



Railway Reform in the Western Balkans



Transport Unit, Infrastructure Department
Europe and Central Asia Region

December 2005

CURRENCY EQUIVALENTS

Currency Unit – EURO

Exchange Rate – US\$1 = 1.21 EURO (June 30th 2005)

Currency Unit – Albanian Lek

Exchange Rate – US\$1 = 102.46 ALL (June 30th 2005)

Currency Unit – Bosnia and Herzegovina Convertible Mark

Exchange Rate – US\$1 = 1.615 BAM (June 30th 2005)

Currency Unit – Croatian Kuna

Exchange Rate – US\$1 = 6.04 HRK (June 30th 2005)

Currency Unit – Macedonian Denars

Exchange Rate – US\$1 = 47.85 MKD (June 30th 2005)

Currency Unit – Serbian Dinars

Exchange Rate – US\$1 = 68.17 CSD (June 30th 2005)

WEIGHTS AND MEASURES

Metric System

FISCAL YEAR

January 1st – December 31st

Vice President, Europe and Central Asia:	Shigeo Katsu
Country Director, ECCU4:	Orsalia Kalantzopoulos
Sector Director, ECSIE:	Peter D. Thomson
Sector Manager, Transport:	Motoo Konishi
Task Team Leaders:	Martin Humphreys/Martha Lawrence

ABBREVIATIONS AND ACRONYMS

CARDS	Community Assistance for Reconstruction, Development and Stabilization
CIM	International Consignment Note for rail transport under COTIF
CIS	Community of Independent States
CMEA	Council for Mutual Economic Assistance (also known as COMECON)
COTIF	Convention Concerning the International Transport of Goods by Rail, 1980
DMU	Diesel Multiple Unit
EBRD	European Bank for Reconstruction and Development
ECA	Europe and Central Asia, an administrative region of the World Bank
ECMT	European Conference of Ministers of Transport (Part of OECD)
EIB	European Investment Bank
EMU	Electric Multiple Unit
EU	European Union
ERTMS	European Rail Traffic Management System
ETCS	European Train Control System
GETS	General Electric Transportation Systems
GDP	Gross Domestic Product
GNI	Gross National Income
GSM	Global System for Mobile communications
HSH	Hekurudhat Shqiptare, or Albanian Railways
HZ	Hrvatske Željeznice, or Croatian Railways
IBRD	International Bank for Reconstruction and Development, the World Bank Group
IDA	International Development Agency, the World Bank Group
IFI	International Financial Institutions
ISG	Infrastructure Steering Group
KFOR	NATO-led force in Kosovo
MoU	Memorandum of Understanding
MZ	Makedonski Željeznici, or Macedonian Railways
OECD	Organization of Economic Co-operation and Development
OSJD	Organization for Railways Cooperation, comprises CIS countries
PETrAs	Pan-European Transport Areas
PHARE	Programme of Community aid to central and east European countries
PSO	Public Service Obligation
PSC	Public Service Contract
REBIS	Regional Balkans Infrastructure Study
RSC	Regional Steering Committee
SaM	Serbia and Montenegro
SAP	Stabilization and Association Process
SEE	South East Europe
SECI	Southeast European Cooperation Initiative
SEETO	South East Europe Transport Observatory
SMGS	Agreement on International Railway Freight Communications, used in OSJD
SOE	State Owned Enterprise
SME	Small and Medium Enterprises
TEN	Trans European Network
TERFN	Trans-European Rail Freight Network
TEU	Twenty-foot equivalent unit (measurement for containerized cargo)
TIRS	Transport Infrastructure Regional Study

UNECE	United Nations Economic Commission for Europe
UNMIK	United Nations Interim Administration Mission in Kosovo
ZCG	Železnice Crne Gore, or Montenegrin Railways
ZFBiH	Željeznice Federacije Bosne i Hercegovine, or the railways of the Federation of Bosnia and Herzegovina,
ZRS	Željeznice Republike Srpske, or Republika Srpska railways
ZS	Železnice Srbije, or Serbian Railways
ZTP	Zheleznichko Transportno Preduzchne Beograd, Former Serbian Railways

TABLE OF CONTENTS

Abbreviations and Acronyms	iii
List of Figures	vi
List of Tables	vii
Acknowledgments	viii
Executive Summary	9
The Challenge	9
The Reform Process	11
Introduction & Background	13
Purpose of the Study	13
Changing Transport Demand	14
Institutional Context for the Railway Sector	16
‘Core Railway Network’ in South East Europe.....	17
Macroeconomic Context	19
The Railways of the Western Balkans Region	22
Albanian Railways (HSH).....	22
The Railways of Bosnia & Herzegovina (ZFBiH and ZRS)	25
Croatian Railways (HZ)	29
UNMIK Railways, Kosovo	31
Macedonian Railways (MZ).....	34
Montenegrin Railways (ZCG).....	37
Serbian Railways (ZS, formerly ZTP).....	40
Analysis of Key Issues And Performance of the Western Balkans Railways	45
Railway Traffic	45
Financial Performance.....	52
Operational Performance.....	55
Institutional and Organization Structure.....	61
Reform Options	64
Reform of Railway Infrastructure	65
Reform of Railway Operators	66
Reform of Government Support for Railway	72
Reform of Regional Relationships	73
Reform Recommendations for Each Railway	74
References	78
Annex A – The Institutional Context For the Railway Sector	86
The <i>Acquis Communautaire</i>	86
The Early European Union Legislation 1990-2001.....	86
The EU White paper: European Transport Policy for 2010: Time to Decide.....	89
The ECMT <i>Acquis</i>	95
Annex B – The Defined ‘Core Network’ and Planned Extensions	99
Background	99
The Genesis of the Core Network	102
Annex C—Rail Infrastructure Access Pricing	107

LIST OF FIGURES

Figure 1 Passenger and Freight Traffic of Western Balkans Railways	15
Figure 2 Fiscal deficit in the Western Balkans countries 2000-2007 (% of GDP)	20
Figure 3 Traffic Carried by Albanian Railways (Million Traffic Units)	22
Figure 4 The Railway Network of Albania.....	24
Figure 5 Traffic Units carried on Bosnia and Herzegovina Railways (1990-2004).....	26
Figure 6 The Railway Network of Bosnia and Herzegovina.....	27
Figure 7 Traffic Carried by Croatian Railways 1990 – 2004 (Million Traffic Units).....	29
Figure 8 The Railway Network of Croatia	30
Figure 9 Rail Network of Kosovo (shown within Serbia).....	32
Figure 10 Macedonian Railways Traffic Carried 1990-2004 (Million Traffic Units).....	35
Figure 11 The Railway Network of Macedonia	36
Figure 12 Montenegrin Railways Traffic Units Carried 1990-2004 (Million Traffic Units).....	38
Figure 13 The Railway Network of Serbia and Montenegro	39
Figure 14 Serbian Railways Traffic Units Carried 1990-2004 (Million Traffic Units)	41
Figure 15 The Railway Network of Serbia	43
Figure 16 Share of passenger and freight traffic for Western Balkans Railways (Traffic Unit-km, Train-km)	45
Figure 17 Passenger traffic for Western Balkans Railways 1990-2004 (Million passenger-km)	46
Figure 18 Freight traffic for Western Balkans Railways 1990-2004 (Million Ton-km)	48
Figure 19 Average Length of Haul for Freight for Western Balkans Railways and Comparators in 2004 (Km).....	50
Figure 20 Railway Subsidy as a Share of Government Expenditure	53
Figure 21 Railway Subsidy per Passenger-km in Purchasing Power Parity Terms (2003 unless indicated)	54
Figure 22 Traffic Units Per Track-km for Western Balkans railways and Benchmark railways (2003/4)	56
Figure 23 Locomotive-km per Mainline Locomotive for Western Balkans Railways and Benchmarks (2004)	58
Figure 24 Wagon-km per wagon for Western Balkan and benchmark railways (2004).....	59
Figure 25 Labor productivity indices for Western Balkans and benchmark railways (2003 unless indicated)	60

LIST OF TABLES

Table 1 A comparison of the context and performance of EU railways and SEE Railways (2002)	14
Table 2 Western Balkans Countries – Actual and Projected Real GDP Growth 2002-2006 (%)	20
Table 3 Network size and length of electrified line for ZFBiH and ZRS (YEAR).....	28
Table 4 UNMIK Railway Lines in Kosovo	33
Table 5 UNMIK Railways Rolling Stock – age, productivity and fleet size	34
Table 6 Average loadings and average trip lengths (kms) by railway (2003 unless indicated otherwise) ...	47
Table 7 Freight volume (Ton-km), Average Haul (km) and Traffic Type for Western Balkans Railways (2004 unless otherwise indicated)	49
Table 8 Annual Income Statement for the Railways of the Western Balkans Region.....	52
Table 10 Western Balkans Composition and Condition of Railway Infrastructure (2004).....	55
Table 11 Locomotive fleet description for Western Balkans railways (2004)	57
Table 12 Labor size and productivity indices for Western Balkans railways (2003 unless indicated)	60
Table 13 Institutional Status of the Western Balkans Railways (2004)	62
Table 14 Organizational Status of Western Balkans railways 2004	63
Table 15 Recommended Reforms	74

ACKNOWLEDGMENTS

This paper was prepared by Martin Humphreys (Senior Transport Economist) and Martha B. Lawrence (Senior Transport Specialist), Task Team Leaders, Gerald Ollivier (Transport Specialist, ECSIE), Cordula Rastogi (Extended Term Consultant), Julia Tomova (Junior Professional Associate), and Julie Morel (Short Term Consultant) from the Infrastructure Department (ECSIE) within the Europe and Central Asia Region of the World Bank.

Thanks are also given to Motoo Konishi (Sector Manager, Transport, ECSIE), together with Peer Reviewers, Paul Amos (Transport Advisor, TUDTR), and Lou S. Thompson (Consultant, former Railways Advisor) and for their helpful and substantive contributions to the draft of this paper. Useful comments were also provided by Ardo Hansson (Lead Economist, ECSPE) and Mathew Verghis (Senior Economist, ECSPE).

The team would also like to gratefully acknowledge the formal and informal contributions representatives of the respective Governments and Railways of the Western Balkans, who assisted during the course of the study.