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Report No: 25241

IMPLEMENTATION COMPLETION REPORT
(CPL-40460; SCL-4046A)

ON A

LOAN

IN THE AMOUNT OF US$350 MILLION

TO THE FEDERATIVE REPUBLIC OF

BRAZIL

FOR A

FEDERAL RAILWAYS RESTRUCTURING AND PRIVATIZATION PROJECT

05/16/2003

Finance, Private Sector and Infrastructure Department
Brazil Country Management Unit
Latin America and the Caribbean Regional Office

CURRENCY EQUIVALENTS

(Exchange Rate Effective November 20, 2002)

Currency Unit	=	Real (R$)
R$1.0	=	US$ 0.28
US$ 1.0	=	R$ 3.50

FISCAL YEAR

January 1 December 31

ABBREVIATIONS AND ACRONYMS

ANTAQ	Regulatory Agency for Water Transport
ANTF	National Association of Rail Carriers
ANTT	Regulatory Agency for Land Transport
BANESPA	Banco do Estado de São Paulo
BNDES	Banco Nacional de Desenvolvimento Econômico e Social
CBTU	Companhia Brasileira de Trens Urbanos *(Brazilian Urban Train Company)*
CEF	Caixa Econômica Federal
CND	National Privatization Committee
COFER	Comissão Federal dos Transportes Ferroviários *(Federal Rail Transport Commission)*
CONIT	National Council for Transport Integration
DNER	Departamento Nacional de Estradas de Rodagem
DNIT	Department of Transport Infrastructure
DTF	Departamento dos Transportes Ferroviários *(Rail Transport Department of the Ministry of Transport)*
EMP	Environmental Management Component
ERP	Emergency Rehabilitation Program
FEPASA	Ferrovia Paulista S.A. *(São Paulo State Railways)*
FGV	Fundação Getúlio Vargas
FNS	North-South Railway
FRS	Financial Restructuring and Settlement Component
GEIPOT	Empresa Brasileira de Planejamento dos Transportes *(National Transport Planning Agency)*
NEMESIS	Núcleo de Estudos e Modelos Especiais Sistêmicos
ORC	Operations Restructuring and Concessioning Component
QAG	Quality Assurance Group
REFER	Railways Employee's Pension Fund
RFFSA	Federal Railways
RRC	Regulatory Reform Component
SAR	Staff Appraisal Report
SD	Settlement Division
SDE	Secretariat of Economic Rights
SRP	Staff Retrenchment Program
WBI	World Bank Institute

Vice President:	David de Ferranti
Country Manager/Director:	Vinod Thomas
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BRAZIL
FEDERAL RAILWAYS RESTRUCTURING AND PRIVATIZATION PROJECT

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Project ID: P040028	Project Name: RAILWAYS RESTRUCTURG
Team Leader: Aymeric-Albin Meyer	TL Unit: LCSFT
ICR Type: Core ICR	Report Date: May 16, 2003

1. Project Data

Name: RAILWAYS RESTRUCTURG
Country/Department: BRAZIL
L/C/TF Number: CPL-40460; SCL-4046A
Region: Latin America and Caribbean Region

Sector/subsector: Railways (99%); Central government administration (1%)
Theme: State enterprise/bank restructuring and privatization (P); Social risk coping (P); Regulation and competition policy (S)

KEY DATES

			Original	Revised/Actual
PCD: 07/15/1995		*Effective:*	10/31/1996	10/31/1996
Appraisal: 04/15/1996		*MTR:*	05/04/1998	05/04/1998
Approval: 06/20/1996		*Closing:*	12/31/2000	06/30/2002

Borrower/Implementing Agency: FEDERATIVE REPUBLIC OF BRAZIL/RFFSA
Other Partners: BNDES

STAFF	Current	At Appraisal
Vice President:	David de Ferranti	Shahid J. Burki
Country Manager:	Vinod Thomas	Gobind T. Nankani
Sector Manager:	Danny M. Leipziger	Asif Faiz
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2. Principal Performance Ratings

(HS=Highly Satisfactory, S=Satisfactory, U=Unsatisfactory, HL=Highly Likely, L=Likely, UN=Unlikely, HUN=Highly Unlikely, HU=Highly Unsatisfactory, H=High, SU=Substantial, M=Modest, N=Negligible)

Outcome: S

Sustainability: L

Institutional Development Impact: H

Bank Performance: S

Borrower Performance: S

	QAG (if available)	ICR
Quality at Entry:		S
Project at Risk at Any Time:	No	

3. Assessment of Development Objective and Design, and of Quality at Entry

3.1 Original Objective:

Reduce the cost of freight transport in Brazil's main corridors by restructuring and privatizing the federal railways, including: (a) improve performance by restructuring and concessioning RFFSA's operations to private operators, and by restructuring its finances to settle debts and labor liabilities; (b) increase productivity through staff retrenchment and emergency rehabilitation of critical assets in order to make the proposed concessions viable, while minimizing the social cost of retrenchment; and (c) enhance competition through regulatory reform, with a view to increase the railways' market share and reduce freight rates.

3.2 Revised Objective:

The objective of the project was revised to also include the restructuring and privatization of the São Paulo State Railways (FEPASA) which was incorporated into the Federal Railways (RFFSA) in 1998.

3.3 Original Components:

The project consisted of the following six components:

(a) Operations Restructuring and Concessioning Component (ORC) (1% of total project cost), including the division of the railway into six regional operations, establishment of interchange traffic arrangements and trackage rights, preparation of bidding documents, negotiation of concession and lease contracts, transfer of rail assets to concessionaires, closure of RFFSA's operational divisions, and the organization and strengthening of RFFSA's technical supervision units;

(b) Staff Retrenchment Program (SRP) (56% of total project cost), including appropriate incentive schemes for early retirement, voluntary separation, severance payment schemes for remaining redundant staff, retraining programs and outplacement assistance, aiming to reduce RFFSA staff by about 18,000, in addition to 4,000 staff that already retired, in order to increase staff productivity while minimizing the social costs of staff retrenchment;

(c) Emergency Rehabilitation Program (ERP) (41% of total project cost), consisting of the emergency rehabilitation, repairs and maintenance of locomotives, wagons and critical sections of track which are necessary to avoid further deterioration and traffic losses during the restructuring and concessioning process;

(d) Environmental Management Component (EMC) (less than 1% of total project cost), including environmental audits of railway facilities and strengthening of RFFSA's environmental management and safety unit;

(e) Regulatory Reform Component (RRC) (less than 1% of total project cost), including the development, monitoring and evaluation of railway regulations, strengthening of the railway regulatory and supervisory agency (Department of Railway Transport (DTF) in the Ministry of Transport (MT), and establishment of a dispute settlement commission (COFER); and

(f) Financial Restructuring and Settlement Component (FRS) (1.5% of total project cost), including establishment of a Settlement Division (SD) within RFFSA and contracting of a Real Estate Manager (REM) to manage and sell non-rail assets in order to settle debts and labor liabilities.

3.4 Revised Components:

The scope of some components, essentially a), b), d) and f), were slightly revised as a result of the incorporation of São Paulo State Railways (FEPASA) into RFFSA in 1998. The scope of component c) was substantially reduced because the concessioning process was accelerated and some planned rehabilitation and maintenance works were actually assumed by the concessionaires, as it was actually foreseen at appraisal (para. 3.26 of the Staff Appraisal Report (SAR) Were also added: (i) two studies to component a) to assess the economic and financial feasibility of the North - South Railway (FNS) under construction by the public company VALEC with a view to privatizing it; (ii) technical assistance to component e) for the Ministry of Transport and the Brazilian Enterprise for Transport Planning (GEIPOT) to prepare for a broad restructuring of the transport sector administration, including the design of the proposed regulatory agency; and (iii) technical assistance into component f) to assist in the liquidation of RFFSA.

3.5 Quality at Entry:

The project's quality at entry is assessed as satisfactory (there was no QAG evaluation). The project was very innovative since it was the Bank's first investment operation to help finance severance payments for retrenched employees, and to support the restructuring and privatization of a major railway system. The processing of the project contributed to the clarification of the Bank's policy on financing severance payments by the Operations Policy Committee. In turn the preparation of the staff retrenchment component benefited from this interaction with Bank operations policy staff. The positive outcomes of the project, and its role in inspiring a number of Bank operations in support of public employee reduction programs or railway privatization projects confirm the soundness of its design. But two project components could have benefited from a more in-depth preparation.

First, the operations restructuring and concessioning component should have included a more comprehensive restructuring of Brazil's entire railway system in order to redesign its regional structure, inherited from the past, in accordance with current demand for rail transport, and to facilitate long distance traffic while minimizing the need for interchange across concessions. Unfortunately, such efficient restructuring was not possible at the time of appraisal as FEPASA was then an element, together with the São Paulo State Bank (BANESPA), in the negotiations for the settlement of the São Paulo state debt, and the Federal Government, facing the rapidly deteriorating condition of the RFFSA system, its increasing operational deficits, and pressures from labor unions and political lobbies, decided to privatize "quickly".

Second, the regulatory reform component should have been mostly implemented prior to concessioning, so that clear rules are established for efficient and equitable operation by the private sector, and a regulatory agency, with some degree of independence from the Government, is established to effectively implement such regulation and supervise the concessions. But the political pressures on Brazil's National Economic and Social Development Bank (BNDES) to rapidly auction the concessions did not allow the establishment of an appropriate regulatory framework.

4. Achievement of Objective and Outputs

4.1 Outcome/achievement of objective:

The outcome of the project is satisfactory because:

The cost of freight transport in the RFFSA corridors has been reduced from an average USc2.9 per ton-km in 1996 to an average USc2.0 per ton-km in 2000, which is exactly the agreed target for the original closing year. The average transport cost in the RFFSA and FEPASA corridors was further reduced to USc1.6 per ton-km in 2001. But the devaluation of the real, which accelerated in 2001, had a substantial impact. In reals, the average cost of transport in these corridors was reduced from about Rc 3.0 per ton-km in 1996 to Rc2.6 per ton-km in 2001, in spite of a general inflation of 56% over the period.

The output of the RFFSA railways increased by over 50% from 35 (in 1996) to 53.5 billion ton-km in 2002, slightly above the 53 billion ton-km appraisal target for 2000 (source: DTF). The target was reached with a two-year delay because of the impact of the 1998 financial crisis on the economy, and petroleum traffic losses resulting from the deregulation of transport of petroleum products and newly-built pipelines. There has been significant increases of market shares in other lines of businesses such as grains products and containers. But the railways' competitiveness, particularly in the long-distance freight market, is still affected by connectivity issues (such as different track gauges and commuter train traffic in metropolitan regions), and inadequate incentives and regulation for joint traffic.

The railways performance has substantially improved as a result of restructuring and privatization. With the exceptions of two small operations (Ferroviária Novoeste S/A - NOVOESTE and Companhia Ferroviária do Nordeste - CFN), all the operators recover more than their operating expenses from revenues. This is a substantial improvement over RFFSA's and FEPASA's annual operating deficits of over R$350 million prior to privatization (source: Federal Railways Restructuring and Privatization Project, Staff Appraisal Report). Although they remained below expectations due to lack of debt financing, the investments made by the private operators (about R$300 million p.a. over 1997-2001) were substantially above those made prior to privatization. RFFSA's debts have been rescheduled or settled through revenues from the sale of the concessions and non-rail assets, and progress has been made in settling the large number of outstanding labor liabilities and in liquidating RFFSA.

The railways' labor productivity increased from 1.1 (in 1996) to 4.9 million ton-km per employee in 2002, well above the target of 2.3 million ton-km per employee for the RFFSA system. About 17,900 ex-employees have received severance benefits financed under the project (the appraisal target was 18,000), and about 17,100 have received similar benefits paid by the concessionaires (source: DTF). The latest surveys showed that, in 1999, about 57% of the RFFSA ex-employees were working, 33% had retired, and 10% were unemployed, which is below Brazil's real unemployment rate.

The regulatory agency for land transport (ANTT) was established in 2001, following preparation studies financed under the project and significant delays in the congressional approval of the necessary legislation. As a result, important regulations including interchange or joint traffic, captive shipper rates, and line abandonment rules still need to be improved, and the capacity of ANTT to enforce regulations, supervise concession contracts and monitor industry performance still need to be strengthened. Following the closure of this loan, support is being provided to ANTT for this purpose under Loan 4188-BR. Also, discussions are underway with the Government on a possible adjustment operation which would, *inter-alia,* support regulatory and institutional reforms in the infrastructure sectors, including railways.

4.2 Outputs by components:

1. Operations restructuring and concessioning (US$ 13.5 million of which US$1.6 million from the loan).

The RFFSA system was restructured into six vertically-integrated regional operations through consolidation of RFFSA's 12 existing Regional Superintendencies, and the separation of operational from non-operational assets. A tentative staffing plan was also prepared for each operation, in order to provide the basis for staff retrenchment (component 2). Each regional operation was evaluated by BNDES, which is responsible for implementing the federal government's privatization program under the supervision of the inter-ministerial National Privatization Committee (CND).

Following restructuring and staff retrenchment, each operation was subsequently auctioned for concessioning to prequalified consortiums (each member being limited to 20% of the operator's stock) for 30 years, renewable for another 30 years. To the concession contract with the federal government was associated a contract with RFFSA for the leasing of operational assets and the sale of material inventory. The bid price, above the minimum price stipulated in the documents as evaluated by BNDES, was to be paid as a down payment (for 10-30%) and quarterly installments over the period of the concession. The restructuring and concessioning of the six RFFSA operations were completed over 1996-97, very much in accordance with the agreed schedule.

The *Nordeste* regional system, which was not attractive "as is" to private investors because of the poor state of its tracks, motive power and rolling stock, was subject to a specific feasibility study and to an emergency rehabilitation program (component 3) prior to concessioning in the second semester of 1997.

The FEPASA system was incorporated into RFFSA in 1998, as part of a debt settlement agreement between the federal and the Sao Paulo state governments, and, at the request of the former, included into the project. Following a similar preparation process, including BNDES' evaluations and some staff retrenchment, the *Malha Paulista* as a whole was auctioned as a seventh concession in November 1998.

The seven concessions were sold for a total aggregated price of R$ 1,764 million, including R$ 383 million as downpayments. Two concessions were sold at the predetermined minimum price, three at premiums of 3 to 11%, and two at premiums above 37%. Section 10 shows the main characteristics of the seven operations (Table 1) and the main results of the concessioning process (Table 2).

Following the transfer of operations to the private operators, RFFSA's operations and operations support divisions were closed. Small regional offices were kept and reorganized to supervise operational asset leases, sell non-operational assets, settle judicial actions, and, by delegation from MT, to supervise the technical and environmental aspects of the concession contracts, until such responsibilities were assumed by DTF from 1999-2001, and by ANTT from June 2001 onwards.

The project component supported the creation of the National Association of Rail Carriers (ANTF) and the establishment of appropriate standards and processes for traffic interchange through technical assistance provided by the Association of American Railroads. ANTF is already playing an important role in disseminating appropriate norms and standards in the industry, and in promoting training activities and public-private partnerships.

Finally, a demand study and project finance services were financed under the loan to assess the feasibility of concessioning the completion and the operation of the North - South Railway (FNS) which is being built by VALEC, a public company within the jurisdiction of MT.

2. Staff Retrenchment Program (US$ 442.8 million of which US$ 194.6 million from the loan)

The objectives of the Program were to reduce RFFSA staff by about 18,000 prior to concessioning (from about 38,000 at the end of 1995), to increase staff productivity through retraining and outplacement assistance, and to minimize the social cost of adjustment through appropriate severance payments. The program included incentive schemes for early retirement and for voluntary separation, involuntary separation grants in case lay-offs would be necessary, retraining programs, and outplacement services.

Separation packages, including grants, retraining programs and outplacement assistance, were designed on the basis of detailed assessments of RFFSA's staff profiles and analyses of the regional labor markets. Early retirement incentives consisted of payment of salary during six months following separation in order to account for the delays in initial pension payments from the social security, and payment of contributions to the railways employees' pension fund (REFER) for up to five years. The voluntary separation incentive, available to employees with at least six years of service, consisted of a grant of four to twelve months of salary, depending on time in service, and payment of contributions to REFER for one year. Involuntary separation grants were set at 80% of the voluntary separation incentive. A broad set of retraining programs were made available to all. Separation packages for ex-FEPASA staff were substantially more generous as they were predetermined at one month per year of service by a contractual agreement between the company and the staff.

A total of 17,879 employees received separation benefits partly financed under the loan; of those, 10,110 received early retirement incentives, 7,384 (including 1,576 ex-FEPASA employees) received voluntary separation incentives, and 385 laid off employees received involuntary separation grants. Although not financed by the loan but from project counterpart funds, another 4,072 employees received early retirement benefits paid prior to project approval. Subsequently to concessionning, about 17,100 employees laid off by concessionaires within one year of concession contract effectiveness received the same separation grants paid from concessionaires' own resources, in accordance with the clauses of the contracts.

A total of 1,953 ex-employees participated into one or more retraining programs, at a total cost of US$1.8 million. Retraining programs were contracted by RFFSA to the system of official training institutes (21 programs to SENAI, 12 to SENAC and 19 to SEBRAE), because they are the only institutions capable of delivering a broad range of tailored technical, administrative, commercial and small business management programs country-wide. In order to achieve the labor productivity improvement objective, the program included an incentive for retraining (in the form of a one-month salary deduction from the separation grant for those not adhering). As a result, about 6,300 adhered to the retraining program. But because of substantial delays in contracting and initiating some of the training courses, about two-thirds of the applicants, most of whom had already found a new job, decided to cancel.

A total of 1,061 ex-employees adhered to the outplacement assistance program offered by RFFSA, which consisted in support for resume and interview preparation, and information on job opportunities. But as a result of delays in offering such assistance, which is not readily available in Brazil for technical and administrative staff, only 172 ex-employees actually participated in one of the 36 seminars organized country-wide.

In order to evaluate the results of the staff retrenchment program, RFFSA maintained a database of its ex-employees and contracted the Catholic University of Rio de Janeiro and Instituto Datafolha de Pesquisas to carry out three successive surveys of the employment and income situation of its ex-employees. The first survey, initiated in January 1998, included over 5,300 ex-employees in over 600 municipalities, and over 4,100 interviews were successfully completed. Follow up surveys were carried out in September 1998 and March 1999 on samples of 675 ex-employees.

In summary, the survey showed that 67% found a new job within four months of separation from RFFSA. In March 1999, 57% of the ex-employees were working, 33% had retired, and 10% were unemployed (down from 12% in the first survey). The large majority (76%) had changed activity, and were working in commerce and services, mostly independently (58%) or as business owners (7%). Others either were public employees (3.5%), had a regular work contract (24%) or were employed without a contract (9%). Regarding incomes, 56% said they were earning less than at RFFSA, and 29% said they were earning more.

3. Emergency Rehabilitation (US$ 145.4 million of which US$ 48.2 million from the loan)

The component, as originally designed, included the emergency repairs and maintenance of locomotives, wagons, tracks and other facilities necessary to allow for continued and safe operations during the restructuring and concessioning process, taking into account possible delays in such process. But the appraisal report also flagged that some of these investments might not be needed or left to concessionaires in case of delays in implementing the component and/or a possible acceleration of the concessioning process (para. 3.26). This is actually what happened with the first five concessions, which were auctioned without major rehabilitation works, but with only some repairs and maintenance of track and locomotives funded from RFFSA's own revenues, and the replacement of 2,200 wagon wheels financed under the loan in the Southern system.

It is only in the *Nordeste* system that a significant emergency rehabilitation component was carried out since it proved to be necessary to turn that concession attractive to private investors. A total of 1,863 km of tracks (44% of the network) were repaired, 64 locomotives were rehabilitated, almost 3,400 wagon wheels were replaced, and telecommunications and signaling system were rehabilitated on trunk lines, at a total cost of US$61.2 million equivalent, of which US$47.1 million from the loan.

4. Environmental Management (US$ 578,000 of which US$ 539,000 from the loan)

Environmental surveys and audits were carried out at 52 railway facilities, including 21 fueling stations, 22 workshops and 9 sleeper treatment plants, which were identified as the highest environmental risks. Work plans were developed on the basis of the results of the surveys to retrofit installations and/or perform clean up operations where necessary. The necessary actions were then discussed case by case between RFFSA and the concessionaires, with a view to reach agreement on their implementation by the concessionaires. Only three clean up operations were carried out by RFFSA under the project, respectively at the sleeper-treatment plant of Rocha Leão - Fazenda União at the fueling station of Iguaçu yard, and at 25 substations of the *malha Paulista*.

RFFSA's environmental management and safety unit was strengthened to supervise these surveys and clean up operations and to discuss actions needed with the concessionaires. In particular, two professional staff of the unit participated in an eight-month environmental management program at a local university.

5. Regulatory Reform (US$ 1.85 million of which US$ 1.81 million from the loan)

The regulatory reform component included technical assistance to RFFSA and to MT, and training of staff, to help develop and establish an appropriate regulatory framework for rail transport.

A first package of technical assistance helped RFFSA and MT develop regulations for interchange and joint traffic, captive shipper rates, abandonment of branch lines, reversible assets and accounting, as well as the procedures and information needed for supervising the concessions, and for improving the effectiveness of the Rail Transport (dispute settlement) Commission (COFER). Procedures and information systems were established at MT/DTF and at RFFSA to supervise the concession and lease contracts. But few of the specific regulations developed at that time were actually implemented.

Since some captive shippers submitted formal complaints to the Ministry of Justice for abusive rates charged by one operator, the Bank agreed to provide technical assistance under this component to the Secretariat of Economic Rights (SDE) of that Ministry, through RFFSA, to help reviewing such complaints. These reviews contributed to the preparation of a decision by the anti-trust agency (CADE) requiring *Companhia Vale do Rio Doce* (CVRD), which was privatized in 1997, to establish separate accounts for the two railways it owns and operates.

A second package of technical assistance helped prepare for a restructuring of the sector administration, aiming in particular to set up an independent regulatory agency which would consolidate the regulatory, supervision and dispute settlement functions of MT/DTF, RFFSA and COFER. The scope of work, initially focussed on the railway subsector, was subsequently expanded to the entire transport sector. Its coordination and supervision was then transferred from RFFSA to GEIPOT, under a cooperation agreement. The resulting restructuring plan served as a basis for the drafting of a law for a broad restructuring of the federal transport administration, including the creation of an independent transport regulation agency and a department of transport infrastructure, and the extinction of the national highway department (DNER) and other sector companies.

The transport sector restructuring law was finally approved by the congress in June 2001, creating two regulatory agencies, one for land transport (ANTT) and another for water transport (ANTAQ), the department of transport infrastructure (DNIT) and the National Council for Transport Integration (CONIT), reorganizing the Ministry of Transport, and establishing guidelines and timetables for the extinction of DNER, RFFSA, CBTU, GEIPOT, and VALEC. The new institutions were established in February 2002. They are now benefiting from Bank assistance under the Federal Highway Rehabilitation and Decentralization Project (Loan 4188-BR). DNER and GEIPOT are being extinct, and RFFSA is being liquidated. Little progress has been made with CBTU and VALEC.

An MBA course on infrastructure privatization, concession regulation and competition was offered by Fundação Getúlio Vargas (FGV) to about 40 professional staff of RFFSA who were expected to transfer to the regulatory agency. This course was then repeated for staff from GEIPOT and the Ministry of Transport, but this second course was not financed under this project but under the Bank-cofinanced Federal Highway Rehabilitation and Decentralization Project (Loan No. 4188-BR). Also under this project, a total of about 30 staff from RFFSA, GEIPOT, the Ministries of Transport, Planning and Finance participated into various WBI courses on privatization and regulation of transport services and infrastructure project finance. This training component represented an important first step in developing a corps of transport regulation professionals.

6. Financial Restructuring and Settlement (US$ 14.9 million of which US$ 10.8 million from the loan)

Following the concessioning process, RFFSA was reorganized to undertake the sale of its non-rail assets and to effectively manage and settle its debts and labor liabilities. A specific division was established for this purpose, and RFFSA's 13 regional offices were reorganized and equipped with microcomputers (financed through the loan) to carry out these new functions. An international consulting firm was hired under the project to assist in this reorganization, and to develop and deliver the necessary training programs for RFFSA's settlement staff, including real estate valuation, labor dispute settlement, environmental assessments, and the like.

Through an international real estate management firm contracted under the project, RFFSA completed an inventory of its large stock of about 20,000 real estate assets and their valuation, and established an information system for their management and preparation for sale. With assistance from Caixa Econômica Federal (CEF), which was hired to give a second opinion on valuations, RFFSA managed to sell a total of about 5,600 pieces of real estate for a total value of about R$253 million during project implementation. RFFSA also sold stocks of materials for a total of about R$40 million. The total revenues from these sales (R$293 million) was significantly less than the (US$1.0 billion) appraisal target, which proved too optimistic in view of the deteriorating conditions of the real estate market at the time, and of the devaluation of the currency.

With assistance from an information systems firm and the purchase of computer equipment and software financed through the loan, RFFSA established a management system (SISJUR) for its huge number of about 35,000 outstanding judicial processes, and trained its relevant staff in operating and using the system. With the much improved information available, RFFSA undertook to negotiate the smaller labor-related actions and managed to settle a total of about 4,100 actions in the course of 2001.

RFFSA's debt with INSS was rescheduled in December 1996 (Law No. 9364 dated December 12, 1996), as agreed during loan negotiations in order to enable RFFSA to start selling non-rail assets. This debt rescheduling as well as payment of some other debts, including to the Federation and REFER, were made possible through the transfer of some receivables from concession leases to the Federation. RFFSA's total outstanding debt is now estimated at about R$ 7.0 billion (about US$ 2.0 billion equivalent), as compared to about US$ 3.7 billion equivalent at appraisal. The reduction of debt in dollar terms (about US$ 1.4 billion equivalent) is well above the negotiated target of US$ 700 million, but this is mainly due to the devaluation of the real. The debt actually increased in nominal terms, in spite of the above-mentioned payments made, as a result of the more reliable assessment of labor liabilities than at the time of appraisal.

4.3 Net Present Value/Economic rate of return:

An ex-post economic evaluation of the project was carried out, following the methodology used at appraisal (Annex 10, section D of the SAR). The benefits derived from the project are: (i) the reductions of rail transport costs resulting from the improved productivity of the privately-operated railroads; and (ii) the transport cost savings for the additional traffic that the railroads captured from trucking. The ex-post evaluation included the seven RFFSA and ex-FEPASA operations (the ex-ante evaluation only included the six RFFSA operations). The retained "without project" scenario was based on the continuation of the stagnation (including traffic and productivity) which characterized the public railways prior to privatization.

With the project, the railways' total traffic actually increased from 40 billion ton-km in 1996 to 60.5 billion ton-km in 2002, an average increase of over 7% p.a.. It was assumed that traffic would increase at an average 5% p.a. from 2003-2006 and 3% p.a. thereafter. The railways' average long run marginal costs decreased from R$ 40 to R$ 36 per thousand ton-km between 1996 and 2001, which corresponds to a reduction of 42% in real terms (see Newton de Castro, "Preços, Custos e Subsídios no Transporte de Carga", Texto para Discussão, NEMESIS - Núcleo de Estudos e Modelos Espaciais Sistêmicos, 2002). It was assumed conservatively that the railways' costs will remain constant in real terms. The long run marginal cost of trucking remained at approximately R$ 60 per thousand ton-km, and was also assumed to remain constant in the future. On this basis, the net present value of the project's net economic benefits was estimated at about R$ 4.1 billion for a 12% discount rate. The economic internal rate of return of the project was estimated at 64%, which is very consistent with the appraisal estimate of 68% (Annex 3, Table).

An ex-post economic evaluation of RFFSA's staff retrenchment program, which accounted for about 50% of total project costs, was also carried out following the same methodology used at appraisal (Annex 10, section B of SAR).

The actual retrenchment costs, including severance pay and retraining costs, were considered the program's economic costs; the economic benefits (the marginal productivity value of laid-off employees, assuming this value would remain close to zero if redundant employees would remain in RFFSA) were estimated as the actual incomes of the laid-off employees, based on the results of RFFSA's ex-employee surveys. The ex-FEPASA employees were not included in the evaluation since no survey of their job and income situation was carried out.

The retrenchment costs for RFFSA's 16,303 redundant staff amounted to about US$ 309 million equivalent. The surveys showed that 67% of laid-off employees had a new job (about 10% were unemployed and the others had retired), and that on average their salaries were 74.3% of their former RFFSA salaries. As a result, the net present value of the staff retrenchment program at a 12% discount rate was estimated at about US$ 410 million equivalent, and its internal rate of return at a high 54%. Assuming salaries would actually be 10% lower than the results of the surveys, the internal rate of return would still be 46%, which is in line with the appraisal estimate of 40%.

4.4 Financial rate of return:

Project expenditures (about R$ 680 million) were already more than fully recovered from the concession downpayments (almost R$ 500 million) and the quarterly concession and lease payments in the initial two years (over R$ 220 million in 1997-98). Annual revenues from concession and lease payments exceed R$ 263 million. In addition to project costs and revenues from concession and lease payments, the ex-post financial analysis of the project takes into account RFFSA's staff and operating costs related to the restructuring, privatization and liquidation process, which is now expected to be fully completed at the end of 2004. On this basis, the financial rate of return of the project is estimated at 69% (Section 10, Table 3).

In addition to the revenues from the concessions and leases, the project resulted into the elimination of the large operational deficits of the public railroads, RFFSA and FEPASA, which were totaling an average of about R$ 350 million in the years prior to concessionning, and were not considered in the ex-post financial analysis (source: Federal Railways Restructuring and Privatization Project, Staff Appraisal Report).

4.5 Institutional development impact:

The project's institutional development impact is rated high. By effectively restructuring and privatizing the operation of Brazil's public railroads, the project contributed to the effective withdrawal of the government from the operation of railway services, which is more efficiently done by the private sector, and to the establishment of a sound basis for an adequate regulatory framework, including a regulatory agency with some degree of independence from the government. The reform resulted into more efficient use of public resources, through the elimination of the large public subsidies to the former public railroads; and into the much higher productivity of the large numbers of redundant public railway employees that found a more productive new job in the private sector.

The project also had a substantial impact on the development of the entire restructuring of the transport sector administration. The scope of the study which was initially contracted for designing a regulatory agency for rail transport was later expanded to the entire transport sector administration. This study served as a reference for the debate, including in the congress, on the proposed restructuring, for the establishment of the transport regulatory agencies (ANTT and ANTAQ) and the department of transport infrastructure (DNIT), and for the extinction of DNER, RFFSA and GEIPOT.

5. Major Factors Affecting Implementation and Outcome

5.1 Factors outside the control of government or implementing agency:

The international financial crisis of 1998 adversely affected both the implementation and the outcome of the project. In response to the crisis, the government had to drastically cut back public expenditures from 1999 onwards. As a result, the full completion of several components of the project, including staff retrenchment, took a longer time than planned; and the settlement of RFFSA's labor liabilities was slower than anticipated, which led to the extended liquidation period. The economic contraction which followed the financial crisis had an impact on the demand for transport, which contributed to several concessionaires not reaching the agreed traffic targets.

The subsequent devaluation of the real affected the finances of some of the concessionaires, who had financed investments and some concession downpayments through foreign borrowings. But more importantly, the increased foreign exchange risks, coupled with the lack of long term finance in the domestic market, had an adverse impact on concessionaires' investments, which have remained below expectations.

The deterioration of the real estate market countrywide also affected the capacity of RFFSA to sell its non-operational assets, and was an important factor for not achieving the agreed targets in this area.

5.2 Factors generally subject to government control:

The large delays in the effective implementation of the reform of railway regulation (reform which had been agreed during loan negotiations), affected the outcome of the project. Because of lack of appropriate regulation of captive shipper rates and the ineffectiveness of the dispute settlement commission (COFER), some captive shippers have had to file complaints with the anti-trust system, and in spite of the technical assistance provided under the project for analyzing the cases, the resolution of these disputes have taken a long time. Similarly, the unclear regulation of interchange and joint traffic has continued to affect the competitiveness of the railroads on long distances, and the concessionaires' market shares and finances.

The delays in establishing the regulatory agency, due in part to the Government who has taken a long time for preparing and presenting a proposal to the Congress, and in part to the extended debate in the Congress, has also affected the outcome of the project. If the regulatory agency had been established upfront, before or at the time of the privatizations, the above-mentioned and other regulatory issues would have been resolved more quickly, which would have contributed to improved operating performance and, by reducing the regulatory risk, to increased private investment in the sector.

The RFFSA liquidation process has been taking a longer time than anticipated since the Government has not been allocating a sufficient priority nor the necessary resources to settle RFFSA's liabilities. As a result, creditors have obtained judicial orders to secure RFFSA's revenues from the leases into escrow accounts pending the resolution of the disputes.

5.3 Factors generally subject to implementing agency control:

RFFSA management team's experience and commitment to project objectives, as well as the dedication of BNDES privatization team, were major factors of the project's successful implementation and outcome. But the lack of experience and effectiveness in selling real estate and in managing and settling large numbers of judicial actions were also important factors of the slow progress made in these areas, in spite of the assistance provided for these purposes under the project.

5.4 Costs and financing:

Project costs were maintained within appraisal estimates, and substantial savings were made by cutting investments which proved unnecessary. Insufficient government counterpart funding in the later years, after the implementation of the main project components was substantially completed, was a major factor of the delays in fully completing the project.

6. Sustainability

6.1 Rationale for sustainability rating:

The sustainability of the project's outcome is rated likely because of the following:

- The large majority of the railroads' clients are satisfied with the services provided by the private operators. Most consider that private operation resulted in significant improvements in the quality of services over the former public operation, and in some reduction of transport rates.
- The federal transport administration has now been reorganized in line with the new public-private sector structure. In particular, the regulatory agency for land transport (ANTT) is now well established, and RFFSA's liquidation is well underway. And the new government confirmed its intention to further strengthen these new institutional and regulatory frameworks.
- The risks of reduced competition through mergers and acquisitions in the railroads and iron ore sectors can be managed and adequately prevented or mitigated by coordinated actions between ANTT and the anti-trust system, consisting of the Ministry of Justice Secretaries for Economic Monitoring (SEAE) and for Economic Rights (SDE), as well as of the national anti-trust agency (CADE). And except for the iron ore market, the trucking industry will continue to effectively compete for market share.
- The risks related to the private operators' financial viability in the long term, which will depend on improving their competitiveness and market shares in the long-distance segments of the transport market and require investments to improve the connectivity of the networks which are beyond their financial capacity, could be addressed through innovative forms of public-private partnerships.

6.2 Transition arrangement to regular operations:

Several important actions are still needed to bring the privatized railroads to more efficient, regular operations. In particular, ANTT should:

- Clarify key regulations, particularly for captive user rates, inter-railroad access and joint traffic, reversible assets and line abandonment.
- Review inter-railroad operations agreements and ownership issues, and consider appropriate restructuring of concession networks and changes in ownership structures during the forthcoming five-year scheduled renegotiation of contracts.
- Develop appropriate regulatory instruments, clarify and enforce regulatory information requirements and establish effective supervision and performance monitoring capabilities through appropriate training of its staff.

The Ministry of Transport should:

- Establish a capacity for policy formulation and planning, including a project finance group or network with expertise in developing and structuring effective public-private partnerships for transport infrastructure projects or programs, with particular emphasis on resolving inter-railroad and inter-modal connectivity issues to allow efficient multimodal transport and logistics services.

7. Bank and Borrower Performance

Bank

7.1 Lending:

The performance of the Bank in guiding the preparation and in appraising the project was satisfactory. Interviews conducted with RFFSA management and BNDES privatization staff indicated that the Bank's contributions to project preparation have been valuable. The close cooperation between operations staff and central operations policy staff was an important factor of the effective processing by the Bank of this first investment operation which helped finance severance payments. The successful outcome of the project is a confirmation of its quality at entry.

7.2 Supervision:

The performance of the Bank in supervising the implementation of the project was also satisfactory. The decisions needed to respond to external factors were taken rapidly. For example: (i) the ex-FEPASA system was included into the project when it was incorporated into RFFSA following the agreement between the Federal Government and the Sao Paulo State Government and the rescheduling of the state debt; (ii) the emergency rehabilitation programs originally planned on the southern and southeastern systems as a safeguard against possible delays in the privatization process and the related loan amounts were cancelled when they proved to be unnecessary; and (iii) cost-sharing was increased to facilitate the completion of the project when the Government had to drastically cut back public expenditures following the 1998 financial crisis.

7.3 Overall Bank performance:

The overall performance of the Bank is therefore rated satisfactory. The performance of the Bank team was recognized with the President's Award for Excellence for the railway concessioning group.

Borrower

7.4 Preparation:

Borrower performance on project preparation is rated satisfactory. RFFSA management team and BNDES privatization team were fully committed to the objectives of the project. They worked together very efficiently in developing a restructuring and privatization process which was both politically feasible and socially responsible. However, the Ministry of Transport was somewhat less efficient in developing and approving the necessary regulatory reform which was advocated by the Bank.

7.5 Government implementation performance:

Government implementation performance is rated satisfactory overall. The Government provided the necessary support to the implementing agency, including counterpart funds, until the restructuring and privatization process was completed, despite fiscal limitations at the federal level. The RFFSA liquidation and liability settlement processes, however, were given less priority after the operations were successfully privatized.

7.6 Implementing Agency:

RFFSA performance is rated highly satisfactory. The commitment of RFFSA's management team throughout project implementation was a key factor of the project's successful outcome. The competence and dedication of RFFSA's project management team was another major factor of its successful implementation. The determination of BNDES privatization team was essential to the success of the privatization process.

7.7 Overall Borrower performance:

The overall performance of the Borrower is therefore rated satisfactory. The performance of the RFFSA-BNDES team was also recognized with the President's Award for Excellence.

8. Lessons Learned

The main lesson learned is that addressing the redundancy issue upfront, and at least initiating a well-designed staff retrenchment program with adequate social safeguards negotiated with the labor unions prior to initiating the privatization of a public enterprise can be an effective instrument to minimize the impacts of restructuring on employees' lives, and to reduce the opposition to such project. The process of the privatization of Brazil's railways could very well have derailed, and many employees could have been brought into poverty without the attention given to the issue by RFFSA management.

Another important lesson for the Bank is that lending in support of a well-designed staff retrenchment program, including equitable severance payments and retraining and outplacement support, can substantially increase the credibility of such program and greatly improve the feasibility of the entire privatization project. This was the first Bank investment project which directly helped finance severance payments, and the risks identified at the time of project processing, including the possible negative impacts on the Bank's image as a development institution, did not actually materialize.

The need for an established regulatory framework prior to initiating a privatization program is another clear lesson from this project. Also, in this case, a broader (geographical) restructuring of the public railways would have been needed to allow for more efficient private operations. The Government's decision to proceed with privatization anyway, since these two issues could not be resolved rapidly, had mixed results. The privatization process was completed, but the geographical restructuring of the concessions in the Southeast region is being proved increasingly necessary to simplify the operating agreements which the operators have had to enter into among themselves and to enable meaningful supervision of the concession contracts. It can also be argued that the regulatory agency could have been established faster if it had been a condition of proceeding with privatization, and that privatization could still have been done even if it had to be delayed by one or more years.

Finally, it is becoming increasingly clear that concessioning railway operations cannot resolve all the problems of the sector, and that government interventions may still be justified. One key area to ensure the competitiveness of the railways in the long distance market is the upgrading of the major rail corridors to allow for competitive operating speeds, and the improvement of their connectivity, particularly in the metropolitan region of Sao Paulo. These improvements are essential to reduce logistics costs and to improve the Brazil's competitiveness in export markets and particularly the competitiveness of the less developed regions of the interior. The investments required, however, are well beyond the financial capacity of the concessionaires, and the externalities involved, including the socio-economic and environmental costs of trucking in congested urban areas, could very well justify the participation of the Government in such investment programs through well-defined public-private partnership agreements with concessionaires and investors.

9. Partner Comments

(a) Borrower/implementing agency:
Borrower's comments translation (original in Portuguese in project file)

In making the overall evaluation of the project, which achieved its main objectives, the following comments are relevant:

- the highly qualified World Bank team working closely together with RFFSA and BNDES teams allowed the effective integration of the efforts needed from all parts to privatize the railroad, which, by Government decision, followed an accelerated process;

- as a result of this accelerated process and limited time for in-depth studies, the selected privatization model followed the geographical structure of the old RFFSA networks. These networks had resulted from political considerations and, in some aspects, are now conflicting with actual market needs. This is particularly true for the São Paulo network, which was aggregated later, and which should have been contemplated in the formulation of the networks. This is now being confirmed by the negotiations between FCA (*Centro-Leste* network), ALL (*Sul* network) and FERROBAN (*Paulista* network) for redistributing the operational corridors of the latter operator, also involving NOVOESTE (*Oeste* network) and FERRONORTE;

- another aspect to be emphasized is the low traffic density networks, such as the Novoeste and mainly the CFN (*Nordeste* network), which have serious economic difficulties. The privatization model for such networks could have had different characteristics, perhaps in the form of Government-subsidised concessions justified by the still fragile transport market;

- it is also important to note that network operations were privatized at a time when a regulatory and oversight structure had not yet been established. An aggravating factor was that the lease and concession contracts were not clear in certain aspects. This led to problems in the execution of these contracts as well as in the actual powers of the Regulatory Agency for Land Transport - ANTT, which was created well after the concessions were in effect;

- it is pointed out that the staff adjustment program supported by the World Bank, which included packages for early retirements, voluntary resignations, financial incentive for dismissed staff, training and outplacement services, helped minimize the social problems caused by the reduction of RFFSA staff, aiming at a higher productivity of the staff and its adjustment to the needs of the private operators that would succeed RFFSA;

- the partnership with the World Bank helped to structure the ANTT, through the studies carried out under the loan, which were the basis for the preparation of *draft law* submitted to the Congress and approved in 2001, creating the Regulatory Agencies for the transport sector, the Department of Transport Infrastructure - DNIT and CONIT;

- finally, the success of the project can be credited to the adequate preparation of its scope, to the modifications which later proved necessary, and to the dedication and integration of the World Bank and RFFSA teams, which managed to carry out the work satisfactorily.

(b) Cofinanciers:

Not applicable.

(c) Other partners (NGOs/private sector):

Not applicable.

10. Additional Information

Table 1. Economic Characteristics of the Concessions

Network/Malha	**Oeste**	**Centro-Leste**	**Sudeste**	**Tereza Cristina**	**Sul**	**Nordeste**	**Paulista**
States Served (*)	MS, SP	SE, BA, MG, GO, ES,RJ, DF	RJ, SP, MG	SC	PR, SC, RS	MA, PI, CE, RN, PB, PE, AL	SP, MG
Track Length (kms)	1,621	7,080	1,674	164	6,586	4,534	4,236
Track Gauge (m)	1	1	1.6	1	1	1	1.6 & 1
Locomotives	88	397	406	10	395	112	408
Wagons	2,777	9,233	11,406	563	10,626	1,919	11,855
Output TKU bn							
In 1995	1.6	6.26	20	0.10	7.5	0.7	6
Year 6	4	13	30	0.12	14.9	2	8.3
Invest. US$ Mn							
Years 1-6	89.0	327.4	227.0	9.4	276.0	18.4	304.8
Years 7-30	270.0	982.4	1,408.0	19.3	1,083.0	49.2	588.2
Op. Rev.US$ Mn							
In 1995	37	175	321	8	187	26	187
Year 1	45.0	195.0	384.0	5.5	202.0	41.3	132.4
Year 6	86.0	350.0	490.0	9.7	327.0	70.3	243.1
Employees	2,423	10,982	9,397	343	9,604	3,707	13,432
(Transferred)	(1,800)	(7,900)	(6,600)	(250)	(6,900)	(1,600)	(6,380)
Main cargoes	Petroleum Soybeans Steel Minerals	Petroleum Cement Steel Soybeans Grains	Iron ore Cement Steel Limestone	Coal and by-products	Soybeans Petro. Rice Alcohol	Iron ore Petroleum Oil Cement	Petroleum Oil Minerals Grains Pellets
Main customers	Petrobas Petroleo Ipir. Shell Cia Cimento Port Itau Nestle Cival Al. COSIPA	Petrobras Petroleo Ipir. Shell Cimento Caue Copebras Usiminas Nitrofertil	MBR CSN COSIPA Ferteco CBA Cimento Tupi Fosfertil	ELETROSUL	Petrobas Petroleo Ipir. Shell ESSO Votorantim Incobrasa	Petrobras Petroleo Ipir. Shell ESSO Adubos Trevo, Gerdau, Milho Brasil	CBA COSIPA Shell Holdercim Cargill Glencore
Main ports served	-	Vitória Salvador	Santos, Guaiba, RJ	-	Paranagua	-	Santos

Notes: (*) Abbreviations: RS=Rio Grande do Sul, SP=São Paulo, SE=Sergipe, BA=Bahía, MG=Minas Gerais, GO=Goiás, ES=Espiritu Santo, RJ=Rio de Janeiro, DF=Distrito Federal, SC=Santa Catarina, MA=Maranhão, PI=Piaui, CE=Ceará, RN=Rio Grande do Norte, PB=Pariba, PE=Pernambuco, AL=Alagoas, MS= Mato Grosso do Sul. Figures for track and rolling stock and employees correspond to 1998 actual values. Figures for output, planned investment, operating revenues and employees correspond to 1995 (before the concessioning) and to the estimates for the concessioning years.

Source: RFFSA (1998) and Gómez-Ibáñez (1998)

Table 2. Main Results from the Concessioning Process

Concession	Oeste	Centro-Leste	Sudeste	Tereza Cristina	Sul	Nordeste	Paulista
Auction date	05/03/96	14/06/96	20/09/96	22/11/96	13/12/96	18/07/97	10/11/98
Transfer date	01/07/96	01/09/96	01/12/96	01/02/97	01/03/97	01/01/98	01/01/99
# Bidders	n.a.	2	3	1	4	4	2
Private operator	Ferr. Novoeste (FNV)	Ferr.Centro Atlântica (FCA)	MRS Logística (MRS)	Ferr. Tereza Cristina (FTC)	Ferrovia Sul Atlântico (FSA)	Co. Ferr. Nordeste (CFN)	Ferroban (FBN)
Bid							
Minimum	60.2	316.9	888.9	16.6	158.0	11.5	233.4
Actual	62.4	316.9	888.9	18.5	216.6	15.7	245.0
Premium (%)	3.5	0	0	11.3	37.1	37.9	4.9
To Governmt:	3.0	15.8	44.4	0.83	7.9	0.5	11.6
To RFFSA:	57.2	301.5	844.4	15.8	150.1	10.9	221.7
Down payment							
% min. Bid)	10%	20%	30%	10%	20%	20%	20%
Total	6.0	63.3	266.7	1.6	31.6	2.3	11.6 (*)
Other payments							
Grace period	2 yrs.	2 yrs.	1 yr.	2 yrs.	2 yrs.	3 yrs.	2 yrs.
# Quarters inst.	112	112	116	112	112	108	112

Notes: All figures are in R$ millions.
(*) In the case of Malha Paulista there was a second installment of R$ 35 million.
The information on the number of bidders was provided by Rio's Stock Exchange.
Source: RFFSA (1998).

Table 3 - Ex-post Financial Evaluation

year	project investmts (R$m.)	restructur. staff & other costs	concession down-payments	concession leases	net cash flow
1995					
1996	297.5	77	432.2		57.7
1997	220.2	73	6.5	27.8	-258.9
1998	101.5	97	58.3	194.2	54.0
1999	38.8	97		231.9	96.1
2000	6.0	65		231.9	160.9
2001	6.4	58		263.4	199.0
2002	9.7	56		263.4	197.7
2003		55		263.4	208.4
2004				263.4	263.4
2005				263.4	263.4
2006				263.4	263.4
2007				263.4	263.4
2008				263.4	263.4
2009				263.4	263.4
2010				263.4	263.4
Financial rate of return:					69%

Source: RFFSA (2002) and mission estimates

Table 4. Concessions' Performance Production (billion TKU, target vs. actual)

Concessionary	Beginning of Concession		Prior Contractual Period	1st year of Operation	2nd year of Operation	3rd year of Operation	4th year of Operation	5th year of Operation	Accumulated
FERROVIA NORVOESTE S.A.	7/1/1996	**actual**	**1.49**	**1.52**	**1.51**	**1.54**	**1.67**	**1.53**	**7.76**
		target		*2.00*	*2.00*	*2.20*	*2.50*	*2.80*	*11.50*
		%		76.2	75.3	69.8	66.6	54.6	67.5
FERROVIA CENTRO-ATLANTICA S.A.	9/1/1996	**actual**	**6.16**	**5.35**	**6.39**	**7.15**	**7.56**	**8.20**	**34.66**
		target		*6.50*	*7.00*	*8.00*	*9.10*	*10.30*	*40.90*
		%		82.3	91.3	89.4	83.1	79.6	84.8
MRS LOGíSTICA S.A.	12/1/1996	**actual**	**18.59**	**20.16**	**21.55**	**21.75**	**26.58**	**27.47**	**117.52**
		target		*21.00*	*22.00*	*23.30*	*24.60*	*26.00*	*116.90*
		%		96.0	98.0	93.4	108.1	105.7	100.5
FERROVIA TEREZA CRISTINA S.A. (*)	2/1/1997	**actual**	**0.091**	**0.154**	**0.163**	**0.176**	**0.278**	**0.213**	**0.984**
		target		----	----	----	----	----	----
		%		----	----	----	----	----	----
AMÉRICA LATINA LOGíSTICA DO BRASIL S.A.	3/1/1997	**actual**	**6.80**	**6.90**	**8.61**	**9.61**	**10.78**	**11.96**	**47.86**
		target		*8.00*	*8.80*	*9.70*	*10.70*	*11.70*	*48.90*
		%		86.3	97.8	99.1	100.8	102.2	97.9
COMPANHIA FERROVIARIA DO NORDESTE	1/1/1998	**actual**	**0.516**	**0.640**	**0.919**	**0.711**	**0.700**	**0.757(1)**	**3.726**
		target		*0.90*	*1.20*	*1.50*	*1.70*	*1.80*	*7.10*
		%		71.1	76.6	47.4	41.2	42.0	52.5
FERROVIAS BANDEIRANTES S.A.	1/1/1999	**actual**		**5.01**	**5.98**	**8.28**	**8.30**		**27.58**
		target		----	*4.33*	*4.76*			*9.09*
		%		----	138.2	173.8			303.2

Source: Ministry of Transports, Rail Transport Department

Table 4.1. Concessions' Performance Number of Accidents (accidents per million of trains/km target vs.actual)

Concessionary	Beginning of Concession		1st year of Operation	2nd year of Operation	3rd year of Operation	4th year of Operation	5th year of Operation
FERROVIA NORVOESTE S.A.	7/1/1996	**actual**	**170.80**	**182.23**	**164.58**	**150.83**	**192.41**
		target	----	*98.80*	*88.40*	*72.80*	*62.40*
		%	----	54.2	53.7	48.3	32.4
FERROVIA CENTRO-ATLANTICA S.A.	9/1/1996	**actual**	**117.51**	**89.33**	**92.21**	**88.38**	**87.05**
		target	----	*99.75*	*89.25*	*73.50*	*63.00*
		%	----	111.7	96.8	83.2	72.4
MRS LOGíSTICA S.A.	12/1/1996	**actual**	**61.97**	**49.57**	**48.69**	**34.76**	**27.88**
		target	----	*62.70*	*56.10*	*46.20*	*39.60*
		%	----	126.5	115.2	132.9	142.0
FERROVIA TEREZA CRISTINA S.A. (*)	2/1/1997	**actual**	**117.30**	**29.08**	**22.29**	**23.47**	**12.34**
		target	----	*154.80*	*129.00*	*86.00*	*60.20*
		%	----	*532.3*	*578.8*	*366.5*	*142.0*
AMÉRICA LATINA LOGíSTICA DO BRASIL S.A.	3/1/1997	**actual**	**105.91**	**56.70**	**42.42**	**41.12**	**39.65**
		target	----	*76.00*	*68.00*	*56.00*	*48.00*
		%	----	134.0	160.3	136.2	121.1
COMPANHIA FERROVIARIA DO NORDESTE	1/1/1998	**actual**	**391.27**	**393.33**	**283.55**	**262.27**	**314.70 (1)**
		target	----	*144.50*	*127.50*	*110.50*	*102.00*
		%	----	36.7	45.0	42.1	32.4
FERROVIAS BANDEIRANTES S.A.	1/1/1999	**actual**	**139.11**	**66.22**	**63.26**	**44.10**	
		target	----	*139.65*	*124.95*	*102.90*	*88.20*
		%	----	*210.9*	197.5	233.3	

Source: Ministry of Transports, Rail Transport Department

Annex 1. Key Performance Indicators/Log Frame Matrix

Outcome / Impact Indicators:

Indicator/Matrix	Projected in last PSR[1]	Actual/Latest Estimate
. average transport cost (UScent/ton-km)	2.0	1.3
. federal railway traffic (billion ton-km / year)	53	53.5
. staff productivity (million ton-km per employee)	2.3	4.9
. locomotive availability (percent of fleet)	80	80
. locomotive productivity (million ton-km / year)	60	40

Output Indicators:

Indicator/Matrix	Projected in last PSR[1]	Actual/Latest Estimate
OPERATIONAL RESTRUCTURING AND CONCESSIONING:		
- concession bidding & contracting		
.nbr. of bidding documents published	6	7
.nbr. of auctions completed	6	7
.nbr. of concessions contracted	6	7
- organization of RFFSA supervision fct.		
. nbr. of regional offices operational	4	12
- staffing of RFFSA: nbr. of staff	500	528
STAFF RETRENCHMENT:		
- reduction of staff (basis 41.991, May 95)		
.nbr. of contracts terminated	18,000	17,879 plus 17,096 by concessionaires
. of which retirement	5,000	10,110
. retraining of redundant staff	9,000	1,953
. re-employment assistance	13,000	172
EMERGENCY REHABILITATION:		
- locomotive rehabilitated	240	64
- nbr. of loco/wagon wheels replaced	13,500	5,582
- track rehabilitation expenditures in US$m.	23.0	19.5
- loco differed maintenance expend. US$m.	150.0	150.0
- track maintenance expenditures in US$m.	20.0	21.8
ENVIRONMENTAL MANAGEMENT		
- nbr. of sites surveyed	150	170
REGULATORY REFORM		
- nbr. of regulation staff training weeks	100	130
RFFSA FINANCIAL RESTRUCTURING		
- revenues from rail assets, cumul. US$m	650	811
- revenues from non-rail assets, cum.US$m.	1,000	293
- debt reduction,		
payment of principal, US$m	700	1,454

[1] End of project
June 30, 2002

Annex 2. Project Costs and Financing

Project Cost by Component (in US$ million equivalent)

Component	Appraisal Estimate US$ million	Actual/Latest Estimate US$ million	Percentage of Appraisal
Operations Restructuring and Concessioning	13.10	13.51	103
Staff Retrenchment Program	395.00	442.78	112
Emergency Rehabilitation Program	248.30	145.44	59
Environmental Management Component	1.20	0.58	48
Regulatory Reform Component	0.30	1.85	617
Financial Restructuring and Settlement	7.40	14.90	201
Total Baseline Cost	665.30	619.06	
Physical Contingencies	25.70		
Price Contingencies	9.00		
Total Project Costs	700.00	619.06	
Total Financing Required	700.00	619.06	

Project Costs by Procurement Arrangements (Appraisal Estimate) (US$ million equivalent)

Expenditure Category	Procurement Method[1] ICB	NCB	Other[2]	N.B.F.	Total Cost
1. Works	0.00 (0.00)	45.00 (34.00)	0.00 (0.00)	30.00 (0.00)	75.00 (34.00)
2. Goods	120.00 (100.00)	35.00 (26.00)	0.00 (0.00)	70.00 (0.00)	225.00 (126.00)
3. Services	0.00 (0.00)	0.00 (0.00)	20.00 (20.00)	0.00 (0.00)	20.00 (20.00)
4. Separation Grants	0.00 (0.00)	0.00 (0.00)	340.00 (170.00)	40.00 (0.00)	380.00 (170.00)
5. Miscellaneous	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
6. Miscellaneous	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
Total	120.00 (100.00)	80.00 (60.00)	360.00 (190.00)	140.00 (0.00)	700.00 (350.00)

Project Costs by Procurement Arrangements (Actual/Latest Estimate) (US$ million equivalent)

Expenditure Category	Procurement Method[1] ICB	NCB	Other[2]	N.B.F.	Total Cost
1. Works	0.00 (0.00)	19.51 (14.65)	0.00 (0.00)	21.80 (0.00)	41.31 (14.65)
2. Goods	43.02 (33.67)	0.40 (0.34)	0.00 (0.00)	61.20 (0.00)	104.62 (34.01)
3. Services	0.00 (0.00)	0.00 (0.00)	22.16 (17.82)	11.64 (0.00)	33.80 (17.82)
4. Separation Grants	0.00 (0.00)	0.00 (0.00)	400.41 (191.15)	38.92 (0.00)	439.33 (191.15)
5. Miscellaneous	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
6. Miscellaneous	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
Total	43.02 (33.67)	19.91 (14.99)	422.57 (208.97)	133.56 (0.00)	619.06 (257.63)

[1/] Figures in parenthesis are the amounts to be financed by the Bank Loan. All costs include contingencies.

[2/] Includes consulting services, services of contracted staff of the project management office, training, and technical assistance services.

Project Financing by Component (in US$ million equivalent)

Component	Appraisal Estimate			Actual/Latest Estimate			Percentage of Appraisal		
	Bank	Govt.	CoF.	Bank	Govt.	CoF.	Bank	Govt.	CoF.
Operations Restructuring and Concessioning	0.60	12.50		1.64	11.87		273.3	95.0	
Staff Retrenchment Program	184.95	210.05		194.57	248.21		105.2	118.2	
Emergency Rehabilitation Program	138.14	110.16		48.24	97.20		34.9	88.2	
Environmental Management Component	1.20			0.54	0.04		45.0		
Regulatory Reform Component	0.30			1.81	0.04		603.3		
Financial Restructuring and Settlement	7.40			10.83	4.07		146.4		

Annex 3. Economic Costs and Benefits

The benefits derived from the project are: (i) the reductions of rail transport costs resulting from the improved productivity of the privately-operated railroads; and (ii) the transport cost savings for the additional traffic that the railroads captured from trucking. The ex-post evaluation followed the same methodology as the ex-ante evaluation, but it also included the ex-FEPASA operation while the ex-ante evaluation only included the six ex-RFFSA operations. The retained "without project" scenario was based on the continuation of the stagnation (including traffic and productivity) which characterized the public railways prior to privatization.

	project	**concession**		**railways**		**Inlation**	**railways**	**savings**		**net**
year	**investmts**	**investmts**	**traffic**	**op. exp.**	**op. cost**	**Index**	**op.cost**	**base traffic**	**transfer.traf**	**benefits**
	(R$m.)	(R$m.)	billion tkm	R$/1000tkm	R$/1000tkm	(IGP-DI)	(adj. 1996)	(R$m)	(R$m)	(R$m)
1995			42.5	21.4	42.0	0.67				
1996	297.5	13.0	40.0	21.0	40.0	0.75	40.0	0	0	-311
1997	220.2	307.0	41.0	19.0	39.8	0.82	36.4	146	12	-325
1998	101.5	198.0	44.0	18.0	34.2	0.86	29.8	427	60	226
1999	38.8	276.0	47.0	17.0	33.3	0.93	26.9	572	116	434
2000	6.0	392.0	53.3	16.3	33.0	1.05	23.6	766	242	724
2001	6.4	366.0	58.2	19.5	36.0	1.17	23.1	831	336	928
2002	9.7	127.0	60.5			1.28	24.0	804	369	1093
2003		200.0	63.5				24.0	828	423	1052
2004		200.0	66.7				24.0	854	481	1134
2005		200.0	70.0				24.0	880	541	1221
2006		200.0	73.5				24.0	908	604	1312
2007		200.0	75.7				24.0	926	643	1369
2008		200.0	78.0			**truck cost**	24.0	944	684	1428
2009		200.0	80.4			R$/1000 tku	24.0	963	726	1489
2010		200.0	82.8			60.0	24.0	982	770	1552

Net present value (R$million):	**4,148**
Internal Rate of Return	**64%**

Annex 4. Bank Inputs

(a) Missions:

Stage of Project Cycle Month/Year	No. of Persons and Specialty (e.g. 2 Economists, 1 FMS, etc.) Count	 Specialty	Performance Rating Implementation Progress	 Development Objective
Identification/Preparation				
04/17/1995	2	TASK MANAGER (1); ENGINEER (1)	S	S
Appraisal/Negotiation				
04/15/1996	3	TASK MANAGER (1); INSTITUTIONAL SPECIALIST (1); ENVIRONMENTAL SPECIALIST (1)	S	S
Supervision				
10/16/1996	3	TASK MANAGER (1); ECONOMIST (1); ENVIRONMENT SPECIALIST (1)	S	S
12/20/1996	3	TASK MANAGER (1); ECONOMIST (1); ENVIRONMENT SPECIALIST (1)	S	S
06/06/1997	2	TASK MANAGER (1); CONSULTANT (1)	S	S
02/20/1998	3	TASK MANAGER (1); CONSULTANT ECONOMIST (1); OPERATIONS OFFICER (1)	S	S
05/29/1998	5	TEAM LEADER (1); ECONOMIST (1); FINANCIAL ANALYST (1); RAILWAYS ADVISER (1); REGULATION ADVISER (1)	S	S
06/09/1999	3	TEAM LEADER (1); CONSULTANT ECONOMIST (1); PROJECT OFFICER (1)	S	S
05/19/2000	2	TEAM LEADER (1); PROJECT OFFICER (1)	S	S
02/15/2001	2	TASK TEAM LEADER (1); TRANSPORT SPECIALIST (1)	S	S
11/29/2001	3	LEAD TRANSPORT ECO. (1); TRANSPORT SPECIALIST (1); ENGINEER (1)	S	S
ICR				
05/2002	2	SR. TRANSPORT ECO. (1); TRANSPORT SPECIALIST (1)	S	S

(b) Staff:

Stage of Project Cycle	Actual/Latest Estimate	
	No. Staff weeks	US$ ('000)
Identification/Preparation	38.0	163.0
Appraisal/Negotiation	9.0	67.0
Supervision	59.60	203.0
ICR	4.0	10.0
Total	110.6	443.0

Annex 5. Ratings for Achievement of Objectives/Outputs of Components

(H=High, SU=Substantial, M=Modest, N=Negligible, NA=Not Applicable)

	Rating				
	H	SU	M	N	NA
[ ] *Macro policies*					●
[x] *Sector Policies*	●				
[x] *Physical*		●			
[x] *Financial*	●				
[x] *Institutional Development*	●				
[x] *Environmental*			●		
Social					
[ ] *Poverty Reduction*					
[ ] *Gender*					
[x] *Other (Please specify)* *safeguards for living conditions of retrenched employees*	●				
[x] *Private sector development*	●				
[x] *Public sector management*		●			
[ ] *Other (Please specify)*					

Annex 6. Ratings of Bank and Borrower Performance

(HS=Highly Satisfactory, S=Satisfactory, U=Unsatisfactory, HU=Highly Unsatisfactory)

6.1 Bank performance	*Rating*
☒ *Lending*	○ *HS* ● *S* ○ *U* ○ *HU*
☒ *Supervision*	○ *HS* ● *S* ○ *U* ○ *HU*
☒ *Overall*	○ *HS* ● *S* ○ *U* ○ *HU*

6.2 Borrower performance	*Rating*
☒ *Preparation*	○ *HS* ● *S* ○ *U* ○ *HU*
☒ *Government implementation performance*	○ *HS* ● *S* ○ *U* ○ *HU*
☒ *Implementation agency performance*	● *HS* ○ *S* ○ *U* ○ *HU*
☒ *Overall*	○ *HS* ● *S* ○ *U* ○ *HU*

Annex 7. List of Supporting Documents

1. Brazil Federal Railways Restructuring and Privatization Project, Staff Appraisal Report, Report No. 15580-BR, May 29, 1996.
2. Memorandum and Recommendation of the President of the International Bank for Reconstruction and Development to the Executive Directors on a Proposed Loan in an amount equivalent to US$350 million to the Federative Republic of Brazil for a Federal Railways Restructuring and Privatization Project, Report No. P-6907-BR, May 29, 1996.
3. Loan Agreement between the Federative Republic of Brazil and the International Bank for Reconstruction and Development, Loan Number 4046-BR, Project Agreement between the Federative Republic of Brazil and the International Bank for Reconstruction and Development, Loan Number 4046-BR, September 17, 1996.
4. Amendment to the Schedule 1 of the Loan Agreement between the Federative Republic of Brazil and the International Bank for Reconstruction and Development, Loan Number 4046-BR, December 1, 1998.
5. Federal Railways Restructuring and Privatization Project, Supervision Reports (Forms 590), or Project Status Reports from July 1996 to November 2002.
6. Federal Highway Decentralization Project, Supervision Reports (Form 590), or Project Status Reports from May 2001 to November 2002.
7. Amendment to the Loan Agreement between the Federative Republic of Brazil and the International Bank for Reconstruction and Development, Loan Number 4188-BR, August 8, 2002, and to the Project Agreement between the International Bank for Reconstruction and Development and Departamento Nacional de Estradas de Rodagem, Loan Number 4188-BR, August 8, 2002.

and Project Agreements between the Federative

8. Preços, Custos e Subsídios no Transporte de Carga, Texto para Discussão, NEMESIS - Núcleo de Estudos e Modelos Espaciais Sistêmicos, Newton de Castro, 2002.
9. Brazil Multimodal Freight Transport: Selected Regulatory Issues, Antonio Estache, The World Bank, Report No. 16361-BR, October 15, 1997.
10. Brazil Public-Private Partnership in Transport Infrastructure, Progress and Challenges, Volume 1: Summary of Main Findings, J. Luis Guasch, The World Bank, Report No. 20702-BR, June 30, 2000.
11. Reestruturação do Setor Transporte, Lei No. 10.233, June 5, 2001, República Federativa do Brasil.
12. Relatório Trimestral de Andamento do Projeto de Reestruturação e Privatização de Ferrovias Federais conforme Acordo de Empréstimo BIRD No. 4046-BR, RFFSA, Various dates.
13. Relatórios Anuais, RFFSA, Various dates.
14. Relatório Trimestral de Acompanhamento das Concessões, RFFSA, Various dates.
15. Relatório de Avaliação da Prestação dos Serviços aos Usuários, RFFSA, Dezembro 1997.
16. Estudos de Avaliação da Situação de Pessoal Desligado, Universidade Católica do Rio de Janeiro e Instituto Datafolha de Pesquisas, January 1998, September 1998 and March 1999.
17. Ex-post financial and economic analysis, February 2003.
18. Borrower's comments on the draft Implementation Completion Report, May 8, 2003