FINANCIAL LEVERAGE IMPACT ON RETURN ON EQUITY FOR ROMANIAN LISTED COMPANIES

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The aim of this paper is to study the impact of financial leverage on return on equity for a sample of eight Romanian listed companies' acting in the manufacturing dairy products sector, using financial leverage method. This method was applied for a period of 3 years (2010-2012) and reflects also the influence of debt policy on company's return on equity that was determined using both accounting data and financial leverage. The conclusions that emerge in this study reflect that financial leverage effect is a key factor that influences the return on equity in function of degree of debts and the relation between return on assets and interest rate, but there are many other determinants of return on equity that are not linked by financial structure.

Key words: leverage effect, return on assets, debt equity ratio, accounting data, financial distress

JEL classification: G30, G32, M41

1. Introduction

The use of debt in a company's capital structure is called financial leverage. The more debt a company has, expressed as a percentage of assets, the greater is its degree of financial leverage that means it refers to the extent to which a company relies on debt. The more debt financing a company uses in its capital structure, the more financial leverage it employs. Debt acts like a lever in the sense that using it can greatly magnify both gains and losses. So, financial leverage increases the potential reward to shareholders, but it also increases the potential for financial distress and business failure (Ross *et al.*, 2003).

The capital structure may produce the highest company value that means the lowest cost of capital that is the one most beneficial to stockholders. Financial leverage may have an important impact on the payoffs to stockholders, but may not affect the overall cost of capital.

The extent to which a company uses debt financing, or financial leverage, has three important implications (Brigham & Houston, 2009):

- by raising funds through debt, stockholders can maintain control of a company while limiting their investment;
- creditors look to the equity, or owner-supplied funds, to provide a margin of safety, so the higher the proportion of the total capital that was provided by stockholders, the less the risk faced by creditors;
- if the company earns more on investments financed with borrowed funds than it pays in interest, the return on the owners' capital (return on equity) is magnified, or "leveraged".

The specialty literature has traditionally analyzed the relationship between leverage and corporate performance from the point of view of how corporate performance affects the level of firm debt; the majority of these studies have found a negative relation. Using a sample of 10,375 companies from 39 countries, Gonzales (2013) studied the relationship between leverage and corporate performance from the perspective of how financial leverage affects the operating performance of companies and he found that the performance of companies with greater leverage is significantly reduced compared to their competitors in industry downturns, in line with the importance of financial distress costs; this effect varies according to the legal origin of the countries, being positive in French civil law countries. He concluded that the protection of shareholder rights and the strength of legal enforcement are the main variables explaining the effect of financial leverage on performance (Gonzales, 2013).

Moon and Tandon (2007) investigates whether the association between ownership structure and leverage varies with the magnitude of growth opportunities. Considering the disciplinary role of leverage on the over-investment problem and ownership structure as a control mechanism to affect funding decisions, they hypothesize that the association between ownership structure and leverage is stronger for companies with fewer growth opportunities. They found that the association between equity ownership

and leverage is significant for low-growth companies, but not for high-growth companies (Moon & Tandon, 2007).

Ojo (2012) examines the effect of financial leverage on a selection of indicators of corporate performance in Nigeria. Their econometric findings demonstrate that leverage shocks (debt/ equity ratio) have substantial effect on corporate performance especially when the net assets per share is used as an indicator of corporate performance. He concluded that earnings per share depend on feedback shock and less on leverage shock; their finding revealed that the leverage shock on earnings per share indirectly affect the net assets per share of companies as the bulk of the shocks on the net assets per share was received from earnings per share of the companies (Ojo, 2012).

Gill & Mathur (2011) studied also the factors that influence financial leverage of the companies. They realized a study on a sample of 166 Canadian firms listed on the Toronto Stock Exchange for a period of 3 years (from 2008-2010) applying co-relational and non-experimental research design. The results of the show that financial leverage of Canadian firms is influenced by the collateralized assets, profitability, effective tax rate, firm size, growth opportunities, number of subsidiaries, and industry dummy (Gill & Mathur, 2011).

Other author attempts to investigate the relationship between financial leverage and financial performance. The results show the positive relationship of debt equity ratio with return on asset and sales growth, and negative relationship of debt equity ratio with earning per share, net profit margin and return on equity. He concluded that the variation from mean was quite high in debt equity ratio which means that there were massive fluctuations in the data during the study period (2006-2011); the variances of net profit margin and return on equity were also high; earnings per share and return on asset have relatively less variations from the mean; sales growth has very low variance indicating that there were fewer fluctuations in the sales growth of the listed sugar companies of Pakistan. Thus, all these reflect that the use of debt may have a positive or negative impact on financial performance (Shah Fasih Ur Rehman, 2013).

Other study examines the profit profile of companies in Nigeria and analyzes the impact of leverage on profitability for the period 1999-2007. The results show that aggregate profit level for the companies decreased by 0.02% yearly over the study period. However, when disaggregated into sectors, a few companies actually experienced an increased profit level. The results show that firm size has a significant positive effect on profitability, while leverage has negative effect. This study suggests that expansion, increased sales and low debt ratios enhance company's profitability (Akinlo & Asaolu, 2012).

In this paper, we examine the impact of financial leverage on return on equity using a sample of 8 Romanian companies acting in the food industry sector, as well as the way in which they can be used to maximize the shareholders value, considering that they may be important information for the investors.

The paper is structured on four sections: section 2 presents the methodology of the study; section 3 highlight the financial performance of the company using as indicators return on assets and return on equity determined by accounting data; in section 4 is reflected the impact of financial leverage on return on equity, using leverage method, comparing the results obtained from calculation of return on equity, and finally the paper is completed with conclusions of the analysis carried out.

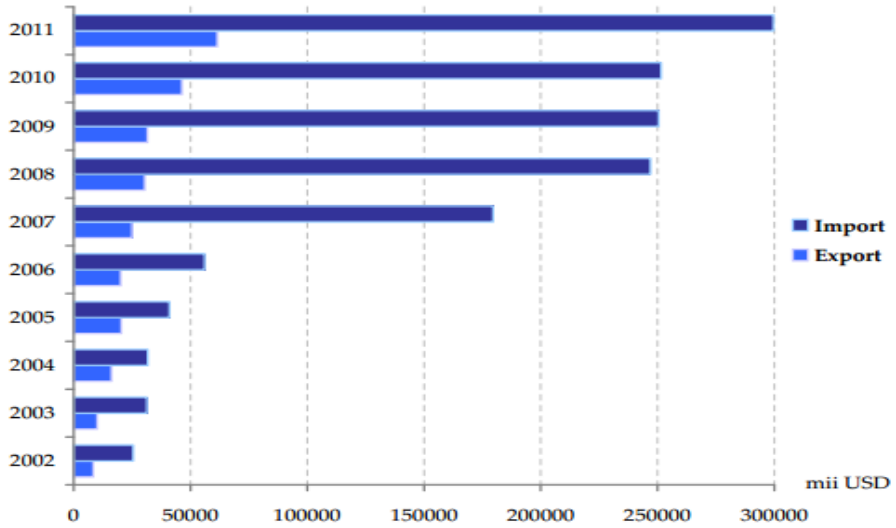
2. Methodology

The aim of this paper is to analyze the financial leverage impact on return on equity for Romanian listed companies, analysing companies acting in manufacturing dairy products sector. It was chosen the dairy products sector because this field of activity is less studied from economic point of view, numerous studies being focused on product quality. Other reason of choosing this sector for analysis is the fact that in the last year was registered important increases in production of dairy products, according to a press release from the National Institute of Statistics: thus in November 2013 compared to November 2012, the amount of cow's milk collected by processing units increased by 4.6%; drinking milk by 9.7%, sour milk (yogurt, drinking yogurt and others) by 9.7%, cream for consumption by 6.3%, butter by 6.3%, cheese by 3.6%. Production increases were due to the increase of the amount of imported raw milk in the same period with 33.6% (Şerban, 2013).

In the period 2002-2011, Romanian dairy trade has experienced an upward trend after 2007; these increases were massive due to imports. Thus, in the first four years of the period analyzed both exports and imports of dairy products showed increasing values, but lower than those carried by major players on the international market.

In Romania dairy products exports registered an upward trend until 2005, and then declined in 2006; as at the beginning of 2007, the year of accession to the European Union, our country's exports registering annual increases, the maximum value of 60,141 thousand USD being reached in 2011. The export increase in 2011 compared to 2010 was by 31.8%.

Figure 1. The trade of milk and dairy products in Romania



Sursa: Mărăscu, C. & Beldescu, A. (2012). Potențialul de export al României. Lapte și produse lactate, Centrul Român pentru promovarea comerțului și a investițiilor străine, available at http://www.dce.gov.ro/Info_business/produse/Lactate2012.pdf

In the period 2009-2012, Romania was ranked the 56 among world exporters, with external deliveries of 4.94 million USD, the share of our country in world exports of these products being 0.06%. In the hierarchy of exporters in the EU27, Romania ranked the 23, making 0.1% of total EU exports.

Given this evolution, in this study, we used eight companies acting in the manufacturing dairy products sector, and we analysed the impact of financial leverage on return on equity in the period 2010-2012. Information necessary for analysing these companies were obtained by processing data of financial statements presented on the website of the Bucharest Stock Exchange for the mentioned period. Based on these data were calculated return on equity determined by accounting data, return on assets, average interest rate, financial leverage and return on equity determined by financial leverage.

This study has some methodological and conceptual limitations:

- dates are collected from a small number of listed companies that have available information for the last 3 consecutive years; that means the sample period analysed in this paper is 2010-2012.
- this study is mainly based on secondary data, which are collected from the annual financial statements. Therefore, the study suffers from all the limitations that are associated with the annual financial statements.
- there is an abundance of literature on financial leverage and many empirical studies, and this study was not able to review all this literature.
- this study included companies that have obtained losses from operating acrivity, in some years and some results of the analysis may be inconclusive;
- this study is focused on the differences that appear between return on equity determined by accounting data, which considers the entire activity of the company, with all the factors that may influence the company's profitability and return on equity determined only by financial leverage.

Since analyzed companies operate in the same sector of activity conducting a comparative study of return on assets and return on equity recorded by each company is easily achieved, the results being relevant. The paper is focused on the analysis of financial leverage impact on companies' return on equity using the financial leverage method. The financial leverage method reflects the influence of debt policy on company's return on equity, using calculations of debt equity ratio, return on assets, average interest ratio and financial leverage. The method reflects as well as the ways the company engages loans to finance operating assets so it can get higher return on equity.

Considering the fact that companies do not registered extraordinary activity or financial income, we can use the following form of return on equity: $ROE = \left[ROA + (ROA - i)\frac{D}{E} \right](1 - t)$, where:

$\frac{D}{E}$ = leverage ratio, the lever arm or debt equity ratio;

$(ROA - i)$ = differential of leverage;

$(ROA - i)\frac{D}{E}$ = financial leverage effect;

t = tax rate.

The leverage effect may have fluctuating values, positive or negative, generating a positive or negative effect on the return on equity. Return on equity (ROE) is equal with return on assets after taxes $ROA \times (1-t)$ plus the financial leverage effect which is expressed by $(ROA - i) \times \frac{D}{E} \times (1-t)$.

If, $ROE \phi i$, then $ROE - i \phi 0$, that means leverage effect is positive and return on equity may increase depending on $\frac{D}{E}$ and/or taxation; and if $ROE \pi i$, then $ROE - i \pi 0$, that means leverage effect is negative and return on equity tends to decrease depending on $\frac{D}{E}$ and/or taxation. Finally we will make a comparative analysis of return on equity determined by financial leverage, and return on equity determined by accounting data.

3. Profitability determined by accounting data

In our paper we studied companies' profitability considering 2 well-known rates: return on equity and return on assets.

Return on equity determined by accounting data shows the performance of own funds provided by investors or shareholders. This ratio must be higher than current interest rate in order to show profitability. The formula used for return on equity is: $\text{Return on equity} = \frac{\text{Net Income (NI)}}{\text{Shareholders' Equity (E)}}$. A high value of it may indicate a higher yield of own funds, or sometimes a low equity compared to net income generated by the activity.

Table 1. Return on equity of the companies in the period 2010-2012

Firm	Net income (NI)			Shareholder's equity (E)			Return on equity (ROE) %		
	2010	2011	2012	2010	2011	2012	2010	2011	2012
AlbaL	580,212	5,797,484	7,320,697	85,917,894	89,979,768	97,407,611	0.68	6.44	7.52
BucoV	1,236,884	435,093	281,625	6,124,540	5,398,862	5,680,487	20.20	8.06	4.96
IlvaS	36,886	100,572	179,380	7,455,656	8,016,504	7,545,160	0.49	1.25	2.38
LactT	-336,469	62,587	-284,187	3,918,061	4,983,628	4,699,442	-8.59	1.26	-6.05
LactG	17,172	19,879	407,249	1,449,800	1,485,044	1,223,298	1.18	1.34	33.29
ProdL	-8,116,730	-6,879,332	-9,051,428	15,431,355	8,552,023	34,892,360	-52.60	-80.44	-25.94
VranL	502,228	354,062	47,296	4,131,043	4,485,105	4,532,401	12.16	7.89	1.04
OltiN	70,491	215,841	141,444	3,377,725	3,531,171	3,672,616	2.09	6.11	3.85

Source: Calculus performed by the authors based on data extracted from the financial statements of companies

From the calculations reflected in table 1 we see that in 2010 and 2012, two of the companies (LactT and ProdL) had a negative net income due to higher financial expenses, which shows that they have completed the activity with loss; in 2011 only ProdL obtained losses. The other companies (AlbaL, BucoV, IlvaS, LactG, VranL and OltiN) obtained profit throughout the period, return on equity recorded having values fluctuating between 0.49% (IlvaS) - 20.20% (BucoV) in 2010, 1.25% (IlvaS) - 8.06% (BucoV) and 1.04% (VranL) – 33.29% (LactG).

Throughout the three-years of studying the return on equity, we can see that the rate of return on equity increases to companies AlbaL, IlvaS and LactG both in 2011 and in 2012. Return on equity is characterized by a downward trend at companies BucoV and VranL in both years and by a fluctuating trend at OltiN with tendency of decreasing until the end of 2012. The decrease in profitability in the period 2010-2012 was due to the decrease in net income each year. Return on equity highlights the actions taken by a company in the calendar year. They are also considered a criterion for comparison of financial investments (Bărbuță-Mișu & Rusu, 2014).

Given the downward trend registered by return on equity is inferred that enterprise managers had wrongly managed the risk of capital entrusted by shareholders. This fact also highlights a lower capitalization of equity. AlbaL and LactG have quite high values of return on equity in 2012, which means that their sources were used effectively. These companies registered increases in both 2011 and 2012, which can be justified by the increase in total assets turnover and net income profitability. The higher values were obtained by LactG in 2012 of 33.29%, BucoV of 20.20% and VranL of 12.16% in 2010.

Return on assets is one of the most popular and useful of the financial ratios. Return on assets has been used in industry since at least 1919 when the DuPont Company used it as the top of its ratio triangle system. The ratio was called return on investment and was calculated as $\text{Return on asssets} = \frac{\text{Net income (NI)}}{\text{Total assets (TA)}}$ (Jewell & Mankin, 2011).

In the specialty literature, the economic profitability was studied in different ways. Thus, some authors examine productivity analysis through financial statements in order to obtain the value drivers for return on operating assets from the viewpoint of productivity. They show that there is a functional relationship between return on operating assets and the main productivity indicators at a company level: total factor productivity and labour productivity. Also, they found that both productivity indicators, together with price change of outputs and inputs, are the drivers that determine the value of return on operating assets, as the functional relationship (Bosch-Badia, 2010).

In our study, return on assets shows the performance of operating activity. The formula used is $\text{Return on assets (ROA)} = \frac{\text{Earnings before interest and taxes (EBIT)}}{\text{Total Assets (TA)}}$. Return on assets must be in a constantly increase to cover the interest expenses. In terms of value, a good result is one that exceeds 15%, a value that shows a real return, which is higher than inflation rate and higher than the average rate of interest. Table 2 presents return on assets for studied companies in the period 2010-2012.

Table 2. Return on assets of the companies in the period 2010-2012

Firm	Earnings before interest and taxes (EBIT)			Total assets (TA)			Return on assets (ROA) %		
	2010	2011	2012	2010	2011	2012	2010	2011	2012
AlbaL	4.461.556	9.486.172	10.739.638	198.506.945	217.377.518	203.103.144	2.25	4.36	5.29
BucoV	480.051	954.613	1.242.966	7.982.934	8.168.095	8.201.043	6.01	11.69	15.16
IlvaS	851.173	914.785	861.362	29.257.775	23.466.411	26.425.716	2.91	3.90	3.26
LactT	-227.938	203.470	-203.408	8.843.355	9.774.842	11.762.895	-2.58	2.08	-1.73
LactG	634.971	492.002	1.089.475	21.249.567	14.571.038	24.213.726	2.99	3.38	4.50
ProdL	-4.888.920	-5.932.944	-8.179.650	55.363.431	48.459.708	45.318.909	-8.83	-12.24	-18.05
VranL	704.074	561.160	190.343	6.555.731	6.707.485	6.520.618	10.74	8.37	2.92
OltiN	161.386	314.551	192.377	4.258.559	4.022.373	4.876.353	3.79	7.82	3.95

Source: Calculus performed by the authors based on data extracted from the financial statements of companies

In the analyzed companies values of return on assets that exceeding 15% were recorded only in the year 2012 by BucoV. Return on assets calculated for sample of companies studied indicates the effectiveness of all economic resources (capital employed) available to the company. The analysis of data presented in table 2 shows that companies have registered positive returns on assets in the range of 2.25% (AlbaL) and 10.74% (VranL) in the year 2010, 2.08% (LactT) and 11.69% (BucoV) in 2011, respectively, 2.92% (VranL) and 15.16% (BucoV) in 2012. The highest values of return on assets in the period under analysis and with tendency of increase was recorded by BucoV from 6.01% in 2010 to 15.16% to 2012, and the highest values but with tendency of decrease was registered by VranL, from 10.74% in 2010 to 2.92% in 2012.

Throughout the three years of study, returns on assets have registered consecutive increases also in companies AlbaL and LactG, but not at the same level as registered BucoV. While companies IlvaS and OltiN registered a fluctuating trend in the analysed period with a tendency of decreasing in 2012, due to inefficient economic activity carried out by them. The company VranL was the only company that had a decreasing trend during the entire period analysed. Two of the analysed companies recorded negative values of return on assets due to losses from operating activities.

However, we can observe the dynamic trend of reduction in return on assets of registered companies IlvaS, VranL and OltiN in 2012 as a decrease in operating efficiency of the companies with negative consequences for return on equity (Bărbuță-Mișu & Rusu, 2014). For these companies, the rate of return on assets recorded is lower than both the market average interest rate and also than the inflation rate. While for companies LactT and ProdL, almost in the entire interval analysed rate was negative, this indicating a downward trend of efficiency in operating activity.

4. Return on equity determined by financial leverage

A high level of indebtedness increases the exposure to risk of both creditors and owners or shareholders. From the creditors' viewpoint, there is a variety of indicators related to total debts or only the long-term debts, in correspondence with the different components of the balance sheet, which

provides a measure much more comprehensive of risk than financial leverage. These rates measure the risk exposure of lenders relating to the assets available over which the creditors' claims would reflect (Bărbuță-Mișu, 2013).

Total *leverage ratio* (L) reflects the extent to which shareholders' equity assure funding of company's activities that is financial structure of the company, calculated by dividing total debts, on short and long term (D) by shareholders' equity (E): $L = \frac{D}{E}$.

The indicator can be interpreted as a rate of the company's financial autonomy, showing the extent to which commitments on short and long term are secured by the equity of the company. The leverage ratio is greater than 1, the company will depend more on its creditors. If leverage is less than 1, the bank will continue to provide loans under conditions of safe guarantee (Vintilă, 2000).

The influence of financial structure on the company's return on equity is known as leverage. It measures the effect of indebtedness on the return on equity of a company. At the same time, financial leverage is a financial management technique through which the company's leadership aims to improve the return on equity (Vâlceanu & Robu, 2005). The leverage ratio is calculated for all 8 studied companies over the period 2010-2012 in the table 3.

Table 3. Leverage ratio of the companies in the period 2010 - 2012

Firm	Total debt (D)			Shareholders' Equity (E)			Leverage ratio ($L = \frac{D}{E}$)		
	2010	2011	2012	2010	2011	2012	2010	2011	2012
AlbaL	107,032,596	122,541,827	101,104,752	85,917,894	89,979,768	97,407,611	1.25	1.36	1.04
BucoV	1,858,394	2,769,233	2,520,556	6,124,540	5,398,862	5,680,487	0.30	0.51	0.44
IlvaS	21,362,183	15,036,429	18,474,493	7,455,656	8,016,504	7,545,160	2.87	1.88	2.45
LactT	4,169,950	4,207,426	4,752,148	3,918,061	4,983,628	4,699,442	1.06	0.84	1.01
LactG	19,799,767	13,085,994	22,888,775	1,449,800	1,485,044	1,223,298	13.66	8.81	18.71
ProdL	34,376,438	35,041,730	3,747,521	15,431,355	8,552,023	34,892,360	2.23	4.10	0.11
VranL	2,424,688	2,222,380	1,988,217	4,131,043	4,485,105	4,532,401	0.59	0.50	0.44
OltiN	880,834	491,202	1,203,737	3,377,725	3,531,171	3,672,616	0.26	0.13	0.32

Source: Calculus performed by the authors based on data extracted from the financial statements of companies

From the table 3 results that in 2010 five of the analyzed companies (AlbaL, IlvaS, LactT, LactG and ProdL) have the share of debt much higher than the share of equity in the total capital structure. The leverage ratio registered values ranging between 1.06 (LactT) and 13.66 (LactG) which show a very high degree of debt. In the period 2011-2012 only four companies (AlbaL, IlvaS, LactG and ProdL, respectively AlbaL, IlvaS, LactT and LactG) have the ratio of total debt to equity higher than 1. These values of indicator was ranging between 1.36 (AlbaL) and 8.81 (LactG) in 2011 and between 1.01 (LactT) and 18.71 (LactG) in 2012. From this we can conclude that these companies finance much of their operating activities through borrowed sources. The most borrowed company from the sample is LactG.

Only three companies (BucoV, VranL and OltiN) proved the establishing as objective the reduction of debt funding use in operating activity; these companies used mainly their own sources, having a high degree of financial autonomy.

In order to study the impact of financial leverage on return on equity we must determine the interest rate that will be compared with return on assets. The interest rate, that is the cost of debt is calculated simple by dividing interest expenses of loans contracted (INT) by total financial liabilities (D): $i = \frac{\text{Interest Expenses (INT)}}{\text{Total financial liabilities (D)}}$.

If the interest rate is below the rate of return on assets of the analyzed company, the indebtedness favours financing by loans. In this situation appears the leverage effect with positive impact on return on equity. But otherwise, the financial leverage will have a negative impact on return on equity. The calculation of interest rate for analysed companies is presented in table 4, for the period 2010-2012.

Table 4. Interest rate of the companies in the period 2010-2012

Firm	Debts (D)			Interest expenses (INT)			Interest rate (%) (i)		
	2010	2011	2012	2010	2011	2012	2010	2011	2012
AlbaL	107,032,596	122,541,827	101,104,752	2,294,799	2,237,891	1,674,000	2.14	1.83	1.66
BucoV	1,858,394	2,769,233	2,520,556	118,976	26,453	40,007	6.40	0.96	1.59

IlvaS	21,362,182	15,036,429	18,474,493	692,529	571,686	687,178	3.20	3.80	3.72
LactT	4,169,950	4,207,426	4,752,148	186,442	130,227	135,659	4.47	3.10	2.85
LactG	19,799,767	13,085,994	22,888,775	235,448	183,725	237,862	1.19	1.40	1.04
ProdL	34,376,438	35,041,730	3,747,521	1,310,438	82,959	399,491	3.81	0.24	10.66
VranL	2,424,688	2,222,380	1,988,217	0	0	0	-	-	-
OltiN	880,834	491,202	1,203,737	63,607	43,157	10,029	7.22	8.79	0.83

Source: Calculus performed by the authors based on data extracted from the financial statements of companies

Analysing data from table 4, we can observe that company VranL didn't used financial debts to finance its operating activity. For companies AlbaL, LactT and Lact G interest rate had a decreasing trend in the analysed period which means that companies borrowed to a lower cost of debt. For other companies, interest rate had fluctuating values. The higher cost of debt, over 7% was registered to ProdL of 10.66% in 2012 and OltiN of 7.22% in 2010 and 8.79% in 2011.

Considering return on assets determined in the table 2, interest rate in the table 4, leverage ratio in table 3 and tax rate of 16%, we have determined the return on equity using financial leverage in table 5.

Table 5. Return on equity determined by financial leverage of the companies in the period 2010-2012

Firm	Differential of leverage $(ROA-i)$			Financial leverage effect $(ROA-i)\frac{D}{E}$			ROE $ROE=\left[ROA+(ROA-i)\frac{D}{E}\right](1-T)$		
	2010	2011	2012	2010	2011	2012	2010	2011	2012
AlbaL	0.10	2.54	3.63	0.13	3.46	3.77	2.00	6.57	7.61
BucoV	-0.39-	10.73	13.57	-0.12	5.50	6.02	4.95	14.44	17.79
IlvaS	-0.33	0.10	-0.46	-0.95	0.18	-1.13	1.64	3.43	1.79
LactT	-7.05	-1.01	-4.58	-7.50	-0.86	-4.64	-8.47	1.03	-5.35
LactG	1.80	1.97	3.46	24.57	17.38	64.74	23.15	17.44	58.16
ProdL	-12.64	-12.48	-28.71	-28.16	-51.14	-3.08	-31.08	-53.24	-17.75
VranL	10.74	8.37	2.92	6.30	4.15	1.28	14.32	10.51	3.53
OltiN	-3.43	-0.97	3.11	-0.89	-0.13	1.02	2.43	6.46	4.17

Source: Calculus performed by the authors

Financial leverage aims to increase return on equity by using different variants of financial structure. The financial leverage is expected to increase the efficiency in using shareholders' equity (that is return on equity) by increasing the amount of borrowed capital. This is possible if there is a margin between the expected return on invested capital (own and borrowed), on the one hand, which should be as higher and the cost of borrowed capital, on the other hand, which should be as smaller (Bucătaru, 2009).

The main idea of the financial leverage relationship is that the company had to attract resources from its creditors at an interest rate lower than the return on assets in order to obtain earnings through their funding policy, increasing the return on equity (Dragotă *et al.*, 2003).

Leverage effect may increase return on equity as a result of (Bărbuță-Mișu, 2013):

- increasing the rate of return on assets, that is possible by selecting the most efficient investments;
- reducing the real interest rate, by contracting the most favourable loans available in the financial market and much lower than the return on investment in assets;
- increasing the borrowing capital until the interest rate is closed to value of return on assets. An increase in share of debts will increase the financial risk. That means financial manager must find a way to balance the desire to increase the leverage effect by increasing the borrowed capital, on the one hand and the company involvement in risky actions, on the other hand.

Ongoing assessment of the size of financial risk can be achieved by comparing predicted profit with interest accruing on loans. If there is a substantial margin between the two indicators, meaning that the profit achieved is much greater than the interest paid, then we can consider that the company is protected against financial risk (Bucătaru, 2010). However, financial leverage effect is defined the improvement or degradation of rate of return on equity, as a result of borrowing and measures the positive or negative incidence of the company leverage ratio on its return on equity (Ariton, 2006).

Financial leverage for studied companies had a positive effect to 3 companies (AlbaL, LactG and VranL) leading to the increase in return on equity when the leverage rate increase, and a negative effect to other 2 companies (LactT and ProdL) on the entire interval analysed, leading to the decrease in return on equity when the leverage rate increase. Analysing data from table 5 we can conclude that the general trend of return on equity determined by accounting data and by financial leverage is similar, that means positive or negative values were obtained in the same years and for the same companies. But, the positive or negative values are different that show us there are many other factors that influence the companies' profitability. In table 6 we will reflect in parallel both returns on equity.

Table 6. Financial leverage impact on return on equity of the companies in the period 2010-2012

Firm	Return on equity (ROE) determined by accounting data			Return on equity (ROE) determined by leverage effect		
	2010	2011	2012	2010	2011	2012
AlbaL	0.68	6.44	7.52	2.00	6.57	7.61
BucoV	20.20	8.06	4.96	4.95	14.44	17.79
IlvaS	0.49	1.25	2.38	1.64	3.43	1.79
LactT	-8.59	1.26	-6.05	-8.47	1.03	-5.35
LactG	1.18	1.34	33.29	23.15	17.44	58.16
ProdL	-52.60	-80.44	-25.94	-31.08	-53.24	-17.75
VranL	12.16	7.89	1.04	14.32	10.51	3.53
OltiN	2.09	6.11	3.85	2.43	6.46	4.17

Source: Calculus performed by the authors

Analysing data from table 6, we can conclude that to the companies AlbaL, LactT and OltiN financial leverage is the main factor that influenced return on equity because the values of return on equity determined by both methods are almost similar (the differences of values are very small, lower than 0.5%). For the other companies the values of return on equity show that there are many other factors that influence the companies' profitability as: liquidity, earnings volatility and tangibility related to asset structure (Sheikh & Wang, 2011) and also factors generated by operational activities.

5. Conclusions

Comparing results obtained in this study, we found that are significant differences between return on equity determined by accounting data and return on equity determined by leverage effect to 5 of 8 companies analysed. A situation that must be remarked to these companies acting in the manufacturing dairy products is that the positive or negative values of return on equity determined by both methods are maintained, in contrast to other study realized on pharmaceutical sector where was found situations in which the leverage effect generates a return on equity positive and by the accounting data results a negative value, or reverse, that shows in practice, there are other financial or non-financial factors that influence return on equity, sometimes positive and sometimes negative (Bărbuță-Mișu, 2013), or in the same sense as financial leverage or not.

In this study we found that the other determinants of return on equity have an influence that maintain positive or negative values of this rate, but decreasing its values, because in the majority of cases return on equity determined by financial leverage is higher than the return on equity determined by financial data. In conclusion, when we intend to study the return on equity of the companies we should consider many other determinants related to financial activity, financial structure and operational activity as: earnings of financial investments in shares and bonds, incomes generated by the investments in banking deposits, or other financial expenses that can appear at a certain moment; liquidity, earnings volatility, assets structure. We may mention also: the high quality of products, low costs (Boca, 2011), company's size, growth opportunities, number of subsidiaries, import and export relations. More important determinant factor is intellectual capital that may contribute successfully alongside other factors to the increase the companies' return on equity.

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