PROJECT PERFORMANCE ASSESSMENT REPORT

ROMANIA

ROADS TWO PROJECT (LN 4178-RO)

March 3, 2009

Sector Evaluation Division
Independent Evaluation Group (World Bank)
Currency Equivalents (annual averages)

Currency Unit = New Romanian Lei (RON)

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Abbreviations and Acronyms

BMS Bridge Management System  
CAS Country Assistance Strategy  
CPS Country Partnership Strategy  
EBRD European Bank for Reconstruction and Development  
EIB European Investment Bank  
ERR Economic Rate of Return  
EU European Union  
EU-PHARE European Union Assistance Program for Central and Eastern European Countries  
GRSP Global Road Safety Partnership  
IBRD International Bank for Reconstruction and Development  
ICR Implementation Completion Report  
ICRS Inter-Ministerial Committee on Road Safety  
IEG Independent Evaluation Group  
IEGWB Independent Evaluation Group (World Bank)  
M&E Monitoring and Evaluation  
MTCT Ministry of Transport, Construction and Tourism  
NAR National Administration of Roads  
PMS Pavement Management System  
PPAR Project Performance Assessment Report  
RNCMNR Romanian National Company for Motorways and National Roads  
SAR Staff Appraisal Report  
USAID United States Agency for International Development

Fiscal Year

Government: January 1 – December 31

Director-General, Independent Evaluation : Mr. Vinod Thomas  
Director, Independent Evaluation Group (World Bank) : Ms. Cheryl Gray  
Manager, Sector Evaluation Division : Ms. Monika Huppi  
Task Manager : Mr. Peter Freeman
About this Report

The Independent Evaluation Group assesses the programs and activities of the World Bank for two purposes: first, to ensure the integrity of the Bank’s self-evaluation process and to verify that the Bank’s work is producing the expected results, and second, to help develop improved directions, policies, and procedures through the dissemination of lessons drawn from experience. As part of this work, IEGWB annually assesses about 25 percent of the Bank’s lending operations through field work. In selecting operations for assessment, preference is given to those that are innovative, large, or complex; those that are relevant to upcoming studies or country evaluations; those for which Executive Directors or Bank management have requested assessments; and those that are likely to generate important lessons.

To prepare a Project Performance Assessment Report (PPAR), IEGWB staff examine project files and other documents, interview operational staff, visit the borrowing country to discuss the operation with the government, and other in-country stakeholders, and interview Bank staff and other donor agency staff both at headquarters and in local offices as appropriate.

Each PPAR is subject to internal IEGWB peer review, Panel review, and management approval. Once cleared internally, the PPAR is commented on by the responsible Bank department. IEGWB incorporates the comments as relevant. The completed PPAR is then sent to the borrower for review; the borrowers' comments are attached to the document that is sent to the Bank's Board of Executive Directors. After an assessment report has been sent to the Board, it is disclosed to the public.

About the IEGWB Rating System

IEGWB’s use of multiple evaluation methods offers both rigor and a necessary level of flexibility to adapt to lending instrument, project design, or sectoral approach. IEGWB evaluators all apply the same basic method to arrive at their project ratings. Following is the definition and rating scale used for each evaluation criterion (additional information is available on the IEGWB website: http://worldbank.org/ieg).

**Outcome:** The extent to which the operation’s major relevant objectives were achieved, or are expected to be achieved, efficiently. The rating has three dimensions: relevance, efficacy, and efficiency. Relevance includes relevance of objectives and relevance of design. Relevance of objectives is the extent to which the project’s objectives are consistent with the country’s current development priorities and with current Bank country and sectoral assistance strategies and corporate goals (expressed in Poverty Reduction Strategy Papers, Country Assistance Strategies, Sector Strategy Papers, Operational Policies). Relevance of design is the extent to which the project’s design is consistent with the stated objectives. Efficacy is the extent to which the project’s objectives were achieved, or are expected to be achieved, taking into account their relative importance. Efficiency is the extent to which the project achieved, or is expected to achieve, a return higher than the opportunity cost of capital and benefits at least cost compared to alternatives. The efficiency dimension generally is not applied to adjustment operations. **Possible ratings for Outcome:** Highly Satisfactory, Satisfactory, Moderately Satisfactory, Moderately Unsatisfactory, Unsatisfactory, Highly Unsatisfactory.

**Risk to Development Outcome:** The risk, at the time of evaluation, that development outcomes (or expected outcomes) will not be maintained (or realized). **Possible ratings for Risk to Development Outcome:** High Significant, Moderate, Negligible to Low, Not Evaluable.

**Bank Performance:** The extent to which services provided by the Bank ensured quality at entry of the operation and supported effective implementation through appropriate supervision (including ensuring adequate transition arrangements for regular operation of supported activities after loan/credit closing, toward the achievement of development outcomes. The rating has two dimensions: quality at entry and quality of supervision. **Possible ratings for Bank Performance:** Highly Satisfactory, Satisfactory, Moderately Satisfactory, Moderately Unsatisfactory, Unsatisfactory, Highly Unsatisfactory.

**Borrower Performance:** The extent to which the borrower (including the government and implementing agency or agencies) ensured quality of preparation and implementation, and complied with covenants and agreements, toward the achievement of development outcomes. The rating has two dimensions: government performance and implementing agency(ies) performance. **Possible ratings for Borrower Performance:** Highly Satisfactory, Satisfactory, Moderately Satisfactory, Moderately Unsatisfactory, Unsatisfactory, Highly Unsatisfactory.
# Contents

PRINCIPAL RATINGS .................................................................................................................. V

KEY STAFF RESPONSIBLE ........................................................................................................ V

PREFACE ...................................................................................................................................... VII

SUMMARY ...................................................................................................................................... IX

1. BACKGROUND .................................................................................................................. 1

2. PROJECT OBJECTIVES AND DESIGN ........................................................................... 2

3. IMPLEMENTATION ............................................................................................................ 5
   Implementation Experience ................................................................................................. 5

4. MONITORING AND EVALUATION (M&E) ....................................................................... 7
   Design ................................................................................................................................ 7
   Implementation ..................................................................................................................... 8
   Utilization ............................................................................................................................ 8

5. RATINGS ........................................................................................................................ 8
   Relevance .......................................................................................................................... 8
   Efficacy .............................................................................................................................. 9
   Efficiency .......................................................................................................................... 15
   Outcome ........................................................................................................................... 16
   Monitoring and Evaluation .............................................................................................. 16
   Risk to Development Outcome ......................................................................................... 16
   Bank Performance .......................................................................................................... 17
   Borrower Performance ................................................................................................. 18

6. LESSONS ......................................................................................................................... 19

ANNEX A. BASIC DATA SHEET ............................................................................................... 20

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This report was prepared by Peter Freeman, who assessed the project in May 2008. Romayne Pereira provided administrative support.
ANNEX B. ROMANIAN NATIONAL ROAD ACCIDENT STATISTICS ........................................... 22

ANNEX C. BORROWER COMMENTS ..................................................................................... 23
Principal Ratings

*Romania Roads Two Project (Loan 4319-RO)*

<table>
<thead>
<tr>
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<td>Satisfactory</td>
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*The Implementation Completion Report (ICR) is a self-evaluation by the responsible Bank department. The ICR Review is an intermediate IEGWB product that seeks to independently verify the findings of the ICR.*

**Key Staff Responsible**

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<tr>
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<td>Jeremy Lane</td>
<td>Ricardo A Halperin</td>
<td>Francois M Ettori</td>
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<td>Completion</td>
<td>Henry GR Kerali</td>
<td>Motoo Konishi</td>
<td>Anand K Seth</td>
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Preface

This is the Project Performance Assessment Report (PPAR) prepared by the Independent Evaluation Group (IEG) for the Roads Two Project, (Loan 4178-RO). The International Bank for Reconstruction and Development (IBRD) loan to the Government of Romania (GOR) was approved by the Board of Directors on March 6, 1997 in the amount of US$150.0 million equivalent. At appraisal the total project cost was estimated to be US$553.4 million, with US$214.0 million to be contributed by the GOR and, through parallel agreements, a loan of US$85.9 million from the European Investment Bank (EIB), a loan of US$87.5 million from the European Bank for Reconstruction and Development (EBRD), and a grant for US$16.0 million from the European Union Assistance Program for Central and Eastern European countries (EU-PHARE).

In the event, the grant funding from EU-PHARE did not materialize. The IBRD loan, however, was substantially under spent after completion of the initial rehabilitation and bridge works, so GOR requested (and the Bank agreed) to spend the balance on a new road linking the city of Bucharest with the international airport as well as the rehabilitation of additional bridges. This extended implementation by nearly three years, but at project closure all World Bank funds had been utilized. The final total project cost disbursed was US$486.3 million.

The project was selected for assessment because of the comprehensive approach of its road safety component; its support for road rehabilitation to assist in meeting the changing patterns in traffic demand in Romania as it moved towards a market economy; its support to strengthen the management of national roads; and its promotion of a reduction in the lead content of petrol. Some useful lessons can be drawn from this project which will be valuable for other similar projects in the region and elsewhere, while the health component (comprising road safety and air pollution improvements) will provide an input into an ongoing IEG review of health, nutrition and population.

IEG prepared this report based on an examination of the relevant Staff Appraisal Report (SAR), Implementation Completion Report (ICR), legal agreements, project files and archives, as well as other relevant reports, memoranda, and working papers. Discussions were also held with Bank staff in both Washington D.C. and in Bucharest. An IEG field mission visited Romania in May 2008, conducted site visits, and discussed both the project and the effectiveness of Bank assistance with relevant officials and stakeholders. The mission appreciates the courtesies and attention given by these interlocutors as well as the support provided by the Bank’s office in Bucharest.

Following standard IEG procedures, copies of the draft PPAR were sent to government officials and agencies for their review and responses received are attached as Annex C.
Summary

This is the Project Performance Assessment Report (PPAR) for the *Roads Two Project* (Loan 4178-RO) which was part of an ongoing transport program in cooperation with other international agencies, including EBRD and EIB to assist Romania to provide a transport system that would be appropriate for a market economy and that would help its integration into the EU. At an estimated cost of US$553.9 million, this was a large project and the Bank's contribution was a loan of US$150.0 million.

The project had five development objectives: to improve traffic safety and the fitness of the vehicle fleet; to continue helping Romania to meet the changing pattern of demand for land transport infrastructure; to improve the management and performance of the National Administration of Roads (NAR); to assist the Romanian civil works construction industry in its transition to a market economy; and to promote the reduction of lead in petrol.

A number of factors affected the project's implementation. Following urgent changes in priority in its assistance program to Romania, EU-PHARE¹, one of the partners, was unexpectedly unable to provide the agreed technical assistance for the road safety and institution building components. The Government of Romania (GOR) therefore looked for other arrangements to help fill the funding gap during implementation. This involved *inter alia* the participation of the Global Road Safety Partnership (GRSP) and Dutch bilateral assistance.

In September, 2003, the NAR was reorganized as the Romania National Company for Motorways and National Roads (RNCMNR), a fully state-owned joint stock company with responsibility for the operation and maintenance of national roads. At the same time the Ministry of Transport was also reorganized as the Ministry of Transport, Construction and Tourism (MTCT). This reorganization process contributed to delays in the pending introduction of modern computerized systems and, because it was not carried out in conformance with established international practice, resulted in audit problems relating to the short and long term financial health of the company. Subsequently, the Bank provided further support to help rectify this situation in a follow-on project.

Substantial funds remained in the loan after completing the rehabilitation of the Bank-financed portion of roads and bridges and the GOR urgently requested that the Bank should consider using the savings accrued in the project for the improvement of the Bucharest-Otopeni road to the Henry Coanda international airport. This was agreed but resulted in a project extension of nearly three years because, although the design was ready, no arrangements had been made to relocate the numerous utility lines crossing the route.

The overall outcome of the project, taking into account the achievement of the individual development objectives (two highly achieved, two substantially achieved and

¹ European Union Assistance Program for Central and Eastern Europe
one modestly achieved), together with the overall ratings for relevance, and efficiency, was considered satisfactory. The national rate of fatalities and serious injuries fell significantly between 1997 and 2003; the extent of roads and bridges rehabilitated exceeded targets; over 90 percent of the main road construction industry was in private hands by project closure, and the reductions in the lead content of petrol were achieved over two years ahead of schedule. The institutional objective was less well attained due to the reorganization taking place at the time. With an ERR of 26 percent, the project met the efficiency criterion. Risk to development outcome was rated as moderate based on concerns about the continued impetus of the road safety program and ongoing problems in the funding of road maintenance.

With regard to monitoring and evaluation (M&E) there were measurable output targets in the design and all of these targets were either exceeded or met earlier than planned. National accident rates were also measured ex post in the ICR. The indicators were measured properly during implementation, where M&E performance was substantial. Only M&E utilization was disappointing because neither the Pavement Management nor the Bridge Management Systems had been introduced due to funding difficulties. Overall, M&E was substantial.

Bank performance was satisfactory. The quality of the design was generally good, and supervision missions were incisive at identifying problem areas and proposing measures to get the project back on track as necessary. The supervision team proved flexible and reacted well when crises occurred. For example, the unexpected withdrawal of EU-PHARE at inception could have spelt disaster, but the team and the Borrower worked well together to seek out alternative funding. When unexpected difficulties arose in the final stages with the relocation of utilities, the Bank worked with the Borrower to develop a new protocol for such eventualities in the future.

Borrower performance was also overall satisfactory. The GOR was strongly committed to the project and supported the establishment of a Global Road Safety Partnership (GRSP) committee as an alternative solution after the expected funding from EU-PHARE did not materialize. After December 2004, however, there were signs of a wavering in the commitment to road safety and the hasty changes in the re-organization of the road administration resulted in disruption and led to audit queries highlighting financial management weaknesses. Nevertheless, in spite of ongoing reorganization, the newly formed company remained effective and disbursements on the project continued as planned. All loan conditions were complied with, and Bank guidelines were followed throughout. The need to cover the unexpected funding shortfall due to EU-PHARE’s withdrawal required the remaining parties, and especially GOR, to consider alternative sources and become more directly engaged.

This project coincided with Romania’s move towards a market economy. The continued support for the modernization of the country’s road system was important and necessary, but the most interesting aspects of the project concerned the ambitious attempts to make improvements related to transport and health that would help Romania conform with EU norms. Although there was an unexpected setback in funding arrangements, the project was able to accomplish much with the resources at its disposal. The main lessons to be taken from this PPAR are:
That a holistic approach to road safety is necessary involving the three “Es” engineering, enforcement, and education to bring down the national accident rate. In the Romania Roads Two project this approach has had some success, but it was found that a good coordinating body is essential to bring together departments and entities unused to working together, while continued political commitment is important to sustain the initiative once this process has begun. In Romania a renewed, action-oriented emphasis is needed to ensure that the positive progress achieved to date is continued.

The road improvement program was effective, but the Romanian experience highlights the importance of forecasting traffic as accurately as possible, of ensuring there is a clear plan to fund road maintenance activities, and of ensuring that there is an appropriate protocol in place for the relocation of utilities. In the Romania Roads Two project specific arrangements could have been made to protect small works contractors facing a very steep rise in inflationary costs. Although a price escalation clause is not usually included in such contracts, it could be argued that force majeure circumstances applied in this particular case.

Complex road safety programs can benefit greatly from continuous and coordinated partnerships between international organizations over an extended time period. The Romania Roads Two project exemplifies the manner in which the partners were able to provide additional support at short notice when one of the components had a funding shortfall.

Vinod Thomas
Director-General
Evaluation
1. Background

1.1 Romania is a middle income country with a GNI per capita of USD 4,850 in 2006. With a population of 21.6 million, it is the second largest country in Central and Eastern Europe and the seventh largest among the 27 current members of the European Union (EU). Although Romania's transition from a centrally planned to a market economy began in 1990, initially the government was hesitant to impose tight fiscal constraints and privatize large loss-making enterprises. Negative economic growth in the late nineties, however, led to improved financial discipline and the adoption of macroeconomic policies that encouraged economic growth.

1.2 Romania joined the EU on January 1st, 2007—the prospect of becoming an EU member having provided a good incentive for the transformation of the country during the previous ten years. Progress in reforms translated into a robust GDP growth averaging 5-6 percent for seven consecutive years, with inflation declining steadily. However, the trade deficit remains a cause for concern, and EBRD has recently warned that a failure to develop sufficient physical infrastructure—in particular, transport infrastructure—could act as a brake on economic growth. International competition and skilled labor shortages are squeezing traditional industries as demand shifts to higher quality products and services. The population of Romania has actually fallen by 1.7 million over the last ten years, due partly to emigration, but also to a decline in the country's birth rate.

1.3 Prior to 1990 the road system was neglected as the emphasis was on rail transport. Trucks and buses could only operate within district boundaries and all transport beyond 50 km had to be sent by rail. In 1990 road transport was deregulated resulting in a surge in traffic volumes, especially heavy trucks, which the roads were ill-prepared to carry; it was estimated at the time that about one third of the national road network (approximately 5,000 km) required some form of strengthening or rehabilitation. Consequently, the GOR sought assistance from IBRD, EBRD, EIB, and EU-PHARE resulting in the Transport Project (Loan 3593-RO), completed in 1998, which began a process of major rehabilitation of the national roads, continued in the Roads Two Project (Loan 4178-RO), evaluated in this PPAR. In this project additional aspects were introduced such as improving road safety, supporting the development of management systems, and promoting a reduction in the lead content of petroleum fuels.

1.4 Romania's road network is about 78,000 km in extent, of which some 14,500 km are national roads and just 279 km expressways. These main roads are administered and managed by the National Company of Motorways and National Roads (RNCMNR). The number of motor vehicles registered in Romania increased by 9 percent per annum between 1990 and 1995, then grew more modestly at around 3.3 percent per annum until 2006, when the figure grew quickly by nearly ten percent reflecting renewed buoyancy in

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2 World Bank data based on the GNI Atlas method
3 World Bank, Romanian Business Digest Report, March 2008
5 Labor Minister, Hon. Paul Pacurarui, statement reported in "Nine O’ Clock Newspaper,” May 15, 2008
the economy. By 2007 there were 4.5 million vehicles in Romania and sales of heavy haul commercial vehicles doubled in comparison to 2006. An EU study in 2004 showed that Romania was ranked 28th out of 30 European countries for its road safety record with a fatality rate of 749 persons killed per million passenger cars. Comparative figures are France 178, Germany 129 and the United Kingdom 121. Only Latvia 752 and Turkey 820 are worse. The data shows that passenger car density is inversely proportional to the number of fatalities in road accidents—the higher the passenger car density, the ‘safer’ the country.

2. Project Objectives and Design

2.1 The objectives of the project as laid out in the Project Appraisal Document (PAD) and Loan Agreement are as follows:

i. To improve traffic safety and the fitness of the vehicle fleet;

ii. To continue helping Romania to meet the changing pattern of demand for land transport infrastructure;

iii. To improve the management and performance of the National Administration of Roads (NAR);

iv. To assist the Romanian civil works construction industry in its transition to a market economy; and

v. To promote the reduction of lead in petrol.

2.2 For objective (v) the ICR has added the words: and assist Romania to harmonize standards with the EU. This was intended to clarify the context in which the reduction of lead in petrol was promoted as the original objective was not specific in this regard. With respect to objective (iii) the NAR was re-organized as the RNCMNR during the implementation of Roads Two, becoming the administrator and manager of the national road system.

2.3 The project objectives were relevant to the country’s priorities of infrastructure rehabilitation, harmonization of standards with the EU, and environmental improvements, consistent with the Country Partnership Strategy (CPS) of 2006, which was of special significance because of the need to strengthen Romania’s partnership with the EU, especially prior to accession.

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6 Data from the Ministries of Transport, Construction and Tourism and the Ministry of Interior and Administrative Reform
7 Statistics in Focus, 14/2007, Eurostat, European Communities, 2007
Table 2.1 Project Cost at Appraisal and Actual by Organization (US$ millions)

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<th>COMPONENT</th>
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<th>GOR</th>
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<th>IBRD</th>
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<th>EIB</th>
<th>EIB</th>
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<td>Actual#</td>
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<td>Actual</td>
<td>Appraisal</td>
<td>Actual</td>
<td>Appraisal</td>
<td>Actual</td>
<td>Appraisal</td>
<td>Actual</td>
<td>Appraisal</td>
<td>Actual</td>
</tr>
<tr>
<td>Traffic safety including education, engineering (roads and vehicles), and enforcement; also assistance with a lead reduction action plan as necessary. IBRD: elimination of 38 black spots and 2 pilot safety projects</td>
<td>4.3</td>
<td>4.9</td>
<td>8.6</td>
<td>7.6</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>11.2</td>
<td>-</td>
<td>24.1</td>
<td>12.5</td>
</tr>
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<td>Road rehabilitation 1,000 km of roads and bridges; IBRD 300 km</td>
<td>209.3</td>
<td>176.4</td>
<td>127.4</td>
<td>126.8</td>
<td>60.9</td>
<td>60.9</td>
<td>87.5</td>
<td>68.6</td>
<td>-</td>
<td>-</td>
<td>485.1</td>
<td>432.7</td>
</tr>
<tr>
<td>Equipment and materials for routine maintenance and assistance towards eventual privatization of maintenance; IBRD equipment for routine maintenance of roads and bridges</td>
<td>-</td>
<td>-</td>
<td>14.0</td>
<td>15.6</td>
<td>25.0</td>
<td>25.0</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>39.0</td>
<td>40.6</td>
</tr>
<tr>
<td>Institutional development; technical assistance for project management, assistance to the emerging road construction industry, computerization and commercialization of the NAR, development of pavement and bridge management systems and support for traffic planning and legislation</td>
<td>0.4</td>
<td>0.5</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>4.8</td>
<td>-</td>
<td>5.2</td>
<td>0.5</td>
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<tr>
<td>TOTAL 553.4 at appraisal (486.3 actual 87.9%)</td>
<td>214.0</td>
<td>181.8</td>
<td>150.0</td>
<td>150.0</td>
<td>85.9</td>
<td>85.9</td>
<td>87.5</td>
<td>68.6</td>
<td>16.0</td>
<td>0</td>
<td>553.4</td>
<td>486.3</td>
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Sources: ICR and SAR; # Estimated
2.4 In addition to the IBRD loan of US$150 million, the project was to be financed in parallel by loans from EBRD US$85.9 million and EIB US$67.5 million. Most of the technical assistance and studies were intended to be financed through an EU-PHARE grant of US$16.0 million. The agreed distribution of finances at appraisal and the actual amounts disbursed are shown in Table 2.1:

2.5 The road safety program was relatively bold. According to the SAR, it aimed to reduce the amount of road traffic accidents at accident black spots to an acceptable “standard level” for Western Europe and by increasing the efficiency of education and law enforcement to gradually improve the conduct of drivers, passengers and pedestrians to reduce the national rate of road traffic accidents. The project would provide the required traffic safety “know-how” for producing and monitoring a Traffic Safety Plan for the ten year period 2000-2009, which when implemented was expected to reduce the number of serious accidents by an ambitious 40 percent (saving the lives of 1,100 people and preventing 3,200 people from sustaining traffic-related injuries). The project aimed at establishing a permanent framework and a program for traffic safety research and development to support further improvements of traffic safety.

2.6 The road rehabilitation, procurement of equipment, training, and assistance to the local construction industry followed on from the program commenced under the previous transport project. In both the previous project and the current project the target was the rehabilitation of 1,000 km of national roads so the combined total of 2,000 km would restore to good condition some 40 percent of the national network previously in poor condition. The expectation for the reduction in the lead content of petrol was to lower the lead level from 0.60 g of lead per liter of petrol to 0.15 g/l by 2003 in compliance with EU requirements. See Table 2.2 for target values at appraisal and actual values achieved.

### Table 2.2 Indicator Target Values at Appraisal and Values Achieved

<table>
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<tr>
<th>Indicator</th>
<th>Target Value</th>
<th>Achieved Value</th>
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<tbody>
<tr>
<td>Km. of road improved i) Bank; ii) Project</td>
<td>i) 300; ii) 1,000</td>
<td>i) 300 + new airport access road; ii) 1,000</td>
</tr>
<tr>
<td>Bridges rehabilitated</td>
<td>50</td>
<td>68</td>
</tr>
<tr>
<td>Number of axle weight stations deployed</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>Number of black spots treated</td>
<td>40</td>
<td>38 (+ 25 as part of road upgrading)</td>
</tr>
<tr>
<td>% of accident reductions at black spots</td>
<td>50</td>
<td>77</td>
</tr>
<tr>
<td>Ave lead content of petrol</td>
<td>0.15 g/l by 12/31/2003</td>
<td>0.15 g/l by 12/31/2002</td>
</tr>
</tbody>
</table>

Source: SAR/ICR

2.7 The project was not reviewed at entry by the Quality Assurance Group, but the ICR team considered the overall Quality at Entry to be satisfactory based on the consistency of the project priorities with the CAS as well as with GOR priorities and sector strategy. The project was classified as Category B under the Bank’s Operational Policy 4.01. While IEG is broadly supportive of this rationale it questions why there was
an appraisal over-estimate of US$15.1 million in the IBRD project cost (later reallocated to the new airport road). This matter is addressed more fully in paragraph 5.3.

3. Implementation

Implementation Experience

3.1 Supervision and safeguards The Roads Two project was approved on June 3, 1997 and became effective as scheduled on October 24, 1997. There were three different task managers prior to 2000, but this discontinuity did not have an appreciable impact on performance. Supervision averaged two missions a year and the project as originally conceived was almost complete by the end of 2002. The road rehabilitation was mostly within the existing right-of-way and the impact of the project on the environment was negligible. Land acquisition only became necessary along the new airport road (see paragraph 3.5) and expropriation and compensation were conducted in accordance with Bank guidelines. The accounts of the road administration NAR were independently audited annually during project implementation and these audits were satisfactory until the administration was reorganized as RNCMNR. While the change in legal form did not affect the project, there were some other issues that needed attention (see paragraph 3.3).

3.2 EU-PHARE funds. Following urgent changes in priority in its assistance program to Romania, EU-PHARE unexpectedly reversed its decision to provide the agreed technical assistance for the road safety and institution building components. The GOR therefore looked for other sources of funding leading to the participation of the Global Road Safety Partnership (GRSP) and Dutch bilateral assistance. EBRD agreed to contribute towards the development of a cost accounting system for NAR, while USAID financed a study of the road construction industry. The GOR, through the NAR, also financed more of the technical assistance activities than originally planned. A Japanese trust fund grant was used to finance preparation of the program to eliminate black spots. EU support for road safety was re-established in 2002, with a two year program and US$3.2 million equivalent for i) road safety twinning; ii) general road safety technical assistance; iii) development of a traffic and accident data base; and iv) assistance to strengthen administrative capacity.

3.3 Change in the organizational structure of the NAR. In September 2003, following a change in government, the NAR was reorganized (without consultation with the Bank) as the RNCMNR, a fully state-owned joint stock company with responsibility for the operation and maintenance of national roads. At the same time the Ministry of Transport was also reorganized as the Ministry of Transport, Construction and Tourism (MTCT). The reorganization of NAR and frequent changes in top leadership of the new RNCMNR was disruptive, contributing to delays in the introduction of modern

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8 The Japanese grant of $144,000 (TF027126) was fully disbursed.
9 Involves the exchange of experts between EU countries to improve road freight transport law
10 Romania National Company for Motorways and National Roads established under Emergency Ordinance 84/2003 dated September 18, 2003
computerized systems. However, a more serious issue was that the transition was carried out very swiftly and in one single step, whereas established international practice was to follow a more evolutionary five step process. The result of this leapfrogging became evident in the first audit of RNCMN in 2004 which drew attention to the short and long term financial health of the company as well as other financial management weaknesses. For example, as a joint stock company RNCMN was legally obliged to have a defined income stream expected to cover needed expenditures, and to be audited as a commercial entity in accordance with Romanian law. This led to a fundamental review of the legal status, organizational structure and financial position of the company for which the Bank provided technical assistance in the follow-on Transport Sector Support Project approved on November 2, 2006.

3.4 Financing of main roads When Roads Two commenced, a road fund had recently been created based on a 25 percent charge on ex refinery prices of motor vehicle fuels and a 10 percent charge on ex-factory prices of new vehicles. This generated about US$200 million a year providing stability for road expenditures. However, this move was opposed jointly by the IMF and the Bank (Poverty Reduction and Economic Management Network) on the grounds that dedicated funds fragment the budgetary process and limit flexibility in the allocation of resources. The fund was replaced by a vignette, which was to be phased in between 2002-08 and used directly for road maintenance administered by the RNCMN.

3.5 However, while the phased approach was being implemented there were insufficient funds for adequate maintenance. For example, the vignette system was only extended to passenger cars in 2005. New construction and major rehabilitation continued to be mostly funded by international financial institutions and only limited funds were available for maintenance of county and communal roads. Recently, there has been some discussion about establishing private sector concessions for building and operating tolled motorways, but thus far this has not been supported with political consensus.

3.6 Increased scope and additional contracts Because substantial funds remained in the loan after completing the rehabilitation of the Bank-financed portion of roads and bridges, the Borrower—faced with major financial difficulties—urgently requested at the highest level of government that the Bank should assist it by using the savings for the improvement of the Bucharest-Otopeni road linking Banaesa airport with the Henry Coanda international airport. This section was experiencing very severe traffic congestion and a high incidence of road accidents; any surplus funds over and above this construction were to be used to rehabilitate up to 23 additional bridges. The project development objectives would remain the same. The main reason given at the time for following this course of action was an indication from the Bank side that it was unlikely to fund further infrastructure projects in Romania in the short term. (In the event this

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11 Letter from Minister of Transport, September 22, 2006
12 Road Fund Law, October 2, 1996
13 The vignette or "road tax sticker", based on EU practice, provides a vehicle with the right to use the road. In the case of Romania this was the right to use national roads. The switch to the vignette system was precipitated by the financial crisis in the country, but also enabled Romania to conform to EU practice.
scenario was reversed after the Bank’s Board of Directors endorsed an Infrastructure Action Plan launching a scaling-up of Bank infrastructure investment).

3.7 Utility relocation issues The decision to add the additional airport road to the project resulted in a project delay of nearly three years because, although the design was ready, no arrangements had been made to relocate the numerous utility lines crossing the route. The utility companies had the right to use their own designers and contractors and could require RNCMNR to pay not only for relocation, but also for betterment. Moreover, they had little incentive to process the relocations quickly.

3.8 Because there was no established protocol for the timely resolution of utility relocation issues, the RNCMNR (encouraged strongly by the Bank) made a proposal to the Ministry based on tried and tested British practice to change the laws governing utility location and cost sharing. An unexpected consequence of the project was therefore an improvement in the procedures for handling future utility relocation. At project closure, on June 30, 2006, all Bank funds had been fully disbursed.

4. Monitoring and Evaluation (M&E)

Design

4.1 The SAR dates back to 1997 when less attention was given to measurable project indicators. Nevertheless there were measurable output targets for reducing the average lead content in petrol, the number of black spots improved, the number of kilometers of road and the number of bridges rehabilitated, as well as the number of axle weight stations deployed (see Table 2.2). All of these targets were either exceeded or met earlier than planned. Other measurable targets were mentioned in the SAR relevant to the overall development objectives, but not mentioned in the ICR. For example in Annex 3 of the SAR there is reference to a National Traffic Safety Plan whereby a reduction in the amount of accidents over a ten year period could be monitored, with the aim of achieving a reduction in serious accidents by 40 percent. The bodies responsible for collecting road safety and other data were the traffic police, the National Institute for Statistics and the RNCMNR.

4.2 No attempt was made to measure outcomes except to reduce the number of accidents and thus improve localized road safety at black spot improvement sites by 50 percent and to ensure that these sites conformed to EU standards. It would have been possible to have devised other outcome measures, but this was not done. An example of what would have been possible is demonstrated by the fact that the IEG mission was able to find data on the average level of lead content in children’s blood due to a reduction of the lead content in petrol before and after the project, (see paragraph 5.22 for more detail). Although two pilot road safety interventions were agreed, their evaluation design was not addressed in the SAR and the detailed designs were completed relatively late in implementation.
Implementation

4.3 During implementation the Bank supervision team and the Borrower implementation unit are to be commended on the way in which the indicators were monitored and recorded. A study of the aide memoires of the supervision team shows plenty of evidence that progress was properly monitored. However, it would have been beneficial if the team could have added additional information, such as road roughness and condition of the network, because this information was available. RNCMNR were unable to produce evidence that M&E was adequately addressed for the two design pilots.

Utilization

4.4 On the other hand, utilization proved somewhat disappointing. Perhaps because neither the Pavement Management System (PMS) or Bridge Management System (BMS) had been introduced due to funding difficulties, the IEG mission had problems in accessing the latest information which was stored on various computers. In at least one instance some information had been lost because a computer hard drive had “crashed” and there was no back-up arrangement. This pattern is especially evident with regard to safety statistics, where a project funded by the EU is under implementation to establish a traffic and accident data base. Until this project is completed the system will remain defective.

5. Ratings

Relevance

5.1 The project objectives were relevant to the country’s priorities of infrastructure rehabilitation, harmonization of standards with the EU, and environmental improvements. Romania’s transport infrastructure had been identified as a bottleneck to the expansion of economic growth. In 1995 the share of the GDP spent on transport infrastructure was only 0.3 percent, which compared poorly to a norm of at least 2 percent in many developing countries. The objectives remain relevant today and are embodied in the CPS of 2006, which was of special significance because of the need to strengthen Romania’s partnership with the EU, before accession. The strategy of the Romanian Ministry of Transport was supported by the CPS objectives. In the short term the strategy was to arrest the technical and operational deterioration of the system; in the medium term to renovate the existing transport capacity; and in the longer term to modernize and develop the infrastructure, equipment and vehicles to match the economic and technical level of Western Europe. At the same time, the GOR declared that it supported competition through freedom to set tariffs, free modal choice by transport users, and investment decisions based on economic analysis. Relevance of the project objectives is high.

5.2 The project design sensibly followed the foundation established with the earlier Transport Project and continued with the fruitful collaboration with EBRD, EIB and the EU. Design standards addressed Romania’s shortfalls with respect to EU standards with a view to Romania’s impending accession. Engineering designs for the road and bridge
rehabilitation were prepared by two consortia of consulting engineers comprised of both international and Romanian firms. The consortia cooperated effectively with EBRD and EIB. Rehabilitation costs were estimated based on the condition of the roads, determined on the basis of deflection data\(^\text{14}\). Work quantities were determined in relation to the conditions, traffic safety considerations, and compliance with EU standards, especially regarding the width of shoulders. The quality of design was generally satisfactory, although some designs had to be revised just before implementation due to unforeseen increased traffic on some road sections and to ensure consistency with EBRD and EIB financed roads. Overall, the cost estimates were on the high side. However, the unit costs appear to have been based on actual costs experienced in the preceding project, which is not, in IEG's view, an unreasonable approach, providing adjustments are made for inflation and general market conditions. In the event, the higher cost estimate (15 percent over actual costs) turned out to be fortuitous as the cost of the airport road could be covered.

5.3 The project was classified as Category B from an environmental viewpoint. After feasibility studies were completed appropriate measures were put in place with regard to mitigation plans for the minor environmental effects anticipated. A number of lessons from previous projects were also taken into account covering the need for early preparation of detailed terms of reference for the preparation of action plans, and the scheduling of regular reviews of budgets and expenditures in tandem with the supervisory missions. Project risks were also identified relating to the adequacy of funds for road maintenance, the degree of commitment to the commercialization of periodic maintenance, and difficulties in implementing the traffic safety component which was dispersed among different agencies unaccustomed to working together.

5.4 A focus of concern during the design phase was the inadequacy of the coordination of road safety activities in Romania. This was resolved by the appointment of an Inter Ministerial Council for Road Safety (ICRS)\(^\text{15}\) established in 1995, which was also responsible for creating and coordinating a National Traffic Safety Action Plan. The ICRS was able to bring together departments and entities unused to working together. The relevance of the design (taking into account the shortcomings in M&E) was substantial, and the overall relevance of both the objectives and design together is substantial.

Efficacy

5.5 Objective i) to improve traffic safety and the fitness of the vehicle fleet. Substantially achieved. After EU-PHARE reversed its decision to provide the expected assistance, GOR turned to the GRSP for help. In early 2000 a GRSP committee was established in Bucharest with various stakeholders assuming responsibility for engineering, enforcement and education. In addition to the government (through the ICRS) and the international financiers, other partners in this endeavor included insurance

\(^{14}\) A deflectometer measures surface conditions and the overall bearing capacity of roads

\(^{15}\) Participants included the ministries/agencies responsible for transport, works, health, education, interior, public administration, and local government, as well as NGO's and representatives of the private sector including insurance companies and motoring organizations
companies, vehicle manufacturers, oil companies, road haulage associations and motoring organizations. A ten year Safety Action Plan was drawn up in October 2001 with a wide range of issues identified for attention. These included short term measures such as new safety regulations and their enforcement, and longer term measures such as creating a road safety fund and establishing a National Road Safety Institute. While the longer term items are still outstanding, many of the short term or ongoing measures have been tackled. However, there is a lack of information on which measures may have had the most impact.

5.6 The year 2002-03 was declared the Year of Traffic Safety by GOR and education campaigns were conducted through the media and in the schools. Meanwhile, IBRD completed its program of improving safety at black spots. The main messages of the campaigns were the need to deter speeding, the importance of wearing seat belts and using child restraint devices, as well as the dangers of driving under the influence of alcohol, medications and drugs.

5.7 The rate of fatalities and serious injuries fell significantly between 1997 and 2003, despite the growth in traffic, and the downward trend is likely substantially due to the combination of measures mentioned above, plus a modernizing, safer national vehicle fleet. However, the rate of decline became more uneven in the last three years as shown in Figures 5.1 and 5.2 (see also Appendix B, Table B.1 for actual data). Inspection of earlier data (1995 experienced a fatality rate of 9.8 fatalities/1,000 vehicles and a serious injury rate of 26.5/1,000 vehicles) indicate that the downward improvement began in the early nineties and has been decreasing ever since. The only major change in the road safety situation during the early years prior to Roads Two was the improvement of the first 1,000 km of roads under the preceding Transport Project, so the engineering aspect is likely a highly significant factor in the overall decline.

5.8 It is not possible to determine the attribution nationally between the road condition improvements and the road safety interventions since 1997 because details were generally not kept, except for the accident black spots. It is also possible that rising fuel prices and a difficult financial climate meant that motorists on average drove less frequently or for shorter distances.
Figure 5.1 Decline in road fatalities and fatality rate/1,000 vehicles, as registered vehicles rose by a quarter

![Figure 5.1](image1)

Figure 5.2 Decline in serious injuries and serious injury rate/1,000 vehicles

![Figure 5.2](image2)

Sources: MTCT and GRSP based on information from the National Institute of Statistics and the traffic police. Data includes both vehicle occupants and pedestrians.
5.9 The Bank was responsible for financing the black spot program. The cumulative accident reduction on 38 black spots is given in Table 5.1 which shows that the number of accidents and serious injuries was reduced by 77 percent and fatalities by 71 percent. These figures are for the period 1999-2002, before and after the improvements. Unfortunately, RNCMNR were unable to provide any later data, (which shows the importance of the proposed traffic and accident database). Nevertheless, information from international research indicates that the majority of black spot improvements lead to permanently better accident statistics at the sites concerned.\textsuperscript{16}

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<tr>
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<tbody>
<tr>
<td>Number of accidents</td>
<td>409</td>
<td>93</td>
<td>-77.3</td>
</tr>
<tr>
<td>Fatalities</td>
<td>171</td>
<td>49</td>
<td>-71.4</td>
</tr>
<tr>
<td>Serious injuries</td>
<td>392</td>
<td>92</td>
<td>-76.5</td>
</tr>
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Sources: RNCMNR and ICR

5.10 With regard to the quality of the accident statistics, it is mandatory for serious and fatal accidents to be reported to the police. The statistics are considered by IEG to be reasonably reliable, but there may be an element of underreporting due to problems of definition.\textsuperscript{17} For example, some victims die later in hospital and the cause of death may not always be attributed to the original accident. The setting up of a national accident database with EU-PHARE funding should improve the quality and consistency of reported accidents.

5.11 A road weather information system was successfully installed and traffic law enforcement equipment provided. Measures were also taken to improve the fitness of the national vehicle fleet through mandatory vehicle condition and emissions control inspections. There are now some 370 privately operated vehicle inspection stations to undertake such inspections and issue certificates. The Romanian Automobile Register reported that there had been a 25 percent improvement in vehicles meeting the required specifications over the first year after the commencement of testing (when only 5 percent of vehicles met the specifications). Finally two pilot safety projects included in the project were delayed because of doubts about local consultants' experience in handling experimental designs. One was on national road DN1 near Bucharest where the number of accidents was excessive, while the other was in a linear village and aimed at reducing...


\textsuperscript{17} See for example Aeron-Thomas, A 2000 \textit{Under-reporting of Road Traffic Casualties in Low-income Countries} Report PR/INT/199/00 TRL Ltd, Crowthorne
the number of collisions between motor vehicles and pedestrians. The former has recently been implemented and was visited by the IEG mission. The road section has been re-designed to reduce traffic speed and improve facilities for pedestrians, but the focus has been more on engineering improvements rather than monitoring and evaluation. Thus far, the pilot has not been in operation long enough to establish whether there are changes in the accident rates.

5.12 The linear village traffic safety pilot project is to be located in a scenic area where pedestrians (many of which are tourists) pose a traffic hazard. It has been designed to increase the visibility of and protection to pedestrians, but has been put on hold by the Ministry pending a decision on the type of design for the overall national route (it may be an expressway). At the time of the IEG mission the safety pilot had not been implemented and there is some doubt as to whether or not it will go ahead.

5.13 **Objective ii) to continue helping Romania to meet the changing pattern of demand for land transport infrastructure.** *Highly achieved.* Both the 1,000 km of rehabilitation of national roads for the project as a whole and the 300 km for the IBRD component were achieved. In addition the target of 50 bridges identified at appraisal was exceeded; and 68 had been rehabilitated at closure. The funds unused in the IBRD loan were also utilized to construct a new road giving access to the international airport at Otopeni; and a further 23 bridges were rehabilitated, making 91 in all. The works observed by the IEG team were of good quality and satisfactorily maintained.

5.14 Follow-on Bank projects such as the Transport Restructuring Project, tackled railway operational and financial performance, ensuring there is a balance and effective modal inter-connectivity in the provision of land transport infrastructure in Romania. A protocol for the handling of utility relocation was also introduced during implementation of Roads Two. The comprehensive deployment of axle weight analyzers will help to preserve the road system from the effects of overloaded vehicles. Prior to this deployment 10 percent of Romania's truck traffic were overloaded. No figures are yet available to measure the effectiveness of the truck weight control measures, but based on experience in other countries such controls yield positive outcomes.²²

5.15 **Objective iii) to improve the management and performance of the National Administration of Roads (now RNCMNR).** *Modestly achieved.* Until 1993 road maintenance had been performed entirely by departmental force account, but with the support of the Bank and its partners, and especially in the Roads Two project, good progress was made in privatizing such activities. Except for a few activities related to emergency repairs and flood protection all periodic maintenance is now contracted out, while routine maintenance is evolving in the same direction. There were also improvements in the management and performance of the agency as the service delivery and supply functions were tendered to the private sector. This more commercial approach to road provision has meant that the roads are managed more like a business. A Road Council with stakeholder participation has also been established to help ensure that roads needing attention are correctly prioritized. Twenty two automatic weight-in-motion

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²² For example, see the seminal research by Small, KA et al, 1989 *Road Work: A New Highway Pricing and Investment Policy*, Brookings Institute
stations were also installed as against nine proposed at appraisal. The GOR thus complied with a covenant to recommend and implement a system for axle load monitoring and control.

5.16 But, several items were to have been financed by EU-PHARE and consequently computerization of the agency, general management support for planning and legislation, and the establishment of a pavement management system (PMS) and a bridge management system (BMS) were cancelled or postponed. The PMS and BMS are now being further developed under the follow-on Transport Restructuring project.

5.17 As discussed under paragraph 3.3 the hasty reorganization process of the former NAR and frequent changes in top leadership of the new RNCMNR were disruptive events that led to certain financial management weaknesses, now being addressed through technical assistance under the Transport Sector Restructuring project. There also remains a short term problem with the adequacy of funds for maintenance, although the vignette system is expected to provide more funds in the medium term. In the meantime the RNCMNR had to resort to short term commercial loans for road maintenance. Securing sufficient engineers to fill key positions remains a critical issue as there is growing concern about skilled labor that is being attracted to Western Europe by higher wages.19

5.18 Objective iv) to assist the Romanian civil works construction industry in its transition to a market economy20. Substantially achieved. The origin of this objective is to be found in the preceding transport project (Loan 3593-RO) in which technical assistance was provided for a construction industry study for the preparation of Roads Two. It recommended measures to improve the business and contracting climate. New public procurement rules based on competitive bidding were introduced and reinforced under Roads Two, and by the time that the project closed over 90 percent of the road construction industry for main roads was in private hands. Equipment to the value of $39 million was procured for routine maintenance and as assistance towards the commercialization and eventual privatization of road maintenance. The system put in place was a lease facility whereby enterprises for road repair and works would be able to lease equipment, with the capital cost being recovered over time from the works contracted.

5.19 However, some lesser important measures such as technical assistance for training in contract and financial management, and establishment of a technical secretariat in the Association of Romanian Contractors were dropped following the cancellation of the EU-PHARE funds. On-the-job training nevertheless did occur initiated by the project implementation unit, and there were considerable opportunities for skills transfer where there were joint ventures between foreign and local contractors. This resulted in several Romanian companies becoming capable of bidding for and winning international contracts both inside and outside the country.

19 See for example, Understanding the transition process in Romania, UNDP 2002
20 Not rated in the ICR Review because of insufficient evidence in the ICR.
5.20 **Objective v)** to promote the reduction of lead in petrol. *Highly achieved.* At the time of project preparation in 1997 Romanian refineries were adding 0.60 g of lead per liter of petrol as an inexpensive way to enhance the octane levels to meet the needs of the country's motor vehicle population. This amount was relatively high in comparison to neighboring countries, and far above EU standards of 0.15 g/l. The primary concern was the strong correlation between lead exposure and health effects, such as increased blood pressure leading to cardiovascular conditions in adults, and neuro-developmental effects in young children.21 A working group was established with representatives of government and the private sector (motor vehicle manufacturing and petroleum industries). The group originally planned to reach the target threshold of 0.15 g/l by 2003 and, with the backing of the Bank and its partners, a Lead Reduction Action Plan was drawn up which included technical options and an analysis of the economic implications for the refinery, the effects of reduced leaded petrol on the existing fleet, pricing policies related to providing incentives in using unleaded petrol, and public awareness of the benefits of using such petrol. The reductions were achieved on a phased basis, first to 0.32 g/l in 1998 and then to 0.15 g/l by September 30, 2000, over two years ahead of schedule. Meeting these targets fulfilled a covenant in the loan agreement.

5.21 Measurement of the concentration of lead in blood is recorded in micrograms per deciliter, (µg/dl). Information from the European Environment and Health Information System22 showed the average level of lead in children's blood in 11 countries at different times between 1990 and 2006. In 1999 the level measured in Romania for children of 9 years or younger was 10.40µg/dl. Based on measurements in three urban areas in Romania in 2005, this figure, according to research for the Commission of European Communities in collaboration with WHO, had already improved to 6.84µg/dl, which was largely attributable to the phasing out of leaded gasoline which was the only significant variable during the period in question, although a reduction of industrial emissions and the use of lead in paint may have played a smaller role. In reality, the 2006 data may underestimate the true improvement since children in rural areas would likely be less exposed to lead health hazards.

5.22 **Overall efficacy is substantial.** Two of the objectives were highly achieved, two substantially achieved and one modestly achieved.

**Efficiency**

5.23 Efficiency is substantial. The most significant portion of the project cost was the rehabilitation component which comprised 85 percent of the IBRD loan. At appraisal the ERR averaged 50 percent and at completion the average was recalculated at 26 percent. This is still a good ERR, but the main reason for the sharp drop was the lower

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21 Several studies have confirmed the connection between leaded gasoline and adverse health conditions including the California Air Resources Board “Proposed identification of inorganic lead as a toxic air contaminant – Part B – Health Assessment”, 1997, and Lovei, M “Phasing out lead from gasoline: worldwide experience and policy implications”, World Bank Technical Paper 397, Pollution Management Series, 1998.

22 European Environment and Health Information System, Blood lead levels in children, country case studies, May 2007
than expected rate of traffic growth between 1995 and 2006 due to the economic stagnation experienced during that period. The IEG mission estimates that this ERR, if re-calculated today, would show a return closer to 30 percent because of the recent strong growth in traffic as the economy has improved. The figures also represent a weighted average of ERRs from each section of road and the impact of the late addition of the new airport road is probably understated. The 1,000 km of road to be rehabilitated for the project as a whole were selected out of 3,000 km analyzed in detail to determine that they were indeed the highest priorities. With regard to the improvement of black spots, 38 were selected from 53 possible locations. The sites chosen had the worst accident records.

Outcome

5.24 The overall outcome, taking into account the achievement of the individual development objectives (two highly achieved, two substantially achieved and one modestly achieved), together with the overall ratings for relevance, efficiency and M&E is satisfactory.

Monitoring and Evaluation

5.25 The project design allowed for a number of output indicators, which were all either met or exceeded, but there was a limited attempt to measure outcomes and no attempt to measure institutional performance. The road safety pilot schemes were also not conceived in a design framework with measurable indicators. However, the ICR, ex post, used national accident statistics of traffic fatalities and serious injuries as a measure and IEG was able to extend this information. M&E during preparation was relatively substantial given the practice at the time. There was regular and adequate reporting on the chosen output indicators throughout implementation. M&E during implementation was therefore substantial. Utilization was disappointing because the required data systems had not been funded – M&E utilization was therefore only modest. The M&E for the project overall, taking into account design, implementation and utilization was substantial.

Risk to Development Outcome

5.26 The quality of construction is good and the latest traffic growth figures indicate that the stream of benefits is likely to continue in the foreseeable future. IEG agrees with the assertion made in the ICR that the commercialization/privatization initiative and the improvements in the construction industry are likely irreversible. Modern management methods are also gradually taking hold and together with better information systems such developments are expected to bring efficiencies in operation. The continued support of the Bank in follow-on projects and the continuing cooperation and support of other development partners, with the backing of the EU, make it likely that the trend towards a gradual improvement will continue. Two areas, however, are flagged in this PPAR as causes for concern; one is the continuity of progress by the road safety program and the other is the adequacy of funds for road maintenance.

5.27 It is likely that further attention and impetus will have to be given to the road safety effort to ensure that the positive direction is continued. The leveling off of the
former positive trends in accident statistics needs to be taken seriously; the likelihood of achieving the targeted decrease of 40 percent in serious injury accidents between 2000 and 2009 now looks doubtful. While there is no single reason why the fatality and serious injury curves are flattening out, discussions with officials in the ICRS, the RNCMR and users in the private sector suggest that there is likely a combination of reasons for this trend. Perhaps the most important is a decline in political commitment to do something about the problem. After the Year of Road Safety ended road accident issues have had less prominence both with the public and the government.

5.28 The December 2004 elections resulted in a reduced status for the ICRS, which was downgraded from a formal directorate to a service department and the number of employees was reduced. A planned Road Safety Institute was postponed because of competing funding priorities, while law enforcement equipment to control speed and alcohol abuse remains in short supply. Other germane factors include the recent sharp increase in the vehicle population and problems in the effective collection of traffic fines. Although a new Traffic Code is in force covering motor vehicle speeds, driving under the influence of alcohol, seatbelt usage and restrictions regarding the use of mobile phones while driving, this will not be fully effective until the traffic police have sufficient equipment to enforce the law and the traffic fine collection system is made more effective. The IEG mission also observes that Romania has as yet no legislation to prevent the growing number of access points to national roads and there is also no special initiative to tackle the interaction between the number of horse-drawn carts, especially in rural areas, and the higher traffic speeds on the improved roads. Road safety issues are still being pursued in subsequent Bank financed follow-on projects such as the Transport Restructuring Project. For example, concerning an *aide memoire* on a supervision mission in April, 2008, IEG notes that a Bank requirement is to insist on an updated road safety action plan. However, it is also clear that road safety has a lower status now than accorded in Roads Two where it was a formal objective and component. This likely reflects the lower priority currently accorded to road safety by the GOR.

5.29 The other area of concern is the lack of funding for maintenance and the shortage of skilled engineers. This has prevented the road maintenance, particularly of the lower order roads from being as effective as it should be. The vignette system is not yet delivering the amount of funds necessary to meet the needs imposed by a modernizing country, a growing economy and a rapidly expanding vehicle population. Fortunately, the average distance travelled in Romania is somewhat less than in other eastern European countries, but the desire to own a motor vehicle is already firmly entrenched. Although membership of the EU will unlock resources that will assist the country to overcome these areas of weakness, for the time being a problem is still evident and for this reason the risk to development outcome rating is *moderate*.

**Bank Performance**

5.30 Project preparation was carried out in close consultation with the EIB, EBRD and EU-PHARE and following-on from the previous project with these partners a good level of cooperation had already been established. The roads selected for rehabilitation were agreed by all to be the highest priorities on the basis of rigorous cost benefit analysis. Lessons from previous projects were also taken into account and most project
risks were considered. The quality of the design was generally satisfactory, but some expected costs were overestimated. Quality at entry was satisfactory.

5.31 There were two supervision missions per year on average and the teams were generally good at identifying problems and proposing measures to get the project back on track. The supervision team proved flexible and reacted well when crises occurred. For example, the unexpected withdrawal of EU-PHARE at inception could have spelt disaster, but the team and the Borrower worked well together to find alternative funding. Although not every item was covered to the same extent and depth as originally planned, most areas were in the end addressed, which was a signal accomplishment in the difficult operating environment.

5.32 Similarly, the team’s efforts to accommodate the Borrower’s request to use unspent loan funds on the airport road showed considerable diligence. While the decision to extend the loan (as it turned out for a further three years) in hindsight was probably not the best option that could have been pursued (a new project would have been preferable), it was nonetheless a logical decision in the circumstances prevailing at the time, when a follow on project was in doubt. When unexpected difficulties arose in the final stages with the relocation of utilities, the Bank worked with the Borrower to develop a new protocol for such eventualities in the future.

5.33 One area where the Bank could have made an improvement was in ensuring that specific arrangements were made to protect small works contractors facing a very steep rise in inflationary costs. Although a price escalation clause is not usually included in such contracts it could be argued that force majeure circumstances applied in this particular case. (Small works are typically found in black spot elimination programs). The procurement process took too long to reach a no objection at a time of rapidly escalating prices which meant that many works could not be finished until after the winter season. Some emerging contractors did not survive. This said, however, overall the performance of the Bank was satisfactory.

Borrower Performance

5.34 The GOR was already familiar with the Bank, its co-financiers, and their procedures from the preceding project and this helped to ensure that preparation went relatively smoothly. GOR was also strongly committed to the project for the most part and supported the establishment of a GRSP committee as an alternative solution after the expected funding from EU-PHARE did not materialize. After December 2004, however, there were signs of a wavering in the commitment to road safety after a change in government. The hasty changes in the re-organization of the NAR also resulted in disruption, delays to the introduction of computerized systems, and financial management weaknesses. GOR performance was moderately satisfactory.

5.35 The original implementing agency was NAR and during implementation it was transformed into the RNCMNR as mentioned above. In spite of ongoing reorganization the company remained effective and disbursements on the project continued as planned. All loan conditions were complied with, and Bank guidelines were followed throughout. The fact that EU-PHARE pulled out of the financial arrangements actually increased
commitment to the project because all those involved were forced to work together to find a solution and, as there was a little funding for consultants, many of the officials had to undertake the work themselves and this increased ownership of the project. Taken together the performance of all agencies involved in the project was satisfactory and, on balance, the overall performance of the Borrower was satisfactory.

6. Lessons

6.1 This project coincided with Romania's move towards a market economy. The continued support for the modernization of the country's road system was important and necessary, but the most interesting aspects of the project concerned the ambitious attempts to make improvements related to transport and health that would help Romania conform with EU norms. Although there was an unexpected setback in funding arrangements, the project was able to accomplish much with the resources at its disposal. The project also provides a good example of ongoing partnership and cooperation between international funders. There is, however, a danger that if the GOR lacks resolve in its future support for road safety, it will fall short of its aspirations. The main lessons to be taken from this PPAR are:

➢ That a holistic approach to road safety is necessary involving the three "Es" engineering, enforcement and education to bring down the national accident rate. In the Romania Roads Two Project this approach has had some success, but it was found that a good coordinating body is essential to bring together departments and entities unused to working together, while continued political commitment is important to sustain the initiative once this process has begun. In Romania a renewed, action-oriented emphasis is needed to ensure that the positive progress achieved to date is continued.

➢ The road improvement program was effective, but the Romanian experience highlights the importance of forecasting traffic as accurately as possible, of ensuring there is a clear plan to fund road maintenance activities, and of ensuring that there is an appropriate protocol in place for the relocation of utilities. In the Romania Roads Two project specific arrangements could have been made to protect small works contractors facing a very steep rise in inflationary costs. Although a price escalation clause is not usually included in such contracts it could be argued that force majeure circumstances applied in this particular case.

➢ Complex road safety programs can benefit greatly from continuous and coordinated partnerships between international organizations over an extended time period. The Romania Roads Two project exemplifies the manner in which the partners were able to provide additional support at short notice when one of the components had a funding shortfall.
## Annex A. Basic Data Sheet

**ROADS TWO PROJECT (LOAN 4178-RO)**

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

<table>
<thead>
<tr>
<th></th>
<th>Appraisal estimate</th>
<th>Actual or current estimate</th>
<th>Actual as % of appraisal estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total project costs</td>
<td>553.4</td>
<td>486.3</td>
<td>87.9</td>
</tr>
<tr>
<td>Loan amount</td>
<td>150.0</td>
<td>150.0</td>
<td>100.0</td>
</tr>
<tr>
<td>Cofinancing</td>
<td>189.4</td>
<td>156.1</td>
<td>82.4</td>
</tr>
<tr>
<td>Cancellation</td>
<td></td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

### Project Dates

<table>
<thead>
<tr>
<th></th>
<th>Original</th>
<th>Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appraisal</td>
<td>10/14/1996</td>
<td>10/14/1996</td>
</tr>
<tr>
<td>Negotiations</td>
<td>04/21/1997</td>
<td>04/21/1997</td>
</tr>
<tr>
<td>Board approval</td>
<td>06/03/1997</td>
<td>06/03/1997</td>
</tr>
<tr>
<td>Signing</td>
<td>07/01/1997</td>
<td>07/01/1997</td>
</tr>
<tr>
<td>Effectiveness</td>
<td>10/28/1997</td>
<td>10/24/1997</td>
</tr>
<tr>
<td>Closing date</td>
<td>09/30/2003</td>
<td>06/30/2006</td>
</tr>
</tbody>
</table>

**Staff Inputs:** *NO DATA AVAILABLE*
## Mission Data

<table>
<thead>
<tr>
<th>Stage of Project Cycle</th>
<th>No. of staff weeks</th>
<th>$ Thousand (Including travel and consultant costs)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Lending</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FY95</td>
<td>-</td>
<td>15.84</td>
</tr>
<tr>
<td>FY96</td>
<td>-</td>
<td>140.06</td>
</tr>
<tr>
<td>FY97</td>
<td>-</td>
<td>153.81</td>
</tr>
<tr>
<td>FY98</td>
<td>-</td>
<td>0.00</td>
</tr>
<tr>
<td>FY99</td>
<td>-</td>
<td>0.00</td>
</tr>
<tr>
<td>FY00</td>
<td>-</td>
<td>0.00</td>
</tr>
<tr>
<td>FY01</td>
<td>-</td>
<td>0.00</td>
</tr>
<tr>
<td>FY02</td>
<td>-</td>
<td>0.00</td>
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<tr>
<td>FY03</td>
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<td>0.00</td>
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<tr>
<td>FY04</td>
<td>-</td>
<td>0.01</td>
</tr>
<tr>
<td>FY05</td>
<td>-</td>
<td>0.00</td>
</tr>
<tr>
<td>FY06</td>
<td>-</td>
<td>0.00</td>
</tr>
<tr>
<td>FY07</td>
<td>-</td>
<td>0.00</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>309.72</strong></td>
</tr>
</tbody>
</table>

| **Supervision/ICR**    |                    |                                                  |
| FY95                   | -                  | 0.00                                             |
| FY96                   | -                  | 0.00                                             |
| FY97                   | -                  | 2.93                                             |
| FY98                   | -                  | 81.23                                            |
| FY99                   | -                  | 85.43                                            |
| FY00                   | 28                 | 96.62                                            |
| FY01                   | 19                 | 69.43                                            |
| FY02                   | 14                 | 72.32                                            |
| FY03                   | 14                 | 67.76                                            |
| FY04                   | 14                 | 69.64                                            |
| FY05                   | 6                  | 37.55                                            |
| FY06                   | 12                 | 63.64                                            |
| FY07                   | 1                  | 7.56                                             |
| **Total:**             | **108**            | **654.11**                                       |
Annex B. Romanian National Road Accident Statistics

Table B.1 Romanian National Road Accident Statistics 1997-2006

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Vehicle registration (000)</td>
<td>3,128</td>
<td>3,286</td>
<td>3,302</td>
<td>3,485</td>
<td>3,598</td>
<td>3,700</td>
<td>3,829</td>
<td>3,985</td>
<td>4,045</td>
<td>4,104</td>
</tr>
<tr>
<td>Fatalities (number)</td>
<td>2,863</td>
<td>2,778</td>
<td>2,505</td>
<td>2,499</td>
<td>2,461</td>
<td>2,398</td>
<td>2,235</td>
<td>2,301</td>
<td>2,491</td>
<td>2,436</td>
</tr>
<tr>
<td>Fatalities/1,000 vehicles</td>
<td>9.2</td>
<td>8.5</td>
<td>7.6</td>
<td>7.2</td>
<td>6.8</td>
<td>6.5</td>
<td>5.8</td>
<td>5.8</td>
<td>6.2</td>
<td>5.9</td>
</tr>
<tr>
<td>Seriously injured (number)</td>
<td>7,451</td>
<td>7,221</td>
<td>6,601</td>
<td>6,315</td>
<td>5,963</td>
<td>6,777</td>
<td>5,538</td>
<td>5,343</td>
<td>5,637</td>
<td>5,281</td>
</tr>
<tr>
<td>Seriously injured/1,000 vehicles</td>
<td>23.8</td>
<td>22.0</td>
<td>20.0</td>
<td>18.0</td>
<td>16.6</td>
<td>18.3</td>
<td>14.5</td>
<td>13.4</td>
<td>13.9</td>
<td>12.9</td>
</tr>
</tbody>
</table>

Sources: MTCT and GRSP based on information from the National Institute of Statistics and the traffic police. Data includes both vehicle occupants and pedestrians.
Annex C. Borrower Comments

MINISTRY OF PUBLIC FINANCE
Secretary of State Office
No. 4/1357/14. 01. 2009

The World Bank
International Bank for Reconstruction and Development
International Development Association

To Mr. Peter Freeman

Re: Romania-Roads Two Project (Loan 4178-RO)
Draft Project Performance Assessment Report

With respect to the letter dated December 8, 2008 related to the Draft Project Performance Assessment Report to the Finance Loan mentioned above and, consequently to the discussion that the Ministry of Public Finance (MPF) had with the Ministry of Transport and Infrastructure (MTI) over the issue from above, we are in the position of communicating you the following conclusion:

- there are no objections to the content of the Performance Assessment Report;
- according to the shared opinion of MPF and MTI, the Roads Two Project was successfully finalized.

Yours sincerely,

Bogdan Alexandru Dragoi
Secretary of State

cc: Monika Huppi, Manager
Sector Evaluation Division
Independent Evaluation Group