

THE FINANCIAL STRUCTURE INFLUENCE ON NET PROFIT

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Abstract: *Financial structure is one of the most complex areas of financial decision making due to its interrelationship with other financial decisions variables. Decision related to financial structure is important because it directly affects the profitability of the organization. The purpose of this paper is to empirically examine the impact of capital structure on net profit for all companies active in the wholesale of motor vehicle parts and accessories in Romania (NACE 4531), with extended financial statements over a 10 years period from 2008 to 2017. In this study, the company's financial structure, which is the independent variable, is measured by financial leverage ratio. Net profit ratio (NPR) is used as the dependent variable for the study. Used data has been analyzed by using regression analysis to find out the links between variables. The output of the study may help to the entrepreneurs, board of directors and policy makers to design better decisions in the debt-equity choice.*

Keywords: *financial structure, net profit ratio, financial leverage ratio, profitability.*

1. INTRODUCTION

One of the most complex areas of financial decision making is capital structure because of its interrelationship with other financial decisions variables. The main component of the financial decision is represented by profitability and it directly affected by the whole of the capital investment decision, which is the vital one. Commercial companies become profitable organizations. The ultimate goal of commercial companies is to achieve maximum profitability, thus minimizing costs. Finance mainly costed interest on the flow of one of the main components of the cost structure. Most researchers have found a negative link between leverage effect and debt and profitability in their research work. But some authors have presented different opinions, so they have found a positive relationship between the level of profitability and the level of debt in their studies.

At microeconomic level, the direct result of managing multifarious economic resource and their efficient use within investment and financing activities represent the performance index of the firm. This direct result should be based on complex and varied information on the evolution of all types of activities within the company. By analyzing the annual financial statements, a synthetic picture of the company's financial position and its performance can be found. These are therefore the main information sources that allow a qualitative analysis of how resources are used during the process of creating value.

Over the time, the influence of the financial structure on the company's performance level has received special attention in the finance literature. Analyzing the effect of the financial structure on the company's profitability will help us to know the potential problems at the level of finan-

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cial structure or profitability. Nowadays, trading firms need to run in a complex and competitive environment. Due to the competitive environment of the activity, it is necessary to choose the most suitable capital structure in order to obtain an optimal level of profitability.

The **financial structure** of the enterprise is represented by a complex and coordinated ensemble of the different sources of finance that the financial manager uses to meet financing needs. In other words, the financial structure can also express the existing ratio between short-term and long-term funding. At enterprise level, the term of financial structure reflects the composition of the capital or the totality of capital components. For this reason, it is called the structure of the capital of the enterprise. When leverage reaches a high share, this leads to an increase in debt, including in turn an increase in bankruptcy or financial distress due to conflicts between equity holders and bondholders. It is very difficult to make distinction between these two sources of agency costs. Accordingly, the financial structure or the capital structure of the enterprise is the sum of the sources of financing involved in forming the capital invested in enterprises. The main criteria that characterize the choice of an optimal financial structure are as follows:

- The leverage effect,
- Financial profitability,
- Lending capacity.

1.1. Literature Review and Previous Studies

Song (2005) suggests that the vast majority of the determinant factors of the capital structure suggested by the capital structure theories seems to be relevant for the Swedish market. There are also significant differences between the determinants of long-term and short-term debt. Raheman, Zulfiqar and Mustafa (2007) have indicated that the capital structure of non-financial firms has a significant effect on the profitability of companies listed on the Islamabad Stock Exchange. Dragota and Semenescu (2008) proved that the pecking order theory seemed to be more appropriate for the Romanian capital market, but the signaling theory was not totally rejected.

In their second paper on corporate capital structure, Modigliani and Mill (1963) show that firm value is an increasing function of leverage due to the tax deductibility of interest payments at the corporate level. A negative correlation between leverage and performance, described by the ratio of earnings before interest and tax to total assets, was found in the Chinese firms (Huang and Song, 2006; Chakraborty, 2010). There are also studies such as Ebaid's (2009), where no significant impact was found between capital structure choices and performance. Studies analyzing the impact of financing decisions on performance and profitability usually employ some of the most relevant capital structure determinants.

The trade-off theory as established by Myers (1984) states that the decision on the source of capital for a firm is evaluated based on the various costs and benefits associated with different sources of financing in their quest to obtain an optimal capital structure. The firm is exposed to bankruptcy costs, agency costs and the benefits associated with debt when evaluating the best source of financing. Bankruptcy costs are costs incurred by the firm when the probability of default on financing is greater than zero (Chen, Jung, & Chen, 2011).

Sina and Matubber (1998) observed that a number of factors such as operational inefficiency, effective credit policy, improper planning and controlling working capital, overhead can lead to the unfavorable position in the industry's managerial performance, profit-making capacity,

liquidity etc. Choudhury (1993) mentioned that the decline in the company's profitability may be influenced by the reduced use of debt. Because due to lack of adequate finances it has to give up some of the profitable opportunities and vice-versa.

According to Banu (1990), the capital structure of a firm has a direct impact on its profitability. If the enterprise structure is negative, this will have a negative impact on its profitability. In order to avoid this situation, Banu suggested that the financial directors involved should focus on the different aspects of the capital structure.

The agency cost hypothesis-higher leverage, or a lower equity capital ratio is associated with higher profit efficiency, all else being equal and consistent according to Berger, A. N. (2002) findings. When leverage is very high due to the agency cost of outside debt, it is considered that the relationship between performance and leverage may be reversed. In line with the agency theory and their argument that profit efficiency embeds agency costs, profit efficiency is responsible for the ownership structure of the firm.

Larry & Stulz (1995) illustrated on their study the effect of debt on firms in Ghana which resulted positive significant association between total debt and total assets and return on equity. A study carried out by Murphy (1968), on financing behavior of listed Chinese firms resulted in a conclusion that a negative relationship between profitability and firms leverage exists.

2. DATA AND METHODOLOGY

Berger, A. N. (2002) findings are consistent with the agency cost hypothesis-higher leverage, or a lower equity capital ratio is associated with higher profit efficiency, all else being equal. The relationship between performance and leverage may be reversed when leverage is very high due to the agency cost of outside debt. Profit efficiency is responsible to ownership structure of the firm consistent with agency theory and their argument that profit efficiency embeds agency costs.

2.1. Sample

The used model is applied to all the companies active in the wholesale of motor vehicle parts and accessories, NACE 4531, with extended financial statements submitted for the entire appraised period were taken into consideration (to eliminate the survivorship effect). Since we need extended format of the financial statements, only companies with turnover above 1 mil EUR have been included.

Table 1: Number distribution of companies

Year/Number	1 - 2,5 MIL EUR	2,5 - 5 MIL	5 - 10 MIL	10 - 50 MIL	+ 50 MIL	Total
2008	79	45	17	19	7	167
2009	100	47	21	20	8	196
2010	106	48	20	21	8	203
2011	109	48	24	20	8	209
2012	117	50	25	21	8	221
2013	120	53	26	21	8	228
2014	127	53	27	22	8	237
2015	130	55	28	22	8	243
2016	131	55	29	22	8	245
2017	130	55	29	22	8	244

2.2. Mode of analysis

Net Profit Ratio is calculated according to the following formula:

$$\text{NPR} = \frac{\text{Net profit}}{\text{Revenue}} \times 100$$

Leverage is calculated according to the following formula:

$$\text{Lev} = \frac{\text{EBIT}}{\text{EBT}}$$

where:

- **EBIT** = Earnings before interest and taxes is an indicator of a company's profitability.
- **EBT** = A measure of a company's ability to produce income on its operations in a given year.

2.3. Data source

The following table illustrates the results of the calculation of Net Profit Ratio and of the calculation of the financial leverage applied to a sample of companies active in the wholesale of motor vehicle parts and accessories (NACE 4531) for the entire period considered (2008-2017).

Table 2: Calculation of financial leverage and net profit ratio

data_bilant	Denumire societate	Lev	NPR
2010-12-31	PRIMAT GOLD IMPEX SRL	1.359077974	0.021535197
2011-12-31	PRIMAT GOLD IMPEX SRL	1.988214821	0.044101936
2012-12-31	PRIMAT GOLD IMPEX SRL	1.459927693	0.002603821
2013-12-31	PRIMAT GOLD IMPEX SRL	2.052189262	0.001053961
2009-12-31	PRIMAT GOLD IMPEX SRL	0.780877282	0.001198473
2008-12-31	PRIMAT GOLD IMPEX SRL	1.391640169	0.011579527
2014-12-31	PRIMAT GOLD IMPEX SRL	3.374349394	0.001309382
2015-12-31	PRIMAT GOLD IMPEX SRL	3.681678767	0.014126057
2016-12-31	PRIMAT GOLD IMPEX SRL	5.00322716	0.018056388
2017-12-31	PRIMAT GOLD IMPEX SRL	4.478398744	0.009091512
2010-12-31	COMAUTOGLOB SRL	2.071424042	0.003595771
2011-12-31	COMAUTOGLOB SRL	2.683757869	0
2012-12-31	COMAUTOGLOB SRL	2.62457851	0
2015-12-31	COMAUTOGLOB SRL	10.09759494	0.015872524
2014-12-31	COMAUTOGLOB SRL	17.68714004	0
2013-12-31	COMAUTOGLOB SRL	1.586210985	0.024297523
2009-12-31	COMAUTOGLOB SRL	2.017803618	0.00851984
2008-12-31	COMAUTOGLOB SRL	2.211307979	0.01122444
2016-12-31	COMAUTOGLOB SRL	3.855078258	0.048909167
2017-12-31	COMAUTOGLOB SRL	3.423021083	0.0360803
2010-12-31	COPROT SRL	0.433561536	0.046816875
2011-12-31	COPROT SRL	0.377991645	0.062537745
2012-12-31	COPROT SRL	0.531627839	0.050074288

High leverage indicates that companies are using debt to fund its assets and operations. Net Profit Ratio indirectly measures how well a company manages its expenses relative to its net sales. A high net profit margin means that a company is able to effectively control its costs and/or provide goods or services at a price significantly higher than its costs. A low net profit margin means that a company uses an ineffective cost structure and/or poor pricing strategy. For example, „COMAUTOGLOB SRL” illustrates a low net profit ratio for the entire period (2008-2017). On the other hand, „AUTO ABIL SRL” converted 64,4 % of her sales into profit in 2010.

2.4. Empirical model

To analyze the influence of an enterprise’s financial structure on its capital, we will use a linear regression model of the form:

$$Y = \alpha + \beta * X + e$$

Table 3: The analysis of model variables

Y	$\frac{\text{Net profit}}{\text{Revenue}} \times 100$	The endogenous variable reflects net profit ratio . It is calculated by deducting all company expenses from its total revenue. The result of the profit margin calculation is a percentage
X	$\frac{\text{EBIT}}{\text{EBT}}$	The exogenous variable reflects leverage ratio for evaluating financial structure. A high debt/equity ratio generally indicates that a company has been aggressive in financing its growth with debt. Typically, a D/E ratio greater than 2.0 indicates a risky scenario for an investor. Negative leverage occurs when a company purchases an investment using borrowed funds, and the borrowed money has a greater cost, or higher interest rate, than the return made on the investment.

3. RESULTS AND DISCUSSIONS

Applying the regression equation previously described on the data panel in E-Views, we obtain the following result on which interpretations will be made:

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	5.418604	0.170510	31.77874	0.0000
LEV2	-0.134164	0.044684	-3.002472	0.0027

R-squared	0.004103	Mean dependent var	5.234318
Adjusted R-squared	0.003648	S.D. dependent var	7.458165
S.E. of regression	7.444548	Akaike info criterion	6.853754
Sum squared resid	121261.8	Schwarz criterion	6.858952
Log likelihood	-7502.861	Hannan-Quinn criter.	6.855654
F-statistic	9.014840	Durbin-Watson stat	0.671094
Prob(F-statistic)	0.002708		

Interpretations: The econometric technique we will use is **Panel data regression**. In statistics and econometrics, panel data or longitudinal data are multi-dimensional data involving measurements over time. By combining data in two dimensions, panel data gives more data variation, less collinearity and more degrees of freedom. Given the overall concentration of revenues among the largest companies in the overall business environment and the selected list of companies, the sample is divided in five different groups by turnover level, that will further represent the cross-sectional series in the panel data model. The intercept is significantly different from zero to a confidence level of 1%. The slope of the regression curve is different than 0 because of its p-value that is at a level of 0.2%, well below the maximum risk level of 5%. In this case, we rejected the null hypothesis that leads to the conclusion that all slope coefficients are different than zero. The value of Probability for independent variable (0.0027) indicates that the coefficient is significant. Coefficient of independent variable illustrates an inverse relationship between the financial leverage and the Net Profit Ratio, but its influence on the dependency variable is very low due to the value of the coefficient approaching 0. The values for R Squared (0.004) indicates that only 0.4 % of the various Net Profit Ratio is explained by Financial Leverage.

4. CONCLUSION

The goal of any business is to maximize assets and minimize costs. In this regard, it is necessary to analyze the weight of each financing state (own funds or debts) in the share of total financing. This study investigated the relationship between financial leverage and net profit margin ratio of the firms that belong to all the companies active in the wholesale of motor vehicle parts and accessories, NACE 4531, with extended financial statements submitted for Romania.

The relationship of these 2 variables was studied using a panel regression model with 2190 observations in total (10-time series for the period 2008-2017). Highly leverage firms have lower profitability and lower leverage firms have higher profitability. The results obtained using panel data are considered to be most relevant due to the large number of observations and on the basis of which we can draw the final conclusions.

The results generated by EViews show that in the context in which we worked; the financial leverage has a negative impact on net profit ratio. Nevertheless, the impact is not significant and the financial leverage only slightly influences the net profit. The results of this study are consistent with the results of previous studies conducted by Ebaid (2009), Huang and Song (2006) and Chakraborty (2010). The results of this study are not matching with the results of previous studies conducted by Larry and Stulz (1995) in which he found a significant positive association between leverage and profitability. He conducted the study in Ghana where the cost of debt is lower than the cost of debt in Romania and he took top twenty companies listed. This could be the reason of contradiction in results of both studies. Because the calculation is complex, other analyzes could lead to different results depending on the calculation method.

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