Business Excellence and Management
Volume 5 Issue 3 / September 2015

THE IMPACT OF FINANCIAL LEVERAGE ON PERFORMANCE OF TRADE IN SERBIA

Radojko LUKIC
University of Belgrade, Belgrade, Serbia
rlukic@ekof.bg.ac.rs

Abstract
The capital structure, i.e. financial leverage is one of the significant factors of (trade) companies' performance. Financial leverage affects liquidity, profitability and other segments of performance of trading companies. Application of the correlation analysis in empirical research of trade sector in Serbia for the period 2008-2013 showed that financial leverage positively affects return of assets and return on equity while negatively affects current liquidity, quick liquidity and return on revenue. Concerning the statistical significance, the impact of financial leverage in trade of Serbia is significant in quick liquidity and return on equity (sig. < 0.05). Familiarity with these effects of financial leverage is significant for meeting future goal performances in trade in Serbia. Beside theoretical knowledge of capital structure, one of the prerequisites is also an adequate integral control of key determinants of financial leverage in trade of Serbia, which is very special compared to other countries, above all developed market economies (for example, UK).
Keywords: Capital structure, Financial leverage, Measures and determinants, Liquidity, Profitability.

1. INTRODUCTION

The great attention is lately dedicated to the issue of impact of the capital structure, i.e. financial leverage on performance of companies. In that context, there are a few papers published concerning trade companies. As far as we know, there are no papers in Serbia which are in their entirety devoted to the research of the impact of capital structure, financial leverage on the performance of trade chains. This gap is to some extent eliminated with this paper, in what it finds its scientific and professional contribution to the treated subject.

Concerning the given problem, this paper researches the impact of financial leverage on liquidity and profitability of trading companies in Serbia for the 2008-2013 period based on the financial reports of the Business registers agency, by the application of statistical analysis. The sample consists of large number of trade companies which have obligation to annually give revised financial reports to the Business registers agency (for example, in 2013 it was 33341).

In terms of concept, structure and the manner of research, this paper should provide adequate theoretical-methodological and empirical basis for appropriate, targeted control of impact of financial leverage on the performance of trade in Serbia in the future. The targeted performance (in the context of

the research problem) is achieved by adequate integrated control of financial leverage key determinants in trade in Serbia, which are certainly unique in comparison to other countries, primarily developed market economies.

The main contribution of this work is that it should provide historical, theoretical and methodological basis for further research of the specifics of financial leverage in trading companies in Serbia; comparable empirical data for analysis of the effects of financial leverage of retail chains globally; and identify the effects of financial leverage on liquidity and profitability of trade in Serbia. On this basis, it can (by efficient financial management, integrated analysis of the key determinants) optimize the capital structure, financial leverage as a function of achieving the targeted performance of trade in Serbia in the future.

In the context of performance analysis in Serbia special attention should be paid to sustainable growth models in the future, modeled on the countries with developed market economy (Phillips, 2010). Generally speaking, there is a considerable importance of modern technology for improving the performance of retail chains (Shin, 2014). Its use in retail chains in Serbia is still unsatisfactory. All this adequately influence the effects of financial leverage on the performance of retail chains in Serbia.

2. LITERATURE REVIEW

Extensive literature is devoted to the general theoretical and practical analysis of the impact of financial leverage on performance (liquidity and profitability) of companies. Special attention is lately devoted to the specifics of impact of financial leverage on performance of companies per sector, including trade. Nevertheless, a few paper concerning specifics of impact of financial leverage on performance of trade companies (wholesale and retail) are written globally (Anhin, 2014). This problem is partially analyzed in the context of general research of the specifics and importance of financial strategies in trade companies (Van der Wijst, 1993; Gleason, 2000; Gill et al., 2009; Evans, 2005; Little et al., 2011; Kamath, 2013; Kaya, 2014; Li et al. 2014; Lee, 2014; Moatti et al. 2014; Chevalier, 1995; McGloldrick, 2002; Levy, 2007; Berman, 2010; Yu, 2014). This is particularly the case with the literature in Serbia (Lovreta, 2011; Lukic, 2011, 2012, 2013 b, 2014 a b c d). To our knowledge, there is no paper dedicated to the research of specificity of impact of financial leverage, as a measure of financial risk on the performance of the trading companies in Serbia. This gap should partly be filled with this work, which content and methodology of the treated problems should provide an adequate basis for efficient management of financial leverage, in accordance with the theory of capital structure, and total finance in order to improve the performance of trading companies in Serbia in the future.

Business Excellence and Management
Volume 5 Issue 3 / September 2015

3. HYPOTHESES, RESEARCH METHODOLOGY AND EMPIRICAL DATA

In accordance with the goal and the subject of the research, by means of statistical analysis we tested the following hypotheses: H1 – there is a positive correlation between the financial leverage and current liquidity; H2 – there is a positive correlation between financial leverage and quick liquidity; H3 – there is a positive correlation between financial leverage and return on revenue; H4 - there is a positive correlation between financial leverage and return on assets; H5 - there is a positive correlation between financial leverage and return on equity; H6 – there is a significant impact of financial leverage on current liquidity; H7 - there is a significant impact of financial leverage on quick liquidity; H8 - there is a significant impact of financial leverage on return on revenue; H9 - there is a significant impact of financial leverage on return on assets; H10 - there is a significant impact of financial leverage on return on equity. Adequate integral control of key factors may substantially control the effects of financial leverage on overall performance of trade chain, to the effect of achieving target goals.

In testing the given hypotheses on the example of trade in Serbia we used the descriptive statistics, correlation analysis and regression model. As much as it was necessary we used a comparative analysis so as to thoroughly envisage the specifics of financial leverage impact on the performance on trade in Serbia, selected trade companies, compared to other countries, above all developed market economies and their trade chains. To a certain extent we also used other related methods of research, especially ratio analysis.

To conduct this paper research we used data collected from literature, rating agencies and web sites to analyse the foreign trade companies. In researching trade of Serbia we primarily used data from revised annual financial reports of the Business registers agency, Statistical yearbook of Serbia for selected years and the data from the Statistical Office of the Republic of Serbia.

4. THEORETICAL FRAMEWORK AND SPECIFIC DIMENSIONS OF FINANCIAL LEVERAGE IN TRADE

Generally speaking, the term capital structure, financial leverage defines the relation between alien and own sources of funding, i.e. share of debt financing (concrete types of assets) of company business. Debt financing of company's business has its own advantages and disadvantages. They are shown in the Table 1.

TABLE 1 THE OPTIMAL RATIO: DEBT FINANCING VERSUS ISSUE OF SHARES

Advantages of debt financing	Disadvantages of debt financing
1.Tax relief: higher tax rate leads to higher tax relief	1. The cost of bankruptcy: greater business risk leads to higher cost
2. enhanced discipline: greater division between managers and shareholders leads to greater benefits	2. agency costs: greater division between shareholders and the creditor gives higher cost
	3.The loss of future financial flexibility greater uncertainty regarding future financial needs gives higher cost

Source: Damodaran, 2007

The benefits of debt financing instead of raising funds by issuing shares are tax reliefs and stimulation of managers to involve discipline in making investment decisions. Weaknesses are: expectation of increased bankruptcy costs, conflicts between shareholders and creditors, and reduction of flexibility of gaining additional financing in the future. In principle, if the marginal utility is greater than marginal cost, the company should get into debt. In all other cases, the company should issue its own shares (Damodaran, 2007).

The analysis of the impact of financial leverage on the performance of trading companies in this paper is based on the theory of capital structure (Brealey, 2007; Van Horne, 2007; Abdou et al., 2012; Kühnhausen, 2014). Two major theories of capital structure are: trade-off theory and the theory of the hierarchy.

According to the trade-off theory, which main creators are Modigliani and Miller (1958, 1963) the formation of capital structure is influenced by: the tax shield, the market value of the company and the costs of capital.

According to Jensen and Meckling (1976) and Myers (1977), the creation of capital structure, beside these factors, is also affected by: costs of bankruptcy and financial troubles and agency costs, respectively.

According to the theory of hierarchy (pecking-order theory), which is advocated by Myers and Majluf (1984), the perception of the order of financing is as follows: internal financing, debt financing and issuing of shares. It is empirically proven that the theory of hierarchy is more applied in trading companies. It is in accordance with the character of their business, treated as a special important determinant of capital structure (Degryse, 2012).

The capital structure affects the financial performance of the company. The negative relationship between capital structure and financial performance indicates that agency problems lead to use debt more than it is needed in the capital structure, what produces poorer performance (Gleason, 2000). Each company, including trading, tends to the optimal capital structure in achieving profit and other

Business Excellence and Management
Volume 5 Issue 3 / September 2015

goals. In principle, the optimal capital structure is realized in maximizing the company's value by minimizing the costs of capital. This is in accordance with - the theory of static compromise - which is now the prevailing theory of capital structure. Table 2 presents the general diverse effects of internal determinants of leverage according to the trade-off theory and the theory of the hierarchy.

TABLE 2 THEORIES OF CAPITAL STRUCTURE AND THE RELATIONSHIP BETWEEN LEVERAGE AND INTERNAL DETERMINANTS

Determinants	Theories	
	The theory of hierarchy	Trade-off theory
Profitability	Negative	Positive
Growth opportunities	Positive	Negative
Tangibility	Negative	Positive
Size	Negative	Positive
Non-debt tax shield	Positive	Negative

Source: Mokhova, 2013

Methodologically observed, financial leverage can be expressed in different ways. Typical are: short-term leverage = short-term debt / total assets; long-term leverage = long-term debt / total assets; total leverage = total debt / total assets.

In the context of strategic profit model, based on DuPont analysis, financial leverage is displayed as: financial leverage = total assets / total shareholders' equity. This way of presenting financial leverage is widely used in trade companies, especially in the framework within the strategic profit model, which is widely used as an instrument of financial management. It is also used in this work, primarily for statistical analysis of the impact of financial leverage on the performance of trade chains in Serbia.

5. GLOBAL EMPIRICAL ANALYSIS OF FINANCIAL LEVERAGE IN TRADE

Observed in certain sectors of the economy, the capital structure, i. e. financial leverage is different. The capital structure is different not only in individual economic sectors, but within the same sector also - trade in our case the, i.e. in different countries, types of trade (wholesale and retail), retail chains, retail formats, their lines of business (for example, organic food sale). Among other things, these differences are caused by the specific characteristics of their business. It is unambiguously showed with the data presented in Tables 3, 4, 5 and 6. In this paper, they serve for considering the differences in terms of financial leverage in certain industrial sectors, types of stores, retail chains, lines of business, and "industry standards" when analyzing the financial leverage of trade in Serbia, in reasoning: is it above or below the average, and which measures should be taken to improve it, i. e. achieving optimal value, as significant determinant of its performance.

TABLE 3 LEVERAGE FOR SELECTED INDUSTRIAL SECTORS AND LINES OF BUSINESS

	Current Ratio	Quick Ratio	Debt to Equity	Sales to Inventory	DSO	Profit Margin %
Agriculture	1.31	0.39	1.33	2.52	19.00	2.58
Mining	1.19	0.77	0.48	0.00	52.00	0.00
Construction	1.44	0.98	1.31	4.74	43.00	1.74
Manufacturing						
Leather/Textile/App	1.50	0.62	1.48	6.05	34.00	1.64
Chem. Petrol. Metal	1.54	0.75	1.33	6.94	48.00	2.23
Wood Related Prod	1.43	0.62	1.41	6.46	33.00	2.16
Mach-trans equipment	1.54	0.74	1.34	5.89	51.00	2.38
Trans-Communic.	1.03	0.70	1.64	0.00	34.00	1.84
Wholesale						
Non-Durable	1.53	0.66	1.70	4.63	39.00	1.40
Durable	1.42	0.69	1.60	7.36	31.00	1.11
Retail						
Hardware	1.68	0.43	1.30	4.20	22.00	1.11
Gen. Merchandise	2.14	0.15	0.59	3.81	4.00	0.16
Automobiles	1.23	0.19	2.61	4.75	9.00	0.84
Apparel	1.90	0.14	0.91	2.96	2.00	1.35
Furniture	1.61	0.38	1.33	4.03	16.00	0.92
Restaurants	0.73	0.18	1.24	35.65	1.00	0.43
Financial Services	1.18	0.34	0.72	0.00	1.00	1.29
Business Services	1.36	0.84	1.11	0.00	42.00	1.75
Service Industry	1.29	0.68	0.75	3.04	15.00	0.77

Source: Industry Norms - Key Business Ratios - Benchmarking Ratios. Retrieved from: http://www.creditguru.com/ratios/inr.htm (accessed 14/11/2014 10:28 AM)

TABLE 4 LONG-TERM LEVERAGE FOR SELECTED INDUSTRIES

Long-Term Debt-to-Capital Ratios for Selected Industries as of December 31, 2013	
Advertising	47%
Food Retailing	45%
Homebuilding	50%
Hotel and Leisure	61%
Publishing	23%
Restaurants	58%
Home Furnishings	38%
Food Processing	37%
Trucking	23%
Health Care Services	30%
Retail Stores (Non-Food)	24%

Sources: Wealth Management Systems Inc., Standard & Poor's. Based on the companies within the S&P 1500 index; Small-Business Financing: Debt vs. equity. Retrieved from: http://fc.standardandpoors.com/sites/client/generic/fcon/adv009/Article.vm?topic=5337&siteContent=5919 (accessed 14/11/2014 10:28 AM)

Business Excellence and Management
Volume 5 Issue 3 / September 2015

TABLE 5 THE CAPITAL STRUCTURE FOR SELECTED RETAIL CHAINS, 2014

Capital structure	Wal-Mart Stores Inc.	Target Corp.	Costco Wholesale Corp.
Total debt/ Total shareholders' equity	74.28	89.93	41.40
The total debt / total capital	42.62	47.35	-
Total debt / Total Assets	27.66	32.76	15.42
Long-term debt / Equity	58.43	77.76	41.40
Long-term debt / total capital	33.53	40.94	29.28
Total assets / Total shareholders' equity *	2.68	2.74	2.68

Source: author's calculations, www.marketwatc.com (accessed 15/10/2014 10:34 AM)

TABLE 6 LEVERAGE RATIO OF ORGANIC FOODS RETAILERS, JUNE 6, 2014

Company	Leverage ratio	Interest coverage ratio
Whole Foods Market - WFM	0.00	0.00
The Fresh Market, Inc. - TFM	0.13	50.53
Sprouts Farmers Market, Inc. - SFM	1.30	7.16
The Kroger Co. - KR	2.30	11.09
Chipotle Mexican Grill, Inc. - CMG	0.00	0.00
Panera Bread Company - PNRA	0.00	0.00
Statistical average: Max Min Median Weight Avg.	 2.30 0.00 0.06 0.77	 50.53 0.00 3.58 23.86

Source: Whole Foods Market - University of Oregon Investment Group. Retrieved from: http://uoinvestmentgroup.org/wp-content/uploads/2014/06/WFM-Report-Updated.pdf (accessed 17/11/2014 11: 05 AM)

6. THE SPECIFICS OF FINANCIAL LEVERAGE OF TRADE IN SERBIA

As it is known, the macroeconomic business environment has a significant impact on the financial leverage as a determinant of the performance of each economic sector, including trade. Due to this, further in the treated issues we briefly consider the economic situation of trade in the economy of Serbia. The role of trade is very important, as it is in other countries, in creating the overall performance of the Serbian economy. The data presented in Table 7 clearly show this.

TABLE 7 THE PLACE AND IMPORTANCE OF TRADE IN CREATING SUSTAINABLE VALUE OF THE SERBIAN ECONOMY IN 2012 AND 2013

Variables	The share of trade in total observed variables of the Serbian economy, (%)
Gross domestic product (at current prices), 2012.	9.7
Added value at factor costs, 2012.	20.7
Number of companies, 2013.*	35.33
Number of employees, 2013.*	19.33
Operating income, 2013.*	34.78
Net profit, 2013.*	20.05

Source: Author's calculations, Statistical Yearbook of Serbia 2014, Statistical office of the Republic of Serbia; and Business registers agency

According to the data presented in the given table, trade participated in the creation of gross domestic product with 9.7% and the creation of added value at factor cost with 20.7% in the economy of Serbia in 2012. In the economy of Serbia in 2013 trade participated in the total number of companies with 35.33%, with 19.33% of employees, with operating income of 34.78% and 20.05% of net profit. Such an important role in creating sustainable trade value of the Serbian economy was considerably influenced by large (especially foreign) trade chains. Table 8 and Figure 1 show their market share (in 2013) in total operating revenues of Serbian trade, and total operating revenue of five largest retail chains, respectively.

TABLE 8 MARKET SHARE OF THE FIVE LARGEST RETAIL CHAINS IN SERBIA, 2013

	Market share of individual company in total operating revenues of trade in Serbia, (%)	Market share of individual companies in total operating revenue of the five largest retail chains, (%)
Delhaize Serbia	2.67	29.08
Mercator-S	2.20	23.99
IDEA	1.92	20.93
Knez Petrol	1.30	14.24
OMV Srbija	1.08	11.76
Five retail chains - total	9.18	100.00

Source: Author's calculations, Business Registers Agency

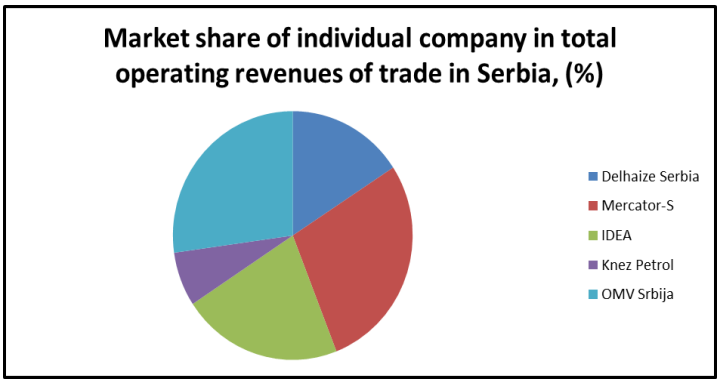

FIGURE 1 – MARKET SHARE OF THE FIVE LARGEST RETAIL CHAINS IN SERBIA
Source: Author's figure

In 2013, five largest retail chains in Serbia participated in total operating revenues of trade with 9.18%. That same year, three companies participated in total operating revenue of the five largest retail chains with 74%. Large retail chains "dictated" the business conditions in the trade Serbia as a whole, which appropriately reflected on their overall performance. They exerted influence not only on the economic position of trade in the economy of Serbia, but also on financial leverage and, through it, on financial performance of trade in Serbia. All in all, a contribution of trade in advancement (creating) of overall sustainable performance in Serbian economy is very significant. Therefore, special attention should be devoted to trade in the Development Strategy of Serbian economy.

Business Excellence and Management
Volume 5 Issue 3 / September 2015

According to the general definition, capital structure shows the relationship between the individual sources of financing (concrete types of assets) – alien and own. It is determined by numerous factors. Typical of the trade are: firm size, profitability, asset structure, business risk, non-debt tax shield, liquidity, technical equipment (modern technology), and others (Abdout et al., 2012). Each company, including trading, pursues an optimal capital structure, at which achieves maximum utility with minimal costs. Table 9 shows the structure of capital (expressed through various measures such as: assets / shareholders' equity, long-term liabilities / assets, current liabilities / assets, total liabilities / assets, total liabilities / shareholders' equity, long-term liabilities / shareholders' equity, long-term liabilities / total capital - total liabilities + shareholders' equity) trade in Serbia for the period 2008 - 2013.

TABLE 9 CAPITAL STRUCTURE OF TRADE IN SERBIA, 2008-2013

	Assets / Shareholders' equity	Long-term liabilities / assets %)	Short-term liabilities / assets, (%)	Total Liabilities / Assets, (%)	Total Liabilities / Shareholders' equity, (%)	Long-term liabilities / Shareholders' equity, (%)	Long-term liabilities / total capital, (%)
2008	2.637	13.88	48.27	61.65	162.59	35.29	13.44
2009	2.747	13.22	49.93	63.15	174.13	36.33	13.25
2010	3.490	13.30	57.55	70.86	247.33	46.43	13.36
2011	3.237	11.59	57.05	68.64	222.24	37.53	11.64
2012	3.333	13.48	55.81	62.29	230.97	44.96	13.58
2013	3.224	11.77	56.55	68.32	220.30	37.96	11.80

Source: Author's calculations, Business Registers Agency

In the observed period (2008 - 2013), the capital structure of trade in Serbia was more unfavourable, dynamically observed, after 2010 compared to earlier years. It is unsatisfactory in relation to "industry standards" and comparable countries, primarily developed market economies. The indebtedness is high. Particularly bank loans are high. All this reflected on the performance (profitability and liquidity) of trade in Serbia, which is deficient in relation to trade in countries with developed market economy.

In analyzing the liquidity of trade in Serbia in this paper, we used current liquidity (current assets / current liabilities) and quick liquidity (current assets - inventories / current liabilities). Table 10 shows the liquidity of trade in Serbia for the period 2008 - 2013.

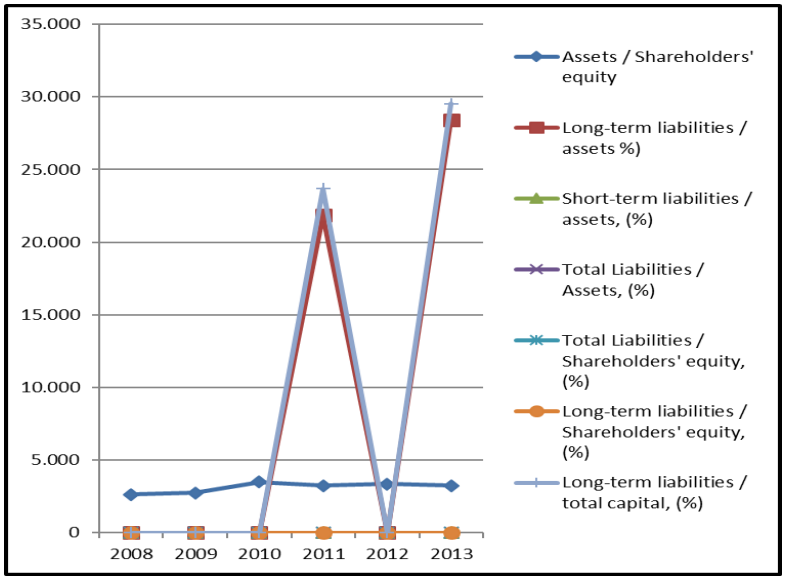

FIGURE 2 – THE CAPITAL STRUCTURE OF TRADE IN SERBIA

Source: Author's figure

TABLE 10 THE LIQUIDITY OF TRADE IN SERBIA, 2008-2013

	Current liquidity (current assets / current liabilities)	Quick liquidity (current assets - inventories / current liabilities)
2008	1.037	0.682
2009	1.004	0.677
2010	1.003	0.669
2011	1.006	0.662
2012	1.017	0.661
2013	0.995	0.661

Source: Author's calculations, Business Registers Agency

Therefore, as it can be seen from the given table, liquidity of trade in Serbia is not satisfactory in relation to "industry standards" and many other comparable countries, especially the developed market economies. Dynamically observed, it was lower in 2013 compared to other analyzed years. In the period 2008 – 2013 the current liquidity of trade in Serbia ranged from 1.00 to 1.04. On average it amounted to 1.01. In the same period, quick liquidity ranged from 0.66 - 0.68. On average it was 0.66 (Table 12). Among other things, financial leverage certainly affected the liquidity of trade in Serbia in such manner.

We will consider the profitability of trade in Serbia for the period 2008 - 2013 by analyzing the return on operating revenues (net profit / operating revenues), return of assets (net profit / assets) and return on shareholders' equity (net profit / shareholders' equity). Table 11 shows the profitability of trade in Serbia for the period 2008 – 2013.

Business Excellence and Management
Volume 5 Issue 3 / September 2015

TABLE 11 PROFITABILITY OF TRADE IN SERBIA, 2008-2013

	Return on revenue (net profit / operating income), (%)	Return on assets (net profit / assets), (%)	Return on equity (net profit / shareholders' equity), (%)
2008	3.59	4.04	10.66
2009	3.30	3.36	9.23
2010	3.23	3.87	13.53
2011	3.40	4.25	13.78
2012	3.09	3.94	13.15
2013	3.10	3.72	12.02

Source: Author's calculations, Business registers agency

According to the data in the table above, the profitability of trade in Serbia in 2013 is worse compared to other observed years. It is worse in comparison to other countries of the European Union, too (Eurostat, May 2013). In the period 2008 - 2013 the return on operating revenues ranged from 3.09 to 3.59% and had average amount of 3.28%. Return on assets in the same period ranged from 3.36 to 4.25%. On average, it amounted to 3.86%. In the observed period, the return on equity ranged from 9.23 - 13.78% - on average it was 12.06% (Table 12). Such profitability of trade in Serbia was also influenced by financial leverage, among other things.

In further analysis of the issue we well research the impact of financial leverage on liquidity and profitability of trade in Serbia by using descriptive statistics, correlation analysis and variance analysis. As a measure of financial leverage we will use the relationship between assets and equity capital because this indicator is displayed in the strategic profit model, which is widely used in trade companies in the analysis of their overall profitability. In the period 2008 - 2013 it ranged 2.64 – 3.49 in trade of Serbia. On average it was 3.11 (Table 12).

TABLE 12 DESCRIPTIVE STATISTICS (FINANCIAL LEVERAGE, LIQUIDITY AND PROFITABILITY OF TRADE IN SERBIA)

	N	Minimum	Maximum	Mean	Std. Deviation
Financial leverage	6	2.64	3.49	3.1113	.34022
Current liquidity	6	1.00	1.04	1.0103	.01485
Quick liquidity	6	.66	.68	.6687	.00905
Return on revenues	6	3.09	3.59	3.2850	.19066
Return on assets	6	3.36	4.25	3.8633	.30349
Return on equity capital	6	9.23	13.78	12.0617	1.80432
Valid N (listwise)	6				

Note: Author's calculations using the SPSS program based on the data of the Business registers agency

According to the established correlated relationship, the impact of financial leverage in the trade in Serbia is: current liquidity is negatively moderate; quick liquidity is very negative; return on revenue was strongly negative; return on assets is weakly positive; and return on equity is very positive (Table 13). In our case, this means that we reject the research hypothesis H1, H2, H3, and accept H4 and H5. All in all, the results of correlation analysis showed that, on average, financial leverage had moderately

negative impact on liquidity, i. e. positive on profitability of trade in Serbia in the period 2008 - 2013. In the future, it is necessary to profoundly influence the financial leverage in achieving the desired (positive, optimal) effect on its performance with systematic integrated control of key factors in trade of Serbia.

TABLE 13 CORRELATIONS (FINANCIAL LEVERAGE AND LIQUIDITY AND PROFITABILITY OF TRADE IN SERBIA)

		Financial leverage	Current liquidity	Quick liquidity	Return on operating revenues	Return on assets	Return on equity capital
Financial leverage	Pearson Correlation	1	-.551	-.821(*)	-.680	.294	.881(*)
	Sig. (2-tailed)		.258	.045	.137	.572	.020
	N	6	6	6	6	6	6
Current liquidity	Pearson Correlation	-.551	1	.589	.669	.394	-.222
	Sig. (2-tailed)	.258		.219	.146	.439	.672
	N	6	6	6	6	6	6
Quick liquidity	Pearson Correlation	-.821(*)	.589	1	.733	-.284	-.751
	Sig. (2-tailed)	.045	.219		.098	.585	.085
	N	6	6	6	6	6	6
Return on revenue	Pearson Correlation	-.680	.669	.733	1	.353	-.324
	Sig. (2-tailed)	.137	.146	.098		.493	.531
	N	6	6	6	6	6	6
Return on assets	Pearson Correlation	.294	.394	-.284	.353	1	.709
	Sig. (2-tailed)	.572	.439	.585	.493		.115
	N	6	6	6	6	6	6
Return on equity capital	Pearson Correlation	.881(*)	-.222	-.751	-.324	.709	1
	Sig. (2-tailed)	.020	.672	.085	.531	.115	
	N	6	6	6	6	6	6

* Correlation is significant at the 0.05 level (2-tailed).

Note: Author's calculations using the SPSS program based on the data of the Business register agency

In further research of the problem by using regression analysis we will determine the impact of financial leverage on liquidity and profitability of trade in Serbia. The general regression model is as follows:

Yit = αi + + βXit μit, where: Yit is dependent variable, and unit, t is time; Xit independent variable; αi and β coefficients; μi error.

Business Excellence and Management
Volume 5 Issue 3 / September 2015

Table 14 presents the regression results of the research of the impact of financial leverage on liquidity and profitability of trade in Serbia for the period 2008 - 2013.

TABLE 14 REGRESSION MODEL (ANALYSIS OF THE IMPACT OF FINANCIAL LEVERAGE ON LIQUIDITY AND PROFITABILITY OF TRADE IN SERBIA)

	Liquidity			
	Model 1: Dependent Variable: Current liquidity			
Independent variable:	**Unstandardized Coefficients**	**Std. Error**	**t**	**Sig.**
(Constant)	1.085	.057	19.043	.000
Financial leverage	-.024	.018	-1.319	.258
R Square	.303			
Adjusted R Square	.129			
Std. Error of the Estimate				
F	.01386			
F Sig.	1.740			
Durbin-Watson	.258			
	2.599			
	Model 2: Dependent Variable: Quick liquidity			
Independent variable:	**Unstandardized Coefficients**	**Std. Error**	**t**	**Sig.**
(Constant)	.737	.024	31.024	0.000
Financial leverage	-.022	.008	-2.875	.045
R Square	.674			
Adjusted R Square	.592			
Std. Error of the Estimate				
F	.00578			
F Sig.	8.267			
Durbin-Watson	.045			
	1.784			
	Profitability			
	Model 1: Dependent Variable: Return on revenue			
Independent variable:	**Unstandardized Coefficients**	**Std. Error**	**t**	**Sig.**
(Constant)	4.471	.642	6.961	.002
Financial leverage	-.381	.205	-1.855	.137
R Square	.463			
Adjusted R Square	.328			
Std. Error of the Estimate				
F	.15627			
F Sig.	3.443			
Durbin-Watson	.137			
	1.926			
	Model 2: Dependent Variable: Return on assets			
Independent variable:	**Unstandardized Coefficients**	**Std. Error**	**t**	**Sig.**
(Constant)	3.049	1.333	2.287	.084
Financial leverage	.262	.426	.614	.572
R Square	.086			
Adjusted R Square	-.142			
Std. Error of the Estimate				
F	.32437			
F Sig.	.377			
Durbin-Watson	.572			
	2.257			

Note: Author's calculations using the SPSS program based on the data of the Agency for business register

Concerning statistical significance the impact of financial leverage on certain indicators of liquidity and

profitability of trade in Serbia is different. According to the results of the regression model (Table 14), it significantly influenced on rapid liquidity and return on equity (sig. <0.05). This means that we reject the research hypothesis H6, H8 and H9 while accepting H7 and H10. In order to achieve the desired effect of financial leverage on the performance of trade in Serbia in the future, it is necessary to appropriately (systematically) and integrally control its key determinants.

Financial leverage of trade differs geographically not only in individual countries, but also within the special types of trade (wholesale and retail), trade companies, retail formats, and lines of business (product category). In order to thoroughly analyze the financial leverage in trade of Serbia. Table 15 shows the financial leverage and profitability for selected retail chains in Serbia in 2013.

TABLE 15 FINANCIAL LEVERAGE AND PROFITABILITY FOR SELECTED RETAIL CHAINS IN SERBIA, 2013

Companies	Financial leverage (total assets / shareholders' equity)	Return on revenue (net profit / operating income), (%)	Return on assets (net profit / assets), (%)	Return on equity (net profit / shareholders' equity), (%)
Delhaize Serbia	1.5873	5.32	7.22	11.46
Mercator-S	2.2068	0.81	0.95	2.11
IDEA	6.0465	(4.04)	(7.26)	(43.90)
Knez Petrol	5.2179	0.59	4.19	21.89
OMV Srbija	1.7415	(1.75)	(4.34)	(7.56)
Lukoil Srbija	(1.8567)	(10.52)	(11.09)	(20.59)

TABLE 16 CORRELATIONS (OF FINANCIAL LEVERAGE AND PROFITABILITY FOR SIX SELECTED RETAIL CHAINS IN SERBIA)

		Financial leverage	Return on revenue	Return on assets	Return on equity
Financial leverage	Pearson Correlation	1	.383	.303	-.036
	Sig. (2-tailed)		.453	.560	.946
	N	6	6	6	6
Return on revenue	Pearson Correlation	.383	1	.947(**)	.668
	Sig. (2-tailed)	.453		.004	.147
	N	6	6	6	6
Return on assets	Pearson Correlation	.303	.947(**)	1	.833(*)
	Sig. (2-tailed)	.560	.004		.039
	N	6	6	6	6
Return on equity	Pearson Correlation	-.036	.668	.833(*)	1
	Sig. (2-tailed)	.946	.147	.039	
	N	6	6	6	6

** Correlation is significant at the 0.01 level (2-tailed). * Correlation is significant at the 0.05 level (2-tailed).
Source: Author's calculations using the SPSS program based on the data of the Business registers agency

Business Excellence and Management
Volume 5 Issue 3 / September 2015

The first three companies shown in the table above are from the food trade sector, and the remaining three from the derivatives trade sector. Financial leverage of Delhaize Serbia, Mercator-S and OMV Serbia is lower compared to other analyzed companies. The general conclusion is that the observed financial leverage of trading companies in Serbia is high in relation to "industry standards" and comparable foreign retail chains (shown in this paper, and others). It is appropriately reflected on their profitability. In all six companies, and according to the results of the correlation analysis, financial leverage had weakly positive influence on the return on revenue and return on assets, and weakly negative on the return on equity (Table 16).

7. CONCLUSIONS

The structure of the capital in trading companies is specific in relation to the other. Determinants are also specific. Depending on the research objectives, they are expressed in different ways. In addition to the specifics of the actual nature of the business, the significant determinants of capital structure in trade are: assets growth, the structure of assets, the tax shield, opportunity growth, operational profitability, liquidity, operational risk, sales increase, company size, and overall profitability (Abdou et al., 2012), as well as the macro business environment, especially in Serbia.

The capital structure in statistical analysis in trading companies in Serbia is expressed as the ratio of assets and equity, in the way it is shown in the strategic profit model. Empirical research (comparative and statistical), on the example of trade in Serbia, showed high financial leverage in relation to "industry standards" and comparable countries, primarily developed market economies, and that it influential factor of liquidity and profitability of trade in Serbia. High financial indebtedness (financing costs) adequately reflected on its overall performance.

The determinants of financial leverage of trade in Serbia are specific in comparison to other countries, for example UK. Acquaintance of determinants alongside the adequate knowledge of the theory of capital structure is a fundamental prerequisite for optimizing the impact of capital structure (i.e. the effects of financial leverage) used to achieve the target performance of trade in Serbia in the future..

REFERENCES

Abdou, H. A. et al. (2012). Determinants of capital structure in the UK retail industry: A comparison of multiple regression and generalized regression neural network. *Intelligent Systems in Accouting, Finace and Management,* 19(3), pp. 151-169.

Anhin, H. & Wenhe, L. (2014). A Study on Debt Sources Structure, Term Structure and Investment

Level of Listed Retail Companies. *Anthropologist,* 17(3), pp. 769-775.

Berman, B. & Evans, J. R. (2010). *Retail Management*. Prentice Hall, Boston.

Brealey, R. A., Myers, S. C. & Macus, A. J. (2007). *Osnove korporativnih finansija*, (prevod sa engleskog jezika) Mate, Zagreb.

Chevalier, J. A. (1995). Capital Structure and Product-Market Competition: Empirical Evidence from the Supermarket Industry. *The American Economic Review*, 85(3), pp 415-435.

Damodaran, A. (2007*). Korporativne finansije – teorija i praksa*, (prevod sa engleskog jezika). MODUS – Centar za statistička istraživanja i prognoze, Podgorica.

Degryse, H. et al. (2012). The impact of firm and industry characteristics on small firms' capital structure. *Small Business Economics*, 38, pp. 431-447.

Evans, J. R. (2005). Are the largest public retailers top financial performers? A longitudinal analysis. *International Journal of retail & Distribution Management*, 33(11), pp. 842-857.

Gill, A. et al. (2009). The Determinants of Capital Structure in the Service Industry: Evidence from United States. *The Open Business Journal*, 2, pp. 48-53.

Gleason, K., Mathur, L., & Mathur, I. (2000). The Interrelationship between Culture, Capital Structure, and Performance: Evidence frpm European retailers. *Journal of Business research,* 50, pp. 185-191.

Kamath, V. R. & Kulkarni, S. (2013). Ratio ac a tool of financial analysis for Indian retail sector companies. *IOSR Journal of Business and Management*, 10 (5), pp. 32-34.

Kaya, H. D. (2014). The Impact of Leverage on Trade Firm' Profitability and Liquidity Measures. *International Journal of Business and Social Science*, 5(3), pp. 66-70.

Kühnhausen, F. & Stieber, H. W. (2014). Determinants of Capital Structure in Non- Financial Companies. Discussion Paper in Economics, Ludwig Maximilian University of Munich, 38, pp. 1-56.

Lee, B. (2014). *Capital Structure and Predation: Evidence fro Retail Industry*. McCombs School of Business, University of texas, Austin, pp. 1-42.

Levy, M. & Weitz, B. A. (2007). *Retailing Management*. McGraw-Hill, Irwin, Boston.

Li, C. et al. (2014). Working Capital Management, Corporate Performance, and Strategic Choices of the Wholesale and Retail Industrz in China. *The Scientific Wold Journal* 14, Article ID 953945, 15.

Little, P. L. et al. (2011). Evaluating the effect of reccesion on retail firms' strategy using DuPont method: 2006-2009. *Journal of Finance and Accountancy*, 7, pp 1-7.

Lovreta, S. (2011). *Trgovinski menadžment*. Ekonomski fakultet, Beograd.

Lovreta, S. et. al. (2013). Competition Policy and Optimal Retail Network Development in Transitional Economies. *Economic Annals*, LVIII (199), pp 57-84.

Lukic, R. (2011). *Evaluacija poslovnih performansi u maloprodaji*. Ekonomski fakultet, Beograd.

Lukic, R. (2012). Sustainable Development of Retail in Serbia. *Review of International Comparative Management*, 13 (4), pp. 574-586.

Lukic, R. (2013a). *Računovodstvo trgovinskih preduzeća*. Ekonomski fakultet, Beograd.

Lukic, R. (2013b). The Influence of Working Assets Efficiency Management on the Profitability of Trade

in Serbia. *Review of International Comparative Management*, 14 (5), pp.731-745.

Lukic, R. (2014a). The economic and financial status of trade entrepreneurs in Serbia. *Economic and Environmental Studies,* 14 (3), pp.239 -264.

Lukic, R. (2014b). The profitability of trade in Serbia. *Asian Journal of Management Res*earch, 4 (3), pp.485-500.

Lukic, R. (2014c). The Analysis of the Efficiency of Trade Costs Management in Serbia. *Economia. Seria Management*, 17(2), pp.1-15.

Lukic, R. (2014a). Analysis of the Efficiency of Small Independent Retailers in Serbia. *Eurasian Journal of Business and Economics*, 7(13), pp. 91-103.

McGoldrick, P. J. (2002). *Retail Marketing*, The McGraw-Hill Companies, London.

Moatti, V. et al. (2014). Disentangling the performance effects of efficiency and bargaining power in horizontal growth strategies: An empirical investigation in the global retail industry. *Strategic Management Journal*, Article first published online: 9 APR 2014 | DOI: 10.1002/smj.2244, pp. 1-13.

Mokhova, N. & Zinecker, M. (2013). The determinants of capital structure: the evidence from of european union. *Acta Universitatis Agriculturae et Silviculturae Mendelianae Brunensis*, LHI, 7, pp. 2533-2546.

Phillips, M., Anderson, S. & Volker, J. (July 2010). Understading small private retail firm growth using the sustainable growth model. *Journal of Finance and Accounting*, 3, pp. 1-11.

Shin, S. & Eksioglu, B. (May/June 2014). Effects of RFID Technology on Efficiency and Profitabilitz in Retail Supply Shains. *The Journal of Applied Business Research*, The Clute Institute, 30(3), pp. 633-646.

Van der Wijst, N. & Thurik, R. (1993). Determinants of Small Firm Debt Ratios: An Analysis of Retail Panel Data. *Small Business Economics*, 5(1), pp. 55-65.

Van Horne, J. C. & Wachowicz, J. R. (2007). *Osnovi finansijskog menadžmenta*, (prevod sa engleskog jezika). Data Status, Beograd.

Yu, W., Ramanathan, R. & Nath, P. (2014). The impacts of marketing and operations capabilities n financial performance in the UK retail sector: A resource-based perspective. *Industrial Marketing Management,* 43, pp. 25-31.