THE PROFITABILITY AND LIQUIDITY UNDER THE INFLUENCE OF THE FINANCING POLICY IN THE METALLURGICAL INDUSTRY OF EU 28

DOBROTĂ GABRIELA
PROFESSOR PH.D., CONSTANTIN BRÂNCUŞI UNIVERSITY OF TÂRGU JIU, FACULTY OF ECONOMIC AND BUSSINES ADMINISTRATION,
e- mail: gabi.dobrota@utgjiu.ro

Abstract

In the context of the problems of the economic system, the use of the capital and his structure represent important elements in the process of the financial decisions. The aim of this paper is to identify the influence of funding policy on rentability in metallurgical industry, dimensioned with the help of a set of relevant indicators, determined on the base of some aggregated data for a significant sample of very large firms from EU 28. Also, the paper present the situation of liquidity, reflected through the cash- flow and liquidity ratio, in the metallurgical industry of EU 28, being used dates for the period 2004 – 2013, for the mentioned sample. The conclusion of the realised study is that a funding policy well-founded, correlated with the efficient management of expenses and proactive risk management can positively influence the profitability and liquidity.

Key words*: metallurgical industry, rentability, liquidity, funding policy, EU 28.*

JEL classification: *G32, L25*

1.Introduction

The use of an optimal financing structure so as to record the lowest cost of finance is a desiderate frequently stated in the specialized literature. The need to achieve some large investment projects, frequently involve the orientation towards loans amid lack of own financial resources. Metallurgical industry is an important sector, which customizes in the whole industrial sector through a high volume of resources needed both for the material base constitution as well as and to purchase necessary materials. From the analysis of the aggregate data at the level of a significant sample of companies in the metallurgical industry of EU 28 (543 organizations from the category of the largest companies) , it can be observed that are recorded small differences between fixed and current assets: 15,22 % in 2013, 9,84 % in 2012, 11,56 % in 2011. Also, into the category ,,fixed assets", the most important element is represented by the ,,tangible fixed assets". Thus, this category, has a share between 50 - 60% from the total assets. In the same time, the stocks have the most share into the current assets. The particularities of this sector falls it into the category of the industrial branches that require a high initial investment, over a long period of time [1].

So, any organization must respected an important principle of the financial policy: the financing of the permanent necessities is realised from the permanent resources, and for the current actives it must used the currents resources. In this context, the necessity to identify the influence of funding policy used on the profitability and liquidity of the economic operators is a fundamental component of the management process. Therefore, making a diagnosis on the company's activity can be a very useful tool, especially at the level of any extremely important sectors of the entire economy, as is the metallurgical sector [2].

In this paper, we aim to perform an study on the cumulated dates that reflected the evolution of the rentability and liquidity rates between 2004 - 2013, in correlation with the financial structure,in the metallurgical sector from EU 28. For this, the paper has been structurated in two important parts, relating to the methodologies used and the analyse of the performance and debts under the impact of financing politics,at the level of a significant sample of companies from EU 28

2. Research methodology

Determination of rentability rates is an important element in the analysis of economic operators performance, their size being taken into account in making decisions to improve technical and economic parameters [3]. The analysis of the financial statement allows the identifing of the factors that influence the financial result of an exercise and is required by the necessity to take the right decisions based on more accurate information. For sizing the rentability it can be used a set of rates established in accordance with the formulas presented in Table 1. Also, may elect to determine the liquidity and solvency ratios, so as to identify the ability of the patrimonial elements to turn into cash and to allow the repayment of debts due. An important role has the commercial policy, that must establish the

rapport between the customer credit and the suppliers' credit, so that the financial blockages can be avoided.

Table 1 **Indicators of rentability and liquidity use în the analysis**

Indicators	Way for calculating	Semnification
ROE (Return on equity)	$\frac{NI}{Kpr} x100$	NI – net income; Kpr - equity ratio.
ROA (Return on assets)	$\frac{NI}{AT} x100$	NI – net income; AT - total assets.
ROS (Return on sales)	$\frac{NI}{S} x100$	S – sales.
Rs (Solvency ratio)	$\frac{Kpr}{AT} x100$	Kpr - equity ratio; AT - total assets.
R_l (Liquidity ratio)	$\frac{AC - S}{Dc} x100$	AC – current; assets; S – stock; Dc - current liabilities.
V_{dc} (speed of rotation debts of customers - days)	$\frac{Dc}{CA} x360$	Dc - debts of customers; CA - net turnover.
V_{cf} (speed of rotation of liabilities towards suppliers - days)	$\frac{C_f}{CA} x360$	C_f - Liabilities towards suppliers.

Source: adapted by [4]

The information provided by the rentability indicators, enable the determining of the contribution of used capital and the sales used in the achievement of net income, while the liquidity indicators demonstrate the ability of economic operators to turn sales and patrimonial elements into cash. Another important element in the financial analysis is the capital structure which enables the determination of the indebtedness of an enterprise. Thus, it can be determined as the ratio between the total debt and the amount of resources used. In practice, it is considered an acceptable level, a value which is around 50%. The capital structure can influence the level of rentability both through the cost of financing as well as through leverage. Studies made to identify the correlation between the two elements have presented contrary results. Thus, was established a positive relationship between the ratio of total debt and return on equity [5]. At the same time, it was considered that ,,profitable firms depend more on equity as their main financing option", in the context of identifying of a negative correlation between debts and profitability [6]. The determination of these indicators is necessary both in the case of application for new loans, in the purpose of development the activities as well as in establishing optimal cost of funding. It should not be omitted nor indicators that highlight the speed of rotation's debts of customers and the speed of rotation of liabilities towards suppliers, because a mismatch of these can generate severe financial bottlenecks. Collection of receivables within a range less than the paying off debt, allows to avoid the risk of defaulting.

3. The analysis of the performance and debts in the metallurgical industry of EU 28 under the impact of financing politics

An analysis carried out at the level of a significant sample of companies from EU 28 (403 - 545, between 2004 to 2013), based on pooled data allows identifying the trends registered by the growth rhythm of important indicators in the financial performance analysis. In Table 2 there are determined annual percentage changes recorded by the cash flow (CF), net income (NI), added value (VA), the medium and long term debt (Dtl) and the short-term (Dc) for the set of analyzed companies (there were considered large companies from the metallurgical industry in the EU 28, for which were identified financial data required).

Table 2 **The growth rhythm with chain base at the level of indicators presented / %**

Years	Ne	CF	NI	VA	Dtl	Dc
2005	434	3,08	5,58	4,69	11,4	9,12
2006	479	39,69	58,12	33,12	31,02	39,78
2007	497	20,85	19,51	23,43	18,89	22,28
2008	522	-39,8	-57,79	12,99	20,25	-16,87
2009	534	-82,74	-163,42	-45,59	-5,42	-76,05
2010	543	350,97	190,53	43,10	1,56	27,70
2011	545	-1,49	-41,00	10,74	15,03	4,52
2012	531	-42,13	-173,88	-19,49	-12,14	-15,85
2013	330	-34,49	78,85	-37,31	-37,99	-43,82

Source: own processing by using dates from [7]

The data in the table above provide important information about the evolution of the analyzed indicators, being necessary their interpretation with caution because it highlights only the annual changes. For example, in 2013, although the percentage change shows an increase, this corresponds to a reduction in total loss compared with 2012 (in 2012, the aggregate loss was by – 2 020 270 Eur, while in 2013 it decreased at - 427 206 Eur).

The recorded situation reflects a number of issues: the level of current debts is superior in comparison with medium and long term debts in the period under review; changing the size of the debt has determined, after 2009, with gap of a year, the change of cash - flow; the manifestation of economic and financial crisis has negatively affected the activity of economic operators from metallurgical industry, the year 2009 reflecting a cumulative loss by – 5 118 682 Eur; the years 2010 and 2011 have resulted a favorable period, being obtained profit in each financial exercise as well as an increase of cash - flow (in comparison with 2009, it increased by about 344 % in 2011); growth tendency was reversed in 2012 and 2013 at all the indicators analyzed, the added value generated by the economic operators being located in 2013 under the 2004 level.

The negative situation recorded by the analyzed sample is evidenced by the evolution of rentability and liquidity rates, presented in Table 3.

Table 3 **The evolution of rentability and liquidity rates in the range 2004 - 2013**

Years	ROE %	ROA %	ROS %	Rs %	R_l %	V_{dc} days	V_{cf} days
2004	20,88	8,83	6,91	42,57	0,87	59	47
2005	19,92	8,51	6,62	42,83	0,87	57	42
2006	26,29	10,78	7,70	40,64	0,87	56	41
2007	23,32	10,01	7,89	43,36	0,89	49	39
2008	10,53	4,54	3,32	44,78	0,94	41	33
2009	-5,16	-2,26	-3,24	46	0,96	54	46
2010	4,54	1,86	2,18	43,34	0,82	50	44
2011	3,32	1,33	1,09	42,19	0,77	40	38
2012	-0,31	-0,12	-0,94	40,78	0,82	39	40
2013	1,12	0,49	-0,31	44,22	0,91	44	39

Source: dates collected from [7]

The data synthesized in the Table 3 allow the formulation of the following views:

- rates of return have recorded significant reductions in the period under review, amid the decrease of net profit;
- generally, ROE is higher than ROA, a fact which demonstrates the financial leverage (ROA reflects the employed capital efficiency, respectively own and borrowed, while ROE measured the equity performance);
- since there is not a significant decrease in equity in order to justify reducing ROE, it can be considered that the total level of debts has influenced the rates of return through the financial expenses generated;
- the level of the liquidity does not provide a secure control of the ability to pay the immediate debts;
- the speed of rotation debts of customers (in days) is higher than the rotational speed of debts to suppliers; this latter aspect justifies, partially, the situation recorded at the level of liquidity (debts are paid faster than cashing debts).

A particular importance has the financing decisions of activity carried by the economic operators on the firm rentability. The analyzed operators from the metallurgical industry opted for an indebtedness degree within acceptable limits, the analysis at the level of this sector for the sample „very large companies" highlighting inclusion in an interval between 53 % - 60 % (Table 4). This situation demonstrates caution in achieving the objectives, in a period marked by risk and uncertainty.

Table 4 **Determination of indebtedness degree**

Years	Kpr / Eur	AT / Eur	DT / Eur	GI / %
2004	59 147 383	138 957 284	79 899 950	57,49
2005	65 881 165	153 836 086	88 020 646	57,21
2006	82 171 533	202 198 709	120 027 480	59,36
2007	111 225 096	257 117 825	145 246 224	56,49
2008	114 085 273	254 771 669	140 594 744	55,18
2009	111 939 553	243 356 320	131 304 168	53,95
2010	116 158 236	268 027 355	151 783 798	56,62
2011	120 502 945	285 638 319	165 133 633	57,81
2012	100 522 759	246 784 158	141 592 984	57,37
2013	65 964 636	149 181 302	83 183 208	55,75

Source: own processing by using dates from [7]

Legend: K_{pr} – equity; AT – total assets; DT – total debts; GI – indebtedness degree

The indebtedness degree looks which is the contribution of the debts that are used for the financing of total asseet. The total capital structure is reflected in Figure 1. Thus, the global self-financing rate (ratio between equity and total resources) are in the range 40,64 % - 46,05 %, the analyzed companies opting for borrowed resources in a reasonable and controlled percentage, to avoid the payment incapacity.

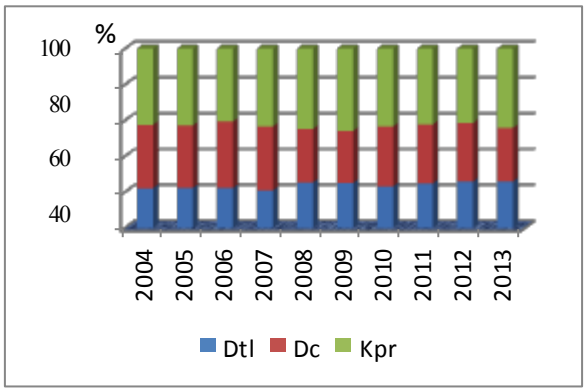

Figure 1 The structure of used capital

However, it should be noted that since 2008, the financial costs exceeded the financial income, the financial results being materialized by significant losses (the biggest loss was recorded in 2011, its level being - 3 210 637 Eur for a sample of very large companies 545).

Another aspect which must be noted is the fact that the achievement of financial surpluses from the carried activity, has long been one of the most important objectives of economic operators. A series of considerations led to a revision of managerial activity, so, the ensuring of the cash-flow represent a fundamental component of development strategy.

Thus, the gap between recording in the accounting evidence and collecting of the receivables can generate financial bottlenecks. In addition, the failure of some partners determines the non-collection of receivables already reflected in incomes. In this context, the economic operators from metallurgical industry are highly exposed to financial risks arising from the interdependence between producers, suppliers and customers.

The use of the cash-flow in management activity is supported by the major interest of potential investors in the ability of economic operators to create liquidities, at the expense of accounting profit or of rentability established on his base [8]. The analysis carried at the level of mentioned sample of companies shows pronounced downward trend of cash-flow, especially in the year 2009, but also, after 2011 (Figure 2).

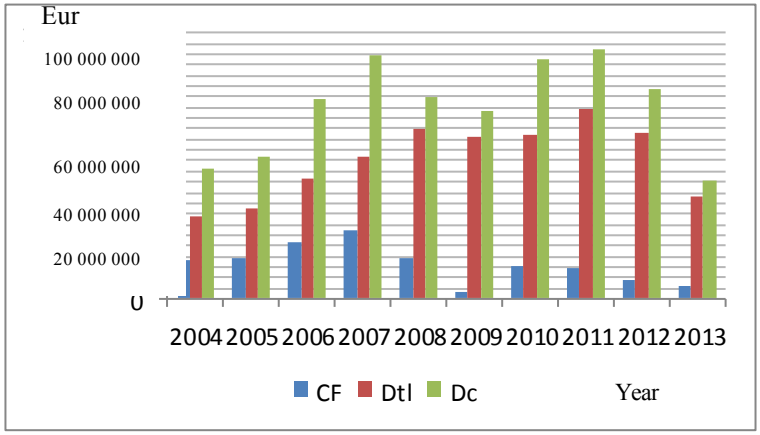

Figure 2 Trends in the evolution of the cash - flow in comparison with the level of current, medium and long term liabilities

.

Obviously, the level of rentability and liquidity is also influenced by the ratio recorded between the production costs and revenue earned. The collected dates reveals an undesirable effect, caused by the increase of prices of the raw materials, in particular, for the consumed energy (the metallurgical operators are large consumers of energy) on the net profit, in the context of maintaining of a high sales volume. A good example of this is the comparison between the sales made and the net profit in 2004 (approximately 138 mil. Eur sales and 9,5 mil. Eur net income) and 2012 (over 212 mil. Eur sales and - 2 mil. Eur loss).

4. Conclusions

Establishing an optimal structure of finance is a major issue at the level of any economic operator, regardless of the branch in which they operate. The funding policy transmits its influence on financial performance through multiple channels, namely: financial expenses arising from loans; leverage; the market value of the company; the customer credit and the supplier credit.

The study realized on the pooled data for an important sample of very large firms from metallurgical industry in the EU 28, allowed the formulating of the following conclusions:

- financing the activity was largely achieved through the current debts and equity;
- although the total assets has not risen significantly, so as to determine the trend of reduction of Return on Assets, the decrease of net income had negative effects on its level;
- the efficiency of using equity fell significantly, from 20,88 % in 2004 to 1,12 % in 2013;
- although sales volume remained at a high level, net profit fell dramatically, which demonstrates a significant increase in costs of materials used in the production process;
- commercial credit policy has generated the record of some differences between the number of days for the rotation of debt, compared to the receipts, fact which influenced the degree of liquidity;
- the tendency of the cash - flow was by severe reduction at the level of the period under review, particularly in the years 2009, 2012 and 2013.

All aspects mentioned converge to a general conclusion: a funding policy well-founded, correlated with the efficient management of expenses and proactive risk management can positively influence the profitability and liquidity. Also, the information provided by the indicators of profitability and liquidity must processed, interpreted and compared, both on different time intervals as well as at branch level, so that to represent a real foundation of financing decisions.

5. References

[1] **Bobek M.**, Revenue and costs of metallurgical companies in 2004-2012, Metal 2014, 23rd International Conference on Metallurgy and Materials, May 21st-23rd 2014, Brno, Czech Republic.

[2] **Achim M.V., Borlea S.N.**, Elaborating a global diagnosis of a company in metallurgy industry, Metalurgija 53 (2) 2014, 261 – 264.

[3] **Căruntu C., Lăpăduşi M.L**., Reflection of the economic rate of return in the efficiency use of the fixed and current assets with study case in mettalurgy, Metalurgija 53 (4) 2014, 668 – 672.

[4] **Dumbravă M.,** Model de analiză a performanței firmei, Economie teoretică și aplicată, vol. XVII, 8 (549) 2010, 105 - 119

[5] **Abor J.,** The Effect of Capital structure on Profitability: An Empirical Analysis of Listed Firms in Ghana, Journal of Risk Finance 6 (2005), 438 -445.

[6] **Shubita M.F., Alsawalhah J.M.,** The relationship between Capital Structure and Profitability, International Journal of Business and Social Science, 3 (16) 2012, 104 – 112.

[7] AMADEUS database

[8] **Dincă M.,** Importanța cash flow-ului pentru creșterea valorii firmei, Finanțe – provocările firmei, no. 6, 2007, 152 - 156.