UČINAK PROFITABILNOSTI KROZ PRIZMU KAPITALNE STRUKTURE I OSTALIH ZNAČAJKI PODUZEĆA: EMPIRIJSKA STUDIJA HRVATSKE HOTELSKE INDUSTRIJE

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PROFITABILITY PERFORMANCE UNDER CAPITAL STRUCTURE AND OTHER COMPANY CHARACTERISTICS: AN EMPIRICAL STUDY OF CROATIAN HOTEL INDUSTRY

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ABSTRACT

The main objective of this paper is to explore how capital structure and other financial characteristics of companies influence Croatian hotel industry performance. This study's key goal is to analyze the debt-equity structure of hotel industry and to demonstrate its correlation with financial performance. The high significance and impact of hotel industry on the economy in Croatia was main reason why authors opted to investigate it. This study was carried out using panel data methodology on a sample of 19 Croatian hotel companies listed on the Zagreb Stock Exchange during the period of 2003-2017. Return on assets and return on equity were used as performance proxies and dependent variables. Twelve variables as capital structure measures and other company characteristics – cash ratio, current liquidity ratio, structure ratio, debt ratio, debt factor (in years), equity to non-current assets, total assets turnover, current assets turnover, accounts receivables, activity ratio, return on revenue and crises during the 2009-2015 period – were used as independent variables. The findings suggest that cash ratio, structure ratio, debt factor (in years), equity to non-current assets, total assets turnover, activity ratio, accounts receivables, return on revenue and crises in the 2009-2015 period are related to the financial performance of the Croatian hotel industry. Although profitability performance theory and influence of capital structure and other company characteristic on it is widely studied in financial literature, there are not many studies examining the hotel industry, especially in Croatia. Finally, this study should provide managers with additional insights in making optimal financial decisions.

Key words: *Capital structure, Company characteristics, Profitability, Croatia, Hotel Industry*

1. INTRODUCTION

Profitability performance indicators measure a company's effectiveness and successfulness. Typical indicators used as company profitability measures are return on equity (ROE) and return on assets (ROA); in addition, return on investment (ROI) can also be used. Capital structure, i.e. debt-equity mix is one of the most important financial choices that every management may take. It has significant impact on companies' financial performance and corporate value. Management should stream towards optimal capital structure that minimizes capital costs and maximizes company value. By optimizing the financial and capital leverage management may achieve optimal capital structure. Recent research on capital structure has focused on trade-off and pecking order theory. The trade-off theory encompasses optimal capital structure by trading off the tax benefits and costs of agency problems, while pecking order theory proposes that capital structure choice is guided by asymmetric information. The basis for trade-off theory and capital structure associated with the value of the company was defined by Modigliani and Miller (1958). In their work they demonstrated the irrelevance of capital structure on the company value. Assumptions of irrelevance were eligible only in perfect market conditions (free access to the market by all investors, zero transactions cost and no tax difference between dividends and capital gains, and rationality of all players present in the market). In their later communication, Miller and Modigliani (1963) corrected an error from the previous model by considering the effect of taxes and the risk of debt on capital structure. Although they upgraded the first model with this communication and brought theory closer to the real financial environment problems regarding capital structure and corporate value, the model was nevertheless far away from the praxis in the real world. Further research on corporate value and capital structure introduced the agency problem and related agency costs (Jensen and Meckling, 1976) as well as free cash flows problem and its control by debt financing (Jensen, 1986; Stulz, 1990). By encompassing all stated effect and concepts, trade-off theory was developed.

Pecking order theory was developed by Myers and Majluf (1984) by explaining financial behavior of corporation and hierarchy in choosing sources of finance. Myers (1984) upgraded the pecking order by recognizing the cost of financial distress besides asymmetric information. The pecking theory assumes that cost of financing increases with asymmetric information. Usually, corporate managers possess more information than outside creditors and even shareholders, which leads to the tendency of choosing internal sources over external sources. Additionally, when choosing external sources managers prefer debt over equity since they are less expensive.

In addition to these central theories of capital structure, there are authors and studies that have analyzed strategy of competing in the product market and product characteristics and its influence to the capital structure (Titman, 1984; Maksimovic, 1988, 1995; Stulz, 1988; Rotemberg and Scharfstein, 1990). Beside the industrial-organization-based approach, the influence of corporate control on the capital structure was investigated as well (Stulz, 1988; Harris and Raviv, 1991; Mehran, 1992; Zwiebel, 1996; Garvey and Hanka, 1999; Mishra and Mcconaughy, 1999; Novaes, 2003). Besides the core theories that have recognized fundamental factors that influence capital structure, there are wide-ranging theories identifying numerous internal factors and corporate characteristic that are influencing capital structure. Harris and Raviv (1991, p. 336) reviewed the surveyed literature and identified the following internal factors that shape corporate leverage,

namely volatility, bankruptcy, profitability, fixed assets, tax shields, R&D, growth opportunities, size, free cash flow, ownership structure.

Due to the importance of this topic, we have decided to investigate the Croatian hotel industry profitability performance under capital structure and other company characteristics. The question that may arise relates to the way of investigating the hotel industry. The main issue and main disadvantage of the Croatian economy and its GDP is that it is highly dependable on tourism since total impact and share of tourism in GDP is 19,7%. With respect to indicated the main purpose of this paper was to present a new insights on profitability performance of the hotel industry in Croatia under capital structure. Besides that, goal and aim of the paper is to bring closer topic on causal relation of financial performance and capital structure as well as other companies characteristics to the experts. Additionally, to raise awareness and to influence to the state of minds of financial manager and decision makers was one of goals. Additionally, in line with Črnigoj and Mramor (2009) who suggested that financial behavior and linked capital structure is somewhat different in Emerging European Countries from those in the developed market economies, we have chosen Croatian hotel industry. It should be highlighted that financial performance is not only dependable on the capital structure. Menicucci (2018) found out that hotel profitability is determined by financial crisis, business model and ownership structure, size, internationalization, location, accommodation. Other authors arrived at the same result associated to the financial crisis and profitability (Shahzad et al., 2015). Xu and Chi (2017) pin pointed operating efficiency U.S hotels to be linked with hotel size and service price. Ben Aissa and Goaied (2016) examined Tunisian hotel profitability and indicated that hotel size has negative impact but also brings to light managerial skills as important factor for hotel profitability. Similar research on leadership styles and human capital (Tran, 2017; Sardo, Serrasqueiro and Alves, 2018) highlighted the positive influence of both human capital and leadership styles on hotel companies' financial performance.

The paper is structured as follows: Section 1 provides the introduction. Section 2 presents an overview of existing literature on the topic of capital structure in the hotel industry sector and in the emerging markets. Data and methodology used for this analysis is elaborated in Section 3. In Section 4 the main empirical results are presented, while Section 5 provides an overall summary of final conclusions.

2. LITERATURE REVIEW

Frydenberg (2011) concludes that theories of capital structure are not "holy grail", i.e. they are not providing answer to the everlasting questions of how and what financing politics firms should use. He also states that a search for a model that can explain capital structure is still work-in-progress. Based on that, we point at the majority of studies on capital structure and the impact that they have on profitability which have been investigated in developed markets; however, in the last two decades, the number of studies that have researched this topic in emerging markets are on the rise. Contrary to the main theories developed on mature markets, results from emerging markets research brought new insights on capital structure theory and profitability. Study on capital structure of Hungarian companies carried out by Nivorozhkin (2002) revealed that less indebted companies are more profitable than more indebted ones, which goes against the fundamental

theories. Furthermore, they discovered negative relationship between leverage and proportion of tangible assets, caused by nonexistence of long-term debt on the market. In addition to the above, Baer and Gray (1995) have previously performed a similar regression analysis on the Polish market and firms, but found out positive yet primarily insignificant coefficients on the same variables. On the same track is a study carried out by Črnigoj and Mramor (2009) who investigated what influences the capital structure choice in Slovenian firms, arriving at the conclusion that financial behavior of emerging countries is somewhat different from those in developed markets. Lucey and Zhang (2011) have investigated the impact of country-level financial integration on corporate financing choices in 24 emerging counties, selected from MSCI Emerging Markets Indices 2007, with China omitted from the sample. Results from the study indicated that higher financial integration leads to significant use of debt and equity financing, which is more emphasized for high-growth firms than low-growth firms on credit use. Correspondingly, large firms in the process of integration tend to use more debt, especially long-term debt, and to issue more equity than small-firms. Booth, Aivazian, and Demirguc-Kunt (2001) analyzed capital structure of firms from ten developing countries and concluded that factors which influence capital structure choice are similar between developed and developing countries. In addition, they drew their attention on the fact that firms in developing countries have higher dependence on short- term debt and trade credit. These results could be explained by the fact of undeveloped financial markets. Limitations regarding outside financing were recognized in the study by Klapper, Sarria-Allende, and Sulla (2002) which investigated SME financing behavior in Eastern Europe. Nivorozhkin (2005) examined capital structure of five EU accession countries (Bulgaria, Czech Republic, Poland, Romania and Estonia). His results pointed out that the capital structures of firms of observed EU accession countries have a steady tendency towards leverage levels of the observed EU countries. Additionally, he found out that tangible assets are a poor source of collateral in five examined EU accessed countries. Abor (2005) brings insight for Ghanaian firms and identifies significant and positive relationship between short-term debt to return on equity and negative relationship of long-term debt.

Berk (2007) studied the role of the Slovenian capital market on determining corporate capital structure; results have indicated that private firms use significantly more debt financing than public ones. Similar results for companies from Serbia, Croatia, Montenegro and Macedonia were obtained by Arsov and Naumoski (2016) regarding firm size and leverage. In addition, in their study results indicated negative impact of profitability and tangible assets on leverage. Results of their study partly confirmed previous results of analysis for Serbian companies carried out by several authors (Malinić, Denčić-Mihajlov and Ljubenović, 2013). In their analysis, Malinić, Denčić-Mihajlov, and Ljubenović (2013) obtained results which indicated that leverage decreases with profitability, liquidity, tangibility and cash gap and increases with growth opportunities. To some degree, these results are in line with study of Ilyukhin (2017) in which he examines Russians non-financial traded firms. He found that most reliable variables that influence capital structure are firm size, growth opportunity and industry mean.

Croatia is not an island regarding results obtained in papers carried out on capital structure. Klapper and Tzioumis (2008) investigated influence of taxation on the capital structure in Croatia and

concluded that results reveal significant impact of corporate taxation on corporate structure. Delic (2016) investigated financing behavior of Croatian SME and confirmed that Myers pecking order was statistically insignificant. Reasons for that may be found in the facts that Croatian financial markets are undeveloped and shallow, bank loans are main source of long-term financing and high insolvency. Učkar (2007) have analyzed relationship of financial structure and stock market values of selected companies form Croatian financial market and got positive results for trade-off theory. In the same vein, the model proposed by Učkar (2007) was not significant for traditional approach, Modigliani-Miller theory and signal theory of financial structure management. Harc (2015) investigated the connection between size and capital structure of 500 Croatian SMEs. Results from the study pointed out that Croatian SMEs tend to use long-term debt. Similar results were obtained by Ježovita (2019). Results of the analysis of 111 large Croatian companies carried out by Pepur, Ćurak, and Poposki (2016) are in line with previous studies of undeveloped markets (Booth, Aivazian and Demirguc-Kunt, 2001; Klapper, Sarria-Allende and Sulla, 2002; Nivorozhkin, 2002; Črnigoj and Mramor, 2009; Malinić, Denčić-Mihajlov and Ljubenović, 2013). The main result differs from main capital structure theories.

In the past, various authors have examined capital structure of companies from tourism and hotel industry. In study of Shamaileh and Khanfar (2014) reveal positive and significant impact of leverage to ROI. Capital structure of Portuguese hotel firms were examined by Salsa, Matias, and Afonso (2018) and results confirmed that variables examined in modern basic theories are significant. Strongest variable was tangibility; likewise, profitability has negative relationship with indebtedness. Pecking-order theory as well as trade of theory are confirmed. Similar results for Portuguese SME hotel companies were obtained by Pacheco and Tavares (2017) but with the indication that examined companies are not homogeneous, and both theories are necessary to explaining their capital structure. Somewhat different results were obtained by Karadeniz et al. (2009) and neither the trade-off nor the pecking order theory exactly seem to explain the capital structure of Turkish hotel companies. Phillips and Sipahioglu (2004) investigated impact of capital structure of quoted organizations with interest in hotel industry on their profitability. Results implied that there is no significant evidence on the relationship between the level of debt and financial performance. Survey of capital structure and impact on the profitability of Indian hotel companies by Madan (2007) indicated that leverage has positive impact just on a few observed companies while others affected negatively.

This study is based on the previous reserch (Burja, 2011; Li, 2012; Berzkalne and Zelgalve, 2014; Shamaileh and Khanfar, 2014; Vătavu, 2015; Oberholzer, 2017; Herzog, 2018).

3. DATA AND METHODOLOGY

For the purpose of this research, secondary data from Financial Agency (FINA) were used for all Croatian hotel companies listed on the Zagreb stock exchange. The study is based on the 2002-2017 financial data from a final sample of 20 hotel industry companies. To satisfy the criteria of inclusion in analysis the observed FINA data set of hotel companies for all variables should be viable for the whole period 2002-2017. Although, the number of listed hotel industry companies is 27 in the observed period we have excluded seven companies due to a couple of reasons: lack

of data, mergers and acquisition by other company in the observed period, long-term insolvency and bankruptcy, or period of indexation shorter than observed 16 years. We tested various internal variables (Table 1) that influence financial performance of selected Croatian hotel industry companies expressed by proxies i.e. return on equity (ROE) and return on assets. Additionally, it should be highlighted that the spillover of the Global Financial crisis and its impact on the Croatian economy took place longer than in most other countries. The duration of the crisis extended over a six-year period, from 2009-2015.

Table 1. Internal tested variables

Variables	Period	Indicator	Measures
Cash ratio	2002-2017	V01	Cash over current liabilities
Current ratio	2002-2017	V03	Total current assets over total current liabilities
Financial stability coefficient	2002-2017	V04	Long-term assets over sum of shareholders' equity and long-term liabilities
Debt-to-assets ratio	2002-2017	V05	Total liabilities over total assets
Indebtedness factor	2002-2017	V08	Total liabilities over sum of retained earnings depreciation and amortization
Degree of Coverage I	2002-2017	V09	Shareholders' equity over fixed assets
Total assets turnover	2002-2017	V11	Total revenues over total assets
Current assets turnover	2002-2017	V12	Total revenues over total current assets
Accounts Receivable turnover	2002-2017	V13	Sales (revenue) over accounts receivable
Cost to income ratio	2002-2017	V15	Operating income over operating income
Gross Profit Margin	2002-2017	V17	Gross profit over revenue x 100
Crisis 2009-2015	2009-2015	KR0915	Crisis in Croatia 2009-2015
ROA	2002-2017	V20	
ROE	2002-2017	V21	

Source: Autors

All explanatory variables are approximated, measured and presented in Table 2. (see appendix)

Since data are indexed by both unit (hotel company) and time (year), a panel regression model was employed. Several models have been used to select appropriate models. First, an applied two-way fixed effects was used, while random effects panel model was employed afterwards.

In order to evaluate the models, we have tested for serial correlation, contemporaneous correlation, and heteroscedasticity. To address the presence of serial correlation several tests have been used. Woolridge test is not significant even at $\alpha = 0.10$ (F=0.564, p = 0.462), but Bias-corrected Born

and Breitung Q(p) test is significant for most variables (p is mostly less than 0.001). Inoue and Solo LM-test does not show significant correlation (all p > 0,10). Two out of three tests do not reject the null hypothesis of no serial correlation but due to the one significant test, the possibility of autocorrelation could not be ruled out.

For heteroscedasticity testing we have used Modified Wald test; with chi2 = 6213.22, p < 0.001 the null hypothesis of no heteroscedasticity was rejected.

Cross-sectional Independence/Contemporaneous Correlation was tested using several tests, all with the null hypothesis of cross-sectional independence: Pesaran's test (Pesaran = 0.444, p = 0.6569) is the only test that does not show cross-sectional dependency. Friedman's test (Friedman = 31.138, p = 0.0390) and Frees' test (Frees = 1.585) are indicating cross-sectional dependency as well as CD-test which for all except one variable has p < 0.001. Since three out of four tests are significant it is reasonable to reject the hypothesis of cross-sectional independence.

With the heteroscedasticity, contemporaneous correlation and possible serial correlation, it becomes evident that fixed and random models are not proper models to be employed in this case. Appropriate models are those with Panels Corrected Standard Errors (PCSEs) and Driscoll-Kraay standard errors fixed effect models (SCC). Feasible Generalized Least Squares (FGLS) model could not be used since T > N (Hoechle, 2007).

4. EMPIRICAL RESULTS REGARDING VARIABLES THAT HAVE INFLUENCE ON PROFITABILITY PERFORMANCE OF CROATIAN HOTEL INDUSTRY

Results for all models – fixed effects, random effects, PCSE and Driscoll-Kraay standard errors fixed effect models (SCC) – are presented in tables 3 and 4 (see app.). We have observed the influence of internal variables on two main financial performance indicators, ROA and ROE, of the Croatian hotel companies index on the Zagreb stock exchange. Due to the carried out we have excluded fixed effects model as well as random effects models. Appropriate models, such as Panels Corrected Standard Errors (PCSEs) and Driscoll-Kraay, were used. Results presented in table 3 (see app.) reveal that using Panels Corrected Standard Errors (PCSEs) following ratios as significant to ROA cash ratio, financial stability coefficient, indebtedness factor, degree of coverage I, total assets turnover, cost to income ratio and gross profit margin ratio. Driscoll-Kraay standard errors fixed effect suggest that indebtedness factor is not statistically significant but however implies crisis as significant factor. Basically, it may be concluded that there is a strong positive connection between financial stability, indebtedness factor, degree of coverage I, total assets turnover, cost to income ratio, gross profit margin to financial performance indicator - return on assets. Nevertheless, expected crisis had a negative influence on the ROA in the observed period. We have to draw the attention to the following issue, that capital structure observed through the share of shareholder's equity in fixed assets is significant in all models.

Also, for ROE as the financial performance measure the same test was carried out, thus ruling out fixed effects and random effects models, with results presented in table 4 (see app.). Panels corrected standard Errors (PCSEs) model indicated that indebtedness factor, total assets turnover,

accounts receivable turnover, cost to income ratio and gross profit margin have significant impact to return on assets. The highest significance of ROE have total assets turnover, cost to income ratio and gross profit margin, at the same time indebtedness factor and accounts receivables turnover have somewhat lover significance. Total assets turnover has the highest impact.

Unlike the previous model, PCSEs model Driscoll-Kraay revealed slightly different results for indebtedness factor and total assets turnover indicated it as insignificant while it pointed to crisis variable as very significant. Additionally, current ratio and financial stability in this model are significant also. Others analyzed variables were signaled as a very significant. Capital structure observed through share of shareholder's equity in fixed assets is revealed as insignificant and does not have influence on return on equity among Croatian hotel companies.

5. CONCLUSION

The purpose of this paper was to present new insights on profitability performance of the hotel industry in Croatia by taking into account specific environment and industry issues. The results were obtained by applying dynamic panel methodology and revealed results that run contrary to capital structure. In the PCSEs and Driscoll-Kraay model capital structure was indicated as significant to return on assets while insignificant to the return on equity. Besides capital structure for both financial performance measures ROA and ROE, statistically significant variables were expected cost of income ratio and gross profit margin. We have to highlight that the crisis was indicated by using Driscoll-Kraay model for both measures as significant with high negative impact.

Given the importance of tourism and hotel industry to the Croatian economy, and the results provided by this study, we recommend it to the hotel decision makers. In addition, result may be used by financial managers in the hotel industry companies. The findings bring insights on financial performance measures and significance of examined variable as well as their impact to return on assets and return on equity. In addition, the crisis variable indicate that financial decisions should take into consideration outside economic environment and their impact on the industry and company as well.

This study also contains limitations, which emerge mainly due to a lack of data on growth opportunities, total debts and long term debt variables and specific industry financial elements as occupancy rates and revenue per available room. Although result provided by this research indicate significant impact of some variables on financial performance there is open question of results if some other variables were taken in account like market capitalization and room occupancy and others.

Suggestion for future research would be to include other capital structure variables as growth opportunity size of company, macroeconomics variables, tax shield, legal characteristic, financial market development measures, managerial style etc. It would be interesting for future work to expend current study at the level of entire central and eastern European region and to compare result of different counties.

APPENDIX

Table 2. Descriptive statistics of tested variables mean and standard deviation*

Year / Variables	V21	V03	V04	V05	V08	V09	V11	V13	V15	V17
Overall	1.471	1.749	1.212	0.289	16.473	0.680	0.210	123.680	107.746	0.988
	(7.406)	(2.564)	(0.382)	(0.15)	(40.428)	(0.273)	(0.109)	(356.979)	(38.005)	(25.654)
2002	-0.306	2.253	1.461	0.216	43.154	0.537	0.171	141.101	102.136	-0.470
	(5.952)	(2.413)	(0.315)	(0.11)	(123.457)	(0.15)	(0.094)	(217.429)	(18.527)	(15.384)
2003	1.930	2.777	1.456	0.216	16.711	0.531	0.162	103.688	107.547	5.293
	(4.189)	(5.424)	(0.287)	(0.091)	(25.906)	(0.147)	(0.076)	(144.384)	(15.833)	(12.634)
2004	2.321	1.894	1.432	0.214	13.529	0.552	0.163	127.305	129.696	8.637
	(10.608)	(2.73)	(0.31)	(0.097)	(10.045)	(0.158)	(0.067)	(238.425)	(91.167)	(26.139)
2005	0.496	2.191	1.425	0.216	15.712	0.560	0.155	243.122	105.965	1.384
	(8.452)	(2.211)	(0.312)	(0.119)	(20.997)	(0.185)	(0.066)	(762.925)	(20.513)	(24.357)
2006	1.904	1.425	1.499	0.220	14.517	0.516	0.169	267.498	101.719	-0.628
	(7.468)	(1.787)	(0.206)	(0.115)	(23.805)	(0.101)	(0.123)	(899.392)	(14.902)	(16.906)
2007	-0.584	1.531	1.528	0.234	22.932	0.493	0.157	146.310	98.710	-4.173
	(5.883)	(1.58)	(0.246)	(0.132)	(58.37)	(0.098)	(0.063)	(333.875)	(15.707)	(19.461)
2008	-0.129	1.150	1.055	0.333	23.128	0.724	0.240	110.350	97.820	-6.803
	(6.858)	(1.53)	(0.143)	(0.146)	(57.232)	(0.232)	(0.118)	(266.464)	(19.506)	(25.388)
2009	-1.017	1.234	1.084	0.334	13.636	0.736	0.213	100.510	95.562	-11.360
	(7.164)	(1.839)	(0.186)	(0.153)	(15.902)	(0.295)	(0.119)	(162.413)	(20.82)	(35.742)
2010	-0.755	1.398	1.043	0.327	13.850	0.789	0.217	105.670	97.909	-6.044
	(6.771)	(2.201)	(0.193)	(0.159)	(16.766)	(0.382)	(0.115)	(200.426)	(19.109)	(21.754)
2011	-0.144	1.245	1.058	0.326	12.387	0.788	0.229	115.816	100.798	-5.347
	(7.78)	(2.143)	(0.212)	(0.171)	(15.276)	(0.385)	(0.122)	(229.638)	(23.032)	(30.095)
2012	0.292	1.009	1.071	0.342	13.034	0.757	0.244	99.393	100.317	-9.993
	(10.192)	(0.995)	(0.229)	(0.179)	(16.882)	(0.328)	(0.122)	(188.899)	(25.553)	(47.755)
2013	2.275	1.264	1.290	0.357	14.072	0.729	0.244	100.296	106.238	1.523
	(7.113)	(1.979)	(0.955)	(0.169)	(17.609)	(0.276)	(0.122)	(232.839)	(19.109)	(27.664)

Year / Variables	V21	V03	V04	V05	V08	V09	V11	V13	V15	V17
2014	2.924	2.196	1.035	0.349	14.099	0.757	0.232	63.762	108.340	4.523
	(6.613)	(3.376)	(0.22)	(0.158)	(18.346)	(0.277)	(0.116)	(84.949)	(18.868)	(19.982)
2015	5.062	1.879	1.004	0.332	12.479	0.793	0.249	60.885	134.229	13.535
	(7.372)	(2.618)	(0.191)	(0.162)	(19.708)	(0.309)	(0.108)	(106.677)	(90.034)	(21.807)
2016	4.232	2.035	0.991	0.318	11.695	0.788	0.249	104.249	115.192	11.229
	(6.027)	(2.483)	(0.161)	(0.157)	(20.844)	(0.236)	(0.105)	(280.412)	(17.029)	(14.418)
2017	5.033	2.497	0.966	0.288	8.626	0.836	0.261	88.924	121.752	14.502
	(5.78)	(2.832)	(0.164)	(0.123)	(14.103)	(0.205)	(0.109)	(291.031)	(28.83)	(15.519)

*Standard deviations are in parentheses

Table 3. Determinants of hotel companies ROA

	FE		RE		XTPCSE		XTSCC	
VARIABLES	V20	pval	V20	pval	V20	pval	V20	pval
V01	0.236	0.325	0.152	0.470	0.216*	0.0520	0.236***	0.00503
V03	0.00452	0.967	0.0280	0.701	−0.0185	0.734	0.00452	0.911
V04	2.005***	0.00246	2.009***	1.31e-05	1.313**	0.0230	2.005***	0.000344
V05	2.568	0.471	3.595	0.143	0.835	0.714	2.568	0.203
V08	0.00528	0.276	0.00618	0.267	0.00443**	0.0383	0.00528	0.229
V09	4.311*	0.0907	5.401***	0.00309	2.728**	0.0352	4.311***	0.00204
V11	11.45***	0.00250	11.41***	7.86e-08	13.30***	6.52e-08	11.45***	0.00469
V12	−0.00724	0.882	−0.0237	0.581	−0.0362	0.300	−0.00724	0.842
V13	0.000313	0.258	0.000270	0.292	0.000580	0.198	0.000313	0.219
V15	0.0295***	1.19e-06	0.0304***	2.11e-10	0.0294***	0	0.0295***	3.16e-07
V17	0.0682***	0.000106	0.0690***	4.22e-06	0.0669***	0	0.0682***	2.42e-06
	−							
KR0915	−0.000587	0.999	−0.339	0.661	0.175	0.755	−10.82***	9.77e-07
Constant	−10.82***	7.73e-05	−11.76***	0	−6.809***	3.46e-05	0	
Observations	320		320		320		320	
R-squared	0.779				0.859			
Number of Id_subj	20		20		20			
r2_w	0.779		0.777		.		0.779	
r2_o	0.807		0.817		.		.	
r2_b	0.847		0.871		.		.	
F	.		.		.		64.49	
chi2type	.		Wald		Wald		.	
chi2	.		.		1408		.	
p	.		.		0		0	
sigma_u	1.277		0.658		.		.	
sigma_e	1.584		1.584		.		.	
rho	0.394		0.147		0.375		.	
Number of groups							20	

Robust standard e rrors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 4. Determinants of hotel companies ROE

	FE		RE		XTPCSE		XTSCC	
VARIABLES	V21	pval	V21	pval	V21	pval	V21	pval
V03	0.129	0.309	0.118	0.163	0.100	0.252	0.129*	0.0850
V04	1.551*	0.0879	1.662**	0.0242	0.974	0.419	1.551**	0.0433
V05	-0.831	0.869	0.658	0.845	-2.682	0.492	-0.831	0.785
V08	0.00767	0.277	0.00988	0.235	0.00787**	0.0228	0.00767	0.221
V09	1.609	0.628	4.152*	0.0931	0.307	0.886	1.609	0.468
V11	15.41	0.171	14.56**	0.0450	21.89***	0.000178	15.41	0.132
V13	0.00129*	0.0973	0.00109	0.160	0.00168**	0.0225	0.00129**	0.0173
V15	0.0355***	5.32e-05	0.0366***	2.79e-07	0.0343***	4.33e-08	0.0355***	0.00149
V17	0.162***	2.41e-06	0.162***	1.15e-09	0.160***	0	0.162***	1.48e-05
KR0915	1.537	0.321	0.847	0.508	1.410	0.115	-8.817***	0.00355
Constant	-10.24***	0.00328	-12.11***	3.55e-08	-3.698	0.245	0	
Observations	320		320		320		320	
R-squared	0.707				0.794			
Number of Id_subj	20		20		20			
r2_w	0.707		0.704		.		0.707	
r2_o	0.753		0.764		.		.	
r2_b	0.822		0.852		.		.	
F	.		.		.		100.9	
chi2type	.		Wald		Wald		.	
chi2	.		.		743.9		.	
p	.		.		0		0	
sigma_u	2.126		1.126		.		.	
sigma_e	3.280		3.280		.		.	
rho	0.296		0.105		0.326		.	
Number of groups							20	

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

REFERENCES

Abor, J. (2005) 'The effect of capital structure on profitability: an empirical analysis of listed firms in Ghana', Journal of Risk Finance, 6(5), pp. 438–445. doi: 10.1108/15265940510633505.

Ben Aissa, S., Goaied, M. (2016) 'Determinants of Tunisian hotel profitability: The role of managerial efficiency', Tourism Management, 52, pp. 478–487. doi: 10.1016/j.tourman.2015.07.015.

Arsov, S., Naumoski, A. (2016) 'DETERMINANTS OF CAPITAL STRUCTURE: AN EMPIRICAL STUDY OF COMPANIES FROM SELECTED POST-TRANSITION ECONOMIES', Zbornik radova Ekonomskog fakulteta u Rijeci: časopis za ekonomsku teoriju i praksu / Proceedings of Rijeka Faculty of Economics: Journal of Economics and Business, 34(1), pp. 119–146. doi: 10.18045/zbefri.2016.1.119.

Baer, H. L., Gray, C. W. (1995) Debt as a Control Device Transitional Economies: The Experiences of Hungary and Poland, Policy Research Working Papers. 1480. Washington,.

Berk, A. (2007) 'The role of capital market in determining capital structure: Evidence from Slovenian public and private corporations', Acta Oeconomica, 57(2), pp. 123–155. doi: 10.1556/AOecon.57.2007.2.1.

Berzkalne, I., Zelgalve, E. (2014) 'Return On Equity And Company Characteristics : An Empirical Study Of Industries In Latvia', The 8th International Days of Statistics and Economics, pp. 94–103.

Booth, L., Aivazian, V., Demirguc-Kunt, A. (2001) 'Capital Structures in Developing Countries', The Journal of Finance, 56(1), pp. 87–130. doi: 10.1002/hup.1190.

Burja, C. (2011) 'Factors Influencing the Companies "Profitability Factors Influencing the Companies" Profitability', Annales Universitatis Apulensis Series Oeconomica, 13(215–224).

Črnigoj, M., Mramor, D. (2009) 'Determinants of Capital Structure in Emerging European Economies: Evidence from Slovenian Firms', Emerging Markets Finance and Trade, 45(1), pp. 72–89. doi: 10.2753/ree1540-496x450105.

Delic, A. (2016) 'Financing preferences of croatian small and medium-sized companies', in Cingula, M., Vlahov, R. D., and Dobrinic, D. (eds) Economic and Social Development. Varaždin: Varazdin Development and Entrepreneurship Agency and University N, pp. 456–463.

Frydenberg, S. (2011) 'Capital Structure Theories and Empirical Tests: An Overview', Capital Structure and Corporate Financing Decisions: Theory, Evidence, and Practice, pp. 127–149. doi: 10.1002/9781118266250.ch8.

Garvey, G. T., Hanka, G. (1999) 'Capital Structure and Corporate Control: The Effect of Antitakeover Statutes on Firm Leverage', The Journal of Finance, 54(2), pp. 519–546. doi: 10.1111/0022-1082.00116.

Harc, M. (2015) 'THE EFFECT OF FIRM SIZE ON SME's CAPITAL STRUCTURE', in Economy of eastern Croatia yesterday, today, tommorow,. Osijek, Croatia: Josip Juraj Strossmayer University, Faculty of Economics, pp. 315–324.

Harris, M., Raviv, A. (1991) 'The Theory of Capital Structure', The Journal of Finance, 46(1), pp. 297–355. doi: 10.1111/j.1540-6261.1991.tb03753.x.

Herzog, S. (2018) 'Financial Aid and College Persistence: Do Student Loans Help or Hurt?', Research in Higher Education. Springer Netherlands, 59(3), pp. 273–301. doi: 10.1007/s11162-017-9471-1.

Hoechle, D. (2007) 'Robust standard errors for panel regressions with cross-sectional dependence', Stata Journal, 7(3), pp. 281–312. doi: The Stata Journal.

Ilyukhin, E. (2017) 'The Determinants of Capital Structure: Evidence from Russia', Journal of Corporate Finance Research / Корпоративные Финансы | ISSN: 2073-0438, 11(4), pp. 54–69. doi: 10.17323/j.jcfr.2073-0438.11.4.2017.54-69.

Jensen, M. C. (1986) 'Agency Costs of Free Cash Flow, Corporate Finance, and Takeovers Agency Costs of Free Cash Flow, Corporate Finance, and Takeovers', American Economic Review, 76(2), pp. 323–329.

Jensen, M. C., Meckling, W. H. (1976) 'Theory of the firm: Managerial behavior, agency costs and ownership structure', Journal of Financial Economics, 3(4), pp. 305–360. doi: 10.1016/0304-405X(76)90026-X.

Ježovita, A. (2019) 'Variations Between Financial Ratios for Evaluating Inancial Position Related To the Size of a Company', Review of Innovation and Competitiveness, 1(1), pp. 115–136. doi: 10.32728/ric.2015.11/7.

Karadeniz, E. et al. (2009) 'Determinants of capital structure: evidence from Turkish lodging companies', International Journal of Contemporary Hospitality Management. Emerald, 21(5), pp. 594–609. doi: 10.1108/09596110910967827.

Klapper, L., Sarria-Allende, V., Sulla, V. (2002) Small- and Medium-Size Enterprise Financing in Eastern Europe, Policy Research Working Paper. 2933. Washington. Available at: https://openknowledge.worldbank.org/handle/10986/19200.

Klapper, L., Tzioumis, K. (2008) Taxation And Capital Structure: Evidence From A Transition Economy. Washington: The World Bank (Policy Research Working Papers). doi: 10.1596/1813-9450-4753.

Li, W. (2012) 'Research on the Factors of Return on Equity--Empirical Analysis in Chinese Port Industries from 2000-2008', in Fourth International Conference on Machine Vision (ICMV 2011): Machine Vision, Image Processing, and Pattern Analysis, pp. 1–6. doi: 10.1117/12.920576.

Lucey, B. M., Zhang, Q. (2011) 'Financial integration and emerging markets capital structure', Journal of Banking & Finance. Elsevier B.V., 35(5), pp. 1228–1238. doi: 10.1016/j.jbankfin.2010.10.017.

Madan, K. (2007) 'An analysis of the debt-equity structure of leading hotel chains in India', International Journal of Contemporary Hospitality Management, 19(5), pp. 397–414. doi: 10.1108/09596110710757561.

Maksimovic, V. (1988) 'Capital Structure in Repeated Oligopolies', The RAND Journal of Economics, 19(3), pp. 389–407.

Maksimovic, V. (1995) 'Chapter 27 Financial structure and product market competition', in Handbooks in Operations Research and Management Science, pp. 887–920. doi: 10.1016/S0927-0507(05)80071-4.

Malinić, D., Denčić-Mihajlov, K., Ljubenović, E. (2013) 'The determinants of capital structure in emerging capital markets: Evidence from Serbia', European Research Studies Journal, 16(2), pp. 98–119.

Mehran, H. (1992) 'Executive Incentive Plans, Corporate Control, and Capital Structure', The Journal of Financial and Quantitative Analysis, 27(4), p. 539. doi: 10.2307/2331139.

Menicucci, E. (2018) 'The influence of firm characteristics on profitability: Evidence from Italian hospitality industry', International Journal of Contemporary Hospitality Management, 30(8), pp. 2845–2868. doi: 10.1108/IJCHM-04-2017-0219.

Miller, M. H., Modigliani, F. (1963) 'Corporate Income Taxes and the Cost of Capital: A Correction', The American Economic Review, 53(3), pp. 433–443. doi: 10.2307/1809167.

Mishra, C. S., Mcconaughy, D. L. (1999) 'Founding Family Control and Capital Structure: The Risk of Loss of Control and the Aversion to Debt', Entrepreneurship Theory and Practice, 23(4), pp. 53–64. doi: 10.1177/104225879902300404.

Modigliani, F., Miller, M. H. (1958) 'The Cost of Capital, Corporation Finance and the Theory of Investment', American Economic Association, 48(3), pp. 261–297. Available at: http://www.jstor.org/stable/1809766.

Myers, S. C. (1984) 'The Capital Structure Puzzle', The Journal of Finance, 39(3), pp. 574–592. doi: 10.1111/j.1540-6261.1984.tb03646.x.

Myers, S. C., Majluf, N. S. (1984) 'Corporate financing and investment decisions when firms have information that investors do not have', Journal of Financial Economics, 13(2), pp. 187–221. doi: 10.1016/0304-405X(84)90023-0.

Nivorozhkin, E. (2002) 'Capital Structures in Emerging Stock Markets: The Case of Hungary', The Developing Economies, 40(2), pp. 166–187. doi: 10.1111/j.1746-1049.2002.tb01006.x.

Nivorozhkin, E. (2005) 'Financing choices of firms in EU accession countries', Emerging Markets Review, 6(2), pp. 138–169. doi: 10.1016/j.ememar.2004.10.002.

Novaes, W. (2003) 'Capital Structure Choice When Managers Are in Control: Entrenchment versus Efficiency', The Journal of Business, 76(1), pp. 49–82.

Oberholzer, M. (2017) 'The relative importance of financial ratios in creating shareholders' wealth', South African Journal of Economic and Management Sciences, 15(4), pp. 416–428. doi: 10.4102/sajems.v15i4.167.

Pacheco, L., Tavares, F. (2017) 'Capital structure determinants of hospitality sector SMEs', Tourism Economics, 23(1), pp. 113–132. doi: 10.5367/te.2015.0501.

Pepur, S., Ćurak, M., Poposki, K. (2016) 'Corporate capital structure: The case of large Croatian companies', Economic Research-Ekonomska Istraživanja . Routledge, 29(1), pp. 498–514. doi: 10.1080/1331677X.2016.1175726.

Phillips, P. A., Sipahioglu, M. A. (2004) 'Performance implications of capital structure: Evidence from quoted UK organisations with hotel interests', Service Industries Journal, 24(5), pp. 31–51. doi: 10.1080/0264206042000276829.

Rotemberg, J. J., Scharfstein, D. S. (1990) 'Shareholder-Value Maximization and Product-Market Competition', The Review of Financial Studies, 3(3), pp. 367–391.

Salsa, L., Matias, F., Afonso, C. M. (2018) 'Capital structure of Portuguese hotel firms: a structural equation modelling approach', Tourism & Management Studies, 14(SI1), pp. 73–82. doi: 10.18089/tms.2018.14si108.

Sardo, F., Serrasqueiro, Z., Alves, H. (2018) 'On the relationship between intellectual capital and financial performance: A panel data analysis on SME hotels', International Journal of Hospitality Management. Elsevier, 75(July 2017), pp. 67–74. doi: 10.1016/j.ijhm.2018.03.001.

Shahzad, S. J. H. et al. (2015) 'Financial leverage and corporate performance: Does financial crisis owe an explanation?', Pakistan Journal of Statistics and Operation Research, 11(1), pp. 67–90. doi: 10.18187/pjsor.v11i1.781.

Shamaileh, M. O., Khanfar, S. M. (2014) 'The Effect of the Financial Leverage on the Profitability in the Tourism Companies (Analytical Study- Tourism Sector- Jordan)', Business and Economic Research, 4(2), p. 251. doi: 10.5296/ber.v4i2.5546.

Stulz, R. (1988) 'Managerial control of voting rights', Journal of Financial Economics, 20, pp. 25–54. doi: 10.1016/0304-405X(88)90039-6.

Stulz, R. (1990) 'Managerial discretion and optimal financing policies', Journal of Financial Economics, 26(1), pp. 3–27. doi: 10.1016/0304-405X(90)90011-N.

Titman, S. (1984) 'The effect of capital structure on a firm's liquidation decision', Journal of Financial Economics, 13(1), pp. 137–151.

Tran, X. (2017) 'Effects of Leadership Styles on Hotel Financial Performance', Tourism and hospitality management, 23(2), pp. 163–183. doi: 10.20867/thm.23.2.7.

Učkar, D. (2007) 'Mogućnosti optimizacije financijske strukture poduzeća u Republici Hrvatskoj', Ekonomska istraživanja, 20(2), pp. 24–34.

Vătavu, S. (2015) 'The Impact of Capital Structure on Financial Performance in Romanian Listed Companies', Procedia Economics and Finance, 32(15), pp. 1314–1322. doi: 10.1016/s2212-5671(15)01508-7.

Xu, X., Chi, C. G. (2017) 'Examining Operating Efficiency of U.S. Hotels: A Window Data Envelopment Analysis Approach', Journal of Hospitality Marketing and Management. Routledge, 26(7), pp. 770–784. doi: 10.1080/19368623.2017.1314205.

Zwiebel, J. (1996) 'Dynamic Capital Structure under Managerial Entrenchment', The American Economic Review, 86(5), pp. 1197–1215.

UČINAK PROFITABILNOSTI KROZ PRIZMU KAPITALNE STRUKTURE I OSTALIH ZNAČAJKI PODUZEĆA: EMPIRIJSKA STUDIJA HRVATSKE HOTELSKE INDUSTRIJE

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SAŽETAK

Glavni je cilj ovog rada istražiti kako struktura kapitala i ostalih financijskih karakteristika poduzeća utječu na učinak profitabilnosti hrvatske hotelske industrije. Ključni cilj ove studije je analizirati strukturu duga i kapitala hotelske industrije i objasniti njezinu povezanost s financijskim rezultatima. Veliki značaj i utjecaj hotelijerstva na gospodarstvo je glavni razlog zašto su se autori odlučili istražiti ga. Ova je studija provedena korištenjem panel dana metodologije na uzorku od 19 hrvatskih hotelskih poduzeća koje kotiraju na Zagrebačkoj burzi u razdoblju od 2003. do 2017. godine. Povrat imovine i povrat na kapital korišteni su kao posrednici i ovisne varijable. Dvanaest varijabli kao mjere kapitalne strukture i ostale karakteristike poduzeća – koeficijent trenutne likvidnosti, koeficijent tekuće likvidnosti, koeficijent financijske stabilnosti, koeficijent zaduženosti, faktor zaduženosti (broj godina), stupanj pokrića dugotrajne imovine vlastitim izvorima, koeficijent obrtaja ukupne imovine, koeficijent obrtaja kratkotrajne imovine, vrijeme naplate kratkotrajnih potraživanja, ekonomičnost ukupnog poslovanja, rentabilnost prometa bruto i kriza u razdoblju 2009. - 2015. – korišteni su kao nezavisne varijable. Rezultati indiciraju da su koeficijent trenutne likvidnosti, koeficijent financijske stabilnosti, faktor zaduženosti (broj godina), stupanj pokrića dugotrajne imovine vlastitim izvorima, koeficijent obrtaja ukupne imovine, ekonomičnost ukupnog poslovanja, vrijeme naplate kratkotrajnih potraživanja, rentabilnost prometa bruto i kriza u razdoblju 2009. - 2015. povezani s financijskim učinkom hrvatske hotelske industrije. Iako teorija učinka profitabilnosti te utjecaj strukture kapitala i ostalih značajki poduzeća su široko proučavana u financijskoj literaturi, nema mnogo studija koje se bave hotelijerstvom, posebno u Hrvatskoj. Konačno, ova studija trebala bi menadžerima pružiti dodatni uvid u donošenje optimalnih financijskih odluka.

Ključne riječi: *struktura kapitala, karakteristike poduzeća, profitabilnost, Hrvatska, hotelska industrija*