THE RELATIVE RATES OF THE COMPANIES' ABILITY TO PRODUCE BENEFITS

Nicoleta Bărbuţă-Mişu[1]
Mihaela-Felicia Bodea[2]

ABSTRACT. The company's ability to generate results from their production and sales can be determined by a series of rates comparing an indicator reflecting the results and an indicator reflecting the overall flow of the activity, generally measured by the turnover (sales) or total assets. Using the comparative method over a period of five years to five companies acting in the metallurgical sector in this paper has been analyzed the evolution of net operating margin rate, net profit rate, gross operating margin rate, rate of free cash-flow, return on total assets and return on equity. Based on these findings it was concluded that the variation of performance of the companies affects and influences funding arrangements considered by the companies' managers.

Keywords: metallurgical sector, profit, return on equity, funding sources.

JEL Codes: G30, G32

Introduction

In accordance with its stage of development, the financial environment provides to companies a more or less substantial range of financing means (Helfert, 2006). These means are much diversified in countries with developed financial systems, but in most developing countries, these remains limited however to basic financial techniques. But, whatever the context, companies' managers are faced with choosing of funding sources, according to financial performance (Vasile, 2010).

The preference for self financing at the expense of traditional credit has become in the late 1990s a constant in financial structure of companies, worldwide. There is a major change in mentality of businesses in some Latin countries such as France and Italy, so if self financing in the early 1990s had a share of more than 25% in the structure of financial resources, in less than a decade, its share significantly increased, reaching 66% at present (Michel, 2001). In our country, due to the financial performance of the companies and activities developed without obtaining sufficient resources for investments, the companies use more debt financing (Bărbuţă-Mişu, 2009).

Between the factors that inter-influence the funding process in the companies we found also the creating an optimal balance between risk and income, quality management (Boca, 2012), maximizing the company's value; determining profitability able to appreciate the profitability of the company; the system of financing instruments to prevent, protect and ensure resources; the specific system of indicators for assessing the quality and results of the company (Onofrei, 2004).

For obtaining funding sources for investments, banks check the ability of the company to produce profit that is reflected in a range of relative rates as: net operating margin rate, net profit rate, gross operating margin rate, rate of free cash-flow, return on total assets and return on equity.

The paper is structured in 3 section followed by conclusions: in the section 2 is presented the evolution of the metallurgical sector in Romania; a short literature review about studies realized on

---

[1] "Dunarea de Jos" University of Galati, Faculty of Economics and Business Administration, 59-61 Bălcescu Street, Galati, Romania, *e-mail: Nicoleta.Barbuta@ugal.ro*
[2] "Dunarea de Jos" University of Galati, Faculty of Economics and Business Administration, 59-61 Bălcescu Street, *e-mail: felicia_mihaela19@yahoo.com*

metallurgical sector and profitability assessment in realized in the section 3; in the section 4 is presented the research methodology and in section 5 is analysed the evolution of relative rates that reflect the companies' ability to produce profit to those 5 companies acting in the metallurgical sector.

Metallurgical sector and their tendencies in Romania

European metallurgical sector is a fundamental link in the industrial supply chain of the European Union because it produces components and finished goods for all other manufacturing sectors. The components are supplied, in particular, to the automotive industry, aerospace, transport, processing industry, such as food, pharmaceutical, chemical, petrochemical and machine construction industry, particularly mechanical engineering, which means that the sector itself constitutes a key-element in the transition to an economy with a more efficient management of resources (NCP, 2006).

The steel industry in Romania is diversified, the companies operating in this sector being in a continuous process of restructuring. The most important company producing steel, Sidex Galaţi was acquired by LNM Ispat Company that later became known as ArcelorMittal. Privatization of Sidex is considered very important for industry reform in the country, offering to the metallurgical sector attractive investment opportunities (MININD, 2013). Metallurgical industry in Romania is 100% privatized (Păun, 2010) and the Russian company belonging to Igor Zyuzin holds 80% of Romanian production of reinforcing bars, thus managing to control a significant share of metallurgy in Romania.

The steel industry in Romania is a very important industry for the national economy because it is multiplier of gross value added, industrial production, employment and generator of taxes (Orgonaţ, 2012). In the year 2012 was realized: 2% of EU steel production and contributed to the country's macroeconomic indicators, namely: 8% of industrial production, 11% of exports, 22,500 employees at the end-year, value-added of Euro 562 million (0.93% of that achieved at European Union level) with an apparent labour productivity of 14,800 Euro / employee, i.e. only 25% of EU average (MININD, 2013).

Romania is one of the few European Union countries that recorded a trade surplus on steel products (Nedelcu, 2013), this being due to the fact that Romania registered a structural surplus of production capacity acquired during the centralized economy, which makes that local industry to be heavily dependent on external demand. On average, 70% of local production of steel (as raw material or final product) is directed to export, and this share has increased in 2008-2009.

In 2011, Romania's steel production was of 3.8 million tons, up from 3.7 million in 2010 and 2.8 million in 2009, but down compared to the 5.3 million tons of steel products in 2008, and 6.3 million tons in 2007 and 2006. We remember that in 1989, Romania was producing over 14 million tons of steel. In January 2012, according to statistics from World Steel Organization, Romania's steel production totalled 330,000 tonnes (Figure no. 1), higher with 17.8% compared to January 2011. With this percentage, Romania was ranked on second place among the EU member countries, only Poland recorded a higher growth rate (+ 20%).
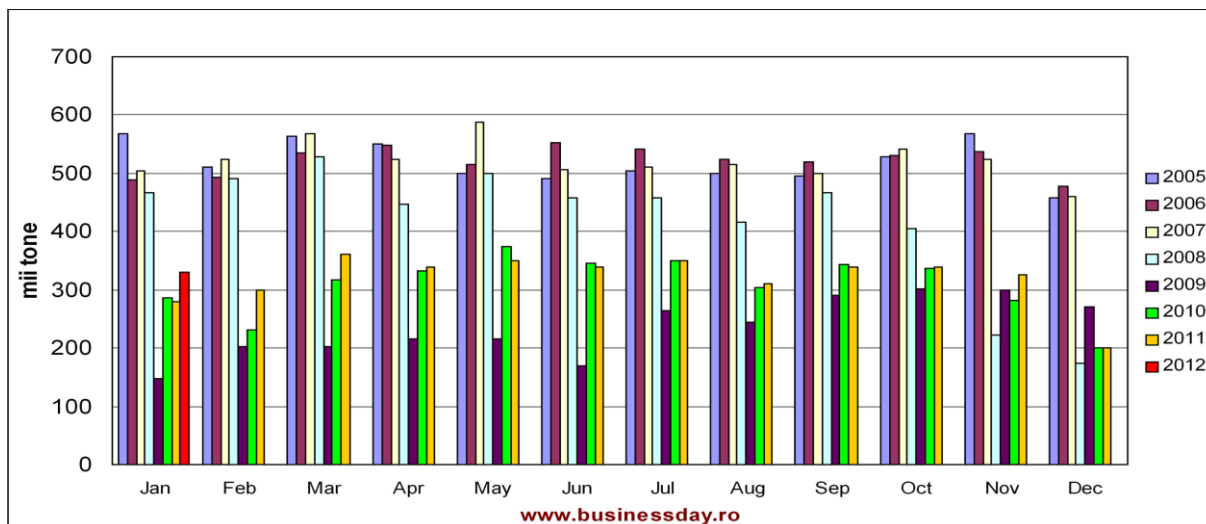
Fig. no. 1. **Romania's steel production in the period 2005-2012**
Source: www.businessday.ro.

Metallurgical sector continues to face pressure generated by production overcapacity, accumulated over the years and low profit margins. At the end of 2013, global industrial production indicators showed an increase of 3.5% globally. It is anticipated that this trend will continue in 2014 with an estimated increase of about 4% in 2014 (Stanciu, 2014). During the same period, the global demand for steel increased by 3.2% on 2012 and it is estimated that global steel demand will be accelerated in 2014, up to 3.3%.
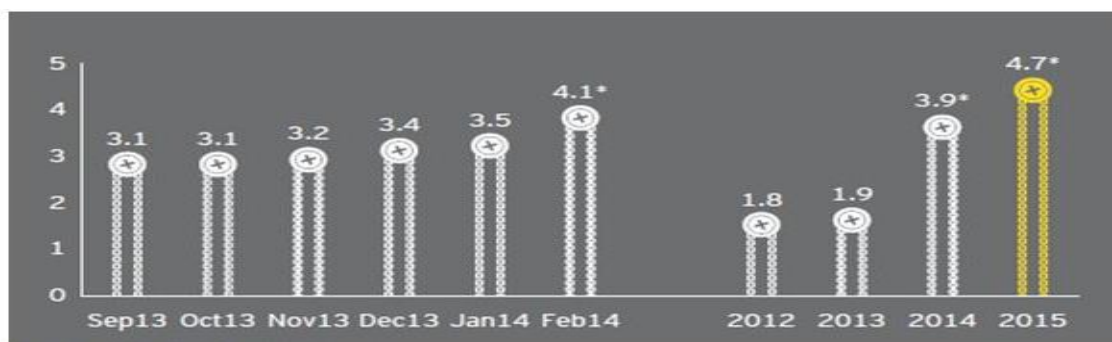

Fig. no. 2. **Industrial production growth worldwide in the period 2013-2015**
Source: www.wall-street.ro

The best estimates for 2014 compared to 2013 and the forecast of a growth accelerated in 2015 and in the next period, the steel production is concentrated and is made plans to take advantages of future opportunities as well (Zamora, 2014). Thus, there are signs of economic recovery and growth of steel demand in the most markets.

Steel producers operate in a competitive international business environment, where production costs are crucial in maintaining market share. Because of this, most likely, 2014 will be similar to the previous years for players in Romania, in the sense that they will be forced by circumstances of energy prices and will continue to restructure and streamline operations. The fact that to the global industry the prospects are again optimistic and it could be an additional support in an attempt of unprofitable groups to exit from the losses area.

Literature review

At the international level, the metallurgical sector is less studied from point of view of profitability; for example, Czillingová et al. (2012) in his paper deals with the implementation of

multidimensional statistical methods used to compare the financial health of selected global steel producers, showing the evolution of the steel industry in years 2003-2007 using factor analysis, multidimensional scaling and cluster analysis, but is not oriented only to relative rates of profitability.

For this sector we try to analyse in this paper the ability of the companies to produce benefits that may be analysed by using some financial rates as: net operating margin rate, net profit rate, gross operating margin rate, rate of free cash-flow, return on total assets and return on equity. These rates reflect the financial performance of the companies, expressed only by the profitability. In the literature, the financial performance is usually reflected by many other different ratios, used in a mix of financial rates related to profitability, liquidity, solvency, leverage etc. This mix of relative rates is used in financial performance assessment or bankruptcy assessment models of the companies. The ratios studied in this paper are referred only to profitability, that is the ability of the companies to produce profit. We didn't find in the literature a similar study that analyse only profitability. Okechi, J.K. (2004) presented in a project study a profitability assessment tool developed for the purposes of evaluating the feasibility of fish farming investment and operations. Also, profitability is studied in relation with economic evaluation in human resources management (Pennig and Vogt, 2008).

The profitability is usually included in the functions used in models of bankruptcy prediction. For example, Thus, Saretto creates a model of corporate risk of bankruptcy assessment in a continuous way using financial ratios which reflect both book value and market value (Triandafil & Brezeanu, 2008). Alkhatib and Bzour (2011) realized a study on industrial companies and non-financial service, in order to report the effect of financial ratios in bankruptcy prediction in Jordanian listed companies by using Altman and Kida models.

Brédart (2014) developed an econometric forecasting model and he found that this model using three simple, few correlated and easily available financial ratios as explanatory variables shows a prediction accuracy of more than 80%. Dakovic *et al.* (2010) developed statistical models for bankruptcy prediction of Norwegian firms using information on the industry sector. The models developed are shown to outperform the model with Altman's variables. Chung *et al.* (2008) examined the insolvency predictive ability of different financial ratios for ten failed finance companies during 2006-2007 in New Zealand and they found that four of the five Altman (1968) ratios, one year prior to failure, were superior to other financial ratios for predicting corporate insolvency.

Research Methodology

Starting from the tendencies presented in the metallurgical sector from Romania we will analyse the ability to produce benefits using 6 relative rates, considering 5 companies acting in this sector. Financial and accounting activity must be organized so as to provide shareholders and key decision makers the objective and fair information related on market value of the company, its market position, as well as information about the degree of vulnerability of the business in different market contexts in order to appreciate the financial performance of the company used for attracting funding sources for the financial situation of the company.

The article offers an overview of the methods and techniques for assessing the companies' ability to produce profit. There are presented several relative rates, such as: net operating margin rate, net profit rate, gross operating margin rate, rate of free cash-flow, return on total assets and return on equity. The considered indicators have an important role because they help company's managers to decide the types of financing that the company should use depending on financial performance.

The analysis was made at five companies acting in the metallurgical sector (ArcelorMittal Hunedoara, ArcelorMittal Iasi, ArcelorMittal Roman, Galfinband SA and Alum SA Tulcea), given the fact that in terms of sectoral risk at local level in Romania are distinguished several sectors with

a high number of insolvent companies during 2012 compared to 1000 companies active in the sector; and metallurgical industry is one of these sectors with a number of 9 insolvencies in 1000 active companies and 62% of the companies with a high risk, that means at the global level was recorded an increase in credit risk. These data highlight the specific problems in the financial performance of companies acting in the metallurgical sector. Thus, the aim of this study is to highlight the ability of the companies to produce profit, using a set of relative rates used in this study that reflect the financial performance of the companies, that are presented in Table no. 1:

Table no. 1. **The relative rates reflecting financial performance**

Indicator	Formula
Net operating margin rate	$\dfrac{Operating\ profit}{Turnover}$
Net profit rate	$\dfrac{Profit\ after\ tax}{Turnover}$
Gross operating margin rate	$\dfrac{Gross\ operating\ margin}{Turnover}$
Rate of free cash-flow	$\dfrac{Self-financing\ capacity}{Turnover}$
Return on total assets	$\dfrac{Profit\ aftertax}{Total\ assets}$
Return on equity ratio	$\dfrac{Net\ income}{Equity}$

Source: Selection made by authors.

Net operating margin rate (NOMR) expresses the efficiency of basic activity of the enterprise. For businesses reviewed this indicator is oscillating with positive and negative values.

Net profit rate (NPR) expresses the global efficiency of the company, on the entire activity of the company.

Gross operating margin rate (GOMR) expresses the efficiency of operating activity. Gross operating margin (GOM) is that result which allows the financing of investments, external sources remuneration, shareholder remuneration and self-financing. GOM is a balance that includes only incomes that will be collected and expenditure that will be paid.

Rate of free cash-flow (FCFR) measures the surplus of resources at companies' disposal in order to secure financing needs and staff remuneration.

Return on total assets (ROA) expresses the company's ability to bring value to economic means within its core activity; is a net profitability of interest and taxes of the invested profit.

Return on equity (ROE) is an indicator of company's profitability by measuring how much profit the company generates with the money invested by common stock owners. Return on equity shows how much money of earnings result from each currency unit of equity.

Analysis the evolution of relative rates

In order to illustrate the evolution of relative rates that reflect the companies' ability to produce profit have been considered five companies acting in the metallurgical sector (ArcelorMittal Hunedoara, ArcelorMittal Iasi, ArcelorMittal Roman, Galfinband SA and Alum SA Tulcea), that were analyzed over a period of five years.

Figure no. 3 reflects net operating margin rate to those five metallurgical companies in the period 2008-2012. In the case of the first two companies, ArcelorMittal Iasi and ArcelorMittal Hunedoara there is a similar evolution of this indicator. In 2008, net operating margin rate has a positive value, then take negative values that decrease from one year to another. This highlights the

problems faced by the two companies in the production and distribution activities as expenses exceed revenues generated by this activity. Meanwhile, after obtaining a negative result shows that the sales generated from production activities are lower than expected expenses for producing traded goods. In this situation, companies would be forced to seek loans from affiliated companies or bank loans in order to compensate for this shortfall.

For enterprises ArcelorMittal Roman and Alum SA Tulcea, the rate registered negative values in four of the five years analyzed (for ArcelorMittal Roman the positive result is recorded in 2012, and for Alum SA Tulcea in 2009). Also, the production activity, in the case of these two enterprises, does not give the expected return and lead to the choice of borrowed sources of funding. The consequence of these negative rates is highlighted in the net result of the companies that registered profit in the years in which this rate is positive because the difference between sales of goods and goods expenditure is positive and companies no longer need to resort to borrowed sources for financial support.
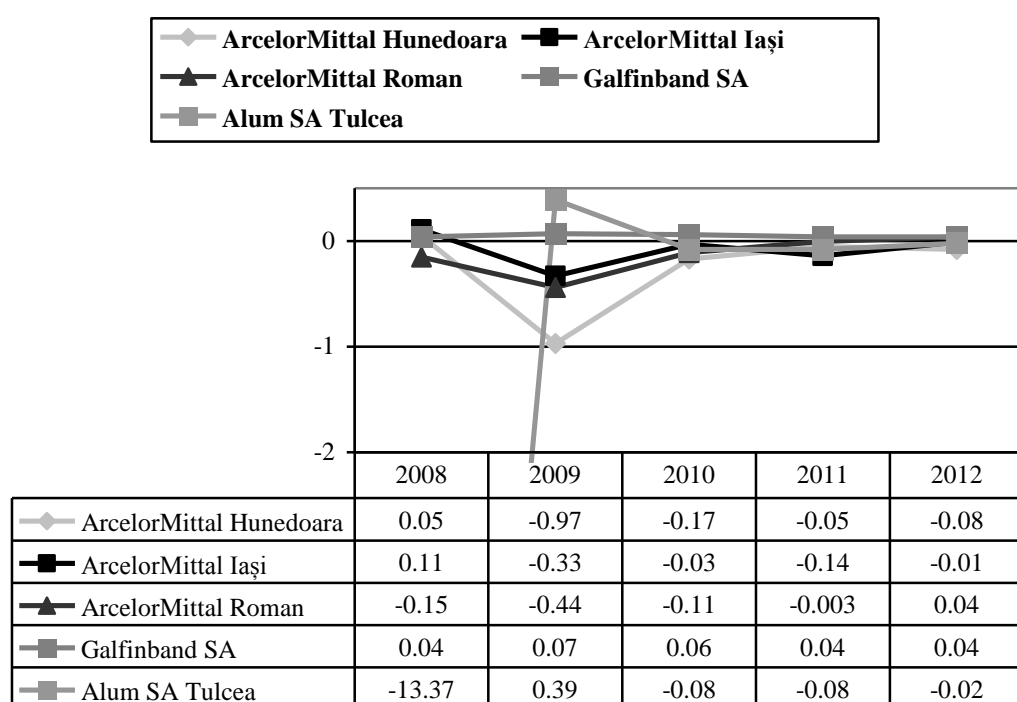
	2008	2009	2010	2011	2012
ArcelorMittal Hunedoara	0.05	-0.97	-0.17	-0.05	-0.08
ArcelorMittal Iași	0.11	-0.33	-0.03	-0.14	-0.01
ArcelorMittal Roman	-0.15	-0.44	-0.11	-0.003	0.04
Galfinband SA	0.04	0.07	0.06	0.04	0.04
Alum SA Tulcea	-13.37	0.39	-0.08	-0.08	-0.02

Fig. no. 3. **Net operating margin rate**
Source: Calculations made by the authors based on data taken from the Profit and loss account of the companies in the period 2008-2012

The only company that obtains a positive value of this indicator over the entire period analyzed is Galfinband SA Galati which demonstrates the financial stability of this company and continually balancing the expenditures with revenues. In fact this is highlighted in the net result of this company that obtain profit throughout the period analyzed, which proves once again a good financial policy.

Net profit rate of the companies in the period 2008-2012 is highlighted in the Figure no. 4. This rate is similar to the previous results, recording mostly negative values. This is a normal situation, given the amount of negative operating result which has a significant influence in determining the net result. The result after tax expresses negative values related to companies' sales and shows once again that companies (except Galfinband SA Galati and Alum SA Tulcea) have to resort to borrowing in order to cover expenses arising from production activities.

Sales obtained has very small percentage compared to total costs of the company and so can not cope with the flow of debt only with possible revenues from their activity. Also, negative values demonstrate that companies registered losses during the study period and thus difficulties in facing with market competition. Some efforts are made to maintain financial stability enjoyed by the companies Galafinband SA Galati and Alum SA Tulcea, demonstrated by values oscillating and close to zero registered by analyzed indicator.

However, the efforts and policy adopted is one effective given that the result isn't negative, except for Alum SA Tulcea which has a negative value in 2008, but starting with 2009 become positive until 2012, when again become negative. This situation shows that the company has encountered some financial problems, but the situation is not alarming given that the negative value is quite small which means that these problems will be fixed.
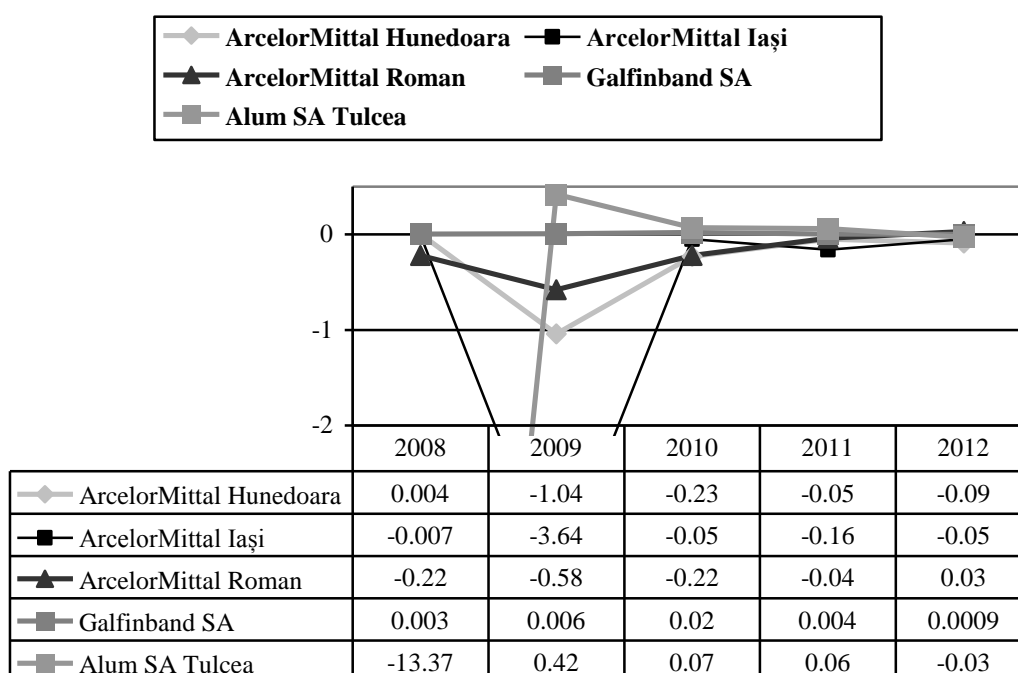
	2008	2009	2010	2011	2012
ArcelorMittal Hunedoara	0.004	-1.04	-0.23	-0.05	-0.09
ArcelorMittal Iași	-0.007	-3.64	-0.05	-0.16	-0.05
ArcelorMittal Roman	-0.22	-0.58	-0.22	-0.04	0.03
Galfinband SA	0.003	0.006	0.02	0.004	0.0009
Alum SA Tulcea	-13.37	0.42	0.07	0.06	-0.03

Fig. no. 4. **Net profit rate**
Source: Calculations made by the authors based on data taken from the Profit and loss account of the companies in the period 2008-2012

Gross operating margin rate to those five metallurgical companies in the period 2008-2012 is reflected in Figure no. 5. This rate provides another measure of the efficiency of core activity, based on a more reliable indicator of outcome than operating result, and measure the level of gross

operating result independent of financial policy, investment policy, tax incidence and extraordinary

	2008	2009	2010	2011	2012
ArcelorMittal Hunedoara	0.13	-0.44	-0.05	0.05	0.02
ArcelorMittal Iași	0.22	-0.21	0.02	0.04	-0.02
ArcelorMittal Roman	-0.06	-0.22	-0.06	-0.01	0.07
Galfinband SA	0.07	0.12	0.11	0.08	0.07
Alum SA Tulcea	-7.98	-1.13	0.05	0.04	0.82

items.

Fig. no. 5. **Gross operating margin rate**
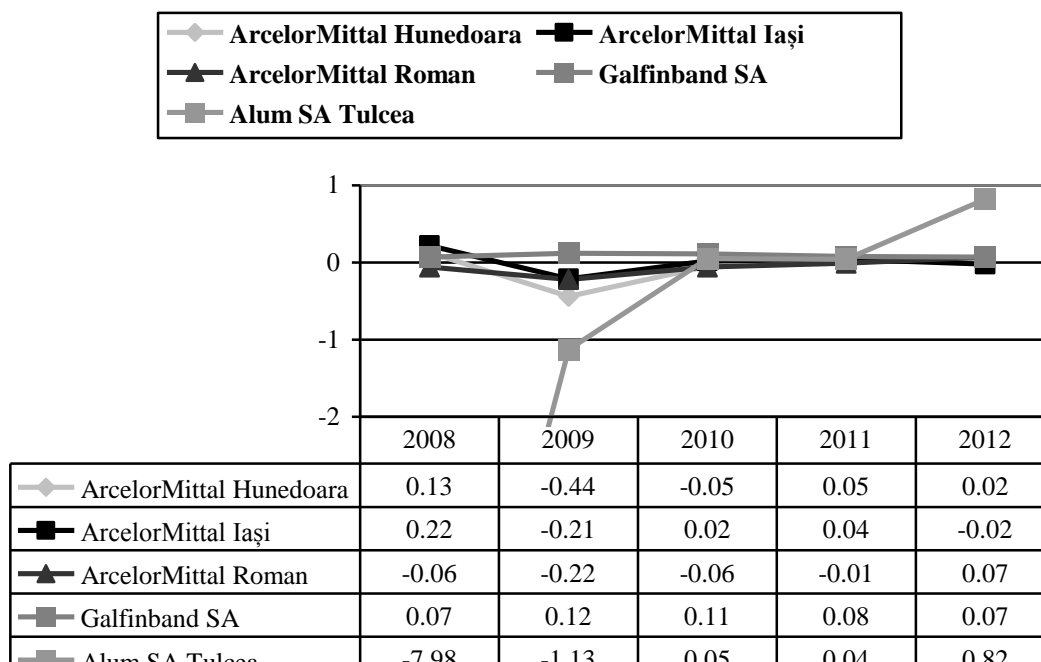*Source: Calculations made by the authors based on data taken from the Profit and loss account of the companies in the period 2008-2012*

The indicator shows a fluctuating trend for companies ArcelorMittal Hunedoara, ArcelorMittal Iasi and Alum SA Tulcea with negative values in two of the five years analyzed (2009-2010 for ArcelorMittal Hunedoara, 2009-2012 for ArcelorMittal Iasi and 2008-2009 for Alum SA Tulcea) followed by positive values.

This shows that companies have experienced some financial problems and rapid renewal of equipment. These companies have taken measures to increase the value added of sold products, reducing staff salaries and contracting of short-term loans from companies in the group, which resulted in achieving a positive and increased value in the following years. For companies ArcelorMittal Roman and Galfinband SA Galati these rates had a reverse evolution.

The company ArcelorMittal Roman registered negative results in the period 2008-2011, which means that the company is facing with a financial instability reflected in impossibility to honour any financial obligations or to finance the development of new investment. However, in 2012 there is an improvement in this situation because is obtained a positive outcome of the indicator. This means that in the company have taken measures to accelerate the collection of outstanding claims and improve the policy for additional costs in order to achieve financial stability.

In contrast, the company Galfinband SA Galati achieved a positive value for the entire period under review and thus demonstrating once again the company's financial stability and their ability to make profits and remunerate invested capital by the distribution of the profit for creating reserves.

Figure no. 6 highlights the free cash-flow rate of the companies in the period 2008-2012. Each of the companies experiencing financial problems during the period analyzed (ArcelorMittal Hunedoara in 2008-2009, ArcelorMittal Iasi in 2010 and 2012, ArcelorMittal Roman in 2008-2011 and Alum SA Tulcea in 2008) thereby causing the loss of financial autonomy and the absolute control over the company in order to overcome these difficulties and to continue the activity, the companies being forced to take loans for short or long time and to speed the recovery of outstanding

receivables. By implementing these measures is observed the financial recovery of companies during the next periods and the possibility of debt repayment.
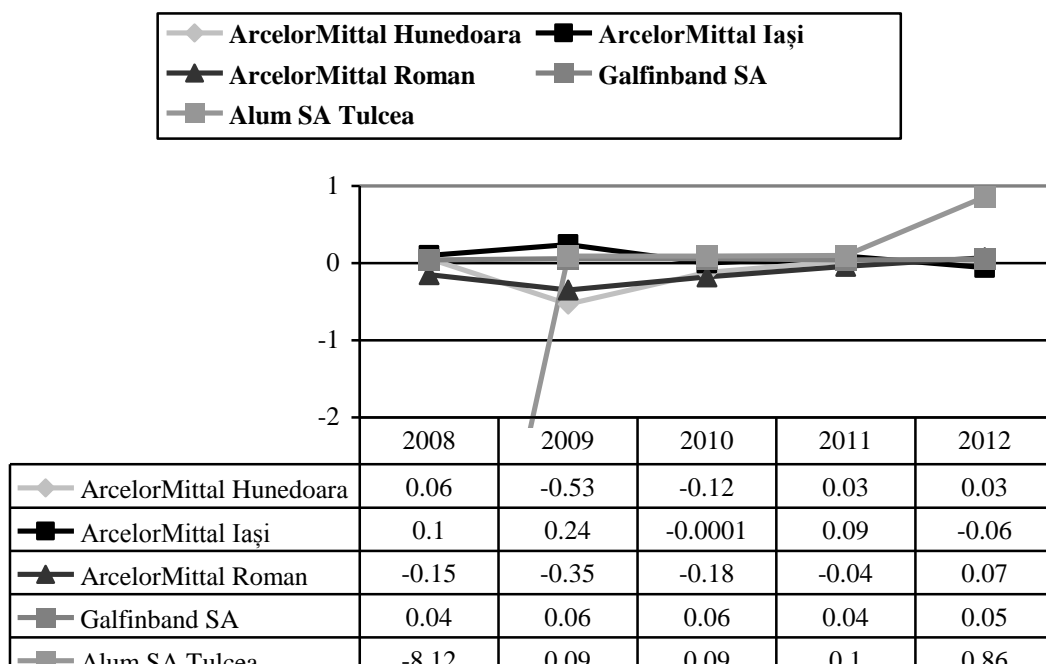
	2008	2009	2010	2011	2012
ArcelorMittal Hunedoara	0.06	-0.53	-0.12	0.03	0.03
ArcelorMittal Iaşi	0.1	0.24	-0.0001	0.09	-0.06
ArcelorMittal Roman	-0.15	-0.35	-0.18	-0.04	0.07
Galfinband SA	0.04	0.06	0.06	0.04	0.05
Alum SA Tulcea	-8.12	0.09	0.09	0.1	0.86

Fig. no. 6. **Rate of free cash-flow**
Source: Calculations made by the authors based on data taken from the Profit and loss account of the companies in the period 2008-2012

Galfinbad SA Galati achieve positive results of this rate, which means that the company has a surplus of resources which gives the possibility to finance new investments and payment of tax liability using own resources rather than using borrowed sources. In this way, the company maintains its financial autonomy and capacity of self-financing the activity.
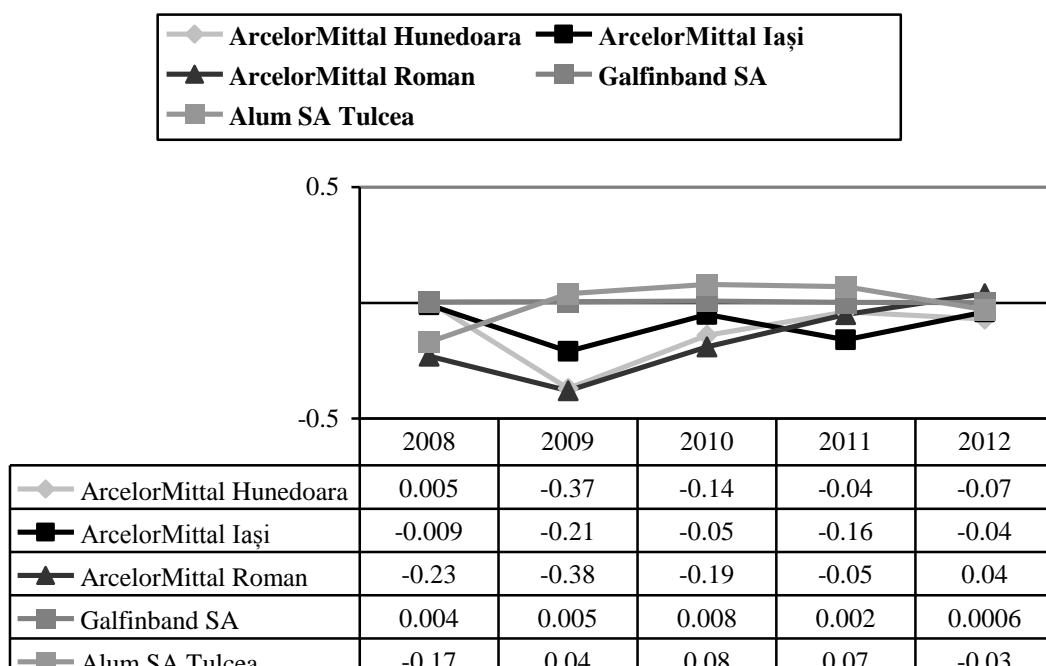
	2008	2009	2010	2011	2012
ArcelorMittal Hunedoara	0.005	-0.37	-0.14	-0.04	-0.07
ArcelorMittal Iaşi	-0.009	-0.21	-0.05	-0.16	-0.04
ArcelorMittal Roman	-0.23	-0.38	-0.19	-0.05	0.04
Galfinband SA	0.004	0.005	0.008	0.002	0.0006
Alum SA Tulcea	-0.17	0.04	0.08	0.07	-0.03

Fig. no. 7. **Return on total assets**
Source: Calculations made by the authors based on data taken from the Profit and loss account of the companies in the period 2008-2012

Return on total assets to those five metallurgical companies in the period 2008-2012 is reflected in the Figure no. 7. The companies Galfinband SA Galati and Alum SA Tulcea obtained positive value and reflects the possibility for companies to obtain profit from investments, activities of production and marketing of products. This highlights the ability of companies to cover all expenses, investments and long-term and debt by using the profit.
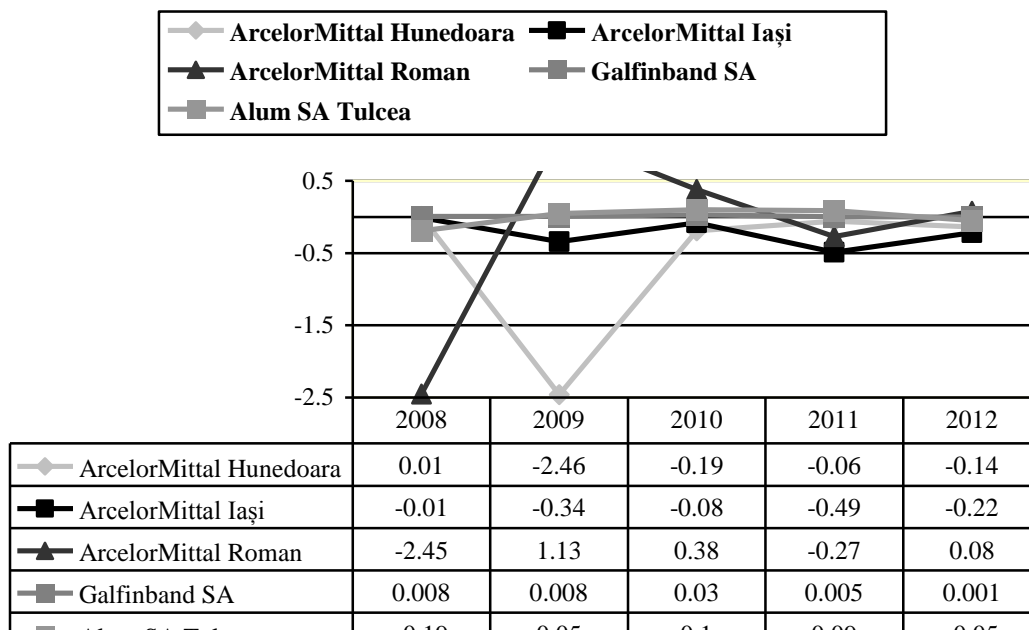

	2008	2009	2010	2011	2012
ArcelorMittal Hunedoara	0.01	-2.46	-0.19	-0.06	-0.14
ArcelorMittal Iași	-0.01	-0.34	-0.08	-0.49	-0.22
ArcelorMittal Roman	-2.45	1.13	0.38	-0.27	0.08
Galfinband SA	0.008	0.008	0.03	0.005	0.001
Alum SA Tulcea	0.19	0.05	0.1	0.09	0.05

Fig. no. 8. **Return on equity ratio**
Source: Calculations made by the authors based on data taken from the balance sheet and Profit and loss account of the companies in the period 2008-2012

In the case of other companies, this indicator takes negative values which proves difficult situation of the companies. They can not finance alone their investment and production activities because the net income is negative. In this situation, companies are forced to use a series of borrowed sources: bank loans, loans from related companies to support the company's operations and acquisitions.

Figure no. 8 highlight the return on equity in the period 2008-2012, that was mostly negative to the analysed companies. The negative result is given by the value of net result that reflects losses in most years. This situation demonstrates that shareholders do not obtain profitability and earnings that they are expected from the company. Therefore, the amount of profits earned in subsequent years is used for financial recovery and to cover losses from previous years.

In the case of companies (Galfinband SA Galati and Alum SA Tulcea) that obtain positive values, shareholders invest profits earned in reserves in order to increase the activity in the future periods.

Conclusions

The main concern of this research was to highlight the importance of the companies' ability to produce profit for managers in order to take the best decision for financing companies' activity, for development. The analysis shows that the majority of companies have a weak financial performance reflected in relative rates analysed. Although, at the level of metallurgical sector was

registered in the last period an increase in production, we found that analysing individually the companies, the financial differs from a company to another, and for the same company in analysed interval, that means an unstable situation in the sector.

So, in this sector occur rapid and profound changes which require rapid and accurate decisions in the operating, investing and financing activities of the companies in order to take advantage of opportunities and avoid or limit losses generated by risk. Therefore, the management should be in line with the theory and experience in financial matters in order to take the best decisions for the company.

References
1. Alkhatib, K. and Al Bzour, A.E. (2011). Predicting Corporate Bankruptcy of Jordanian Listed Companies: Using Altman and Kida Models, International Journal of Business and Management, Vol. 6, No. 3, pp. 208-215.
2. Altman, E. I. (1968). Financial ratios, Discriminant Analysis and the prediction of Corporate Bankruptcy, Journal of Finance, Vol. 23, September, pp. 589-609.
3. Bărbuţă-Mişu, N. (2009). Corporate finance, Bucharest: Didactică şi Pedagogică.
4. Boca, G.D. (2012). SWOT analysis to improve quality management production, Procedia - Social and Behavioral Sciences, Vol. 62, pp. 319 – 324.
5. Brédart, X. (2014). Bankruptcy Prediction Model: The Case of the United States, International Journal of Economics and Finance; Vol. 6, No. 3, pp. 1-7.
6. Chung, K. C., Tan, S. S., & Holdsworth, D. K. (2008). Insolvency prediction model using multivariate discriminant analysis and artificial neural network for the finance industry in New Zealand. International Journal of Business and Management, Vol. 3, Issue 1, pp. 19-29.
7. Czillingová, J.; Petruška, I., Tkác, M. (2012). Financial and economic analysis of steel industry by multivariate analysis, Ekonomicky casopis, Vol. 60, pp. 388-405.
8. Dakovic, R., Czado, C. and Berg, D. (2010). Bankruptcy prediction in Norway:a comparison study, Applied Economics Letters, Vol. 17, Issue 16/18, pp. 1739 – 1746.
9. Helfert, E. (2006). Techniques of financial analysis, Bucharest: BMT.
10. Michel, A. (2001). Financial macroeconomics, Vol. 1, Bucharest: Coresi.
11. Nedelcu, M. (2013). Romania has achieved 2% of EU steel production, available on-line at www.focus-energetic.ro, 21 August 2013.
12. Okechi, J.K. (2004). Profitability assessment: a case study of African Catfish (Clarias Gariepinus) farming in the Lake Victoria Basin, Kenya, available at http://www.unuftp.is/static/fellows/document/okechiprf04.pdf, accessed at 12 June 2014.
13. Onofrei, M. (2004). Corporate finance, Bucharest: Economica.
14. Orgonaţ, C. (2012). Steel production increased by 17.8% in January, available on-line at www.businessday.ro, 24 February 2012.
15. Păun, R. (2010). Russian oligarchs control a significant part of the metallurgical sector in Romania, available on-line at www.hotnews.ro , 15 March 2010.
16. Pennig, St. and Vogt, J. (2008). Profitability assessment and economic evaluation in human resources management – guidelines and tools, Research project F2105, Dortmund / Berlin / Dresden 2008, available at http://www.baua.de/de/Publikationen/Fachbeitraege/F2105-3.pdf?__blob=publicationFile&v=11, accessed at 12 June 2014.
17. Saretto, A. (2004). Predicting and Pricing the Probability of Default, UCLA Press, http://papers.ssrn.com.
18. Stanciu, M.A. (2014). 2014 represents a turning point for steel production?, available at www.wall-street.ro , 25 April 2014.
19. Triandafil, C. M. & Brezeanu, P. (2008). Is there needed a corporate default approach according to the localization criteria — emerging versus developed countries? Case study on

IT commercial companies, Proceedings of 4th International Conference of ASECU "Development Cooperation and Competitiveness", May 2008, Bucharest.

20. Vasile, I. (2010). Enterprise financial management, Bucharest: Meteor Press.
21. Zamora, G. (2014). Global demand in the steel industry recovers, but structural problems remain, available on-line at www.economiczoom.ro, 7 March 2014.
22. *** National Commission for Prognosis (NCP) (2006). Metallurgy - present and perspectives, available on-line at http://www.cnp.ro/user/repository/f68a53fd74393519fd98.pdf , 26 October 2006.
23. *** MININD (2013). Metallurgy (steel and non-ferrous metallurgy industry), available on-line at www.minind.ro, http://www.immromania.ro/stiri_fisiere/sinteza-consultari-7264.pdf , accessed at 30 April 2014.