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Report No. 19478

PERFORMANCE AUDIT REPORT

ROMANIA

TRANSPORT PROJECT
(Loan 3593-RO)

June 16, 1999

Sector and Thematic Evaluations Group
Operations Evaluation Department

Currency Equivalents

Currency Unit	=	lei
US$1.00	=	265 lei (January 1992)
US$1.00	=	7400 (March 1999)

Weights and Measures

M	=	meter (3.281 feet)
Km	=	kilometer (0.621 mile)

Principal Abbreviations and Acronyms

ARL	Enterprises for Road Regains and Works
CEE	Central and Eastern Europe
CMEA	Council for Mutual Economic Assistance
EBRD	European Bank for Reconstruction and Development
EEC	European Economic Community
EIB	European Investment Bank
GOR	Government of Romania
HDM	Highway Design Model
IPTANA	Design Institute for Road, Water and Air Transport
MOF	Ministry of Finance
MOT	Ministry of Transport
MPW	Ministry of Public Works
NAR	National Administration of Roads
OED	Operations Evaluation Department
PCR	Project Completion Report
PMU	Project Management Unit
RAR	Romanian Automobile Registrar
SNCFR	Railway Company of Romania
SOE	Statement of Expenditure
TACI	Technical Assistance and Critical Imports Loan
VOC	Vehicle Operating Costs

Fiscal Year

January 1 – December 31

Director-General, Operations Evaluation	:	Mr. Robert Picciotto
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Office of the Director-General
Operations Evaluation

The World Bank
Washington, D.C. 20433
U.S.A.

June 17, 1999

MEMORANDUM TO THE EXECUTIVE DIRECTORS AND THE PRESIDENT

SUBJECT: **Performance Audit Report on Romania Transport Project (Loan 3593-RO)**

Attached is the Performance Audit Report prepared by the Operations Evaluation Department on the above project, which was approved in FY93 and closed on December 31, 1998. The loan, for US$120 million equivalent, was fully disbursed. The project was cofinanced by the European Bank for Reconstruction and Development (EBRD) and by the European Investment Bank (EIB).

The project sought to improve economic efficiency and fiscal performance of the country's road system, while also helping to reduce the role of the state, increase the role of the private sector, and introduce competition in the public works market. The project financed rehabilitation of 380 km of national roads (on four of the seven national roads radiating from Bucharest) and strengthening of 1,650 km. Project components also included upgrading border crossing border posts, improving safety on 5,000 km of roads through better marking and signaling, essential investments for the railway, and technical assistance for training and studies on maintenance by contract, axle control, and equipment management.

Implementation of the project was under the leadership of the National Road Administration (NRA), a newly-created, autonomous highway agency. Although there were delays on individual road subprojects, mainly because additional works were required in difficult mountainous areas, loan funds were disbursed ahead of schedule. By project closing, all components had been completed, although cost overruns had to be met by funding from the follow-on road project. The other physical components also were satisfactorily implemented. The vehicle inspection equipment for Romania's Auto Registrar (RAR) has allowed this agency to operate 40 fully mechanized vehicle inspection (safety and air pollution) lines, as well as to guide and monitor performance of private inspection facilities, closely aligning Romania with European Union standards. Axle control equipment was delivered and installed, following a pilot and a public information campaign, but enforcement of the controls will need to be substantially strengthened to be fully effective.

The project was very successful in supporting commercialization and privatization of road maintenance. Through corporatization of the highway agency's regional maintenance units, by 1998 much of the maintenance work had been contracted out: 87 percent of all road periodic maintenance, 79 percent of bridges periodic maintenance, and 23 percent of routine road and bridge maintenance. These numbers equaled or surpassed the targets that had been set for 1996. Despite the 2-year delay, these indicators can be considered highly successful since the 1996 targets were clearly ambitious. As a result of the corporatization process, the National Road Administration reduced its personnel from 15,000 in 1995 to 8,800 in 1998. At the same time, the project was instrumental in helping modernize, privatize, and improve the efficiency of the construction industry. This sector is estimated today to be 90 percent private, and have less than half the 1 million (state) employees it had at the start of the decade.

There were also substantial improvements in road financing and resource allocation. The government went substantially beyond the project's requirement to improve the system of road user charges. In 1995 it created, with the strong support of the central economic agencies, a Road Fund, initially fed by supplementary taxes on gasoline and on diesel and vehicle registration fees, and subsequently complemented with annual fees on vehicle capacity. In 1997, this fund had financed over 90 percent of road expenditures, thus releasing budgetary resources for other purposes. Project-financed training helped the road agency to strengthen its ability to conduct economic analysis, which became compulsory for all large projects. Good economic analysis will be increasingly necessary as Romania will need to sort out priorities especially when trade-offs between national and international roads arise. Such trade-offs are likely to intensify as trade flow patterns and demands on the transport system change.

The project's achievements were substantial. Despite some delays and cost overruns in individual components the project was completed earlier than expected and with satisfactory quality. At the same time, the progress in contracting out, the development of the construction industry, the creation and good start of the Road Fund, and the systematic application of economic analysis are significant accomplishments. On this basis, the audit rates outcome as highly satisfactory, institutional development impact as high and sustainability as likely. The audit further rates borrower performance as highly satisfactory and Bank performance as satisfactory. The audit finds that Bank's failure to adequately foresee the problems with quality of engineering and the mixed signals it sent to the government on the Road Fund preclude giving the Bank the highest mark that it would have otherwise deserved.

Three key lessons emerge from this project. First, difficult institutional reforms such as creating a Road Fund, corporatizing maintenance agencies, and contracting out maintenance activities can be carried out in a short period of time when such reforms are led by strong and visionary political leaders, find the support of central government authorities, and are designed and implemented by a well qualified team. Second, project implementation by a highly professional agency empowered to implement the project without line ministry controls shows that much red tape can be avoided when an effective and autonomous agency can be put directly in charge of project implementation. Third, effective coordination among cofinanciers can be achieved when it starts from project preparation and missions are jointly scheduled.

Attachment

Contents

This report was prepared by Hernan Levy (Task Manager), who audited the project in October 1998. William B. Hurlbut edited the report. Romayne Pereira provided administration support.

Principal Ratings

	ICR	PAR
Outcome	Satisfactory	Highly satisfactory
Sustainability	Likely	Likely
Institutional Development	Partial	High
Borrower Performance	Satisfactory	High Satisfactory
Bank Performance	Satisfactory	Satisfactory

Key Staff Responsible

	Department Director	Division Chief	Task Manager
Appraisal	M. Wiehen	P. Donovan	J. Yenny
Completion	A. Vorkink	E. Mulnar	E. Vasur

Preface

This is a Performance Audit Report (PAR) of Romania'sTransport Project (Loan 3593-RO), for which the World Bank approved a loan for $120 million on April 30, 1993. The loan closed on schedule on December 31, 1998. The project was cofinanced by the European Development Bank (EBRD) and the European Investment Bank (EIB).

This report is based on reviews of the Implementation Completion Report, the Staff Appraisal Report (SAR), loan documents, project files, transcript of Board proceedings, and other Bank documents, and on discussions with Bank as well as cofinanciers'staff. An OED mission visited Romania in October1998 and reviewed the project with officials of the Ministry of Transport and its agencies, the Ministry of Finance, and private contractors. Their kind assistance is gratefully acknowledged.

The audit gives especial emphasis to reviewing the modernization of the Romania's road sector management, particularly in the areas of commercialization and privatization of road maintenance and road financing and resource allocation, which the project supported and where the government has made significant progress during the 1990s.

Following standard procedures, copies of the PAR were sent to the Romanian authorities and to the cofinanciers for comments. Comments received are attached as Annex B.

1. Background

1.1 With a GDP per capita in the $1,000–$1,500 range over the past 10 years, Romania ranks behind most of its Central and Eastern European neighbors. Its population, at 23 million, is the second highest in that group. The economic transition from a socialist economy to a market economy that Romania started in 1990 has been weak: in the first three years GDP declined 30 percent, then it recovered somewhat from 1994 to 1996 before suffering another drop in 1997.[1] The number of people below the poverty line is now about 5 million, about five times as many as before the transition. Two thirds of the poor live in rural areas.[2]

1.2 Romania has a wide range of natural resources, including a good agriculture base and mineral resources, notably coal, lignite, oil, and natural gas. Heavy industry accounts for about one-third of the GDP, and about 45 percent of total (formal) employment. Agriculture, the second-largest sector, accounts for about one-fifth of GDP and about 35 percent of employment.

1.3 As in other centrally planned economies, Romania's railway network was for many years the backbone of its transport system. Its 11,000 km of rail track carried most of the country's passengers and freight. While Romania's railway remains an important long-distance passenger carrier, it has become less important for freight. Since 1989, demand for rail has declined dramatically: in 1995 the railway carried only one-third the freight and about one-half the passengers it did in 1989. The decline in freight traffic has largely resulted from the abolition of a regulation that required all shipments over 50 km distance to go by rail.

1.4 Meanwhile, despite the sharp decline in GDP, demand for the 73,000 km road network has steadily grown, increasing by 11% average per year from 1990 to 1995.[3] Today the road system carries over 60 percent of all freight. The high growth in road traffic has strained the road network, the capacity of which has been expanded little during the 1990s. Many roads, therefore, especially the main national roads, operate close to their design capacity.

1.5 Transport institutions underwent substantial reform following the political and economic transformation of 1990. A newly created Ministry of Transport was entrusted with policy making and regulatory functions, while the highway, railway, and port agencies became autonomous units or Regies Autonomes (RA), reporting to (but not managed by) the ministry. Under this scheme, the National Administration of Roads (NAR) is responsible for the construction, maintenance, and administration of the national highway network. The Romanian Automobile Registrar (RAR) is responsible for setting up standards for road vehicles safety and environmental emissions, and monitoring compliance. The National Railway Company of Romania (SNCFR), which became autonomous following the transport sector reorganization, underwent a radical restructuring in October 1998 and was broken up, mainly to separate infrastructure from railway services, into five distinct enterprises.

1.6 An important feature of the transport system is the relative financial autonomy of the highway system, consisting of earmarked user fees going into an autonomously managed Road Fund. This fund was established in 1995 and has been fine-tuned and improved since then.

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1. Romania-Lower-Middle Income Country/Transitional Economy, statistical summary, World Bank web site. URL: wbln0018.worldbank.org/psd/.Database:Romania:Lower-Middle Income Country.Transition Economy.

2. World Bank: *Country Assistance Strategy for Romania*, May 19, 1997 and *Poverty and Social Policy*, April 1997.

3. NAR- Center for Road Technical Studies and Informatics–*Romanian Roads*, 1998.

2. Project Objectives and Preparation

2.1 The Transport Project (Ln. 3593-RO) was one of the first investments assisted by the World Bank after Romania launched its transition to a market economy. Preparation of the project was supported by studies financed under the Technical Assistance and Critical Import (TACI) loan (Ln. 3363-RO), the first Bank operation after the central planning system was dismantled in 1990. Previous World Bank involvement in Romania's transport sector had been limited to two projects in the 1970s and 1980s. The Transport Project was followed, in 1997, by the Second Roads Project, which is ongoing.

Project Objectives

2.2 The Transport Project had six major objectives (Table 2.1). They sought to improve economic efficiency and financial performance while also helping to reduce the role of the state, to increase the role of private sector, and to introduce competition in the public works market.

2.3 The objectives focused on highways and were clearly relevant to Romania's new economic policies. A study had shown that Romania had allocated too few resources to its highway system; among CEE countries, it had given its highway system the lowest budget in relation to the cost of redressing the maintenance backlog. The decision to build the Bucharest-Constanta motorway without exhaustive economic studies exemplified the old central-planning approach to investments, and underscored the need to introduce rigorous economic analysis. Road user charges, also a remnant of old economic policies, needed to be restructured to better reflect road use costs while enhancing revenue collection from road users. Development of private contractors was an obvious and priority objective and in line with getting public agencies out of functions that could be taken over by the private sector.

2.4 The focus of the project's physical investments on the rehabilitation and strengthening of key national roads—those with the highest traffic levels and congestion and which carry basically domestic traffic—was correct. These roads are not necessarily those identified by the European Community (EC) as part of the European road corridor system. For example, Bucharest-Brasov, the country's most heavily trafficked road, the improvement of which was financed with Bank funds, is not part of the EC network. EC roads are more likely to receive funding from European institutions. Conflict between national and international interests may obscure or confuse the choice of investments, or direct investment to lower priorities from the national point of view.

2.5 The project did not cover secondary or local roads. These roads are being covered under the follow-on project.[4] Considering funding constraints, both external and counterpart, the focus on the most trafficked was reasonable.

2.6 The railway's objective signaled government's intention to restructure this industry, and was probably the first such stance taken within the CEE countries. The component's limited focus on urgent investments was reasonable because at appraisal, with funding from the TACI project the government had launched a study on railway restructuring, which was likely to have a significant impact on the railway's strategic directions and investments. Yet, it appears that some of the investments did not meet the "urgency/survival stage" label. For example, tamping machines for track maintenance were more aimed to improve efficiency and quality of work than

4. The support to local roads is consistent with the Bank's 1997 CAS. The Bank's commitment indicated there in support of Romania's accession to the European Union includes "encouraging regional responses to depressed communities," which requires improving the local and community road networks.

to ensure continuity in the provision of railway services, since the railway had a large, albeit old and inefficient, fleet of tamping equipment. At the same time, the SAR contained no suggestion that the railways would be prepared for privatization, which could have called into question the continuation of government-financed investments. Therefore, the relevance of the RW component was not high.

Table 2.1. Project Objectives and Components

Objectives

- Increase efficiency of the sector and accommodate expected changes in transport demand by improving the condition of the road network.
- Promote the selection of transport investments on the basis of economic criteria.
- Improve fiscal performance by implementing a cost-based system of road user charges.
- Develop the execution of road works by contract.
- Help prepare the railways for eventual restructuring.
- Support the economic reform program and encourage social stability by financing geographically dispersed efficient employment generation, hopefully in newly privatizing contracting companies.

Components

- *Rehabilitation* of about 1100 km of national roads.
- *Upgrade* six main crossing border posts to ensure adequate flow of international road traffic.
- *Improve safety* and information signaling and marking of 5,000 km of roads through improved signalling and marking to improve information and safety.
- Purchase of *imported materials and fuel* to cover NRA's expected deficit for the 1993-95 strengthening program of secondary national roads.
- *Technical assistance and training for studies* and training in areas such as axle load control, equipment management, maintenance by contract.
- *Railway investments* urgently needed, notably, track maintenance and data processing equipment and spare parts.

Project Preparation

2.7 Early in project preparation, the main aims of the project were identified: help the government restructure its transport and public works institutions and policies, help harmonize the transport network with the standards of the EC, and focus physical investments on maintenance and rehabilitation of the transport system.

2.8 The project was prepared under difficult conditions. The implementing agencies (NAR, SNCFR, and RAR) had no experience with Bank projects.[5] Furthermore, existing transport and procurement legislation still reflected the old central planning framework. One of the biggest

5. Two earlier Bank-financed transport projects: the Danube-Black Sea Canal Project (Ln 1794, US$100m, approved FY80) and the Land Transport Project (Ln 2034, US$125m, approved FY81) had long been completed. The Danube Canal Project dealt only with river transport. Most of the Romanian staff working on the Land Transport Project had left the government. Furthermore, the government had no experience with international competitive bidding, because state-owned contractors had implemented the project.

handicaps, however, was that Romania had no engineering consultants, local or foreign, other than IPTANA, the government-owned public works engineering company.[6]

2.9 IPTANA carried out all engineering and economic studies for the project's road component.[7] This included conducting preliminary studies for some 5,000 km of roads in less than 6 months. While the company had experience in traditional highway engineering works, it had not worked on modern highway design. It also lacked expertise in the preparation of engineering documents for contracts awarded through competitive bidding, as civil works traditionally were entrusted to government-owned construction companies. While Bank preparation missions noted the need for training and adequate supervision, the drawbacks of using IPTANA were never highlighted for more forceful action.[8] As a trade-off, by using IPTANA, the Bank was able to approve the project just a year after the initial project formulation, a significant achievement under the circumstances.[9]

2.10 The three project cofinanciers—the European Bank for Reconstruction and Development, the European Investment Bank, and the World Bank—closely coordinated their project preparation and often jointly scheduled missions.[10] The 1992 opening of the Bucharest office of the World Bank was instrumental in helping the government through project processing and document preparation.

2.11 An important issue raised during preparation was the construction of the Bucharest-Constanta (B-C) motorway. The Bank had expressed doubts about its economic justification. Further, it had ascertained that it was being financed from counterpart funds generated by the sale of foreign exchange obtained through a Structural Adjustment Loan and an IMF stand-by operation. The government agreed to freeze commitments until a feasibility study for this route (financed by the EBRD) was completed. The study found that construction of B-C motorway was not economically feasible, but that its initial section, Bucharest-Fundulea (some 25 km), was feasible. In the end, no part of the B-C expressway was built. The B-C motorway project was symptomatic of the need for Romania to strengthen its investment analysis methodologies.

2.12 Project preparation was helped by NAR's early decisions to reform highway management and to enhance efficiency, particularly by using private contractors to execute highway maintenance works. On the other hand, doubts were raised that the government would be able to provide the required counterpart funds to carry out investments of the magnitude envisaged in a project that was to have three cofinanciers.[11] These doubts proved unfounded, as counterpart funding was adequate in amounts and timing.

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6. A senior official, considering the difficult conditions, told the audit mission that the project could only move forward during preparation because of the courage of all concerned: transport authorities, central government officials, and Bank staff.

7. During the preparation of the follow-on Second Roads Project, funds from the Transport Project were used to pay for engineering studies by international consultants.

8. Project files do show that at appraisal, IPTANA was asked to redo the economic evaluation for all project roads. However, no question was raised about the quality of the engineering work.

9. IEPS in February 1992 and Board approval in March 1993.

10. Government officials noted that while all three entities assisted in project preparation, the World Bank teams were especially useful because they focused exclusively on this project, while missions from the other financiers often had to deal with other projects during their stay in Romania, limiting the attention they could give to the transport project.

11. In particular, this issue was raised by the US ED at the time of Board presentation.

3. Project Implementation

Physical Components

3.1 Implementation proceeded at a good pace, and loan funds were disbursed ahead of schedule. An important factor in this appears to have been the organization of project implementation, including an efficient project management unit (PMU) and decision making that rested directly with NAR, with the Ministry of Transport being kept informed but outside the decision-making circuit. This is different from most Bank-financed projects in other sectors in Romania, which are implemented by government ministries. Another factor was the high level of project readiness when the project was approved. For example, a short list of consultants had been prepared and contractor qualifications had been received and evaluated.

3.2 By the time the project closed it had largely met its civil works targets (924 km of road had been rehabilitated, compared with 1100 km originally foreseen). But those targets had not been met without some implementation problems, which are clearly analyzed in the ICR. Understanding these problems is essential for the success of future works, and they appear to have been taken into account in follow-on projects funded by the Bank and other donors. The problems were as follows:

- Engineering design was sometimes inadequate, and led to numerous variation orders that significantly increased costs.
- The design problems stemmed in part from road condition assessments and traffic level estimates[12] that inadequately accounted for a rapidly changing situation. As a result, between the time the engineering design was completed and the works were built, road conditions had deteriorated more than anticipated. Consequent need for road rehabilitation of some sub-projects (rather than road strengthening originally envisaged) further contributed to cost increases.
- NAR requested work beyond that originally planned.
- A low ceiling coupled with slow replenishment in the Special Account led to delays in payments to contractors.
- Romania's lack of experience in planning and executing road works while keeping traffic open. [13]This is likely to become a serious problem, as Romanian roads are increasingly congested, and blocking traffic will increase costs and inconvenience to the traveling public and freight vehicles.

3.3 The other physical components were also satisfactorily implemented. Equipment for NAR, mostly for road maintenance but also for bitumen and other equipment and materials, as well as vehicle inspection equipment for RAR, were procured on time and within cost estimates and were put into use. The equipment for RAR currently allows the agency to operate 40 fully mechanized vehicle inspection lines, closely aligning Romania with European Union standards.

3.4 The vehicle weighing scales were procured as expected, both for axle control purposes and for data collection, but systematic operation of this equipment has not yet started (see para. 3.11).

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12. This was not a generalized issue, but happened mostly in the roads that became important to traffic between Western Europe and the Balkans upon the closure of the Yugoslavia routes.

13. As noted by several supervision missions.

3.5 The railway equipment, notably the tamping machines to maintain the rail track, were procured and put into service, generating substantial increases in the coverage per machine and in the quality of the work and, thus, improving conditions for train operations.[14]

Institutional Development

3.6 The construction industry study was carried out, and was instrumental in preparing the Second Roads Project. Together with other actions, the project helped modernize the management of highway maintenance (see Chapter 4).

3.7 There was also substantial progress in road financing and allocation of resources (see Chapter 5).

3.8 *Highway safety and the environment.* [15]The rapid motorization of CEE countries (Romania's vehicle fleet has doubled in the past seven years) is bringing with it a significant increase in road accidents and in vehicle-induced air pollution. Project-financed vehicle inspection equipment, which RAR is using in vehicle inspection stations in each *judet*[16](plus several in Bucharest), should help on both counts. This modern equipment, and the training that went with it (provided by supplier and by various bilateral assistance programs), are used to conduct annual inspections of the mechanical condition and emissions of vehicles.

3.9 More important perhaps, the RAR-operated stations are in the process of recertifying some 700 privately operated stations. These stations are under-equipped and have poorly trained personnel, and the RAR stations are serving both an equipment demonstration purpose and as a means to transfer operating knowledge. By October 1998, some 80 private stations had been recertified. All private stations are expected to continue to be under RAR supervision.

3.10 The inspections themselves are in line with EU norms. RAR also has updated the country's vehicle emissions regulations and is catching up with EU regulations.

3.11 *Vehicle overloading.* The project also included weighbridges to control vehicle overloading. The SAR includes an action plan to implement axle-load controls. This plan included a reasonable two-year span between start of action through submission of new legislation. However, the plan was too sketchy to be useful, since worldwide experience indicates that implementing axle-load controls is a complex task that requires strong political commitment, education campaigns, and well-trained and committed police forces. By the time of the audit mission, NAR had tested the equipment, conducted education campaigns, and had eight weigh-in-motion stations (one per *judet*) covering the national road network. Penalties for overloading were low, however, and the control system does not appear to be effective. The audit concludes that substantially higher engagement of political authorities and police will be needed if axle controls are to be seriously enforced.

3.12 *Railways.* The railway restructuring study financed by TACI became the basis for the follow-on railway restructuring project. In October 1998, SNCFR was broken up into five autonomous companies: infrastructure, asset management (to divest non-operating assets),

14. At Bank's request, the railways prepared a detailed cost-benefit analysis of this investment, which showed a satisfactory economic return.

15. Environment is not listed as a project objective or component although equipment financed aimed to control air pollution.

16. Judet is a territorial subdivision equivalent to a province.

freight, passenger, and accounting/financial services. This unbundling breaks new ground in the region and opens opportunities for Romanian rail services. But it faces significant challenges, particularly regulatory and pricing, and will require that appropriate incentives and penalties be established among interacting parts, notably between infrastructure and passenger and freight. Despite scale, organization, and service differences, the problems and approaches followed in the British railways should prove of significant value to the new Romanian railway framework.

3.13 *Project cost.* Total project cost at completion was $457.8 million, compared with an appraisal estimate of $405 million. The cost overrun was due to price adjustments brought about by delays and to variation orders that led to a higher volume of works. Financing needed to meet the funding shortfall and complete the works was made up by funds provided from the Second Roads Project.

4. Commercialization and Privatization of Road Maintenance

4.1 The project contained several related actions to modernize and commercialize the execution of road maintenance. The first was to launch road maintenance by contract, since until 1992 all road maintenance in Romania was done by force account.

Road Maintenance by Contract

4.2 The SAR included specific targets for various categories of maintenance work to be executed by contract. These targets proved to be optimistic, but probably contained the right amount of "stretch" to stimulate NAR to move as fast as possible. As shown in Table 4.1, by 1996, NAR had made considerable progress, but it was still substantially behind the original targets. If NAR estimates for 1998 prove right, the agency will have achieved and slightly surpassed the targets set for 1996. Despite the delays, and given the risks involved in setting the targets, these numbers reflect significant progress. Initially, achievement of targets was most difficult for bridges, which are not attractive for companies, especially in regions with bad weather, when works stop for long periods. As the figures show, however, companies interested in these works are emerging.

Table 4.1. Maintenance by Contract – Proportion Achieved Each Year (%)

Activity	Percentage of Maintenance Budget	1993 Expected*	1996 Target	1996 Actual	1998 Estimate
Routine Road and Bridge Maintenance	27.8	0	0	20.4	22.5
Roads – Periodic Maintenance	66.2	*0*	80	51.7	87.0
Bridges – Periodic Maintenance	6.0	10	80	53.0	78.5
Breakdown of Special Items					
Winter Maintenance	9.6	15	60	12.3	31.3
Buildings & other Fixed Assets – Periodic Repairs	2.1	15	90	57.4	52.4
Road Signing & Marking	8.5	20	80	15.0	96.0
Road Materials – Production	3.0	25	100	82.0	100.0

*The SAR, issued in March 1993, included these numbers as estimates for the year.

4.3 NAR accomplished this essentially by *corporatizing its regional maintenance units* as ARLs[17] and passing contracts between such units and the regional administrations. In so doing, it

17. Romanian acronym meaning Enterprises for Road Repairs and Works (SAR, Second Roads Project). These are shareholding companies, but initially all the capital belongs to the state.

needed to program work to be contracted, and adapt administrative procedures to operate on a contract basis. Corporatization was, at the same time, a step beyond expectations at appraisal, which foresaw that NAR initially would operate the equipment pool on a chargeback basis to the individual maintenance districts.[18] The first units to be corporatized were Cluj and Constanta, in 1994; Brasov followed in 1995. By 1998, all eight regional maintenance districts had been corporatized.

4.4 The Brasov unit, which was visited by the audit mission, is typical of the process. The management and staff are essentially the same that belonged to the Brasov highway maintenance district. The period 1995–98 has been a time of learning as the unit evolves from force account operations to contract-based works. Besides learning, the new company was expected to use the initial period to invest in additional equipment, especially machines required for doing heavier works.[19] In practice, however, it has not been able to derive the cash flow to do so. Therefore the Brasov company, and the other ARLs, are not yet in a position to compete with private companies. NAR has delayed the launching of a competitively awarded maintenance contract, probably to 1999. At the same time, these companies find that although they execute most the periodic maintenance work in each *judet*, this does not absorb their operating capacity nor provide sufficient revenues. To remedy this they are selling services to city and local government public works departments.[20] This is in part due to the lower revenues of the Road Fund in 1998, compared to 1997 (see para. 5.6), and therefore less budget for financing ARL activities for the NAR-managed road network.

4.5 The inability of the ARLs to generate cash for investment, despite carrying out works at contract-administered prices that are likely to be substantially higher than those obtained through competitive bidding, also suggests that these corporations are overstaffed and have poor operating efficiencies. Until the Romanian economy picks up and unemployment levels drop it will be difficult for the ARLs to downsize. Yet, the ARLs, with more flexible management than the public sector, will have a better chance to downsize, when conditions obtain, than NAR would have.

4.6 The equipment position of these companies has been enhanced by equipment financed under the transport and the Second Roads Project and made available to them by NAR on a leasing basis. However, ARL personnel report that this new equipment, while it is increasing efficiency, quality of the works, and yields, has not reduced costs.

4.7 It is readily apparent that these companies suffer from a huge lack of managerial expertise, especially on the financial side. Management personnel report being trained to prepare to operate with a business philosophy. This is not sufficient. It essential that these companies increase their financial management capacity, ideally by recruiting recent graduates from business schools. Since Romania is just starting to produce such personnel, the maintenance companies will have a difficult time competing with other companies. These conditions were foreseeable, and the project could have committed NAR to establish a technical assistance group that, on a chargeback basis, helped the various maintenance corporations organize their financial management during the initial years.

18. The audit was unable to establish the exact situation of the assets transferred to the newly corporatized units, and the extent to which these units would compensate NAR financially for these assets.

19. The Brasov unit has set up a joint venture with a Finnish company for the production of cold asphalt. This will help transfer of technology and reduce investments requirements, since the equipment is supplied by the partner company.

20. Typically, their revenues stem about 60 percent from NAR contracts, 40 percent from other works.

4.8 In addition to the need to introduce competitive bidding for maintenance operations, the corporatization and eventual privatization needs to be completed. This is being pursued under the follow-on Second Roads Project.[21]

NAR Organization

4.9 A direct result of hiving off functions and personnel to the newly created ARLs corporations is that NAR is a leaner organization: it has 8,800 staff directly in its payroll, while it had 15,000 only three years ago. [22]Corporatization means actual operation of periodic maintenance is no longer under direct execution by the ministry. This follows the modern trend (initiated in New Zealand, Finland, and other countries) to separate public works between the "client" (the government who has the funding and decides on its allocation among roads and types of works) from the "supplier" (the entity that executes the works). However, in countries the process has been more gradual, with (i) contracting out practically completed before the corporatization took place and (ii) an intermediate stage, of awareness raising of client's (planners and managers) and supplier's (execution of maintenance operations) role in the highway agency prior to legally separating these functions

4.10 The government will need to continue to enhance its ability to contract out work. This will involve further strengthening NAR for contract administration and setting monitorable standards. It will also require strengthening the central government institutions that have regulatory and oversight functions. Officials and private contractors interviewed by the audit mission complained that some institutions, particularly the Cour de Comptes, (government's financial comptroller) are extremely bureaucratic and poorly equipped to review accountability under civil works contracts.

Development of the Local Construction Industry

4.11 Development of the local construction industry was inherent in the objective to contract out maintenance. The construction industry, in the words of one large contractor, saw the transport project as essential "oxygen" to keep them going (after the 1991/92 economic slump). The project stimulated companies to convert from other civil works (mainly dam and other irrigation civil works) to road works. While foreign contractors won most of the bids (and continued to do so in the bidding under the Second Roads Project), Romanian firms have acted as subcontractors in what they see is a healthy approach to transfer of technology and management.

4.12 Local contractors saw prequalification requirements, demanding a high turnover level in recent years, as playing against Romanian firms, given the low amount of works in earlier years.[23] This later was amended. Local contractors also found contract size to be on average high for their capacity. On the other hand, the Bank sought to have some contracts of big enough value to entice foreign firms to come to Romania and form joint companies with local firms, as a way to transfer know-how. Setting aside some of the works under smaller contracts could have helped the local contractors win some of the bids giving them higher profits and more management experience. At the same time, more incentives could have been given for the formation of joint-

21. According to the Second Roads Project SAR, under a plan agreed with EBRD, the Cluj company has been selected as a pilot to complete the commercialization and privatization process, including completing the functional separation of all periodic maintenance activities, setting up a state-owned joint-stock company, and privatizing the company later on.

22. As noted in para 4.5, the staff reduction is mainly due to the transfer of personal to the ARLs.

23. Supervision reports.

ventures (that were successful in neighboring Hungary), which generally are an effective way to transfer know-know and strengthen the local companies.

4.13 The current Romanian contractors originated from large state-owned construction companies, which were first divided into smaller companies then later privatized, most through management-employee buy outs. This process of breaking up state-owned construction companies may have gone too far, though. Heavy civil works require large quantities of equipment—particularly large-scale equipment—that smaller companies find it more difficult to mobilize. Mergers among local contractors, therefore, are likely to be both desirable and inevitable if the local construction industry is to become competitive in contracting for large civil works.

4.14 The project appears to have been instrumental in helping to modernize, privatize, and improve the efficiency of the construction industry. The industry today is estimated to be 90 percent private, and have less than half the 1 million (state) employees it had at the start of the decade. The success with contracting out and encouraging development of the private construction industry needs to be seen in its context: less than 50 percent of all state-owned enterprises in all sectors slated for privatization in Romania had been privatized by 1997.[24]

4.15 There is considerable room for the further development of the construction industry. Bank credit needs to be more accessible (most contractors currently cannot afford credit for bid securities collateral, for example). And regulation is excessive in some areas, such as equipment requirements and certification of contractors, which opens the door to corruption.

5. Improvements in Road Financing and Resource Allocation

5.1 *Financing and User Charges*. The SAR is surprisingly sketchy about Romania's road financing and system of user charges. It describes past road expenditures, notes that, like most other prices, fuel prices were controlled (with pump price a low $0.34 per gallon) and asserts that the government had agreed to implement a system of user charges upon completion of an ongoing study financed under TACI.

5.2 During both preparation and implementation, user charges were a significant issue, mainly because the price of fuel was so low and the project did not appear to require clear targets for improvement.[25]

5.3 Despite this rather inauspicious start, low-key Bank involvement, and weak Government commitment, the government significantly improved its road financing mechanisms. Furthermore, the Bank was more closely involved in this process (although, as supervision reports show, not always providing consistent advice) than might have been expected.

24. Source: 1997 CAS. The CAS also reports that only 6 of the largest SOEs, from a list of 147, had been privatized, and from a set of 829 companies targeted for sale by direct negotiations with strategic investors, only 15 percent had been sold.

25. On the price issue, during preparation of the Second Roads Project, a Bank mission noted that the price of fuel in Romania was the third lowest in the world after Nigeria and Venezuela, two large oil producers. On road user charges, the US ED's office raised the issue and noted that the project had not clear targets in this respect.

5.4 From early project preparation, the government appeared to be persuaded of the need for a strong mechanism for funding road works. The draft (1993) subsidiary financing agreements for the on-lending of loan funds to NRA, RAR, and SNCFR implied the creation of a Road Fund, though the loan agreement stipulated only that the government "would introduce a comprehensive system of road user charges."[26] There is practically no documentary evidence on the role of the Bank here, but audit mission discussions revealed that the Bank transport team encouraged the setting up of such fund. Yet when it had to comment on the draft subsidiary agreements, the Bank came out against the Road Fund, stating that "the proposal to earmark funds needs to be weighed within the broader context of public finance management." This was a polite but clear statement that such a fund was not desirable. The Bank's position, made on principle and without relating to the specific analysis of the Romanian situation (and ignoring the fact that the Bank was supporting newly-designed road funds in other countries), appeared essentially ideological. Yet, a month after the Bank's admonition, a supervision mission underlined the importance of a correct system of user charges to avoid distortions, and noted for both government and Bank management attention that "a road fund covering maintenance (including deferred expenditures) may be advisable."[27]

5.5 In the end, the government introduced several changes (see Table 5.1) to the system of road user charges, and ended up with a Road Fund that in 1997 financed over 90 percent of road expenditures.

Table 5.1. Evolution of Road User Charges and Road Fund, 1995–97

Year	*Change Introduced*
1995	Law Creates Road Fund. 25% of Gasoline and 15% Diesel price at pump and 5% tax at first vehicle registration
1997	Adds annual fee based on vehicle capacity
1998	Adds rules on vehicle leasing.

5.6 *Road Fund revenues.* The Road Fund collected some $250 million in 1997, and some $200 million was projected for 1998. For 1998, more than a quarter of fund revenues will come from the fee on vehicle capacity, paid by the larger vehicles that most damage the road pavement. Based on ICR estimates, this figure is about 50 percent of highway maintenance requirements, suggesting that revenue sources will need to be further increased. The Road Fund also will need to find ways to ensure reliability of collection. While 1997 revenues represented close to 100 percent of estimated revenues, the 1998 collection will be substantially lower. Thus, despite the addition of new revenue sources, 1998 revenues will be lower than those of 1997 due to the deteriorating economy and drop in oil companies' revenues. The collection shortfall stems from the Romanian oil refineries' withholding of taxes earmarked due to the deteriorating economy and oil companies' revenues for the fund, partly because penalties for non-conveyance of such funds are low. While the Ministry of Finance (MOF) is providing assistance, and Ministry of Transport personnel are being trained to enforce collection, legislation may need to be revised to improve compliance.

5.7 Getting the political support to further increase revenues and make revenue collection more reliable would probably require a widening of the Road Fund constituency. This could be done by bringing road users and other commercial interests into the management of the Road Fund. At the same time, the Fund will need to train its decision-makers in financial management,

26. SAR, para 1.10.

27. It is not clear from project files if there were differences in opinion between Bank management and staff, within the project team, or whether the latter changed its view regarding the Road Fund.

and to develop a set of performance indicators to ensure accountability and efficiency in the use of funds.

5.8 Despite these problems, compared to other countries that have launched Road Funds, Romania can be considered a success. Two factors are key to that success: (i) the strong leadership of the highest political authorities in the Ministry of Transport combined with effective work by senior technical personnel and (ii) MOF support. Unlike in other countries, Romania's MOF supports the Road Fund because it relieves budgetary pressures and because the NAR is seen as making rational investments. The experience with the Road Fund has prompted the government to begin preparation of a similar fund for airports.[28]

5.9 Resource allocation. One aim of the project was to help Romania improve investment selection and to introduce proper economic analysis in this process. The issue originated with the construction of the B-C motorway. Through effective discussions, the Bank persuaded the government to reassess the motorway's feasibility and to carry out proper economic analysis. (Construction subsequently was stopped).Thereafter, assisted by training under the project NAR strengthened its ability to conduct economic analysis and made it compulsory for all investments exceeding $6 million. The economic evaluation undertaken for the ICR was prepared by NAR.

6. Ratings

Outcome

6.1 While the project encountered implementation difficulties—mainly because of engineering weaknesses that led to delays and cost increases—and the length of road works was less than expected (by 17%) the project met or exceeded difficult institutional objectives and the physical components were completed ahead of schedule, with satisfactory quality, and high economic returns (Annex A). The audit therefore rates project outcome as **highly satisfactory**.

Institutional Development

6.2 The management efficiency and the organizational structure of Romania's transport system is significantly better today than it was at the start of the project. Progress in commercializing and privatizing road maintenance has been substantial. Road financing, despite shortfalls and problems with revenue collection, is on much better footing than it was in the early 1990s. The railway system's new corporate structure is innovative for the region. While the project cannot be considered the only or even the prime cause of these changes, which should rather be ascribed to government's ownership and commitment, the project objectives, components and conditions encouraged and supported these changes in various ways, strongly in the case of the highway sector, more indirectly in the case of the railways. Further, the institutional changes were achieved in just five years, a brief span for policy reforms. On this basis, the audit rates the institutional development of the project as **high.**

28. Such initiative may be helpful to ensure adequate airport funding, although airports normally have good revenues from terminal concessions, landing fees and other sources. Corporatization of the more important airports might be a better course.

Sustainability

6.3 Although funding for highway maintenance is still well below ideal levels, the creation of the Road Fund, the government's strong will to make it work—both the central government and the sectoral authorities—and the high priority assigned to maintenance of the national road network make sustainablity of the project benefits **likely**.

Borrower Performance

6.4 In view of the achievements noted above, and, further, considering the inexperience of the implementing agencies in carrying out Bank projects and the relative lack of engineering capabilities at the start of the project, borrower performance is rated as **highly satisfactory**.

Bank Performance

6.5 The Bank did most things right during the life cycle of this project. The most significant flaw was in its assessment of engineering weakness and potential problems. The Bank could also be faulted for its hesitation in supporting the Road Fund, and the mixed signals it sent the government on the issue. On balance, however, the audit rates Bank performance as **satisfactory**.

7. Conclusions and Lessons

7.1 The following key lessons emerge from this project:

- *Effectiveness in donor coordination*, can best be achieved when it starts from project preparation and missions are jointly scheduled.

- *Project implementation by autonomous agency*. Much red tape is avoided when an effective agency, free of line ministry controls, can be put directly in charge of project implementation.

- *Institutional reforms*. Even difficult institutional reforms, such as highway finance and railway restructuring, can be achieved quickly when the following factors obtain: strong and visionary sectoral political leaders, trusting and supportive central government authorities, and a highly professional team designing and implementing the reforms.

- *Central government support of Road Funds*. When Fund's revenues are supplementary to existing taxes and are invested efficiently, Finance officials are likely to support i) earmarked, off-budget funding of road expenditures, and ii) a legal framework that makes it difficult to raid Fund resources for other purposes. However, the Fund may face hurdles in collecting its revenues if its enforcement authority is weak, and it may need coaching and other assistance from tax authorities.

7.2 The audit analysis also suggests that:

- *National versus international highway investment priorities*. Potential conflicts for investment priorities between national and international traffic are easier to avoid in the early stages of road modernization. As the level of highway investment increases, rigorous economic analysis is necessary to sort out priorities. Mere designation of a route as a national road or as part of the European road network cannot not suffice for selection. The economic analysis of proposed road investments, especially in transitional economies, needs to carefully monitor and consider changes in road demand stemming from the transformation of the local economy, changes in the competitive position of each mode, and expansion and diversification of international trade.[29]

- *Benefits from new equipment.* New equipment for the railways and highways, while it can improve the performance of individual activities and the quality of the output, may only partially reduce the total operational costs in the activities served by that equipment. Such cost reductions cannot be fully achieved unless accompanied by (a) reduction of redundant personnel as more efficient equipment is put in service, (b) eliminating the old equipment from the books, thus eliminating unnecessary stock and maintenance costs, and (c) efficient financial management.

[29]. Trading among the CIS countries has fallen from 75 percent of the republics' exports in 1990 to only 33 percent in 1996. (World Bank: *Infrastructure Sector Strategy, Living by Serving – New Directions for the Transition Economies.* Washington DC, 1998).

Basic Data Sheet

TRANSPORT PROJECT (LOAN 3593-RO)

Key Project Data *(amounts in US$ million)*

	Appraisal Estimate	*Actual or current estimate*	*Actual as % of appraisal estimate*
Total project costs	405.0	453.9	112
Loan amount	120.0	120.0	
Cofinancing	160.0	183.0	114
Cancellation	-	-	
Date physical components completed	06/30/1998	06/30/1998	
Economic rate of return	24-63	23-66	

Cumulative Estimated and Actual Disbursements

	FY94	*FY95*	*FY96*	*FY97*	*FY98*	*FY99*
Appraisal estimate (US$M)	8	17	42	36	15	2
Actual annual	10.5	26.7	37.5	36.2	5.5	3.6
Actual as % of estimate	131%	157%	89%	100%	36%	180%
Date of final disbursement:	01/05/99					

Project Dates

	Original	*Actual*
Preparation	March 1992	March 1992
Appraisal	10/20/92	10/20/92
Negotiations	February 1993	02/16/93
Board Presentation	04/13/93	04/13/93
Signing	04/30/93	04/30/93
Effectiveness	September 1993	09/07/93
Project Completion	06/30/1998	06/30/1998
Loan closing	12/31/98	12/31/98

Staff Inputs (staff weeks)

Stage of Project Cycle	*Actual*	
	Weeks	US$
Preparation to appraisal	44.8	117.4
Appraisal	18.9	41.6
Negotiations through Board approval	4.9	13.7
Supervision	87.1	216.0
Completion	6.0*	15.0*
TOTAL	161.70	403.7

*Estimated

Mission Data

Stage of Proj. Cycle	*(Month/year)*	*No. of persons*	*Specialized staff skills represented*	*Performance rating*		*Types of problems*
				Implement. status	*Develop. objectives*	
Through Appraisal	1/92 - 1292	3	Eng./Econ./PO*	HS*	HS*	-
Appraisal through Board Approval	1/93 – 3/93	3	Eng./Econ./PO	HS	HS	-
Supervision	1/94 – 12/98	3	Eng./Econ./PO	HS	HS	
Completion	12/31/98	3	Eng./Econ./PO	HS	HS	-

*Eng. (Engineer)/ Econ. (Economist/PO (Project Officer)
*HS (High Satisfactory)

R O M A N I A
MINISTRY OF FINANCE
General Directorate for
International Financial Relations

The WORLD BANK
Mr. Gregory K. Ingram - Manager
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June 18,1999

Dear Sirs,

Re: ROMANIA - Transport Project (Loan 3593-RO)
Draft Performance Audit Report

We have studied the draft Performance Audit Report (PAR) and consequently we would like to express our appreciation on it.

We consider the draft PAR as a well structured, concise yet complete work containing conclusions we highly agree with.

For the sake of rigorousness please replace MOEF (Ministry of Economy and Finance) with MOF (Ministry of Finance) in "Abbreviations" and page 15 and delete MTPN (Ministry of Transport and Public Works) in "Abbreviations" as this institution does not exist.

Yours Sincerely,

General Director
Mioara Ionescu