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The Effect of Capital Structure on Firm Performance: Empirical Evidence from the IndonesianFinancial Industry

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ABSTRACT :*Capital structure is one of the most important aspects in the financial management. Many previous studies investigated the capital structure from many sectors of various countries in a certain period, but only fewliteratures thatfocus to examine the capital structure on the entire financial sector. This study investigate the effect of capital structure on firm performance of financial sector in the Indonesia Stock Exchange (IDX) during 2009 to 2013. Panel data analysis was applied to estimate the relationship between capital structure and firm performance. The results of the study shows that capital structure has negative effect on firm performance measured by ROA, consistent with the Pecking Order theory. Capital structure has different effect on each financial subsector. Capital structure has negative effect on securities companies, funding companies and other financial subsectors while capital structure has positive effect on banking and insurance subsectors. Furthermore, the results show that financial sector is using high leverage and bankinghas the highest leverage with 89% total debt to total assets.*

KEYWORDS :*Capital Structure, Financial Sector, Firm Performance, Panel Data Analysis, Indonesia Stock Exchange (IDX)*

I. INTRODUCTION

One of the most important decision from the financial managersin order to maintainthe firm's competitiveness is a decision regarding the capital structure. Capital structure is combination from all the right side of the firm's balance sheet [1]. The capital structure is one of the main topics in financial management becausecapital structure plays very important role in maximizing the value and performance of the firms [2].

The study about capital structure mostly done after 1958, when Modigliani Miller (MM) stated that the capital structure has no effect to the firm value [3], assuming the capital market is in the perfect conditions. Therefore, even though proportion of debt and equity from the company is changed, it will not affect the firm value. This theory was criticized by many researchers because in reality, there is no perfect capital market. The Modigliani Miller revised the theory in 1963 [4] with considering taxes and an argument that in the market imperfections where the interest payments are tax deductible, then the value of firm will increase with the level of the debt. In other words, the optimal capital structure is using 100 percent of debt, althought it is very rare or even impossible to find.

The others capital structure theory proposed by Myers [5] or better known as Pecking Order theory.The theory explains that the firm is prefer use internal funding derived from retained earning than external funding. If the external funding is urgently needed, the firm will firstly choose the most secured funding, which is debt that has lowest risk, fell to the riskier debt like hybrid securities (convertible bonds), and finally preferred stock and ordinary shares (common stock) as the last option. Myers [6] also argues Trade off theory which revealed that the firm will adding debt up to a certain level, where tax shield from the additional debt is equal to the cost of the financial distress. Financial distress is a condition where the firm is cannot fulfill or has difficulty paying off its financial liabilities to its creditors, so this may result in the bankruptcy of the firm.

Every firm management must determine the composition of capital structure as well as a proper funding for the firm. According to Gitman [7], it is not possible for financial managers to find a method that is really appropriate to determine the optimal capital structure. It is difficult to determine the most optimal capital structure for the company, especially for a various of industries and types of businesses that diverse nowadays. In general, the optimal capital structure should minimize the cost of capital and maximize the firm value so it can balanced between risk and return of the firm.

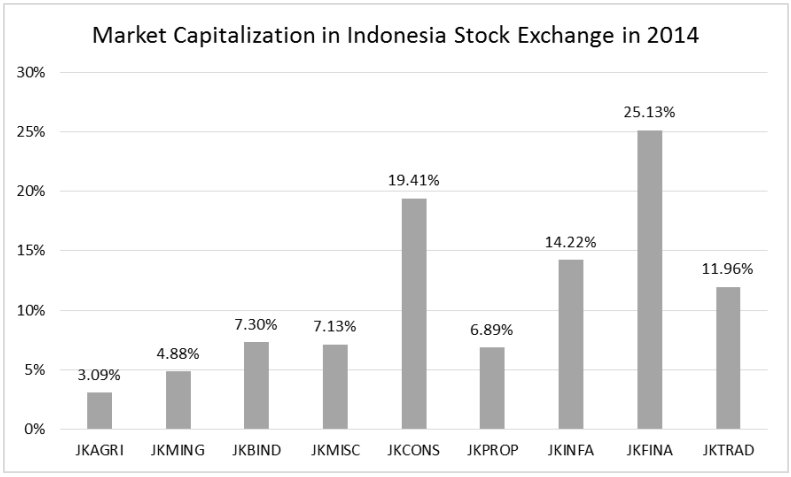
Previous research regarding the effect of capital structure to the firm performance has been widely applied to the various sectors with varying research results. Research conducted by Abor [8], Pratomo & Ismail [9], Goyal [10], Saeed *et al.* [11] and Taani [12] find that capital structure has positive effect on the firm

performance. On the other hand, research conducted by Zeitun & Tian [13], Vitor & Badu [14], Shubita & Alsawalhah [15], Leon [16] and Hasan *et al.*[17] found the opposite result, that the capital structure has negative effect on the performance of the firm. Ebaid [18] study also found that the capital structure has a weak-no effect on the performance of the firm.

The study about Indonesia Stock Exchange is not quite much, therefore the Indonesia Stock Exchange is relatively less explored. Several studies related to the stock market in Indonesia, as is done by Achsani and Strohe [19] who analyzed the stock market returns and macroeconomics factors in Jakarta Stock Exchange of Indonesia (now Indonesia Stock Exchange/IDX) from 1990-2001. Pranowo *et al.* [20] examined the determinant of corporate financial distress in Indonesia Stock exchange during 2004-2008. Hardiyanto *et al.* [21] explored the trade-off theory of capital structure from listed companies in Indonesia Stock Exchange. Hardiyanto*et. al.*[22] also analyzed the difference of capital structure among industry sectors in the Indonesia Stock Exchange.Moreover, there are onlyfew studies have been done related to the capital structure, especially in the financial sector of Indonesia Stock Exchange.

From previous studies regarding the capital structure, there is a difference in the results obtained, that the capital structure can effect positively, negatively or even no effect on the firm's performance. Hence, this study will re-examine how the effect of capital structure on listed financial companies in the Indonesia Stock Exchange. There are two motivations behind this research. First, many previous studies investigated the capital structure from many sectors of various countries in a certain period, but eliminating financial sector from the sample. It is causedby thedifferent characteristics of capital structure from the financial sector than the others. Previous study on the financial sector mostly only focus on banking subsector, while other subsectors in the financial sector excluded from the sample. Second, the financial industries is a very important sector for a country, especially for developing country like Indonesia. Indonesia as a developing country is still a bank-based country, where the dependence on the financial sector is still quite high.

Financial companies listed in the Indonesia Stock Exchange (IDX) consist of 5 subsectors, namelybanking, funding companies, securities companies, insurance and other financial companies. In Figure 1, we can see that financial sector in Indonesia Stock Exchange recorded the largest market capitalization, which is 25.13% or about Rp1313.7 trilion from the Rp5228 trilion whole market capitalization in 2014. Also, the financial sector recorded an average GDP growth of 7.24% in last 5 years, while the average of total Indonesian GDP growth over last 5 years is about 5.8%.



JKAGRI	:	agriculture	JKPROP	:	property and real estate
JKMING	:	mining	JKINFA	:	infrastructure, utilities and transportation
JKBIND	:	basic industry and chemicals	JKFINA	:	finance
JKMISC	:	miscellaneous industry	JKTRAD	:	trade, services and investments
JKCONS	:	consumer goods industry			

Figure 1. Market capitalization in Indonesia Stock Exchange in 2014

Based on the backround as explained before,research will be conducted on public financial companies that listed on the Indonesia Stock Exchange (IDX) during 2009 to 2013. The selection of financial sector is based on the importance of the financial sector to the economy of Indonesia and to complement the previous studies that also examined the effect of capital structure on performance from various sectors in many countries. Result from the study will enrich the scientific knowledge about the capital structure on the financial industry in Indonesia, which have been relatively less explored.

The two objectives from this research areto identify the capital structure and performance of financial companies and to analize the effect of capital structure on firm performance of financial sector that listed in Indonesia Stock Exchange (IDX). This research expected to provide benefits to the firm management also to the investors in capital market.

Overall paper will divided into several parts. The first section describes backround and objective of the research. The second contains the literature review. The third contains the data and research methods. The fourthsection contains result and discussion and the five section contains managerial implications based on the results. Finally, the last section is conclusions from the research and recommendations for future research.

II. LITERATURE REVIEW

There are many studies related to the effect of capital structure on firm performance. Abor [8] conducted a study on the influence of capital structure to profitability of companies listed on Ghana Stock Exchange (GSE) for a five years period (1998-2002). Multiple regression analysis is used to estimate the model which connects the return on equity (ROE) variable with the capital structure. The results is show positive relationship between short term debt to total assets ratio and ROE. Meanwhile, negative relationship occurs between long term debt to total assets ratio and ROE.

Ebaid [18] investigated the effect of capital structure choice to the firm performance in Egypt. Studied conduct on non-financial public companies listed in the Egyptian Stock Exchange during 1997 to 2005.Multiple regression analysis was used to estimate the relationship between leverage and firm performance. The firm performance is measured based on three variables, ROE, ROA and gross profit margin (GPM) while the capital structure is represented by the short-term debt to total assets (STD), long-term debt to total assets (LTD) and total debt to total aseets (TTD). In addition, there is also firm size (LogS) variable as the control variable. The results obtained is that capital structure choice, generally have a weak-no impact on firm's performance.

Vitor and Badu [14] examined the effect of capital structure on the performance of listed banks in Ghana during 2000 to 2010. The data is collected from Ghana Stock Exchange and annual reports of each bank. The method used is panel data regression. Result show that the public banks in Ghana have very high debt ratios and the debt level have negative influence on the bank performance. The research shows a high level of debt on each public bank. It can be seen from the banks that depend on short-term debt and it lead to low bond market activity. The regression results indicated that capital structure has negative effect to firm performance measured by ROE and firm value(Tobins'Q).

Goyal [10] conducted a study on the effect of capital structure on the profitability of listed banks in India during 2008 to 2012. The multiple regression analysis is used to determine the relationship between dependent variable (short term debt to total capital, long term debt to total capital, total debt to total capital) on the independent variable (ROA, ROE and earning per shares). The control variables used are firm size (SIZE) and firm asset growth (AG). Results show there are positive relationship between short-term debt with profitability measured by ROA, ROE and earning per shares (EPS).

Saaed *et. al.* [11] examined the effect of capital structure on the performance of the 25 companies in banking sector listed on the Karachi Stock Exchange in Pakistan during 2007-2011. The study used multiple regression models to examine the relationship between capital structure and bank performance. Performance is measured with ROA, ROE and EPS variable. Capital structure measured by short-term debt to total capital, long-term debt to total capital and total debt to total capital. The study also using firm sizeand firm asset growth as control variable. Results show there is positive relationship between capital structure and performance of the banking Industry in Pakistan.

Hasan *et al.* [17] examined the effect of capital structure on the firm performance in Bangladesh. Research conducted on 36 companies listed in Bangladesh Dhaka Stock Exchange during the 2007 to 2012. The firm's performance is measured using four variables: EPS, ROE, ROA and Tobin's Q. Capital structure is measured using short-term debt, long term debt and total debt ratio. The study using pooling data panel regression model to estimate the effect of capital structure on the firm performance. The results show that EPS has positive significant relationship to short-term debt and has negative significant relationship towards long-term debt. There is also a significant positive relationship between ROA and capital structure. On the other hand, there is no significant relationship between capital structure and firm performance measured by ROE and Tobin's Q. The conclusion is capital structure had negative effect on the firm's performance, which is consistent with the Pecking Order theory.

III. RESEARCH METHODOLOGY

3.1 Data

The research used financial statements data from financial sector companies listed in Indonesia Stock Exchange from 2009 until 2013. Financial sector are classified into five subsectors. The firms that choosen as a sample of research must have criteria, namely: 1) Listed in Indonesia Stock Exchange from 2009-2013 and

never delisted from that period; 2) Submit a financial report regularly in the period of 2009-2013. 3) Always have positive equity and performance.After the screening process, 55 sample are obtained from five financial subsectors. There are banking (24 companies), fundingcompanies (9 companies), securities companies (5 companies), insurance (10 companies) and other financial companies (7 companies).

3.2 Variables

Independent variables that used in this study are short term debt to total assets (SDTA), long term debt to total assets (LDTA), total debt to total assets (TDTA), total debt to total equity (TDTE), firm size (SIZE) which is the natural log (Ln) of the total assets and firm's asset growth (AG). The dependent variables consist of return on assets (ROA) and return on equity (ROE) that used as proxy of performance.

3.3 Regression Model and Technical Estimates

This research uses panel data regression analysis to investigate the effect of capital structure on firm performance. Panel data is combination of cross section data and time series data. Cross section data is data collected in one time of many individuals, whereas the time series data is collected from time to time from an individual. Two regression models were used to analyze the effect of capital structure on firm performance in the five subsectors of financial sector in Indonesia Stock Exhange. The regression model is adapted from previous research conducted by Goyal [10] and Saaed *et al.* [11]. Both regression model are:

Return on Asset (ROA)

$$ROA_{it} = \alpha_0 + \alpha_1 LDTA_{it} + \alpha_2 TDTA_{it} + \alpha_3 TDTE_{it} + \alpha_4 SIZE_{it} + \alpha_5 AG_{it} + e_{it} \quad (1)$$

$$\alpha_1, \alpha_2, \alpha_3, \alpha_4, \alpha_5 > 0$$

Return on Equity (ROE)

$$ROE_{it} = \beta_0 + \beta_1 LDTA_{it} + \beta_2 TDTA_{it} + \beta_3 TDTE_{it} + \beta_4 SIZE_{it} + \beta_5 AG_{it} + e_{it} \quad (2)$$

$$\beta_1, \beta_2, \beta_3, \beta_4, \beta_5 > 0$$

Where:

ROA = ratio of return to total assets owned by the firms (%)
ROE = ratio of return to total equity owned by the firms (%)
LDTA = ratio of long term debt to total assets
TDTA = ratio of total debt to total assets
TDTE = ratio of total debt to total equity
SIZE = firm size (Ln total assets)
AG = assets growth (%)
e_{it} = error
α_0, β_0 = intercept
α_i, β_i = regression coefficient

According to Gujarati [23], to estimate the model using panel data regression techniques, can be using three regression models:

1) Pooled Least Squared (PLS)
2) Fixed Effect Model (FEM)
3) Random Effect Model (REM)

To choose the appropriate model among three models, it can be done using Chow test and Hausman test. Chow test is used to choose the best model between Pooled Least Square and Fixed Effect Model. The hypothesis used in the Chow test is:

H_0 = Pooled Least Square (PLS)
H_1 = Fixed Effect Model (FEM)

If the results of Chow test show that Fixed Effect is better than Pooled, then we can proceed to the Hausman test. Hausman test is used to choose the best model between Fixed Effect and Randon Effect Model. Hypothesis in the Hausman test is:

H_0 = Random Effect Model (REM)
H_1 = Fixed Effect Model (FEM)

The next step is to test the heteroscedasticity and autocorrelation. Heteroscedasticity and autocorrelation test performed if Pooled Least Square (PLS) or Fixed Effect Model (FEM) are chosen. The

testwas conducted so the chosen model has BLUE (Best Linear Unbiased Estimate) criteria. If the Random Effect Model (REM) chosen, then heteroscedasticity and autocorrelation test is not necessary. The Random Effect Model has been using Generalized Least Square (GLS), so the Random EffectModel (REM) is free from both heteroscedasticity and autocorrelation problem.

IV. RESULT AND ANALYSIS

4.1 Descriptive Statistics

The descriptive statistics is presented in Table 4.1. The ROE value that represented the profitability has an average value of 15.86% over a five years period. This indicates that companies in the financial sector had a good performance during that period. TDTA variable has an average value of 69.30%, while SDTA has 51.23% and LDTA has 18.14% average value. It show that firms in financial sector more depend on short-term debt compared to long-term debt. TDTE has an average value of 4.76, which means the average of firm total debt in financial sector is 4.76 times of the total equity. For the other variables, SIZE variable has an average value of 15.45 and AG variable has 22.66% during 2009 to 2013.

Table 4.1Descriptive statistics

Variable	ROA	ROE	SDTA	LDTA	TDTA	TDTE	SIZE	AG
Observations	275	275	275	275	275	275	275	275
Cross Sections	55	55	55	55	55	55	55	55
Mean	0.0442	0.1586	0.5123	0.1814	0.6930	4.7613	15.4515	0.2266
Median	0.0313	0.1470	0.4882	0.0928	0.8000	4.0800	15.13949	0.1826
Maximum	0.3060	0.5270	0.9205	0.7985	0.9400	15.6200	20.4128	2.3479
Minimum	0.0000	0.0000	0.0044	0.0000	0.0044	0.0040	11.5206	-0.3438
Std. Dev.	0.0403	0.0910	0.2772	0.1940	0.2360	3.8896	2.2760	0.2743

Source : Eviews 7 software output

Capital structure and performance for each financial subsector during 2009 to 2013 can be seen in Table 4.2 and Table 4.3. In banking subsector, TDTA ratio for five years period is 89%, consist of 73% SDTA and 16% LDTA. Meanwhile, the banking total debt was 8.50 times compared to the total equity (TDTE). Banking subsector had the biggest total debt and short-term ratio over all the entire financial subsector in Indonesia Stock Exchange. The banking short-term debt largerly derived from customer deposits (saving, giro, deposits etc.). On the funding companies subsector, SDTA and LDTA ratio have the same number of value, 32% so the TDTA ratio is 64%. The value of 2.80 times in TDTE show that funding companies have a 2.80 times total debt compared to the total equity held. For all the other subsectors, that is securities companies, insurance and other financial companies, the average value of TDTA is 52%, 56% and 43%. The TDTE ratio for those three subsectors is 1.36, 1.62 and 1.38 times of the total equity.

From the five financial subsectors, only funding companies subsector has different capital structure compared to others with the same amount of short-term debt and long-term debt. Funding companies subsector conduct business activities related to financing companies, institutions or other business entities who needs an additional funds. Funding companies debt derived from loans and bonds. Loan are mostly from short-term bank loan, while bonds issued mostly still have more than one year maturity (long-term bond). In the research period, both types of debt has the same proportion during the research period. Besides the capital structure variable, there is also the firm size (SIZE) and firm's asset growth (AG) variables which can be seen in Table 4.2.

From the Table 4.3, the largest ROA owned by funding companies subsectors, amounted to 6.71%. Banking, securities companies, insurance and other finacial companies have ROA by 2.18%, 6.51%, 6.13% and 5.18%. The largest ROE is also owned by funding companies subsector, with 18.26% value while banking, securities companies, insurance and other financial companies had 17.22%, 13.85%, 15.50% and 10.05% respectively.

Table 4.2 Capital structure of financial subsectors

Subsector	2009	2010	2011	2012	2013	Average*)
Banking						
SDTA	0.77	0.76	0.72	0.71	0.71	0.73
LDTA	0.12	0.13	0.17	0.18	0.18	0.16
TDTA	0.89	0.89	0.89	0.89	0.89	0.89
TDTE	8.95	8.73	8.61	8.38	7.83	8.50
SIZE (Ln Total Assets)	16.95	17.17	17.37	17.55	17.71	17.35
AG (%)	21.27	24.95	23.11	19.37	18.52	21.44

Subsector	2009	2010	2011	2012	2013	Average*)
Funding Companies						
SDTA	0.24	0.28	0.34	0.36	0.37	0.32
LDTA	0.27	0.31	0.35	0.34	0.32	0.32
TDTA	0.51	0.59	0.69	0.70	0.69	0.64
TDTE	1.93	2.37	3.24	3.23	3.25	2.80
SIZE (Ln Total Assets)	14.00	14.38	14.74	14.87	15.09	14.62
AG (%)	-4.03	45.59	53.98	18.81	14.57	25.78
Securities Companies						
SDTA	0.56	0.61	0.44	0.39	0.33	0.47
LDTA	0.04	0.04	0.07	0.03	0.04	0.05
TDTA	0.60	0.65	0.51	0.42	0.37	0.52
TDTE	1.64	2.23	1.12	0.92	0.90	1.36
SIZE (Ln Total Assets)	13.03	13.38	13.22	13.25	13.17	13.21
AG (%)	24.21	44.18	-13.10	5.40	-6.55	10.83
Insurance						
SDTA	0.48	0.51	0.48	0.54	0.54	0.51
LDTA	0.04	0.05	0.07	0.04	0.04	0.05
TDTA	0.52	0.56	0.55	0.58	0.58	0.56
TDTE	1.25	1.49	1.29	2.06	1.99	1.62
SIZE (Ln Total Assets)	12.90	13.24	13.47	13.78	13.92	13.46
AG (%)	8.69	41.82	29.22	34.73	15.82	26.06
Other Financial Companies						
SDTA	0.39	0.42	0.31	0.34	0.27	0.35
LDTA	0.10	0.06	0.08	0.06	0.12	0.08
TDTA	0.49	0.48	0.39	0.40	0.39	0.43
TDTE	1.50	1.52	1.07	1.42	1.36	1.38
SIZE (Ln Total Assets)	13.94	14.13	14.56	14.79	14.88	14.46
AG (%)	3.92	21.01	66.95	31.51	10.40	26.76

Notes : *) averagefrom 2009-2013
Source : Firm financial statements

Table 4.3 Performance (measured by ROA and ROE) offinancial subsectors

Subsector	2009	2010	2011	2012	2013	Average*)
Banking						
ROA (%)	1.78	2.08	2.30	2.40	2.35	2.18
ROE (%)	14.11	17.41	17.72	18.85	18.00	17.22
Funding Companies						
ROA (%)	8.76	8.80	6.07	5.12	4.80	6.71
ROE (%)	19.59	21.15	17.00	16.72	16.83	18.26
Securities Companies						
ROA (%)	5.74	5.35	6.14	7.56	7.75	6.51
ROE (%)	11.58	14.07	12.39	14.90	16.31	13.85
Insurance						
ROA (%)	5.60	5.79	6.36	6.79	6.11	6.13
ROE (%)	13.00	14.59	16.52	17.65	15.76	15.50
Other Financial Companies						
ROA (%)	3.76	7.40	4.17	5.57	5.02	5.18
ROE (%)	8.41	15.54	8.41	10.44	7.46	10.05

Notes : *) averagefrom 2009-2013
Source : Firm financial statements

4.2 The Effect of Capital Structure on Firm Perfomance

We will analyze the regression result to find the effect of capital structure on firm performance. First, regression will be conducted to all of the firm in the financial sector in Indonesia Stock Exchange during 2009 to 2013. Then, regression will be conducted to the dependent variable (ROA and ROE) in each financial subsectors (banking, funding companies, securities companies, insurance and other financial companies). This step was conducted to determine how the effect of capital structure to each financial subsector listed in Indonesia Stock Exchange.

4.2.1 Regression Results on All of The Firm in Financial Sector

The Chow and Hausman test is conducted to choose the right model on panel data regression. Table 4.4 show the result of Chow and Hausman test. From the test, selected model for both ROA and ROE variables is Random Effect Model (REM). The regression results on all of the financial sector can be seen in Table 4.5.

Table 4.4Result of Chow and Hausman test for all of the financial sector

ROA				**ROE**			
Chow Test				**Chow Test**			
Effect Test	Statistics	d.f.	Prob.	Effect Test	Statistics	d.f.	Prob.
Cross-section F	7.619105	(54,215)	0.0000	Cross-section F	11.182528	(54,215)	0.0000
Cross-section Chi-Sq.	294.085451	54	0.0000	Cross-section Chi-Sq.	367.749484	54	0.0000
Hausman Test				**Hausman Test**			
Test Summary	Chi.Sq. Statistic	Chi.Sq. d.f.	Prob.	Test Summary	Chi.Sq. Statistic	Chi.Sq. d.f.	Prob.
Cross-section random	9.861440	5	0.0793	Cross-section random	9.439816	5	0.0928

Source : Eviews 7 software output

From Table 4.5, we can see that TDTA variables has a negative significant effect to ROA on 1% confidence level, while TDTA variable does not have significant value to ROE. LDTA and TDTE variable not provide a significant value both toROA and ROE.The SIZE variable has significant positive effect on 1% confidence level to ROE, while AG hassignificant positive effect to ROA and ROE on 5% confidence level.

Table 4.5Regression result on all of the financial sector

VARIABLE	**ROA**			**ROE**		
Model Chosen	REM			REM		
	Coefficient	t-statistic	Prob.	Coefficient	t-statistic	Prob.
C	0.089367	3.498401	0.0005	-0.073423	-1.135509	0.2572
LDTA	0.000082	-0.005973	0.9952	-0.005242	-0.158858	0.8739
TDTA	-0.084409*	-4.627495	0.0000	0.025620	0.600564	0.5486
TDTE	-0.001707	-1.479147	0.1403	-0.001026	-0.381380	0.7032
SIZE	0.001210	0.675251	0.5001	0.013894*	3.082158	0.0023
AG	0.012140**	2.392331	0.0174	0.023943**	2.113961	0.0354
R^2	0.207198			0.070857		
Adjusted R^2	0.192462			0.053586		

Notes : ***** = significant at 1% level ; ****** = significant at 5% level; ******* = significant at 10% level
Source : Eviews 7 software output

The effect of capital structure to the firm performance measured by ROA and ROE for all of the firm in financial sector tend to be weak because only TDTA variable has a significant effect to ROA, while there was no significant effect on capital structure variables (LDTA, TDTA, TDTE) to ROE.The capital structure variable seems had less impact on performance of financial sector. This may caused by different capital structure on each subsectors, as discussed earlier. It causes the merging of all firm will cause the regression result become insignificant. Hence, it is important to investigate how the effect of capital structure to ROA and ROE on each financial subsector. In the next section, we will discuss how the effect of capital structure to the firm's performance in each financial subsectors.

4.2.2 Regression Results on Financial Subsectors

Similar to previous model, the Chow and Hausman test is conducted to choose the best regression model to be used. The chosen regression model along with the regression result on each subsectors againts ROA and ROE can be seen in Table 4.6.LDTA variable has negative effect to ROA and ROE in insurance subsector. LDTA also has negative effect to ROE in other financial companies subsector. TDTA variable has negative effect to ROA and ROE in securities companies and TDTA also has negative effect to ROA in funding companies. Meanwhile, TDTA has positive effect to ROE in banking and insurance subsector. TDTE has negative effect to ROA in funding companies, while TDTE has positive effect to ROE in securities companies.

The LDTA variable has negative effect in insurance and other financial subsectors due to the small amount of LDTA in both subsectors, meanwhile the finance sector has good performance measured by ROA and ROE. Only the funding companies subsector that has more long term debt than the others.TDTA and

TDTEhas negative effect to ROA in funding companies because the amount of total debtin this subsector is increase over a five years period, while the amount of ROA is declining continuously from 2010 to 2013. The use of debt in this subsector is decreasing the firm performance measured by ROA. The TDTA also has negative effect to ROA and ROE in securities companies. Different from funding, the ROA and ROE for securities subsector is increase when the firm is reducing the total debt to total assets ratio. Although the TDTA variable has negative effect to ROA and ROE in securities subsector, otherwise the TDTE variable has positive effect to ROE in this subsector. The positive effect due toraise of TDTEalong with the ROE in 2009 to 2010 and degression of TDTE along with the ROE in 2010 to 2011.The TDTE and ROE variables are moving in the same direction during 2009 to 2011.

The negative effect of capital structure on ROA is caused by the capital structure characteristics in financial sector. The financial sector consist of firm providing financial services that have high leverage, compared with the other sectors in Indonesia Stock Exchange. With using high debt, the firm must pay interest which results in reduced of profit. Because the return on assets (ROA) is the ratio of earning after interest and taxes to the firm total assets, using high debt may reduce profit and eventually will reduced the ROA.The firm can only earn high profits if their leverage is at optimal level (Miller [24]). Using debt is profitable only when the cost of capital is lower than the benefit of the tax shield from using the debt. When the firm could not meet its debts, it can lead to financial distress and finally lead the firm to the bankruptcy.

Different from the securities companies, TDTA variable has positive effect to ROE on banking and insurance subsectors. This probably because of business process from both subsectors. Both of banking and insurance are collect funds directly from the customers and these funds are taken into debt account.

The result from SIZE and AG variable also can be seen in Table 4.6. The SIZE variable has positive effect to ROA on banking and insurance, while SIZE has negative effect on funding companies subsector. Furthermore, SIZE variable has positive effect to ROE on banking, securities and insurance companies. The AG variable has positive effect to ROA and ROE on funding companies, also AG variable has positive effect to ROE on other financial companies subsector.

Table 4.6Regression result on financial subsectors

VARIABLE	**Return on Asset (ROA)**				
SUBSECTOR	**Banking**	**Funding**	**Securities**	**Insurance**	**Other**
Model Chosen	REM	FEM	FEM	REM	FEM
C	-0.056775	0.506458	-0.001782	-0.041715	-0.143962
LDTA	0.004157	0.015061	-0.091154	-0.123239**	-0.146754
TDTA	-0.004065	-0.128970*	-0.104964**	-0.005572	0.162854
TDTE	-0.000713	-0.007071**	0.012423	-0.006248	-0.012442
SIZE	0.005007*	-0.024036*	0.008207	0.009176**	0.010425
AG	0.003406	0.035264*	-0.021934	-0.006064	0.018067
R^2	0.320914	0.808341	0.936856	0.257315	0.595096
Adjusted R^2	0.291130	0.727968	0.898969	0.172919	0.401446
VARIABLE	**Return on Equity (ROE)**				
SUBSECTOR	**Banking**	**Funding**	**Securities**	**Insurance**	**Other**
Model Chosen	REM	FEM	FEM	REM	FEM
C	-1.349890	0.602770	-1.195911	-0.274228	-0.101179
LDTA	0.012265	-0.204577	-0.546931	-0.245318***	-0.389653***
TDTA	1.018498**	0.166953	-0.192463***	0.339470*	0.354649
TDTE	-0.007491	-0.019918	0.048204***	-0.016480	0.010253
SIZE	0.039002*	-0.028642	0.106359***	0.020879**	0.004070
AG	0.016118	0.052171***	-0.081228	0.001488	0.034855*
R^2	0.288470	0.801752	0.881358	0.332521	0.622027
Adjusted R^2	0.257262	0.718615	0.810173	0.256671	0.441257

Notes : ***** = significant at 1% level ; ****** = significant at 5% level; ******* = significant at 10% level
Source : Eviews 7 software output

4.2.3 Overall Regression Analysis

The capital structure variables have a negative effect on the firm's performance measured by ROA. This result supports previous research conducted by Zeitun and Tian [13], Vitor and Badu [14] and Hasan *et.al.*[17] which conclude that the capital structure hadnegative effect on ROA.The negative effect of capital structure to ROA is support the Pecking Order theory proposed by Myers [5]. According to the theory, a firm with high level of profitablity will decrease their debt level, because firms that have high profitabilty has abundant internal funds. In this theory, there is no rule regarding the optimal capital structure. The firm has a

sequence preference in using funds. The firm prefer to use resouces from the inside or internal financing compared with the external financing. Internal funds derived from retained earnings generated from the firm operational activities.

If external funds is required, then the firm will choose the safest financing, the debt that has the lowest risk, then down into riskier funds such as bonds, preferred stock and common stock as the last option. Pecking Order theory do not explain the target of capital structure, but explain the sequence of funding preferences so that financial managers do not consider the optimal level of debt. The funding is also determined by investment needed. Therefore, this theory also explains why high profitable firms would have a small debt level and explains why the high level of debt will reduce the firm's profitability.

Meanwhile, to ROE variable, the capital structure had various effect on each financial subsector as can be seen in Table 4.6.The LDTA variable has negative effect on insurance and other funding companies, contrary to the TDTA variable that has positive effect to ROE in banking and also insurance subsectors. The positive effect of total debt to ROE is supports previous research conducted by Saeed *et al.* [11] and Javed et *al.* [2] which conclude that the capital structure had positive effect on firm performance measured by ROE.

Increasing the amount of the debt to total assets (TDTA)in banking and insurance subsectors is also increase the value of ROE, vice versa.Based on their business process, banking and insurance subsector is the financial service company that mostly using third-party funds from the customers. Banks collect saving, deposits, giro etc., while insurance is collecting insurance premium which both counted as external funding in the form of debt. The using of debt is important for the business process in both subsectors, so when the available debts are used properly, it will generate a high return to the firm.

V. MANAGERIAL IMPLICATIONS

5.1 Implication to Firm Managers

In general, the capital structure variable had a negative effect on the financial sector, except for the banking and insurance subsector that have a positive effect.Negative effect on the funding companies, securities companies and other financial subsector indicates that increasing the debt level will reduce the firm performance. The firm in all three subsectors should maintain or even reduce the debt level by using more internal funding compared with external funding. In banking, total debt had positive effect on ROE, meanwhile in the insurance subsector, long-term debt had a negative effect on ROA and ROE and total debt had a positive effect on ROE. The positive effect of total debt to total assets (TDTA) indicates that increasing the level of debt is also increase the profitability measured by ROE. Increasing the debt will bring a positive effect on profitability until at a certain level, that additional debt would lead into a financial distress. Hence, financial managers in both banking and insurance subsectors should maintain the level of debt so that the cost of debt is less than or equal to the benefits that provided.

5.2 Implication to Investors

Investments made in the financial sector has a fairly high return reflected by the ROE in all the five subsectors that have a value above 10%.Therefore, investing in this sector is quite profitable. Besides of the firm performance, the investor must have to look at the other fundamental aspects which may affect the firm profitability, like the capital structure. By considering at the firm performance, the capital structure and the effect of capital structure on the firm performance, be expected investors can invest in right sector, subsectorand also right firm to be able to generate a sustainable return.

VI. CONCLUSIONREMARKS

The capital structure from all finacial subsectors is using high leverage. The firm performance from the five financial subsectors has a good rate of return. This can be seen from the value of ROE on all of the subsectors which has an average value above 10% during the period of 2009-2013.The capital structure had significant effect on firm performance measured by ROA and ROE.

Based on the regression results, the capital structure had negative effect to ROA on funding, securities and insurance companies. The negative effect from capital structure on the firm performance measured by ROA is support the Pecking Order theory that explains why the firms with high profitability should use more internal funding than external funding. Meanwhile, the capital structure had positive effect to ROE in the banking and insurance subsectors. In banking and insurance, the total debt to total assets had a positive effect on the firm's profitability, so the debtfinancing is more preferable.

Suggestions for further research related to the effect of capital structure on the firm performance is to add more research period, so the gathered data is more various with longer time span and can expose some new issues. In addition, further research may add other control variables, such as tax, the cost of capital, risk etc. so the model can predict the dependent variable even better. This study can be extended by grouping firms based on total assets and also with considering the debt source, whether it comes from domestic or foreign sources.

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