

ECONOMIC OPPORTUNITIES FOR THE EXPLOITATION OF COPPER ORE IN THE ROMANIAN CARPATHIANS

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This paper is a synthetic analysis of the Romanian approach of an important underground resource, namely copper ore deposits. Certain elements of the international context have been introduced, highlighting the appreciation of the price of copper, as a result of increased demand from countries with emerging economies and speculative transactions on certain markets. The Romanian government, given that it can not provide funding to modernize the mining companies, is forced to choose as a solution to privatize them. The most emblematic case is the one of the company „Cupru Min”, which is based on the exploitation of ore from the Western Carpathians (Rosia Poieni). For this reason, many of our references relate to data and information on this company.

Key-words: copper ore, mining, metals price, Romania, technology investment

THE POLITICAL AND ECONOMIC CIRCUMSTANCES

Romania is currently undergoing a period of severe economic crisis that was triggered in 2008 [1-2]. The financial relief provided by the International Monetary Fund, the World Bank and the European Commission was conditioned by a series of additional restrictions [3]. The letter of intent addressed to the IMF by the Romanian Government stresses the fact that several state-owned companies need to be privatized. „Cupru Min” is one of these companies, a representative unit of the economic branch of extraction and exploitation of nonferrous ores, which operates in an area relatively rich in such natural resources in the Carpathian Mountains [4]. The company’s privatization strategy has been approved by Government Decision and is annexed as a pledge in the Letter of Intent as part of the precautionary as part of the precautionary Stand-By Arrangement between Romania and the FMI (International Monetary Fund) [5]. The approximate value of the Rosia Poieni copper reserve amounts to € 13-14 billion [6]. According to statistics, there are about 1 billion tons of copper ore, with a 75 % maximum degree of recycling. Thus, 750 million tons of ore can be recovered. The metal that can be obtained from this ore could amount to 2,4 million tons.

Therefore, the fact that SC „Cupru Min” SA Abrud owns the copper mine Roşia Poieni, that holds the above mentioned reserves, estimates the reserves of the company at about US\$ 7,5 billion (€ 5,6 billion), at the current price of copper of about US\$ 8 300/tons.

THE SUBSTANTIAL RISE OF THE COPPER PRICES

Less than a year ago, foreign investors have come across a new opportunity on the Romanian market. It involved the extraction of the copper ore from the Ore Mountains of the Western Carpathians. This new interest has also been triggered by the fact that the spot prices of copper as quoted on international stock markets have increased significantly in the past 30 years, starting from US\$ 1 000/ton in the 80’s, rising to US\$ 3 000/ton in 1988-1998, declining to under US\$ 2 000/ton in 1999-2004 and subsequently rising since 2005 (Figure 1) [7]. At the end of 2011, copper was quoted at US\$ 7 600/ton and is now listed at US\$ 8 500/ton.

The substantial rise of the copper prices is due to the increasing demand from the world’s emerging economies, such as China, India or Brazil – countries that are growing at an unprecedented rate. The increasing price

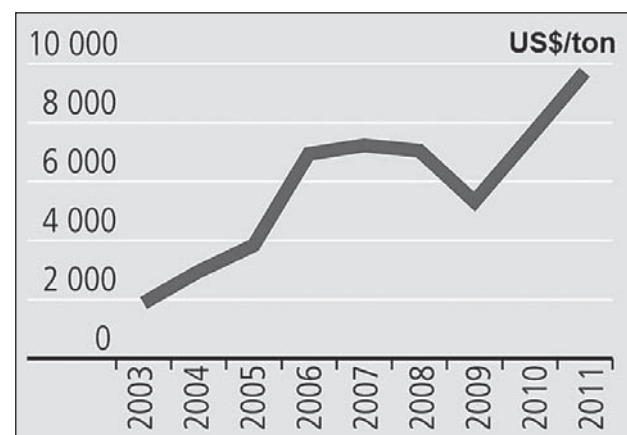


Figure 1 Evolution of the world price of copper (US\$/ton, 2003-2011) [8]



Figure 2 Carpathian copper area (RO) [11]



Figure 3 The Rosia Poieni mining site („Cupru Min” SA) [12]

of copper is also influenced by the speculative transactions on international stock markets, since metal can be bought and sold freely and exclusively for profit. „Barclays Capital” anticipates that the international copper market will record a deficit of 363 000 tons in 2012 [9]. Note that the copper ore reserves in Romania are to be found at Roşia Poieni (Abrud - Alba), Moldova Nouă (Caraş-Severin), Bălan (Harghita), Altân Tepe (Tulcea) and Baia de Aramă (Mehedinţi). The mines of Altân Tepe and Baia de Arama are already closed and being rehabilitated. The license for the copper mining operations of Moldova Noua has been taken over by SC „Minco Cupru Mineral” SRL from Switzerland that will soon resume the extraction activities [10]. The largest copper reserve is to be found in Roşia Poieni (Ore Carpathians, Alba county, Figures 2-3), and is currently being extracted by SC „Cupru Min” SA Abrud, which is a state-owned company.

ADVANTAGES FOR THE DEVELOPMENT OF A NEW INVESTMENT PROJECT – ACQUIRING „CUPRU MIN” ABRUD

The main activity of SC „Cupru Min” SA Abrud is the extraction and specific delivery of copper ore resources/reserves found in the mining perimeter of Rosia Poieni. This area has been an imminent ecological disaster threat until a few years ago. Starting with the last quarter of 2011, the state-owned company was launched for privatisation.

SC „Cupru Min” SA Abrud has an annual extraction capacity of 1,5 million tons of ore. The management of the company believes that the sustainable exploitation of the mine requires the productive capacity to reach 3,5 million tons of extracted and processed ore per year, 3,5 million tons of sterile per year and one million tons of ore for heap leaching (for dissolving gold from the ore). In terms of revenue [13], the company had a net income of 18,8 million lei (€ 4,5 million) in 2010 – Figure 4, with a turnover of 113,9 million lei (€ 27,0 million), after several *unprofitable* years during which the mine was closed due to the low prices of copper on the stock markets.

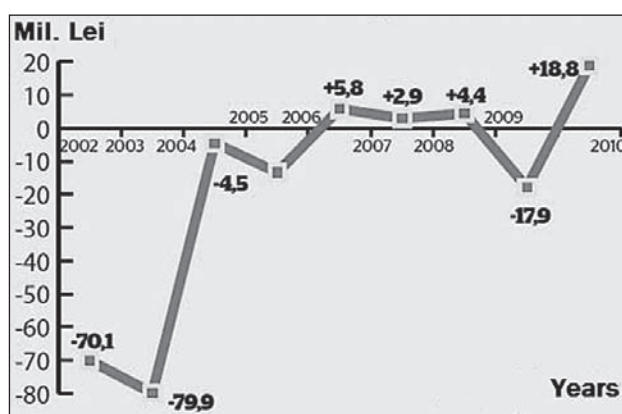


Figure 4 The financial evolution of „Cupru Min” SA Abrud (Mil. Lei, 2002-2010) [14]

The profit and loss indicators, and also the indicators reflecting the profitability, for the period between years 2006 and 2010, are presented in Tables 1 and 2.

Table 1 The indicators of the profit-and-loss account (2006-2010) [15]

Indicators	2006	2007	2008	2009	2010
Turnover (Mil. Lei)	104,7	31,3	29,3	20,2	113,9
Revenue (Mil. Lei)	116,8	39,6	35,8	32,3	115,3
Expendit. (Mil. Lei)	109,8	36,6	30,2	50,3	96,5
General Profit (Mil. Lei)	6,9	2,9	5,6	-17,9	18,8
Net Profit (Mil. Lei)	5,8	2,9	4,4	-17,9	18,8
Employees (No. of pers.)	824,0	187,0	148,0	203,0	431,0

Table 2 Profitability indicators (2006-2010) [12]

Indicators	2006	2007	2008	2009	2010
General Profit Rate/ %	6,7	9,4	19,1	-88,8	16,5
Net Profit Rate/ %	5,6	9,4	15,1	-88,9	16,5
The Capitalization of Equity Pre-tax Capital/ %	38,6	-55,6	26,1	-964,7	112,7
The Capitalization of Equity Post-tax Capital/ %	32,4	-55,6	20,8	-65,3	112,6

The performance of the company under the present circumstances (see also Figure 5) can be maintained for only one year and is conditioned by extensive investments in restructuring and modernisation.



Figure 5 Obsolete mining equipment [16]

CONCLUSIONS. LUCRATIVE OUTCOME OF PRIVATIZATION OF „CUPRU MIN”

The privatisation of this company with the financial support of the Romanian state is directed at continuing the copper ore exploitation activity in the Rosia Poieni mining site, attracting funds for technological and environmental investment, keeping and creating new jobs, as well as encouraging the horizontal development of other industrial activities. After privatization, „Cupru Min” could extract around 18 000 tons of copper per year, if extensive investment is made in the productive capacity. The necessary technological investment was estimated at € 67,3 million, of which € 61,0 million should be invested by 2015, while the environmental investment amounted to € 32,2 million, of which € 17,0 million would be expected in 2012 alone [17]. However, it is noteworthy that an outcome level of 18 000 tons per year would generate a turnover of about US\$ 150 million (€ 112 million) and significant profits. If we take into account the acquisition price - € 200,8 million, the transaction amounted to approximately 20 times the net annual profit of Cupru Min. Since the restructuring and modernisation of mining plants has become costly, if not impossible, the Romanian government has admitted that the privatisation of such companies is a lucrative and reasonable solution. Note that the efficient extraction of copper cannot be performed without the use of modern equipment, given the proportion of economic copper ore extracted at the Rosia Poieni mine (0,3 %). This will entail a significant financial effort, as has been pointed out above. If no further investment is made, the

shutdown of the site would entail rehabilitation costs that will amount to € 92 million, solely provided by the state, apart from the costs related to the discharge of the 431 miners currently employed there.

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Note: The responsible for English language on the lectures from Faculty of Economics, Suceava, Romania