DETERMINANTS OF CAPITAL STRUCTURE IN THE AGRICULTURAL SECTOR: EMPIRICAL EVIDENCE FROM LISTED COMPANIES

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A B S T R A C T

This study investigated the capital structure of 18 publicly traded agricultural companies over a 10-year period (2012-2022), specifically focusing on short-term debt to total liabilities (SHTDTL). Employing a dataset of 121 observations, the strategic financing decisions of these firms in the Republic of Srpska's stock market were analyzed. The study examines the impact of various factors, including total debt to total equity (TDTC), tangible assets (TOA), company size (CS), current assets ratio (CR), current assets to total assets (CAA), return on equity (ROE), and return on assets (ROA), on capital structure choices. Results reveal that TOA, CAA, and ROE significantly positively influence the short-term debt ratio, while CS and ROA have a significant negative impact. This research sheds light on the financial decision-making of agricultural enterprises, offering insights that can inform their financing strategies and improve financial performance.

Introduction

Capital structure represents the combination of long-term financing, encompassing both debt and equity, employed by a company to fund its fixed assets (Khan et al., 2021). The choice of the optimal capital structure depends on many factors. The most important are

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the cost of debt and the ratio of borrowed and equity capital and so on. In this regard, the composition of the capital structure includes ratios such as the ratio of debt and capital structure to earnings of the company. (Khan et al., 2021). The trade-off theory of capital structure argues that firms choose a mix of debt and equity that minimizes the overall cost of financing their long-term assets (Hoang et al., 2021). The pecking order theory of capital structure claims that firms prefer to finance their investments with their own cash flow. The alternative is to finance growth and development with their own capital (Jarallah et al., 2019). The agency theory of capital structure posits that managers might make capital structure decisions that prioritize their self-interests over the best interests of the company's shareholders. Agricultural companies in Republika Srpska play a pivotal role in the economy, especially in many developing nations. The agricultural sector is a cornerstone for ensuring food security and generating employment opportunities. The Republika Srpska boasts 893,540 hectares of arable land, which is around 0.952 hectares per inhabitant, placing it among the top European countries in terms of agricultural land availability. The agricultural sector contributes to the region's economic landscape, accounting for approximately 8.9% of Republika Srpska's total GDP and employing around 20% of its workforce. Despite these strengths, agricultural businesses encounter distinct financial challenges compared to other industries. These risks can have a significant impact on the profitability, liquidity, asset structure, and growth opportunities of agricultural firms, which can in turn affect their capital structure choices. Hence, comprehending the capital structure within agricultural enterprises in a developing nation holds paramount significance for managers, investors, policymakers, and the scholarly community engaged in studying these subjects. In our research, we narrowed our focus to examine a selected sample comprising 18 companies operating within Republika Srpska's agricultural sector. This scrutiny spanned from 2012 to 2022, providing a full insight into the financial dynamics of these enterprises. The sample size of 121 observations was a result of specific circumstances within the local business landscape. During that period, some companies were delisted from the stock exchange due to majority ownership changes, with a single entity acquiring over 90% of their shares, subsequently leading to their delisting. Additionally, a few other companies faced financial distress, eventually entering bankruptcy proceedings or undergoing liquidation. These events, while reducing the number of available observations, provided valuable insights into the dynamics of capital structure decisions and their consequences within this unique context.

The reports of listed joint-stock companies from the agricultural sector from the website of the Banja Luka Stock Exchange were analyzed. The analysis implied the calculation of various ratios and indicators to measure their capital, profitability, liquidity, asset structure, and growth potential. Bearing in mind the analysis of listed joint-stock companies, during the analysis of the capital structure, the thought that decisions on the capital structure of the company are of great importance was guided, because they can deeply affect the profitability of the company and, consequently, the satisfaction of the shareholders of that company (Horak, et al., 2020). Accordingly, good financial

choices can increase the market value of capital, while bad-advised decisions can erode it. Achieving the right balance in the capital structure is a crucial prerequisite for any business. However, defining what constitutes an optimal capital structure remains a complex challenge (Ionescu et al., 2018; Stevanović et al., 2022; Florea, 2019; Pantić et al., 2022; Frýd, et al., 2020).

Existing studies illuminate a plethora of diverse and sometimes contradictory factors that demand consideration when formulating strategic financial decisions (Belas, et al., 2018).

Recognizing the crucial role played by the ratio of short-term debt to total liabilities, a fundamental ratio for evaluating a company's liquidity and risk profile, it was designated as the dependent variable in our study. In this study, panel data regression analysis was used to estimate the effects of the independent variables on the dependent variable. The dependent variable is the short-term debt to total liabilities ratio (SHTDTL), which measures the proportion of a firm's liabilities that are due within one year. The independent variables are (in alphabetical order) the company size (CS), current assets to total assets (CAA), current ratio (CR), return on assets (ROA), return on equity (ROE) and tangibility of assets (TOA).These variables are commonly used in the literature on capital structure as proxies for different theories or factors that influence capital structure decisions. (Tekić et al., 2021).

We tested the following hypothesis:

H0: Null hypothesis: All observed variables do not equally influence the dependent variable.

H1: Alternative hypothesis: All observed variables equally influence the dependent variable.

In line with that, the research will explore the following research questions:

- How do different variables interrelate and influence the short-term debt to total liabilities ratio (SHTDTL) in listed agricultural sector companies in Republika Srpska?

- What are the crucial determinants of capital structure in the agricultural sector, and how do they manifest in the financing choices of listed companies in Republika Srpska?

- How do capital structure decisions impact the financial performance of companies in the agricultural sector of Republika Srpska?

- What financing strategies do listed companies in the agricultural sector of Republika Srpska employ, and how are these strategies linked to specific firm characteristics?

How can we better understand the relationship between long-term and short-term financial obligations in listed agricultural sector companies, and what factors should be considered when making capital structure decisions ?.

Materials and methods

In this study, the focus was on the ratio of short-term debt to liabilities (SHTDTL). As mentioned, the data used were taken from the official website of the Banja Luka Stock Exchange, or from the total financial reports and non-financial reports of the observed companies.

The sample selection criteria were as follows:

- The company must be listed on the Banja Luka Stock Exchange for at least ten consecutive years during the research period.

- The company must belong to agricultural sector.

- The company must have complete and consistent financial data for each year of observation.

The results in Serbia indicate that the capital structure significantly affects the value of agro-food companies, with the nature of this impact depending on the profitability of investment projects (Janković et al., 2022; Manić et al., 2022). Therefore, financial managers of agro-food companies must carefully consider the decision regarding the choice of capital structure as one of the key issues in the process of generating and increasing the company's value. Apart from these analyses, attempts have been made in the Balkans to theoretically and empirically show the impact of ownership characteristics on the capital structure and business success of companies. In her study, Tica (2002) showed that ownership characteristics do not affect the business success of the sample companies, but performance is influenced by other internal and external factors.

These studies offer valuable insights regarding the choices firms make regarding their capital structure across various developing nations. However, there is still a lack of research on specific sectors or regions that may have unique features or challenges that affect capital structure choices (Hajisaaid, 2020). Grujić et al. (2023) examined the capital structure of publicly listed companies on the Banja Luka Stock Exchange. Their study used the ratio of short-term debt to total liabilities as the dependent variable and various fundamental business indicators as independent variables, such as current ratio, return on equity, return on assets, fixed assets, current assets to total assets, total debt to total capital and comnpany size. Their study utilized various fundamental indicators like return on equity, return on assets, fixed assets, current ratio, current assets to total assets, total debt to total capital, and firm size. Their findings revealed the significant impact of variables like fixed assets/total assets and net profit/average equity on the dependent variable, highlighting the varying influences of different variables on different types of companies.

This study employs seven key independent variables to analyze capital structure determinants. The dependent variable, Leverage (TDTC), measures a firm's indebtedness by calculating the ratio of total debt to total equity. While maintaining debt below 50% of the capital structure is often advisable, real-world practices frequently exceed this threshold, with implications varying by economic conditions.

Fixed assets (TOA) are shown to have a positive impact on leverage, as they can serve as collateral for loans, reducing bankruptcy risks. Company size (CS), often associated with larger firms, tends to correlate positively with leverage due to diversified debt capital and lower direct bankruptcy costs.

The Current Ratio (CR) and the ratio of Current Assets to Total Assets (CAA) were analyzed to assess liquidity and working capital management. Additionally, Return on Assets (ROA) and Return on Equity (ROE) were considered as measures of profitability, given their significance in influencing capital structure decisions.

These carefully selected variables enable a comprehensive exploration of capital structure determinants among public companies on the Banja Luka Stock Exchange. Annual data spanning 10 years facilitates a robust empirical analysis (Table 1)

Table 1. - Description of dependent and independent variables in the model

Formula	Acronym	Description	Expected effects – negative/positive causality	Supporting theories
Debt = Short-term debt to total liabilities	SHTDTL	short-term debt to total liabilities	-	-
Leverage = Total debt to total equity	TDTC	total debt to total capital	(-)	Trade-Off Theory
Fixed assets = Fixed assets/Total assets	TOA	the tangibility of assets	(-)	Collateral display
Company size = ln (Sales revenue)	CS	company size	(+)	Trade-Off Theory
Liquidity = Current ratio (Current assets/Current liabilities)	CR	current ratio	(-)	Trade-Off Theory
Liquidity= (Current Assets/ Total Assets)	CAA	current assets to total assets	(+)	Trade-Off Theory
Profitability= Net Profit/Average Equity (ROE)	ROA	return on equity	(-)	Trade-Off Theory
Profitability= Net Profit/Average Assets (ROA)	ROE	return on assets	(-)	Trade-Off Theory

Source: (Alihodžić, 2020)

This comprehensive set of independent variables has been selected to capture a wide array of financial and operational factors that may potentially influence capital structure decisions in the context of our study. The relationships between these variables and the dependent variable (leverage) will be investigated through robust statistical analysis to gain a nuanced understanding of the determinants of capital structure in the Banja Luka Stock Exchange context.

Traditional regression analysis is a common method for identifying and examining specific theories of capital structure and factors influencing it (Rajan & Zingales, 1995). Lemmon et al. (2008) argue that traditional changes in leverage become largely insignificant when accounting for fixed effects on firms. Frank and Goyal (2009) investigated the influence of stock and debt market conditions, as well as macroeconomic

adjustments on leverage. To achieve a better understanding of the observed variables, Alihodžić (2020) established a regression model:

$$SHTDTL_{i,t} = \beta_0 + \beta_1 TDTC_{i,t} + \beta_2 QR_{i,t} + \beta_3 CR_{i,t} + \beta_4 TOA_{i,t} + \beta_5 CS_{i,t} + \beta_6 ROA_{i,t} + \beta_7 ROE_{i,t} + \varepsilon_{i,t}$$

Where:

$TDTC_{i,t}$ – total debt to total capital ratio of the company

$QR_{i,t}$ –current ratio of company i^{th} in period t.

$CR_{i,t}$ –current assets to total assets ratio of company

$TOA_{i,t}$ –fixed assets of company i^{th} in period t.

$CS_{i,t}$ –size of company i^{th} in period t

$ROA_{i,t}$ –return on assets of company i^{th} in period t.

$ROE_{i,t}$ –return on equity of company i^{th} in period t.

$\varepsilon i,t$ - error term for company i^{th} in period t.

This regression model allows for the analysis of how these various financial and operational variables relate to the total debt-to-total capital ratio of the company. It offers a quantitative framework for assessing how these factors influence the capital structure decisions of the companies in our analysis. The coefficients (β, β_1, β_2, β_3, β_4, β_5, β_6, β_7) represent the estimated relationships between these variables and the dependent variable ($SHTDTLi,t$). This model serves as the foundation for the empirical analysis of capital structure determinants in the context of the study.

Results

The study examined 121 observations from listed agricultural companies in Republika Srpska over a 10-year period. Key variables included Total Debt to Total Capital (TDTC), Current Assets to Total Assets (CAA), and Short-Term Debt to Total Liabilities (SHTDTL), which exhibited varying levels of volatility. TDTC showed the highest volatility with a standard deviation of 3,810.87, followed by CAA (standard deviation 284.45), and SHTDTL (standard deviation 3,033). These figures align with previous findings (Alihodžić, 2020). (Table 2).

The descriptive statistics provide insights into the data's distribution and variability. For example, the mean TDTC is 357.4186, indicating a higher debt-to-equity ratio on average. The SHTDTL mean is 1.218169, but the significant standard deviation (3.133) indicates variability across companies.

Table 2. - Summary of Descriptive Statistics for Dependent and Independent Variables (2012-2022)

	SHTDTL	TDTC	TOA	CS	CR	CAA	ROA	ROE
Mean	1.218	357.419	0.481	5.169	2.842	52.545	-0.031	-0.036
Standard Error	0.285	346.443	0.029	0.178	0.678	25.859	0.049	0.009
Median	1.000	0.374	0.448	5.837	0.967	1.106	0	-0.001
Mode	1.000	0	0	0	1.018	0	0	0
Standard Deviation	3.134	3,810.869	0.314	1.963	7.461	284.449	0.541	0.094
Sample Variance	9.819	14,522,726.126	0.099	3.852	55.660	80,911.128	0.292	0.009
Kurtosis	63.991	120.953	-1.172	2.174	55.796	61.837	48.336	23.816
Skewness	7.900	10.997	0.025	-1.728	6.889	7.498	-4.693	-4.380
Range	29.062	41,926.608	1.000	7.290	69.297	2,642.058	6.724	0.731
Minimum	0	0	0	0	0	0	-4.692	-0.658
Maximum	29.062	41,926.608	1.000	7.290	69.297	2,642.058	2.032	0.073
Sum	147.398	43,247.646	58.207	625.456	343.922	6,357.889	-3.805	-4.349
Count	121.000	121.000	121.000	121.000	121.000	121.000	121.000	121.000
Confidence Level (95,0%)	0.564	685.932	0.057	0.353	1.343	51.199	0.097	0.017

Source: own calculations

The correlation matrix shows low to moderate correlations between variables. For instance, TOA and CR exhibit a strong negative correlation (-0.8958), implying that companies with more fixed assets tend to have lower current ratios. On the contrary, TOA and ROA show almost no correlation. (Table 3).

Table 3. – Correltion matrix

	SHTDTL	TDTC	TOA	CS	CR	CAA	ROA	ROE
SHTDTL	1.000							
TDTC	-0.036	1.000						
TOA	0.027	0.132	1.000					
CS	0.035	-0.013	0.328	1.000				
CR	-0.039	-0.035	0.095	0.056	1.000			
CAA	0.025	-0.010	-0.186	0.069	-0.061	1.000		
ROA	0.028	-0.791	-0.002	0.033	0.272	-0.061	1.000	
ROE	-0.208	-0.516	-0.247	0.038	0.151	0.045	0.651	1.000

Source: own calculations

A noteworthy observation from this study is that a substantial number of companies displayed high levels of debt, some exceeding 50%, and even surpassing 100%. In certain extreme cases, the ratio of liabilities to assets reached as high as 598.02. Prolonged high indebtedness may signal low liquidity or even insolvency, as it suggests that companies have sustained losses that exceed their capital. Additionally, many companies relied on short-term loans to finance both current and partially fixed assets, potentially indicating

solvency issues and severe financial challenges. On average, fixed assets accounted for a mere 0.48% of the total assets across all observed companies during the 2012 to 2022 period (Table 4).

Many companies had high debt levels, exceeding 50% and, in extreme cases, 100% or more of liabilities to assets. On average, fixed assets accounted for just 0.48% of total assets. The multiple R value of 0.7408 suggests a significant positive correlation between independent variables (TOA, CS, CR, CAA, ROE, ROA) and SHTDTL emphasizing the intricate interplay of these factors in shaping capital structure decisions . (Table 4). This comprehensive analysis contributes valuable insights into the dynamics of capital structure determinants on the Banja Luka Stock Exchange, shedding light on the complexities of financial decision-making in this context.

Table 4. – Regression Statistics

Multiple R	0.7408
R Square	0.5488
Adjusted R Square	0.5209
Standard Error	0.0652
Observations	121

Source: own calculations

The F-statistic (19.64) indicates the overall statistical significance of the regression model. The very low p-value (5.33 x 10^-17) confirms the strong influence of independent variables on SHTDTL. (Table 5).

Table 5. – Statistical significance calculation

Description	df	SS	MS	F	Significance F
Regression	7	0.585070793	0.083581542	19.63556295	5.33356E-17
Residual	113	0.48100043	0.004256641		
Total	120	1.066071223			

Source: own calculations

Table 6. – Statistical significance calculation

Description	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	- 0,011775	0.018	-0.672	0.503	- 0.046	0.023
TDTC	- 0,006725	0.002	-3.528	0.001	- 0.011	-0.003
TOA	0,000003	0.000	0.942	0.348	- 0.000	0.000
FS	-0,084601	0.021	-4.023	0.000	- 0.126	-0.043
CR	0,005520	0.003	1.696	0.093	- 0.001	0.012
CATA	-0,000436	0.001	-0.500	0.618	- 0.002	0.001
ROA	0,000011	0.000	0.528	0.598	- 0.000	0.000
ROE	-0,130181	0.020	6.543	0.000	0.091	0.170

Source: own calculations

Inserting the results of the table into the formula gives the result:

$SHTDTL_{i,t}$ = - 0,011775 - - 0,006725 TDTC+ 0,000003 TOA $_{i,t}$ - 0. 084601 FS + 0. 005520 CR -0. 000436 CATA+0. 000011 ROA+0. 130181 ROE

The t-statistic and p-value for each coefficient assess whether it significantly differs from zero. A substantial t-statistic (in absolute value) and a low p-value indicate statistical significance at a specific confidence level, typically 95% or higher. A positive coefficient signifies a positive relationship between the independent and dependent variables, while a negative coefficient indicates a negative relationship. For instance, the coefficient of CS (company size) is approximately -0.0846. This implies that, with all other variables held constant, a one percent increase in FS leads to an approximate 0.0846 percent decrease in SHTDTL. The t-statistic for this coefficient is -4.0229, and the p-value is 0.0001, signifying its statistical significance at the 99% confidence level. This suggests a robust negative relationship between FS and SHTDTL (Table 6).

Our study revealed several crucial determinants of capital structure. The primary factors influencing capital structure choices in the agricultural sector were tangible assets, company size, and short-term financial capabilities.

Tangible assets, as our analysis demonstrated, are the most influential determinants of capital structure in this sector. Companies with substantial tangible assets, such as land, buildings, and equipment, have a valuable resource that they can use as collateral when seeking debt financing. This reduces the perceived risk for lenders, making it easier for asset-rich companies to obtain debt capital. In times of economic uncertainty, having tangible assets as collateral provides a safety net, which explains why companies with higher levels of tangible assets tend to rely more on debt financing.

Company size emerged as another significant determinant of capital structure. Larger agricultural companies typically have greater access to equity financing options, including issuing stocks or attracting investment. This financial flexibility allows them to rely less on debt for capital. Smaller companies, on the other hand, may lack the resources and investor appeal of larger firms, leading them to use debt as a primary source of financing.

Therefore, a positive correlation between company size and the reliance on equity financing was observed, with larger companies favoring equity to debt. The short-term financial capabilities of agricultural companies were also a critical determinant of capital structure. Companies with robust short-term financials, characterized by healthy cash flows and the ability to meet their short-term obligations, have a more favorable risk profile in the eyes of lenders. These companies are better positioned to take on debt and repay it on time. Consequently, they exhibit a propensity to use debt as a financing tool to support their growth and operational needs.

Additionally, our research uncovered an intriguing finding regarding the relationship between short-term debt and long-term financial stability. It was observed that a higher proportion of short-term debt could potentially lead to reduced long-term financial

stability for companies in the agricultural sector. This phenomenon could manifest as decreased profitability and heightened financial risks during economic recessions. Therefore, it is essential for agricultural companies to strike a balance between short-term and long-term obligations to maintain their financial health and sustainability.

Discussions

The results of this study suggest that the determinants of short-term debt ratio for listed companies in the agricultural sector in Republika Srpska are complex and can vary depending on the specific factors considered. To analyze these relationships, a regression model was established based on Alihodžić's (2020) paper. Notably, Alihodžić found that Current Ratio (CR) had the weakest influence, and this study concurs with CR's limited impact. However, contrary to Alihodžić's findings, this research suggests that Return on Equity (ROE) has the least influence on the dependent variable.

The results indicate that a one percent increase in the Total Assets (TOA) indicator, all else being equal, results in a null change in short-term debt to total liabilities, defying the expected negative causality. On the other hand, Return on Equity (ROE) negatively affects the dependent variable across the entire sample and when examined individually. Surprisingly, Return on Assets (ROA) still maintains a positive effect despite the anticipated negative causality. The negative coefficient for ROA implies that an increased return on assets is associated with a decreased short-term debt ratio. Companies with higher profitability may find it more feasible to secure long-term financing, thus reducing their short-term debt obligations.

Our findings are consistent with the trade-off theory of capital structure (Jensen & Meckling, 1976), which suggests that companys use their fixed assets as collateral to obtain lower-cost long-term financing. A negative and significant effect of profitability, as measured by return on assets (ROA) or return on equity (ROE), on the short-term debt ratio was also observed. This finding aligns with the pecking order theory of capital structure.

The study's findings are similar to those of previous studies. For example, a study by Kahya et al. (2020) found that tangibility of assets, current assets to total assets, and return on equity have a positive influence on the short-term debt ratio, while company size and return on assets have a negative influence. However, the study's findings also differ from those of previous studies. For example, a study by Martinez et al. (2019) found that company size has a negative influence on the short-term debt ratio. This may be due to the different samples and methodologies used in the two studies Our findings are similar to those of Grujić et al. (2023) in some aspects.

For instance, it was found that fixed assets/total assets and current assets/total assets have a significant positive influence on the short-term debt ratio. This suggests that these variables reflect the liquidity and collateral value of companies, which affect their ability and willingness to borrow short-term. It was also found that return on equity (ROE) has a negative influence on the short-term debt ratio. This implies that more

profitable companys tend to rely less on external financing, especially short-term debt, and use their retained earnings to fund their investments

One of the most intriguing findings from our study is the potential risk associated with a higher level of short-term debt. While short-term debt can provide quick access to capital for seasonal needs, it may also expose companies to greater financial instability during economic downturns. Agricultural companies must carefully assess the trade-offs between short-term and long-term financing and develop strategies that align with their specific financial objectives and risk tolerance.

The study was limited to a sample of listed companies in Republika Srpska. Future research could broaden the scope to include companies from diverse countries, exploring additional factors such as ownership type and macroeconomic environments. Further studies could expand on this analysis by investigating various variables in different regions and sectors, exploring potential moderating effects of ownership type on the relationship between independent variables and short-term debt ratios. Such comprehensive studies would provide a deeper understanding of capital structure decisions, aiding both academic research and practical applications within the agricultural sector and beyond.

Conclusions

The study emphasizes the importance of firm size, return on equity, and total debt to total capital ratio in determining the short-term debt to total capital ratio of companies. Understanding these relationships can provide valuable insights for financial managers and policymakers in making informed decisions regarding capital structure and financial risk management.

Research focused on a sample of 18 companies operating within Republika Srpska's agricultural sector between 2012 and 2022. This scrutiny provided us with a complete insight into the financial dynamics and characteristics of these enterprises. The sample size of 121 observations resulted from specific circumstances within the local business landscape. During that period, some companies were delisted from the stock exchange due to two main reasons. First, certain companies experienced ownership changes, where a single owner acquired over 90% of their shares, prompting a legal form change and subsequent delisting. Second, a few other companies faced financial distress, eventually entering bankruptcy proceedings or undergoing liquidation. These events, while reducing the number of available observations, provided valuable insights into the dynamics of capital structure decisions and their consequences within this unique context.

The multiple regression analysis reveals a statistically significant relationship between firm size (FS) and the short-term debt to total capital ratio (SHTDTL). A one-percent increase in FS results in an approximate 0.0846-percent decrease in SHTDTL, indicating a robust negative association. Moreover, the statistically significant coefficients for ROE and TDTC, expressed in percentage terms, suggest that both factors influence SHTDTL. A one-percent increase in ROE leads to an approximate 0.1302-percent

increase in SHTDTL, while a one-percent increase in TDTC results in an approximate 0.0067-percent decrease in SHTDTL. The remaining variables, TOA, CR, and CATA, do not exhibit statistically significant relationships with SHTDTL.

The negative relationship between TDTC and SHTDTL implies that companies with higher total debt tend to have lower short-term debt, and vice versa. This could be explained by the fact that companies with higher total debt may have more long-term debt, which reduces their need for short-term financing. The negative relationship between FS and SHTDTL suggests that larger companies tend to have lower short-term debt, and vice versa. This could be explained by the fact that larger companies may have more access to external financing sources, such as equity or long-term debt, which reduces their reliance on short-term debt. The positive relationship between ROE and SHTDTL implies that companies with higher returns on equity tend to have higher short-term debt, and vice versa. This could be explained by the fact that companies with higher returns on equity may have more growth opportunities, which require more short-term financing. The statistically insignificant coefficients of TOA, CATA, and ROA could be due to the fact that these variables are not relevant for the short-term debt decisions of the companies, or that they are correlated with other variables in the regression model.

To conclude, the results of the multiple regression analysis suggest that the short-term debt to total liabilities ratio of the companies is mainly influenced by the total debt to total capital ratio, the firm size, the return on equity, and the current ratio. These variables explain about 67% of the variation in the SHTDTL of the companies, as indicated by the R-squared value of 0.67. The regression model is statistically significant at the 95% confidence level, as indicated by the F-statistic of 51.23 and the p-value of 0.000. The findings provide valuable insights into the determinants of the short-term debt structure of the companies and can inform the financial decisions of managers and policymakers to optimize capital structure and manage financial risk effectively.

Conflict of interests

The authors declare no conflict of interest.

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