



# The Role of Capital Structure in Company's Financing

Nicoleta BĂRBUȚĂ-MIȘU \*, Mihaela-Felicia BODEA \*\*

## ARTICLE INFO

### Article history:

Accepted October 2014

Available online December 2014

### JEL Classification

G30, G32

### Keywords:

Company's funding, Cost of capital,  
Company's value, Return on equity,  
Interest coverage ratio

## ABSTRACT

The changes in capital structure and in financial components of a company have a particular importance in choosing optimal financing decision, in determining the impact of changes in capital structure and of elements within balance sheet. To quantify such an impact in the literature have been considered many factors as debt-equity ratio, profitability, self financing capacity and the ability to earn profit. Using the comparative method over a period of three years to five companies acting in the metallurgical sector in this paper has been analyzed the evolution of debt capacity ratio, return on equity ratio, financial long term debt ratio, interest coverage ratio and long-term financial autonomy ratio. Based on these findings it was concluded that the variation of capital structure and performance of the companies affects and influences funding arrangements considered by the companies' managers.

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## 1. Introduction

After its stage of development, the financial environment provides to companies a more or less substantial range of financing means. Very diversified in countries with developed financial systems, this range remains limited however to basic financial techniques in most developing countries. But whatever the context, companies are faced with choosing of funding sources (Vasile, 2010).

Brundtland report entitled *Our Common Future*, presented at the United Nations Conference of Rio de Janeiro in June 1992, states that sustainable funding is conceived in the vision of reconciliation between economy and environment, on a new way of development to support human progress, not only in few places for a few years, but for the whole planet and for long time future (Cămășoiu, 1994).

According to economic indicators with which are assessed until now the health of the global economy, since 1994, Brown stated that the world is in reasonable, good condition and the long term economic forecasts are promising. Economists believed that advanced technology can overcome any limits (Brown, 1994).

In an article published by Oliver Robert de Massy in 1990 in *Revue Banque* was stated that before 1985, companies manifested a strong preference for debt at the expense of recourse to the capital market resources, and by 1985 registered a decrease in preference for credit and an increase in the volume of transactions related to capital market securities (Onofrei, 2004).

Worldwide, the preference for self financing at the expense of traditional credit has become in the late 1990s a constant in financial structure of companies. 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).

Based on the three factors that inter-influence the funding process as: *business risk* - inherent in the company's assets if it does not use debt for financing; *taxation statement* - by the interest deduction from taxable profits and thus decreasing the effective cost of debt, *financial flexibility* - the research strategy related to funding aims to capture the change in the type of economic growth, we found that there are other factors that influence funding process, such as: risk control; creating an optimal balance between risk and income, and thus 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). It comes to conceive and realize such an economic environment that, by its inputs and outputs to be in direct and dynamic compatibility with business environment and present and future needs and interests of the companies.

\*, \*\* Faculty of Economics and Business Administration, Dunarea de Jos University of Galati, Romania. E-mail addresses: nicoleta.barbuta@ugal.ro (N. Barbuta-Misu), felicia\_mihaela19@yahoo.com (M. F. Bodea).

The paper is structured in 3 section followed by conclusions: in the section 2 is presented a literature review related to companies financing and capital structure; in the section 3 is presented the research methodology and in section 4 are analysed the factors that influence the capital structure in metallurgical sector.

## 2. Company's financing - necessity and rationing

In a perfect market, the financing and self financing decision would not change in any way the value of the company and its investment projects. But the market is not perfect and, due to some asymmetries of fiscal treatment of shareholders capital gains and loans, and a certain transaction costs, both the financing decision and dividend decision may influence the value of the company and its investments. In general, financial structure (of internal and external equity and borrowed capital) determines tax savings with the increase in indebtedness rate (Dragotă *et al.*, 2006).

A profitable company will always find capital to finance its projects, even if their financial structure is in debt. More than that, the leverage effect will act positively on the overall profitability of the company if the overall rate of return is higher than the interest rate (Toma, 2003).

Obtaining financial resources, both on short term and long term and remuneration the financiers that offer funds to the company, involves certain costs of using capital (Isai and Radu, 2014), witch should be considered when financing decision is taken. The use of any financial resources attracts costs, in a form or another. One of the management tasks is to develop enough flexible financing plans so as to satisfy the varying needs of financial resources due to the evolution of business under the specific risk-return ratio of the company. At the same time, the use of long-term capital involves meeting the expectations of creditors, and preferable, rewarding the shareholders with superior returns then their expectations (Helfert, 2006).

Essentially, in the choice of financing source, companies must take into account the following factors (Mişu, 2009):

a. *The experience of financier* on granting loans to companies from the concerned activity sector. Financier should be familiar with the issues facing companies acting in that sector. Few companies can afford to employ experienced staff to handle specifically with the financing problem, for the reason companies obtain capital from institutions that have experience in their funding.

b. *The reputation of financier*. The companies' success is sometimes based on the quality of relationships with financier. Therefore, the financier must have a reputation for honesty, fairness and willingness to work with that company.

c. *The assistance they offer*. In obtaining financing is important for financier to provide the necessary assistance. This is very important for companies that don't have experience in certain fields of activity and those need advices.

d. *Other services*. In some cases, financier offer free or reduced tariffs, such as financial statement analysis, preparation of financial projections.

Compared financial structure of companies from Western Europe, was presented in the early 1990s as follows: *the Latin model* (France, Belgium, Italy, Spain) focused on debt, both on medium term and long term, and less on equity and *the Anglo-Saxon model* represented by Great Britain and Germany, characterized by the presence of own and attracted funds (in a high percentage of 40-43%) and by decrease of interest for debt.

In Romania, the optimal capital structure is that structure which ensures an optimal balance between risk and income and thus maximizes the company's value. Shareholders or company's associates benefits from the change in the capital structure if and only if the company's value increases as a result of this change. Thus, organizational leaders must choose that capital structure which they believe that will increase the company's value in order to be beneficial for company's owners (Hoanță, 2003).

The studies made by Jensen and Meckling (1976) related to the issue of share and debt preferred over share argue that cost is of central importance in financing decision, because of the interest conflict between shareholders and creditors, especially bondholders (Jensen and Meckling, 1976). Suppose if companies want to finance two projects; one is risky and have low pay off and the other is high risky and have high pay off, the management will prefer high risky and high pay off project because if the project is successful, the management will earn high residual cash flows after paying the debts. If the project fail the majority of lose is entitled to the creditors because the shareholders have limites liability. Beside these theories, empirical studies highlight the major determinants of capital structure like tangibility, risk, size, growth and profitability (Khan, 2013).

Financial economists believe that highly leveraged companies have higher earning than low leveraged companies due to low cost of borrowed capital. So the profitability of the companies is judged by positive upward trend in their stock values that are done when the market operates in a normal way (Means and Olarte, 2013).

The theory of capital structure is known to be a compromise theory which offers an explanation of benefits through prudent management of resources and dangers of excessive debt, for good functioning of the

company being required a control of the percentage that the debts have in the company's capital structure (Stretcher and Johnson, 2011).

The idea of maximizing the value of the company can also be perceived in terms of minimizing the company's weighted average cost of capital. Financing options influence the behaviour of a company on the markets products in comparison with competitors' behaviour, thus influencing competitive outcomes. Chevalier and Scharfstein (1996) predict that companies that rely heavily on external debt financing are more likely to reduce investment in response to adverse market shocks (Chevalier and Scharfstein, 1996).

Competitive results obtained from such actions depend on the financial structure of the industry rivals. Some authors state that reliance on outside financing may prevent a firm to fight competition (Tesler, 1966; Bolton and Scharfstein, 1990).

Companies can choose funding sources that allow them to transfer risk and maintain control. Thus, while some companies resort to expensive sources of financing which allows them to maintain control and transfer risk, others seeking cheap funding to help them maintain business stability (Harris and Raviv, 1990).

Choosing the optimal financing structure is one of the most complex activities in which managers engage in the enterprise. Thus, some business models are likely to generate fewer capital resources, but are generating high rates of return and cash flows due to their ability to generate monopoly rents. At the same time, it could be possible that companies that have low rates of return can attract capital, both equity and borrowed, given that it is easier to pay these investments both in terms of interest rates and the point view of the possibilities of recovery (Gartner *et al.*, 2011).

Starting from these studies we try to determine the role of capital structure in choosing company's financing considering 5 companies acting in the metallurgical sector from Romania.

### 3. Research Methodology

Romanian economy, deeply marked by centralism and obvious domination of engineering-based management copes hardly in the context of a strong atomistic market, in which the technique of sales exceeds in complexity the production of goods. The transition from centralized economy to competitive economy involves deep changes in the financial and accounting management of the company.

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 use the most suitable funding sources for the financial situation of the company.

The article offers an overview of the effectiveness of methods and techniques for assessing the financial structure of a company. There are presented several options / methods of financing a company, according to the results of the analysis of a set of indicators, such as: leverage, debt levels, the level of expenditures, and the ability to cope with expenses by using its own resources. The considered indicators have an important role because it helps company's managers to decide the types of financing that the company should use depending on financial autonomy and shortage of resources on long or short term to each company.

The analysis was made at five companies acting in the metal sector, 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 financing of companies acting in the metallurgical sector. Thus, the aim of this study is to identify weaknesses and as well as to find optimal solutions in terms of funding, which could appeal companies to overcome difficult periods.

Capital structure decisions are influenced by a range of factors, namely: *financial flexibility*, *debt capacity* and the *final return of equity*. The first indicator, financial flexibility is the ability to raise capital on reasonable terms in the event of adverse circumstances in the economic environment. The company's treasurer should know that in order to ensure stability of the activity is required a constant supply of capital. The treasurer needs to know, also the fact that when the money supply in the economy is limited or when a company is facing operating difficulties, the capital providers prefer to advance funds to companies with solid sound financial and economic standing. Finally, the adoption of a capital structure is determined by the lenders who are considering the risk they are exposed by crediting the company (Onofrei, 2004).

In addition to these indicators, companies use different rates which establish normal limits, according to are estimated the positive or negative effects of borrowing on the company's management such as: *long term debt ratio*, *interest coverage ratio*, *financial autonomy rate* (Brezeanu, 2002). The set of indicators used in this study that affect capital structure of a company is presented in Table 1:

**Table 1.** The factors that influence capital structure

Indicator	Formula
Debt capacity ratio	$\frac{\text{Total debts}}{\text{Total liabilities}}$
Return on equity ratio	$\frac{\text{Net income}}{\text{Equity}}$
Financial long term debt ratio	$\frac{\text{Long term debts}}{\text{Permanent capital}}$
Interest coverage ratio	$\frac{\text{Earnings before interest and taxes}}{\text{Interest expense}}$
Long-term financial autonomy ratio	$\frac{\text{Equity}}{\text{Long term debts}}$

Source: Selection made by authors.

**Debt capacity ratio** is obtained by comparing the company's total debt to total liabilities. If the result of the ratio is less or equal to 2/3 then result a positive or favourable leverage effect. However, if the ratio is greater or equal to 2/3 then result a negative or unfavourable leverage effect (Hoanță, 2003).

**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.

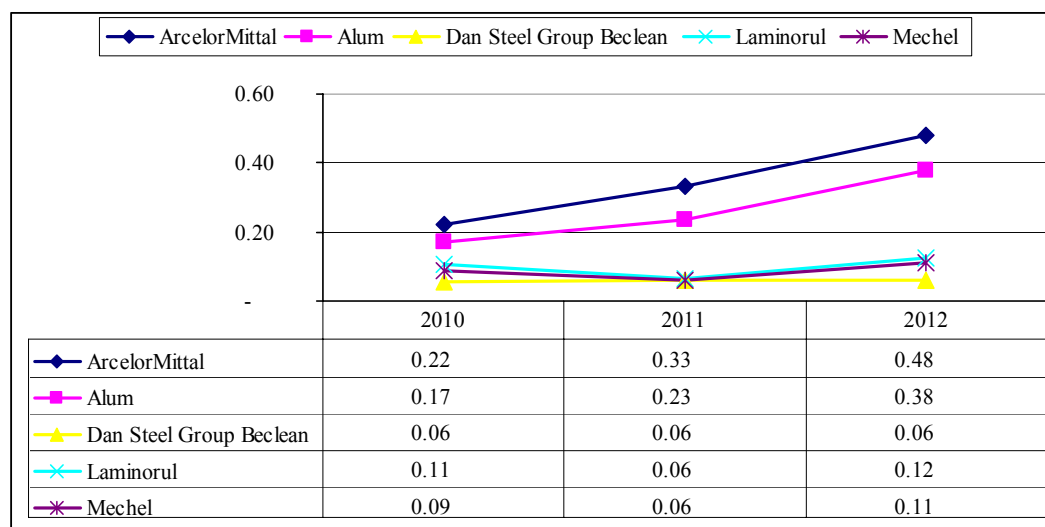
**Long-term debt ratio** indicates the proportion of long-term debt to permanent capital. If long-term debt exceeds permanent capital, then the company have a high degree of debt that means negative equity. In this case the long-term debts must represent at most half of the permanent capital, which is the equivalent of a value lower or equal to 50% or, if we express it as a coefficient, lower or equal to 0.5.

**Interest coverage ratio** is calculated by dividing the earnings before interest and taxes by interest expenses and if interest expenses are higher than earning before interest and taxes, then the indebtedness becomes unbearable for the economic profitability of the company (Hoanță, 2003).

**Long-term financial autonomy ratio** expresses the company's financial independence on long term. The increasing of equity share capital of the company in its permanent capital has benefits on total financial autonomy (Onofrei, 2004). In this case the equity capital must be equal or bigger than the medium and long term debts, which means a rate of long-term financial autonomy higher or equal to 1.

#### 4. Research Methodology

In order to illustrate how these indicators affect the capital structure have been considered five companies acting in the metallurgical sector (ArcelorMittal Hunedoara, Alum Tulcea, Dan Steel Group Beclean, Laminorul Braila and Mechel Campia Turzii), that were analyzed over a period of three years.

**Figure 1.** Debt capacity ratio

Source: Calculations made by the authors based on data taken from the balance sheets of the companies in the period 2010-2012

Figure 1 reflects debt capacity ratio to those five metallurgical companies in the period 2010-2012. ArcelorMittal had the higher debt capacity ratio in the analysed period, between 22% and 48%, registering an

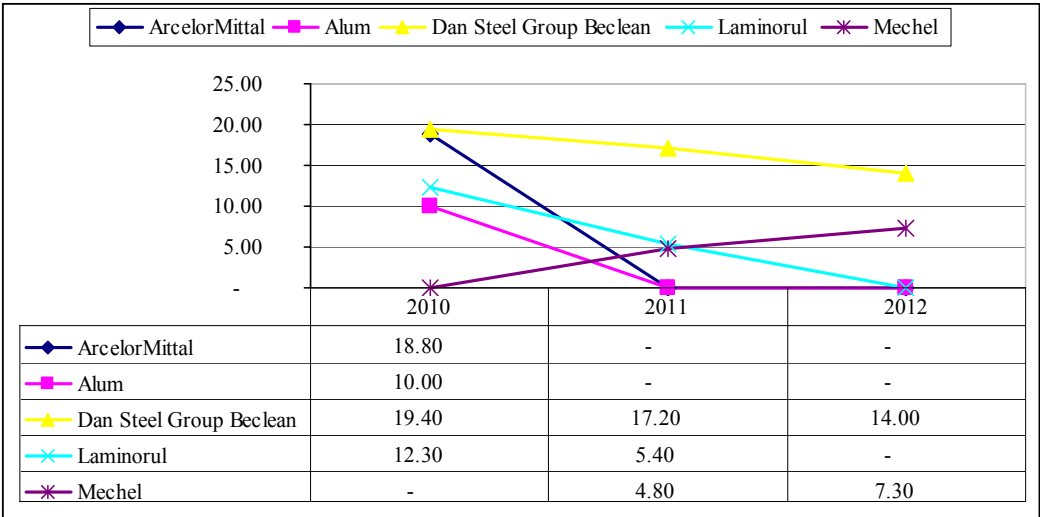
increase by 50% in 2011 compared to 2010 and with 45.45% in 2012 compared to 2011. Also, Alum had an important share of total debt in total liabilities, between 17% and 38%, registering an increasing trend the period analysed. Dan Steel Group Beclean is the company that uses the least debt to financing the activity, around 6% of total liabilities.

For ArcelorMittal, high values of debt capacity demonstrates the difficulties encountered by the company related to short term payment obligation by using own resources. This situation is sustained also by the values recorded by indicators return on equity and interest coverage ratio that show the company has no long term debt uncovered, but is facing with a net loss of own resources which impede it to cover short-term debts.

Related to Laminorul, debt capacity ratio registered values ranging between 6% and 12%, which show that the company is not facing problems regarding long-term debt financing. In terms of interest coverage ratio in the period 2011-2012 the company did not make profits in order to meet the funding costs.

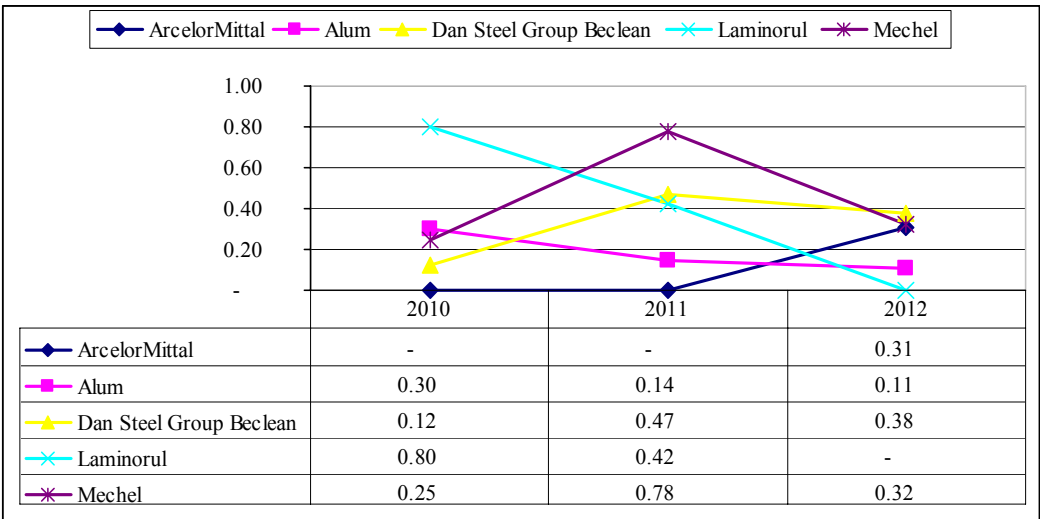
The evolution of return on equity for the companies is reflected in the figure 2. Dan Steel Group Beclean registered a positive net income in the period 2010-2012, reflected in a return on equity ranging between 14% and 19.40%, with a decreasing trend (it decreased with 11.34% in 2011 compared to 2010 and with 18.60% in 2012 compared to 2011). ArcelorMittal and Alum were both profitable in 2010, but 2011 and 2012 end up with losses. Laminorul had a decreasing return on equity in the period 2010-2011 (decreasing with 56.10% in 2011 compared to 2010), year 2012 ending up with losses and Mechel obtained losses in 2010, and then registered an increasing trend of return on equity, increasing with 52.08% in 2012 compared to 2011.

**Figure 2. Return on equity ratio**



Source: Calculations made by the authors based on data taken from the balance sheets of the companies in the period 2010-2012

**Figure 3. Financial long term debt ratio**

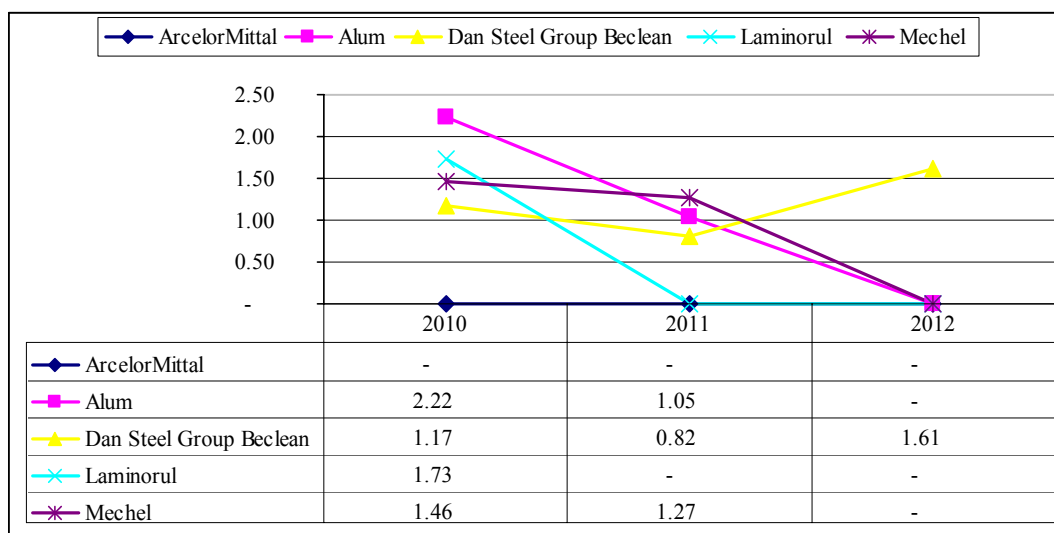


Source: Calculations made by the authors based on data taken from the balance sheets of the companies in the period 2010-2012

In the figure 3 is reflected financial long term debt ratio of analysed companies. Although, ArcelorMittal had the greatest degree of debt, the company appeal to financial long term debt only in 2012, that means it have higher debt from operating activity. Alum, Dan Steel Group Beclean and Mechel use financial long term debt all analysed period, the ratios ranging between 11%-30%, 12%-47% and respectively 25%-78%. In 2012, Laminorul had an important share of financial debts in permanent capital, that decreased to 42% in 2011 when the company has repaid all loans.

The financial long term debt ratio recorded by Dan Steel Group Beclean and Mechel is subunitary throughout the considered period which shows that the company may face financial debts on short and long term using the permanent capital. This is demonstrated also by the long term financial autonomy rate values which recorded supraunitary values over the three years so that the equity value exceeds the long term debt.

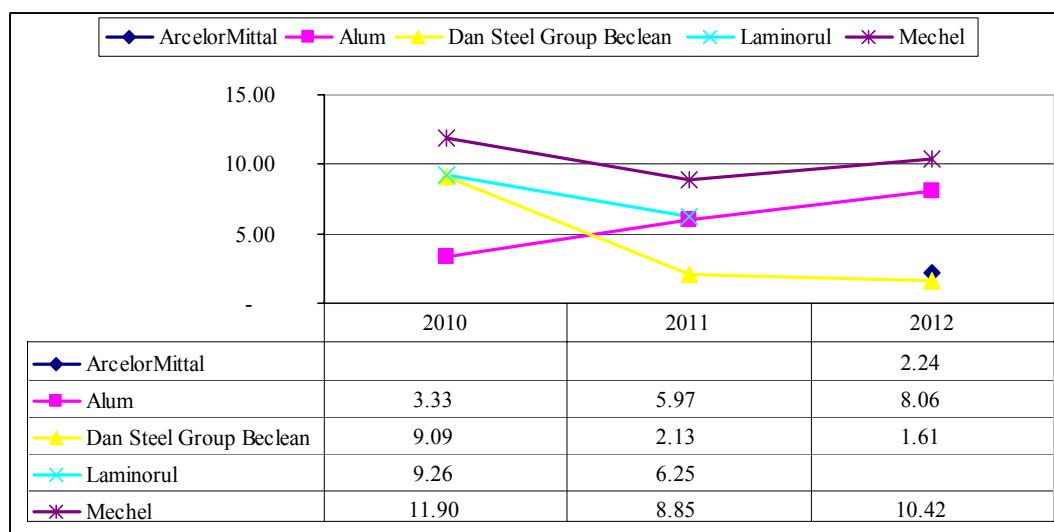
**Figure 4. Interest coverage ratio**



Source: Calculations made by the authors based on data taken from the balance sheets of the companies in the period 2010-2012

The interest coverage ratio of the companies reflected in figure 4 shows that only Dan Steel Group Beclean has the capacity to coverage the interest from earning before interest and taxes, but their capacity is reduced. Although, ArcelroMittal in 2010, Laminorul in 2011 and Mechel in 2012 have positive net income, these positive values was determined by the profits of financial activity of the companies, because earnings before interest and taxes were negative. In the same time, although, Alum in 2011 and Mechel in 2010 had positive earnings before interest and taxes, financial activity generated losses higher than these profits, determining a negative net income.

**Figure 5. Long term financial autonomy ratio**



Source: Calculations made by the authors based on data taken from the balance sheets of the companies in the period 2010-2012

Figure 5 reflects long term financial autonomy ratio of metallurgical companies in the period 2010-2012. The evolution of this rate is similar with the evolution of financial long term debt ratio. Dan Steel Group

Beclean had the most reduced financial autonomy in the period 2011-2012, the values of ratio ranging between 1.61 and 9.09 in the overall interval, but without being under the minimum allowed. All other companies registered higher values of long term financial autonomy ratio.

Alum had a financial stability well enough having regard to the evolution of the indicator that determines financial autonomy, although this registered an increase by 79.28% in 2011 compared to 2010 and 35.01% in 2012 compared to 2010, highlighting the fact that long term debts remains lower than equity, and the company may cope with payments.

Mechel has the highest long term financial autonomy ratio having regard the values of this indicator that has values higher than 1, this being demonstrated by the subunitary value of financial long term debt ratio; thus the permanent capital exceeds financial long term debts recorded by the company.

Overall, in the analyzed companies noticed that indicators have a fluctuating trend, exceeding in certain periods the optimal value, which is a positive effect, but sometimes with values below normal limits, illustrating an involution of the financing structure of the company.

For all analyzed companies, debt capacity ratio registered values below 50% which shows that companies haven't difficulties to meet debt payment through its own resources. Dan Steel Group Beclean recorded the best values in terms of return on equity (19.4% in 2010), which means that they can make profits with the resources they use without needing new external resources, unlike the first two companies analyzed ArcelorMittal and Alum, which recorded two consecutive years (2011 and 2012) null values which means that companies should increase resources to deal with investment.

Financial long-term debt coverage of permanent capital recorded for all companies subunitary values, demonstrating that companies can face long-term debt and that means it is not required to seek long-term funding to meet obligations; instead, in terms of interest coverage ratio, it registers supraunitary values, less the company ArcelorMittal, which shows that the company are experiencing problems in investments financing as long as earnings before interest and taxes are negative.

Financial autonomy rate demonstrates the ability of the companies to meet debt and payments with own resources, and in the case of analyzed companies is observed a fluctuating trend with tendency of increase at the end of the considered period for three companies, that means were taken measures to improve the autonomy and financial situation of the companies.

## **5. Conclusions**

Regarding the economic area, according to the report Tradeville, metallurgical sector on the Stock Exchange is heterogeneous in terms of the theory of sectoral rotation according to which the performance of each sector are optimal in certain times of the economic cycle, because it contains both the two companies in the processed metallurgical products, respectively Artrom and Zimtub, as well as two of the primary metallurgy sector, respectively Alro and Mechel.

The main concern of this research was to highlight the importance of financing in companies' activity and the role it has the capital structure in the choice of funding source, as well as presentation the main factors that lead to obtaining and maintaining an optimal financial structure. Thus, the majority of companies have a great capacity of debt, but this must be correlated with the proportion between debt and equity and desired profitability.

We may say that Dan Steel Group Beclean had an optimal capital structure that means approximately 94% equity and only 6% debts, situation that generated a return on equity ranging between 14% and 19.40%. A higher proportion of debts determined obtaining of losses, as the case of ArcelorMittal and Alum. So, the main conclusion related to optimal capital structure in the case of companies acting in the metallurgical sector is that high leveraged companies are not performant, only companies that uses own funds for financing investments obtaining high returns on equity. Also, a indebtedness capital structure reduced the capacity to obtain new external funds from creditors.

In a business environment characterized by structural changes, investors have acquired a remarkable influence which determined the boom of securities markets and the management of companies expressed by the will of the shareholders. These changes have had a particular impact on the financial structure of the companies and capital management which holds a privileged position, being considered a sign of prosperity that every company wants to attract it in terms of return and risk.

Currently, in finance occur rapid and profound changes which require rapid and accurate decisions in the operating activities that must generate products of high quality with low costs (Boca, 2011), and also in 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.

Given the decisive role that companies play in the destiny of each country, treating the financial dimension of their activity is a demarche that worth be taken into account and analyzed in depth.

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