

PROFITABILITY AND SOURCES OF GENERAL MANUFACTURERS IN 2009-2011

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Abstract: *Analysis of capital structure of corporations is a key issue of economics and the effect of its fluctuation can be observed on several fields of the life of corporations. It wields influence shall I say the competitiveness of the sector, property status or financial and profitability situation of corporations, effectiveness of management, market value of the company as well as the expectable output rate of equity for owners. My empirical analysis is based on data containing 5 manufacturer enterprises from Hungary between 2009 and 2011. To substantiate my aims, during my research in the scope of a technical literature processing I reviewed the most important parameters of the fluctuation of financing, fund- and capital structure, especially considering their agricultural references. I cared especially the followings: financing and the system of the sector supports, thus reviewing: root causes of lack of capital in agrarian sector, connection between capital structure and profitability of the sector. I demonstrated capital structure theories considered to be the most important also in a technical literature processing, emphasizing their practical materialization, thus proving the fact that up to this day there is no existence of an accepted ruling theoretical trend for defining development of an optimal capital structure. With regression calculating I searched the volume of influence of chosen indices of capital structure on financial and profit situation of corporations, in addition I studied which variant of those that take a part in development of capital structure, should be in functional relation with profitability indices. I try to assess the reasons of the changes in the structure of resources of enterprises in order to find the determinants effecting the capital structure. Furthermore, I determine the capital structure with that profit running could be achieved in the most effective way. As a result of my review I can state, that the capital structure proportions take serious effect on the fluctuation of profitability and I defined a proportion of foreign capital and own capital which if reached or exceeded, may lead to operation producing deficit.*

Keywords: *manufacturers, capital structure, liability, profitability*

JEL classification: *M40*

INTRODUCTION

Analysis of capital structure of corporations is a key issue of economics and the effect of its fluctuation can be observed on several fields of the life of corporations. Executives must take into consideration during the maximization of the company value the examinations concerning the forming of the optimal capital structure because these decisions affect a lot of other segments of the business activity (Nemessályi, 2003).

Capital structure is the mixture of sources of funds a firm uses, that can be viewed as the permanent financing the enterprise represented primarily by long-term debt, preferred stock, and common equity but excluding all short term credit (Baker and Wurgler, 2002). It reflects the composition of the permanent financing sources and the ratio of the equity capital and the long-term liabilities of the company which are modulated by the long-term financing decisions (Pupos, 1997).

The financing of the production companies occur via a multi-channeled system: it can happen in the form of internal aggregation, credit and state subsidy.

MATERIAL AND METHOD

In my study the calculations concerning the examination of the liabilities and capital structure of the production companies are based on the data of 2009-2011 of 5 companies that made a yearly account operating in the Észak-Alföld Region.

When examining the relationship between the capital structure and the profitability I wanted to find out that based on the average of the analyzed 3 years is there a relation between the capital structure and the profitable operation of a company.

After the analyze of the processions occurring within the capital structure of the companies, examining the correlation-calculations I wanted to find out whether the relation between the capital structure and the business indexes of the companies can be proven, and if yes, what is its kind. Does the applied capital structure affect the profitability of the companies. I examined with the regression-calculations the volume of the effect of the chosen capital structure indexes to the financial-income situation of the companies and which one of the variables determining the capital structure is in a strong relation with the profitability indexes (Bács et al, 2005).

RESULTS

The current situation of the capital structure of the company affects several areas of the operation of the company. It influences the competitiveness of the sector, the wealth, financial and profitability situation of the companies and the effectiveness of the business too. This study focuses on the examination of the relationship between the capital structure and the profitability.

	Berettyómenti			Mechanikai Művek			DÉSZ KER		
	2009	2010	2011	2009	2010	2011	2009	2010	2011
Equity Capital	312793	455816	642107	298146	336682	405747	202481	203585	205552
Long liability term	55133	196322	153438	39546	100590	136144	335070	115220	0
Short liability term	280604	121952	148640	235314	74300	68071	124539	157583	279534
<i>Total assets</i>	648530	774090	944185	573006	511572	609962	662090	476388	485086

	FARMGÉP			POLYDUCT		
	2009	2010	2011	2009	2010	2011
Equity Capital	156577	171739	178644	544385	576525	596831
Long liability term	150574	120001	94103	11511	24700	15292
Short liability term	292146	228490	284388	140666	86647	90013
<i>Total assets</i>	599297	520230	557135	696562	687872	702136

Table 1: The resource structure in the period of 2009-2011 (data in thousand HUF)

Source: Own compilation

The analysis shows the run of the capital structure of the agricultural business associations in the period of 2009-2011 based on the timeline of the relevant data of the balance sheet and the profit and loss account of the given companies. The calculation of the averages helps to examine and calculate the indexes that are relevant in this issue.

The changes in the resource and capital structure of the production companies are shown in Table 1. Taking into consideration the ratio of the equity capital it can be said that the trend is ascendant in all of the five companies. This is due to lack of loaning possibilities at good conditions restraining with this the step of development of the companies. Besides this the companies reinvested a part of the incomes of the previous years and the ratio of their liabilities shrank because their investments did not grow with the same scale and in relation with this fact the ratio of their equity capital grew.

	Berettyómenti Zrt			Mechanikai Művek			DÉSZ KER		
	2009	2010	2011	2009	2010	2011	2009	2010	2011
Operating profit	105563	131743	181154	55150	55150	71033	25456	8801	14429
Financial earnings	-32852	-77913	-35819	-14732	-14732	-17301	-10518	-6599	-10900
Earnings before taxes	72711	53830	145335	41618	41618	54997	14878	2127	5046
Balance sheet earnings	69627	52533	139928	38536	38536	46465	6444	1104	1967

	FARMGÉP			POLYDUCT		
	2009	2010	2011	2009	2010	2011
Operating profit	54615	29534	20215	86311	39869	41861
Financial earnings	-10878	-20618	-18920	-9374	9506	-3070
Earnings before taxes	44685	15271	8655	61775	45067	29181
Balance sheet earnings	41308	15162	6905	21797	32140	20306

Table 2: The earnings indexes of the production companies, 2009-2011 (data in thousand HUF)

Source: Own compilation

Table 2 shows the main contents and the changing of the earnings of the businesses. The balance sheet earnings calculated on the basis of the database that I had in the examined period showed a growth only in the case of 2 companies, the Berettyómenti Zrt and the Mechanikai Művek and at the same time it dropped in the case of the other companies, the DÉSZ-KER, the FARMGÉP and the Polyduct Kft in the period of 2009-2011.

We can get an informative picture about the shaping of the capital structure and the profitability situation of the production companies examining the indexes. Of course during the analysis the optimal value of the indexes cannot be unambiguously determined because they reflect the specific business situation of each company too.

Examining the change of the capital structure of the companies using the indexes I examine the quantity and the relation of the items of the assets and liabilities shown

in the balance sheet valuating this way the change of the indexes pointing out the sort and the standard of the business through the run of the wealth and capital structure, the change of the assets and liabilities.

As it can be seen in Figure 1 the equity capital / total liabilities index showing the capital strength of the company has the highest value at the Polyduct Kft. where it grew from 75 percent in 2009 to 83 percent in 2011. When valuating and determining the optimal level of the index the costs and expenditures of the single source-elements must be considered too (the cost of the share capital is the dividend, the cost of the foreign funds is the interest rate generally). It is specifically positive if the equity capital grows due to the profitability of the company. On the other side the highest is the ratio of the equity capital within the total capital, the company has to pay less interest rates and capital redemption.

In connection with the things mentioned above the capital leverage index – i. e. the ratio of the liabilities compared to the equity capital – show the total indebtedness of the company. This index was extremely high at the FARMGÉP Kft., in 2009 it was almost 300 percent.

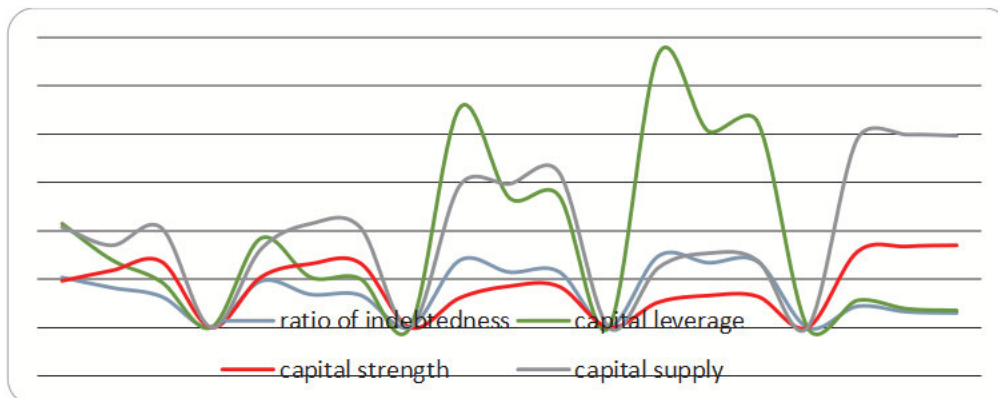


Figure 1: Analysis of the companies on the basis of the indexes I.

Source: Own compilation

During the examination of the profitability indexes shown on Figure 2 it could be seen the huge decrease of the earnings due to the unsecure economic situation of the year 2010. Examining the company data it can be said that the profitability of the equity capital in all of the examined years exceeds the profit on income which even this way exceeds the profit on assets. The yield on the equity capital higher even than the profitability of the total capital is considered a positive event because on the one hand it is a result of the growth of the equity capital and on the other hand it also means that in the given years the profit of the equity capital exceeded the cost of the foreign capital. The higher is the profitability of the equity capital compared to the profitability of the total capital, the more efficient is the utilization of the capital.

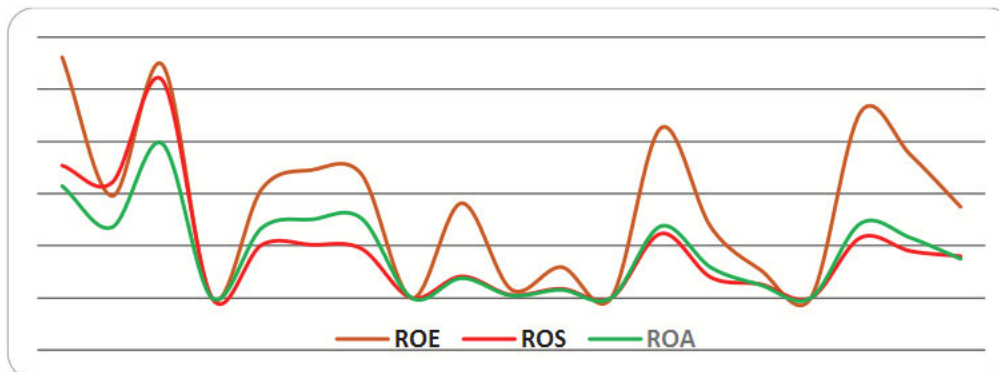


Figure 2: Analysis of the companies on the basis of the indexes II.

Source: Own compilation

In the next part of the examination I analyse of the relationship between capital structure and profitability, revealing determining factors of profitability and defining their effects. In this manner, I am looking for the answer whether selecting capital structure should take effect on the fluctuation of profitability of corporations, and if so, how. I examine the linear relation and its intensity with correlation examinations than with regression analysis I determine the functional relation between the examined variables.

With correlation calculation I test the correctness of the following assumption:

Hypothesis: *There is relation between the indexes describing the operation and the business of the companies and the changing of the capital structure in the field of the companies.*

Examining the data of the balance sheet and the profit and loss account concerning the capital structure it can be said that the income is in close correlation with the assets and this can lead to a positive relation with the fix costs and the subsidies too. The income shows a strong positive correlation (+ 0.7915) with the interest rates to be paid and this way it is in a negative relation with the earnings of the financial operations (- 0.7635). The income has strong positive correlation with every asset-group that means that they change in the same direction. Within the assets the correlation of the stocks with the income is the highest (that confirms the more intensive reaction of the current asset demand than the fixed assets to the increase of the output that can refer to a high capacity reserve in the sphere of the companies).

Besides these facts it is important to emphasize the positive correlation between the income and the net current asset (+ 0.7178). The high net current asset is namely typical in the case of the companies with a conservative financing strategy so there is a statutory relation between the financing strategy and the income. Because of the strong negative relation between the equity capital and the foreign capital the growth of the equity capital reflects the growth of the value of the net current asset.

I performed regression analysis of studied database on the base of two starting point. In one case I wanted to find an explanation: the chosen capital structure indexes that shows on the best way the structure of the liabilities how affect the financial-income situation of the company, and in the other calculation I wanted to find out which one of the indexes determining the capital structure has a functional relation with the profitability indexes. I attributed two important parameters to the significant linear relations found in the course of the chosen statistical procession: the determination coefficient that shows the strength of the linearity, the correctness of the appropriateness and the beta coefficient which shows that the single alteration of the explanatory variant how much does alter the result variant's value.

Table 3: The regression result of the capital leverage

Pending variant	β_0	P(β_0)	β_1	P(β_1)	95% CI		R ²
Profitability of the equity capital	0,26351	0,000	-0,1867	0,000	-0,18123	-0,16145	0,8215
Income / equity capital	0,53140	0,003	0,8976	0,000	0,81176	0,92126	0,8327

Source: Own calculation

CONCLUSIONS

The analysis of the relation between the capital structure and the profitability, to pint out the effect of the capital structure to the profitability is an essential part of the examinations concerning the capital structure of the companies. Results of further calculations also confirmed: fund structure proportions take serious effect on the variation of profitability. Symmetry of equity shows positive connection between profitability indices and the fluctuation of liquidity, moreover the raise of foreign capital proportion on the whole goes together with the lessening of taxed throughputs.

The results of the correlation calculations done prove my assumption, i.e. that statistically it can be proved that there is relation between the capital structure and the financial, profitability indexes of the business associations.

REFERENCES

Baker, M. and Wurgler, J. (2002): *Market Timing and Capital Structure*. Journal of Financial Economics LVII.

Bács, Z., Boros, A., Darabos, É., Ertsey, I., Fenyves, V., Galicz, K. Grasselli, N., Herczeg, A., Jacsmenik, Gy., Kárpáti, L., Rózsa, A., Tábori, M.: (editor: Bács, Z. – Fenyves, V.): *Finance and Accounting of Corporations*, Expertise Publisher Office, Budapest, 2005. 35-52.p ISBN 963 9553 64 6

Nemessályi, Zs., Nemessályi Á. (2003): *Indexes of the effectiveness of operating*. Gazdálkodás. XLVII. évfolyam 3. sz. 54-60. o.

Pupos, T. (1997): *Vállalkozások finanszírozása*. Gazdasági Szaktanácsok, Keszthely 35.p.

Data of balance sheet from the examined enterprises: Berettyómenti Zrt, Mechanikai Művek, DÉSZ-Ker Zrt, Farmgép and Polyduct Kft in 2009-2011