

# THE IMPROVEMENT OF THE FINANCIAL STRUCTURE IN THE DOMAIN OF ADMINISTRATING THE RAILWAY INFRASTRUCTURE

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## 1. Introduction

The improvement implies complex decisional problems, when, simultaneously, there are many criteria and the ones that decide, which starts from the hypothesis that the data of a problem are the variables. So, you have to obtain this combination of elements with the advantages and costs, which gives us the best solution. Amongst this domain, applicable inside any company, the improvement leaves a place in the determination of the financial structure which assures the biggest value of the company.

You can observe that the concept “the ideal financial structure” of a company is hard to be established. In fact, with the passing years, the concept of a “good” or “balanced” financial structure suffered multiple modifications: In the 50s, a company was considered to have a good financial structure when it was little indebted, this way they emphasized the financial autonomy of the company, in the context of and economic stability.

In the 60s and the 70, a good financial structure had to keep in mind an obligation considered “normal”, that is in its own funds.

Starting with the 80s, good financial structure had to have a balanced significance of the financial structure of the company, characterized by a progressive movement of obligation and of financial capitalization.

According to the basic objective of the financial function of a company, the managers' preoccupation is the continuous growth of the values of the company, so that they can obtain a maximum of its value regarding the structure of the actives that makes her up<sup>1</sup>.

## 2. The analysis of the dynamics financial structure networks

The financial structure networks are the parameters of orientation for the administration of the company in point of influencing the level of efficiency of the costs of the financing sources, but also of the parameters for the potential creditors with reference to the risk of gaining the loaned funds. This is why they calculate and interpret many more rates of structure of the passive and active balances.

### 2.1. The analysis of the structure of the networks of the passive balances

The structure networks of the elements of the passive balances, calculated between 2004-2008, for the National Railroad Company “CFR”-SA are presented in Table nr. 1.

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<sup>1</sup> Sichegea Nicolae, Fundamental scenarios of the financial structure of the company, Finances. The challenges of the future, nr. 7, Publishing House Universitaria, Craiova, 2008, pag. 49.

Tabel nr. 1 The structure networks of the elements of the passive balances

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Nr crt	Denumirea	2004	2005	2006	2007	2008
1	Subscribed and infused capital	230.478.652	195.716.659	198.771.422	568.574.637	845.243.094
2	Proper capitals	448.009.879	10.311.952	-958.501.747	646.290.141	174.750.981
3	Credits drawn out from the banks and from financial organisms	1.256.435.733	1.640.165.138	1.564.309.533	1.541.823.227	1.959.372.532
4	Capital loaned on medium and long term	812.766.158	1.156.653.587	1.177.587.317	1.161.533.726	1.521.821.448
5	Depts which must be paid on a period bigger than a year	13.034.271.970	13.684.311.581	13.772.800.212	13.692.346.736	14.063.657.529
6	Depts which must be paid within one year	2.443.696.216	2.853.252.850	3.505.190.370	2.165.376.706	3.020.594.496
7	Exploitation depts	14.221.532.453	14.897.399.293	15.713.681.049	14.315.900.215	15.124.879.493
8	Total depts	15.477.968.186	16.537.564.431	17.277.990.582	15.857.723.442	17.084.252.025
9	Permanent capital (2+4)	1.260.776.037	1.166.965.539	219.085.570	1.807.823.867	1.696.572.429
10	Passive total	17.202.258.494	17.846.603.807	18.233.817.284	19.278.686.850	21.081.360.131
11	Financial rentability rate (9/10)	<b>7,33 %</b>	<b>6,54 %</b>	<b>1,20 %</b>	<b>9,38 %</b>	<b>8,05 %</b>
12	Rata autonomiei financiare globale (2/10)	<b>2,60 %</b>	<b>0,06 %</b>	<b>-5,26 %</b>	<b>3,35 %</b>	<b>0,08 %</b>
13	Term financial autonomy rate (2/9)	<b>35,53 %</b>	<b>0,88 %</b>	<b>-437,5 %</b>	<b>35,75 %</b>	<b>10,30 %</b>
14	Degree of indept <sup>2</sup> (4/1)	<b>3,53</b>	<b>5,91</b>	<b>5,92</b>	<b>2,04</b>	<b>1,80</b>
15	The rate of the banking credits (3/8)	<b>8,12 %</b>	<b>9,92 %</b>	<b>9,05 %</b>	<b>9,72 %</b>	<b>11,47 %</b>
16	The rate form the depts from exploitation (7/8)	<b>91,88 %</b>	<b>90,08 %</b>	<b>90,95 %</b>	<b>90,28 %</b>	<b>88,53 %</b>

Source: The National Railroad Company "CFR" – SA, Financial Situations

<sup>2</sup> The degree of indept is calculated also as a proportion between funds loaned on medium and long term, anual average and proper anual average funds, for rates <3, the interest is whole deductible

From the data presented in Tabel nr. 1, one can point out the following:

- ❖ the very low level of the financial stability rates, towards the recommended rate (50%), which endangers the financial stability of the company;

- ❖ the variation of the financial autonomy rates, compared to the level considered satisfactory (bigger than 30% - 40%), to ensure the financial stability, pointing out reduced financial degree of the active elements on proper resources;

- ❖ the raised degree of indebt because the amount of loans on medium and long term are bigger than the capital subscribed and infused of the company;

- ❖ the rate of the banking credits evolves approximately in the same way towards the total of the registered debts;

- ❖ the added weight of debts from the exploration in all the debts, generated by the considerable sums of fiscal and commercial debts; this is applied to the activity displayed by the company, the actual situation of the railway infrastructure, emerged in a difficult technical situation thanks to some important arrears in the achievement of some boarding and repairing projects of the railroads, arrears generated by the chronic lack of necessary funds.

In conclusion, through the evolution of the structure of the rates of the passive elements, one can observe a hand-to-mouth financial stability and autonomy of the the National Railroad Company "CFR"-SA, traceable to the insufficient funds as well as the big volume debts towards the producers, the employee or the budget to fulfill the workings of sustenance, repairs and modernizing of the railroad infrastructure, to assure the safe conditions of the goods and human traffic.

## **2.2. The analysis of the structure rates of the active balances**

In the system of the structure rates of the active balances, the most significant as an informative value and also more frequently recommended by the specialized literature are: the immobilization rate, the supply rate, the claim rate, the availability rate. All these reflect some aspects respecting the economic patrimony of the entity and the nature of the activity.

The rates of the structure of the active elements, calculated between 2004-2008 for the National Railroad Company "CFR" – SA are presented in tabel nr. 2. The data presented here denote the following:

- \* the significant weight of the actives locked up in the amount of actives through the field of activity of the company, of the railroad infrastructure management, due to the percentages given by the intangible assets which are reflected in the accounting of the public patrimony leased status of the company;

- \* the low level of the rate of supplies, due to the insufficient funds allocated to the acquisition of railroad material that are, generally, immediately used in the activity of sustenance and repairs;

- \* the big weight of claims, especially because of the sums that come from the fact that they don't collect the taxes for the utility of the railroad infrastructure by the railroad operators of goods and passengers;

- \* the rates of availability and monetary means closed to the acceptable ones, but some accounts are blocked due to the unpayment of the obligation towards the estate budget.

Tabel no. 2 - The evolution of the structure rates of the active elements

-RON-

Nr crt	Denumirea	2004	2005	2006	2007	2008
1	Intangible assets	12.139.073.305	12.415.808.850	12.444.430.739	12.456.536.909	12.460.738.882
2	Tangible assets	2.789.868.012	2.809.188.707	3.007.409.501	4.103.185.632	5.196.412.934
3	Financial assets	239.670.393	224.769.494	209.534.068	218.068.515	178.968.548
4	Active assets (1+2+3)	15.168.611.710	15.449.767.051	15.661.374.308	16.777.791.056	17.836.120.364
5	Supplies	373.757.293	147.788.164	167.248.499	152.048.683	127.939.915
6	Claims	1.518.317.858	1.897.799.948	1.842.281.997	2.056.450.578	2.726.688.250
7	House and accounts at the banks	135.762.440	349.731.793	560.646.230	279.777.434	376.591.642
8	Circulating actives (5+6+7)	2.027.837.591	2.395.319.905	2.570.176.726	2.488.276.695	3.231.219.807
9	Total active	17.202.258.494	17.846.603.807	18.233.817.284	19.278.686.850	21.081.360.131
10	The rate of the immobilized actives (4/9)	88,18 %	86,57 %	85,89 %	87,03 %	84,61 %
11	The rate of the intangible immobilisations (1/9)	70,57 %	69,57 %	68,25 %	64,61 %	59,11 %
12	The rate of the tangible immobilisations (2/9)	16,22 %	15,74 %	16,49 %	21,28 %	24,65 %
13	The rate of the financial immobilisations (3/9)	1,39 %	1,26 %	1,15 %	1,13 %	0,85 %
14	The rate of the circulating actives (8/9)	11,79 %	13,42 %	14,10 %	12,91 %	15,33 %
15	The supplies rate (5/9)	2,17 %	0,83 %	0,92 %	0,79 %	0,61 %
16	The claims rate (6/9)	8,83 %	10,63%	10,10 %	10,67 %	12,93 %
17	The rates of availability and monetary means (7/9)	0,79 %	1,96 %	3,07 %	1,45 %	1,79 %

Source: The National Railroad Company "CFR" – SA, Financial Situations

The situation is even more difficult as the development of the railroad infrastructure represents a necessary condition for successfully implementing the other priorities to develop Romania in the next period, contributing to the increase of the mobility of goods and passengers, to the integration of the regional poles of growth into the trans-European transport network.

### 3. The means of improving the financial structure

Considering the difficult economic situation of the National Railroad Company "CFR" – SA, we estimate that the improvement of the financial structure must become an important objective for its proper functioning. The problem consists in the identification of the balance between the transportation prices, the access price into the railroad infrastructure, the level of coverage of the costs of the passengers' transport through the contracts of public services concluded between the railroad operators and the state, the financial support of the state in the railroad domain and the control of costs inside the activities which are partly financed by the state and don't benefit from the self-regulation of the market. Ignoring all these leads to a reduced quality in the railroad services, but also a major risk of accidents, by unfulfilling the repairs on time, because of the lack of financial resources. Under these conditions, we consider that the means of improving the financial structure of the company are the following:

- ❖ the increase of the social capital with the value of the debts at the budget;
- ❖ the allocation, from the budget, of the difference between the value of the expenses of sustenance and the repairing of the railroad infrastructure and the price for using the infrastructure entrusted from the railroad operators, keeping in mind the maintenance at a correspondent level of railroad security;

❖ the cutting down made which corresponds to the restraint of the dimension of the railroad and the organizational structures of the company, with the corresponding diminishing of the number of personnel and costs afferent to the following measures:

- the reducing of the dimension of the railroad network administrated by the company through the closing down, the renting, the eradication and/or the sellment of wards and parts of the railroad;
- the increase in quality of the maintenance and the verification of the infrastructure by using some installations of big and small mechanization; crește
- the reorganization and the modernization of the wiring, from the sorting stations and the stations where these have the normal duration of utility surpassed;
- the restraint of the territorial and administrative structures, according to the foresight in the volume of traffic.

**The reducing of the dimension of the railroad network administrated by the company.** The evolution of the railroad traffic, after 1990, was decreasing, especially when it comes to the goods traffic. The perspectives of the traffic in the next decade aren't so encouraging, but they estimate some growth. Under these conditions, the activity in the railroad stations, dependent especially on the traffic of goods, has decreased substantially. The sizing of the railroad stations was done for the traffic in the period before 1990, the time when the activity in the railroad stations sometimes surpassed their capacity of processing and transit. I realized that, the maintenance of this sizing of the stations is very uneconomic thanks to the big costs of the sustenance, repairs and rehabilitation. Under the requests of streamlining the activity in the railroad infrastructure it is necessary to reduce the dimension of the railroad and way stations to a necessary optimum keeping in mind the following criteria: the

actual activity and the perspectives of the railroad traffic, the requests of the railroad operators tied to the increase of the speed; the exigency in the traffic safety; the requests to reduce the effort of sustenance and repairs; the continuance of the programme of eliminating the unoperable and unprofitable rows.

Nowadays, there is a program approved for the reducing of the devices of rows in the stations, for the next five years, which foresees: the erradication of 25 stations, the elimination of 750 unused rows in other stations, on 500km of built railroad, simultaneously with the elimination of 2000 railway machines; these call for, every year, expenses of 3.000.000 lei<sup>3</sup>. At the actual level of costs of sustenance (20.000 lei per km of road and 3.000 lei for a rail machine), annually, by reducing the network by 100 km and 400 rail machines equivalent, there will be a reducement in costs by 3.200.000 lei<sup>4</sup>.

The increase in quality of the mentenance and the verification of the infrastructure. We consider necessary the fulfilment of some changes in exploitation, among which:

- ⇒ the aquizition of some new plants to overhead the rows which lead to the reducing of the costs of exploatation;
- ⇒ measures regarding a close management of the mentenance and repairs, for the diminishing of the number of dangerous points and speed limits.

It is appreciated that there are approximately 6.000 jobs in the teams of the National Railroad Company "CFR" – SA for meintenace procedures, with am average of aproximately 15 jobs. This number of jobs is big they use manual means.

With the endowment of machines, the efficiency of the team increases substantially and, probably, will make the elimination of the entire team possible, with the passing of time. However, the

economy is based only on two jobs per team, the annual economy can be of approximately 800 thousand lei<sup>5</sup> for the salaries and 2.600 thousand lei in materials. Based on the price and the technical specificity of the equipment, it is possible that the annual investment necessary to be of approximately 13.000 thousand lei, with an amortization of investment within four year. Immediately after the efficiency of these teams tooled up with equipement of little mechanization will become evident, they will obtain other economies by consolidating the endowment and the total elimination of some teams.

The reorganizing and modernization of the wiring. The automation of these wires is positively perceived, which has a strong maintenance inside the company which administrates the railroad. On the whole existent network, there are almost 300 railroad crossings which have manual barrier, operated by the employees (five at each crossroad). By using the automatic signalling, where the mechanic barriers are operated by the employees (an investment of approximately 500 thousand lei<sup>6</sup> for each machine) they eliminate the expenses for salaries, which at each mechanic barrier are of approximately 70 thousand annually. Within thete 350 stations, there are electrodynamic wires, 25 years older. The exploitation of such installation implies high costs with the sustentation and the electrical energy used, because the value of the global efficiency is of 0,5. They use almost 10.000 old railway circuits, from the technological generation back in 1950s, have a high energetic input. The utility of the sub-assemblies of straightening and energetic conversion made up with the nowadays electronics, with a low input abd high fiability, leads to the reducing of losses of energy, eliminates the troubles

<sup>3</sup> \*\*\* Program of rebuilding and reorganizing the National Railroad Company "CFR" – SA, 2009

<sup>4</sup> Ditto

<sup>5</sup> Ditto

<sup>6</sup> Ditto

and boosts the safety of the communication. On certain distances between stations of remote control there is a high number personnel for checking (almost 200 jobs of pointsmen of marks). By introducing “the count of axles” to control the current lines between stations, the safety in travelling by train happens and the reducing of jobs for the pointsmen to confirm liberation of the current line. The introduction of “a count of axle” implies an investment of almost 200 thousand lei, that are absorbed by the economies correspondent to the expenses with the personnel (the salary of five pointsmen of marks) in approximately five years. In addition, there are 19 marshalling yards that use “humps for sorting”, this number is bigger taking into consideration the volume of traffic of goods. The operations to overhead them are very expensive and should substantially be reduced. Each abolished “hump” determines the cutting down of approximately 30 jobs and the elimination of the expenses with the energy and the materials for the maintenance. Because such circulation, is much more efficient one doesn't have to give it up. Although, if the volume of activities is bigger than 500 wagons per day “the circulations with humps” are not economical. Under these conditions, it is necessary that each circulation must be ranked based on the number of wagons sorted per day and should start a program of annual elimination of the unefficient ones. This initiative would lead to the saving of approximately 30 jobs per year, plus the materials used to sustain it and the necessary energy to function. The annual expense with the salary in two parts are of approximately 300 thousand lei<sup>7</sup> and the ones with the energy and the materials are of 400 thousand lei. If the commodity operator considers that a marshalling yard should be kept, “CFR” – SA should keep that

marshalling yard when the commodity operator wants to subsidize the supplementary costs.

The restrains of the territorial and administrative structures. Nowadays, the generalization of the communication based on fiber link allows the achievement of the “wholes of the network”, and the implementation, at the network level, of new types of telephonic centrals allows the secure and rapid prosecution of any links to transmit the informations. By reducing, every year, tow communication timers, they set free almost 60 employees that is an economy of almost 1.000 thousand lei<sup>8</sup>. By reducing the personnel, that works in the central part of the company and in the main regional branches with almost 10%, they will obtain an economy of almost 500 thousand per year. In addition, as a consequence of the interconnection networks of romanian digital railroad transmissions to the european ones, SC “Telecommunications CFR” – SA is an internet distributor, offering this service at high european standards. The interconnection will decrease the costs of the rail operators for the communications outside the railroad system, by almost 50%. With the enclosing of the channels that transmit the information to some private operators through a fiber link, the income of the society of telecommunication will increase and the expenses of the National Railroad Company “CFR” – SA will decrease by almost 1.000 thousand lei<sup>9</sup> per year. Nowadays, the network of tele-printers is technically overdone, the gear is constantly broken and it costs very much, and the personnel that attains the transmission of the tepegrams works in very difficult conditions. The technical endowment of calculation progressed until the basic unities, and all the employees have assumed the way of operating on the computer and they send

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<sup>7</sup> Program of rebuilding and reorganizing the National Railroad Company “CFR” – SA, 2009

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<sup>8</sup> Ditto

<sup>9</sup> Ditto

the information through the electronic mail.

#### 4. Conclusions

In the domain of the railroad infrastructure administration, the optimization of the financial structure is influenced by the specific conditions of the activity held, that is: the company assures the development and the modernization of the railroad network to attain the public railroad transport in Romania which constitutes, by its nature, of a strategic sector and a public service essential for the society; the requests imposed by our country along with the adhesion to the European Union foresee the assurance of the compatibility of the national railroad system to the European system of transport; the insufficiency of proper capitals, which have registered a negative value (2006).

The difficult financial situation of the company is evident from the

presentation of the ways of quantifying of the financial structure.

Noadays, I realized that, the consequence of the effects of the global financial crisis, at the level of our national economy, there have been generated a series of disfunctionality caused, mainly, by the economic factors, which determined that the railroad transport confronts with an important decrease in the traffic of goods and passengers, with negative implications in the financial structure of the National Railroad Company "CFR"- SA.

In conclusion, we consider that, the necessary means to improve the financial structure endorse a series of objectives that lead to the reducing of costs through reorganizing and others, that need funds (investments) to be fulfilled, lead to the streamlining of the activity and that growth of the productivity.

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