

# The Effect of Capital Structure for Firm Performance in Manufacturing Companies Listed of the Indonesia Stock Market

Nini\*, Dina Patrisia

*Universitas Negeri Padang, Indonesia*

*\*Corresponding Author. Email: nini03598@gmail.com*

## ABSTRACT

The purpose of this study is to examine the effect of capital structure on company performance in all manufacturing companies listed on the Indonesia Stock Exchange for five years from the 2014-2018 period. In the capital structure variable is measured by Total Debt to Total Assets (TDTA), Long-Term Debt to Total Assets (LTDTA), Short-Term Debt to Total Assets (STDTA). Company performance variables are measured by the ratio of Return on Assets (ROA). While the population in this study is all manufacturing companies listed on the Indonesia Stock Market. The final sample was obtained by 360 companies for five years using a purposive sampling method. Then for the type of data in this study, researchers used secondary data obtained from IDX by using multiple regression analysis methods. In this study the results of the analysis found that capital structure has a negative and significant effect on firm performance in both models.

*Keywords: Capital Structure, Firm Performance*

## 1. INTRODUCTION

In Indonesia there are a lot of manufacturing industry companies even from year to year manufacturing companies continue to grow. Manufacturing industry is an industry that has the characteristics of processing resources into finished or semi-finished goods through the manufacturing process, either mechanically, chemically or by hand so that the goods are of high value. This manufacturing sector plays a role as one of the pillars of the national economy because this sector provides a significant contribution to the growth of the Indonesian economy. A company that has gone public has the main objective is to improve shareholder assets by improving firm performance. The company performance is the effectiveness and efficiency of the company in managing resources in its business activities. Santos and Brito (2012) stated the company's performance is the effectiveness of corporate organizations with operational and financial results. Fosu (2013) states that company performance is the extent to which managers can use company resources

efficiently. According to Tseng and Lee (2014) company performance is the effectiveness and efficiency of individuals, groups in corporate organizations. The benefit of company performance for the company is to find out the growth of assets owned by the company. The company's performance is also beneficial for creditors and investors. For creditors, the company's performance is useful as a guideline to refuse or approve loans proposed by the company. For investors, that is as a comparison for investing. A healthy company will be able to convince investors of the company's business so that investors do not feel objected to adding funds to the company so that businesses grow faster and get high company profits. In this study, the company's performance is measured by the ratio of Return on Assets (ROA).

In this study factors that can affect company performance are capital structure. Capital structure is a balance between long-term debt and short-term debt with equity as a source of funding used to carry out company

activities. Baker and Martin (2014) stated that the structure is a mixture of debt and equity used to finance assets and productive operations so as to maintain the company growth in the future. Li, Niskanen, and Niskanen (2018) capital structure is a mixture of various types of funding sources. Chadha and Sharma Anil (2015) states that capital structure is a source of funds derived from debt, ordinary shares and preferred shares used for various long-term company projects.

Research on the influence of capital structure on firm performance also underlies various theories. Here the author uses two theories namely trade off theory and agency theory. According to Kraus and Litzenberger (1973); Myers (1984) in the theory of trade-offs, namely to create an optimal capital structure and increase corporate profits, the company will exchange costs and benefit tax savings associated with funding costs. Therefore capital structure will have a positive effect if debt is used optimally and vice versa will be negatively related when the debt used is greater than the profits derived by the company. In agency theory Jensen (1986) states that the use of high debt managers are required to invest in order to pay interest. Therefore debt can have a positive effect on company performance. According to Myers (1977) the debt used can cause conflicts between managers and shareholders. Where if use the debt get high with increasing profits the party that enjoys the most profit is the company's shareholders and if the company goes bankrupt then the risk will be borne by the debt holders and shareholders. Because of that debt can have a negative effect on company performance.

The purpose of this research was to find out how the influence of capital structure for company performance on manufactur companies in the Indonesian stock market for five years period from the 2014-2018. Capital structure is measured by ratio Total Debt to Total Assets (TDTA), ratio Long-Term Debt to Total Assets (LTDTA), and ratio Short-Term Debt to Total Assets (STDTA). In this research for control variable measures using the ratio of firm growth (growth) and ratio firm size (size).

This research contributes to provide insights for managers on how to properly manage company assets. while investors can see which companies have large profits to invest. Although this research has been carried out in Indonesia, researchers are therefore interested in re-examining, especially in all manufacturing companies on the Indonesia Stock Market.

The relationship of capital structure with company performance conducted by Gill, Biger, and Mathur (2011) found that there was positively and significant relationship with capital structure as measures by TDTA, STDTA and LTDTA on company performance. Likewise, research conducted by Margaritis and Psillaki (2010) found leverage to have a positive relationship with company performance. Research conducted by Shyu (2013) also found that capital structure is positively and significantly related to firm performance in his research in Taiwan. While research conducted by Dawar (2014) on agency theory, capital structure and company performance found capital structure is negatively and significantly related to firm performance. Furthermore, research conducted by Le and Phan (2017) in Vietnam also found negatively and significantly results with firm performance. Likewise, research conducted by Sheikh and Wang (2013) which examined capital structure and company performance found negative and significant results.

The hypotheses in this research are:

H1: The ratio of Total Debt to Total Assets (TDTA) is considered to have a significant effect for company performance measures by ratio of ROA.

H2: The ratio of Long Term Debt to Total Assets (LTDTA) is considered to have a significant effect for company performance measures by ratio of ROA.

H3: The ratio Short Term Debt to Total Assets (STDTA) is considered to have a significant effect for company performance measures by ratio of ROA

**2. METHODS**

The data for this research were obtained from manufacturing companies listed on the Indonesian stock market for the five years period from the 2014-2018. Furthermore, sampling is done by purposive sampling method. the criteria in taking samples are also done in this study. The criteria are: 1) companies that have not been delisted from the Indonesian stock exchange for five years from the 2014-2018 period. 2) manufacturing companies that have rupiah currency and have complete data. 3) companies that always present data on financial statements for five years from 2014-2018 and data obtained from the company's financial statements contained on the official website of the Indonesia Stock Exchange. This study obtained a final sample

of 360 companies in five years from the 2014-2018 period. In this study, researchers used multiple regression analysis with the following regreis model:

$$ROA = \alpha + \beta_1TDTA + \beta_2GROWTH + \beta_3SIZE + \varepsilon \dots\dots\dots(1)$$

$$ROA = \alpha + \beta_1LTDTA + \beta_2STDTA + \beta_3GROWTH + \beta_4SIZE + \varepsilon \dots\dots\dots(2)$$

Where :

- $\alpha$  = Constant
- $\beta$  = Regression coefficient
- ROA = Return on asset
- TDTA = Total debt to total asset
- LTDTA = Long term debt to total asset
- STDTA = Short term debt to total asset
- GROWTH = Firm growth
- SIZE = Firm size
- $\varepsilon$  = Error

**Table 1.** Operational Definition and Variable Measurement

Variable	Operational definition	Proxy	Source
The performance	The company's ability to use resources efficiently to generate net profit.	$ROA = \frac{\text{Net profit}}{\text{Total Asset}} \times 100$	Kartikasari and Merianti (2016)
Capital Structure	Sources of capital that come from creditors to the overall capital.	$TDTA = \frac{\text{Total Debt}}{\text{Total Asset}} \times 100\%$ $LTDTA = \frac{\text{Long - Term Debt}}{\text{Total Asset}} \times 100\%$ $STDTA = \frac{\text{Short - Term Debt}}{\text{Total Asset}} \times 100\%$	Le and Phan (2017)
Growth	Shows the growth of the company measured by the growth of other companies	$\text{Growth} = \frac{\text{Total Asset (t)} - \text{Total Asset (t - 1)}}{\text{Total Asset(t - 1)}} \times 100$	Dawar (2014)
Size	Measuring companies based on company assets.	Size = Log (Total Asset)	Kieschnick and Moussawi (2018)

**3. RESULTS AND DISCUSSION**

The results of the descriptive statistical test can be seen in Table 2, the final sample used in

this study were 360 companies in five years during the 2014-2018 period. The results show

that the average value ratio of Return on Assets (ROA) of 4.3031 means that on average the manufacturing company is able to produce a net profit of 4.30%, with a std deviation of 6.28608 then from the standard deviation value it can be concluded that the company's ROA in the sample is not very different in value. Furthermore, the minimum value is obtained in the ratio of Long-Term Debt to Total Assets (LTDTA) of 0.33, meaning that the company's ability to pay long-term debt of

0.33%. The maximum value is in the ratio of Total Debt to Total Assets (TDTA) of 99.22. Then in the control variable the lowest value is in the Growth ratio that is equal to -47.79, which means that the company's assets decrease by 47.79% of the assets under management. For the maximum value there is a Growth ratio of 64.73, which means that the company's growth in terms of assets is very good when compared to the average value of the industry.

**Table 2.** Descriptive Statistics data of Capital Structure and Firm Performance

	Minimum	Maximum	Average	Std. Dev
ROA	-11.78	27.26	4.3031	6.28608
TDTA	3.87	99.22	43.4376	20.86370
LTDTA	.33	54.33	12.2181	11.24740
STDTA	1.00	90.03	31.3407	18.14472
GROWTH	-47.79	64.73	8.3776	14.44752
SIZE	10.99	14.54	12.2518	.66744
Valid N (listwise)	360			

Source: Data processed (SPSS)

The results of subsequent studies using a regression model, before this study has passed several tests. Like the classic assumption test in the form of Normality, Multicollinearity

Test, Heterokedaticity Test, Autocorrelation Test, F Test, R2 Test and t Test and the results of this study have passed all tests.

**Table 3.** Analysis Regression

	Unstandardized Coefisient			
	ROA			
	Model 1		Model 2	
	B	Std.Error	B	Std.Error
TDTA	-0.093***	0.017		
LTDTA			-0.108***	0.050
STDTA			-0.092***	0.024
GROWTH	0.088**	0.018	0.090**	0.018
SIZE	2.209*	0.410	2.437*	0.412
(Constant )	-16.769***	5.002	-19.354***	5.018
F Test		59.886		44.238
R <sup>2</sup>		0.396		0.419
N		360		360

Source: Data processed (SPSS)

Information:

\*\*\* significant 1%, \*\* significant 5% and \* significant 10%

In this research the first hypothesis is that the capital structure measured by ratio of Total Debt to Total Assets (TDTA) has a negative and significant effect for company performance as measured by ratio of Return on Assets (ROA). Model 1 multiple regression test results in table 3 can be seen that hypothesis H1 is accepted. The second hypothesis is that the capital structure measured by ratio of Long Term Debt to Total Assets (LDTA) has a negative and significant effect for company performance as measured by ratio of Return on Assets (ROA). Model 2 multiple regression test results in table 3 can be seen that hypothesis H2 is accepted. The third hypothesis is that the capital structure measured by ratio of Short Term Debt to Total Assets (STDTA) has a negative and significant effect for company performance as measured by ratio of Return on Assets (ROA). Model 3 multiple regression test results in table 3 can be seen that hypothesis H3 is accepted. Then the control variables measured by Growth and Size can be seen in Table 3. The results of the study show positive and significant value for company performance measured by the ratio of Return on Assets (ROA) in both models.

The results of capital structure research on company performance show that the ratio of Total Debt to Total Assets (TDTA), ratio Long Term Debt to Total Assets (LDTA), ratio Short Term Debt to Total Assets (STDTA) negatively affect company performance as measured by Return on Asset (ROA). It can be concluded that increasing debt will reduce company performance as measured by ROA. Therefore this research also found the same results with Dawar (2014) on agency theory, capital structure and company performance, finding that capital structure has a negative and significant effect on company performance. Also research conducted by Le and Phan (2017), Sheikh and Wang (2013) also found negative and significant results. Then the results of this study do not agree with the findings made by Gill et al. (2011), Margaritis and Psillaki (2010), Shyu (2013) they found positively and significant.

The results of this study also support the trade-off theory discovered by Kraus and

Litzenberger (1973); Myers (1984) which is to create an optimal capital structure and increase company profits, the company will exchange costs and benefit tax savings associated with funding costs. Therefore capital structure will have a positive effect if debt is used optimally and vice versa will be negatively related when debt used is greater than the profits derived by the company. In agency theory Jensen (1986) states that in the use of high debt, managers are required can to make investments for pay interest and can be positive impact on company performance. According to Myers (1977) the debt used can cause conflicts between managers and shareholders. Where if use the debt get high with increasing profits the party that enjoys the most profit is the company's shareholders and if the company goes bankrupt then the risk will be borne by the debt holders and shareholders. Because of that debt can have a negative impact for company performance.

#### **4. CONCLUSIONS**

From the results of this research, it can be concluded that the capital structure has a negative effect on company performance. Because every addition of debt that is not managed properly will have an impact for company performance. This research also agrees with the trade off theory where debt if managed as optimal possible will have positively effect for company performance but if addition to debt exceeds profits earned by the company then debt will have a negative effect on company performance. Likewise with the agency theory where debt can create conflicts between debt holders and shareholders, when company profits increase, the party that enjoys the most success of the company is shareholders but if the company goes bankrupt then the company will be borne by the debt holders and shareholders. Furthermore, the results of this study are useful for managers to help in managing the company's capital structure and can generate greater profits. This research can also help investors to invest, they can see which company has a good capital structure and do not choose a company that has a debt that is

greater than the profit generated by the company.

The next researcher is suggested for the measurement of capital structure can use other indicators such as DAR, DER and LDER. in performance measurement other companies can use Tobin's Q, EPS, PBV, NPM, ROE and ROI ratios. Then for the company sample it is hoped that the next researcher can add to the observation period.

## REFERENCES

- Baker, H. K., & Martin, G. S. (2014). *Capital Structure and Corporate Financing Decisions: Theory, Evidence, and Practice*. John Wiley & Sons.
- Chadha, S., & Sharma Anil, K. (2015). Determinants of capital structure: an empirical evaluation from India. *Journal of Advances in Management Research*, 12(1), 3-14. doi:10.1108/JAMR-08-2014-0051
- Dawar, V. (2014). Agency theory, capital structure and firm performance: some Indian evidence. *Managerial Finance*, 40(12), 1190-1206. Retrieved from <https://www.emerald.com/insight/content/doi/10.1108/MF-10-2013-0275>
- Fosu, S. (2013). Capital structure, product market competition and firm performance: Evidence from South Africa. *The Quarterly Review of Economics and Finance*, 53(2), 140-151. doi:<https://doi.org/10.1016/j.qref.2013.02.004>
- Gill, A., Biger, N., & Mathur, N. (2011). The effects of capital structure on profitability: Evidence from United States. *International Journal of Management*, 28, 3-15.
- Jensen, M. C. (1986). Agency Costs of Free Cash Flow, Corporate Finance, and Takeovers. *American Economic Review*, 76(2), 323-329. Retrieved from <https://www.jstor.org/stable/1818789>
- Kartikasari, D., & Merianti, M. (2016). The effect of leverage and firm size to profitability of public manufacturing companies in Indonesia. 6, 409-413.
- Kieschnick, R., & Moussawi, R. (2018). Firm age, corporate governance, and capital structure choices. *Journal of Corporate Finance*, 48, 597-614. doi:<https://doi.org/10.1016/j.jcorpfin.2017.12.011>
- Kraus, A., & Litzenberger, R. H. (1973). A State-Preference Model of Optimal Financial Leverage. *Journal of Finance*, 28(4), 911-922. doi:<https://doi.org/10.1111/j.1540-6261.1973.tb01415.x>
- Le, T. P. V., & Phan, T. B. N. (2017). Capital Structure and Firm Performance : Emperical Evidence from A Small Transition Country. *Reaerch In International Business and Finance*, 42, 710-726. doi:<https://doi.org/10.1016/j.ribaf.2017.07.012>
- Li, K., Niskanen, J., & Niskanen, M. (2018). Capital structure and firm performance in European SMEs: Does credit risk make a difference? *Managerial Finance*, 45(5), 582-601. doi:<https://doi.org/10.1108/MF-01-2017-0018>
- Margaritis, D., & Psillaki, M. (2010). Capital structure, equity ownership and firm performance. *Journal of Banking & Finance*, 34, 621-632. doi:<https://doi.org/10.1016/j.jbankfin.2009.08.023>
- Myers, S. C. (1977). Determinants of corporate borrowing. *Journal of Financial Economics*, 5, 147-175. doi:[https://doi.org/10.1016/0304-405X\(77\)90015-0](https://doi.org/10.1016/0304-405X(77)90015-0)
- Myers, S. C. (1984). The Capital Structure Puzzle. *The Journal of Finance*, 39(3), 575-592. doi: <https://doi.org/10.1111/j.1540-6261.1984.tb03646.x>
- Santos, J., & Brito, L. (2012). Toward a Subjective Measurement Model for Firm Performance. *BAR - Brazilian Administration Review*, 9, 95-117. doi:<https://doi.org/10.1590/S1807-76922012000500007>
- Sheikh, D. N., & Wang, Z. (2013). The impact of capital structure on performance: An empirical study of non-financial listed firms in Pakistan. *International Journal of*

- Commerce and Management*, 23.  
doi:10.1108/IJCoMA-11-2011-0034
- Shyu, J. (2013). Ownership structure, capital structure, and performance of group affiliation: Evidence from Taiwanese group-affiliated firms. *Managerial Finance*, 39(4), 404-420. doi: <https://doi.org/10.1108/03074351311306210>
- Tseng, S.-M., & Lee, P.-S. (2014). The effect of knowledge management capability and dynamic capability on organizational performance. *Journal of Enterprise Information Management*, 27.  
doi:10.1108/JEIM-05-2012-0025