Advances in Business-Related Scientific Research Journal
ABSRJ
geacollege
Faculty of Entrepreneurship

FIRM-SPECIFIC DETERMINANTS OF CAPITAL STRUCTURE - CASE OF FIRMS IN BOSNIA AND HERZEGOVINA

Azra Bajramović
Džemal Bijedić University of Mostar,
Faculty of Economics,
Bosnia and Herzegovina
azra.bajramovic@unmo.ba

Abstract

This paper explores relative importance of some firm-specific determinants of leverage for the firms in Bosnia and Herzegovina. In order to explore which determinants are important and what is the nature of their influence, data on firms listed in two stock exchanges in Bosnia and Herzegovina for 5 years period were taken. The effect of tangibility, profitability, firm's size, non-debt tax shield and growth on leverage was tested. The results show statistically significant positive influence of tangibility and non-debt tax shield on firms' leverage and negative effect of size which is opposite to results for other transition economies. The results of regression models also show that significance of some factors and nature of their influence differs for firms listed in different stock exchanges.

Key Words

Capital structure; leverage; firm-specific determinants; transition economies.

INTRODUCTION

The issue of capital structure may be considered, to some extent, as a controversial issue in corporate finance because almost sixty years have passed since Modigliani and Miller (1958) claimed that capital structure does not affect the value of firms in perfect markets and there is still no unique theory on capital structure nor consensus on determinants of capital structure and direction of their influence. The statement about irrelevance of capital structure under perfect market assumptions has led to studying of conditions under which capital structure matters and influences firm's value.

Several theories have been developed in an attempt to explain how firms choose their capital structure and at the same time many studies were conducted in order to prove those theories and their assumptions. The most tested theories in empirical research are trade-off and pecking order theory. According to trade-off theory firms choose their mix of debt and equity by weighing potential tax benefits of debts and costs of financial distress. On the other hand, Myers and Majluf (1984) claimed that firms do not have optimal capital structure and that the choice on sources of financing is brought by following a pecking order of financing that says that firms should finance from internally generated sources, then debt and finally equity. Most of the empirical work has been focused on testing potential determinants of firms' capital structure and proving in that way the validity of different theories. However, those determinants were well explored in developed economies but the work on determinants of capital structure in developing and emerging economies is far from finished. In past ten years there were some studies on capital structure of European transitional economies, mostly focused on Central and/or Eastern European countries (Nivorozhkin, 2005; DeHaas & Peeters, 2006; Delcoure, 2007; Joeveer, 2013). There are also a few studies on capital structure in some Western Balkan countries and former Yugoslav federation countries (Črnigoj & Mramor, 2009; Pepur et al. 2016; Šarlija & Harc 2014; Stančić et al., 2016; Malinić et al., 2013).

The goal of this paper is to offer insight into capital structure of firms in Bosnia and Herzegovina and give a modest contribution to empirical research in this field for transition economies. Relevance of determinants of capital structure that have been identified as significant in other studies for transition economies will be tested for the firms in Bosnia and Herzegovina, economy in transition with a lot of specific features of economic but also historic nature. The goal is to see if firms in Bosnia and Herzegovina are influenced by the same determinants as firms in other transition economies especially Western Balkans.

The rest of the paper is organized in the following way: The second part of this paper gives insight into results of studies for effects of different firm specific determinants on capital structure for firms in developed economies and for transition economies. The third part of the paper explains how research for the firms in Bosnia and Herzegovina was done, namely describes the methodology used and the way the data were collected. In the fourth part results of regression models, used to test the effect of some firm

specific determinants leverage are presented and later on results are discussed and compared to studies for other transition economies.

LITERATURE REVIEW

Firm-specific determinants of capital structure in developed economies

Very extensive research on capital structure determinants of firms in developed economies exists. Harris and Raviv (1991) gave an overview of capital structure theories and results of empirical research at the time. Their analysis had shown that industry type, volatility, fixed assets, non-debt tax shield and profitability are significant determinants of capital structure but without joint conclusion in studies on the direction of their influence on leverage. Since then many other studies were done for firms in specific countries but there are also studies on the capital structure that included firms in a number of different countries. For instance, Cheng and Shiu (2007) studied capital structure of firms in 45 countries, deYong et al. (2002) for 42 countries and Öztekin (2015) for 37 countries. These studies included also analysis of macro determinants and their effect on capital structure. Results of mentioned studies indicate significance of the following determinants: type of assets, profitability, size of a firm, growth and industry type with positive influence confirmed for type of assets and size of a firm and negative influence for profitability and growth opportunities.

Positive and significant influence of tangibility of assets on leverage is confirmed in studies of De Jong et al. (2006), Öztekin (2015), Frank and Goyal (2009) for USA, Acharya et al. (2005) for firms in GB and USA, Gaud et al. (2005) for Switzerland. Cheng and Shiu (2007) show negative effect of tangibility on total debt but positive for long term debt meaning that firms who have more tangible assets will use long term debt to finance its assets. Negative relationship between profitability and leverage is suggested by the studies of Öztekin (2015), Cheng and Shiu (2007), DeJong et al. (2006), and for firms in USA by Graham et al. (2015), Frank and Goyal (2009), Harrington (2006) for USA, and Brailsford et al. (2002) for Australia. In most of the studies the size of the company is statistically significant and has positive effect on the leverage. That was shown for 25 countries out of 42 in the study of deJong et al. (2006) for book value of leverage. Also studies done by Öztekin (2015), Graham et al. (2015), Frank and Goyal (2009), Cheng and Shiu (2007), Akhtar (2005) for Australia, Gaud et al. (2005) and many others confirm that bigger firms will have more leverage. Studies of Cheng and Shiu (2007), DeJong et al. (2006), Ghosh et al. (2000) and Wald for France, Germany, United Kingdom and United States (1999) indicate that firms with greater opportunities for growth mostly have lower leverage. On the other hand Wald's study for Japan shows positive effect of firm's growth on its leverage as well as the study of Titman and Wessels (1988). Some studies have also shown that the effect of growth is not significant.

So the effect of tangibility and size in above mentioned studies confirms the trade-off theory but the profitability effect is in line with predictions of pecking order theory.

Firm-specific determinants of capital structure in transition economies

There are much less studies that analyse effects of different determinants on leverage for firms in transition economies. De Haas and Peeters (2006) have analysed firms in Central and Eastern Europe, Mateus and Terra (2006) focused on seven EE countries, Nivorozhkin (2005) analysed data for Bulgaria, Czech Republic, Estonia, Poland and Romania, Delcoure (2007) for Czech Republic, Poland, Russia and Slovak Republic and Joeveer (2013) for Bulgaria, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania and Slovakia. Most of those studies covered period of five to seven years. Results show significance of profitability, tangibility, size, non-debt tax shield and growth for firms' leverage.

All of the above mentioned studies have reached the same conclusion about profitability – it is negatively related to the leverage. In other words more profitable firms in transition economies will have less leverage. Tangibility is the next important factor of capital structure that has shown negative effect on leverage in the studies of Joeveer (2013), De Haas and Peeters (2006) for Romania, Bulgaria and Hungary and Nivorozhkin (2005) for Bulgaria and Romania, but Delcoure (2007) results show positive influence of tangibility on leverage and also the study of Nivorozhkin (2005) for Czech Republic and Estonia. Size of a firm has positive influence on the leverage as indicated Delcoure (2007) except in case of long-term leverage and Nivorozhkin (2004) for the firms in Bulgaria, Czech Republic and Romania. Study of Delcoure (2007) has also shown very strong positive influence of non-debt tax shield on firms' leverage in all countries and for all measures of leverage used in the study. Many of mentioned studies included growth or growth opportunities as a model variable but De Haas and Peeters (2006) confirmed positive effect of firms' growth on leverage for the firms in Latvia and Lithuania.

Besides the studies that focused on the countries of Central and Eastern Europe there is a small number of studies that focused on some Western Balkan countries and also countries that were together with some of those a member of a same state known as Yugoslav federation. Črnigoj and Mramor (2009) explored capital structure of firms in Slovenia, Pepur et al. (2016) and Šarlija and Harc (2014) of Croatia, Stančić et al. (2016) and Malinić et al. (2013) of Serbia.

In all of those studies profitability is statistically significant with negative influence on leverage. Tangibility is in negative relation with leverage (Črnigoj & Mramor, 2009; Stančić et al., 2016; Malinić at al., 2013). Size of a firm has been proven to have significant positive effect on leverage too (Črnigoj & Mramor, 2009; Stančić et al., 2016; Šarlija & Harc, 2014). On the other hand Pepur et al. (2016) who researched large firms in Croatia concluded that size has negative effect on leverage. Also growth is relevant factor with positive relation to leverage for the firms in Slovenia (Črnigoj &

Mramor, 2009) but negative for large Croatian firms (Pepur et al., 2016). Besides these non-debt tax shield has proven to be important determinant with negative influence on leverage in the study of Pepur et al. (2016).

Arsov and Naumoski (2016) studied capital structure of firms in Croatia, Macedonia, Serbia and Slovenia. Their results show that bigger firms will have higher leverage while more profitable firms as well as firms with more tangible assets will have lower leverage. The results also show positive influence of growth on leverage.

So, results of studies for transition economies are a bit different compared to those in developed economies. Unlike firms in developed economies tangibility in transition economies exhibits negative influence on leverage and growth has positive effect. Profitability as in developed economies has negative effect on leverage of firms in transition economies. So for transition economies more determinants than for developed economies confirm assumptions of pecking order theory.

DATA AND METHODS

Bosnia and Herzegovina (BiH) is a Western Balkan country that was a part of Yugoslav federation for almost half of century. It shares some features with other countries from Western Balkan but also has its own unique characteristics. Capital structure determinants of firms in BiH were not included in above mentioned studies so this study aims to investigate relative importance of capital structure determinants that were proven to be significant for firms in transition economies, especially Western Balkan, for firms in BiH.

The source of information for this study were two stock exchanges in Bosnia and Herzegovina, one in the entity of Federation of BiH called Sarajevo Stock Exchange (SASE) and another one in entity of Republic of Srpska called Banja Luka Stock Exchange (BLSE). The firms taken into the sample are the ones whose shares are listed in Sub segment 1 that contains most liquid shares from SASE and firms whose shares are listed in so called segment Official market-Shares from BLSE. Only non-financial firms were taken into consideration and those that had all the financial statements for the period of 2011-2015. So the sample in total represents 62.9% of the firms listed in both stock exchanges or 33% of those listed in SASE and 90 % of those listed in BLSE. From the financial statements of the selected firms (that are available on web pages of stock exchanges) information on values of some positions in balance sheets were obtained and variables were calculated.

In available studies the effects of different determinants on firm's capital structure are presented through their effect on the leverage. That approach will be used here too and investigated through the model of multiple regression. Leverage is dependent variable in the model while chosen determinants are independent variables. All regression models were tested for the level of significance of 0.05.

In available studies for transition economies in most of the cases a few measures of leverage were used. One of those is the ratio of total debt to total assets that shows relative importance of debt financing (Joeveer 2013; Delcoure, 2007). Still, there are firms in Bosnia and Herzegovina who do not have any long term debt and there are also many who rely on short term liabilities to finance their business. In that case total liabilities could represent total debt of firms and be used as a measure for leverage. That measure was used in the studies of Arsov and Naumoski (2016), Pepur et al. (2016), Črnigoj and Mramor (2009), Šarlija and Harc (2014), Malinić et al. (2013). Šarlija and Harc (2014) and Stancic at al. (2016) also used relation of long term debt to total assets of a firm. For the comparability of results the main measure of leverage in this study is ratio of total liabilities to total assets. Another regression model will also include the ratio of total debt / total assets for checking the validity of results in the first model. To check if the firms are influenced by some specific factors in the long term another measure of leverage will be used - long term debt to total assets. So the effect of different factors on the leverage will be tested through three different models.

Taking into account availability of the data from the financial statements and theoretical and empirical importance of the determinants for transition economies for the purpose of this study the following factors will be analysed: tangibility, profitability, size, effect of the tax and growth.

Tangibility of firms' assets is considered to indicate liquidation value of a firm. According to trade off theory firms that have more tangible assets have more assets that could serve as collateral and are expected to have more leverage. According to pecking order theory firms that have more tangible assets are exposed to less information asymmetry and therefore will have less debt. Tangibility is calculated as the ratio of tangible assets of the firm to its total assets. That is the measure most often used in most of the available studies and it was used as a measure in all above mentioned studies for transition economies.

Profitability according to trade off theory will have positive effect on leverage. More profitable firms need to protect their profit from taxation so they will have higher leverage. Pecking order theory on the other hand suggests that more profitable firms will have less debt since they have more internal sources of finance. Profitability in available studies is measured in different ways. When financial costs are significant the profitability may be miscalculated so for the purpose of this study profitability will be expressed as EBIT to total assets. That kind of approach was used in a number of studies (for instance, Brailsford et al., 2002; MacKay & Phillips 2005; Graham et al., 2015).

Big firms, according to trade off theory, are less likely to experience financial distress, their cash flows are more stable and they show less earnings volatility. They can also get lower interest rates thanks to their size. All of that could lead to greater leverage of those firms. For those firms according to the assumptions of pecking order there is less information asymmetry so they are expected to have less debt. Size of the firm in most of the studies is expressed through the ln of total assets or total sales. For the purpose of this analysis ln of total assets is used to express the size of

the firm as in Arsov and Naumoski (2016), Joeveer (2013), Delcoure (2007), Nivorozhkin (2005).

High tax rate, according to trade-off theory should motivate firms to have more leverage in order to use so called tax shield, or in other words to protect their earnings from taxation. Studies that analysed firms in many different countries have mostly used tax rate comparisons or calculations of average or marginal tax rate. The firms in the sample are form the same country with the same tax rate. One of the options to measure the effect of tax was to calculate the marginal tax rate, but there are firms that experienced losses, carried forward tax gains and losses so that information is not very useful. Instead another approach is used in this study. Non-debt tax shield is expressed as the ratio of amortization to total assets. That measure was used also in Pepur et al. (2016), Sarlija and Harc (2014), Delcoure (2007). Higher values of this ratio mean that the firm will have less necessity for the debt as means of protecting its profits from taxation.

According to pecking order theory effect of growth on leverage will depend on the size of internal sources of firm. Firms whose investment opportunities are greater than internally generated funds will borrow more. Growth of the firm is very difficult to measure because the potential growth of the firm is influenced by many different factors such as consumer behaviour, macroeconomic conditions, level of firm's investment etc. In different studies it is measured in different ways and still there are no joint conclusions on its effects on capital structure. BLSE offers data on P/B ratio for its firms but those data are missing for some years for firms listed in SASE so that ratio cannot be used for the purpose of this study. That is why simply a rate of growth of firms is being used without exploring what caused the growth. Namely average rate of growth of total assets for each of the firms for the selected period is used as a proxy for growth.

FINDINGS

Information on the mean of leverage and all analysed determinants for the period of 2011-2015 for the firms in the sample (total and by stock exchanges) are given below.

Table 1: Mean of leverage and potential leverage determinants

Leverage / Determinant	All firms	Firms listed in SASE	Firms listed in BLSE
Total liabilities / Total assets	0.1914	0.1690	0.1991
Total debt / Total assets	0.1048	0.1098	0.1030
Long-term debt / Total assets	0.0588	0.0464	0.0630
Tangibility	0.6432	0.5935	0.6604
Profitability	0.0092	0.0177	0.0062
Size	18.4019	18.1519	18.4881

Non-debt tax shield	0.04	0.0361	0.0414
Average growth	0.2789	0.0031	0.3740

Source: Author's calculations based on the data from financial statements of the firms.

The average leverage of firms in Bosnia and Herzegovina expressed as ratio of total liabilities to assets is 19,14% with leverage of firms listed in SASE being a bit lower compared to firms listed in BLSE and overall results. About 64% of total assets of firms consist of tangible assets and firms on average had a very low profitability in this period of 0.92% while still on average experiencing average growth rates of 27.89% but the growth was uneven for the firms listed in SASE and BLSE.

Three regression models were used to explore the effect of different determinants on leverage where dependant variable, the leverage, was expressed in three different ways. The results of the models are presented in Table 2. Along each of the determinants beta coefficient was shown and in the brackets bellow significance of factor at 0.05 level.

Table 2: Results of regression models for all the firms in the sample

Factor	**Model 1** (Leverage = total liabilities / total assets)	**Model 2** (Leverage = total debt / total assets)	**Model 3** (Leverage = long-term debt/ total assets)
Tangibility	0.179* (0.007)	0.236* (0.000)	0.235* (0.001)
Profitability	-0.081 (0.272)	-0.074 (0.325)	-0.072 (0.344)
Size	-0.372* (0.000)	-0.314* (0.000)	-0.080 (0.253)
NDTS	0.296* (0.000)	0.269* (0.000)	0.327* (0.000)
Growth	-0.026 (0.688)	0.000 (0.995)	-0.081 (0.235)
Adjusted R^2	**R^2=0.199**	**R^2 = 0.174**	**R^2 = 0.145**

Source: Author's calculations based on the data from financial statements of the firms.

The highest explanatory power is in Model 1 where 19.9% of variation in leverage is caused by given factors.

If the leverage is measured as the ratio of total liabilities to total assets than looking at statistically significant influence of tangibility, size and non- debt tax shield we can conclude that firms with more tangible assets, smaller firms and firms with higher ratios of amortisation to total assets will have higher leverage. The second model serves to check the validity of the first model and significance of determinants and direction on their influence on leverage is confirmed. In case of long term leverage size does not show significant influence on leverage.

Statistically significant positive influence of tangibility and non-debt tax shield on leverage can be explained by the fact that tangible assets are most

often financed through debt and that firms with more tangible assets usually have higher amounts of amortization.

These results are not completely in line with previous research in Western Balkan countries where tangibility shows negative influence on leverage while positive is shown only in Delcoure (2007) and Nivorozhkin (2005) for Czech Republic and Estonia. Results for size are in line with results of Pepur et al. (2016) for large firms in Croatia and for non-debt tax shield with Delcoure (2007).

Since data for the analysis were taken from firms listed in two stock exchanges, the next step in the analysis was to see if there are maybe some differences in terms of determinants' relevance for the firms listed in two stock exchanges. The data on regression model for the firms listed in SASE is presented in Table 3.

Table 3: Results of regression models for the firms listed in SASE

Factor	**Model 1** (Leverage = total liabilities / total assets)	**Model 2** (Leverage = total debt / total assets)	**Model 3** (Leverage = long-term debt/ total assets)
Tangibility	0.290* (0.003)	0.268* (0.028)	0.406* (0.017)
Profitability	0.108 (0.184)	0.078 (0.445)	-0.124 (0.378)
Size	-0.370* (0.000)	-0.309* (0.006)	-0.348* (0.022)
NDTS	-0.098 (0.298)	-0.102 (0.391)	0.460* (0.007)
Growth	0.574* (0.000)	0.556* (0.000)	0.120 (0.441)
Adjusted R^2	**R^2 = 0.810**	**R^2 = 0.697**	**R^2 = 0.421**

Source: Author's calculations based on the data from financial statements of the firms.

These models show very high level of adjusted R2. For instance in the first model 81% of variations in the leverage, expressed as the ratio of total liabilities to total assets, can be explained by given factors. Significance of determinants in the first model is also confirmed in Model 2. Tangibility and size are statistically significant in all three models and show the same direction of the influence as for the entire sample of firms. Still, the fact that this sample is consisted of smaller number of firms compared to firms listed in BLSE should be taken into consideration.

For the firms listed in SASE that, on average, have shown very low average growth rates (0.31%) that factor is statistically significant for the leverage in models 1 and 2 and leads to conclusion that the greater the rate of growth, the greater the leverage of firms as in Črnigoj and Mramor (2009) and Šarlija and Harc (2014).

In Table 4 results of regression model for the firms listed in BLSE are presented.

Table 4: Results of regression model for the firms listed in BLSE

Factor	Model 1 (Leverage = total liabilities / total assets)	Model 2 (Leverage = total debt / total assets)	Model 3 (Leverage = long-term debt/ total assets)
Tangibility	-0.181* (0.016)	-0.101 (0.184)	0.057 (0.493)
Profitability	-0.193* (0.017)	-0.220* (0.007)	-0.051 (0.566)
Size	-0.224* (0.003)	-0.126 (0.095)	0.613 (0.829)
NDTS	0.454* (0.000)	0.518* (0.000)	0.315* (0.000)
Growth	-0.114 (0.130)	-0.054 (0.481)	-0.118 (0.160)
Adjusted R^2	**R^2 = 0.265**	**R^2 = 0.245**	**R^2 = 0.086**

Source: Author's calculations based on the data from financial statements of the firms.

Profitability and non-debt tax shield are relevant capital structure determinants if we take into consideration Models 1 and 2. Non-debt tax shield is the only factor that has shown statistical significance in all three models. In case when leverage is expressed as the ratio of total liabilities to total assets tangibility, profitability and size also show statistically significant influence. Looking at the signs of beta coefficients it can be concluded that firms with greater levels of tangible assets, more profitable firms and bigger firms will have lower leverage.

The results in this case are different from the results for the whole sample in the direction of influence of tangibility and relevance of profitability. Profitability shows significant negative influence in Models 1 and 2 (confirmed by all studies for Western Balkan countries) and it is not statistically significant for the firms listed in SASE or overall sample of the firms. It should also be noted here that on average firms listed in BLSE have had low profitability and most of the firms in this sample have experienced losses for some years during the observed period so relative importance of this determinant should be taken with precaution.

DISCUSSION AND CONCLUSIONS

The main goal of this paper was to explore relative importance of some firm-specific determinants of capital structure for firms in Bosnia and Herzegovina. The results of the regression models show statistically significant influence of tangibility of firm's assets, size of a firm and non-debt tax shield. Firms with more tangible assets, higher levels of non-debt tax shields and smaller firms are expected to have higher leverage. The results for tangibility are opposite to results of other studies for transition economies but in line of those for firms in developed economies. Negative influence of firms' size and positive of non-debt tax shield on firms' for each of these determinants is confirmed by one study in transition economies. Due to that

a conclusion on prevalence or applicability of prevailing capital structure theories can still not be made.

However if only firms listed in BLSE are observed the results are mostly in line with other transition economies in terms of statistically significant negative influence of tangibility of firm's assets, profitability and size. The reasons for somewhat different results may lie in the fact that the sample did not consist of equal number of firms from both stock exchanges. Also among firms in the total sample listed in SASE 50% of them belong to manufacturing industry while from firms listed in BLSE almost 70% of the sample is consisted of firms equally belonging to manufacturing and firms that offer utilities services such as electric energy production, gas, water utilities etc. Those are all firms with great amounts of tangible assets. Previous studies have shown significant influence of type of industry a firm belongs to on capital structure so that factor probably had the effect here.

For the purpose of this study data for period of five years on firms listed in stock exchanges were taken into consideration. For more conclusive results more firms, not just listed in stock exchange should be brought into the sample. Also this study included five determinants that were proven to be significant in studies for transition economies. More determinants should be included in the future, especially the effect of industry and some macroeconomic indicators. Future studies should also investigate the difference in results for firms in different stock exchanges in more details to reach conclusive results on the relevance and direction of influence of some firm-specific determinants on capital structure of firms in Bosnia and Herzegovina.

This study is a modest contribution to studying of capital structure determinants that can serve as a starting point for future research for firms in BiH. Its results could also serve for comparative analysis of determinants of capital structure of firms in transition economies. Some light has been shed on capital structure determination of firms in Bosnia and Herzegovina and future research that could include the points mentioned above could lead to more definite conclusion on relevance of capital structure theories and complement the existing research on capital structure in transition economies.

REFERENCES

Acharya, V. V., Sundaram, R. K., John, K. (2005). On the capital structure implications of bankruptcy codes. 2005 Annual Meeting, American Finance Association, (retrieved from www.afajof.org 27. 3. 2007)

Akhtar, S. (2005). The determinants of capital structure for Australian multinational and domestic corporations. Australian Journal of Management, 30(2), 321–341.

Arsov, S., Naumoski, A. (2016). Determinants of capital structure: An empirical study of companies from selected post-transition economies. Zbornik radova Ekonomskog fakulteta Rijeka, 34(1), 119–146.

Brailsford, T. J., Oliver, B. R., Pua, S. L. H. (2002). On the relation between ownership structure and capital structure. Accounting & Finance, 42(1), 1–26.

Cheng S., Shiu C. (2007). Investor protection and capital structure: International evidence. Journal of Multinational Financial Management, 17, 30–44.

Črnigoj, M., Mramor, D., (2009). Determinants of capital structure in emerging European economies: Evidence from Slovenian firms. Emerging Markets Finance & Trade, 45(1), 72–89.
DeHaas, R., Peeters, M. (2006). The dynamic adjustments towards target capital structures of firms in transition economies. Economics of Transition, 14(1), 133–169.
DeJong, A., Kabir, R., Nguyen, T. T. (2006). Capital structure around the world: The roles of firm and country specific determinants. 2006 Annual Meeting Financial Management Association, (retrieved from www.fma.org 02. 4. 2007.)
Delcoure, N. (2007). The determinants of capital structure in transitional economies. International Review of Economics and Finance, 16, 400–415
Frank, M. Z., Goyal V. K. (2009). Capital structure decisions: which factors are reliably important? Financial Management, 38, 1–37.
Gaud, P., Jani, E., Hoesli, M., Bender, A. (2005). The capital structure of Swiss companies: An empirical analysis using dynamic panel data. European Financial Management, 11(1), 51–69.
Ghosh, A., Cai, F., Li W. (2000). The determinants of capital structure. American Business Review, 18(2), 129–132.
Graham, J. R., Leary M. T., Roberts M. R. (2015). A century of capital structure: The leveraging of corporate America. Journal of Financial Economics, 118, 658–683.
Harrington, C. (2006). The effect of competitive structure on the relationship between leverage and profitability. 2006 Annual Meeting Financial Management Association, (retrieved from www.fma.org 03. 4. 2007.)
Harris, M., Raviv, A. (1991). The theory of capital structure. The Journal of Finance, 46(1), 297–355.
Joeveer, K., (2013). Firm, country and macroeconomic determinants of capital structure: Evidence from transition economies. Journal of Comparative Economics, 41, 294–308.
Malinić, D., Denčić-Mihajlov, K., Ljubenović, E. (2013). The determinants of capital structure in emerging capital markets: Evidence from Serbia. European Research Studies, 16(2), 98–119.
Mateus, C., Terra, P. R. S. (2006). Capital structure and debt maturity: evidence from emerging markets. 2006 Annual Meeting Financial Management Association, (retrieved from www.fma.org 02. 4. 2007.)
Modigliani, F., Miller M. H. (1958). The cost of capital, corporation finance and the theory of investment. The American Economic Review, 48(3), 261–297.
Myers, S. C., Majluf, N. S. (1984). Corporate Financing and Investment Decisions When Firms Have Information The Investors Do Not Have. National Bureau of Economic Research, Working paper No.1936, 1–57.
Nivorozhkin, E. (2005). Financing choices of firms in EU accession countries. Emerging Markets Review, 6, 138–169.
Öztekin, O. (2015). Capital structure decisions around the world: Which factors are reliably important? Journal of financial and quantitative analysis, 50(3), 301–323.
Pepur, S., Ćurak, M., Poposki, K. (2016). Corporate capital structure: the case of large Croatian companies. Economic Research-Ekonomska Istraživanja, 29(1), 498–514.
Stančić, P., Janković, M., Čupić, M. (2016). Testing the relevance of alternative capital structure theories in Serbian economy. Teme, 4, 1309–1325.
Šarlija, N., Harc, M. (2016). Capital structure determinants of small and medium enterprises in Croatia. Managing Global Transitions, 14(3), 251–266.
Titman S., Wessels, R. (1988). The determinants of capital structure choice. The Journal of Finance, 43(1), 1–19.
Wald, J. K. (1999). How firm characteristics affect capital structure: an international comparison. Journal of Financial Research, 22(2), 161–187.