EVALUATION AND ANALYSIS OF THE IMPACT OF CAPITAL STRUCTURE ON THE PERFORMANCE OF INDUSTRIAL COMPANIES IN IRAN

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Abstract

The authors aim to examine the impact of capital structure on the performance of food and beverage companies listed on the stock exchange in Iran. The paper investigates the different effect of capital structure on firm performance in food and beverage companies listed on the Iran stock market. The panel data of research sample includes 31 food and beverage processing companies listed on the Iran stock market for a period of 5 years, from 2019 - 2023. Through the FGLS model, the study found that the ratio of short-term debt to total assets (STDA) and the ratio of long-term debt to total assets (LTDA) have a negative impact on the performance expressed through return on assets (ROA). The two control variables GROWTH and SIZE both have a positive impact on ROA and return on equity (ROE). Based on findings, some recommendations for food and beverage companies to enhance their profitability in the future.

Keywords: Capital Structure, Firm Performance, food and beverage, ROA, ROE.

1. Introduction

Food and beverage are a promising industry with great investment prospects in the Iran market since it leads to socio-economic growth. The sector has always made a significant contribution to the country's economic progress, establishing itself as a core industrial group and the country's major export industry. Capital structure is one of the important decisions in the field of corporate finance and refers to the way that a company finances its assets by combining liabilities and equity. Listed companies have the basic characteristic that different shareholders, thus forming the company's ownership structure, own equity capital. Determining capital structure is a crucial decision for any business because the ideal capital structure is the basis for creating a balance between risk and return, from that, the company can design strategies to optimize stock prices while minimizing the cost of capital. Therefore, it is very necessary to question the effect of capital structure on the performance of enterprises in Iran at the present time. The study of the impact of ownership structure on firm performance is a necessary research topic. The objective of this study is to find evidences on the relationship between capital structure and performance of food and beverage companies listed on the Iran stock market and present recommendations to state management agencies, business managers and related parties.

Abor (2005) studies the relationship between capital structure and performance across 22 companies on the GSE stock exchange in the period from 1998 to 2002. The author uses common variables to clarify the relationship between capital structure and operating performance including return on equity (ROE) which represents the profitability performance of the business, while equity is expressed through short-term debt to total assets ratio (SDTA),

long-term debt to total assets ratio (LDTA) and total debt to total assets ratio (TDTA). The results show that there is a positive relationship between capital structure and the profitability of enterprises.

Tran Hung Son and Tran Viet Hoang (2008) examined the relationship between capital structure and corporate performance using accounting data from a sample of 50 non-financial companies listed on HOSE in 2008. The results showed a clear and positive correlation between capital structure and company performance. On the other hand, when Tian & Zeitun (2007) examined the impact of capital structure on company performance in Jordan, using unbalanced panel data from 167 Jordanian companies during the period from 1989 to 2003, the results indicated that capital structure had a significantly negative impact on accounting-based performance indicators (ROE and ROA).

Huynh Anh Kiet (2010) studied the capital structure and performance of companies listed on HOSE in 2008 and also found that capital structure negatively affected the market-based performance of companies. However, some other authors found mixed results. For instance, Abor (2007) concluded that short-term debt and total debt had a statistically significant positive relationship with return on assets (ROA) while asserting a negative relationship between long-term debt and ROA.

Salim and Yadav (2012) conducted a study on the relationship between capital structure and firm performance on 237 companies listed on the stock exchange in Bursa Malaysia in 6 industries: construction, plantation, manufacturing. consumer products, industrial products, property, trade and services, 1995-2011. In this study, the author uses 4 profitability measures: ROE, ROA, Tobin's Q and EPS, the independent variable is identified as capital structure including long-term debt (LTD), short-term debt (STD) and total debt (TD). The results show that profitability, as measured by ROE, is negatively affected by TD, LTD and STD. In addition, LTD and STD have a significant negative effect on ROA in the plantation sector, but only TD has a negative effect on the consumer products industry. In general, the above studies suggest that capital structure has a negative impact on performance.

Doan Ngoc Phuc (2014) used two control variables, company size and growth opportunities, when studying the impact of capital structure on corporate performance and found a statistically significant positive relationship between these variables and the business performance of post-privatization companies in Iran.

Ramadan and Ramadan (2015) identified the effect of capital structure on the performance of 72 companies listed on the Amman Stock Exchange during the period between 2005 and 2013. The authors used ROA as a measure of profitability and the ratios of LDTA and TDTA as indicators of capital structure. Applying OLS regression, the authors stated that debt ratios are negatively related to performance.

The study by Tran Thi Bich Ngoc & Pham Hong Trang (2016), using data from 68 companies listed on HOSE during the period from 2009 to 2013, indicated that except for the long-term debt to total assets ratio, the remaining factors in the capital structure had a negative impact on corporate performance.

Dada & Ghazali (2016) used data from companies listed on the Nigerian stock exchange, showing that capital structure, including debt ratios and tangible assets, significantly affects corporate performance. Specifically, a high debt ratio may lead to increased financial risk, reducing performance, while tangible assets help mitigate risk for creditors and enhance asset value in the event of liquidation. Additionally, companies with unstable cash flows tend to use less debt in their capital structure compared to companies with more stable earnings.

Tran Thi Bich Ngoc et al (2017) investigated a study with 130 joint- stock companies in the province in the past year period 2010 - 2014. The authors use measures for corporate performance as ROE, ROA and EPS. The total debt/total assets ratio represents the capital structure. Control variables as firm size (SIZE), revenue growth opportunity (GROWTH) and asset structure (AST) are also included in the model. The results show that capital structure represented by the ratio of TDTA has a negative impact on performance, firm size has a positive effect on ROA and EPS while GROWTH and AST have the same effect. Inversely to the performance represented by ROE and ROA.

Nguyen Hoang Thai & Nguyen Hoang Thien Son (2021) was concluded that the debt-to-equity ratio can affect corporate performance. A high debt ratio may lead to high financial costs and increased financial risk, negatively affecting performance. Conversely, effective debt management can help optimize capital and enhance performance. Additionally, the report pointed out that large companies with higher tangible assets tend to have better access to long-term debt, which allows them to better cope with liquidity crises and other financial risks.

Bui Vinh Thanh (2022) using data from 87 companies listed on the HOSE from 2009 to 2019, showed that an unreasonable capital structure significantly impacts corporate performance. If a company relies entirely on equity, it may not be competitive with other competitors in terms of scale and profitability, and the company's value may not increase. On the other hand, if too much debt is used with high interest costs, it will reduce the company's profitability.

|Linh et al (2022) analyzed the relationship between capital structure (debt-to-equity ratio) and company performance (based on indicators such as ROA, ROE, and ROI). Factors such as company size, growth, and liquidity were also considered in the research model. The study indicated that the impact of capital structure on company performance is not uniform, with the effect of debt on performance varying depending on the debt level and specific circumstances of each company.

Phuong & Tu (2022) evaluated the impact of factors related to capital structure on the business results of 24 companies in the steel industry listed on the Vietnam stock exchange during the period from 2011 to 2021. The results showed that the short-term debt ratio (STD) and the fixed asset investment growth rate (FAIG) negatively affected the ROE. Additionally, increasing revenue growth, total assets, and company size while maintaining an appropriate debt ratio in the capital structure will help companies increase the ROE.

3. Research Methodology

3.1 Hypothesis Development

Liabilities can be categorized into short-term debts and long-term debts. Theoretically, companies using short-term debts must regularly replicate the cycle of repaying old debts and borrowing new ones. Short-term debts are sensitive to market interest rates, causing instability in the use of capital. On the other hand, interest rates of long-term debt are more stable. Abor (2005), Arbabiyan and Safari (2009) found a positive correlation between the ratio of SDTA and business performance and an inverse correlation between the ratio of LDTA and business outcomes (measured by ROE). Meanwhile, Chang, Wang, Lee, and La (2014) discussed the ratio of SDTA is negatively related to ROE while long-term debt is statistically insignificant to ROE. Prahalathan and Ranjani (2011) concluded the ratios of SDTA, LDTA and TDTA are insignificant to both ROE and ROA. Khan (2012) suggested the ratios of SDTA, LDTA and TDTA are weakly related to ROE. In the context of Iran, in order to determine the relationship between short-term debt and long-term debt to business performance, the following two hypotheses are formulated:

H1: The ratio of short-term debt to total assets (SDTA) has a negative effect on profitability (ROA, ROE).

H2: The ratio of long-term debt to total assets (LDTA) has a negative effect on profitability (ROA, ROE).

Besides that, the authors also include a number of control variables to control the impact of independent variables including growth rate (GROWTH) and company size (SIZE). Firms with high growth rates are more profitable as firms can generate more profits from their investment portfolios (Zeitun and Tian, 2007). Besides, the size of the company (SIZE) has a positive effect on the profitability of the company because bankruptcy costs will be reduced due to the size of the business. Therefore, we have the hypothesis:

H3: Firm size has a positive effect on profitability (ROA, ROE).

H4: Growth rate has a positive effect on profitability (ROA, ROE).

3.2 Data Collection

Research data is based on enterprises in the food and beverage industry listed on the Iran Stock Exchange. The data in the article are secondary data extracted from the audited consolidated financial statements of 31 listed food and beverage companies listed in Iran over a 5-year period from 2019-2023, provided by Fiin Group JSC. The data collected from the above 31 enterprises ensures that there are no data gaps in any year and also contain no outliers. Thus, the authors obtained a balanced panel data consisting of 155 observations.

3.3 Research Model

The impact of capital structure on firm performance is shown in the following two models:

(1) $ROA_{it} = \alpha_0 + \beta_1(SDTA_{it}/LDTA_{it}/TDTA_{it}/TDTE_{it}) + \gamma_1 SIZE_{it} + \gamma_2 GROW_{it} + \varepsilon_{it}$

(2) $ROE_{it} = \alpha_0 + \beta_1(SDTA_{it}/LDTA_{it}/TDTA_{it}/TDTE_{it}) + \gamma_1 SIZE_{it} + \gamma_2 GROW_{it} + \varepsilon_{it}$

The obtained panel data are balanced. The authors use multiple regression analysis for panel data to determine the direction and extent of the impact of capital structure on the performance of processing and manufacturing enterprises over time.

Unlike most of the previous researches, to avoid the case that the model is missing variables that affect the accuracy of the results, the research team performed a regression analysis of a model including the ratio of short-term debt and long-term debt on; the ratio of total debt to total assets will not be included in the model to eliminate the phenomenon of autocorrelation and multicollinearity between variables. The main models of the study are presented as follows:

Table 1: Measurement of variables

Variables	Symbol	Description
Profitability	ROA	Net profit after tax/ Total assets
	ROE	Net profit after tax/ Total Equity
Capital Structure	STDA	Short-term debt/Total assets
	LTDA	Long-term debt/Total assets
	TDTA	Total debt/Total assets
	TDTE	Total debt/Total equity
Control Variables	GROWTH	Annual revenue growth
	SIZE	Ln (Total assets)

Data are entered into STATA software to conduct regression analysis, based on the panel data regression method with the approach of all three models including: Pooled OLS model, fixed effect model (FEM), model random effects (REM). Then, the F-test and Hausman test were performed to select the most suitable model among the three models above. In case the selected model does not satisfy the tests of heteroskedasticity and autocorrelation, FGLS regression will be applied to overcome the defects of the model.

4. Empirical Result

4.1 Data Description and Summary

The research group will present descriptive statistics on data collected from food and beverage listed companies for the period from 2019 to 2023. Companies that are under-observed in a given year in the dataset had been removed, the final result is 31 companies with full 5-year data from 2019 to 2023. Thus, the dataset

has a total of 155 observations. The research team will start with descriptive statistics for the aforementioned companies.

Table 2: Summary Statistic

Variables	Observations	Average	Standard deviation	Min	Max
ROA	155	0.074999	0.079935	-0.282280	0.338142
ROE	155	0.115072	0.161801	-1.178607	0.481064
TDTA	155	0.425665	0.190199	0.033622	0.981103
TDTE	155	1.326421	4.211032	0.034792	51.91954
SDTA	155	0.360316	0.149767	0.027572	0.941429
LDTA	155	0.065349	0.092167	0.000000	0.447842
GROWTH	155	0.0183	0.1912	-0.8420	1.4358
SIZE	155	1.20e+13	2.39e+13	1.27e+10	1.47e+14

Source: Stata results

From Table 2 statistics of variables, we see that the ROA of the companies are on average 7.49%, with the lowest is -28.2%, the highest is 33.7% and the standard deviation is 7.99%. ROE of the companies is on average 11.5%, with the lowest is -117.8%, the highest is 48.1% and the standard deviation is 16.18%. Short- term debt (SDTA) has an average of 36.03%, with the lowest being 2.75%, the highest being 94.14%. Long-term debt (LDTA) has an average of 6.53%, with the lowest being 0.00%, the highest being 44.78%. From this descriptive statistics table, we see that food and beverage listed companies in Iran use a lot of short-term debt in their capital structure while using little long-term debt. In addition, Table 2 also shows that the growth rate (GROWTH) has an average of 1.83%, with the lowest being -84.20%, the highest being 143.58%.

The research team examines the correlation between each relationship shown. The statistical results describing the matrix of correlation coefficients between the variables are shown in the table below:

Table 3: Matrix correlation

	TDTE	TDTA	LDTA	SDTA	ROA	ROE	Size	GROWTH
				Correlation				
TDTE	1.0000							
TDTA	0.4224	1.0000						
LDTA	0.1096	0.6343	1.0000					
SDTA	0.4690	0.8796	0.1902	1.0000				
ROA	-0.1776	-0.4674	-0.4490	-0.3172	1.0000			
ROE	-0.0872	-0.2914	-0.3311	-0.1663	0.8850	1.0000		
Size	0.0498	0.3003	0.5890	0.0189	-0.0269	0.0491	1.0000	
GROWTH	0.0327	0.2176	0.4623	0.0243	0.3452	0.0726	0.0231	1.0000

Source: Stata results

In Table 3, it can be seen that there exists a correlation between the variables, specifically some prominent pairs of variables such as:

- Negative correlation between variables: ROA and SDTA, ROA and LDTA, ROA and TDTE, ROA and TDTA, ROE and SDTA, ROE and LDTA, ROE and TDTE, ROE and TDTA, SIZE and ROA.
- Positive correlation between variables: ROE and ROA, SIZE and ROE, GROWTH and ROA, GROWTH and ROE.

Table 4: Multicollinearity Test

Variable	VIF	1/VIF	Tolerance	Squared
TDTE	1.29	1.14	0.7758	0.2242
TDTA	2.15e+15	4.6e+07	0.0000	1.0000
LDTA	5.05e+14	2.2e+07	0.0000	1.0000
SDTA	1.33e+15	3.7e+07	0.0000	1.0000
ROA	6.05	2.46	0.1652	0.8348
ROE	5.10	2.26	0.1959	0.8041
Size	1.73	1.32	0.5764	0.4236
GROWTH	1.03	1.08	0.926614	0.974466

Source: Stata results

Table 4 shows that the values of the variance inflation factor (VIF) are all less than 10, so the research variables in the model do not have multicollinearity with each other.

4.2 Regression Analysis Result

After performing the necessary tests, the research team selected FGLS as the most effective and unbiased regression model. Analyzing the impact of capital structure on corporate performance by book value.

Table 5: The impact of capital structure on ROA

*** Significance level 1% (p < 0.01) ** 5% significance level (p < 0.05) * Significance level 10% (p < 0.1)

Variables	Dependent variable: ROA
	FGLS
SDTA	-0.1133*** (-10.81)
LDTA	-0.0433** (0.0667)
TDTE	-0.000766* (0.000429)
TDTD	-0.00964** (0.0673)
SIZE	0.00634*** (5.11)
GROWTH	0.00936** (2.66)
_cons	0.106*** (0.0272)
Number of observations	155
R-square	0.060

Source: Stata results

Table 5 shows that all variables of SDTA, LDTA, TDTA, TDTE, SIZE and GROWTH have equally significant effects on the ROA of enterprises in the food and beverage industry in Iran with the regression coefficients reaching the significance level of 1% and 5%.

From there, the regression equation for the impact of capital structure on the performance of food and beverage enterprises in Iran is presented below:

$$ROA = 0.106 - 0.1133*SDTA - 0.0433*LDTA - 0.000766*TDTE$$
$$- 0.00964*TDTA + 0.00634*SIZE + 0.00936*GROWTH$$

The coefficient of the SDTA variable is -0.1133, which has a negative effect on the dependent variable ROA. Similar to SDTA, the ratio of LDTA, TDTE, TDTA negatively affects the performance of the firm at book value with a regression coefficient of -0.0433, -0.000766, -0.00964. The variable firm size (SIZE) and growth opportunity (GROWTH) both have a positive effect on the dependent variable ROA with the regression coefficients of 0.00634 and 0.00936, respectively.

Analyze the impact of capital structure on business performance according to ROE

Table 6: The impact of capital structure on ROE

*** Significance level 1% (p < 0.01) ** 5% significance level (p < 0.05) * Significance level 10% (p < 0.1)

Variables	Dependent variable: ROE
	FGLS
SDTA	- 0.0025*** (0.811)
LDTA	-0.00316** (0.283)
TDTE	-0.000789** (0.00158)
TDTA	-0.0188** (0.281)
SIZE	0.0799** (5.411)
GROWTH	0.0829** (2.766)
_cons	0.176* (0.103)
Number of observations	155
R-square	0.033

Source: Stata results

Equation to estimate the regression from the impact of capital structure on the performance of food and beverage enterprises in Iran:

$$ROE = 0.176 - 0.0025*SDTA - 0.00316*LDTA - 0.000789*TDTE$$
$$- 0.0188*TDTA + 0.0799*SIZE + 0.0829*GROWTH$$

The coefficient of the SDTA, LDTA, TDTE, TDTA explanatory variable are - 0.0025, -0.00316, -0.000789, -0.0188. They have a negative and obvious effect on the ROE. The variable enterprise size and growth opportunity have the same effect on the dependent variable Tobin's Q with the regression coefficients of 0.0799 and 0.0829, respectively.

5. Discussion

- Short-term debt to total assets ratio

After conducting the test, the regression coefficient obtained by the FGLS model method shows that the short-term debt to total assets (SDTA) has a negative impact on ROA, ROE. The results are consistent with the economic significance because the ROA, ROE variable in the study is measured by the ratio of profit after tax to total assets, so ROA, ROE is negatively affected by interest. The use of loan interest contributes to reducing the numerical element (profit after tax) but does not bring benefits to the denominator (total assets) of the ROA, ROE indicator. The negative effect of short-term debt on book value (ROA, ROE) in the study is also consistent with the pecking order theory of Myers & Majluf (1984) and is supported by results from previous studies. by Abor (2007), Ghafoor Khan (2012), Zeitun & Tian (2007), Vătavu (2015).

-     Long-term debt to total assets ratio

The results estimated by FGLS model show that, at the 1% significance level, the impact of long- term debt to total assets (LDTA) on a firm's ROA, ROE is inverse. This can be explained by the fact that in Iran the benefit of the debt tax shield is outweighed by the cost of using long-term debt. Therefore, when enterprises use long-term debt, they will incur costs of financial diffculties, liquidity costs, bankruptcy costs, etc., so the negative impact of long-term debt on ROA, ROE, a measure of business performance, is consistent with market realities. This result supports the previous work of Abor (2007), Zeitun & Tian (2007), Saeed et al (2013), Nguyen & Nguyen (2020).

-     Growth rate

Regression results obtained from Pooled OLS show the positive impact of growth rate index measured by growth rate of revenue (GROWTH) on book value (ROA, ROE) of food and beverage listed companies. This result is reasonable and makes economic sense because the high revenue growth rate is a sign of an enterprise on the verge of expanding the market. This will create opportunities for making high profits. Some previous studies of Abor (2007), Zeitun & Tian (2007), Nguyen & Nguyen (2020) have also tested and tested the positive impact of revenue growth on ROA, ROE.

-     Firm size

The results show that the enterprise size index measured by the natural base logarithm of total assets (SIZE) has a positive impact on the book value (ROA, ROE) of companies in the processing - manufacturing industry. This shows that economies of scale increase. In the research samples, it can also be seen that the enterprises selected to extract data for research have significant diversity and differences in size, large-scale enterprises operate more efficiently than other enterprises in smaller-scale industry.

6. Recommendation

From the research results, it can be seen that the increase in debt use will cause harm to the efficiency of the enterprise, only increasing the ratio of short-term debt to total assets will not affect the value of the business. industry in the market. Based on that result, the authors have the following recommendations for food and beverage listed companies:

Firstly, food and beverage listed companies need to limit mobilizing capital through debt to improve their profitability as well as their market value. Prioritize financing for investment, production and business activities with short-term debt sources over long-term debt.

Second, food and beverage listed companies' managers need to improve management capacity, regularly monitor the situation of the capital structure of the enterprise and take reasonable risk prevention measures.

Third, food and beverage listed companies need to avoid forms of mobilization and use of loans but do not increase total assets. This form can be mentioned as issuing more bonds, borrowing debt to restructure old debts due or to buy back corporate shares. This not only destabilizes the liquidity of the enterprise, increases the debt ratio in the total capital structure, and affects the efficiency of the enterprise; but is not compensated by the positive impact of an increase in asset size on performance (according to the team's research results).

Fourth, food and beverage listed companies need to improve their management, production and business capacity to expand their market scope and boost revenue growth. Actively increasing exports and accessing foreign markets is one of the main driving forces for firms in the food and beverage industries to improve income. Iran has been a participant in and implementer of free trade agreements, assisting in the removal of tariff barriers for Iran goods exported to potential markets such as Europe, Australia, and Japan, among others. This has resulted in increased opportunities for domestic goods to access international markets with more favorable terms, promoting revenue growth opportunities.

7. Conclusion

In conclusion, through the data of 31 food and beverage companies listed on the Iran stock exchange from the period 2019 - 2023, the research team has investigated the impact of capital structure on performance. By using the FGLS model, the results show that there is a negative relationship between STDA, LTDA and ROA. Besides, two control variables GROWTH and SIZE have a positive effect on ROA and Tobin's Q. The study would useful for food and beverage companies in Iran to effectively manage their capital structure and increase profits. In addition, the author also gives recommendations to the government, state agencies and banks to increase profits for food and beverage listed companies in Iran.

References

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

2. Abor, J. (2007). Debt policy and performance of SMEs: Evidence from Ghanaian and South

3. African firms. *Journal of Risk Finance*, 8(4), 364-379. https://doi.org/10.1108/ 15265940710777315

4. Baltagi, B. H., & Baltagi, B. H. (2008). Econometric analysis of panel data (Vol. 4). Chichester: John Wiley & Sons.

5. Berzkalne, I. (2015). Company's Capital Structure and Value: a Panel Threshold Regression Analysis. *Applied Economics: Systematic Research*, 9(1), 77-94.

6. Bui. V. T, & Nguyen. T. N. D. (2016). Capital structure impact to operational efficiency of the company on the stock market Vietnam. *Journal of Science of Lac Hong University*, 5, 95- 100. Retrieved from https://lachong.edu.vn/Data/News/383/files/17_Van_Thuy_Ngoc_Diep.pdf

7. Cole, C., Yan, Y., & Hemley, D. (2015). Does capital structure impact firm performance: An empirical study of three US sectors. *Journal of Accounting and Finance*, 15(6), 57-65. Retrieved from http://www.m.www.na-businesspress.com/JAF/ColeC_Web15_6_.pdf

8. Dare, F. D., & Olorunfemi, S. (2010). Capital structure and corporate performance in Nigeria petroleum industry: psanel data analysis. *Journal of Mathematics and Statistic*s, 6(2), 168-173. Retrieved from https://www.researchgate.net/publication/49590100_Capital_Structure_and_Corporate_Performance_in_Nigeria_Petroleum_Industry_Panel_Data_Analysis

9. Doan Ngoc Phuc (2014), Ảnh hưởng của cấu trúc vốn đến hiệu quả hoạt động kinh doanh của doanh nghiệp sau cổ phần hóa ở Việt Nam, *Những vấn đề Kinh tế và Chính trị thế giới*, 7(219), 72-80.

10. Ebaid, I. E. S. (2009). The impact of capital-structure choice on firm performance: empirical evidence from Egypt. *The Journal of Risk Finance*, 10(5), 477-487. https://doi.org/10.1108/ 15265940911001385

11. Fama, E. F., & French, K. R. (2002). Testing trade-off and pecking order predictions about dividends and debt. *The Review of Financial Studies*, 15(1), 1-33. https://doi.org/10.1093/ rfs/15.1.1

12. Gallegos Mardones, J., & Ruiz Cuneo, G. (2020). Capital structure and performance in Latin American companies. *Economic research-Ekonomska istraživanja*, 33(1), 2171-2188. https://doi.org/ 10.1080/1331677X.2019.1697720

13. Hadi, A. R. A. (2017). Capital Structure Theories and Firm's Value-Evidence from Bursa Malaysia Construction Sector. *International Journal of Business and Management*, 12(9), 163-172. https://doi.org/10.5539/ijbm.v12n9p163

14. Huynh Anh Kiet, (2010), Capital structure and firm performance: case study: listed companies in hochiminh stock exchange, *Master thesis*.

15. Igbinosa, S. (2015). Another look at capital structure and corporate performance in emerging markets: the case of Nigeria. *Asian Journal of Business Management*, 7(1), 1-12. Retrieved from https://www.researchgate.net/profile/Sunday-Igbinosa2/publication/322727699_Another_Look_at_Capital_Structure_and_Corporate_Performance_in_Emerging_Markets_The_Case_of_Nigeria/links/5eeaaf5c92851ce9e7ec74fd/Another-Look-at-Capital-Structure-and-Corporate-Performance-in-Emerging-Markets-The-Case-of-Nigeria.pdf

16. Khan, A. G. (2012). The relationship of capital structure decisions with firm performance: A study of the engineering sector of Pakistan. *International Journal of Accounting and Financial Reporting*, 2(1), 245.

17. Maina, L., & Ishmail, M. (2014). Capital structure and financial performance in Kenya: Evidence from firms listed at the Nairobi Securities Exchange. *International Journal of Social Sciences and Entrepreneurship*, 1(11), 209-223. Retrieved from http://www.ijsse.org.

18. Margaritis, D. and Psillaki, M. (2007). Capital Structure and Firm Efficiency. *Journal of Business Finance & Accounting,* 34(9-10), 1447-1469.

19. Myers, S. C. (2001). Capital Structure. *Journal of Economic Perspectives,* 15(2), 81-102;

20. Muritala, T. A. (2012). An empirical analysis of capital structure on firms' performance in Nigeria. *International Journal of Advances in Management and Economics*, 1(5), 116- 124. Retrieved from https://www.managementjournal.info/index.php/IJAME/article/view/214/207

21. Nawaz, A., Ali, R., & Naseem, M. A. (2011). Relationship between capital structure and firms performance: A case of textile sector in Pakistan. *Global Business and Management Research*, 3(3/4), 270. Retrieved from https://www.researchgate.net/publication/319980982_Relationship_between_capital_structure_and_firms_performance_a_case_of_Textile_sector_in_Pakistan

22. Nguyen, T. H., & Nguyen, A. H. (2020). The impact of capital structure on firm performance: Evidence from Vietnam. *The Journal of Asian Finance, Economics and Business*, 7(4), 97-105. https://doi.org/10.13106/jafeb.2020.vol7.no4.97

23. Rajhans, R. K. (2013). Financial determinants of firm's value: evidence from Indian firms. *ZENITH International Journal of Business Economics & Management Research*, ISSN, 2249-8826, 3(5), 70-76. Retrieved from https://ssrn.com/abstract=2305950

24. Saeed, M. M., Gull, A. A., & Rasheed, M. Y. (2013). Impact of capital structure on banking

25. performance (A case study of Pakistan). *Interdisciplinary Journal of Contemporary Research in Business*, 4(10), 393-403. Retrieved from https://journal-archieves28.webs.com/393-403.pdf

26. Saeedi, A., & Mahmoodi, I. (2011). Capital structure and firm performance: Evidence from Iranian companies. *International Research Journal of Finance and*

Economics, 70, 20-29. Retrieved from https://experts.umn.edu/en/publications/capital-structure-and-firm- performance -evidence-from-iranian-comp

27. Salim, M., & Yadav, R. (2012). Capital structure and firm performance: Evidence from Malaysian listed companies. *Procedia-Social and Behavioral Sciences*, 65, 156-166. https://doi.org/10.1016/j.sbspro.2012.11.105

28. San, O. T., & Heng, T. B. (2011). Capital structure and corporate performance of Malaysian construction sector. *International Journal of Humanities and Social Science*, 1(2), 28-36. Retrieved from http://www.ijhssnet.com/journals/Vol._1_No._2%3B_February_2011/3.pdf

29. Tran, T. B. N. (2016). IMPACT OF CAPITAL STRUCTURE ON FIRM PERFORMANCE OF PROCESSING & MANUFACTURING LISTED FIRMS ON HO CHI MINH STOCK EXCHANGE. *The University of Danang - Journal of Science and Technology*, 2(99), 43- 47.

30. Tran Hung Son and Tran Viet Hoang (2008), Capital structure and firm performance: case study in listed companies in Hochiminh stock exchange, *Journal of Economics Development*, 218.

31. Vătavu, S. (2015). The impact of capital structure on financial performance in Romanian listed companies. *Procedia Economics and Finance*, 32, 1314-1322. https://doi.org/10.1016/ S2212-5671(15)01508-7

32. Zeitun, R., & Tian, G. G. (2014). Capital structure and corporate performance: evidence from Jordan. *Australasian Accounting Business & Finance Journal, Forthcoming*. http://dx.doi.org/10.2139/ssrn.2496174