

CORPORATE PERFORMANCE DETERMINANTS. EVIDENCE OF DIFFERENCES ACROSS SECTORS

Sorana Vătavu, Ph.D. Student, Research Assistant, East-European Center for Research in Economics and Business, Faculty of Economics and Business Administration, West University of Timisoara

ABSTRACT: *This research aims to establish the determinants of financial performance in 126 Romanian companies listed on the Bucharest Stock Exchange, over a period of ten-years (2003-2012). The analysis is based on cross sectional regressions and factor analysis. Return on assets is the performance proxy, while the variables expected to have the highest impact on performance are capital structure indicators, debt and equity ratios. Previous research indicated asset tangibility, size, liquidity, taxation, risk, inflation and crisis as capital structure determinants in Romanian listed companies. As long as these factors have an important impact on financing decisions, they will be included in the analysis as they are expected to have an influence on performance. Regression results indicate that Romanian companies register higher returns when they operate with limited borrowings. Tangibility, business risk and the level of taxation have a negative impact on return on assets, showing that companies manage their assets more efficiently when the fiscal pressure and earnings volatility is low. Performance is sustained by significant sales turnover, but it is affected by high levels of liquidity. Periods of unstable economic conditions, reflected by high inflation rates and the current financial crisis, have a strong negative impact on corporate performance.*

KEYWORDS: *determinants of capital structure, leverage, financial performance.*

1. INTRODUCTION

Over time, the financial theory and practice focused on finding a capital structure that would maximize the company value. In order to explain how firms are financed and what influences the financial decisions, several models of capital structure were identified.

The relationship between capital structure and corporate performance represents an important topic in the corporate finance literature. The optimal capital structure refers to a proportion of equity and debt which ensures the lowest costs, but it is also important to identify factors which maximize the company value through the funding sources. Corporate financing decisions and their impact on corporate performance should be based on both components of capital - debt and equity - and on the interests of the major stakeholders - shareholders, managers, creditors.

It is expected for leverage and equity ratios to have an impact on performance, but the influence of financial structure on corporate performance can be understood in greater depth if it is also related to capital structure determinants.

This paper intends to identify how debt and equity ratios influence return on assets in companies listed on Bucharest Stock Exchange (BSE). Previous research on the same sample returned fixed assets, dimension, liquidity, business risk, taxation, inflation rate and crisis as determinants of financing decisions in Romanian listed companies. Therefore, these factors will be used

as control variables, along with capital structure ratios, in order to demonstrate their relationships with firm performance.

2. LITERATURE REVIEW

Miller and Modigliani (1958) demonstrated in their first capital structure theory that, in perfect market conditions, this is irrelevant to company value. However, these conditions are impossible to be realized in real financial markets, as they assume no transaction costs, no differences between capital gains and dividend taxation, and free access to information for all market investors.

Nowadays, the choice of debt and equity is somehow a tradeoff between business and financial risk. When firms choose more debt to finance their needs, they avoid the dilution of corporate ownership. However, when a large proportion of capital is sustained by shareholders, this ensures a better credit rating. Therefore, companies using large borrowings induce higher risks on their creditors, but those using more equity tend to operate more conservatively, especially when they are controlled by risk-averse shareholders.

The influence of capital structure on performance is not clearly stated in the literature. There are studies demonstrating a positive relationship between total debt and return on equity, but a negative influence on the same performance indicator coming from the long-term debt [1]. Several studies discovered that leverage in

Chinese firms has a negative influence on return on assets [6], [3]. There are also studies considering that the relationship between financing decisions and performance is not significant [5].

As long as many capital structure determinants influence profitability, studies analyzing the relationship between financing decisions and performance usually employ some of these determinants. Akintoye (2008) realized an analysis of corporate performance in selected Food and Beverage companies in Nigeria. He used four indicators as performance measures related to earnings and dividends. Beside the role of capital structure, the author discovered that taxation, business risk, financial flexibility and managerial behavior are important factors of performance. He considered that an optimum proportion minimizes the cost of capital while maximizing the value of company, and that any changes in debt or equity would alter this value. Considering the economic conditions, results indicated that companies would borrow more in order to avoid the tax burden, and so they improve their performance.

Serghiescu and Vaidean (2013) focused on Romanian companies and their results indicated that they use more debt to undertake investments, although they first use internal funds to finance their tangible assets. In addition, performant companies avoid leverage because they usually register higher liquidities, assuming lower levels of risk. Previous studies on Romanian manufacturing companies listed on BSE demonstrated that they follow the Golden Rule of Funding, matching the life of the asset with the life of resource used for funding that asset. Moreover, during times of high inflation rates, companies tend to access more short-term debt when they need financial resources [14]. The matter refers to whether or not these characteristics are available for all Romanian listed companies. Although in the past sectors were characterized by various debt ratios, the present trend reveals small differences in the indebtedness degree on sectors when these are compared to the overall indebtedness of the Romanian companies [11].

3. DATA AND METHODOLOGY

3.1. Sample

The sample consists of 126 companies listed on the BSE. Based on their summarized balance sheet, indicators were computed over a period of 10 years, from 2003 up to 2012. To ensure results robustness only certain categories of companies were selected for this sample:

- in order to reduce the number of outliers, delisted companies, those in dissolution stage or those registering negative equity values were not included in the sample;
- in order to ensure data reliability, only companies with financial data available for every year, from 2003 until 2012, were selected.

3.2. Data

The capital structure will be expressed through total debt and equity ratios. These indicators have been widely adopted because the long-term goal is usually purely financial. Therefore, financial performance evaluation should be easily explained through corporate financial goals. Besides these, other financial and non-financial indicators will be included in the analysis: tangibility, size, liquidity, risk, tax and a macroeconomic factor comprising inflation and crisis. The data was obtained through the formulae presented in the following equations, from (1) to (9).

$$ROA = \frac{\text{Earnings before interest and tax}}{\text{Total Assets}} \quad (1)$$

$$\text{Debt} = \frac{\text{Total debt}}{\text{Total Assets}} \quad (2)$$

$$\text{Equity} = \frac{\text{Shareholders Equity}}{\text{Total Assets}} \quad (3)$$

$$\text{tang} = \frac{\text{Fixed Assets}}{\text{Total Assets}} \quad (4)$$

$$\text{size} = \log (\text{Sales Turnover}) \quad (5)$$

$$\text{liquid} = \frac{\text{Current Assets}}{\text{Short-term debt}} \quad (6)$$

$$\text{risk} = \text{stdev} \left(\frac{\text{Earnings before interest and tax}}{\text{Total Assets}} \right) \quad (7)$$

$$\text{tax} = \frac{\text{taxes}}{\text{Earnings before interest and tax}} \quad (8)$$

$$\text{inflcr} = \text{inflation-rate} \times \text{crisis}^1 \quad (9)$$

3.3. Methodology

This paper is analyzing the relationship between capital structure, its determinants and performance on a time-series cross-sectional data over the period 2003-2012. The performance indicators will be regressed on the rest of variables, considering that performance is a function of these financial and non-financial indicators, presented in equation (10):

$$\text{Performance} = f (\text{capital ratio, tangibility, size, liquidity, risk, taxation, inflation, crisis}) \quad (10)$$

Based on the previous function, equations (11) and (12) express the linear models of performance. α_i ($i = 1 \dots 126$) represents the unknown intercept of every company, t ($t = 2003 \dots 2012$) is the year analysed, β_s are the coefficients for every independent variable and ε_{it} is the error term.

¹ Crisis takes value 0 from 2003 until 2007, and 1 from 2008 until 2012.

$$ROA_{it} = \alpha_i + \beta_1 Debt_{it} + \beta_2 tang_{it} + \beta_3 size_{it} + \beta_4 liquid_{it} + \beta_5 risk_{it} + \beta_6 tax_{it} + \beta_6 inflcr_{it} + \varepsilon_{it} \quad (11)$$

$$ROA_{it} = \alpha_i + \beta_1 Equity_{it} + \beta_2 tang_{it} + \beta_3 size_{it} + \beta_4 liquid_{it} + \beta_5 risk_{it} + \beta_6 tax_{it} + \beta_6 inflcr_{it} + \varepsilon_{it} \quad (12)$$

Several regression models will be used in order to test the results robustness and the data reliability. The first stage of analysis is the Pooled Ordinary Least Squares (OLS). The second stage is to compute Fixed Effects with n entity-specific intercepts (FE) and Random Effects (RE) models. The Hausman Test will be used to discover which model is more suitable for the sample data. Fixed effects models consider that the characteristics of companies influence the correlations between the variables, while random effects models assume a random variation across companies which is not correlated to independent variables. For this sample, we expect that the Hausman test coefficient will reject the null hypothesis, which states that the difference in coefficients is not systematic. Rejecting the hypothesis would mean that the fixed effect model is more appropriate for the sample. If Hausman indicates that Random Effect is more suitable, an additional test, the Breusch-Pagan Lagrange multiplier will help us decide between a random effects or an ordinary least squares model. As long as capital structure and corporate performance accounts for differences across firms it is expected to use firm fixed effects. Based on the Hausman test, coefficient and p-value, another stage of analysis is to consider a corrected model, which will also take into consideration heteroskedasticity and autocorrelation, through Wald test and Wooldridge test. The Modified Wald test for groupwise heteroskedasticity in regression models with fixed effects indicates the presence of heteroskedasticity if the test rejects the null hypothesis, which considers a constant variance and data homoskedasticity. The Wooldridge test for serial correlation in panel data returns better results for long time series, but it is efficient in micro panels as well. The null hypothesis expresses no serial correlation (Torres-Reyna, 2007). Stata offers the options to correct the heteroskedasticity and autocorrelation issues. Despite of correcting the model, static regressions cannot overcome heterogeneity, and thus a Generalized Method of Moments (GMM) will be used as a final step of analysis. The most important relationships between capital structure, its determinants and performance will be discussed based on the regression results and their consistency.

3.4. Descriptive statistics

Table 1 presents the main descriptive statistics of every variable use in the analysis. Based on the performance indicator, companies register limited earnings, of approximately 4% of total assets. The capital structure ratios indicate a preference for internal funding, as the borrowed resources represent only one third of the capital in Romanian companies.

The average tangibility shows a greater usage of tangible assets - around 59% of total assets - with a relatively high standard deviation. This means that the data is spread over a large range of values when we consider the proportion of fixed assets in total assets. Compared to the minimum of 3.81, the average companies are rather large (the mean of size is 7.31). The liquidity ratio indicates a level of current assets which exceeds the short-term debt around three times. This is an optimum value considered in theory, although it should take into account the industry. The average risk does not necessarily imply that Romanian companies face unstable earnings, but its standard deviation is high. The tax ratio shows an average of 23.6% and the variable composed of crisis and inflation rate fluctuates up to 0.079, with an average of 0.029.

Table 1. Descriptive statistics

Variable	Obs	Mean	Std.dev.	Min	Max
ROA	1260	0.039	0.116	-1.108	0.656
Debt	1260	0.342	0.257	0.005	1.811
Equity	1260	0.642	0.243	-0.511	1.296
tang	1260	0.587	0.214	0.018	0.997
size	1260	7.306	0.813	3.809	10.290
liquid	1260	2.968	3.688	0.011	29.364
risk	1134	0.147	0.591	0	10.539
tax	1260	0.236	0.137	0	1
inflcr	1260	0.029	0.030	0	0.079

4. RESULTS

Before discussing any regression results, it is important to mention that unit-root tests were applied to every variable from the panel data. The reason was to examine if data is stationary in order to control for spurious relationships among variables. The null hypothesis is that all panels contain unit-root. This was rejected for all variables, providing the basic conditions for performing a regression analysis on this data.

The results section includes the correlations between all variables considered in the analysis (Table 2) and the regression analysis results (Table 3).

Table 2. Correlations

	ROA	Debt	Toteq	tang	size	liquid	risk	tax	inflcr
ROA	1								
Debt	-0.264	1							
Toteq	0.265	-0.935	1						
tang	-0.157	-0.346	0.363	1					
size	0.157	0.122	-0.216	-0.097	1				
liquid	0.161	-0.478	0.471	-0.098	-0.177	1			
risk	-0.039	-0.048	0.049	0.046	-0.141	0.196	1		
tax	0.015	-0.031	0.029	-0.051	0.003	0.045	-0.010	1	
inflcr	-0.185	-0.104	0.080	0.083	-0.006	0.118	0.075	-0.008	1

At a first glance, companies are less profitable when they operate with higher borrowings, as the return on assets is sustained by equity. Other values which constrain the performance of Romanian companies come from higher tangibility and risks. Companies are more profitable when they have sufficient sales and liquidities, and also when the level of taxation is high. Inflation rates and the financial crisis conditions affect return on assets.

Compared to ROA correlations, the relationships with debt indicate the contrary: while sales turnover is the only factor positively influencing borrowings, the rest of the variables have a negative influence on debt. Equity is directly influenced by tangibility, liquidity, risk, taxation, inflation and crisis, and negatively correlated to company size.

Table 3. Determinants of return on assets in Romanian companies listed on BSE

	OLS	OLS	FE	FE	RE	RE	FE corrected	FE corrected	FE corrected (time FE)	FE corrected (time FE)	GMM	GMM
lag 1											0.197*** (0.028)	-0.180** (0.028)
lag 2											0.055*** (0.018)	
lag 3											0.076*** (0.017)	
DT	-0.172*** (0.014)		-0.236*** (0.020)		-0.206*** (0.017)		-0.236*** (0.043)		-0.245*** (0.043)		-0.195*** (0.052)	
Cpro		0.198*** (0.015)		0.289*** (0.021)		0.248*** (0.017)		0.289*** (0.039)		0.289*** (0.038)		0.283*** (0.032)
tang	-0.134*** (0.015)	-0.143*** (0.015)	-0.246** (0.024)	-0.272*** (0.024)	-0.184*** (0.019)	-0.203*** (0.019)	-0.246*** (0.043)	-0.272*** (0.041)	-0.234*** (0.043)	-0.258*** (0.041)	-0.281*** (0.035)	-0.403*** (0.040)
dim	0.024*** (0.003)	0.029*** (0.003)	0.058*** (0.010)	0.061*** (0.010)	0.028*** (0.005)	0.035*** (0.005)	0.058*** (0.012)	0.061*** (0.011)	0.059*** (0.013)	0.062*** (0.011)	0.040*** (0.005)	0.018*** (0.003)
lichid	0.0001 (0.001)	-0.0002 (0.001)	-0.004*** (0.001)	-0.004*** (0.001)	-0.002** (0.001)	-0.003*** (0.001)	-0.004** (0.001)	-0.004*** (0.001)	-0.003* (0.001)	-0.004** (0.001)	-0.002 (0.001)	-0.003 (0.002)
risc	-0.001 (0.005)	-0.0001 (0.005)	-0.006 (0.004)	-0.006 (0.004)	-0.006 (0.004)	-0.006 (0.004)	-0.007 (0.004)	-0.007 (0.004)	-0.001 (0.005)	-0.004 (0.005)	-0.002 (0.002)	-0.001 (0.001)
fisc	-0.001 (0.002)	-0.001 (0.002)	-0.001 (0.002)	-0.001 (0.002)	-0.001 (0.002)	-0.001 (0.002)	-0.001 (0.001)	-0.001 (0.000)	-0.0002 (0.000)	-0.001 (0.000)	0.003*** (0.000)	0.003*** (0.000)
inflcr	-0.736*** (0.097)	-0.703*** (0.096)	-0.644*** (0.086)	-0.600*** (0.084)	-0.692*** (0.086)	-0.651*** (0.085)	-0.644*** (0.099)	-0.599*** (0.101)			-0.172** (0.075)	-0.243*** (0.080)
Time FE (significant for years:)									2005, 2007, 2008, 2009, 2010, 2011, 2012	2007, 2008, 2009, 2010, 2011, 2012		
cons	0.020 (0.031)	0.202*** (0.030)	-0.129 (0.083)	-0.404*** (0.082)	0.039*** (0.044)	0.228*** (0.043)	-0.129 (0.098)	-0.404*** (0.098)	-0.121 (0.098)	-0.406*** (0.102)		
F-test	42.74***	47.17***	40.22***	49.47***	286.74***	339.25***	15.06***	19.76***	11.27***	13.60***		
Wald chi2(7)											346.91***	265.22***
R-squared	0.2110	0.2279	0.1871	0.1945	0.2364	0.2282	0.1871	0.2279	0.2130	0.2119		
Hausman					62.64***	97.25***						
time FE			12.10***	10.02***								
Wald			67065.29***	51882.68***								
Wooldridge			5.921**	9.814***								
Sargan (Prob>chi2)											31.18 (0.4547)	26.38 (0.2354)
Arellano-Bond test order 1 z (Prob>z) order 2 z (Prob>z)											-4.0254 (0.0001)	-3.9927 (0.0001)
											-0.4348 (0.6637)	0.6027 (0.5467)

Based on the results of the static regression models and their statistically significant coefficients, the determinants of return on assets are debt and equity ratios, tangibility, size, liquidity and the variable of inflation and crisis.

The re is a negative relationship between debt and return on assets, and a positive one between equity and ROA. Both are statistically significant at 1% level. On one side, an increase of 1% in debt ratio would induce a decrease of up to 0.25% in asset returns. On the other side, an increase of 1% in equity ratio would induce an increase of up to 0.29% in asset returns. When they are performant, companies register more earnings in order to meet their needs. Hence, as long as borrowed funds are kept to a minimum proportion of capital and profits are large, companies should have a strong operational capacity. Moreover, the higher the efficiency of managing assets, the more performing the company will be.

A higher proportion of fixed assets induces a decrease in asset returns. More precisely, the indirect relationship shows that one percentage increase in the proportion of fixed assets in total assets produces a

decrease of up to 0.27 in return on assets. Tangibility coefficients are statistically significant at 1% level in all regression models. We can find some reasons to explain why Romanian companies with higher fixed assets register lower returns. First of all, over a long period of time, an investment in tangible assets would have a direct impact on performance if it would be mostly financed through internal funding. Furthermore, if companies lack of equity or liquidities, higher fixed assets could be dependent on higher operating leverage. Second, this relationship could provide evidence that the sampled companies are not able to operate their tangible assets efficiently, affecting their performance. In addition, if an investment has a higher value, it would reach its break-even point in a longer period of time.

Company size is another statistically significant factor in every model used. In Romania, the bigger the companies are the higher their return on assets will be. Greater size values imply that companies register high sales turnover and therefore they have a good place on the market and even development prospects. Performance, regardless its proxy, is in

general linked to strong solvency, meaning that large companies operate more efficiently when they benefit from economies of scale. Accordingly, larger firms may also leverage their market power, thus having a positive effect on profitability [10]. This assumption is supported by the correlation between debt and size, meaning that companies listed on BSE operate with greater debt ratios when they register higher sales turnover.

Liquidity has an indirect relationship with performance, and it is statistically significant in all static models, except OLS. As long as a higher level of liquidity provides a lower return on assets, we can assume that Romanian companies do not invest their internal funds in excess over short term. Another reason would be related to their current assets organization: either companies dispose of cash flows because their operational activity is limited, or they keep large stocks due to defective inventory, operational capacity or lower market demand for their products.

According to the coefficients of risk and tax, these variables have a negative impact on performance. This shows that companies assuming higher business risk operate are less performant in terms of their assets. Also, during times of higher taxes, the performance of Romanian companies is affected. ROA is calculated based on earnings before interest and tax, and thus, considering that tangible assets are lower when taxes are high (according to correlations -Table 2) we can state that an increased level of taxation affects the company earnings in Romania. However, business risk and tax variables cannot be considered determinants of ROA, as they are not statistically significant.

Inflation and crisis have an indirect relationship with return on assets. Although recently inflation rates were low, higher values constrain the company activity. In addition, since the crisis started, the sales are affected. Regression results indicate a statistically significant relationship: an increase of inflation and crisis variable with a unit causes a decrease of return on assets with approximately 0.7 units. From all variables, this has the highest impact on the performance proxy.

The Hausman test rejects the null hypothesis in both models considered, indicating that differences across companies influence the relationships between variables. Therefore, the fixed effect model is preferred as it controls for firms' characteristics, such as industry sector, the level of competition, the area where the company is established. The additional tests confirm the need for time fixed effects, as the model should take into consideration omitted time-invariant characteristics. In both regressions most of the years included in the decade have statistically significant coefficients. Previous research demonstrated the use of fixed effects in controlling for unobservable and time-invariant characteristics of companies [8], [7]. The corrected Fixed-Effect model is also corrected for heteroskedasticity and autocorrelation, as both coefficients from Wald and

Wooldridge tests indicate that data does not comply with all regression assumptions.

The dynamic model confirms only the roles of capital structure ratios, tangibility, size, taxation, inflation and crisis. The relationships are consistent with the static analysis results. In addition, the capital structure is dependent on its previous ratios. Equity is strongly dependent on the values of previous years, indicating a direct relationship. On the contrary, the lagged debt ratio has a negative coefficient, assuming that Romanian companies follow a target ratio, and this is why the proportion of borrowings varies from one year to another.

All regression models are statistically significant at 1% value, confirming the relevance of the model in determining return on assets for companies listed on BSE.

5. CONCLUSIONS

The capital structure has an important influence on performance in Romanian companies. This research study confirms the conclusions of most studies focused on developing countries. Romanian companies register higher performance when most of their assets are financed by internal funds. Results show that investments are based on equity and internal funding. Therefore, there is a tendency for pecking order theory, as Romanian companies require external financing in order to continue their activities only when their equity ratios are limited or when they lack liquidity. Also, there is a preference for borrowed funds as accessing equity is uncommon for companies due to Romania's underdeveloped financial market.

Although the pecking order theory confers more financial stability, a couple of aspects should be corrected in order to adjust the corporate performance in Romania. First of all, there is a deficiency in investing over short term, because companies do not use their internal funds profitable. Results also prove that large companies operate their assets more efficiently, although their sales are based on borrowed funds. This increases the business risks, despite the fact that this might be already too large, threatening the company activities over long-term.

A large proportion of fixed assets affects the return on assets. This does not necessarily represent a problem because investments in fixed assets return profits after a longer period of time. Moreover, during times of high inflation and unstable conditions caused by financial crisis, companies tend to increase their equity ratio, avoiding debt. As a consequence, tangible assets seem to have a higher proportion in total assets during times of financial constraints. After 2007, when the crisis triggered, the Romanian companies indicate a decreasing return on assets. But despite of the unstable economy, results indicate that companies undertake new investments trying to develop and maintain their market position.

Romanian companies depend on creditors due to the absence of a liquid financial market. However,

tax savings do not boost the use of debt. In fact, Romanian companies tend to follow a target debt ratio, fluctuating in order to limit the undertaken risks. With the cost of interest and a high level of taxation, even companies with large operating profits seem to be poor financial performers in terms of their net income. For future research it is advised to consider sub-sampling, based on the industrial sector, as long as the regression analysis proved that differences across companies influence the relationships between variables. However, the results and their statistical significance indicated robustness, and the conclusions of this research are relevant.

6. REFERENCES:

- [1]. **Abor J.**, *The effect of capital structure on profitability: an empirical analysis of listed firms in Ghana*, Journal of Risk Finance, Vol. 6(5), pp.438-447, 2005.
- [2]. **Akintoye I.R.**, *Sensitivity of Performance to Capital Structure*, European Journal of Social Sciences, Vol. 7 (1), pp. 1-9, 2008.
- [3]. **Chakraborty I.**, *Capital structure in an emerging stock market: The case of India*, Research in International Business and Finance, Vol. 24 (3), pp. 295-314, 2010.
- [4]. **Torre-Reyna O.**, *Panel data analysis fixed and random effects using Stata*, Data and Statistical Services, Princeton University, 2007.
- [5]. **Ebaid E.I.** *The impact of capital structure choice on firm performance: empirical evidence from Egypt*, The Journal of Risk Finance, Vol. 10 (5), pp. 477-487, 2009.
- [6]. **Huang S. and Song F.**, *The determinants of capital structure: evidence from China*, China Economic Review, Vol. 17 (1), pp. 14-36, 2006.
- [7]. **Lemmon M. L., Roberts M. R., and Zender J. F.**, *Back to the beginning: Persistence and the cross-*

section of corporate capital structure, Journal of Finance, 63, pp. 1575-1608, 2008.

[8]. **MacKay P.G. and Phillips G.M.**, *How does industry affect firm financial structure?* Review of Financial Studies, 18, pp. 1432-1466, 2005.

[9]. **Modigliani F. and Miller M.H.**, *The Cost of Capital, Corporation Finance and the Theory of Investment*, American Economic Review, Vol. 48 (3), pp. 261-97, 1958.

[10]. **Onaolapo A.A., and Kajola S.O.**, *Capital Structure and Firm Performance: Evidence from Nigeria*. European Journal of Economics, Finance and Administrative Sciences, 25, pp. 70-82, 2010.

[11]. **Pirtea M., Botoc C., Nicolescu C. and Enache C.**, *The analysis of corporate finance policy at sectorial level: case of Romania*, Annals of Eftimie Murgu University Resita, Fascicle II, Economi, pp. 121-130, 2010.

[12]. **Serghiescu L. and Vaidean V.L.**, *Determinant factors of the capital structure of a firm– an empirical analysis*, Working paper EMQFB Tg Mures 2013, 2013.

[13]. **Torres-Reyna O.**, *Panel Data Analysis, Fixed and Random Effects (Using Stata 10.x)*, Princeton University, 2007.

[14]. **Vatavu S.**, *Determinants of capital structure: Evidence from Romanian manufacturing companies*, 1st Advanced Research in Scientific Areas Conference, [online] Available at <www.arsa-conf.com/archive/?q=2012-ARSA-7::pdf::2:8> [Accessed 13 January 2013], 2012.

Acknowledgement: This work was supported from the European Social Fund through Sectorial Operational Programme Human Resources Development 2007 – 2013, project number POSDRU/159/1.5/S/134197, project title “Performance and Excellence in Doctoral and Postdoctoral Research in Romanian Economics Science Domain”