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Impact of Capital Structure on the Firm Performance of Listed Food and Beverage Firms in Vietnam

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Abstract:- This study examines the relationship between capital structure and firm performance of listed food and beverage firms in Vietnam. By using FEM and FEM methods with sample 325 of 47 listed firms in the period of 2013-2017. The research results show that the capital structure has negative influence on firm performance under control variable's firm size at the 1% significance level. From the above results, the research gives managerial implication to increase firm performance.

Keywords:- *Capital Structure, Firm Performance, Firm Size*

I. INTRODUCTION

Capital structure is a very important issue in the decision to finance capital and significantly affect the firm performance. This topic has been studied in many researches around the world such as Abor (2005) in Ghana; Ebaid (2009) in Egypt; Onaolapo & Kajola (2010) in Nigeria.

However, studies on the effect of capital structure on the performance of enterprises in transition economies like Vietnam are still limited. Therefore, this study was conducted to measure the impact of capital structure on the business performance, particularly for the listed companies in food and beverage industry in Vietnam.

II. THEORETICAL BASIS AND RESEARCH METHOD

❖ *Theoretical Basis*

➢ *Capital Structure*

The capital structure is the ratio of debt to equity, or the pie model. The cake size is the total value of the assets of the business, including debt and equity (Ross, Westerfield & Jaffe, 2017).

➢ *Firm Performance*

Firm performance is the level of achievement of planned goals (Mia & Clarke, 1999). In this study, firm performance is an effective measure when businesses use assets to generate revenue from business activities. This term is also used as a general measure of the overall financial health of a business for a certain period of time.

➢ *The Relationship between Capital Structure and Firm Performance*

There are controversial opinions about the relationship between capital structure and firm performance. Abor (2005) shows that the capital structure (debt / total assets) has a positive impact on ROE of 20 listed companies in Ghana (1998-2002). Meanwhile, Majumdar and Chhibber (1999) found capital structure to adversely affect the firm performance of 1,000 companies in India (1988-1994). Research by Gleason and Mathur (2000) also shows that capital structure affects the ROA of 14 countries in Europe.

Based on researches of Majumdar and Chhibber (1999) and Gleason and Mathur (2000), the author proposes a research model and hypothesis as Figure 1.

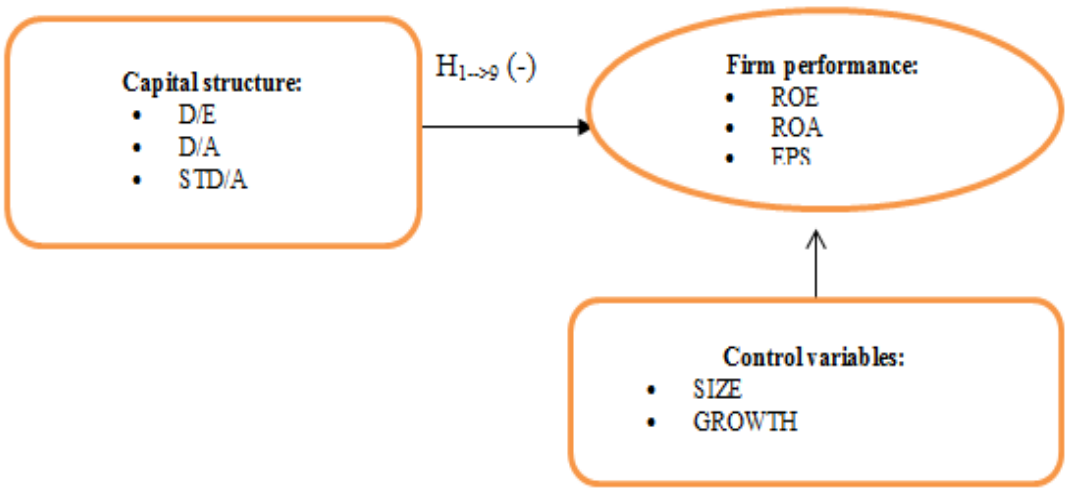

Fig 1:- Research Model

Summary of research hypotheses:

- *Hypothesis H1: DA has a negative effect on ROA;*
- *Hypothesis H2: SDTA has a negative effect on ROA;*
- *Hypothesis H3: DE has a negative effect on ROA;*
- *Hypothesis H4: DA has a negative effect on ROE;*
- *Hypothesis H5: SDTA has a negative effect on ROE;*
- *Hypothesis H6: DE has a negative effect on ROE;*
- *Hypothesis H7: DA has a negative effect on EPS;*
- *Hypothesis H8: SDTA has a negative effect on EPS;*
- *Hypothesis H9: DE has a negative effect on EPS;*

Estimated models are developed as follows:

- Model 1: $ROA = \beta_0 + \beta_1 DA + \beta_2 SIZE + \beta_3 GROWTH + \varepsilon$
- Model 2: $ROA = \beta_0 + \beta_1 SDTA + \beta_2 SIZE + \beta_3 GROWTH + \varepsilon$
- Model 3: $ROA = \beta_0 + \beta_1 DE + \beta_2 SIZE + \beta_3 GROWTH + \varepsilon$
- Model 4: $ROE = \beta_0 + \beta_1 DA + \beta_2 SIZE + \beta_3 GROWTH + \varepsilon$
- Model 5: $ROE = \beta_0 + \beta_1 SDTA + \beta_2 SIZE + \beta_3 GROWTH + \varepsilon$
- Model 6: $ROE = \beta_0 + \beta_1 DE + \beta_2 SIZE + \beta_3 GROWTH + \varepsilon$
- Model 7: $EPS = \beta_0 + \beta_1 DA + \beta_2 SIZE + \beta_3 GROWTH + \varepsilon$
- Model 8: $EPS = \beta_0 + \beta_1 SDTA + \beta_2 SIZE + \beta_3 GROWTH + \varepsilon$
- Model 9: $EPS = \beta_0 + \beta_1 DE + \beta_2 SIZE + \beta_3 GROWTH + \varepsilon$

❖ *Research Method*

This research used secondary data. This is tabular data from vietstock.vn, the leading online portal of finance and securities in Vietnam.

The research sample includes 47 listed companies in the food and beverage industry at the Ho Chi Minh City Stock Exchange (HOSE) and Hanoi Stock Exchange (HNX) in about 5 years (from 2013 to 2017), with a total of 47 * 5 = 235 observations. Therefore, the fixed effect model (FEM) and the random effect model (REM) have been used to analyze the data.

III. RESEARCH FINDINGS

The test results in Table 1 and Table 2 show that the models are not multicollinearity, but most are heteroscedasticity and autocorrelation. To overcome this problem, this study used Feasible Generalized Least Squares (FGLS).

	ROA	ROE	EPS	DA	SDTA	DE	SIZE	GROWTH
ROA	1.0000							
ROE	0.7513	1.0000						
EPS	0.7801	0.7005	1.0000					
DA	-0.4888	-0.2217	-0.2894	1.0000				
SDTA	-0.4190	-0.1934	-0.2262	0.8997	1.0000			
DE	-0.3451	-0.4501	-0.2855	0.6316	0.6262	1.0000		
SIZE	0.1619	0.1129	0.1743	0.1052	-0.1438	-0.0238	1.0000	
GROWTH	-0.0127	0.0314	-0.0017	0.0658	-0.0679	0.0078	0.1885	1.0000

Table 1:- Analysis of Correlation Coefficients

	Hausman test selects the method	Multicollinearity	Heteroscedasticity	Autocorrelation	To fix the model violation
Model 1	REM		X	X	Feasible Generalized Least Squares (FGLS)
Model 2	FEM		X	X	
Model 3	REM		X	X	
Model 4	REM		X		
Model 5	REM		X		
Model 6	FEM		X	X	
Model 7	REM		X	X	
Model 8	REM		X	X	
Model 9	REM		X	X	

Table 2:- Results of Accreditation of Estimated Models

The results presented in Table 3 indicate that DA, SDTA and DE have has negative effects on ROA with the estimated coefficients of -0.207, -0.171 and -0.0106 at 1% significance level under the regulation of firm size (SIZE). This finding is similar to previous studies, such as the study of Amara and Aziz (2014) on the negative impact of DE on ROA, and the study of Zeitun and Tian (2007) on the negative effect of SDTA and DA on ROA.

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Dependent variable: ROA	Model 1	Model 2	Model 3
DA	-0.207***		
SDTA		-0.171***	
DE			-0.0106***
SIZE	0.0113***	0.00594*	0.00832***
GROWTH	-0.00211	-0.00640	-0.00417
Constant	-0.138*	-0.0159	-0.139
Number of observations	235	235	235

Table 3:- Estimated Results after Fixing Model Violations

*Note: *, **, *** corresponding to 10%, 5% and 1%*

According to Table 4, DA, SDTA and DE have negative effects on ROE with the estimated coefficients of -0.205, -0.161 and -0.0297 at 1% significance level with the adjustment of firm size (SIZE). This finding is different from some previous studies, for example, Umar et al (2012) and Saedi & Mahmoodi (2011) have stated that capital structure has an insignificant impact on ROE.

Dependent variable: ROE	Model 4	Model 5	Model 6
DA	-0.205***		
SDTA		-0.161***	
DE			-0.0297***
SIZE	0.0147**	0.00947	0.0109*
GROWTH	0.00478	0.000625	0.00356
Constant	-0.177	-0.0622	-0.124
Number of observations	235	235	235

Table 4:- Estimated Results after Fixing Model Violations

*Note: *, **, *** corresponding to 10%, 5% and 1%*

The test results in Table 5 show that DA, SDTA and DE have negative effects on EPS with the estimated coefficients of -5090.9, -3518.3 and -354.7 at 1% significance level under the regulation of firm size (SIZE). This finding is similar to the previous researches of Ebrati et al (2013) and Umar et al (2012).

Dependent variable: EPS	Model 7	Model 8	Model 9
DA	-5090.9***		
SDTA		-3518.3***	
DE			-354.7***
SIZE	440.3***	319.2**	362.6***
GROWTH	-87.71	-186.1	-134.5
Constant	-6758.7*	-4349.9	-6509.7*
Number of observations	235	235	235

Table 5:- Estimated Results after Fixing Model Violations

*Note: *, **, *** corresponding to 10%, 5% and 1%*

In summary, the capital structure (DA, SDTA, DE) has negative impacts on the firm performance (ROA, ROE, EPS) under the regulation of firm size (SIZE) at the significance level of 1%. Therefore, the hypotheses from H1 to H9 are accepted, no hypothesis is rejected.

IV. CONCLUSION AND MANAGERIAL IMPLICATIONS

The research findings show that there is a relationship between capital structure and firm performance of listed food and beverage companies in Vietnam. Capital structure negatively affects firm performance under the regulation of firm size in the period of 2013-2017. The reason is that, in this period, the economy has not fully recovered after the serious financial crisis in 2008. Besides, the Government has stepped up inflation control, banks tightened money

policies and businesses were seriously in need of capital. Due to the high interest rates of debts and the burden of paying, many businesses use short-term debts to pay interests of long-term debts, causing them to face bad debts.

From the above research results, corporate finance managers should prioritize the use of retained earnings to reinvest according to the pecking order theory. In the current market, in order to operate, the food and beverage industry uses up to 90% of its capital from short-term debts. This makes short-term loans face certain difficulties, especially when increasing interest rates lead to reduction in the value of the tax shield and increasing bankruptcy costs.

In addition, due to the positive relationship between firm size and firm performance, enterprises can scale up to easily access loans with more preferential interest rates.

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