ANALYSIS OF THE CORRELATIONS BETWEEN THE DEGREE OF INDEBTEDNESS AND THE PERFORMANCE OF THE ECONOMIC ENTITIES FROM EMERGING ECONOMY

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Abstract: *The purpose of this research is to assess the performance of the economic entities that are part of the BRICS economies (Brazil, Russia, India, China, South Africa). Thus, the following objectives have been set to achieve the intended purpose: O1 - analysis and evaluation of the economic performance that were reported by entities in the emerging BRICS economies; O2 – identification of the correlations between the performance indicators that were reported by entities from emerging BRICS economies (Return on Assets; level of indebtedness; equity ratio; Earnings Before Interest, Taxes, Depreciation, and Amortization growth). For these objectives to be achieved, we have collected and analyzed the financial data from the reports of 50 companies that are listed on a regulated market in Brazil, Russia, India, China and South Africa. This research focuses on assessing the effects of the financial report and of the level of indebtedness on the performance of the entities from emerging BRICS economies. Research is relevant to current and potential investors interested in emerging BRICS economies, as well as for other categories of stakeholders.*

Keywords: *BRICS, performance, emerging market, key performance indicators*

JEL Classification: M40, C22, F23, F38

Introduction

The emerging BRICS economies ((Brazil, Russia, India, China, South Africa) are a global economic, political and social power. The most important features of these economies are the abundance of natural resources, cheap labor and attractive environment for investors, thanks to the tax facilities and policies. Foreign direct investment flows are the main factor contributing to the

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development and to the growth of these economies that are a strong attraction of foreign direct investments, being able even in times of crisis to attract a significant flow of foreign investments (Melega, 2020). For example, during the pandemic crisis of COVID-19, the flow of foreign investments in BRICS economies decreased by only 13.7% (UNCTAD 2021). In 2020, China recorded a foreign investments flow of USD 163 billion, being the world's largest recipient of Foreign Direct Investment (FDI) and India was the fifth largest recipient of foreign investment, managing to absorb USD 64 billion.

With accelerated economic growth as well as with increasing foreign capital, emerging BRICS countries perform better economically, not socially or environmentally. The standard of living in these countries is a precarious one, with shortcomings in education and health. However, companies operating in these markets achieve a fairly high level of financial performance, as it is demonstrated by the economic and financial indicators reported by them. According to Fatihudin, Mochklas (2018) financial performance is "the company's ability to manage and control its own resources". The economic performance of companies in the BRICS economies is mainly due to the fact that in these countries the labor force is cheap, the access to large markets is provided and there is an abundance of natural resources as well.

The performance of BRICS emerging companies plays an important role in attracting foreign direct investment, and an analysis and evaluation of them by correlating all performance indicators gives investors an image of the determinants. Thus, in this study we aim to evaluate the economic performance of companies in the BRICS countries, by identifying the correlations between performance indicators (Return on Assets, degree of indebtedness, equity rate, Earnings Before Interest, Taxes, Depreciation, and Amortization growth).

Research methodology

Our research is made using quantitative as well as qualitative methods, the last ones being summarized to the analysis of the existing literature. The quantitative method refers to the collection and the analyzing of the financial performance data reported by 50 firms from the emerging BRICS economies in 2016-2020 period. The data was collected from the financial statements of the companies, published on the Moscow Stock Exchange, the Hong Kong Stock Exchange, the Brazilian Stock Exchange, the National Stock Exchange of India, the Securities Exchange and the Johannesburg Stock Exchange. Given the fact that the entities originate from different countries and that the financial statements are drawn up in different currencies, the currency conversion of all balance sheets and profit and loss account amounts have been made, converting it into a single currency - euro. As a reference point for the currency conversion, the exchange rate that was taken into account is the one that was communicated by the BRICS national banks on the closing date of financial years. We also point out that the principle of independence of the horizontal exercise was affected as a result of the fact that, unlike the other BRICS countries, India is an exception to the rule, in the sense that for this country, the financial year starts on 1st April and ends on 31st March. Regarding the inclusion indicators, there were taken into account only the indicators reported by BRICS companies, being selected only those who directly influence the indebtedness of the entities. The data was processed using the SPSS version 26 software.

Literature review

The business performance and the sustainability concepts have been extensively analyzed in the literature from the perspective of the economic and financial indicators reported by companies, linking them to the general business environment, market size, the impact of the enterprise on economic growth, etc. The market size and the social and political environment are important factors that ensure and contribute to the business sustainability, having a significant impact on the business' performance indicators. These indicators such asReturn on Assets (ROA), Return on Equity (ROE), Return on Investment (ROI), Earnings Before Interest and Taxes (EBIT), equity ratio, debt ratio, etc., are sometimes decisive factors for investors. Scientific production strengthens the idea that the performance indicators have a significant role in the decision-making process. For example, Hart (1995) argues that "liabilities effectively limit overinvestment. They appreciate that increased liabilities by extending repayment obligations, not only reduces free cash flow, but also increase the possibility of corporate failure, leading corporate managers to cut investments and sell unprofitable business divisions." Therefore, the level of indebtedness is an indicator that has a significant impact on investment activities. Yazdanfar and Ohman (2015) studied the relationship between the debt level and the corporate performance of Swedish SMEs and concluded that the corporate debt ratio has a negative effect on performance. The net profit margin, another measure of the company's performance, has a significant influence on the rate of rotation of assets and equity (Halkos and Tzeremes, 2011). Some researchers also argue that the net profit margin, the debt ratio and the equity ratio are important tools in the analysis of business sustainability (Saintis, et. al 2016) and in the analysis of investment risk. Lopez-Valeiras et. al (2016) analyzed the role of debt for 83 livestock companies in the determination of the performance of a businesses, concluding that " indebtedness can increase the materialization of the potential benefits of a larger organizational dimension and the relationship between size and financial performance is negatively mediated by indebtedness." Another analysis of the impact of the indebtedness on the firm's performance was carried out by Carlos Echeverry et. al (2003) on a sample of Colombian firms an according to their results, the size of the firm is the most important determinant of the degree of indebtedness, which has a negative effect on profitability.

The debt ratio and the variables on the return on assets, the equity ratio and the Earnings Before Interest, Taxes, Depreciation, and Amortization (EBITDA) should be combined to assess whether they would significantly affect the performance of the company by using the regression analysis.

Results and discussions

Assessing and predicting the future performance of the companies is a key factor in investment decisions, as investors are generally concerned about the inherent risk and about the profitability of their investment (Marchini & D'is., 2015; Melega et. al 2021). Corporate indebtedness is an important variable in the prediction of bankruptcy and it provides information about the entity's ability to honor its debts. The value of this indicator is of important relevance to the investors, especially for those who invested in equity, because a high level of indebtedness indicates that their investment is at risk.

Thus, in order to identify, evaluate and analyze the indebtedness rate indicator of the entities from the BRICS economies, we built the following econometric model:

$TL/TA = \alpha + \beta_1 ROA + \beta_2 CE/TA + \beta_3 TSE/TA + \beta_4 EBITDAG$, where

ROA – return on assets;
TL/TA (Total Debts/Total Assets)- debt ratio (level of indebtedness);
CE/TA (Capital Equity/Total Assets) – equity ratio;
TSE/TA – Total Shareholders Equity /Total Assets;
EBITDAG -Earnings Before Interest, Taxes, Depreciation, and Amortization Growth.

The proxy intensities between the dependent variable debt ratio (TL/TA) and the independent variables Return on Assets (ROA), Equity Ratio (CE/TA), Total Shareholder Equity/ Total Assets (TSE/TA) , Earnings Before Interest, Taxes, Depreciation, and Amortization Growth (EBITDAG) of the entities from emerging BRICS economies are given in the correlation matrix in (table no.1):

Table no. 1. Correlations between the TL/TA variable and the independent variables ROA, CE/TA, TSE/TA, EBITDAG

		TL/ TA	ROA	CE/TA	TSE/TA	EBITDAG
BRAZIL						
Pearson Correlation	TL/ TA	1.000	-.698	-.440	-.984	-.238
	ROA	-.698	1.000	.081	.716	-.026
	CE/TA	-.440	.081	1.000	.457	.770
	TSE/TA	-.984	.716	.457	1.000	.241
	EBITDAG	-.238	-.026	.770	.241	1.000
Sig. (1-tailed)	TL/ TA	.	.000	.001	.000	.057
	ROA	.000	.	.299	.000	.433
	CE/TA	.001	.299	.	.001	.000
	TSE/TA	.000	.000	.001	.	.055
	EBITDAG	.057	.433	.000	.055	.
N	TL/ TA	45	45	45	45	45
	ROA	45	45	45	45	45
	CE/TA	45	45	45	45	45
	TSE/TA	45	45	45	45	45
	EBITDAG	45	45	45	45	45
RUSSIA						
		TL/TA	ROA	CE/TA	TSE/TA	EBITDAG
Pearson Correlation	TL/TA	1.000	-.213	-.733	-.733	.214
	ROA	-.213	1.000	.226	.226	-.006
	CE/TA	-.733	.226	1.000	1.000	-.130
	TSE/TA	-.733	.226	1.000	1.000	-.130
	EBITDAG	.214	-.006	-.130	-.130	1.000
Sig. (1-tailed)	TL/TA	.	.073	.000	.000	.072
	ROA	.073	.	.061	.061	.485
	CE/TA	.000	.061	.	.000	.189
	TSE/TA	.000	.061	.000	.	.189
	EBITDAG	.072	.485	.189	.189	.
N	TL/TA	48	48	48	48	48
	ROA	48	48	48	48	48
	CE/TA	48	48	48	48	48
	TSE/TA	48	48	48	48	48
	EBITDAG	48	48	48	48	48

INDIA						
		TL/TA	ROA	CE/TA	TSE/TA	EBITDAG
Pearson Correlation	TL/TA	1.000	-.041	-.992	-.992	-.036
	ROA	-.041	1.000	.038	.038	-.132
	CE/TA	-.992	.038	1.000	1.000	.032
	TSE/TA	-.992	.038	1.000	1.000	.032
	EBITDAG	-.036	-.132	.032	.032	1.000
Sig. (1-tailed)	TL/TA	.	.389	.000	.000	.401
	ROA	.389	.	.398	.398	.180
	CE/TA	.000	.398	.	.000	.413
	TSE/TA	.000	.398	.000	.	.413
	EBITDAG	.401	.180	.413	.413	.
N	TL/TA	50	50	50	50	50
	ROA	50	50	50	50	50
	CE/TA	50	50	50	50	50
	TSE/TA	50	50	50	50	50
	EBITDAG	50	50	50	50	50
CHINA						
		TL/TA	ROA	CE/TA	TSE/TA	EBITDAG
Pearson Correlation	TL/TA	1.000	-.142	.086	-.065	.179
	ROA	-.142	1.000	.308	.340	-.188
	CE/TA	.086	.308	1.000	.914	-.197
	TSE/TA	-.065	.340	.914	1.000	-.228
	EBITDAG	.179	-.188	-.197	-.228	1.000
Sig. (1-tailed)	TL/TA	.	.162	.275	.326	.107
	ROA	.162	.	.015	.008	.096
	CE/TA	.275	.015	.	.000	.085
	TSE/TA	.326	.008	.000	.	.056
	EBITDAG	.107	.096	.085	.056	.
N	TL/TA	50	50	50	50	50
	ROA	50	50	50	50	50
	CE/TA	50	50	50	50	50
	TSE/TA	50	50	50	50	50
	EBITDAG	50	50	50	50	50
SOUTH AFRICA						
		TL/TA	ROA	CE/TA	TSE/TA	EBITDAG
Pearson Correlation	TL/TA	1.000	-.088	-.068	-.103	.088
	ROA	-.088	1.000	.037	.158	.027
	CE/TA	-.068	.037	1.000	.800	-.164
	TSE/TA	-.103	.158	.800	1.000	-.137
	EBITDAG	.088	.027	-.164	-.137	1.000
Sig. (1-tailed)	TL/TA	.	.271	.321	.239	.272
	ROA	.271	.	.400	.136	.426
	CE/TA	.321	.400	.	.000	.128
	TSE/TA	.239	.136	.000	.	.172

	EBITDAG	.272	.426	.128	.172	.
N	TL/TA	50	50	50	50	50
	ROA	50	50	50	50	50
	CE/TA	50	50	50	50	50
	TSE/TA	50	50	50	50	50
	EBITDAG	50	50	50	50	50

Source: developed by the author using IBM SPSS Statistics, version 26

According to the information in (table no. 1), regarding the analyzed data on the performance analysis of the entities from Brazil, these are the following findings: a very strong correlation between deby ratio (TL/TA) and Total Shareholder Equity/ Total Assets (TSE/TA) is observed in a value of -0,984, an average correlation between the Total Shareholder Equity/ Total Assets (TSE/TA) and Return on Assets (ROA) variables in a value of -0,698 is seen and a poor correlation between Total Shareholder Equity/ Total Assets (TSE/TA) and Equity Ratio (CE/TA) having a value of -0.440 and between debt ratio (TL/TA) and Earnings Before Interest, Taxes, Depreciation, and Amortization Growth (EBITDAG) having a value -0,238 are identified.

Analysis of the correlations between entities' performance indicators from Russia shows: a very strong correlation between debt ratio and Total Shareholder Equity/ Total Assets (TSE/TA) and debt ratio and equity ratio (CE/TA) in value -0,733 and a poor correlation between debt ratio and Earnings Before Interest, Taxes, Depreciation, and Amortization Growth (EBITDAG) with value of 0,214 and between debt ratio and Return on Assets with value of -0,213. Reagrding the correlations between entities' performance indicators from India, we see a very strong correlation between indebtedness and the non-dependent variables Total Shareholder Equity/ Total Assets (TSE/TA), debt ratio and equity ratio in the value of -0,992 and a very poor correlation debt ratio and Return on Assets in the value of -0.041 and Earnings Before Interest, Taxes, Depreciation, and Amortization Growth (EBITDAG) in the value of -0,036. There is a moderate positive relationship between the analyzed performance indicators of the companies from Brazil, Russia and India. Surprisingly, there is insufficient evidence to conclude that the indebtedness is associated with the equity ratio, as p value shows a higher percentage than the significant level. The debt variable for the entities from China and South Africa is influenced in an insignificant way by the analyzed indicators (variables).

Table no. 2 Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
BRAZIL					
1	.985[a]	.969	.966	21.76785%	1.643
a. Predictors: (Constant), EBITDAG, ROA, TSE/TA, CE/TA					
b. Dependent Variable: TL/ TA					
RUSSIA					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	
1	.745[a]	.555	.524	18.50513%	
a. Predictors: (Constant), EBITDAG, ROA, TSE/TA					
b. Dependent Variable: TL/TA					
INDIA					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.992[a]	.984	.983	10.28666%	2.019

a. Predictors: (Constant), EBITDAG, TSE/TA, ROA					
b. Dependent Variable: TL/TA					
CHINA					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.414[a]	.172	.098	20.82278%	.665
a. Predictors: (Constant), EBITDAG, ROA, CE/TA, TSE/TA					
b. Dependent Variable: TL/TA					
SOUTH AFRICA					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.150[a]	.022	-.065	28.70455%	.205
a. Predictors: (Constant), EBITDAG, ROA, CE/TA, TSE/TA					
b. Dependent Variable: TL/TA					

Source: developed by the author using IBM SPSS Statistics, version 26

According to the Summary table for the indicators of the Brazilian entities, a very high correlation is observed because the correlation ratio R is 0,985. The value of the determination ratio R2 is 0,969, therefore for the used model, the variation of the independent variables Return on Assets (ROA), Equity Ratio (CE/TA), Total Shareholder Equity/ Total Assets (TSE/TA), Earnings Before Interest, Taxes, Depreciation, and Amortization Growth (EBITDAG) explains 96,90% of the variation of the dependent variable Debt ratio. The Durbin-Watson coefficient is 1.643. An average correlation was recorded between indicators reported by entities from Russia where correlation ratio is R = 0,745 and determination ratio is R2 = 0,555, therefore for the used model, the variation of the independent variables Return on Assets (ROA), Equity Ratio (CE/TA), Total Shareholder Equity/ Total Assets (TSE/TA), Earnings Before Interest, Taxes, Depreciation, and Amortization Growth (EBITDAG) explains 55,50% of the variation of the dependent variable Debt Ratio. A weak correlation was also recorded between indicators reported by Chinese entities, where correlation ratio is R = 0,414 and determination ratio is R2 = 0,172, therefore for the used model, the variation of the independent variables Return on Assets (ROA), Equity Ratio (CE/TA), Total Shareholder Equity/ Total Assets (TSE/TA), Earnings Before Interest, Taxes, Depreciation, and Amortization Growth (EBITDAG) explains 17,20% of the variation of the dependent variable Debt Ratio. We also can see from the analyzed model that there is a weak correlation between the performance indicators of entities from South Africa, with the value of R being only 0,150 and the determination ratio R2 of 0,022. For the used model, the variation of the independent variables Return on Assets (ROA), Equity Ratio (CE/TA), Total Shareholder Equity/ Total Assets (TSE/TA), Earnings Before Interest, Taxes, Depreciation, and Amortization Growth (EBITDAG) explains 0,22% of the variation of the dependent variable Debt Ratio. The Durbin-Watson coefficient is 0,205.

Mocanu (2009) analyzed the correlations between the degree of indebtedness and the Return on Assets (ROA) and Return on Equity (ROE) indicators of Romanian wholesale companies, concluding that there is no significant correlation between the analyzed indicators. Some authors argue that the degree of indebtedness must be correlated with the structure of capital and its origin (Majumdar et al. 1999; Margaritis, et al 2007). If we refer to our study, companies come from different backgrounds and the structure of capital is different, so there are major differences in the correlations between the degree of indebtedness and the performance of companies. Iavorskyi (2013) analyzed the relationship between the structure of capital and the performance of companies, on a sample of 16,500 companies in Ukraine, from the perspective of performance indicators, especially the degree of indebtedness. The results of the research

highlighted the idea that the degree of indebtedness negatively affects the performance of the company.

Table no. 3 ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
BRAZIL						
1	Regression	599843.726	4	149960.932	316.481	.000[b]
	Residual	18953.571	40	473.839		
	Total	618797.298	44			
a. Dependent Variable: TL/ TA						
b. Predictors: (Constant), EBITDAG, ROA, TSE/TA, CE/TA						
RUSSIA						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	18774.529	3	6258.176	18.275	.000[b]
	Residual	15067.356	44	342.440		
	Total	33841.885	47			
a. Dependent Variable: TL/TA						
b. Predictors: (Constant), EBITDAG, ROA, TSE/TA						
INDIA						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	293388.413	3	97796.138	924.214	.000[b]
	Residual	4867.511	46	105.815		
	Total	298255.924	49			
a. Dependent Variable: TL/TA						
b. Predictors: (Constant), EBITDAG, TSE/TA, ROA						
CHINA						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4041.450	4	1010.362	2.330	.070[b]
	Residual	19511.459	45	433.588		
	Total	23552.909	49			
a. Dependent Variable: TL/TA						
b. Predictors: (Constant), EBITDAG, ROA, CE/TA, TSE/TA						
SOUTH AFRICA						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	849.241	4	212.310	.258	.903[b]
	Residual	37077.791	45	823.951		
	Total	37927.032	49			
a. Dependent Variable: TL/TA						
b. Predictors: (Constant), EBITDAG, ROA, CE/TA, TSE/TA						

Source: developed by the author using IBM SPSS Statistics, version 26

According to the above table, the value of the Fisher coefficient for the reported indicators by Brazilian entities is F= 316,481. It is observed that the Sig. for the F-test is less than 0.05, therefore the built pattern explains the significant dependence between the variables analyzed by a multiple linear link. The same idea is also contained in the model that was built for entities from India and South Africa, fact that explains and validates it. Regarding the applied model to entities from Russia and China, it is noted that the value of the Fisher coefficient is F= 18,275 and F = 2,330, the value of the Sig. for the F-test being lower than 0.05, which means that the obtained model explains the significant linear dependence between the analyzed variables by a multiple linear link.

Table no. 4 Regression coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
BRAZILIA						
1	(Constant)	93.710	3.502		26.758	.000
	ROA	.080	.136	.025	.589	.559
	CE/TA	.099	.120	.042	.830	.412
	TSE/TA	-1.039	.050	-1.016	-20.775	.000
	EBITDAG	-.013	.024	-.025	-.561	.578
a. Dependent Variable: TL/ TA						
RUSIA						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	79.882	5.655		14.125	.000
	ROA	-.053	.104	-.053	-.512	.611
	TSE/TA	-.688	.102	-.705	-6.771	.000
	EBITDAG	.088	.073	.122	1.203	.236
a. Dependent Variable: TL/TA						
INDIA						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	97.661	1.632		59.833	.000
	ROA	-.001	.004	-.004	-.218	.828
	TSE/TA	-1.001	.019	-.991	-52.564	.000
	EBITDAG	.000	.001	-.005	-.279	.782
a. Dependent Variable: TL/TA						
CHINA						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	39.091	9.345		4.183	.000
	ROA	-.001	.002	-.115	-.789	.434
	CE/TA	.756	.288	.881	2.628	.012
	TSE/TA	-.875	.374	-.798	-2.342	.024
	EBITDAG	.007	.007	.150	1.065	.293
a. Dependent Variable: TL/TA						
SOUTH AFRICA						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	20.688	8.766		2.360	.023
	ROA	-.142	.286	-.075	-.495	.623
	CE/TA	.043	.313	.034	.137	.892
	TSE/TA	-.136	.320	-.107	-.426	.672
	EBITDAG	.009	.016	.081	.540	.592
a. Dependent Variable: TL/TA						

Source: developed by the author using IBM SPSS Statistics, version 26

Based on regression coefficients, we can determine the estimated equation of the multiple linear regression model for each group of entities in BRICS countries.

a) Brazil

$$TL/TA = 93,710 + 0,080\ ROA + 0,099\ CE/TA - 1,039\ TSE/TA - 0,013\ EBITDAG$$

The correlation indicators show that the indebtedness of Brazilian entities is influenced by the variables Total Shareholder Equity/ Total Assets (TSE/TA), Equity Ratio (CE/TA), Return on Assets (ROA), Earnings Before Interest, Taxes, Depreciation, and Amortization Growth (EBITDAG). A significant influence the level of indebtedness is the variable Total Shareholder Equity/ Total Assets (TSE/TA), the significant correlation being explained by the fact that these indicators have as common denominator the total asset variable. The increase in the value of the Total Shareholder Equity/ Total Assets (TSE/TA) indicator will lead to a decrease of the value of the entity's indebtedness.

b) Rusia

The estimated equation of the multiple linear regression model for the assessment and analysis model of the reported indicators by entities from Russia presents as it follows:

$$TL/TA = 79,882 - 0,053\,ROA - 0,688\,TSE/TA - 0,088\,EBITDAG$$

Based on the equation above, we conclude that the variable that has a significant influence on the level of indebtedness is Total Shareholder Equity/ Total Assets (TSE/TA and the smallest influence is given by the Return on Assets (ROA) variable.

c) India

The model coefficients are given in Table 4 on the basis of which the estimated equation of the multiple linear regression model is outlined:

$$TL/TA = 97,661 - 0,001\,ROA - 1,001\,TSE/TA - 0,000188\,EBITDAG$$

As in previous models, we see that the indebtedness of companies in India is influenced by the value of the relationship between Total Shareholder Equity/ Total Assets (TSE/TA). Increasing the equity ratio will determine a decrease fo the company's level of indebtedness.

d) China

According to the regression coefficients in Table 4, the estimated equation of the multiple linear regression model for the analysis model regarding the reported indicators by entities from China presents as it follows:

$$TL/TA = 39,091 - 0,001\,ROA + 0,756\,CE/TA - 0,875\,TSE/TA + 0,007\,EBITDAG$$

The indebtedness of Chinese companies is 87% influenced by the equity ratio. The Return on Assets (ROA) and Earnings Before Interest, Taxes, Depreciation, and Amortization Growth (EBITDAG) indicators have a minor influence on the level of indebtedness. The increase of the Earnings Before Interest, Taxes, Depreciation, and Amortization Growth (EBITDAG) and Return on Assets (ROA) factors will lead to increased indebtedness.

e) *South Africa*

For the assessment and analysis model of the reported indicators by South African entities, the linear regression equation presents as:

$$TL/TA = 20,688 - 0,142\ ROA + 0,043\ CE/TA - 0,136\ TSE/TA + 0,009\ EBITDAG$$

According to the regression coefficients, the level of indebtedness is significantly influenced by the Return on Assets (ROA) factor by 14%, followed by the equity ratio indicator with 13%. The Earnings Before Interest, Taxes, Depreciation, and Amortization Growth (EBITDAG) indicators have insignificant influence on the level of indebtedness.

Table no. 5 Residuals Statistics[a]

	Minimum	Maximum	Mean	Std. Deviation	N
BRAZIL					
Predicted Value	17.4384%	550.2496%	106.5590%	116.75963%	45
Residual	-91.70560%	12.66370%	0.00000%	20.75483%	45
Std. Predicted Value	-.763	3.800	.000	1.000	45
Std. Residual	-4.213	.582	.000	.953	45
a. Dependent Variable: TL/ TA					
RUSSIA					
	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	1.5585%	85.8313%	44.7280%	19.98645%	48
Residual	-79.38618%	21.39218%	0.00000%	17.90481%	48
Std. Predicted Value	-2.160	2.057	.000	1.000	48
Std. Residual	-4.290	1.156	.000	.968	48
a. Dependent Variable: TL/TA					
INDIA					
	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	-2.0753%	462.5188%	63.9297%	77.37906%	50
Residual	-68.42207%	2.46603%	0.00000%	9.96679%	50
Std. Predicted Value	-.853	5.151	.000	1.000	50
Std. Residual	-6.652	.240	.000	.969	50
a. Dependent Variable: TL/TA					
CHINA					
	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	0.8189%	38.6688%	28.8956%	9.08177%	50
Residual	-37.02304%	42.78848%	0.00000%	19.95478%	50
Std. Predicted Value	-3.092	1.076	.000	1.000	50
Std. Residual	-1.778	2.055	.000	.958	50
a. Dependent Variable: TL/TA					
SOUTH AFRICA					
	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	11.6641%	31.0946%	18.0418%	4.16311%	50
Residual	-31.09456%	73.30600%	0.00000%	27.50799%	50
Std. Predicted Value	-1.532	3.135	.000	1.000	50
Std. Residual	-1.083	2.554	.000	.958	50
a. Dependent Variable: TL/TA					

Source: Author's using IBM SPSS Statistics version 26

The Residuals Statistics table shows us about the residue, the minimum and the maximum values of the residue being the most important. The lowest value of the residue for the model used to measure and analyze the indicators reported by Brazilian entities is -91.70% and the highest value is 12.66370%. For indicators of entities from Russia, the lowest value of the residue is -79.38% and the highest value is 21.39%. The highest residual value in the model that was used to assess and analyze the reported indicators of the Indian entities is 2.46603% and the lowest is -68.42%. For the model that was applied on the entities from China and South Africa, the lowest residual value is 37.02% and 31.09% and the highest residual value is 42.78% and 73.30600%.

Conclusions

The enterprise management has always been looking for profit and business sustainability and in order achieve this, it is imperative to have control over indebtedness and other performance indicators which are of interest for stakeholders.

Following the analysis of the correlations between the debt ratio (level of indebtedness) and the ROE indicators, EBITDAG and the equity ratio of the analyzed entities from the emerging BRICS economies, we can conclude that in order to keep the level of indebtedness as low as possible, they must implement strategies that generate asset growth - especially current assets - that lead to the generation of cash flow, offering the possibility to pay off their debts at maturity. In contrast, the ROA and EBITDAG indicators show an insignificant positive relationship with the debt ratio, being directly associated with the performance of the company. In this idea, it is highlighted that entities from the emerging BRICS economies should minimize indebtedness and maximize their contributions to increase the equity ratio.

Being an important indicator in the prediction of bankruptcy and in the assessment of the inherent risk, management should pay particular attention to the debt ratio indicator. The investors will always be concerned to evaluate this indicator in order to secure their investments and to minimize losses. In general, the performance of the companies from the emerging BRICS economies is influenced by: the debt ratio, the equity ratio, the level of foreign investment flows, liquidity, solvency, etc.

From our study we can notice that the degree of indebtedness has a negative impact on the company's profitability. The degree of indebtedness is an important indicator for the company, the loans must help the company to increase its level of performance or in other words profitability.

This study should be improved by adding more evaluation indicators, as we noticed that for the entities from China and South Africa the selected indicators did not have a significant influence on the level of indebtedness. At the same time, some authors, such as Himmelberg et al. (1999), directs the research spectrum on the analysis of the company's performance in correlation with the property structure (the company's shareholders, the source of capital, foreign investors, etc.).

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