

**THE FINANCING DECISION OF ROMANIAN LISTED COMPANIES  
– A DESCRIPTIVE APPROACH**

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**Abstract**

*This article aims to capture the financing methods chosen by the companies listed on the Bucharest Stock Exchange's Main Market, during the 2014-2016 period, as well as the possible correlations between the capital financing structure and various financial indicators calculated for the companies in the analysed sample, through a descriptive approach. Finally, it was empirically highlighted that the most profitable companies listed on the BSE between 2014 and 2016 were ones with greater leverage and that larger companies were more indebted. In the same period, the Romanian listed companies on the BSE's Main Market opted for structuring their financing sources towards equity issuing.*

**Keywords:** financing decision, factors of influence, profitability, size

**JEL classification:** G32

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**1. Introduction**

When determining the financial strategy which a company intends to implement, the management is mainly considering the cost associated with the different financing options.

A company may use a variety of financing methods, including reinvesting previous profits, increasing equity by issuing ordinary or preferential shares and/or borrowing.

The optimal structure between the available financing sources follows the final objective of any company to maximize the wealth of its shareholders (Gordon and Shapiro, 1956). In order to achieve this goal, the main criterion in determining the combination between own and borrowed resources is to minimize the cost of acquired capital (Brezeanu and Stănculescu, 2009).

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The cost of capital borne by companies choosing to use more than one funding options should reflect in the average cost of the funding resources used. However, the main challenge is to identify the mix of financing resources that minimizes the capital costs and ensures that the company's primary objective has been fulfilled.

The cost of capital is determined by various internal and external factors. The capital structure is one of the factors that the company can control, together with the dividend policy and the degree of risk associated with the company as a result of its investment policy. Contrariwise, a company cannot control the rise in the interest rates (increasing the cost of debt, and also the rate of return expected by investors that hold shares issued by the company, due to the existence of better opportunities to place the available amounts), nor the fiscal policies of the state (which may influence the attractiveness of equity investments through the taxation policy).

Based on the observations made on a sample of US companies during 1996-2016, Kieschnick and Moussawi (2018) concluded that the age of a company is negatively correlated with the use of loans.

Cooper and Lambertides (2018) showed that in case of companies distributing large dividend values, the signal is that the indebtedness policy is to be modified, leading to an increase in leverage. The authors analyzed the changes both in terms of the book value of the leverage (the ratio of the book value of debt to the total value of assets) and the market value of the leverage (considered to be the ratio between the book value of debt and the sum of the book value of debt and the market value of equity) over a period of 5 years after the change in the dividend policy.

According to Rajan and Zingales (1995) and Akdal (2010) there is a positive relationship between the size of a company and leverage.

This article aims to highlight the financing methods chosen by the companies listed on the Bucharest Stock Exchange's Main Market, during 2014-2016, as well as the possible explanations of the capital structure using a descriptive approach based on various financial indicators calculated for the companies in the analyzed sample.

## **2. The data sample for which the analysis was performed**

In order to analyze the financing methods of the Romanian companies was used a sample of companies listed on the Bucharest Stock Exchange's Main Market (BSE), during 2014-2016.

Out of 87 companies listed on BSE website on March 1, 2018, there were eliminated: financial sector's companies (3 credit institutions, 5 financial investment companies and 4 other financial companies - totalling 12 companies), companies in insolvency (2), companies listed in the Int'l category (2), companies for which data was not available for the entire period under review (3), and companies with negative equity value for at least 1 year of the period analysed (8).

The final sample consists of annual observations for 60 companies listed on BSE for a 3 years period. The data used was collected from the BSE official website, financial information section, and also from the published annual reports.

### 3. Main results of the analysis of the financing structure of listed companies

For each considered year and each company, the analysis was conducted based on several financial indicators as described below.

Considering the purpose of the analysis, respectively the analysis of the financing methods of listed companies on the BSE's Main Market, there were determined the leverage and the level of indebtedness of the companies from the sample, based on the following formulas:

$$\text{Leverage}_{in} = \frac{BVD_{in}}{BVE_{in}} \quad (1)$$

where:

$BVD_{in}$  = the book value of debt of company i in year n;

$BVE_{in}$  = the book value of equity of company i in year n.

By computing the leverage on the basis of book values, this indicator is not influenced by the possible increase in the company's capitalization. This indicator shows whether a company's financing is more inclined towards loans or equity.

$$\text{Indebt}_{in} = \frac{BVD_{in}}{\text{Total}_{-} \text{assets}_{in}} \quad (2)$$

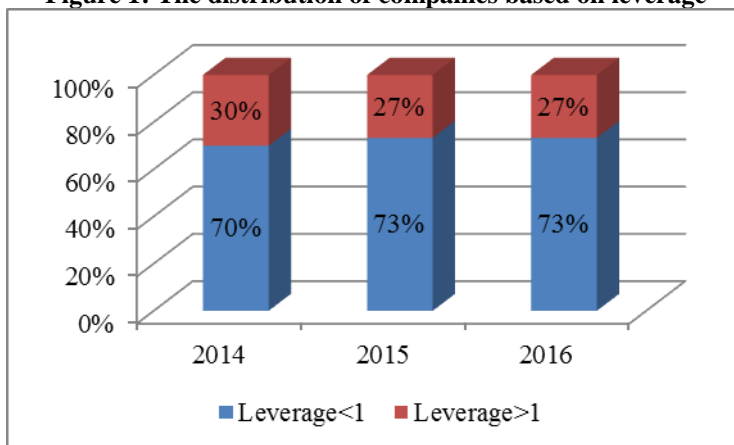
where:

$\text{Indebt}_{in}$  = the total level of indebtedness of company i in year n;

$\text{Total}_{-} \text{assets}_{in}$  = the total value of assets of company i in year n.

Figure 1 displays the distribution of the companies in the sample according to the leverage's value for each analysed year. A leverage below 1 shows that the company is less dependent on creditors and less sensitive to the evolution in market interest rates against a similar company whose assets are mainly financed by borrowings (having a leverage greater than 1).

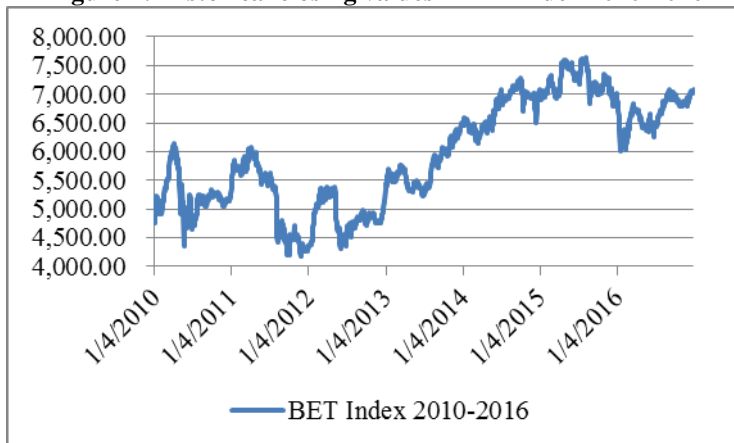
**Figure 1: The distribution of companies based on leverage**



Source: own calculations

Most of the companies in the sample (about 70% of them) chose to finance mainly by equity during 2014-2016, which is not surprising considering the category of companies in the sample (all are listed companies on the main market, with easy access to finance through the capital market). Also, the capital market recorded a positive evolution starting in 2012 (Figure 2), which made equity financing more attractive.

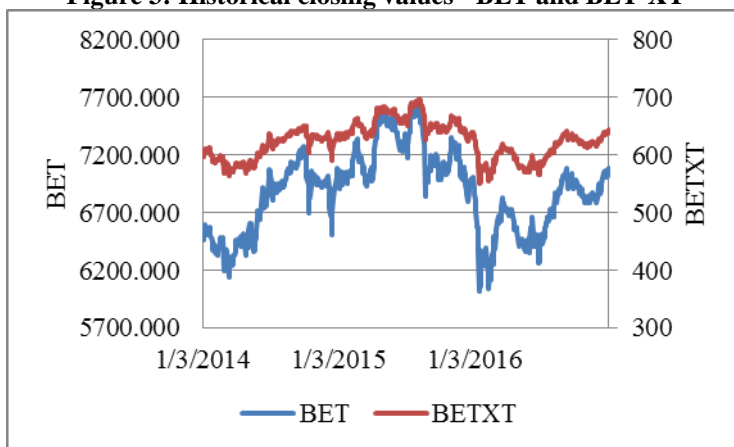
**Figure 2: Historical closing values - BET Index 2010-2016**



Source: BSE, own calculations

At the same time, Figure 3 illustrates the evolution of BET index (the Romanian capital market reference index reflecting the evolution of the most traded companies on the BSE's Main Market) and BET-XT index (reflecting the evolution of prices of the most traded 25 companies on the BSE's Main Market) during the analysed period. It can be seen that the maximum values were recorded at the middle of 2015.

**Figure 3: Historical closing values - BET and BET-XT**



Source: BSE, own calculations

Regarding the indebtedness level of the companies listed on the BSE's Main Market, the results are not conclusive (Figure 4), as the decrease/increase in 2016 compared to 2014 of the ratio provided in equation (2) was recorded by approximately the same no. of companies.

However, both on average and in the median, the indicator showed a declining trend in 2016 compared to 2014, although insignificant (Table 1).

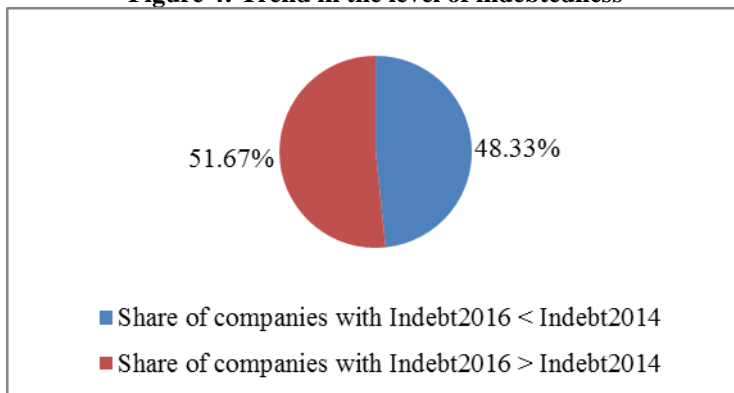
**Table 1: Median and average of the level of indebtedness**

Indicator	2014	2015	2016
Median	35,97%	33,91%	35,40%
Average	39,84%	38,88%	38,87%

Source: own calculations

Figure 4 shows the the percentage of companies that recorded a higher/lower debt ratio in 2016 compared to 2014.

**Figure 4: Trend in the level of indebtedness**



Source: own calculations

According to the data regarding the operating business sector, companies that have chosen financing through external borrowing belong mostly to the manufacturing sector. With respect to the level of indebtedness

calculated according to the formula illustrated in Equation 2, out of the 29 companies for which the level decreased in 2016 as compared to 2014, most of them (16) also come from the manufacturing sector.

The decision of companies on the financing method used may be influenced by the company's profitability proxied by the return on equity. Return on equity was determined according to the formula presented below:

$$ROE_{in} = \frac{NP_{in}}{BVE_{in}} \quad (3)$$

where:  $ROE_{in}$  = return on equity for company i in year n,  $NP_{in}$  = the net profit of company i in year n.

**Table 2: The distribution of median leverage based on ROE**

Percentile	2014	2015	2016
Companies for which ROE stands below the 10 <sup>th</sup> percentile	2,93	0,25	0,33
Companies for which ROE stands above the 90 <sup>th</sup> percentile	0,54	0,62	0,66

Source: own calculations

In order to highlight the correlation between ROE and leverage using a descriptive approach, the sample was sorted ascending by ROE and the median of the sub-samples consisting on the less/most profitable 10% of the companies was determined.

According to the results obtained (Table 2), in 2014 the most profitable companies listed on the BSE' Main Market were also the one less indebted. For 2014, the results showed a negative correlation between ROE and leverage, confirming the pecking order theory of Myers and Majluf (1984). Pecking order theory states that companies chooses to finance themselves primarily by reinvesting profits and only borrowing as a last resort measure. The negative relation between profitability and leverage may be due to the debt service, which, through increasing financial expenses, contributes to lower profitability's values. Also, lenders and investors may consider companies with higher leverage as riskier.

Despite previous results, a reversal of this relation was observed in 2015 and 2016, the most profitable companies being the ones with greater leverage. The values illustrated in Table 2 for 2015 and 2016 may be the result of the decrease of the total value of transactions with stocks on the capital

market and the increase of the index of contagion in yields. These events were characterized, according to the *Report on the evolution of the capital market in Romania* issued by the Financial Supervisory Authority at 31 December 2015, as defining for the capital market in 2015.

In this financial environment, stock issuing and internal sources' financing have not been weight upon similarly as in 2014 due to the decrease in the price of stocks proxied by the evolution of the BSE (Figure 3).

Another element that may influence the decision of companies on the financing method used is their size. It is generally accepted for emerging markets companies that large entities can more easily borrow funds.

In order to test the correlation between the size of the companies in the sample and their financing preferences, size has been proxied as shown below:

$$size_{in} = \ln(Total\_assets_{in}) \quad (4)$$

where:  $size_{in}$  = the size of company i in year n.

**Table 3: Median and average of the size of the company**

Indicator	2014	2015	2016
<b>Median</b>	11,99	11,95	12,09
<b>Average</b>	12,30	12,33	12,36

Source: own calculations

The value of the proxy used for illustrating the size of the firm increased in 2016 compared to 2014, both in terms of median and average (Table 3). This increase may be due to the favourable economic context also observed on the capital market (Figure 1 and 2).

**Table 4: The distribution of median leverage based on the size of the company**

Percentile	2014	2015	2016
<b>Companies for which the size proxy stands below the 10<sup>th</sup> percentile</b>	0,52	0,23	0,26
<b>Companies for which the size proxy stands above the 90<sup>th</sup> percentile</b>	0,63	0,64	0,53

Source: own calculations



Similar to the method used above in case of ROE, the sample was sorted ascending by the size proxy and was determined the median of the sub-samples for which the size proxy stands below the 10<sup>th</sup> percentile, respectively above the 90<sup>th</sup> percentile. According to the results illustrated in Table 4, the value of the leverage is much higher for the largest companies' sub-sample.

This is a an evidence of the the fact that larger companies are more indebted in Romania. This can be mainly attributed to the behavior of the credit institution to find larger companies as more eligible.

#### **4. Conclusions**

This paper aims to capture the particularities of the financing methods chosen by the companies listed on the Bucharest Stock Exchange's Main Market, during 2014-2016.

Even though the size of the sample was limited to companies listed on the main market and the differences between the industries in which companies operate were not considered, the particularities highlighted by the analysis are in line with the results obtained in the literature for the relations established between the leverage, ROE and company size.

In a context of a favourable capital market between 2014 and 2016 in Romania, marked by the growth of BSE indices, the companies opted for structuring their financing sources towards equity issuing. Surging shares prices may have provided an incentive for reducing debt ratios.

Moreover, the descriptive analysis revealed that large firms are borrowing more than small firms, recording higher values of the ratio between the book value of debts and the book value of equity.

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- <http://www.bvb.ro/> - the official website of the Bucharest Stock Exchange.