

European Commission

**Regional Balkans
Infrastructure Study -
Transport**

Appendix 13 - Final Report

Railway Study

July 2003

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Table of Contents

1	Albanian Railways (Hekurudhat Shqiptare – HSH)	3
1.1	Introduction	3
1.2	Railway market	3
1.3	Financial situation	8
2	Bosnian Railways (BiH ZFBiH and BiH ZRS - BHZJK)	10
2.1	Introduction	10
2.2	Railway market	10
2.3	Financial situation	15
3	Croatian Railways (Hrvatske Zeljeznice – HZ)	19
3.1	Introduction	19
3.2	Railway market	19
3.3	Financial situation	23
4	Macedonian Railways (Makedonski Zeljeznice – MZ)	31
4.1	Introduction	31
4.2	Railway market	31
4.3	Financial situation	34
5	Unmik Railways (Kosovo)	38
5.1	Introduction	38
5.2	Railway market	39
5.3	Financial situation	40
6	Serbian Railways (Railway Transport Enterprise – RTE Belgrade)	43
6.1	Introduction	43
6.2	Railway market	43
6.3	Financial situation	48

7	Montenegro Railways (Zeljeznica Crne Gore – ZCG)	54
7.1	Introduction	54
7.2	Railway market	54
7.3	Financial situation	59

1 Albanian Railways (Hekurudhat Shqiptare – HSH)

1.1 Introduction

The length of the Albanian railway network, which is not electrified, is 447 km of main lines. In 2002, the staff amounted to 2,280.

The mines operated in the North of Albania (copper, chrome ore, petro-coke, oil, gravel/stone, cement, fertilisers, steel, coal, etc.) are the major clients of the Railways. The economy is also based on agriculture, which constitutes more than 50% of the total output (wheat, corn, meat) and energy.

The Port of Durres has the potential of becoming an international port - the export accounted for 150,000 tons in 2001 (1/10 of 1988) and the import was in the range of 1,800,000 tons (x 2 of 1988).

The railway line connecting Albania with Montenegro at the Habi-i-Hotit border, which was destroyed in 1997, has been reopened in February 2003. The HSH has now been connected to the international railway network again. There is a market for rail passenger traffic, as 60% of the population is concentrated along the railway corridors. The HSH has some growth potential and studies have been carried out recently for a high speed passenger rail link on the stretch Tirana-Durres and for a new ferry terminal at Durres.

However, some uncertainties still remain about the institutional strengthening, the development of the legal framework and the growth of the economy in Albania and it will take time before the country is fully opened towards the international society. At the same time, the financial situation of HSH is very bad.

1.2 Railway market

1.2.1 Passenger service

In 2001, 2,676 million passengers were transported by train (+ 48 %/year 1997 but -77%/1990) and 138.2 million passenger-kilometres were registered (+46%/year 1997 and - 82%/1990).

In 1990, 11.9 million passengers were carried by the HSH (779.2 million pkm) with an average travel distance of 65 kilometres. In 1997, 1.8 million passengers were carried by train (94.7 million pkm) over a 50 km distance on average.

The peak periods for passenger rail transport are in July and August (23% of the yearly traffic).

In 1997, most of the passenger traffic was registered on the following sections:

Durres – Pogradec (35%)
Durres-Vore (23.5%)
Durres-Tirana (22%)
Durres-Ballsh (19%)

In 2001, the main stations of the HSH, according to the number of tickets sold, were Durres (35%), Tirana (22%), Elbasan (17%) and Fier (15%).

The speed of the passenger trains, which is 40 km/h, is not very high and comfort and services are poor.

Pricing policy and competition

The HSH is not free to set tariff without prior approval by the state. The commercial activities of the railway are separated from the operation, but there is no business unit dedicated particularly to passenger/freight transport.

The passenger rail transport in Albania accounts for about 1% of the total transport (in million passengers) whereas the road transport accounts for almost 99% (air transport not significant yet).

The main competition comes from bus transport, especially minibuses. Fares are much higher for bus transport compared to transport by train, but offers more comfortable, more flexible and faster services. Minibuses can carry about 8-10 passengers and depart when they are full.

On the Tirana-Durres stretch (40 km), a train ticket costs 0.36 EUR, which is half of the fare of the trip by minibus. On the Tirana-Pogradec stretch (140 km), a train ticket costs 1.75 EUR and 4.30 EUR by minibus and on the Tirana-Shkoder stretch (120 km), the train costs 0.9 EUR compared to 2.15 EUR for minibus.

Bus service with large buses is not very common, but then slightly cheaper than minibuses. For the Tirana-Berat stretch (120 km), a minibus ticket costs 2.15 EUR whereas the large bus fare is 1.78 EUR (no rail connection).

Future development

The passenger traffic is assumed to reach about 5.5 million people in year 2005 (that is almost twice the passenger traffic of 2001), but the development of

passenger traffic will depend on the improvement of the railway services and the standard of living.

The HSH supports the completion of the link to Kicevo in FYRO Macedonia on the Corridor VIII. The Transport Institute in Tirana is finalising the study for the construction of the 2.8 km rail section in Albania up to the border and it is assumed that FYRO Macedonia will construct the 64 km track on its own territory.

1.2.2 Freight service

0.259 million tons of freight were carried in 2001 (-50% in tons compared to the mid 90's) and 19 million tonne-kilometres (-16.3 % /year 1997 and - 26.7%/year 2000).

The average tonnage hauled by the HSH by the end of the 80's was 8.0 million tons and 640 million tkm, which plummeted to only 0.5 million tons in the mid 90's due to low mining activities, changes in the cargo structure, the embargo on Serbia and the liberalisation of the transport market. 22.7 million tkm were transported in 1997.

The average haulage distance is 73 km for freight trains with a speed of 25km/h.

The rail traffic to and from the port of Durres was 60,000 tons in 1996.

In 1997, the main freight traffic flows were registered on the following stretches (in % of tonne-km):

Pogradec-Elbasan-Durres	(46%)
Durres-Vlore	(25%)
Ballsh-Durres	(25%)
Durres-Tirana	(5%)

In 2001, the largest freight stations were Durres (42% of the total traffic in tons), Ballsh (38%), Elbasan (9.6%), Laç (9.3%) and Tirana (1.5%).

The main commodities hauled are (2001, '000 tons):

Clinker	65.4	(25%)
Coal (Ballsh)	52.9	(20.5%)
Fuel	44.5	(17%)
Chrome	26.3	(10%)
Iron ore	16.9	(6.5%)
Coal (import)	16.0	(6%)
Ferro chrome	11.0	(4%)
Building materials	4.1	(1.6%)
Phosphates	3.3	(1.2%)

Tariffs and competition

Freight tariffs are based on distance, type of cargo and load in wagons. Their level is fixed and controlled by the Government.

Freight rail transport accounts for no more than 1% (in tons) of the total freight transport in Albania and road has the lion's share (98%).

Future development

Rail freight transport is expected to reach about 1.4 million tons by 2005 which is more than 5 times the traffic registered in 2001.

The following markets are considered to be the most promising ones for the HSH:

- copper transport from the mines in North Albania hauled by truck to Mjeda then by rail to a copper smelter in Lac and then to a copper plant in Rubik. The blister copper is then transported to the port of Durres
- chrome ore transport from the Mjeda, Milot, Lac and Pogradec stations to Durres
- petro Coke and oil from Ballsh, of which most is transported by rail
- gravel and stone from Peqin (mostly transported by rail)
- cement from plants in Fush Kruje and Elbasan (bags and bulk), mostly hauled by road as distances are short and HSH wagons are obsolete. The potential of transport by rail is estimated at 50,000 tons per year
- fertilisers from a plant in Lac (100-150,000 tons per year), on both import/export and through Durres by rail.
- steel (mostly scrap) ofr which only little is currently carried by rail
- coal of which rail transport is likely to double in the future
- transport from or to the port of Durres. The development of Corridor VIII (Italy-Durres-FYRO Macedonia-Bulgaria) should increase the rail transit through Durres, together with the reconstruction of a track between Durres and Tirana, provided, however, that the rail link to FYRO Macedonia be established. The construction of a container terminal is expected at the port of Durres, which should contribute to increase rail freight traffic

The reopening of the Shkoder-Hani I Hotit rail line to Montenegro could also contribute to increase the rail traffic.

Quality of the rail freight service

3 freight clients have been interviewed, using a detailed questionnaire:

Darfo (coal, Tirana)
Kurum (iron, steel, Elbasan)
Armo (fuel, Fier)

All are manufacturers They operate a few wagons per day (less than 10 and even under 3 for one of them) and between 10-25 trucks daily. 2 companies have their own fleet of trucks. 2 clients haul more than 200 tons per day by road on the busiest routes.

Road transport is used on short distances (50-100 km) and usually on routes where rail transport is not operated.

The main commodities hauled by train are coke and coal, chrome and oil, etc. The main rail stations used are Fier, Lushnje, Durres, Tirana, Elbasan, Pogradec, Shkoder, Laç and Ballsh.

For all clients the most important issues to be addressed with respect to freight transport are the security of the cargo, then speed (for 2 clients), door to door delivery, delivery as scheduled, cost of transport and simple documentation.

The clients interviewed were not satisfied with the extended travel time of transport by rail (for 2 clients) and lack of information on the shipment (2). They required between 10 to 50% additional discount to turn more freight to rail, though they already benefit from an average 25-30% discount on rail tariff.

They required a better scheduling of the transport, the possibility of modifying the schedule of transport, door to door delivery and a 24 h advance delivery notice.

All clients considered that the main drawbacks of rail transport are the disposal of empty wagons in bad condition (dirty or damaged), the non observance of schedule for the provision of empty wagons and the damage caused to the cargo during loading-unloading.

1.3 Financial situation

1.3.1 Income statement, 2000-2001

(in EUR)

	2000	2001
Total revenue	8,298,448	6,635,906
Freight operations	1,581,986	1,181,079
Passenger services	898,257	989,850
Other revenue	2,690,036	1,436,093
State subvention	2,571,429	2,571,429
VAT on sales	556,740	457,455
Total expenses	8,732,876	7,553,491
Staff	2,700,964	2,665,814
Materials	452,421	1,167,043
Energy	1,075,700	992,164
Depreciation	1,514,443	714,286
Other expenses	2,989,348	2,014,184
Profit/loss	-434,428	-917,585

Source: HSH - 1EUR = 140 Lek (01 March 03).

Freight and passenger revenues contribute by about 30% of the total revenue and freight revenues account for between 55% and 65% of the transport activity. Total revenue dropped 20% between 2000 and 2001, though the state contribution, which represents between 32% (in 2000) and 39% (2001) of the total revenue, was unchanged.

The cost of staff accounts for about 30-35 % of the total expenses and energy for about 13 %. The loss more than doubled from 2000 to 2001 as total revenue dropped 20% and expenses only 13%. According to HSH managers, the major part of the operating expenses relates to passenger transport.

No information nor data is available for estimated expected income statements or Balance sheets.

Investment was recently secured for:

- the renewal Tirana-Durres: USD 7.5 million
- the installation of a telecommunication system on Tirana-Durres: USD 0.15 million
- the feasibility study for upgrading of Durres-Pogradec

The current situation of the Albanian railway network is difficult, with damaged locomotives, unsuitable platforms and tracks in bad condition. In 2002 the total investment in railways reached Lek 457 million (3.26 million EUR), most of which was for the Shkoder-Ballsh railway line.

1.3.2 Current indebtedness and sources of finance

Debts to foreign railways amount to 7,190,500 EUR of which:

- Yugoslavian railways: 6,763,480 EUR
- Czech railways: 50,571 EUR
- Romanian railways: 80,428 EUR
- Other: 296,020 EUR

Credits have been provided by:

- a Japanese grant: 1,637,630 EUR
- the World bank: 985,000 EUR
- Italian credit: 2,682,857 EUR

In practice, the Albanian railways are close to bankruptcy with heavy debts and insufficient state subsidies to cover losses.

2 Bosnian Railways (BiH ZFBiH and BiH ZRS - BHZJK)

2.1 Introduction

The railway system in Bosnia and Herzegovina (BiH) consists of two companies, the Railways of Federation of Bosnia and Herzegovina (ZFBiH) in Sarajevo and Republika Srpska Railways (ZRS) in Doboj. At the State level the Bosnia and Herzegovina Railways Public Corporation (BHZJK), established in 1998, is mainly responsible for the harmonisation of the level of railway infrastructure, the application of EU regulations, international traffic and inter Entity traffic.

The total length of the Bosnian Railways network is 1,032 km (59% in BiH ZFBiH), of which 75% is electrified. In 2001, staff amounted to 6,500 (54 % in ZFBiH).

The BiH economy is highly dependent on the wood processing, mining (coal, iron) and metallurgy industry, which outputs are mostly carried by train.

The BiH railway was seriously affected by the war and the traffic was totally stopped until 1995. The railway infrastructure (bridges, telecommunication systems, workshops) and the rolling stock were damaged during the conflict. The industrial plants, which are the Railways' major clients, were, to a great extent, also destroyed during the war. The rehabilitation of the railway is still far from completion and their intricate organisation at the State level (each Entity Railway has a territorial autonomy) slows down the modernisation process.

Transit traffic is insignificant, mainly for cargo between Hungary and Ploce.

2.2 Railway market

2.2.1 Passenger service

About 1.3 million passengers representing 53.4 million passenger-kilometres were carried by BiH railways in 2001 (of which 76% by ZRS) that is 5 times more than in 1997.

Domestic traffic accounts for 90% of the total traffic in RS and 51% in FBiH (all traffic was domestic in 1997). The average distance travelled by train is about 40 km.

For the FBiH, most of the passenger traffic is registered on the 3 following sections:

- Visoko-Zenica
- Zenica-Maglaj and
- Sarajevo-Visoko

The annual traffic between Sarajevo and Maglaj amounts to 8,485 million passengers.

The 2 main stations are Zenica (108,000 passengers) and Sarajevo (24,000 passengers in 2001).

For the ZRS, the main stations are Dobož (495,000 passengers), Banja Luka (125,000 passengers), Prijedor (93,500) and B. Novi/Novi Grad (58,500).

Pricing policy and competition

The ZFBiH must submit its passenger tariff proposal to the Government of the FBiH for final approval. This type of service is subsidised by Government of the FBiH and it is enforced by appropriate laws. The level of subsidy is determined on an annual basis and allocated to the ZFBiH on a monthly basis.

The main competitors of the railways are the bus companies, mostly privately-owned. The rail price levels are competitive to bus companies but other service components such as travel time, frequency and flexibility are more in favour of bus transport, especially for international traffic.

For example, for an international trip Sarajevo-Zagreb (2 rail companies are involved in the BiH, the ZFBiH and the ZRS):

- the roundtrip ticket price by railways is 35 EUR (second-class) and 55 EUR (first-class), though there is not significant difference between the two classes. The same trip costs 40-45 EUR by bus
- there is only 1 pair of trains every day, whilst some 6-8 buses are operating daily along the same stretch
- travel time by train is 11 hours, including a 70 minutes stop at the border. By bus, it takes 9-10 hours, including a 30-60 minutes stop at the border

An agreement has been made between the two BiH railways' companies and the Croatian Railways for the division of the incomes. However, the ZFBiH is not in a favourable position as it cannot operate modern coaches on this section (they are owned by the Croatian Railways or by the ZRS). The situation is the same on the new railway service operated between Sarajevo and Budapest.

Future development

The Bosnian Railways' passenger traffic is forecast to reach 77.5 million passenger-kilometre (pkm) in 2005 (+45 %/2001) and 145.2 million pkm in 2010 (+172.3 %/ 2001). However, these figures are still far below the pre-war traffic (Bosnian Railways transported 1,654 million passengers in 1985 and 1,318 million in 1990).

The ZRS traffic will represent 55% of total traffic in 2005 and the ZFBIH traffic 62% of total traffic in 2010. Domestic traffic constitutes the biggest share of the ZRS traffic (78% both in 2005 and 2010) whereas international traffic will be biggest in the ZFBIH (respectively 62% and 67%).

The increase is mostly due to the introduction of new railway services (re-opening of lines). There is, for instance, no rail connection yet between Sarajevo and Belgrade where 10 buses are operated daily, mostly from Lukavica (Sarajevo suburb, 10 km from downtown). The railway service will also gradually improve and, thus, attract more clients.

2.2.2 Freight service

280.9 M net tonne-kilometre (ntkm) were carried in 2001 by the Bosnian Railways (of which 58% by the ZFBIH).

In the ZFBIH, 60% of the total traffic was domestic, 21% import, 10% export and 9% transit traffic. The main commodities were coal and coke (29% of total tkm at ZFBIH), ores (13%), oil and oil products, wheat, etc, mostly in import or transit (for ores). The average distance of the domestic traffic is short - only 18 km. For international traffic it is 70 km.

In the ZRS (42% of the Bosnian Railways traffic in 2001), 61% was export, 26% transit, 10% import and 3% domestic. Average transport distance for the ZRS is 118 km (2001). The ZRS operates about 10% of total BiH freight volumes as most of the industrial complexes, including the coal based power plants and coal mines, are located within the FBiH. The area around Banja Luka (Tomasica) is rich in iron ore, which is transported to Western Serbia, mainly to the Steel plant located in Smederevo. Bauxite and aluminium ores are hauled to Zvornik Novi. Timber goes to Serbia and clay to Italy.

3,500 containers (mainly 20') were hauled in 2001, which accounts for about 1% of total freight transport in BiH.

Freight trains are operated on a daily basis in the ZFBiH and the main sections for freight transport are:

- Podlugovi-Kakanj (coal transport from mine to the power plant)
- Zenica-Kakanj (coal and metal products)
- Banovići-Tuzla (coal transport from mine to power plant)
- (Ploče) Čapljina-Sarajevo (wheat, petroleum)
- Mostar – (Ploče) (bauxite, aluminium)

The main stations are (2001):

- Banovići (1.05 million tons)
- Ljubače (550,000 tons, flour)
- Lukavac (550,000 tons, coke)
- Kakanj (500,000 tons, coal)

The main commodities hauled by the ZRS are iron ore, bauxite, aluminium ore, clay and timber. The main sections used for freight transport are:

- Banja Luka-Prijedor-Volinja (clay)
- Tomasica-Zvornik-Novii Brasina (iron ore)

and the most important freight stations are:

- Tomasica (275,000 tons)
- Banja Luka (60,000 tons)
- Zvornik Novi (40,000 tons)
- Prijedor (37,000 tons)

The number of tkm of the Bosnian Railways was 50.5 M tkm in 1997 (of which 92% by the ZFBiH). The traffic rose by 450% from 1997 to 2001.

In 1997, 65% of the ZFBiH traffic was domestic, 26% import and 9%, export. In 1997, all traffic was domestic at the ZRS.

Tariffs and competition

Freight tariffs are based on distance, load in wagons and type of wagon. The ZFBiH is free to grant discounts to significant clients. The main competitors of the freight rail transport are trucks - especially within international transport.

Future development

The Bosnian Railways freight traffic is expected to reach 442.2 M tons-kilometre (tkm) in 2005 (+57.4 %/2001) and 646.1 M tkm in 2010 (+130 %/2001).

The ZFBiH traffic will represent 66.5 of the total freight traffic in 2005 and 70% in 2010.

Domestic traffic is expected to make up the major share of the ZFBiH traffic (61 and 56%, respectively, in 2005 and 2010). Import will account for about 25% and export for about 15%. International traffic will be most considerable in the ZFBiH (62% and 67%, respectively). Export will be highest for the ZRS, both in 2005 and 2010 (58% and 74%). Transit will account for 45% in 2005 and 58% in 2010 and import for 9% and 12%, respectively.

The increase is mainly based on the expected growth of the production for some local industries, notably:

- at Kakanj and Tuzla (60% of the total power potential in BiH is based on coal)
- at Ljubače (a giant silo for the production of flour)
- at Bačevići (aluminium plant which will be established and supported by French and German partners)
- at Zenica (steel plant) and
- at Lukavac (coke and chemicals)

Quality of rail freight service

4 freight clients of the Bosnian Railways have been interviewed, using a detailed questionnaire:

- Intersped (Sarajevo)
- SHP Celex (Banja Luka)
- Srpske Sume (Sokolac)
- Iron Mines (Prijeedor)

3 of which are manufacturers and one a freight forwarder. One client operates more than 200 wagons per day, one less than 10 and two others between 10 and 25. 2 clients operate less than 10 trucks per day another 2 between 10 and 25. None of the clients have their own fleet of trucks.

These clients mainly carry metal products, cellulose, wood and iron.

All clients use trucks on routes, which are also served by the railways. The commodities hauled are bulky meaning that, potentially, part of the road market share might be taken over by rail, though the average distance travelled by road is rather short (200-500 km).

The key components of the freight transport for the clients in BiH are as, a priority, security of the freight, speed of delivery, opportunity to pre-plan the date of delivery and cost of transport.

Two clients have stated that they will need a 10% discount on the freight tariff to turn more cargo to rail transport. One client already gets a 50% discount, which makes freight by rail a satisfactory choice. Another client benefits from a 30% discount and requires 30% more to haul more freight by rail.

All clients are satisfied with the security of the cargo during rail transport and with the reliability of delivery time. 3 clients have declared their dissatisfaction with the level of rail transport tariff.

According to 2 of the clients interviewed, the main drawback of rail transport is the disposal of wagons after working hours, which was not stipulated in the contract. Clients ask for additional railway services such as help with filling in documentation forms, scheduling of transport, door to door delivery, notice to consignee 24hours in advance, storage of the cargo at the station and loading/unloading by the railway.

No delay occurs at the border (an average 2-hour waiting time for customs inspection).

2.3 Financial situation

2.3.1 Income statement, 2000-2001

(ZFBIH, 000 EUR)

	2000	2001
Total revenue	24,746	19,330
Operating Revenue	17,922	12,373
<i>Passenger services</i>	238	377
<i>Freight operations</i>	9,641	10,240
<i>Other Revenues</i>	8,043	1,756
State Budget subsidies	6,824	6,957
Total Expenses	64,379	61,709
Cash expenses	18,061	19,443
<i>Staff</i>	14,879	15,350
<i>Energy</i>	2,041	2,410
<i>Materials</i>	958	1,478
<i>Services</i>	183	205
Other operating expenses	12,088	11,070
Depreciation	26,652	24,561
Other expenses	7,578	6,635
Profit/loss	-39,633	-42,379

Source: BHZJK.

(ZRS, 000 EUR)

	2000	2001
Total revenue	19,300	19,124
Operating revenue	3,902	5,930
<i>Passenger services</i>	593	819
<i>Freight operations</i>	2,922	3,966
<i>Other operating revenues</i>	387	1.145
State budget subsidies	15,398	13,194
Total expenses	39,592	38,054
Cash expenses	12,826	13,395
<i>Staff</i>	9,461	9,629

	2000	2001
<i>Energy</i>	1,964	1,881
<i>Materials</i>	1,202	1,556
<i>Other</i>	199	329
Other operating expenses	114	98
Depreciation	26,652	24,561
Profit/loss	- 20,292	- 18,930

Source: BHZJK.

Bosnian Railways passenger and freight revenues were 15.4 million EUR in 2001 (+15%/year 2000) of which 92% came from freight activities. The RS revenue was 31% of the Bosnian Railways passenger and freight revenues in 2001 (and 26% in 2000).

Total operating expenses of the Bosnian Railways were 76 million EUR in 2001 (-4%/year 2000).

RS expenses amounted to 27% of the Bosnian Railways operating expenses.

Staff expenses amounted to 33% of the total operating expenses of the Bosnian Railways in 2001 (+2%/year 2000). RS staff expenses amounted to 38.5% of the Bosnian Railways staff cost (2001).

Energy expenses represent 5.6% of total operating expenses (+7%/year 2000). RS energy expenses account for 44% of the total energy expenses (2001).

Total depreciation was 31.7 million EUR in 2001 (-11.5%/year 2000). RS accounts for 22.5% of that depreciation.

In both entities the revenues only partially cover the cash expenses (a very small percentage in ZRS) and the deficit is financed by state subsidies.

According to the tax law applicable in Republika Srpska, there is a provision to allocate 2% of the total Sales Tax income to the Railway Fund. There is not such a provision in the Federation of BiH, where the level of the government subsidies for the railway is decided on a lump sum basis (for year 2003 it is foreseen to allocate about 15 million KM – Konvertible Mark, for the railways in the FBiH). The two different approaches explain the enormous difference between the levels of subsidies in the 2 entities (almost twice as much in the RS compared to the FBiH). The state subsidies for the railways, which represent 25-35% of the total revenue in the FBiH and 70-80% in the RS, are meant to cover part of the cost of infrastructure, passenger services and some specific freight services (such as combined transport).

Despite of the subsidies, the losses in both entities remain very high and the railway system is almost bankrupt.

No data is available on the expected income statement over the next few years.

2.3.2 Balance sheet

Dec 2000, 2001

In ZFBiH (000 EUR)

	2000	2001
Assets	770,705	738,766
Current assets	13,310	9,071
Fixed assets	757,395	729,695
Liabilities	770,705	738,766
Long term and current liabilities	48,071	46,024
Capital & reserves	722,634	692,742

Source: BHZJK.

The current assets/liabilities ratio decreased from 1.7 to 1.2 between 2000 and 2001 as the value of assets dropped by 32% during that period.

In ZRS (000 EUR)

	2000	2001
Assets	177,608	171,241
Current assets	4,244	6,869
Fixed assets	173,364	164,372
Liabilities	177,608	171,241
Long term and current liabilities	5,992	6,204
Capital & reserves	171,616	165,037

Source: BHZJK.

The current assets/liabilities ratio grew from 2.4 to 4.0 between 2000 and 2001 as the value of assets increased by 62% during that period. The value of assets/liabilities in the ZRS represents about 1/4 of ZFBiH assets.

No data is available on the estimated balance sheet over the coming years.

2.3.3 Existing loans

ZFBiH (000 EUR)

	2000	2001
Short term loans	3,589	2,626
Long term loans	2,336	2,945
Total	5,925	5,571

ZRS (000 EUR)

	2000	2001
Short term loans	128.0	2.5
Long term loans	1,179.0	1,048.0
Total	1,307.0	1,050.5

Total loans for the Bosnian Railways amounted to around 7.2 million EUR in 2000 and around 6.6 million in 2001, the biggest part (about 80%) is dedicated to the ZBiH.

3 Croatian Railways (Hrvatske Željeznice – HZ)

3.1 Introduction

The length of the Croatian railway network is 2,775 km, of which 952 km (34%) are electrified and 1,092 km constitute the core main lines. In 2002, HZ staff amounted to 18,170 (even 21,211 including HZ subsidiaries).

In 2001 some external positive factors were favourable to the development of the transport, particularly the increase of the industrial production (+6%), of import (+14%) and export (+5%). But the depreciation of the national currency, the kuna (HRK), towards the US dollar (-2.4%), an increase in prices of industrial products (+4.9%), in inflation (+5.9%) and in the cost of energy (petroleum: +6.7%) counterbalanced the positive factors.

In 2001, the HZ increased its productivity (+13.4% tonne-kilometre per employee) notably as a consequence of work force's downsizing (-365 employees in 2001 and even -444 for HZ subsidiaries). However, some aspects still hinder HZ's competitiveness, such as the bad condition of both infrastructure and rolling stock, the limited investments (2,930 million HRK from 1992 to 2001 compared to 3,592 million HRK for depreciation) and delays in using loans (the World Bank loans have been used mostly for severance payment).

3.2 Railway market

3.2.1 Passenger service

36.964 million (M) passenger were carried by the HZ in 2001 (+ 5.8%/year 2000, 53% suburban) and 1,240 M passenger-kilometres (-1%/year 2000)

Domestic traffic accounts for 94% of the total traffic (of which suburban constitutes 25%) and international for 6%. Traffic rose by 7% from 1997 (in 1997 almost 97 % of the traffic was domestic, including suburban which was 15%)

60% of the passenger traffic is operated on 6 sections (in 000 pkm, 2001):

Novska-Vinkovci	177,083
Dugo Selo-Novska	153,157
Zagreb-Ogulin	121,390
Zagreb-Dugo Selo	105,478
Koprivnica-Dulo Sego	94,435
Zapresic-Varazdin	90,835

Main stations are Zagreb (2.2 M passengers per year), Savski Marof (0.47 M passengers) and Dugo Selo (0.45 M).

Pricing policy and competition

The Croatian railways must submit their proposal for new transport tariffs to the Ministry of Economy, which then submits the proposal to the parliament for ratification. However, the railways try to adapt its pricing policy in accordance with the competition, especially on the Split, Zadar and Sibenik sections, which are the most travelled destinations on the Adriatic coast.

Road transport is a major competitor to the rail passenger services in Croatia , mainly buses operated by government owned carriers. The bus operation is more flexible, as services can be added or cancelled quickly according to their profitability. Rail is tied by time schedules valid over half a year, at least. The recent construction of motorways throughout the country has also harmed the rail transport

Air transport is only seen as a competitor to rail to Split and Zadar (for both travel time and tariff).

The pricing policy for rail passenger transport is in line with the level of bus transport. The ticket price, 2nd class, one way, by fast train is 10% more expensive than taking the bus on the stretch Zagreb-Split (423km) but 18% cheaper on the stretch Zagreb-Vinkovci (256 km). On congested roads (to Split, for example) the train is faster and more comfortable. Tolls to use motorways are increasing, making rail more competitive.

International agreements have been signed with neighbouring networks to enhance rail competitiveness. Between Croatia and Slovenia or Serbia, a 20% to 30% reduction on railway fares is granted to compete with bus services. For some specific stretches between Croatia and Hungary prices can be cut down by 65-70%. The Croatian railways have opened offices in Budapest, Munich, Vienna, and Belgrade to provide information (and even sell tickets in their Vienna office).

Future development

The HZ passenger traffic is forecasted to reach 1,376 M passenger-kilometre (pkm) in 2004 (+11%/2001) and 1,403 M pkm in 2007 (+13%/ 2001), the increase is mostly due to domestic long distance (+17% 2002-2007) and international transport (+16%).

The Croatian Railways will introduce tilting trains from Zagreb to Split and Rijeka and purchase new EMUs (electrical multiple unit) for suburban

transport. The rolling stock is more than 25 years old and half of the suburban traffic is carried in old coaches.

The HZ plan to buy 38 air conditioned new coaches, 10 sleeping cars and a first set of 8 diesel tilting trains, manufactured by Bombardier, to be operated as double train sets from June 2004 on the Zagreb-Split stretch, thus, cutting travel time down to 5 hours. The electrification of Zagreb-Split in 2007 will force the HZ to buy new electric tilting trains to serve this section.

The feasibility study of the purchase of new suburban trains has been made and the new equipment is expected to be bought soon. Special summer tourist trains should be launched shortly, in agreement with other railways and promoted by tourist agencies, from Slovakia to Split, Budapest to Rijeka, Prague and Warsaw to Split.

3.2.2 Freight service

11.96 million (M) tons were carried in 2001 (+8.2%/year 2000, of which 77% international) and 2,429 M net tonne-kilometre (ntkm) (+16.6%/year 2000, 73% international).

The number of tkm rose by 20% from 1997 to 2001, with a drop in the share of import (from 28% to 19.6%).

Main commodities hauled are (in million ntkm, 2001):

Metal and metal products	312 (13% of total ntkm)
Wood and wood products	256 (10%)
Oil and oil products	244 (10%)
Fertilizers	208 (8%)

In 1997, the main commodities hauled were oil, metal, fertilisers and chemical products over an average distance of 154 km. At present, almost all traffic (92%) is made in full trainloads, with an average distance of 203 km.

Container transport is still limited (25 M tkm in 2001, 1% of total traffic). The main container yards are located in Zagreb Vrapce, Osijek, Split and Rijeka Brajdica.

About 200 freight trains are operated on a daily basis. About 55% of which are international. For international traffic, bottlenecks may occur at the border due to customs inspections, changing of locomotives etc.

Freight traffic is mainly operated on the following sections (2001):

Botovo-Zagreb-Rijeka (Corridor Vb): 829 M ntkm (+14%/year 2000, +27%/year 1999), 34% of total

Savski Marof-Zagreb-Tovarnik (Corridor X) : 463 M ntkm (+23%/year 2000, +46%/1999), 19% total

Main railways stations on both these axis are Botovo, Zagreb Zitnjak, Rijeka port, Rijeka Brajdica, Bakar, Kutina.

Tariffs and competition

The freight tariff is based on distance, load in wagons (10, 15, 20 and 25 tons) and category of wagons.

The main competitors to freight rail transport are domestic and foreign big volume articulated trucks operating on the east-west Corridor routes connecting with the European Union. Railway remains competitive with respect to mass transport hauled over long distances. The HZ Cargo department also provides shipping and customs facilities.

Future development

The HZ expect to reach 2,500 M tkm in 2004 (+11%/2001) and 2,920 M tkm in 2007 (+30%/ 2001), mainly due to an increase in transit.

The Croatian Railways will try to concentrate on mass transport on long distances and seek niches such as transport of hazardous cargo and containers.

The main European operators and forwarders are waiting for the opening of the rail infrastructure in the Balkan countries. This may make the situation more difficult for the domestic rail operators, who will be forced to improve their services with better equipment, competitiveness in pricing policies and time and partner associations.

Quality of rail freight service

4 freight clients of the Croatian railways have been interviewed, using a detailed questionnaire:

- Trast Company (Split)
- Zagrebsped (Zagreb)
- Transadria (Rijeka)
- Agit (Zagreb)

They are all freight forwarders, operating from 10 to 50-100 wagons and from 10 to more than 100 trucks per day. 2 companies use their own fleet of trucks.

3 clients have declared their dissatisfaction with prices, which is considered to be too high by 20-30 % though they already benefit from a 15-25% discount.

2 clients regret that transport time by rail is too long and would expect a door to door delivery.

The main drawbacks of rail transport are the disposal of wagons in bad condition (dirty, etc.), non-observance of schedule for the provision of empty wagons and freight security (loss of freight).

Some delay at the borders may occur (24 hours), specifically with Bosnia and Herzegovina, but this is also the case for road transport.

3.3 Financial situation

3.3.1 Income statement

Income statement, 2000-2001

(million EUR)

	2000			2001		
	HZ	Transport	Infra-structure	HZ	Transport	Infra-structure
Total revenue	338.46	200.48	137.98	344.53	203.61	140.92
Operating Revenue	183.73	160.09	23.65	189.81	161.43	28.38
Passenger services	71.41	71.41	-	64.75	64.75	-
Freight operations	58.05	58.05	-	64.00	64.00	-
Other operating Revenues	54.27	30.63	23.65	61.06	32.68	28.38
State Budget subsidies	144.80	34.18	110.62	124.81	20.60	104.21
Exchange gains	9.49	5.76	3.73	29.23	20.89	8.34
Non core business	0.43	0.43	-	0.69	0.69	-
Total Expenses	390.18	223.82	166.36	425.30	248.14	177.16
Total Cash expenses	305.10	178.13	126.97	330.66	194.34	136.32
Staff	169.71	87.26	82.45	182.12	94.05	88.07
Energy	27.82	24.67	3.15	30.93	27.00	3.93
Material expenses	44.09	22.52	21.57	47.27	23.19	24.07
Services	31.74	24.35	7.39	29.74	22.18	7.56
Other expenses	31.74	19.33	12.41	40.61	27.92	12.70
Total Operating expenses	361.60	206.11	155.51	398.23	231.28	166.95
Exchange losses	12.49	9.05	3.44	25.69	19.19	6.50
Depreciation	41.18	16.07	25.10	41.57	17.45	24.13
Losses from subsidiaries	2.83	2.83	-	0.31	0.31	-
Financial expenses	13.15	8.50	4.65	16.14	10.35	5.79
Severance payment	15.43	9.22	6.21	10.93	6.50	4.43
Profit/loss	-51.73	-23.34	-28.38	-80.77	-44.53	-36.24

(million Kuna - 1 Ku: 0,13122 EUR /average currency in 2000)

(million Kuna - 1 Ku: 0,13493 EUR /average currency in 2001)

Source: HZ annual report 2001.

The operating ratio, which was 166% in 2000 decreased to 174% in 2001 due to a decrease in the passenger/freight revenue and an increase in staff, energy and material expenses.

Revenue

The total HZ revenue was 344.5 million EUR in 2001. The revenue dropped 1% from 2000 to 2001, the share of transport revenue remaining constant (59%).

In 2001, the revenue from traffic services was 128.8 million EUR (37% of total).

The passenger revenue (without Public Service Obligations - PSO - revenue) was 35.47 million EUR (35.7% of total, +11.6%/2000 due to a decrease in special fares and an increase of 10% in prices). 89.5% of the total revenues came from domestic traffic (of which only 17% from suburban).

The freight revenue was 64.0 million EUR (64.3% of total revenue, +7.2%/2000), out of which 79.4% came from international traffic. The revenue from domestic transport was increased by 3.6%/2000 and from international traffic by 8.2% .

The State provided a revenue of 151.95 million EUR (45.3% of total revenue - 20.5%/2000) split up into:

- State budget: 124.8 million EUR: 62% for infrastructure maintenance (-16%/2000) and 22% for debt service
- Public Service Obligations (PSO): 28.5 million EUR (-29.7%/2000)

Expenses

Total expenses were 425.3 million EUR in 2001 (+6%/2000, the share of transport expenses remaining constant at 58%).

Operating expenses represented 398.23 million EUR of which:

- Material expenses: 107.93 million EUR (25 % of total expenses, +1.3%) of which energy: 28.6% (+8%/2000)
- Labour costs: 182.115 million EUR (42.8% of total expenses, +4.4%/2000)
- Depreciation: 41.57 million EUR (9.8% of total, -1.8%/2000)
- Other (exchange losses, etc.): 29.55 million EUR

The business deficit increased by 52% compared with 2000 (- 80.77 million EUR) and debt by + 28.4% (to increase liquidity and investment).

Estimated income statement, 2002-2006

(million EUR)

	2002	2003	2004	2005	2006
Total revenue	429.55	460.40	486.17	489.65	546.46
Operating revenue	223.49	229.97	236.43	242.72	252.17
Passenger	105.50	106.32	111.84	114.27	116.82
Freight	71.67	73.87	79.17	82.58	85.45
Other	46.31	49.78	45.43	45.86	49.89
State subsidies	198.65	223.11	242.69	239.90	287.26
Other revenue	7.42	7.32	7.04	7.03	7.03
Total expenses	419.96	435.11	447.05	452.77	443.57
Cash expenses	330.59	312.94	311.36	304.53	297.10
Staff	183.50	162.17	151.24	140.37	129.56
Energy	30.41	31.01	32.76	33.40	33.89
Material	39.17	39.94	42.20	43.01	43.66
Other	77.50	79.82	85.16	87.75	89.99
Operating expenses	380.15	369.42	371.64	368.21	363.99
Other	39.82	65.69	75.41	84.56	79.58
Profit/Loss	+9.59	+25.29	+39.12	+36.88	+102.89
Operating ratio (excl. subsidies)	148%	136%	132%	125%	118%
Operating ratio (with subsidies)	78%	69%	65%	63%	55%

1 Ku: 0.13996 EUR /Average currency in 2002)

1 Ku: 0.13812 EUR /21 May currency in 2003-2006)

Source: HZ business plan 2002-2006.

The revenue from passenger traffic comprises a 66.3 million EUR Public Service Obligation revenue per year (cost of unprofitable lines). It is estimated that the passenger revenue will increase by an average annual rate of 2.4% between 2002 and 2006 (due to an increase in traffic, to higher revenue from the City of Zagreb for commuter traffic and to an increase in tariff).

The revenue from freight traffic is forecasted to increase by an average of 4% per year due to the development of the rail freight transport.

The state subsidies, which should reach an average of 235 million EUR per year, will finance the rail infrastructure, repayment of loan principal and interest and severance payments.

The working ratio improves as both passenger and freight revenue increase and staff costs are reduced (number of employees should drop from 18,170 in 2002 to 12,781 in 2006).

3.3.2 Balance sheet

Balance sheet, Dec 2000, 2001

(Million EUR)

	2000			2001		
	HZ	Transport	Infra-structure	HZ	Transport	Infra-structure
Assets						
Current assets	168.62	126.76	41.86	137.76	119.82	17.95
Fixed assets	849.39	240.13	609.25	891.89	261.49	630.39
Financial investments						
Total assets	1086.50	435.39	651.11	1100.76	452.42	648.34
Liabilities						
Current liabilities	137.52	109.04	28.47	140.73	111.99	28.74
Long term debt	229.37	153.40	76.11	291.31	209.14	82.17
Other long term liabilities	46.58	19.81	26.64	57.88	24.96	32.92
Capital & reserves	673.03	153.13	519.89	610.83	106.32	504.50
Total liabilities and equity	1086.50	435.39	651.11	1100.76	452.42	648.34

1 Ku: 0,13122 EUR /average currency in 2000)

1 Ku: 0,13493 EUR /average currency in 2001)

Source : HZ annual report 2001.

Current assets/ liability	1.2	1.2	1.5	1	1.1	0.6
Indebtedness (LT debt/Capital)	34%	100%	15%	48%	196%	16%

The current liabilities remained at the same level in 2000 and 2001 but the value of assets dropped 20%. Long term indebtedness increased while total equity decreased.

Estimated balance sheet, 2002-2006

(million EUR)

	2002	2003	2004	2005	2006
Assets					
Current assets	107.63	106.63	96.96	85.08	81.49
Fixed assets	1213.31	1512.28	1733.13	1908.40	2106.88
Financial investments	67.60	66.71	66.71	66.71	66.71
Total assets	1388.54	1685.62	1896.80	2060.20	2255.09
Liabilities					
Current liabilities	83.84	71.27	73.48	73.76	72.10
Long term debt	504.42	741.15	865.32	962.83	1031.89
Other long term liabilities	134.36	190.74	236.46	265.19	289.78
Capital & reserves	665.93	682.45	721.54	758.42	861.32
Total liabilities and equity	1388.54	1685.62	1896.80	2060.20	2255.09

1 Ku: 0.13996 EUR /Average currency in 2002)

1 Ku: 0.13812 EUR /21 May currency in 2003)

Source: HZ business plan 2002-2006.

Current assets/ liability	1.3	1.5	1.3	1.2	1.1
Indebtedness (LT debt/Capital)	76%	109%	120%	127%	120%

The current assets are expected to decrease throughout the period together with liability implying that the ratio remains at 1.2. Indebtedness ratio is expected to increase as long term debt increases at a higher speed than capital and reserves.

3.3.3 Investment

Investment, 1999-2001

(Million EUR)

	1999	2000	2001
Infrastructure	24.61	18.33	22.94
Civil structures	18.32	12.70	16.74
Power supply, signalling/telecom	2.70	4.87	3.89
Traffic operation	-	0.72	0.45
Information systems	0.01	-	1.54
Other	3.59	0.04	0.32
Transport	23.87	12.69	33.83
Rolling stock	22.51	12.20	29.85
Combined transport		0.07	0.35
Buildings	1.32	0.41	3.62
Other	0.04	0.01	0.01
Total	48.48	31.02	56.77

1 Ku: 0.13086 EUR /average currency in 1999)

1 Ku: 0,13122 EUR /average currency in 2000)

1 Ku: 0,13493 EUR /average currency in 2001)

Source: HZ annual report 2001.

The total investments amounted to 56.77 million EUR in 2001 (+78%/2000). Investments in transport were 60% of total in 2001 (+160%/2000) of which 88% was for rolling stock. The investments in infrastructure increased by 22% in 2001, 73% of which was for civil engineering, power supply and signalling.

Investment and financing, 2002-2006

(Million EUR)

	2002	2003	2004	2005	2006	Total
Infrastructure	201.39	206.68	188.60	169.36	181.89	945.28
Cash flow	6.09	19.06	33.96	21.88	23.91	104.82
State budget	26.03	17.27	17.27	13.81	13.81	87.84
Existing loans	58.67	21.64	9.72	3.31	-	92.58
New loans	74.47	117.75	104.46	114.10	121.55	531.35
Counterpart funds for IFI projects	36.12	30.97	23.19	16.26	22.62	128.69
Transport	118.57	158.45	86.34	63.38	77.20	502.43
Cash flow	4.11	-	10.14	9.59	-	23.78
State budget	0.98	0.97	0.97	0.97	0.97	4.83
Existing loans	34.18	21.88	-	-	-	55.61
New loans	68.36	133.42	75.28	52.83	76.23	405.22
Counterpart funds for IFI projects	10.94	2.18	-	-	-	12.98
Total	319.96	365.13	274.94	232.75	259.09	1447.70

(1 Ku: 0.13996 EUR /average currency in 2002)

(1 Ku: 0.13812 EUR /21 May currenty in 2003)

Source: HZ business plan 2002-2006.

The total investments will grow 4.5 times between 2002 and 2006 (in value), of which the infrastructure share is 65%. Cash flow will hardly cover more than 9% of the total amount and the Croatian Railways mostly rely on new loans to meet new investments (up to 65%).

3.3.4 Loans

IBDR loan "4433-HR"

This loan agreement was signed in January 1999 with a closing date of 30 June 2003.

Total amount: 85.4 million EUR out of which:

- Infrastructure: 17.7 million EUR
- Rolling Stock: 27.0 million EUR
- Environmental Protection: 1.3 million EUR
- Labour Restructuring: 28.2 million EUR
- Technical Assistance: 2.5 million EUR
- Unallocated/Contingencies: 7.7 million EUR

EBRD loan "733"

Signed in December 1998, closing date: 30 August 2003
Total Amount: 35.0 million USD (100% for rolling stock)

EIB loan "2001/987"

Loan Agreement signed in May 2001
Closing date: not clearly defined, end 2005
Total Amount: 40 million EUR (100% for infrastructure)

4 Macedonian Railways (Makedonski Zeljeznice – MZ)

4.1 Introduction

The length of the FYRO Macedonian railway network is 699 km, of which 233 km are electrified (33%). In 2001 the staff amounted 3,986 (- 4% /2000).

The dissolution of FR Yugoslavia in 1991 deprived FYRO Macedonia of its protected markets then the blockade imposed by Greece in February 1994 stopped the north-south transport flows. The traffic resumed in 1997 until the war burst out in Kosovo (1999). Internal conflicts in FYRO Macedonia slowed down the economic activity in 2001 leading to a decline in transport activities. The FYRO Macedonian economy, which relies on external sources for energy (oil, gas) and modern machinery, will recover if the country is able to develop trade with its neighbours (Serbia and Montenegro and Greece) and attract investments.

The main industries in FYRO Macedonia consist of coal, lead, zinc, ferronickel, wood products, agriculture (rice, wheat). Exports are foodstuff, iron, steel and imports are machinery and equipment, chemicals, etc.

Rail is the major carrier of most of these industries, but the MZ suffer from obsolete assets, low traffic volumes, scarce funds for infrastructure maintenance and rehabilitation, high loan indebtedness and a non profitable passenger activity.

4.2 Railway market

4.2.1 Passenger service

1.343 million passengers were carried in 2001 (-28.6%/2000) and 133.1 million passenger-kilometres – pkm (-24.3%/2000).

The passenger traffic dropped 62% from 1990 (before the dissolution of FR Yugoslavia, the MZ transported almost 400 million pkm).

International traffic plummeted from 177 million passenger-km in 1990 to one million in 1999 and, at present, domestic traffic represents 99% of total

transported passengers (though domestic and international traffic were balanced in 1990).

75% of the passenger traffic is operated on 3 sections (number of passenger, 2001):

- Skopje-Tabanovci: 393,452 (Corridor X)
- Skopje-Veles: 364,614 (Corridor X)
- Veles-Bitola : 256,376 (Corridor Xd)

The main railway stations are Skopje (330,904 passengers per year), Veles (309,096) and Prilep (119,823).

In 1994 railway prices were placed under governmental control with a 30% increase on rail tariffs in 1995.

The MZ own 140 units of which 63 are operated (20 are motorised units).

The rail passenger traffic is assumed to reach 1.640 million in 2005 (+22% /2001).

4.2.2 Freight service

2.799 thousand tons were carried in 2001 (- 13.3%/year 2000) and 461.5 million net tonne-kilometres (- 12.5%/year 2000, 97.6% being international)

Traffic in tonne-kilometres dropped - 40% from 1990 to 2001. Before the dissolution of FR Yugoslavia, the MZ carried up to 900 million tkm. The average haulage distance is 165 km.

Almost 70% of the international rail freight traffic is export, 20% is import and 10% transit.

More than 30% of the cargo hauled by the MZ consists of products from metallurgy, mainly in Skopje and Kumanovo stations. The other commodities carried are petrol, minerals and coal.

27 freight trains are daily hauled, about 16 of them being international.

Freight traffic is mainly operated on the following sections, all located on Corridor X (in tons, 2001):

- Skopje-Tabavnoci: 1,219,671
- Veles-Gevgelija: 333,558
- Skopje-Veles: 215,911

The main freight stations on these sections are Miladinovci (673,291 tons in 2001), Jelezara South (400,411), Veles (176,580) and Egropolci (144,935).

The MZ own 2,500 wagons, of which 900 wagons are operated (60% are open wagons). The fleet is old (average age is 28 years).

The freight traffic is assumed to reach 3,485,000 tons in 2004 (+24.5%/2001).

Quality of rail freight service

4 freight clients of the Macedonian Railways have been interviewed, using a detailed questionnaire:

- Fersped (Skopje)
- Ohis (Skopje)
- Semlorp (Radovis)
- Makopsed (Skopje)

3 of the clients are freight forwarders, one is a manufacturer. They operate between less than 3 wagons and more than 50 wagons per day. These companies also use between less than 10 up to more than 100 trucks per day. 3 companies operate their own fleet of trucks.

Road transport is used for long distances, up to 1,000 km, and sometimes on routes where rail is also operated. Thus, it is expected that part of this transport could be turned to rail provided that suitable services are provided.

The main commodities hauled by train are lead and silicate (loaded in Stip), building material (Mazari); paper (unloaded in Lisice), sugar (Mazari), etc.

3 clients have declared not to be satisfied with the price, which is considered to be 30% too expensive on average. However, the clients already benefit from a 10-40% discount.

2 clients are concerned with the lack of reliability regarding the scheduled transport time and 2 clients regret that transport time is too long by rail and would expect a door to door delivery.

Main drawbacks induced by transport by rail are the disposal of empty wagons in bad condition (dirty, damaged), the non-observance of the schedule for the provision of empty wagons, the lack of inspection and the security of the cargo. One client would like to benefit from MZ's assistance to fill in administrative documentation.

A 24-hour advance notice before arrival of the cargo is required by 2 clients.

Some delay at Tabanovce, Gevgelija and Volkovo borders may occur (12-24 hours), mainly due to administrative reasons.

4.3 Financial situation

4.3.1 Income statement

Income statement, 2000-2001

(million EUR)

	2000	2001
Total revenue	44.29	36.25
Operating Revenue	43.31	34.44
<i>Passenger services</i>	2.74	1.96
<i>Freight operations</i>	33.21	28.14
<i>Other operating revenues</i>	7.36	4.34
State Budget subsidies	0.00	0.00
Non core business	0.98	1.81
Total expenses	48.33	43.45
Total Cash expenses	42.65	38.35
<i>Staff</i>	16.96	15.39
<i>Energy</i>	7.23	6.55
<i>Materials</i>	0.18	0.20
<i>Other</i>	18.27	16.21
Other expenses	5.69	5.10
Profit/loss	-4.05	-7.19

(1 MKD: 0.016581 EUR /July in 2000)

(1 MKD: 0.016494 EUR /July in 2001)

Source: Ministry of Transport – MZ Restructuring.

The total revenue dropped 18% between 2000 and 2001 and total expenses by -9.5% over the same period.

The freight activity provides the major part of the revenues (almost 80% of total revenue). Staff accounts for 40% of the total expenses and energy for 17%.

The deficit was 7.19 million EUR in 2001 (+78.6 %/2000). It is estimated that the total loss accumulated from 1995 to 2001 was almost 115 million EUR.

Estimated income statement, 2002-2005

(million EUR)

	2002	2003	2004	2005
Total revenues	30.23	41.92	43.20	46.45
Transport	16.36	26.32	28.65	32.94
Infrastructure	4.09	6.58	7.16	8.23
State Budget (infrastructure)	9.78	9.01	7.38	5.27
Total expenses	38.10	37.37	35.27	34.80
Transport	24.23	21.77	20.73	21.29
Infrastructure	13.87	15.59	14.54	13.50
Total loss/profit	-7.87	4.54	7.92	11.64

(1 MKD: 0.016492 EUR /July in 2002)

(1 MKD:0.016118 EUR /April in 2003)

Source: Ministry of Transport – MZ Restructuring.

It is expected that the MZ revenue increase by an average of 14% per year when expenses drop at an average of 1.5% rate per year. State subsidies should be cut from 32% of the total revenue in 2002 to 11% in 2005. The Ministry of Transport expects that the MZ will make profit from 2003.

4.3.2 Balance sheet, 2000-2001

(million EUR)

	2001	2002
Assets		
Current assets	347.07	248.11
Fixed assets	5,916.72	6,015.62
Other (financial investment, etc.)	110.38	110.37
Total assets	6,374.17	6,367.62
Liabilities	0.00	0.00
Current liabilities	197.98	85.58
Long term liabilities	1,046.91	1,114.44
Capital & reserves	5,129.28	5,167.60
Total liabilities and equity	6,374.17	6,367.62

(1 MKD: 0.016494 EUR /July in 2001)

(1 MKD: 0.016492 EUR /July in 2002)

Source: MZ – 2003.

The current liabilities dropped more than 50% between 2001 and 2002 and current assets almost 30%.

4.3.3 Investment and sources of finance

Past investment

(million EUR)

	1999	2000	2001
Infrastructure	8.68	7.79	8.18
Civil structures	8.68	7.75	6.86
Power supply, signalling/telecom	-	-	1034.09
Information systems	-	0.04	0.27
Transport	0.20	1.38	1.14
Rolling stock	-	-	0.91
Buildings	0.04	-	-
Other	0.16	1.38	0.22
Total	8.88	9.18	9.32

(1 MKD: 0.016071 EUR /July in 1999)

(1 MKD: 0.016581 EUR /July in 2000)

(1 MKD: 0.016494 EUR /July in 2001)

Source: MZ – 2003.

The level of investment is kept constant over the period, the major part being dedicated to infrastructure.

Estimated investment plan

(million EUR)

	2002	2003	2004	2005	2006
Infrastructure	8.57	10.96	na	na	na
Civil structures	5.06	8.86	na	na	na
Power supply, signalling/telecom	3.20	2.08	na	na	na
Information systems	0.22	-	na	na	na
Transport	4.83	4.83	na	na	na
Rolling stock	4.73	3.30	na	na	na
Other	0.10	1.53	na	na	na
Total	13.41	15.79	na	na	na

(1 MKD: 0.016492 EUR /July in 2002)

(1 MKD:0.016118 EUR /April in 2003)

Source: MZ – 2003. na = not available.

The preparation of the short-term investment plan for 2004-2009 is ongoing. Investments increased by almost 75% between 2001 and 2003, mainly due to a sharp growth in transport investments (purchase of new rolling stock in 2002 and 2003).

These investments will be financed by the following means:

(million EUR)

	2002	2003
Cash flow	1.33	4.92
Government budget	5.06	7.25
Existing loans	3.70	1.99
Grants	3.30	1.62
Total	13.41	15.79

The state budget has provided the major means of funding (between 38 and 45% of the total required investment) while the share of loans and grants decreased. A significant growth in cash flow is expected in 2003 by the MZ.

5 Unmik Railways (Kosovo)

5.1 Introduction

The length of the UNMIK Railways' network is 334.4 km, of which 229.8 are main lines (69%). The network is not electrified.

In 2001 staff was about 600.

The responsibility for the operation of the railways was taken over from the KFOR in March 2001. Now UNMIK (United Nations Interim Administration Mission in Kosovo) administers the territory of Kosovo and, thus, the Railways, under the Kosovo Trust Agency (KTA). A new UNMIK Railways management was appointed in September 2002.

A Transport Policy proposal has been under elaboration for the last year which will define the objectives to be achieved by each transport mode (road/rail) and set up a legal framework to adapt to the EU directives and to restructure the UNMIK railways into a market oriented company.

Infrastructure and rolling stock have until now been financed through donations. In the future the investment in and maintenance of the infrastructure should be borne by the Kosovo Provisional Government and operation financed through the Track Access Fees. Infrastructure and operation have been managed separately since 2001.

An agreement has been made with UNMIK Customs to ease border procedures. Discussions have not been initiated yet for agreements with neighbouring countries.

In 2001 staff was downsized by 435 persons - no discussion about a possible privatisation was initiated. Some infrastructure works (new ballast and rail) were implemented and a new radio communication system (financed by the European Agency for Reconstruction) was installed.

The northern railway line to Serbia, which is Kosovo's most important trade partner with respect to import to Kosovo, and to Central Europe has been reopened mid December 2002.

5.2 Railway market

5.2.1 Passenger service

350,000 passengers were carried in 2001 (80%/ 2000) totalling 13.1 million passenger-kilometres (70%/2000)

The average distance travelled by passengers is 30 to 40 km.

In May 2001, a new service was opened between Pristina and Peje/Pec, which was, however, cancelled in January 2002 due to the bad condition of the rolling stock.

The line operated to/from the north of Kosovo ("Freedom of Movement Train") and was extended to Lipjan in 2001 and on to Gurez/Gerlica at the beginning of 2002. From March 2002, two trains are operated daily between Hani I Elezit/Deneral Jankovic in the South to Leshak/Lesak in the North, carrying 660,000 passengers and financed on a contractual basis by UNMIK. The line to Gracanica was reopened quite recently on 11th April 2003.

A co-operation agreement was signed in May 2001 with the Macedonian Railways for marketing and operational matters. A temporary agreement was also set up with the Serbian Railways to promote rail traffic in the region.

Passenger traffic is assumed to reach 21.5 million passenger kilometres in 2005 (+64% /2001) and 22 million in 2010 (+68%), mostly composed of domestic traffic.

5.2.2 Freight service

180,000 tons were carried in 2001 and 340,000 tons in 2002 (+90%/ 2001).

13.1 million tonne-kilometres were transported in 2001 and 27.3 million tonne-kilometres in 2002.

The freight transport mainly consists of military cargo (80% of UNMIK freight market in 2001, down to 60% in 2002), notably fuel for the KFOR.

The commercial traffic represented 20% of the total freight traffic in 2001 and 40% in 2002. Peja Brewery was the major domestic customer with respect to transport of coal between Kastriot/Obiliq and Peja Brewery.

Main commodities hauled are (% of tonne kilometre, 2001):

- Oil and oil products: 50%
- Coal and coke: 15%
- Fertilizers: 2%
- Milk: 2%

Almost 50% of the freight traffic is made in full train loads. The average length of haul is 88 kilometres for domestic traffic and 74 km for international traffic.

The freight traffic is assumed to reach 33 million tonne-kilometre in 2005 (+150%/2001) and 47 million tkm in 2010 (+260%). The greatest part of the traffic is expected to be import (88%), domestic transport accounts for 10% and transit for 2%.

The agreement signed in 2001 with the Macedonian Railways within the following areas; co-ordination of freight tariffs, reopening of the northern line, growth of fuel transport in transit through FYRO Macedonia, transfer from road to rail of a part of the fuel import, re-opening of mines and improvement of the facilities at Miradi/Teretna station should contribute to an increase in the rail freight transport.

5.3 Financial situation

5.3.1 Income statement, 2000-2001

(000 EUR)

	2000	2001
Operating revenue	893	1,616
Freight revenue	627	1,197
Passenger revenue	266	419
Operating expenses	6,348	2,209
Bad debt	188	73
Staff	723	878
Material	4,395	218
Energy	301	474
Depreciation	412	427
Other	329	139
Operating income	-5,455	- 593
Other income	6,508	966
Social obligations	- 98	-119
Extraordinary charges	- 1,043	-360
Income before tax	-88	-106
In come Tax	-	-26
Profit/loss	-88	-132

Source: UNMIK Railways – March 2003.

The operating revenue increased by more than 80% in 2001, mainly due to a 90% increase in freight traffic, as commercial traffic is developing.

Freight represented 70% of the revenue in 2000 and up to 74% in 2001. The total income for freight is expected to reach about 2 million EUR in 2003. 60% of the UNMIK Railways' freight transport consists of military freight, of which the share is increasing.

The UNMIK Railways benefit from some additional incomes mainly derived from rent contracts concerning the Railways' estates and from demurrage.

Passenger revenue is expected to reach 1.65 million EUR in 2005 and 1.97 in 2010. Freight business revenue should reach 2.8 million EUR in 2005 (63% of the total revenue) and 4 million in 2010 (67% of total).

Operating costs were 2.2 million EUR in 2001, of which 40% was were dedicated to staff, 21% to energy and 19% to depreciation.

5.3.2 Balance sheet, 2001-2002

(In EUR)

	2001	2002
Total assets	4,590,670	5,971,268
Fixed assets	3,080,870	3,869,160
Current assets	1,509,795	2,102,108
Total liabilities	4,590,670	5,971,268
Long term liabilities	3,973,370	5,202,450
Short term liabilities	617,300	768,818

Source : UNMIK Railways annual reports 2001-2002 and Consultant estimations.

Long term liabilities increased by 30% in 2002 and fixed assets by 25%.

5.3.3 Investment, 2003-2005

(In EUR)

Budgets	2003	2004	2005
Infrastructure	4,907,000	3,872,000	24,495,700
Track	1,833,000	1,270,000	23,564,200
Track machinery	1,000,000	1,300,000	50,000
Track maintenance equipment	27,000	27,000	27,000
Maintenance of stations	100,000	100,000	100,000
Optic cable, digital centres, etc.	240,000	435,000	385,000
Signalling	1,450,000	500,000	150,000
Maintenance signalling	257,000	240,000	219,500
Refurbishment stations	100,000	100,000	100,000
Rolling stock	3,700,000	1,400,000	1,300,000
Environment	900,000	100,000	-
Information systems	500,000	150,000	-
Total	10,007,000	5,522,000	25,795,700

Source : UNMIK Railways "Financial needs – 7 Oct 2002".

A total 41.5 million EUR will be invested until 2005, mainly for infrastructure (80%), the biggest part being dedicated to track rehabilitation.

Funds are also required for the operation of the "Freedom of Movement Train" and the overhaul of some locomotives. Severance plans for staff must also be financed.

In the long term, the north-south line must be rehabilitated up to pre-war standards - this also applies to some of the stations on the network. New rolling stock must be purchased (15 coaches, 30 wagons and 4 second hand DMU (diesel multiple units) and funds should be provided for investment in fuel handling facilities and information systems including ticketing systems.

In 2001-2002, the European Agency for Reconstruction provided the UNMIK Railways with financing through:

- 801,000 EUR to acquire spare parts for locomotives, machinery and a new radio telecommunication system
- 3,000,000 EUR to acquire spare parts, heating and infrastructure equipment, etc.

The Swedish Aid Agency (SIDA) has supported UNMIK Railways with a one-year management support programme (1,600,000 EUR), starting in September 2001, which might be extended for one more year.

The upgrading of the line to Gracanica has been supported by the Belgian and Netherlands' Governments and by the KFOR.

6 Serbian Railways (Railway Transport Enterprise – RTE Belgrade)

6.1 Introduction

The length of the Serbian railway network is 3,809 km, of which 934 km (24.5 %) is electrified and 1,768 km constitute the main lines. In 2001 the staff amounted 33,471 (- 3% / 2000) and fell to 32,108 in February 2002 (- 4%).

The Serbian economy is characterised by the extraction of raw material, steel, iron and copper processing, by agriculture and well-developed industries (chemical plants, machinery), for which rail is usually the predominant transport mode. But the dissolution of FR Yugoslavia and the destruction of industrial installations by the NATO bombing have reduced foreign investment and led to a decline in local industry (the GDP declined by half between 1997 and 2000 and the industrial production dropped by 50% between 1990 and 2000).

However, the recovery of the Serbian economy is underway. Industrial production grew by 1.8% in 2002, compared to the previous year.

The RTE Belgrade faces shortage and bad condition of rolling stock and infrastructure. Its organisation is burdened by a complex organisation comprising 13 subsidiaries (cleaning services, rolling stock maintenance, construction design, etc). The Corridor X, which is the backbone of the system (25% of the network but 50% of transport) needs rehabilitation and upgrading. Traffic volumes are low, funds for infrastructure rehabilitation are scarce, assets are obsolete, indebtedness is high and activity, at least for passenger traffic, is not profitable.

But the 5-year business plan (2002-2005) shows the will of the RTE Belgrade to pave the way for a new development of the rail transport.

6.2 Railway market

6.2.1 Passenger service

13.655 million (M) passenger were carried in 2001 (-8.3%/2000 but - 68.3 %/1990) and 1,186 M passenger-kilometres (-4%/year 2000).

In 2002 the transport volume was 1,071 M pkm, which is 10.7% lower than in 2001. It should be noted that before the dissolution of FR Yugoslavia, the RTE transported almost 4,452 million pkm and that international traffic dropped from 94 million passenger-km in 1990 to 45 million in 2000 recovering to 62 million in 2002.

Domestic transport represents 57.6% of total transported passengers, urban/suburban: 39.8% and international 2.6% only.

Suburban traffic have increased over the last 2 years (+30%) while domestic transport dropped by 8% and international traffic remained constant. However, domestic traffic is the largest market in terms of revenue and passengers transported.

The average distance travelled by train is around 110km and 36% of the total passenger traffic is operated on 4 sections (in million passenger, 2002):

- Batajnica-Subotica: 2,016 (Corridor X)
- Resnik-Bar: 1,444
- Resnik-Nis-Presevo: 1,440 (Corridor X)
- Resnik-Kraljevo-Raska: 0,717 (Corridor X)

The main railway stations are Belgrade (about 1 million passengers per year), Novi Sad (0.55), Subotica (0.5) and Nis (0.45).

Commuter traffic (“Beovoz”) is mainly operated on the sections Resnik-Batajnica, Resnik-Pancevo Varos and Batajnica-Pancevo Varos.

Pricing policy and competition

The RTE is not free to set its tariffs without prior approval by the Ministry of transport.

Railway is about 30% cheaper than road on the domestic market, but people prefer bus transport as it offers better services with respect to frequency, regularity, comfort, reliability and quality of service.

Rail prices are considerably higher than the prices on the international market. For example, a Belgrade-Berlin return ticket by train (2nd class) costs a minimum of 12,000 YUD and only 9,800 by bus, Belgrade-Vienna costs 4,300 and 3,800, respectively and Zagreb 2,200 and 2,050 YUD.

The modal split is estimated at 25% for rail and 75% for road transport in 2000, whereas, in 1990, the split was 42% for rail and 58% for road, respectively. However, as private car traffic is not included in the official statistics, it is estimated that the share of the private car traffic is about 71%, bus 24% and rail 5%.

About 520 passenger trains are scheduled daily, of which 10% are cancelled. Trains are rather short (2-3 wagons) - some fast trains are operated on Belgrade-Nis Presevo, Belgrade-Kraljevo, Belgrade-Subotica, etc.

Future development

The RTE expect to reach 1,207 million passenger- kilometres in 2004 (+1.8%/2001) and 1,301 million pkm in 2006 (+9.7%/2001), which is below 1990 traffic figures. This increase is mainly due to domestic traffic (+23.5% 2002-2006) and international traffic (+13%).

The RTE Belgrade plan to overhaul the priority sections on both the Corridor X and the Belgrade-Bar lines as national and international links, to purchase 2 diesel locomotives, 5 DMUs (Diesel Multiple Units), 24 coaches and to rehabilitate obsolete material to sustain the traffic growth.

6.2.2 Freight service

8.72 million tons were carried in 2001 (+1.5%/2000, 43% being international) and 1990 million net tonne-kilometre (+3.7%/2000, 62% being international).

The traffic growth was higher in 2002, as RTE Belgrade carried 9,325 thousand tons (+7%/2001) and 2.260 million ntkm (+13.5%/ 2001).

The fall is significant in domestic traffic (-13.6% in tons from 2001 to 2002) counterbalanced by a 32.5 % increase in international traffic.

The traffic in tons dropped by -70% in 2001 compared to year 1990 and the number of ntkm decreased 73% from 1990 to 2000 (before the dissolution of of FR Yugoslavia, the RTE carried more than 7,200 million tkm).

In 2002 the domestic traffic represented more than 55% of the freight transport in tons (44.5% in 2001). Import accounted for 24.8% of the total freight traffic, transit for 19.5% and export for 10.9%.

70% of the traffic volume is bulk (coal, iron, ore, oil, timber, etc.), almost all traffic (93%) was carried in full trainloads and average haulage distance was 231 km in 2002 (155 km for domestic traffic and 320 km for international).

The main commodities hauled are (in thousand tons, 2001)

Coal, coke coal	2.006	(23.01% of total) / -12%/1997
Non-metal minerals,		
Construction material	1.290	(14.80) / -28%/1997
Ores and concentrates	1,020	(11.70) / -44%/1997
Petroleum and derivates	574	(6.58) / -31%/1997
Metallurgical products	570	(6.54) / -50%/1997
Fertilisers	428	(4.91) / +60%/1997
Chemical products	395	(4.53) / -39%
Agricultural, food stuffs	328	(3.76) / +18%

In 1997, the main commodities hauled were coal (19% of total), ores (15.7%), minerals (15.4%) and metallurgical products (9.8%)

The container traffic is limited (14,500 units in 2002) operated at the Belgrade, Pancevo, Prahova and Novi Sad terminals.

About 200 freight trains are hauled daily, about 20% of them being international.

The most important border crossings are Subotica (Hungary) – 34% of the total wagons in international traffic and Dimitrovgrad (Bulgaria) – 18%, located on Corridor X, together with Presevo (FYRO Macedonia) and Vrsac (Romania). Bottlenecks occur at the Subotica and Dimitrovgrad borders due to long inspection procedures.

The traffic flows reflect the change in the pattern of trade after the dissolution of FR Yugoslavia from the east-west route to the north-south corridor. In 2000, 80% of the transit passed through Corridor X (Subotica-Presovo transit).

The freight traffic is mainly operated on Subotica-Presevo, Subotica-Dimitrovgrad, Sid-Presevo, Sid-Dimitrovgrad and Sid-Vrsac.

More than 50% of the cargo is shipped from Vreoci (coal), Smederovo and Radinac (steel, metallurgy), Dragacevo, Batocina, Svilajnac (coal plant) and Belgrade.

The main freight stations are (tons, 2001, loading-unloading)

Radinac	: 1,422 (12% of total)
Vreoci	: 1,200 (10.1%)
Pancevo junction (Belgrade)	: 0,672 (5.6%)
Belgrade junction	: 0,562 (4.7%)

The stations connected to the most important plants are Radinac and Smederovo (steel works), Pancevo, Novi sad (oil, chemicals), Subotica (chemicals), Vreoci (coal), Nis (mechanical industry, electric equipment) and Beocin (cement).

The RTE Belgrade operate 14,800 wagons, of which 45% are covered wagons, 45% open wagons with high walls and 3% tanks. Only 4,000 are in steady operation.

Tariffs and competition

The freight tariff is based on distance, load in wagons and category of wagons and must be approved by the Government prior to publication.

The railway tariff is competitive with other transport modes. Some international tariffs are set and co-ordinated with neighbouring networks. Discount is granted notably to major clients for block trains in transit.

On medium to long distances the railway share is about 50% in tonne-kilometres. Waterway transport accounts for about 30% (mainly bulk cargo

carried by waterway on the Danube on section Novi Sad Belgrade-Smederovo to Romania and Bulgaria). However, data on international road traffic is scarce.

On short distances, the rail share is about 25% (compared to 30% in 1990).

Main competitors to freight rail transport are road and river traffic on both domestic and international markets (big volume articulated trucks and barges).

Future development

The freight traffic is assumed to reach 12.370 million tons in 2006 (+34%/2002 and +42%/2001) and 3,020 million tonne-kilometre, provided that the economic recovery continues.

Traffic with the port of Bar in Montenegro should develop as well as with neighbouring countries, mainly for transit (West-Central Europe with Greece and Turkey) and average transport distance is expected to increase slightly (237 km in 2006).

Domestic traffic should drop from 55.4% of the market share in 2001 to 52.7% in 2006, and international traffic should grow from 44.6% to 47.3%. According to the RTE Business plan 2001, more transit traffic will be operated on Corridor X.

Quality of rail freight service

5 freight clients of the RTE Belgrade have been interviewed, using a detailed questionnaire:

- Pansped (Novi Sad)
- Zupa - Chemical Industries (Krusevac)
- Sartid - Steel and Iron products (Smederevo)
- Jugosped (Belgrade)
- Transped (Belgrade)

3 of the clients interviewed are freight forwarders and 2 are manufacturers.

They operate between less than 3 wagons and more than 200 wagons per day and use between less than 3 up to more than 100 trucks per day. 3 companies operate their own fleet of trucks in addition to the services of the freight carriers.

Road transport is used on long distances (over 1,000 km) for 4 clients, and, in most cases, 4 out of 5 on routes where rail is also operated. Thus, it is expected that a part of this transport could, potentially, be diverted to railroad transport if that a suitable offer is provided.

The main commodities hauled by train are:

- raw materials loaded/unloaded at Novi Sad, Pancevo, Kikinda, Subotica, Belgrade, Dedina, Podbara, Smederevo, Despotovac, Kaona
- processed products at Belgrade, Radinac, Dimitrovgrad, Sid and Uzice
- consumer goods at Radinac (loaded), Subotica, Presevo (unloaded)

4 clients have declared their dissatisfaction with the reliability of rail transport in terms of scheduled delivery. Transport time by rail and price are also a concern for 2 clients.

The clients have declared that a 20-30% additional discount on rail transport tariffs would encourage them to use rail transport, though they already benefit from a 15-20% discount on freight tariffs.

Main drawbacks are (i) non-observance of schedule for the provision of empty wagons, (ii) disposal of empty wagons in bad condition (dirty, etc.), the absence of door to door delivery and the lack of some associated services (storage of cargo at the station, loading/unloading undertaken by the railways).

A 24-hour advance notice before arrival of cargo is required by all 5 clients.

2 clients have said that some delays occur at Subotica and Dimitrovgrad, mainly due to inspection routines.

6.3 Financial situation

6.3.1 Income statement, 2001-2002

(000 EUR)

	2001	2002
Total revenue	204,491,5	252,258,1
Operating revenue	63,301,8	80,387,1
Passenger services	18,354,9	23,838,7
Freight operations	44,946,9	56,548,4
State Budget	123,345,9	162,806,5
Financial revenue	17,843,8	9,064,5
Total expenses	371,423,2	441,058,1
Total cash expenses	162,249,0	209,258,0
Staff	74,757,0	98,580,6
Energy	13,080,9	17,080,6
Materials	16,426,3	49,096,8
Services	57,984,8	44,500,0
Total operating expenses	194,569,9	217,154,9
Depreciation	174,629,9	203,951,6
Other operating expenses	19,940,0	13,203,3
Financial expenses	14,604,3	14,645,2
Profit/loss	-166,931,7	-188,799,9

Source: RTE Beograd.

The operating ratio deteriorated slightly between 2001 and 2002 (from 256% to 260%) whereas it increased by 27% in 2002, but cash expenses increased even more due to a sharp increase in material expenses.

A large portion of the costs and revenues is not directly related to the train operation (freight and passenger revenue contributed with 32% of the total revenue in 2002). It should be noted that the significant increase in revenue in previous years was mainly the result of inflation, which also resulted in higher operational costs.

The passenger revenue was 23,838.7 thousand EUR in 2002 (+30%/ 2001) and represents less than 10% of total income. The domestic traffic represents 65%, international 31% and suburban 4% of the passenger income. The most important revenue source is the international traffic, which represents 2.6% of total passenger transported, but 31% of revenue.

The freight revenue amounted to 56,548.4 thousand EUR (58,988 thousand EUR including container traffic operated by the RTE Company), which is 22% of total income. Coal and coke transport represent 17.5% and ores 11% of freight revenue. One third of the freight revenue comes from international traffic.

The State contribution is quite high (64.5% of the revenue in 2002). Staff costs represent 47% of the operating costs in 2002 (46% in 2001) and material account for 25% (10% in 2001)

The business deficit amounted to almost 190,000 thousand EUR in 2002 (+13%/2001) and the total loss from 1995 to 2001 is likely to reach almost 700 million EUR.

Estimated income statement, 2003-2006

(000 EUR)

	2003	2004	2005	2006
Total revenues	248,732	256,617	265,132	276,114
Operating revenue	108,716	116,601	125,116	136,098
Passenger	17,556	18,130	19,250	21,028
Freight	62,586	67,824	72,981	79,299
Other	28,574	30,647	32,885	35,771
State subsidies	132,890	132,890	132,890	132,890
Other revenue (financial)	7,126	7,126	7,126	7,126
Total expenses	377,749	374,614	374,079	378,950
Cash expenses	288,893	290,242	293,744	302,248
Staff	113,621	102,259	92,033	82,830
Material	175,272	187,983	201,711	219,418
Operating expenses	68,372	63,887	59,851	56,218

	2003	2004	2005	2006
Depreciation	44,850	40,365	36,329	32,696
Non material	23,522	23,522	23,522	23,522
Other (financial)	20,484	20,484	20,484	20,484
Profit/loss	-129,017	-117,997	-108,947	-102,836
Operating ratio (excl. subsidies)	265%	249%	235%	222%
Operating ratio (with subsidies)	119%	116%	113%	112%

Source: RTE Beograd business plan 2002-2006.

The passenger revenue is expected to increase by an average of 5% per year over the period considered and freight revenue by 6.5% due to both expected traffic development and an increase in tariff.

The State subsidies remain at a high level (133 million EUR per year representing about 50% of the RTE revenue). Staff costs are expected to drop significantly from 40% of the cash expenses in 2003 to 23% in 2006 as a result of a cut down of almost 40% in the work force between 2002 and 2006.

It is assumed that the operating ratio will improve slightly due to the increase of transport revenue and the drop in staff and operating expenses.

6.3.2 Balance sheet

Balance sheet, Dec 2000-2001

(000 EUR)

	2001	2002
Assets		
Current assets	68,554	54,258
Fixed assets	3,442,197	3,500,989
Other (financial investment, etc.)	14,818	14,818
Total assets	3,525,569	3,570,065
Liabilities		
Current liabilities	180,379	209,535
Long term liabilities	348,205	498,798
Capital & reserves	2,996,985	2,861,732
Total liabilities and equity	3,525,569	3,570,065

Source: RTE Beograd business plan 2002-2006

Current assets/liability	0.38	0.26
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The available information on asset valuation and details about long term debt is not accurate, making it difficult to analyse the balance sheet in terms of liquidity and solvency. However, it can be inferred that the burden of debts is high.

Estimated balance sheet, 2003-2006

(000 EUR)

	2003	2004	2005	2006
Assets				
Current assets	55,531	56,232	57,222	58,954
Fixed assets	3,662,151	3,848,863	4,082,031	4,244,028
Other (financial investment, etc.)	14,818	14,818	14,818	14,818
Total assets	3,732,500	3,919,913	4,154,072	4,317,800
Liabilities				
Current liabilities	276,899	346,347	431,758	344,123
Long term liabilities	722,886	958,847	1,216,542	1,418,891
Capital & reserves	2,732,715	2,614,719	2,505,772	2,554,786
Total liabilities and equity	3,732,500	3,919,913	4,154,072	4,317,800

Source: RTE Beograd business plan 2002-2006

Current assets/liability	0.2	0.16	0.13	0.17
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Long term liabilities will almost double over the period, to meet investment, while fixed assets are expected to increase by only 16%.

6.3.3 Investment

Past investments and loans

Previous large investment projects:

- 1958-76: Belgrade- Bar
- Belgrade freight bypass
- 1970-80: Electrification
- 1982: New Central station, Belgrade
- 1986: high speed line Sid-Zagreb
- 1986-89: second track Danis-Nis
- 1992: freight station Novi Sad

partly financed by 6 loans from the World Bank (1963-1984) and 2 loans from the EIB (1984-89).

At the end of 2001, the RTE Belgrade's obligations to its foreign creditors were as follows:

	Million EUR
World Bank (long term)	110.4
European Investment Bank (long term)	43.4
Eurofima (long term)	176.0
Foreign railways	134.7
Other	12.7
Total	477.2

Source: RTE Beograd Business plan 2002-2006.

A 10 million EUR loan has been obtained in 2002 for staff restructuring.

Estimated investment plan (2002-2006)

(000 EUR)

	2002	2003	2004	2005	2006	Total
Infrastructure	45,104	206,904	208,315	248,240	150,780	859,343
Rolling stock	58,682	45,652	65,933	104,477	89,485	364,230
Intermodal equipment	40	810	500	500	100	1,950
Environment		2,000	2,000	2,000	2,000	8,000
Information system	3,000	5,730	2,740	2,610	920	15,000
Human resources	2,000	8,000	0	0	0	10,000
Total	108,827	269,096	279,488	357,827	243,285	1,258.523

Source: RTE Beograd business plan.

Investments chiefly aim at upgrading infrastructure, traction fleet and coaches, purchasing new information systems and equipment..

Investment in infrastructure is required for overhauls and completion of electrification works on Corridor X (80% of total investment), overhaul on Belgrade-Bar (3%), modernisation of signalling, etc.

For the rolling stock the following activities are foreseen: reconstruction and scrapping of electric/diesel locomotives, representing 40% of the total rolling stock investments (with purchase of some electric units in 2006), reconstruction and scrapping of coaches and investment in diesel multiple units (45% of total rolling stock investments), reconstruction/scrapping and purchase of wagons (14% of investments) and investment in container technology (equipment, wagons and boxes).

Funds have already been secured, mostly from EIB and EBRD loans for priority investments, which are expected to be completed by 2003. These investments amount to 121.3 million EUR covered by a 64.3 million EUR EIB and a 57 million EUR EBRD loan.

The value of the priority investments for the infrastructure amounts to 606.9 million EUR (instead of 859.3 as stated in the investment plan) as only the works on Corridor X and the Belgrade-Bar line are considered to be vital. Thus, the total amount of the investments required over the period is 1,006 million EUR instead of 1,258 million EUR

Priority investment and sources of finance

(000 EUR)

	2002	2003	2004	2005	2006	Total
Priority investment	33,159	80,159	7,960	0	0	121,278
EIB loan	19,319	44,959	0	0	0	64,278
EBRD loan	13,840	35,200	7,960	0	0	57,000
Investment (with priority infrastructure)	75,668	125,853	219,118	269,497	194,693	884,828
Total	108,826	206,012	227,078	269,497	194,693	1,006,106
% investment covered	30.47%	38.91%	3.51%	0.00%	0.00%	12.05%

Source: RTE Beograd business plan.

Some additional funds can be released from the sale of the RTE Beograd subsidiaries (total estimated value of assets, about 100 million EUR). Some savings can also be made from a major restructuring of the railway.

The reorganisation of the company should:

- as a first step (until 2005), ensure a split between operation and infrastructure accounts. Freight and passenger units will be created, while the rail infrastructure will be financed by the State. The Law on railways, currently under review, will be put in force during this period
- as a second step, a physical separation between operation and infrastructure activities will be implemented

7 Montenegro Railways (Zeljeznica Crne Gore –ZCG)

7.1 Introduction

The length of the Montenegro railway, which is part of the Serbia and Montenegro network, is 249 km, of which 169 km are electrified (68%). In 2002 the staff amounted to 2,305 (1,500 by 2007).

The Montenegro economy is characterised by agriculture (cereals, vegetables), bauxite mines used to produce aluminium, steel plants (in Niksic) and food processing. The tourism industry is also a source of revenue for Montenegro. Both industry and tourism have suffered seriously from the recent conflict and from the economic sanctions imposed and some of the industries are not fully able to compete on the international market.

The deep sea port of Bar is the most important port in Serbia and Montenegro. Its handling capacity is 5 million tons per year, with plans to double its capacity. However, the port capacity is, at present, underused and no more than 10% of hauled volumes are carried by rail. The port has facilities for general cargo, petroleum products, container and RoRo traffic with Italy. Large investments have been made during the last 10 years.

The railway company is not yet operated as a market oriented company. Freight and passenger activities are managed by the transport division without clear separation between infrastructure and operation. Management information systems are not developed. The Ministry of Transport is preparing a law on railways, which should be ready by the end of this year.

7.2 Railway market

7.2.1 Passenger service

About 2.1 million passengers were carried in 2001 (-25 %/1989) representing 211.7 million passenger-kilometre (-6 %/year 1997 and -37 %/1989).

30% of the passenger traffic is local and 70% inter Republic. The average travel distance dropped from 137 km in 1998 to 97 km in 1999 as a consequence of NATO bombing of FR Yugoslavia.

Long distance services are not well developed and most of the passenger traffic is operated on the Vrbnica-Bar axis (annual traffic reached 225 million pkm in the past). Other major flows are located on Podgorica-Bar, Podgorica-Bijelo Polje and Bar-Bijelo Polje

The main railway stations are Bar (850,000 passenger per year), Podgorica (850,000) and Bijelo Polje (225,000), which concentrate about 95% of the total passenger traffic.

The passenger fleet consists of about 60 coaches and 10 sleeping cars, of which half is operated - 5 train pairs are scheduled per day on the Bar-Vrbnica line (7 during the peak season), 6 on the Bar-Podgorica line, 3 on the Bar-Bijelo Polje line and 1 on the Niksic-Podgorica line.

Pricing policy and competition

A few years ago, the Railways were given authority to freely set its tariffs without prior state control. As the network is rather short, the commercial activity is still under the control of the Transport Division, without separation between freight and passenger activities.

Train is cheaper than bus and rail transport still benefits from a good position due to the difficult topographic conditions, the poor state of the roads and the low population income. But the average speed of passenger trains is rather low (60 km/h) and the rolling stock needs overhauling. The share of buses and private cars is growing on the domestic market, though there is not yet significant competition along the existing railway lines.

There is no competition from air transport. A round trip Porgorica-Belgrade costs 10 EUR by rail and 50 EUR by air in 2001. 70% of the sold tickets are full fare, 20% with commercial discount and 10% social fares

Future development

The passenger traffic is assumed to reach 240 million pkm in 2005 (+13 % /2001) and 340 million pkm in 2010 (+60%). The growth is mainly due to the expected increase in domestic long distance transport and partly to the increase in international traffic up to 2007 (20 million pkm in international traffic in 2010)

The development of the passenger traffic will depend on the improvement of the services and the standard of living. The repair of about 40 coaches in the next years, the modernisation of the station in Podgorica and the construction of a passenger station in Bar should help develop passenger traffic (65 coaches are currently operated).

There is a market for short distance traffic, for example on the stretch Podgorica-Niksic, provided that the track is overhauled. Presently, there is one bus leaving Podgorica for Niksic every 15 minutes during peak hours.

7.2.2 Freight service

About 880 thousand tons were carried in 2001 and 61.5 million tkm in 2001 (-70% /1997).

The freight traffic dropped 86% (in tons) from 1990 to 2000.

The average haulage distance is 60 km for domestic traffic and 80 km for international. 70% of the traffic is made in full trainloads. There is an intermodal transport terminal in Bar (no development for container transport is foreseen), 30 private sidings used by industrial plants and no marshalling yard.

The ZCG main clients are:

- Niksic bauxite mine (however, transport of bauxite provides with a low profit)
- Niksic steel works
- Niksic brewery
- Podgorica aluminium factory
- Grain storage silos "Zito Promet" and cement factories at Spuz "Servis Cement"
- Fuel storage at Krusevo
- Port of Bar

The main traffic flows are operated on:

- Niksic-Podgorica 36,500,000 tkm/year (60% of total traffic)
- Podgorica-Bar 11,200,000 tkm/year (18%)
- Podgorica-Vrbnica 8,600,000 tkm/year (14%)

The biggest freight stations are Podgorica (700,000 tons/year), Niksic (650,000) and Bar (250,000).

The main commodities hauled are:

- Bauxite 28,000,000 tkm (46%)
- Steel scrap 6,800,000 tkm (11%)
- Oil 5,000,000 tkm (8%)
- Soda 3,300,000 tkm (5%)
- Coal 1.800,000 tkm (3%)

Oil, oil products and petrol are all imports.

The number of freight trains operated depends on traffic demand. 1 pair of freight trains is scheduled on Bar-Bijelo Polje, 2 on Bar-Podgorica and 3 on Niksic-Podgorica.

The fleet of wagons consists of about 1,000 freight wagons, of which 225 are operational, but there is a lack of tank wagons.

Tariffs and competition

The freight tariff is based on distance, type of cargo, and wagon loads.

Only 1/3 of the traffic is made with discount, depending on the quantity transported (a 30% discount is granted for transport over 100,000 tons), on the type of wagon (10% granted for the use of private wagons), and on some other parameters (30% granted, if the wagon comes back loaded).

Road traffic is the main competitor to rail transport, especially domestic big volume articulated trucks. International rail transit routes (in the direction of Kopar, Rijeka, Constance, Varna and Thessaloniki) are also in competition with the ZCG transit.

Future development

Freight traffic is assumed to reach 180 million tkm in 2005 (+190%/2001) and 380 million tkm in 2010 (+500%/2001).

Domestic transport (construction material for reconstruction works) and container traffic are expected to grow most. Export of bauxite from Niksic to Serbia and Romania, import of grain and other agricultural products (from Serbia), import and export of steel at Smederovo (Serbia), initially from Burgas, Rijeka, Koper, transferred to Bar are also expected to contribute to this increase.

It is assumed that one third of the future development in the rail freight transport will come from major clients such as the aluminium smelter at Podgorica, the bauxite mine at Niksic and the mill in Spuz and Jugopetrol at Kotor).

Quality of rail freight service

5 freight clients of the ZCG have been interviewed, using a detailed questionnaire:

- AD Aluminium (Podgorica)
- Zetatrans (Podgorica)
- Bauxite mines (Niksic)
- Lovensped (Bar)
- AD Luka (Bar)

2 are freight forwarders, 2 are manufacturers and one client is a distributor.

2 clients operate between 50 and 100 wagons per day and 3 less than 10. 2 companies use between 50 and 100 trucks per day, 2 between 10 and 25 and 1 less than 3.

2 companies operate their own fleet of trucks.

2 clients haul more than 200 tons per day by road.

Road transport is used over short distances (50-100 km), except for one client and usually on routes where rail is not operated.

The main commodities hauled by train are bauxite, cryolite, sodium sulfate, etc.

The main railway stations used are Bar, Podgorica, Niksic and Belgrade.

For all clients the key components with respect to freight transport are cost and speed of transport. The clients also prioritise a pre-planned delivery (for 4 clients) and the security of cargo (3 clients).

The clients interviewed are not satisfied with the price of rail transport and the lack of information on delivery. They require a 40% additional discount to turn more freight to rail, it appears that whereas 2 of the clients do not benefit from any discount, one gets 10% and one 30%

3 clients require a better scheduling of the transport and the possibility to modify the schedule of transport and 2 require a door to door delivery.

The main drawbacks are the disposal of empty wagons in bad condition (dirty, etc.), the non-observance of schedule for the provision of empty wagons and the lack of associated services.

A 24-hour advance notice before arrival of cargo is required by 1 client.

Some delay at Vrasac border may occur (24 hours), mainly due to customs procedures (specific documentation is required to enter Romania).

7.3 Financial situation

7.3.1 Income statement

(Million EUR)

	2000	2001
Total revenue	13.105	15.324
Operating revenue	7.238	7.215
Passenger services	3.367	3.841
Freight operations	3.757	3.270
Other operating revenues	0.114	0.104
State budget subsidies	5.694	7.949
Non core business	0.173	0.160
Total expenses	14.108	15.700
Total cash expenses	8.529	9.425
Staff	5.450	6.320
Energy	1.032	1.436
Material expenses	1.551	1.456
Other	0.496	0.213
Other expenses	5.579	6.275
Profit/loss	- 1.003	-0.376

Source: ZCG & Consultant estimation - March 2003.

Though relevant and coherent data is difficult to find, it seems that the total revenue increased almost 17% in 2001 mainly as a result of a 40% growth of the State subsidies, which account for about 50% of this revenue. The freight revenue dropped 13% down to 3,270 thousand EUR in 2001, which was counterbalanced by higher passenger revenues (3,841 thousand EUR (+14%).

According to the ZCG, the passenger revenue was 4,373,5 thousand EUR in 1997 (13% more than in 2001) for 225.4 million passenger transported (7% more than in 2001). The passenger traffic revenue has dropped 6.5% from 1997.

Staff expenses represented almost 65% of the cash expenses in 2000 deteriorating to 67% in 2001. Energy represents around 10% of the operating expenses and material accounts for almost 20%.

No data is available, neither on the estimated income statement over the next few years nor on the balance sheet.

7.3.2 Indebtedness, planned investment and required credit

Current Bank credit for infrastructure

The current credit for infrastructure amounts up to 22,064,769 EUR, of which:

- Exim Bank credit : 21,551,056 EUR
- RBD credit : 513,712 EUR

EIB grant

The EIB granted 15,000,000 EUR to upgrade the Montenegro portion of the Bar-Belgrade rail infrastructure. Planned investments, 2003:

- Repair of 4 locomotives (120,000 EUR each), total: 500,000 EUR
- Repair of 17 coaches (20,000 EUR each), total: 350,000 EUR

Planned future investments:

- Repair of 1 electric train set: 300,000 EUR
- Repair of 8 locomotives: 1,000,000 EUR
- Repair of 20 coaches: 400,000 EUR
- Reconstruction of bridges, tunnels, modernisation of the Podgorica railway station, construction of a passenger station in Bar : 25,000,000 EUR
- Upgrading/electrification of Podgorica-Niksic: 45,000,000 EUR

The total credit needed for the planned investments in 2003 etc. amounts to approximately 73,000,000 EUR.