carried out within programmes proposed by international organisations.

## BOX 1

### **Programme of Modernisation of the Sanitation Sector - PMSS II: indicators for the measurement of the outcomes achieved**

#### **Indicators:**

- number of states and municipalities with legal and regulatory frameworks approved by the Legislative Branch;
- additional number of families receiving water and sewage services;
- additional population in areas where sewage is collected and treated;
- criteria for the measurement of the outcome of projects.

#### **Criteria for the measurement of the outcome of projects**

- productivity of the work (number of employees per 1.000 water and sewage connections);
- cost of labour as % of the total cost (ratio between the cost of labour and the operational cost, depreciation excluded);
- % of the water connections measured (number of water connections measured over the total of water connections);
- ratio between operational cost operational, depreciation excluded, and operational revenue;
- coverage of the service of the debt (ratio between the internal cash flow and the service of the debt);
- rate of liquidity (ratio between current assets and current liabilities);
- reduction of the number of people deprived of water supply;
- extension of water ducts and volume of the production capability of water added to the systems;
- extension of sewage collectors and capacity of treatment of sewage added to the systems.

#### **4. Role of the Ministry of Cities in the process of implementation of Resolution number 3.153**

The process of selection of credit operations of the public sector, pursuant the resolution of the National Monetary Council of December, 2003, was regulated by the Ministry of Cities along the lines described above, having begun in January, 2004, following the stages below:

##### *i) Presentation of the letters of consultation*

The letters of consultation filed in the Ministry of Cities included the set of operations analysed by experts of that body during of the process of selection. All in all, 745 letters of consultation were presented and accepted, for a total amount of loans of R\$ 5,7 billion, ensuing an average value per letter of consultation of R\$ 7,7 million. The demand, per modality, at this stage, was as follows:

**Table 2**  
**Demand for Resources for Environmental Sanitation**  
**Brazil, 2004**

Destination	Value		Projects	
	R\$ million	Proportion	Number	Proportion
Water	1,658	29%	217	29%
Sewage	2,244	39%	316	42%
Institutional Development	449	8%	55	7%
Solid Waste	31	1%	27	4%
Drainage	634	11%	70	9%
Integrated Sanitation "Pró-sanear"	52	1%	21	3%
More of the modality	645	11%	39	5%
<b>TOTAL</b>	<b>5,713</b>		<b>745</b>	

*ii) Stage of previous fitting*

The analysis as to the previous fitting only included the modalities of water supply, sewage services, final destination of urban solid wastes and institutional development. This analysis brought about the reduction of 163 operations, allowing for the inclusion of 582 operations in the amount earmarked for loans of R\$ 4,6 billion.

The picture below represents, per modality, the credit operations that were included, divided as to the value of loans, number of operations and their respective relative values.

**Table 3**  
**Demand for resources for Environmental Sanitation**  
**(after previous fitting)**  
**Brazil, 2004**

Destination	Value		Projects	
	R\$ million	Proportion	Number	Proportion
Water	1,576	34%	205	35%
Sewage	2,035	44%	281	48%
Institutional Development	443	10%	51	9%
Solid Waste	21	0%	18	3%
More of the modality	506	11%	27	5%
<b>TOTAL</b>	<b>4,581</b>		<b>582</b>	

The operations that did not fit the criteria were disqualified for the following reasons:

- 72 because they qualified as drainage operations;
- 21 because they qualified as integrated-sanitation – "Pró-sanear" operations;

- 3 because they qualified as actions involving solid waste, but not its final destination, and
- 67 because they were out of the limit made available.

*iii) Stage of institutional analysis*

The institutional analysis checked, for actions involving water supply and sewage services, if the provider of sanitation services had been chartered under the form of autonomous organisation, public enterprise or mixed-economy society, and, if the borrower were not the provider of sanitation services, whether the concession was regular. In this case, it was required from both a term of commitment establishing that the creation, operation and maintenance of services involved in the credit operation were carried out under the responsibility of the service provider. For operations involving solid waste, the existence and the actual collection of legally instituted fees or tariffs was noticed. A total of 568 operations complied with these requirements and were approved for a total amount of loans of R\$ 4,5 billion.

**Table 4**  
**Demand for resources for Environmental Sanitation**  
**(after institutional analysis)**  
**Brazil, 2004**

<b>Destination</b>	<b>Value</b>		<b>Projects</b>	
	R\$ million	Proportion	Number	Proportion
Water	1,571	35%	203	36%
Sewage	1,990	44%	270	48%
Institutional Development	443	10%	51	9%
Solid Waste	21	0%	17	3%
More of the modality	506	11%	27	5%
<b>TOTAL</b>	<b>4,531</b>		<b>568</b>	

All in all, 14 operations were not approved:

- 13 due to the non-existence of a service provider chartered under the form of autonomous organisation, public enterprise or mixed-economy society, and
- 1 due to the non-existence of legally instituted and actually collected fees or tariffs.

*iv) Stage of feasibility analysis*

In the feasibility analysis the outcome of the credit-risk analysis and of the analysis of the sustainability of the venture intended were taken into account. Out of the 568 operation proposals, only 336 operations were approved, for a total amount for loans of R\$ 3,1 billion.

**Table 5**  
**Demand for resources for Environmental Sanitation**  
**(after feasibility analysis)**  
**Brazil, 2004**

Destination	Value		Projects	
	R\$ million	Proportion	Number	Proportion
Water	984	32%	118	35%
Sewage	1,366	44%	157	47%
Institutional Development	208	7%	27	8%
Solid Waste	12	0%	10	3%
More of the modality	506	16%	24	7%
<b>TOTAL</b>	<b>3,076</b>		<b>336</b>	

The refusal of 232 operations was due to:

- 192 operations not approved in the credit-risk analysis, and
- 40 operations failed to be approved in the economic-sustainability and financial analyses.

*v) Stages of ranking and qualification*

Operations were ranked according to criteria that took into account the health situation of the benefiting municipality, the efficiency of the service provider, the advance in the preparation of the engineering project, the percentage of the borrower's counterpart and the stage of the works to be funded, favouring those whose completion would be allowed by the loan.

For the purpose of qualification, the limits imposed by the National Monetary Council were taken into account for each type of venture, as provided for in Resolution 3.153/2003, the availability of the budget of the FGTS <sup>t.n.</sup> and of other budgetary sources (for example: FAT/BNDES <sup>t.n.</sup>) and the ranking of operations. At this stage 286 operations qualified, for a loan value of R\$ 2,3 billion, which, together with some large operations, particularly those open to international competition, totalled R\$ 2,9 billion of fiscal space established by the CMN.

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<sup>t.n.</sup> FGTS – Brazilian unemployment insurance, managed by Caixa Econômica Federal (Federal Savings Bank) – CEF.

<sup>t.n.</sup> BNDES – National Bank for Economic and Social Development.

**Table 6**  
**Demand for resources for Environmental Sanitation**  
**(after the stage of ranking and qualification)**  
**Brazil, 2004**

Destination	Value		Projects	
	R\$ million	Proportion	Number	Proportion
Water	616	27%	96	34%
Sewage	1,067	46%	139	49%
Institutional Development	107	5%	17	6%
Solid Waste	12	1%	10	3%
More of the modality	506	22%	24	8%
<b>TOTAL</b>	<b>2,308</b>		<b>286</b>	

In short, contracts were entered into for 286 operations were, covering a universe of circa 10,2 million people in 18 states and specifically serving 448 municipalities, which provided new momentum to sanitation works in Brazil.

Among the credit operations signed for with State Governments, 169 contracts benefit municipalities where services are operated by State Sanitation Companies, totalling a global investment of R\$ 1,4 billion.

Among the 117 contracts signed with Municipality Governments, five operations contemplate areas under the responsibility of Municipality Sanitation Companies, corresponding to an investment of R\$ 50,1 million. The other operations benefit systems operated by Municipality Sanitation Autonomous Agencies and, to a lesser degree, municipalities in which such services are operated by State Sanitation Companies.

## 5. Financial Aspects of Credit Operations

The new approach of the sanitation sector has had several positive outcomes for the improvement of the use of public funds in infrastructure. On the one hand, it allowed for the unleashing of a sector that had undergone a strong retraction in the level of investments in 2002 and 2003. On the other, it indicated an important expansion in the number of contracts entered into on the part of private banks in the sector of water supply, institutional development and sewage services.

Historically, the private sector has not significantly participated in financing schemes for the sanitation sector with resources of the FGTS. Mostly, this behaviour tends to be associated to the fact that borrower companies used to belong exclusively to the public sector<sup>7</sup> and to the inhibition deriving from the perception

<sup>7</sup> About the growth in the participation of the private sector in the delivery of sanitation services, it is important to highlight that the process of public selection for contracts for credit operations within the Programmes of Funding for Private Sanitation Concessionaires – FCP/SAN and Specific Purpose Companies – SPE, carried out in 2004, received proposals for the amount of R\$ 810 million, out of which operations were selected for the amount of R\$ 286,6 million for Programme FCP/SAN and R\$ 294,9 million for Programme SPE. In spite of Programme FCP-SAN having been active since 1997, this was the first year in which the demand for financing schemes surpassed the supply of resources. In view of the expressive demand for resources, it is estimated

of risk on the part of the financial institutions. More recently, the prudential restrictions imposed on the limits of funding to the public sector on the part of financial institutions (45% of the assets of reference) and the participation of private concessions in some municipalities have encouraged diversification in the participation of the private financial sector in the domain. Although CEF and the BNDES were the main suppliers of credit in this programme, in 2004, the latter having participated with R\$ 476 million, the participation of the private sector is gaining space.

Breaking with a long-lived trend, private banks entered into contracts for circa R\$ 40 million in 2002, R\$ 60 million in 2003, and up to December, 2004, the forecast is that contracts will be signed for R\$ 256 million. Among the private institutions that invested FGTS resources in the sector, the following highlighted in the last years: Bradesco, Itaú/BBA and Unibanco, the latter being the only one to have entered into contracts in 2004. Looking ahead, it is likely that a greater participation of the private sector such as it has happened in terms of the PSH may become a trend.

**Table 7**  
**Resources for Environmental Sanitation per Financial Institution**  
**Brazil, 2004**

<b>Modality</b>	<b>Banrisul</b>	<b>BDMG</b>	<b>BNDES</b>	<b>Caixa (Federal Savings Bank)</b>	<b>State Savings Bank /Rio Grande do Sul</b>	<b>Unibanco</b>	<b>Total</b>
Water Supply		238	14.392	629,686		97,814	<b>742,130</b>
Institutional Development				46,068		61,387	<b>107,455</b>
Sanitary Sewage	11,720	7,220	115,989	729,191	780	97,590	<b>962,490</b>
Solid Waste		449	3,743	5,214			<b>9,406</b>
More of the modality		12,137	341,793	125,393			<b>479,323</b>
<b>Total Global</b>	<b>11,720</b>	<b>20,044</b>	<b>475,917</b>	<b>1,535,552</b>	<b>780</b>	<b>256,791</b>	<b>2,300,804</b>

Regarding the disbursement of FGTS resources in credit operations signed for in 2003 and 2004, pursuant Resolution CMN number 3.153/2003, the totals were R\$ 96,5 million in 2003 and R\$ 35,8 million up to November, 2004. The forecast is of a disbursement of about R\$ 1,4 billion in the coming twelve months.

In turn, the average nominal profitability forecast in the contracts is of two digits. Indeed, the active rates of the modalities water and sewage stay at about 12% to 15%. Over these rates, it is estimated that the projects will feature a level of profitability between 2.0% and 3.0% per annum, which represents a total profitability rate between 15% and 17.5%, depending on the modality of use of the resources. Thus, the real rate of return of projects stays, overall, between 6% and 10% per annum. Bearing in mind the fact that the

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that, after the completion of all stages of the process of public selection, all the R\$ 360 million available in the budget of the FGTS will be used in contracts, an unheard of fact that represents the increment in the interest of the private sector in the domain of sanitation.

sectoral rate of default is low, reflected in a concept of low risk<sup>8</sup>, the real rates of return may be considered quite solid<sup>9</sup>.

**Table 8**  
**Average Rates of Return in Projects of Basic Sanitation**  
**Brazil, 2003-2004**

<b>Caixa (Federal Savings Bank)</b>	<b>TR<sup>t.n.</sup></b>	<b>Rate of the modality</b>	<b>Administration Fee</b>	<b>Risk Rate</b>	<b>Total of the Bank</b>	<b>Margin of the Project*</b>	<b>Profitability of the Project*</b>
Water	2.78 %	8%	2%	1.68%	14.46%	3.0%	17.46%
Sewage	2.78 %	6.5%	2%	1.68%	12.96%	2.0%	14.96%

(\*) estimated

The analysis of the picture above suggests that credits for sanitation deriving from Resolution number 3.153/2003, which are long term, should feature during their duration a capital cost below the opportunity cost of the public debt. This perspective indicates that these investments, if made beforehand, will have a neutral or positive effect on the solvability of the public sector in medium run. Therefore, the exceptional fiscal treatment offered for these credit operations will probably prove advantageous from the social point of view and safe from the fiscal point of view.

<sup>8</sup> Taking as an example the last contracts of Caixa Econômica Federal (Federal Savings Bank) (2003 and 2004), in the modalities water, institutional development and drainage, more than half the volume of contracts was ranked as AA or A risk (higher risks, according to Resolution 2.682 of the CMN). Including the modalities sewage and solid waste the participation of the contracts at these levels is reduced to 47%. Even so, this is a relatively low level of risk for sectors having the characteristics of the sanitation sector in Brazil.

<sup>9</sup> Taking into account the total portfolio, which includes the loans granted without the additional efficiency criteria (dealt with in Resolution CMN 3.153/2003), the level of default is of about 1%. Taking into account solely the new Financing Schemes, it is expected that the level of default of service providers stays close to zero. This is explained by the level of guarantees required from the borrower and by the fact that projects are normally linked to safe sources of revenue.

<sup>t.n.</sup> Reference Interest Rate.