

# Corporate ownership and capital structure: evidence from Romania

Alina ȚARAN\*

## Abstract

*This study explores the relation between local and foreign corporate ownership and capital structure of Romanian listed companies (as proxied by debt ratio, short-term debt ratio, and long-term debt ratio in total assets). Our empirical analysis indicates that corporations, as shareholders of public companies, determine a reduction in the overall need of external debts of the investee firms. However, foreign corporate shareholders promote a short-term indebtedness policy of non-financial companies listed on the regulated segment of Bucharest Stock Exchange. In contrast, local corporate shareholders have a negative influence on the short-term debt of their affiliates. Our findings provide a better understanding of financing decisions of domestic entities, and consequently, may contribute to efficient investing and management decisions of business actors in Romania, and other European frontier markets.*

*Keywords:* foreign ownership, debt ratios, frontier markets, developing economies, Central and Eastern European countries

## Introduction

Corporate capital structure is influenced by various firm level and institutional factors (Booth *et al.*, 2001; Delcoure, 2007; Jensen and Meckling, 1976; Joeveer, 2013; McNamara *et al.*, 2017). However, the influence of corporate ownership on financing policies of investee firms is an under-explored topic, especially in the context of developing economies and frontier markets (Avarmaa *et al.*, 2011; Delcoure, 2007). Corporate shareholders may provide additional financing support to their affiliates and expose them to more diverse and favourable financing conditions, especially if the owners are foreign entities (Avarmaa *et al.*, 2011). The effect of ownership on financing strategies of investee firms is driven by

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\*Alina ȚARAN is a PhD candidate at the Doctoral School of Economics and Business Administration, “Alexandru Ioan Cuza” University of Iasi, Iasi, Romania, and a Lecturer at the Faculty of Business, Izmir University of Economics, Izmir, Turkey; e-mail: taran.alina.ro@gmail.com.

shareholders' monitoring and involvement in the firms' activities. Various theories seek to explain how an optimal balance between internal and external financing may be achieved, but their validity is not universal (Delcours, 2007; Jaros and Bartosova, 2015). Numerous empirical studies indicated the distinctive characteristics of the analysed setting as the main explanation for the inconclusive findings reported in the literature. The aim of our study is to explore the influence of foreign and domestic corporate ownership on financing policies of investee firms, in the context of transition economies from Central and Eastern European (CEE) region, providing evidence from Romania.

CEE countries share similar business and institutional characteristics, but distinguish through distinctive absorptive capacity of attracting foreign funds. This leads to competition for foreign investments within the region. A single country study gives the advantage of covering the country-specific aspects and institutional context that affect local businesses and their investors. Romania has a strongly bank-oriented economy, with a relatively small stock exchange (around 80-90 companies listed on the regulated stock market, during the last decade). The main categories of investors are local and foreign corporations, followed by governmental agencies, institutional and individual investors, including employees (Taran and Mironiuc, 2018). The ownership is highly concentrated and mostly stable over time. This study investigates the influence of corporate ownership on the capital structure of Romanian public entities during 2011-2016 and provides a better understanding of financing decisions of domestic companies.

The paper is structured as follows. Section 1 presents literature insights and hypotheses development regarding the effect of ownership on capital structure. Section 2 describes the context of capital markets and credit conditions in Romania in comparison to other CEE countries. Section 3 presents the data selection and research methodology. Section 4 discusses the empirical study and the results. The paper ends with concluding remarks.

## **1. Literature review and hypotheses development**

Various theories, such as Modigliani-Miller's theory, trade-off theory, signalling theory, pecking order theory, agency theory, free cash-flow theory, and market timing theory (Alipour *et al.*, 2015; Mironiuc, 2018; Serghiescu and Vaidean, 2014), explain the role of capital structure in firm valuation, the determinants of capital structure or the optimal capital structure. Consequently, empirical studies have tested the applicability of these theories, especially in developed countries. However, the theoretical and empirical evidence is inconclusive, with variations related to the analysed institutional and economic contexts (Booth *et al.*, 2001; Daskalakis *et al.*, 2017; Delcours, 2007; Fan *et al.*, 2012; Mokhova and Zinecker, 2013; Orman and Koksal, 2017). For example, Fan *et al.* (2012) examined the debt maturity of entities from 39 countries and found that the differences in the degree of

corporate indebtedness across countries are explained by legal and tax systems, level of corruption, and country-specific financing opportunities. Booth *et al.* (2001) indicated similar factors such as growth opportunities, inflation and level of development of the capital markets. Mokhova and Zinecker (2013) provided evidence about the influence of fiscal and monetary factors on the capital structure of the firms. Traditional theories of capital structure partially explain the financing decisions of CEE companies (Delcours, 2007; Črnigoj and Mramor, 2009). Firms from CEE countries are more prone to short-term rather than to long-term debt, in contrast to the typical capital structure of companies from developed economies (Delcours, 2007). This characteristic may be explained by the attitude towards risk, interest rates, financing constraints, development plans, growth opportunities of the firms, etc. The regulatory framework of CEE countries has been developed, especially under the influence of the European Union, and the overall activity of the banks significantly improved in the CEE region (Andries, 2011). Capital markets improved their regulations and activities as well. They adopted and revised their corporate governance codes in order to enhance investors' confidence. However, as specific to small capital markets from civil law countries (La Porta *et al.*, 1997), investor protection mechanism may still be perceived as relatively weak. Nevertheless, although the macroeconomic and institutional factors significantly influence the corporate financing decisions, the main determinants of the indebtedness level of public entities in CEE countries are the firm-level characteristics (Joeveer, 2013).

In fact, financing policies of the firms are guided by opportunistic behaviour. Managers seek for the trade-off among the financing needs of the companies, available financing sources, costs of capital, indebtedness risk and profit maximization. The relation between debt and equity is mainly dictated by the financing needs and constraints of the companies, and by financing sources available in the economic environment of the firms. The capital structure reflects the contribution of shareholders and creditors in financing the assets of the firms. Financial resources involve specific costs and obligations for the companies. The cost of external financing must be paid to the creditors, regardless of the financial results of the firms. In contrast, the shareholders may receive dividends in the limit of earnings generated by the investee entities. Thus, investors assume a higher risk and dividends are generally expected to be higher than the cost of debt. In addition to that, the due payment of debt is a primary obligation for the firms and it has priority in front of the shareholders' claims in the assets of a company. This retribution sequence indicates that shareholders face conflicts of interest with creditors and managers who contract the creditors (Ardalan, 2017; Orman and Koksai, 2017). Jensen and Meckling (1976) indicated that the ownership structure influences these agency conflicts, and thus, the corporate financing decisions.

Foreign direct investment and multinational corporations have both positive and negative spillovers on the host countries business environment. These effects are

associated with technological development of production capacities, workforce policies, investment and market integration (Anwar and Sun, 2015), financing resources, etc. Controlling foreign investors or affiliation to foreign groups expose investee firms to different business practices, regulatory frameworks and, especially, to intra-group or foreign financing opportunities (Avarmaa *et al.*, 2011; Mueller and Peev, 2007; Ormazabal, 2018). In contrast, local shareholders have a privileged position by being familiar and more connected to local institutions and creditors (Ormazabal, 2018). A consistent stream of literature analysed the relation between ownership and corporate capital structure (Alipour *et al.*, 2015; Deesomsak *et al.*, 2004; ElBannan, 2017; Jensen and Meckling, 1976; Moh'd *et al.*, 1998; Saona *et al.*, 2017). However, a less explored topic in the context of transition economies is the influence of foreign corporate investors on financing policies of domestic firms. Jeon and Ryoo (2013) found that foreign investors are more likely to influence payout and investment policies of Korean industrial firms through the mechanism of management monitoring. Anwar and Sun (2015) developed a theoretical model to explain the effect of foreign ownership on the financial leverage of domestic entities, and found empirical evidence for their arguments. They indicated that a higher increase in debt in comparison to equity is positively associated with foreign ownership. In a multi-country analysis, Bena *et al.* (2017) found that foreign institutional investors enhance long-term investment of the firms, and thus, affect their financial needs. Avarmaa *et al.* (2011) found that in Baltic countries, local companies are more leveraged than companies with foreign ownership, but also more affected by macroeconomic changes, in contrast to local affiliates of multinational corporations.

Although CEE countries shared a similar development path during the transition to market-economy, their capital markets are not on the same level of development. Additionally, corporate practices are influenced by country-specific regulatory and cultural specificities. As reported by Hernádi and Ormos (2012), shareholders' involvement in corporate management determines a lower level of indebtedness for Romanian companies in comparison to other countries in the region. The capital structure of Romanian companies was also analysed by Bredea (2014), Serghiescu and Vaidean (2014), or Vatavu (2012). In an analysis of non-financial public companies during 2007-2011, Bredea (2014) found that ownership concentration positively influences debt ratio. These findings indicate that Romanian companies and their dominant shareholders are reluctant to increases in equity through financing from new investors, and thus, the external financing is the preferred source of capital. This tendency is specific to the bank-oriented transition economies with a relatively small capital market. Vatavu (2012) studied the factors that influence financial indebtedness of manufacturing firms and found that the company size is the main determinant. Similarly, Serghiescu and Vaidean (2014) analysed the determinants of capital structure of construction companies. They found a negative effect of corporate performance, assets tangibility and liquidity on debt

ratio, and a positive effect of company size and asset turnover on corporate indebtedness. Moreover, research indicates that Romanian public entities from manufacturing industry lack in an efficient management of assets and investments, and they are characterised by a preference for indebtedness, although this increases their business risk (Vatavu, 2015). However, scarce evidence regards the effect of corporate ownership and group-affiliation on financing policies of CEE companies and Romanian listed entities. Based on the specific characteristics of corporate ownership, which involve intra-group transactions and financing support, it may be expected that the influence of corporate shareholders could be positive, leading to an increased accepted level of indebtedness for investee firms (Saona *et al.*, 2018). On the other side, the dominant involvement of shareholder-corporations in controlling and monitoring investee businesses may determine a more restrictive debt policy, financing needs being covered by internally generated sources, or by additional investment from existing or prospective investors. Foreign corporate investors, especially from countries with developed financial markets, may promote equity financing, whereas local ownership may be prone to debt financing. Hence, the association between corporate ownership and firm indebtedness is hypothesised as follows:

**H1:** *Local corporate ownership positively influences the indebtedness level of Romanian listed companies.*

**H2:** *Foreign corporate ownership negatively influences the indebtedness level of Romanian listed companies.*

The debt component of the capital structure is sensitive to associated costs and has different determinants for short-term and long-term dimensions (Daskalakis *et al.*, 2017; Fan *et al.*, 2012; Vo, 2017). Specifically, debt maturity aspects represent the subject of agency cost, signalling and liquidity risk, maturity-matching, and tax constraints (Stohs and Mauer, 1996; Orman and Koksall, 2017). Thus, the maturity of debts depends on the growth opportunities and size of the companies, business quality and firm associated-risks, assets' structure and useful life, or level of corporate taxation (Stohs and Mauer, 1996). The share of short versus long-term debt in total capital reflects the indebtedness risk exposure of the firms, and signals their financial needs related to operating and investing activities (Orman and Koksall, 2017). Corporate ownership and agency conflicts may also have an influence on the debt maturity options of the firms. Uncertainty regarding relations between shareholders and managers signals a higher risk for creditors, which may prefer offering short-term debts (Arslan and Karan, 2006). Concentrated ownership, as specific to Romania and other CEE countries, is more likely to affect corporate decisions of financing through short-term versus long-term debt (Arslan and Karan, 2006). The short-term versus long-term debt financing practices are dictated by financing needs, costs or risks constraints. Foreign corporations are known as having higher business flexibility, and may be more oriented towards short-term

indebtedness, whereas local corporations may be more secure for local creditors. Investment projects promoted or imposed by corporate investors, as well as reorganization measures expected from shareholder-companies (especially foreign groups) may require additional financial resources from creditors. Therefore, we state the following hypotheses to be further explored in our study:

**H3:** *Local corporate ownership negatively influences short-term indebtedness of Romanian listed companies.*

**H4:** *Local corporate ownership positively influences long-term indebtedness of Romanian listed companies.*

**H5:** *Foreign corporate ownership positively influences short-term indebtedness of Romanian listed companies.*

**H6:** *Foreign corporate ownership negatively influences long-term indebtedness of Romanian listed companies.*

## **2. Regional context: Capital markets and credit conditions in CEE**

In order to describe the regional context and Romanian's particular characteristics, we further present a descriptive analysis of capital markets and credit conditions in the main Central and Eastern European countries. Besides their similarities and European Union membership, these countries are in competition for attracting foreign investment. Classified as a frontier market by international agencies, Romania has a relatively small capital market. Considering the market size, liquidity and accessibility for investors, some other countries in the region are considered emerging markets (Czech Republic, Hungary, Poland) or stand-alone markets (Bulgaria), as classified by Morgan Stanley Capital International classification for the year 2017. A similar hierarchy is suggested by the share of market capitalisation in GDP for these countries, as illustrated in Table 1.

The share of market capitalisation in GDP is presented only for the base year of our analysis (2011) because data is not available for the entire period. Based on size, Romania and Slovak Republic have the smallest capital markets in the region, preceded by Hungary and Bulgaria, and then by Poland. Members of the European Union since 2004 or 2007, these countries are still using their national currencies (except Slovak Republic which adopted Euro in 2009). The difference in capital market size and monetary conditions reflects that business-financing practices are different among the regions. The level of domestic credit provided to private sector varies among the countries, with an increasing trend in the Czech Republic, Poland, and Slovak Republic, and decreasing in Bulgaria, Hungary and Romania, during 2011-2016. The average indebtedness cost, as reflected by the lending interest rate, significantly diminished over time, but it is relatively higher in Romania and Bulgaria, in comparison to the other countries.

**Table 1. Market capitalisation and credit conditions in CEE region**

Country	EU accession year	Market capitalisation (% of GDP) 2011	Domestic credit to private sector (% of GDP) and Lending Interest rate (%)					
			2011	2012	2013	2014	2015	2016
Bulgaria	2007	14.37	65.58	66.27	66.26	59.59	55.41	52.77
			10.63	9.714	9.043	8.26	7.45	6.39
Czech Republic	2004	-	48.67	49.76	51.16	49.82	49.86	51.31
			5.72	5.41	4.97	4.64	4.28	3.91
Hungary	2004	13.34	58.83	50.66	46.24	42.94	35.77	34.12
			8.32	9.00	6.30	4.45	2.90	2.09
Poland	2004	26.14	51.39	50.10	51.07	52.33	53.62	54.56
Romania	2007	7.61	-	-	-	-	-	-
			39.11	37.52	33.86	31.12	29.90	28.18
Slovak Republic	2004	5.53	12.13	11.33	10.52	8.47	6.77	5.71
			46.66	46.81	47.99	49.81	53.32	57.00
			-	-	-	-	-	-

Source: World Bank indicators and European Union portal (europa.eu).

Overall, Romania has a moderate level of indebtedness of the private sector, with 39% to 28% to GDP, and the lowest level among the selected countries for comparison. The high interest rate may be a key factor for the reduced level of credits to Romanian companies. Under these conditions, it is interesting to see how group affiliation and corporate ownership influence the debt ratios of domestic companies, as further analysed in our research.

### 3. Data and methodology

The empirical study investigates the influence of corporate ownership on the capital structure of investee firms. The selected sample includes 51 out of 86 companies listed on the regulated segment of Bucharest Stock Exchange. Financial and utilities companies were excluded from the total population of firms due to their particular business profile. The analysed period, 2011-2016, captures the characteristics of Romanian listed companies after Romania's accession to the European Union (in 2007), and after the 2008-2009 financial crisis. Moreover, it starts with the year of mandatory adoption of International Financial Reporting Standards (IFRS) by all listed companies from Romania (2012, with the restated figures for the fiscal year 2011), and ends with the latest information available when the dataset was collected. The sample is unbalanced. Overall, it includes 237 firm-

year observations. The source of ownership data and financial indicators is the Thomson Reuters Eikon database.

In order to investigate the effect of local and foreign corporate ownership on capital structure of investee firms, the analysis is conducted both on the overall sample and on separate sub-samples for local corporate ownership and foreign corporate ownership, respectively. The sub-samples were determined based on the dominant share of local corporate versus foreign corporate ownership in total outstanding shares of a company (determined as the highest between the ratios of local corporate shares in total shares and the ratios of foreign corporate shares in total shares). The local and foreign corporate ownership ratios are the main explanatory variables of the study and reflect the corporate shareholders of the analysed firms.

The dependent variable, capital structure, was alternatively proxied by debt ratio, short-term debt ratio, and long-term debt ratio, each of them describing the indebtedness level of the firms, as total, short-term and long-term indebtedness (Alipour *et al.*, 2015; Delcoure, 2007; Mironiuc, 2018; Vo, 2017). Additionally, firm-level control variables were included in analyses, as indicated by capital structure theories (trade-off theory; pecking-order theory) and previous empirical studies. Overall, the selected control variables reflect the ability of companies to pay their debts on the due dates. They are firm size, age, profitability, growth, and assets tangibility (Alipour *et al.*, 2015; Booth *et al.*, 2001; Delcoure, 2007; Stohs and Mauer, 1996; Vo, 2017). Definitions of all variables included in the study are presented in Table 2.

**Table 2. Selected variables**

Variables	Explanations
<i>Dependent variables (alternative measures for capital structure and debt maturity)</i>	
Debt ratio ( <i>Debt</i> )	Total debt divided by total assets
Short-term debt ratio ( <i>Short</i> )	Short-term debt divided by total assets
Long-term debt ratio ( <i>Long</i> )	Long-term debt divided by total assets
<i>Independent variables (analysed both simultaneously and alternatively)</i>	
Local corporate ownership ( <i>LO</i> )	Ratio of shares held by local corporations in total common outstanding shares
Foreign corporate ownership ( <i>FO</i> )	Ratio of shares held by foreign corporations in total common outstanding shares
<b>Control variables</b>	
Size ( <i>LnTA</i> )	Natural logarithm of total assets



Age ( <i>Age</i> )	Difference between year $t$ and year of incorporation, plus 1
Profitability ( <i>ROA</i> )	Income after taxes divided by average total assets
Sales growth ( <i>Growth</i> )	Sales revenue for the year $t$ divided by sales revenue for the previous year ( $t-1$ )
Assets Tangibility ( <i>Fixed</i> )	Fixed assets (property, plant and equipment) divided by total assets

*Data source:* Thomson Reuters Eikon database.

The relation between local or foreign corporate ownership and capital structure of investee companies is analysed through panel least squares regression model, with fixed effects. The effects are considered in order to capture the differences among companies, and to control for firm-level omitted variables bias (Baltagi, 2008; Wooldridge, 2012).

Our model selection is supported by Hausman test and likelihood test for redundant effects. The equation of the model is:

$$DV_{it} = \beta_0 + \mathbf{c}_i + \beta_1 \mathbf{Own}_{it} + \beta_2 \mathbf{Controls}_{it} + \varepsilon_{it} \quad (1)$$

Where:

- *DV* represents the dependent variable for capital structure (debt ratio, short-term debt ratio or long-term debt ratio, alternatively);
- *Own* represents corporate ownership, which can be local or foreign;
- *Controls* represents the vector of control variables;
- *i* stands for the value for firm  $i$ ;
- *t* represents year  $t$ ;
- $\mathbf{c}_i$  represents firm effects;
- $\varepsilon_{it}$  is the error term.

#### 4. Empirical study and discussions of results

The first step of the empirical study regarding corporate ownership influence on capital structure of investee firms is descriptive statistics analysis. As indicated in Table 3, Romanian listed companies have a debt ratio of 0.258, on average. This indicates a moderate level of indebtedness, below the theoretical threshold of insolvency risk of 0.66 mentioned by Mironiuc (2018), and a high degree of financing through internal resources. However, maximum values show that the sample also includes companies with high indebtedness and in financial difficulties or insolvency. Companies dominantly held by foreign corporate shareholders have significantly higher mean values of debt ratio than locally owned entities. Overall, Romanian entities seem to have a short-term debt orientation, regardless of their ownership.

The share of corporate ownership in total equity of the firms is on average 33% for local shareholders and 24% for foreign companies. Descriptive statistics for the sub-samples indicate that local companies hold on average 48%, whereas foreign corporations around 66% of total equity of listed entities. ANOVA analysis shows that apart from debt ratios and ownership share, listed companies also differ in size. The average age of the companies is 21 years, with most of the companies incorporated after the fall of communism. This suggests that most of the firms are old state-companies, recently privatized and with a historical development beyond their reported year of incorporation (recognised under the market-economy regulations). In terms of financial performance, selected entities have a small profitability rate, on average. Foreign companies perform better and have a higher sales growth than local companies have. Both groups of entities have almost the same level of assets tangibility, on average. Overall, the fixed assets ratio indicates that fixed assets represent half of the total assets of the firms.

**Table 3. Descriptive statistics**

<i>Panel A: Overall sample (237 observations)</i>					
	<b>Mean</b>	<b>Median</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Std. Dev.</b>
<b>Debt</b>	0.258	0.184	0.000	1.608	0.294
<b>Short</b>	0.156	0.088	0.000	1.334	0.216
<b>Long</b>	0.102	0.029	0.000	1.603	0.197
<b>LO</b>	0.325	0.297	0.000	0.924	0.297
<b>FO</b>	0.238	0.000	0.000	0.996	0.343
<b>LnTA</b>	19.011	18.788	16.306	24.487	1.406
<b>Age</b>	21.636	23.000	1.000	27.000	5.148
<b>ROA</b>	0.002	0.014	-1.480	2.643	0.223
<b>Growth</b>	1.000	1.014	0.004	2.080	0.266
<b>Fixed</b>	0.533	0.530	0.075	0.961	0.195
<i>Panel B: Local versus foreign corporate ownership</i>					
	<i>Local ownership (155 observations)</i>		<i>Foreign ownership (82 observations)</i>		<b>ANOVA F-test</b>
	<b>Mean</b>	<b>Std. Dev.</b>	<b>Mean</b>	<b>Std. Dev.</b>	
<b>Debt</b>	0.211	0.237	0.344	0.363	11.618***
<b>Short</b>	0.129	0.138	0.207	0.311	7.118***

<i>Long</i>	0.082	0.180	0.141	0.222	4.809**
<i>LO</i>	0.486	0.240	0.017	0.047	306.197***
<i>FO</i>	0.017	0.046	0.665	0.255	946.043***
<i>LnTA</i>	18.687	0.886	19.636	1.914	27.194***
<i>Age</i>	21.710	5.004	21.280	5.744	0.3556
<i>ROA</i>	-0.008	0.160	0.019	0.310	0.749
<i>Growth</i>	0.997	0.276	1.002	0.249	0.019
<i>Fixed</i>	0.535	0.190	0.527	0.205	0.092

Source: author's processing.

Correlation analysis shows that both local and foreign corporate ownership are significantly correlated with capital structure of listed firms, as presented in Table 4. Moreover, local ownership is negatively correlated with long-term debt ratio, and foreign ownership is positively correlated with both short-term and long-term debt ratios. As the two categories of ownership are complementary, representing shares in total equity of the firms, they are negatively correlated. The intensity of their correlation is medium; however, it should be considered in interpreting the results of regression analyses. Other significant but weak correlations exist among the other financial characteristics of the firms (as reflected by control variables). Company size is significantly correlated with both local and foreign corporate ownership. Large companies are more likely to have foreign corporate shareholders than local shareholders. Moreover, local corporate ownership is negatively correlated with fixed assets ratio. This suggests that companies with local corporate shareholders may have less long-term assets than other entities. Firm profitability is negatively correlated with debt ratio and short-term debt ratio, suggesting that profitable firms need less debt for their activity.

**Table 4. Pearson correlation matrix**

	<i>Debt</i>	<i>Short</i>	<i>Long</i>	<i>LO</i>	<i>FO</i>	<i>LnTA</i>	<i>Age</i>	<i>ROA</i>	<i>Growth</i>
<i>Short</i>	0.741***								
<i>Long</i>	0.677***	0.008							
<i>LO</i>	-0.200***	-0.097	-0.192***						
<i>FO</i>	0.273***	0.246***	0.137**	-0.682***					
<i>LnTA</i>	0.047	0.003	0.066	-0.269***	0.349***				
<i>Age</i>	-0.017	0.024	-0.051	0.076	-0.050	-0.174***			
<i>ROA</i>	-0.224***	-0.209***	-0.104	-0.010	-0.026	0.100	0.058		
<i>Growth</i>	-0.064	-0.001	-0.095	0.040	-0.006	0.058	-0.116*	0.180***	
<i>Fixed</i>	0.130**	0.022	0.169***	-0.141**	-0.059	0.396***	-0.187***	0.077	-0.051

\*\*\*, \*\*, \* represent significance at 1%, 5%, and 10%, respectively.

Source: author's processing.

The relation between local and foreign corporate ownership and capital structure of Romanian listed companies is analysed through panel regression analysis with fixed effects. Three estimations are considered for the three alternative dependent variables that proxy the capital structure: debt ratio, short-term debt ratio, and long-term debt ratio. The results of the full sample analysis, which includes both local and foreign corporate shareholders as explanatory variables, are reported in Table 5.

**Table 5. Regression results for the overall sample**

Variables	<i>Debt ratio</i>		<i>Short-term debt ratio</i>		<i>Long-term debt ratio</i>	
	Coefficients	Std. Error	Coefficients	Std. Error	Coefficients	Std. Error
<i>LO</i>	-0.293	0.177	-0.297	0.200	0.006	0.072
<i>FO</i>	-0.307*	0.173	-0.237	0.215	-0.069	0.099
<i>LnTA</i>	-0.301***	0.105	0.021	0.066	-0.324**	0.142
<i>Age</i>	0.014**	0.006	0.007	0.007	0.008	0.007
<i>ROA</i>	-0.009	0.054	-0.015	0.035	0.006	0.079
<i>Growth</i>	0.038	0.034	0.032	0.038	0.008	0.019
<i>Fixed</i>	-0.183	0.178	0.264	0.217	-0.442	0.283
Constant	5.894***	2.017	-0.408	1.276	6.338**	2.777
N	237		236		236	
Adjusted R-sq.	0.902		0.718		0.679	
F-statistic	39.247***		11.503***		9.733***	
Hausman (Chi-sq.)	77.040***		17.606**		70.811***	
Firm fixed effects	Yes		Yes		Yes	
Cross-section						
F-statistic	37.063***		10.911***		9.948***	

Estimations are based on White Period robust standard errors.

\*\*\*, \*\*, \* represent significance at 1%, 5%, and 10%, respectively.

Source: author's processing.

It was found that local and foreign corporations that invested in Romanian public entities have a negative influence on the indebtedness level of their investees. However, the result is statistically significant only for the influence of foreign corporate shareholders on the total debt ratio. Thus, foreign corporate ownership, through its presumed involvement in the activity of investee companies, determines a decrease of the overall indebtedness of affiliated firms. This may be explained by better financing strategies, a more efficient cash-flow management, additional equity, intra-group investment or financial support from shareholder companies (that

are not recognised as debt by the investee firms). It is presumed that foreign corporations may even impose a reorganisation of activity and business model of local affiliates, in order to align the business practices of subsidiaries to the policies of the group. If such changes determine a reduction of debt ratio, that consequently means a reduction of financial risk of the affiliated entities. Therefore, corporate ownership, especially foreign corporate ownership, seems to strengthen the financial position of domestic entities by reducing their debts. This effect is relative to firm size and age as control variables with significant influence in our estimations.

The influence of local corporations as shareholders of Romanian listed companies is further analysed on the sub-sample of firms dominantly held by local corporations. As indicated in Table 6, local corporate ownership has a significant influence on the overall level of indebtedness and on the short-term debt ratio of the affiliated firms. The effect is negative, which means that corporate ownership tends to decrease the indebtedness risk of investee firms, improving their financial position. This is especially based on a reduction of short-term debts. Thus, it may be assumed that local corporate shareholders reduce the short-term debt pressure and help the affiliates to improve their working capital (through additional support, intra-group transactions or business reorganisations as well). The relation between local corporate shareholders and capital structure of investee firms depends on size and age of owned entities.

Alternatively, the influence of foreign corporations on the capital structure of Romanian affiliates was also analysed on a separate sub-sample (the sub-sample composed by companies dominantly held by foreign corporate shareholders). The results of panel regression estimations are reported in Table 7. In contrast to the results obtained for the full sample, the influence of foreign corporate ownership on the capital structure of Romanian non-financial companies is statistically significant, and as expected, with opposite signs for the short-term and long-term debt models. In contrast to local ownership also, foreign corporations are associated with an increase in the short-term debts of their investee firms. Business development strategies of foreign corporations seem to be based on a decrease of long-term debts, and an increase of short-term debts of local affiliates. This confers business flexibility. The influence of foreign corporate shareholders is relative to size, age and profitability of investee firms. Overall, the reduction effect on long-term indebtedness is higher than the increase in short-term indebtedness. Thus, partially in with our initial hypotheses (H1 and H2), both local and foreign corporate shareholders improve the financial position of investee entities and determine a reduction of their indebtedness. However, the two categories of corporate shareholders seem to have different financial strategies for their affiliates. Whereas local corporations are prone to a reduced level of short-term debts, foreign corporations are more risk-oriented and encourage short debt maturities for their affiliates.

**Table 6. Regression results for the firms with local corporate ownership**

Variables	<i>Debt ratio</i>		<i>Short-term debt ratio</i>		<i>Long-term debt ratio</i>	
	Coefficients	Std. Error	Coefficients	Std. Error	Coefficients	Std. Error
<i>LO</i>	-0.384**	0.173	-0.405**	0.183	0.021	0.062
<i>LnTA</i>	-0.295***	0.106	0.031	0.053	-0.326**	0.134
<i>Age</i>	0.011	0.007	-0.005	0.005	0.017***	0.006
<i>ROA</i>	-0.126	0.116	0.005	0.040	-0.131	0.148
<i>Growth</i>	0.016	0.043	0.008	0.047	0.008	0.023
<i>Fixed</i>	-0.308	0.226	0.053	0.172	-0.361	0.288
Constant	5.815***	1.967	-0.170	1.058	5.985**	2.604
N	155		155		155	
Adjusted R-sq.	0.836		0.627		0.745	
F-statistic	20.565***		7.460***		12.275***	
Hausman (Chi-sq.)	106.974***		36.882***		111.500***	
Firm fixed effects	Yes		Yes		Yes	
Cross-section						
F-statistic	13.936***		7.014***		8.425***	

Estimations are based on White Period robust standard errors.

\*\*\*, \*\*, \* represent significance at 1%, 5%, and 10%, respectively.

Source: author's processing.

**Table 7. Regression results for the firms with foreign corporate ownership**

Variables	<i>Debt ratio</i>		<i>Short-term debt ratio</i>		<i>Long-term debt ratio</i>	
	Coefficients	Std. Error	Coefficients	Std. Error	Coefficients	Std. Error
<i>FO</i>	-0.025	0.076	0.228**	0.090	-0.253***	0.083
<i>LnTA</i>	-0.178*	0.104	0.045	0.182	-0.230	0.205
<i>Age</i>	0.0189**	0.007	0.033**	0.015	-0.014	0.014
<i>ROA</i>	0.079***	0.027	-0.037*	0.021	0.115***	0.042
<i>Growth</i>	0.020	0.039	-0.023	0.061	0.045	0.049
<i>Fixed</i>	0.068	0.176	0.450	0.426	-0.380	0.452
Constant	3.398	2.049	-1.758	3.719	5.277	4.230
N	82		81		81	
Adjusted R-sq.	0.966		0.800		0.640	
F-statistic	94.498***		13.762***		6.691***	
Hausman (Chi-sq.)	16.994***		4.020		19.661***	
Fixed effects	Yes		Yes		Yes	
Cross-section						
F-statistic	56.686***		11.583***		5.408***	

Estimations are based on White Period robust standard errors.

\*\*\*, \*\*, \* represent significance at 1%, 5%, and 10%, respectively.

Source: author's processing.

Overall, our findings support the tested hypotheses regarding the influence of foreign corporate shareholders (H2, H5, H6) and partially support the hypotheses regarding the effect of local corporate ownership (H3, whereas H1 is contradicted and H4 is not supported by significant results). The study revealed the different financing models of local and foreign corporations for their affiliates in the Romanian context.

## Conclusions

This study investigated the capital structure strategies of Romanian listed entities under the influence of local and foreign corporate shareholders. Previous literature scarcely reports on the influence of corporate ownership on the capital structure of the companies from developing economies or frontier markets, especially from the Central and Eastern European region. This paper aimed to fill this gap and provide evidence about the relation between corporate ownership and financing strategies of Romanian listed companies. Reflecting the business environment of the Central and Eastern European region, Romania has a relatively small capital market, being classified as frontier market by international agencies (for example, Morgan Stanley Capital International classification for the year 2017). The descriptive analysis indicated that capital market size and credit conditions in Romania are slightly different from other CEE countries. Romania has a small market capitalization and a low level of domestic credit to private sector relative to GDP. However, the cost of debt proxied by lending interest rates seems higher than in other CEE countries.

In this context, the main results of our empirical study indicate that overall, both local and foreign corporations that held shares in public companies have a negative effect on the indebtedness of their investee firms. However, foreign corporate shareholders promote a short-term indebtedness policy and a decrease of long-term indebtedness of their affiliates listed on the regulated segment of Bucharest Stock Exchange. In contrast, local corporate shareholders support a reduction in the short-term indebtedness of the investees. These findings reveal the different financing strategies of foreign versus local corporate shareholders and their influence on the capital structure of domestic entities.

Future research may investigate the debt sources for entities with foreign corporate ownership in order to provide a deeper understanding of the business strategies that foreign companies apply in the host countries. Moreover, further investigations may consider the country of origin of foreign ownership, and may extend the analysis to other countries in the region.

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