

# IS THERE A RELATIONSHIP BETWEEN FINANCIAL LITERACY, CAPITAL STRUCTURE AND COMPETITIVENESS OF SMEs?

---

**Delić, Anamarija; Oberman Peterka, Sunčica; Kurtović, Ivan**

*Source / Izvornik:* **Ekonomski vjesnik : Review of Contemporary Entrepreneurship, Business, and Economic Issues, 2016, 29, 37 - 50**

**Journal article, Published version**

**Rad u časopisu, Objavljena verzija rada (izdavačev PDF)**

*Permanent link / Trajna poveznica:* <https://um.nsk.hr/um:nbn:hr:145:184489>

*Rights / Prava:* [Attribution-NonCommercial-NoDerivatives 4.0 International](#)/[Imenovanje-Nekomercijalno-Bez prerada 4.0 međunarodna](#)

*Download date / Datum preuzimanja:* **2024-04-24**



*Repository / Repozitorij:*

[EFOS REPOSITORY - Repository of the Faculty of Economics in Osijek](#)



**Anamarija Delić**  
Josip Juraj Strossmayer  
University of Osijek  
Faculty of Economics in Osijek  
Trg Ljudevita Gaja 7,  
31000 Osijek, Croatia  
adelic@efos.hr  
Phone: +38531224426

**Ivan Kurtović**  
Interkapital vrijednosni papiri d.o.o.  
Masarykova 1,  
10000 Zagreb, Croatia  
ivan.kurtovic@interkapital.hr  
Phone: +38514825890

**UDK: 336:658.15**  
**Original scientific article**

Received: March 29, 2016  
Accepted for publishing: May 2, 2016

**Sunčica Oberman Peterka**  
Josip Juraj Strossmayer  
University of Osijek  
Faculty of Economics in Osijek  
Trg Ljudevita Gaja 7,  
31000 Osijek, Croatia  
suncica@efos.hr  
Phone: +38531224462

# IS THERE A RELATIONSHIP BETWEEN FINANCIAL LITERACY, CAPITAL STRUCTURE AND COMPETITIVENESS OF SMEs?

## ABSTRACT

The importance of financial market development for the economic development and competitiveness of a country is reflected in channelling of capital towards those investments that have the highest returns, thus ensuring liquidity and efficient grouping of enterprises, that is, risk-taking. Efficient risk-taking is primarily reflected in the availability of a large number of sources of funding, which allow enterprises freedom when forming their capital structure. Enterprises that do not have a large number of sources of funding at their disposal have to resort to debt financing when forming their capital structure, which ultimately means excessive financial vulnerability. Financial vulnerability, especially in times of the financial crisis, when fluctuations in the cost of capital are very high, reduces investment, growth and employment in the long-term. Small and medium-sized enterprises in the Croatian underdeveloped financial market must resort to borrowing, as the most readily available source of funding. Analysing the process of decision-making about capital structure on a sample of 108 small and medium-sized enterprises, it was observed that enterprises whose capital structure is less dependent on debt achieve better financial results and growth. The process of making financial decisions in those companies is in the hands of owners and/or managers and consultants with knowledge about the advantages and disadvantages of individual sources of funding. Financial knowledge is one of the most important determinants of the capital structure that will enable the growth and development of the small and medium-sized enterprise sector, as well as greater competitiveness of enterprises, regardless of size, activity, industry and the form of ownership of these enterprises.

T-test and Levene's test of equality of variances were used to investigate the relationship between the profitability of enterprises and their financial literacy.

**Keywords:** Financial knowledge, capital structure, small and medium-sized enterprises, financial market, competitiveness

## 1. Introduction

Financial markets, i.e., the level of their development, significantly affect the economic development of a country, as well as its competitiveness. Financial markets are indispensable in channelling capital towards those investments or business ventures that have the highest returns, thus ensuring the necessary liquidity, as well as risk-taking. Only developed financial markets will enable the creation of a social class that can evaluate and assume calculated risk, which ultimately encourages savings, i.e., accumulation of capital. Enabling access to capital, i.e., sources of financing to those that need large initial investments, expands the role of the financial market to launching new entrepreneurial ventures. A developed financial market has a positive effect on economic growth and competitiveness (Šonje, 2005), while, on the other hand, underdeveloped markets limit company growth and development, stimulate excessive financial vulnerability of companies (due to excessive reliance on debt), and hinder the development of a wide range of investors (venture funds, business angels, factoring, etc.). Financing company growth through debt, with a large number of available external sources of financing allows risk diversification, as well as lower financial vulnerability of the company, and can be of crucial importance in times of financial crisis when fluctuations in the price of capital are very high.

The development of the financial market is associated with the development of institutional indicators, such as quality of protection of creditors and shareholders, the level of corruption, the quality and application of the legal system, which is particularly reflected in the rule of law and quality of administration. According to Demetriades and Law (2004), and Šonje (2005), quality institutions are conducive to economic growth, which is reflected, among other things, in the development of the small and medium-sized enterprise sector. Institutional and business environment (primarily property rights, contract rights, and the degree of complexity of entering and exiting the market) do not affect all businesses equally. Corruption, access to sources of financing and legal system will impact the development of the small and medium-sized enterprise sector twice as much.

The aforementioned factors also point to a high level of agency costs between the external investors and the owners/managers themselves, due to which, in countries with a weak legal and financial framework, small and medium-sized enterprises will remain small longer (Beck et al., 2007). Agency costs are particularly devastating for external financing of the small and medium-sized enterprise sector, primarily because of the quality of information that the owner, i.e., manager of a small or medium-sized enterprise provides to the financial institution. The loan disbursement process largely depends on the long-term relationship between the owner, i.e., manager, and the bank. The quality of information that small and medium-sized enterprises can offer to the bank does not allow quality assessment of risk of disbursement of loan funds. There are several factors that influenced the poor quality of information, but the primary reason is the accounting standards, which are still an unfinished process in the majority of countries with underdeveloped financial markets. In such circumstances, the only way to reduce agency costs, as well as to monitor costs, is a high level of collateral. High collaterals are one of the biggest obstacles to financing through debt for small and medium-sized enterprises, which, on the other hand, cannot be decreased without institutional development, as well as development of the financial market. In market-oriented systems, companies have more transparent information; loans are based on quality projects, on more competitive interest rates, with lower agency costs and lower levels of collateral. Therefore, companies in such systems will have less need for investment in long-term tangible assets.

In the conditions of a small number of available sources of financing, underdeveloped institutional and business environment, and the financial crisis that has additionally aggravated the access to external sources of financing, developing long-term relationships with banks, and good knowledge of the advantages and disadvantages of the available sources of financing, will allow for such a capital structure that leads to growth and development of the sector of small and medium-sized enterprises and their increased competitiveness.

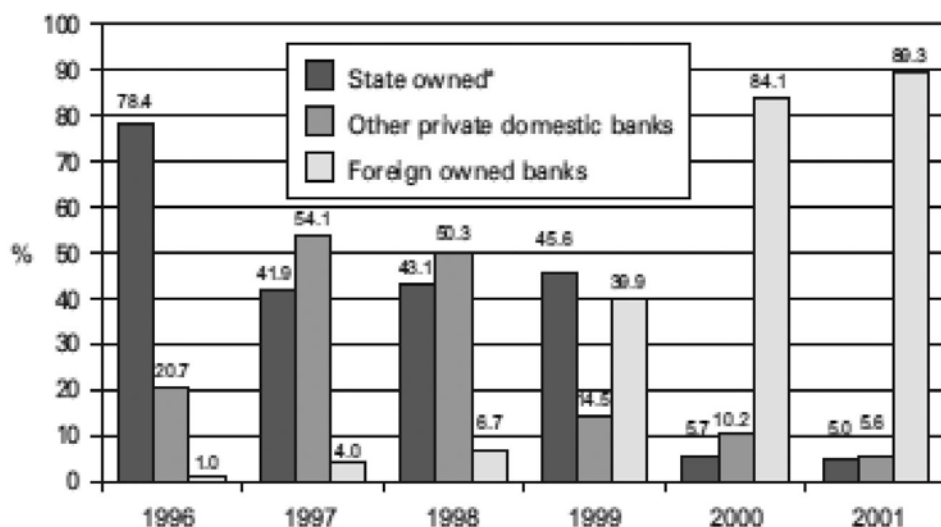
## 2. Underdeveloped financial market of the Republic of Croatia and competitiveness

The financial market of the Republic of Croatia has gone through the process of privatisation, as well as the war events (Homeland War 1991-1995), which have completely extinguished economic and investment activity in some parts of Croatia. The first wave of foreign investments has affected the financial sector the most, which has manifested primarily in the development of the banking sector. The banks have literally, according to Orsag (2006), monopolised the Croatian financial market.

The share of assets of foreign banks steadily grew in the period from 1996 to 2001. Strong growth of the banking sector, primarily of the foreign-owned banks, should have brought modern financial instruments to the financial market the Republic of Croatia and encourage, through new credit lines, stronger development of the small and medium-sized enterprise sector. But, according to the Croatian National Bank's data, in 2012, of all the disbursed loans, banks have disbursed 44.9% of loans to the population<sup>1</sup>, stating a high proportion of bad loans disbursed to the small and medium-sized enterprise sector as the reason.

At the same time, share transactions in relation to the GDP (a measure of the liquidity of the market) are considerably lagging behind. This situation, in which the banking system is quite developed, while other non-bank financial intermediaries are poorly developed, with a rather low level of development of the capital market, is characteristic for underdeveloped financial markets. A new market take-off, as Šonje (2005) claims, can only come from the private sector, which is unfortunately hampered by numerous obstacles: corruption, high taxes, unfinished reforms of the market infrastructure (registers, judiciary, excessive administration and corruption), a marked tendency to finance companies through debt and reluctance towards equity financing. Large banks are predominant in the banking market of the Republic of Croatia (82.1% of the market), whose influence is evident through the exploitation of economies of scale when it comes to processing of financial data (Chen et al., 2002). Large banks have organised channels of communication with clients, as well as data collection, which is particularly difficult for owners / managers of small and medium-sized enterprises to show, which further increases the impact of asymmetric information and increases the costs of monitoring of approved loan applications. On the other hand, in spite of new knowledge and technologies that foreign, large banks bring, they are still faced with the problem of processing and interpretation of the so-called "soft

Figure 1 Share of total assets of foreign banks in the Republic of Croatia



Source: Kraft, E. (2003), *Strane banke u Hrvatskoj: iz druge perspektive*, Croatian National Bank, Research Department, available at: <http://www.hnb.hr/publikac/istrazivanja/i-012.pdf> (Accessed on: June 16, 2015)

information” that comes from the owners/managers of small and medium-sized enterprises, which cannot be incorporated in statistical scoring models (Berger et al., 2003). Government policies aimed at allocating funds for co-financing of market interest rates have prompted small and medium-sized enterprises to use external borrowing, especially due to the fact that interest is a tax deductible expense. In addition to these co-financed loan offers, grants were also made available to Croatian companies, which allowed temporary fixing of financial situation of companies. The development of banks has stimulated the development of the financial market in the Republic of Croatia, but development of the capital market did not occur. The choice of external sources of financing for small and medium-sized enterprises has been reduced exclusively to banks and several savings and loan cooperatives, while other external investors (venture funds, business angels, etc.) are almost non-existent. The World Economic Forum’s Europe 2020 Competitiveness Report for 2014 ranks Croatia as 22<sup>nd</sup> according to availability of sources of financing, while the worst ranking is in the availability of venture capital (24/28).

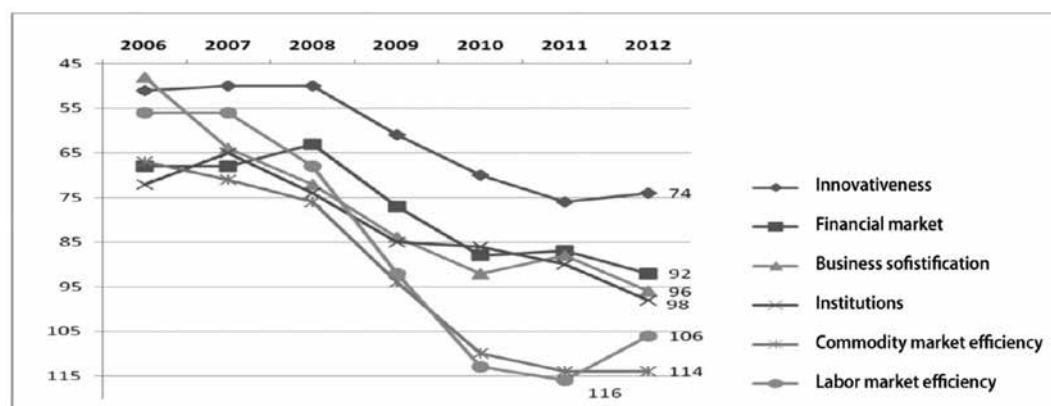
Croatian financial market, in addition to poor regulatory and judicial framework, is characterised by a high level of indebtedness, and insolvency has become an inevitable part of business operations of all Croatian companies.

Together with an inefficient legislative framework and judicial practice, insolvency has influenced an increase in agency costs, with which the influence of asymmetric information also grew stronger, because of the lateness in preparation and application of accounting standards. All these characteristics of the Croatian financial market have resulted in a lack of interest of external investors for investment in the Croatian economy.

The underdevelopment of the financial market is directly linked to the competitiveness of the Croatian economy. According to the Global Competitiveness Report 2012-2013, Croatia has entrenched key weaknesses in the system of efficient use of labour and capital, which is one of the main reasons of a downward trend of the Croatian economy in the ranking of the World Economic Forum from 2002 to 2012. Among the factors of competitiveness of the World Economic Forum, Croatia is ranked the worst in the areas of innovation and institutional efficiency, business sophistication and financial market.

In the conditions of an underdeveloped financial market, which is accompanied by high levels of unpaid, but overdue receivables, and underdeveloped business environment, knowledge of the advantages and disadvantages of individual, available sources of financing, the so-called financial literacy, can be crucial for creating a capital structure that will enable long-term growth and development of the company, and strengthen its competitiveness.

Figure 2 Factors responsible for Croatia's lagging behind in terms of competitiveness



Source: Lenardić, M. (2013), “Nacionalna i regionalna konkurentnost Hrvatske”, in Jurčić, Lj. (Ed.), *Zbornik radova 21. tradicionalnog savjetovanja Ekonomska politika Hrvatske u 2014. godini*, Croatian Economic Association, Opatija, pp. 246-275

Financial literacy of the owner or manager of the company is of the utmost importance for decisions on the structure of capital. Its importance is reflected in lower agency costs towards credit institutions, as well as in diversification of used sources of financing. In this way, financial leverage is used more effectively and the value of company's assets is increased, and companies whose owners have more financial knowledge also have better indicators of activity and profitability of the business (Delić, 2012).

### **3. Financial literacy and competitiveness of enterprises**

Capital structure, particularly one that is optimal, which means long-term survival but also competitiveness of an individual company, has been the subject of discussion and research of many scientists for a long time. Analysing the determinants of capital structure, researchers have, starting with Modigliani and Miller (1958), defined the four most common strategies of forming capital structure: agency costs theory (Jensen and Meckling, 1976; Fama and Miller, 1972), theory of asymmetric information (Ross, 1977; Leland and Payle, 1977), corporate control theory (Harris and Raviv, 1991; Stulz, 1988 and Israel, 1991) and theories based on market interactions of products and inputs (Brander and Lewis, 1986; Maksimovic, 1988; Glazer, 1989). Although they start from different determinants with which they attempt to explain making the decision on capital structure, all the theories nevertheless agree about the benefits of borrowing, which include tax shelter, reduction of transaction costs and impact on investment policy. Company borrowing, or manner of the use of financial leverage will greatly affect the value of the company, and thus also its growth and development.

However, the above theories have their limitations (Myers, 1984). All these theories are analysing financial and accounting information, but when making decisions, the impact of financial behaviour as an essential factor must also be considered. On the other hand, all research on the topic of optimal capital structure has been conducted on large companies in the United States, and it was not possible to talk with certainty about the applicability of these theories to companies operating in different legisla-

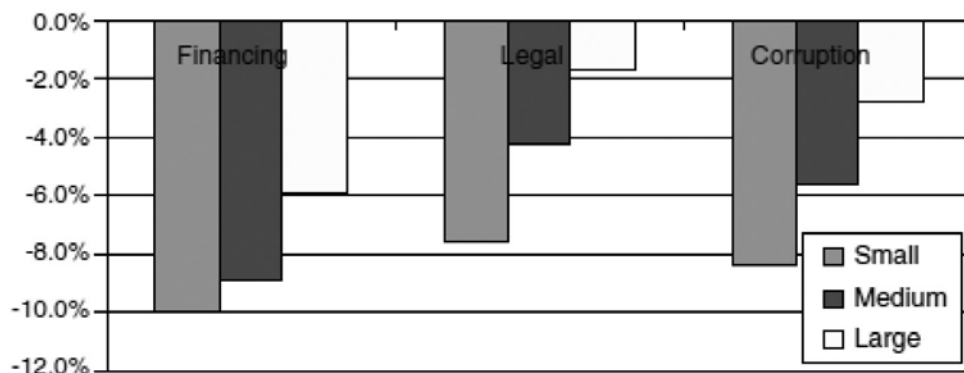
tive frameworks, financial markets and institutions (Rajan and Zingales, 1995). These open issues have launched a new wave of research related to the issue of optimal capital structure.

Capital structure theories were created at the time of domination of large companies, but in the period from 1972 to 1988, the number of small and medium-sized enterprises has increased from 29 million to 45 million.<sup>2</sup> More recent research, led by Walker and Petty (1978) focuses on the capital structure of small and medium-sized enterprises, whose financial management differs significantly from that of large enterprises. In small and medium-sized enterprises, agency costs will not be crucial for making the decision on the structure of capital (Hamilton and Fox, 1998), but neither will asymmetric information (Norton, 1991). Whenever they are able to, small and medium-sized enterprises primarily finance their operations with internal sources of financing, and the influence of preferences of owners/managers has a much greater importance than is anticipated by capital structure theories. Encouraged by the results of the research of capital structure in small and medium-sized enterprises, researchers began to introduce the characteristics of owners/managers to the capital structure puzzle: need for control, experience, goals and attitude towards risk, widely using the results of research from other sciences, especially psychology and sociology. More recent research, led by researchers who are extensively using their banking experience, includes studies by Uzzi (1999), Baker (1990), Mizruchi and Stearns (2001) and Day et al. (2006). These studies combine the results of all previous research primarily because they connect the importance of capital structure for further growth, development and competitiveness of companies, both in the domestic and foreign markets, with the characteristics of entrepreneurs (owners and/or managers), as well as with the environment in which companies operate.

Investigating the impact of sources of financing on the growth and development of enterprises, Carpenter and Petersen (2002) concluded that it is extremely difficult for small and medium-sized enterprises to obtain external sources of financing at acceptable terms, and are therefore forced to use mostly internal sources (loans from owners, retained earnings, long-term provisions). In the conditions of underdeveloped financial markets, which are characterised by an underdeveloped business environment, small and medium-sized



**Figure 3** Impact of obstacles from entrepreneurial environment on enterprises, according to size



Source: Beck, T., Demircug-Kunt, A. (2006), "Small and medium-sized enterprises: Access to finance as a growth constraint", *Journal of Banking and Finance*, Vol. 30, No. 11, p. 2937

enterprises are more affected by deficiencies than is the case with large enterprises. According to Beck and Demircug-Kunt (2006), small and medium-sized enterprises will be twice as much affected by the deficiencies and irregularities that characterise all the underdeveloped financial markets, primarily by access to sources of financing, legal protection and corruption.

As generators of new jobs and economic development, growing enterprises are of enormous importance in underdeveloped financial markets. The specificities of these enterprises, compared to other small and medium-sized enterprises operating under the same conditions, represent an extremely interesting research question. Capital structure is an important prerequisite for growth and development of each company, which is influenced by the characteristics of the owner, that is, the manager. In the conditions of difficult access to sources of financing, financial literacy, or knowledge of advantages and disadvantages of individual available sources of financing can be an important factor, on which not only the capital structure, but the company's growth and its competitiveness will depend.

Based on these results of previous research, the goal of this paper is to test the hypothesis on the importance of knowing the advantages and disadvantages of individual sources of financing for growth and development and competitiveness of companies.

Entrepreneurs (owners and/or managers) of small and medium-sized enterprises who are familiar with the advantages and disadvantages of individual sources of financing will diversify their financial resources and will have a better capital structure.

#### 4. Methodology

Financial literacy of company owners and/or managers is of the utmost importance for decisions on the capital structure. Its importance, in small and medium-sized enterprises, is reflected in lower agency costs towards credit institutions, as well as in diversification of used sources of financing, that is, increasing the value of company's assets. Companies whose owners have more financial knowledge also have better indicators of activity and profitability of the business. Financial literacy includes knowledge of the available sources of financing, as well as the knowledge and management of company's accounting information. Owners and/or managers of small and medium-sized enterprises who are using a large number of different financial or accounting information when making decisions on capital structure will have better business results.

Research on the importance of knowledge of advantages and disadvantages of individual sources of financing for the purpose of arranging optimal capital structure for each individual company was conducted on a sample of 108 small and medium-sized Croatian enterprises. In order to eliminate the influence of industry, enterprises in the sample came from all types of activities and had to be older than one year.

Only those companies that are subject to profit tax, and had the obligation to publish their final financial reports were selected from the database of all the registered small and medium-sized enterprises in the Republic of Croatia. The data on the financial results of companies in the sample were collected through the Register of Annual Financial Reports (RGFI), a publicly available database maintained by the Financial Agency of the Republic of Croatia (FINA).

To test the stated hypothesis, variables of the number of financial information, which owners/managers use when making decisions on capital structure, and types of information which owners/managers use when making decisions, were used.

Expectations of random variables between the two groups of data – average number of used information when making decisions on capital structure, were tested by t-test, while Levene's test was used to test variances.

## 5. Results

Among the respondents (owners and/or managers of small and medium-sized enterprises) as many as 95.4% highlighted the importance of knowing the strengths and weaknesses of individual sources of financing (financial literacy) as an important factor when making decisions about capital structure.

Information used when financing a business venture mainly includes sales data and data from annual financial statements (balance sheet and profit and loss statement). Entrepreneurs also state that they use personal data, that is, internally compiled data for the needs of the company and the owner. Use of this data may be indicative of the discrepancy of the information that the owner has in relation to the information that is prepared for the purpose of reporting on company's operations (theory of asymmetric information).

**Table 1** Group statistics for the number of financial information that is used when making decisions on the capital structure of SMEs

Number of used financial information		N	Arithmetic mean	Standard deviation	Standard error
Data on profits and sales					
	no	42	1.1190	0.39524	0.06099
	yes	62	2.3226	0.91927	0.11675
Balance sheet and profit and loss statement					
	no	31	1.1935	0.54279	0.09749
	yes	73	2.1096	0.96554	0.11301
Tax return					
	no	92	1.6739	0.72792	0.07589
	yes	12	3.0833	1.50504	0.43447
Personal data					
	no	63	1.5397	0.59094	0.07445
	yes	41	2.2927	1.20921	0.18885
Inventory status, payables and receivables					
	no	107	1.7570	0.99850	0.09653
	yes	1	3.0000	-	-
Something else – not specified in detail					
	no	101	1.7525	0.82953	0.08254
	yes	3	4.6667	0.57735	0.33333

Source: Authors



**Table 2 Independent test of the sample for the average number of used information when making decisions on the capital structure of SMEs**

Number of used financial information	Levene's test of equality of variances	t-test for equality of arithmetic means								
		F	Sign	t	df	Sign	Difference of arithmetic means	Standard error	95 % confidence interval	
									Lower	Upper
Data on sales	Equal variances assumed	21.528	0.000	-7.990	102	0.000	-1.20353	0.15064	-1.50232	-0.90474
	Equal variances not assumed			-9.137	88.9	0.000	-1.20353	0.13172	-1.46525	-0.94181
Balance sheet and profit and loss statement	Equal variances assumed	5.690	0.019	-4.952	102	0.000	-0.91604	0.1850	-1.28299	-0.54909
	Equal variances not assumed			-6.138	94	0.000	-0.91604	0.14925	-1.21237	0.61971
Tax return	Equal variances assumed	22.752	0.000	-5.423	102	0.000	-1.40942	0.25989	-1.92491	-0.89393
	Equal variances not assumed			-3.196	11.7	0.008	-1.40942	0.44105	-2.37330	-0.44554
Personal data	Equal variances assumed	31.960	0.000	-4.234	102	0.000	-0.75300	0.17786	-1.10578	-0.40022
	Equal variances not assumed			-3.709	52.6	0.001	-0.75300	0.20299	-1.16023	-0.34577
Inventory status, payables and receivables	Equal variances assumed	-	-	-1.239	106	0.218	-1.24299	1.00316	-3.23184	0.74586
	Equal variances not assumed			-	-	-	-1.24299	-	-	-
Something else	Equal variances assumed	0.695	0.406	-6.027	102	0.000	-2.91419	0.48353	-3.87326	-1.95512
	Equal variances not assumed	-	-	-8.486	2.3	0.009	-2.91419	0.34340	-4.24376	-1.58462

Source: Authors

**Table 3** Group statistic for the number of financial sources that are used when financing the growth of SMEs

Number of used sources of financing		N	Arithmetic mean	Standard deviation	Standard error
<b>Own funds</b>					
	no	24	1.9167	1.05981	0.21633
	yes	84	2.3333	1.13364	0.12369
<b>Family</b>					
	no	96	2.1667	1.11135	0.11343
	yes	12	2.8333	1.11464	0.32177
<b>Friends</b>					
	no	104	2.1923	1.10670	0.10852
	yes	4	3.5000	1.00000	0.50000
<b>Loans from suppliers</b>					
	no	81	1.8642	0.91860	0.10207
	yes	27	3.3704	0.92604	0.17822
<b>Loans from banks</b>					
	no	47	1.5745	0.87836	0.12812
	yes	61	2.7541	1.02723	0.13152
<b>Overdraft on personal accounts</b>					
	no	93	2.0753	1.01335	0.10508
	yes	15	3.2667	1.27988	0.33046
<b>Leasing</b>					
	no	75	1.8267	0.93539	0.10801
	yes	33	3.1818	0.95048	0.16546
<b>Factoring</b>					
	no	103	2.1553	1.07336	0.10576
	yes	5	4.0000	0.70711	0.31623

Source: Authors

Entrepreneurs have used their own funds and bank loans the most. These sources of financing are also the dominant form both when starting business ventures and when financing company growth and development. Funds from family and friends (FFF), as well as factoring, are among the rarest and least used sources of financing. In developed financial markets, FFF funds are among the most accessible and used sources of financing of start-up companies, while bank loans are inaccessible to companies

at this stage of their life cycle. Loans from suppliers also represent an important source of financing of growth and development of companies, but this source of financing, with insufficient legal protection of investors, which is considered one of the biggest obstacles to further development of the financial market, represents the riskiest form for the investor (supplier) and most often leads to insolvency.

**Table 4 Independent test of the sample for the average number of used sources when making decisions on the capital structure of SMEs**

Number of used sources		Levene's test of equality of variances		t-test for equality of arithmetic means						95 % confidence interval	
		F	Sign	t	df	Sign	Difference of arithmetic means	Standard error		Lower	Upper
Own funds	Equal variances assumed	0,881	0,350	-1,610	106	0,110	-0,41667	0,25877		-0,92971	0,09638
	Equal variances not assumed			-1,672	39,3	0,102	-0,41667	0,24920		-0,92058	0,08724
Family	Equal variances assumed	0,441	0,508	-1,959	106	0,053	-0,66667	0,34038		-1,34151	0,00818
	Equal variances not assumed			-1,954	13,9	0,071	-0,66667	0,34118		-1,39902	0,06568
Friends	Equal variances assumed	0,352	0,554	-2,325	106	0,022	-1,30769	0,56243		-2,42276	-0,19263
	Equal variances not assumed			-2,556	3,3	0,076	-1,30769	0,51164		-2,85792	0,24254
Loans from suppliers	Equal variances assumed	0,002	0,961	-7,364	106	0,000	-1,50617	0,20454		-1,91169	-1,10065
	Equal variances not assumed			-7,334	44,3	0,000	-1,50617	0,20537		-1,92000	-1,09235
Loans from banks	Equal variances assumed	1,079	0,301	-6,295	106	0,000	-1,17963	0,18738		-1,55113	-0,80813
	Equal variances not assumed			-6,425	105	0,000	-1,17963	0,18361		-1,54371	-0,81555
Overdraft on personal accounts	Equal variances assumed	0,868	0,354	-4,069	106	0,000	-1,19140	0,29283		-1,77196	-0,61083
	Equal variances not assumed			-3,436	16,9	0,003	-1,19140	0,34677		-1,92319	-0,45961
Leasing	Equal variances assumed	0,151	0,698	-6,902	106	0,000	-1,35515	0,19635		-1,74444	-0,96586
	Equal variances not assumed			-6,858	60,3	0,000	-1,35517	0,19759		-1,75035	-0,95996
Factoring	Equal variances assumed	3,331	0,071	-3,794	106	0,000	-1,84466	0,48626		-2,80871	-0,88061
	Equal variances not assumed			-5,532	4,9	0,003	-1,84466	0,33344		-2,70482	-0,98450

Source: Authors

Based on the t-test for equality of arithmetic means and the Levene's test of equality of variances, with significance of less than 0.005, it can be concluded that owners and/or managers of small and medium-sized enterprises who, when making decisions on the structure of capital, use a larger number of financial information, including sales data, balance sheet and profit and loss statement, tax return and personal data, diversify the sources of funding used. Diversification relates to loans from suppliers, loans from banks, overdrafts on personal accounts, leasing and factoring, while the number of used information is not related to the use of own funds, and funds from family and friends. When using internally generated funds, owners/managers of small and medium-sized enterprises do not perform an in-depth analysis of their financial operations because they know at all times how much funds they have available to finance the growth and development of their companies. Financial literacy reduces the impact of asymmetric information, helps owners/managers make better decisions on the sources of financing, and ultimately contributes to better business results and competitiveness of the company.

## 6. Implications and further research

Over the past 70-odd years, the question of optimal capital structure has been the subject of numerous studies, but it seems there is no universal formula that is applicable to all companies in all legal and business environments. Capital structure is dependent on a number of determinants, and it is shaped, among other things, by the business environment, as well as the characteristics of the company's owner/manager. Financial literacy, which represents the knowledge of advantages and disadvantages of individual sources of financing as well as knowledge of

own company's accounting and financial information, significantly influences the shaping of capital structure. Capital structure that enables companies to grow and develop certainly affects the competitive position of each individual company. Excessive financial strain, i.e. lack of funds for starting new projects represents an opportunity cost of missed future earnings, i.e. profits. Financial slack, on the other hand, indicates a company without ideas and new projects. Such a situation is not sustainable in the long run and represents competitive lagging behind of a company, and ultimately its downfall. The optimal capital structure of each individual company therefore represents the situation in which the company is capable of financing good projects, whether by internal resources or by obtaining external sources of financing. In the conditions of underdeveloped financial markets, which are characterised by difficult access to sources of financing, and a business environment that does not support company growth and development, financial literacy can be a crucial factor in the capital structure decision-making processes, as well as for the competitive position of small and medium-sized enterprises.

Decision-making processes on capital structure are extremely complex and dependent on a large number of determinants. Although numerous studies have demonstrated the importance of a large number of factors, notably financial ones, the characteristics of company owners and/or managers are still an insufficiently explored area, which can provide an answer to the asked question about the key determinants in the decision-making processes on capital structure. The complexity of this problem requires a multidimensional or multidisciplinary approach, which can help in understanding the processes through which decisions on capital structure are made, and, consequently, on the future competitive position of the company.

## REFERENCES

1. Beck, T., Demircug-Kunt, A. (2006), "Small and medium-sized enterprises: Access to finance as a growth constraint", *Journal of Banking & Finance*, Vol. 30, No. 11, pp. 2391-2943.
2. Beck, T., Demircug-Kunt, A., Levine, R. (2007), "Bank Concentration and Fragility: Impact and Mechanics, The Risks of Financial Institutions", Available at: <http://papers.nber.org/books/care06-1> (Accessed on: October 15, 2015)
3. Berger, A. N., Udell, G. F. (2004), "A More Complete Conceptual Framework for SME Finance", *Proceedings of the World Bank Conference on Small and Medium Enterprises: Overcoming growth Constraints*, October 14-15, 2004, World Bank, Washington DC.
4. Brander, J. A., Lewis, T. R. (1986), "Oligopoly and financial structure: The limited liability effect", *American Economic Review*, Vol. 76, No. 5, pp. 956-970.
5. Carpenter, R. E., Petersen, B. C. (2002), "Capital Market Imperfections, High-Tech Investment and New Equity Financing", *The Economic Journal*, Vol. 112, No. 477, pp. F54-F72.
6. Chen, J., Hong, H., Stein, J. C. (2002), "Breadth of ownership and stock returns", *Journal of Financial Economics*, Vol. 66, No. 2-3, pp. 171-205.
7. Commission of the European Communities (2013), "Green Paper: Entrepreneurship in Europe", Available at: [http://ec.europa.eu/invest-in-research/pdf/download\\_en/entrepreneurship\\_europe.pdf](http://ec.europa.eu/invest-in-research/pdf/download_en/entrepreneurship_europe.pdf) (Accessed on: October 22, 2015)
8. Day, J., Reynolds, P., Lancaster, G. (2006), "Entrepreneurship and the small to medium-sized enterprise: A divergent/convergent paradox in thinking patterns between advisers and SME owner-managers", *Management Decision*, Vol. 44, No. 5, pp. 581-597.
9. Delić, A. (2012), *Čimbenici donošenja odluka o strukturi kapitala na nerazvijenom financijskom tržištu Republike Hrvatske*, Doctoral dissertation, Faculty of Economics in Osijek
10. Demetriades, P., Law, S. H. (2004), "Finance, Institutions and Economic Growth", Working paper No. 04/5, University of Leicester, Leicester, February 2004.
11. Fama, E. F., Miller, M. H. (1972). *The Theory of Finance*. New York: Holt, Rinehart and Winston.
12. Glazer, J. (1989), "Live and let live: Collusion among oligopolists with long-term debt", Working paper, Boston University, Boston MA.
13. Hamilton, R. T., Fox, M. A. (1998), "The financing preferences of small firm owners", *International Journal of Entrepreneurial Behavior & Research*, Vol. 4, No. 3, pp. 239-248.
14. Harris, M., Raviv, A. (1991), "The Theory of Capital Structure", *The Journal of Finance*, Vol. 46, No. 1, pp. 297-355.
15. Israel, R. (1991), "Capital structure and the market for corporate control: The defensive role of debt financing", *The Journal of Finance*, Vol. 46, No. 4, pp. 1391-1409.
16. Jensen, M. C., Meckling, M. (1976), "Theory of the Firm: Managerial behaviour, agency costs, and capital structure", *Journal of Financial Economics*, Vol. 3, No. 4, pp. 305-360.
17. Kraft, E. (2003), *Strane banke u Hrvatskoj: iz druge perspektive*, Croatian National Bank, Research Department, Available at: <http://www.hnb.hr/publikac/istrazivanja/i-012.pdf>, (Accessed on: June 16, 2015)
18. Leland, H., Pyle, D. (1977), "Information asymmetries, financial structure and financial intermedia-

- tion", *The Journal of Finance*, Vol. 32, No. 2, pp. 371-387.
19. Lenardić, M. (2013), "Nacionalna i regionalna konkurentnost Hrvatske", in Jurčić, Lj. (Ed.), *Zbornik radova 21. tradicionalnog savjetovanja Ekonomska politika Hrvatske u 2014. godini*, Croatian Economic Association, Opatija, pp. 246-275.
  20. Maksimovic, V. (1988), "Capital structure in repeated oligopolies", *Rand Journal of Economics*, Vol. 19, No. 3, pp. 389-407.
  21. Mizruchi, M. S., Stearns, L. B. (2001), "Getting Deals Done: The Use of Social Networks in Bank Decision-Making", *American Sociological Review*, Vol. 66, No. 5, pp. 647-671.
  22. Modigliani, F., Miller, M. H. (1958), "The costs of capital, corporation finance and the theory of investment", *American Economic Review*, Vol. 48, No. 3, pp. 261-297.
  23. Myers, S. C. (1984), "The Capital Structure Puzzle", *The Journal of Finance*, Vol. 39, No. 3, pp. 575-592.
  24. Norton, E. (1991), "Capital Structure and Small Growth Firms", *The Journal of Small Business Finance*, Vol. 1, No. 2, pp. 161-177.
  25. Orsag, S. (2006), *Banke u Hrvatskoj monopolizirale su financijsko tržište*, Available at: <http://limun.hr/main.aspx?id=12827&NadID=12739>, (Accessed on: October 17, 2015)
  26. Rajan, R. G., Zingales, L. (1995), "What do we know about Capital Structure? Some Evidence from International Data", *The Journal of Finance*, Vol. 50, No. 5, pp. 1421-1460.
  27. Ross, S. (1977), "The determination of financial structure: The incentive signalling approach", *Bell Journal of Economics*, Vol. 8, No. 1, pp. 23-40.
  28. Stulz, R. (1988), "Managerial control of voting rights: Financing policies and the market for corporate control", *Journal of Financial Economics*, Vol. 20, No. 1-2, pp. 25-54.
  29. Šonje, V. (2005). *Veza koja nedostaje: Kako povezati razvitak tržišta kapitala i gospodarski rast*. Zagreb: Arhivanalitika.
  30. Uzzi, B. (1999), "Embeddedness in the Making of Financial Capital: How Relations and Networks Benefit Firms Seeking Financing", *American Sociological Review*, Vol. 64, No. 4, pp. 481-505.
  31. Walker, E. W., Petty II, J. W. (1978), "Financial Differences Between Large and Small Firms", *Financial Management*, Vol. 7, No. 4, pp. 61-68.

## (ENDNOTES)

- 1 Croatian National Bank, available at: <http://www.hnb.hr/publikac.htm> (Accessed on: June 16, 2015)
- 2 OECD's data used in the preparation of Green Paper: Entrepreneurship in Europe, available at: [http://ec.europa.eu/invest-in-research/pdf/download\\_en/entrepreneurship\\_europe.pdf](http://ec.europa.eu/invest-in-research/pdf/download_en/entrepreneurship_europe.pdf) (Accessed on: October 22, 2015)



Anamarija Delić  
Sunčica Oberman Peterka  
Ivan Kurtović

## **POSTOJI LI VEZA IZMEĐU FINACIJSKE PISMENOSTI, STRUKTURE KAPITALA I KONKURENTNOSTI MALIH I SREDNJIH PODUZEĆA?**

### **SAŽETAK**

Značaj razvijenosti financijskoga tržišta za gospodarski razvoj i konkurentnost neke zemlje ogleda se u kanaliziranju kapitala prema onim investicijama u kojima su povrati najviši, čime se osigurava likvidnost i učinkovito grupiranje poduzeća, odnosno preuzimanje rizika. Učinkovito preuzimanje rizika ogleda se ponajprije u dostupnosti velikog broja izvora financiranja koji omogućavaju poduzećima slobodu prilikom oblikovanja strukture kapitala. Poduzeća koja nemaju na raspolaganju veliki broj financijskih izvora, nužno su, prilikom oblikovanja strukture kapitala, orijentirana na dug, a što u konačnici znači preveliku financijsku ranjivost. Financijska ranjivost, posebice u vrijeme financijske krize, kada su kolebanja u cijeni kapitala iznimno velika, dugoročno smanjuje investicije, rast i zaposlenost. Mala i srednja poduzeća na nerazvijenom financijskom tržištu Hrvatske, nužno su okrenuta zaduživanju, kao najdostupnijem izvoru financiranja. Analizirajući proces donošenja odluka o strukturi kapitala na uzorku od 108 malih i srednjih poduzeća, uočeno je kako ona poduzeća koja se u svojoj strukturi kapitala manje oslanjaju na dug, ostvaruju bolje financijske rezultate i rastu. Proces donošenja financijskih odluka u tim poduzećima je u rukama vlasnika i/ili menadžera i savjetnika koji posjeduju znanja o prednostima i nedostacima pojedinih izvora financiranja. Financijsko znanje je jedna od najvažnijih determinanti one strukture kapitala koja će omogućiti rast i razvoj sektora malih i srednjih, kao i veću konkurentnost poduzeća, bez obzira na veličinu, djelatnost, industriju kao i oblik vlasništva ovih poduzeća.

Za ispitivanje veze između profitabilnosti poduzeća i njihove financijske pismenosti korišten je Levinov test jednakosti varijanci.

**Ključne riječi:** financijsko znanje, struktura kapitala, mala i srednja poduzeća, financijsko tržište, konkurentnost