# THE EFFECT OF PROFITABILITY, TANGIBILITY, SIZE, GROWTH AND LIQUIDITY TO LEVERAGE OF BUSINESS ENTITIES LISTED IN INDONESIA STOCK EXCHANGE ON PERIOD 2011-2015

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***Abstract***
*The objective of this research is to examine the impact of profitability, tangibility, size, growth, andliquidity as the independent variable toleverage as the dependentvariabel on the all sector that listed on the Indonesia Stock Exchange (IDX)2011-2015 period.This research uses quantitative perspective with multiple linearregression model in a panel data for all of the research's observation thatused in this research. The number of observation in this research are 1640 observations, consist of 328 firmsare listed in IDX on 2011 – 2015 period.The study findings suggest that tangibility andsize have positive and significant effect towards the firm's leverage ratio, profitability, growth, andliquidity have negative and insignificant effect towards the leverage ratio of firms in all sector in IDX on period 2011 – 2015.*

*Keywords: Capital Structure, Leverage, Profitability, Tangibility, Size*

## INTRODUCTION

According Oino and Ukaegbu (2015), puzzles capital structure continues to attract scholars and policy makers, especially financial institutions. In this case, the capital structure is closely related to enterprise funding decisions. The capital structure is a permutation of equity and debt used in obtaining capital costs. Business entities, regardless of the industry or sector, have a goal in lowering the cost of capital. This is because the cost of capital has effects on investment or project acceptance and performance of the enterprise as a whole.

Many theories associated with capital structure. However, the theory is most often used to analysis of the capital structure is a trade off theory and the pecking order theory. Baxter (1967) as well as Kraus and Litzenberger (1973) in Abdeljawad et al. (2013) argued about the trade-off theory in the capital structure. In this regard, enterprises choose their capital structure by balancing the benefits gained from debt, especially in terms of tax savings, the costs associated with the debt, or that can be called with the cost of capital by considering bankruptcy cost.

Myers and Majluf (1984) and Myers (1984) in Husnan and Pudjiastuti (2002) describes the pecking order theory. This theory is based on asymmetric information. Asymmetric information can influence the decision of funding sources, whether internal or external funding. In accordance with this theory, investment decisions will be funded by internal sources of funds (retained earnings) first, and then followed by the issuance of new debt and new equity issuance eventually. Here are the previous studies related to capital structure.

Oino and Ukaegbu (2015) has done research on the impact the profitability of the capital structure and the speed of adjustment in non-finance companies listed on the Nigerian Stock Exchange. The results of these studies indicate that the size, tangibility, growth has a significant positive correlation to leverage. Meanwhile, profitability has a significant negative correlation to leverage.

Daskalakis et al. (2014) have done research on the determinants of capital structure of SMEs. In that study adopts profitability, asset structure, size and growth. The results of these studies is the size positively correlated significantly to debt ratio, profitability was negatively correlated significantly to debt ratio, tangibility negatively correlated significantly to debt ratio, and growth is positively correlated significantly to debt ratio.

Syahara and Sukarno (2015) have also been researching on specific factors in determining the capital structure decisions public company in Indonesia to investigate the existence of a target capital structure and identifying the speed of Adjustment. The results of these studies indicate size and growth has a significant positive correlation to leverage. Meanwhile, profitability and tangibility had significant negative correlation to leverage. Then, non-debt tax shield has a positive correlation was not significant to leverage and liquidity has a significant negative correlation to leverage.

Abdeljawad et al. (2013) melakukkan study of dynamic capital structure and speed of adjustment (SOA) in 434 enterprises in Malaysia where the data comes from Thomson Financial Worldscope database over the period 1992-2009. Results of research conducted shows that the size, tangibility, growth has a significant positive correlation to leverage. Meanwhile, profitability had a significant negative correlation to leverage.

Murhadi (2011) the determinant factors which determine the structure of capital in existing companies in the mining sector in ASEAN countries. The study also examined whether there are differences in capital structure determination on these companies. Results Murhadi study (2011) showed that ROA (profitability) and growth has a significant negative correlation to leverage. Meanwhile, the size and tangibility has a significant positive correlation to leverage. Non-debt tax shield has a positive correlation was not significant to leverage.

This study uses the variables studied at least two journal or a journal that have a significant effect on the dependent variable. There are five variables that had a significant influence on the capital structure of the enterprise, ie profitability, tangibility, size, growth, liquidity. 5 variables are then used in this study as independent variables.

Based on the results of previous studies, show the results in which profitability is likely to have a significant negative effect on leverage. However,

contrary to empirical facts that show profitability likely to have a significant positive effect on leverage.Tangibility according Oino and Ukaegbu (2015), Abdeljawad, et al. (2013) and Murhadi (2011) has a significant positive effect on leverage as opposed to research Daskalakis et al. (2014) who argued tangibility significant negative effect on leverage.Size in tend to have a significant positive effect on leverage. However, contrary to empirical facts where there are 8 companies that have shown that size has a significant negative effect on leverage.Growth has a significant positive effect on leverage expressed by Oino and Ukaegbu (2015), Daskalakis, et al. (2014), Syahara and Sukarno (2015), and Abdeljawad, et al. (2013) as opposed to research Murhadi (2011) which states growth has a significant negative effect on leverage.Then, the liquidity has a significant negative effect on leverage expressed by Syahara and Sukarno (2015) as opposed to empirical facts on which indicate that liquidity has a significant positive effect on leverage.

## LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

### Capital Structure Theory

There are three main theoretical models to determine the factors that affect the capital structure of the enterprise. Three of the theoretical model that is still being developed and used as research is a trade-off theory, pecking order theory, and the signaling models of financial structure. In addition, there is agency theory associated with the capital structure of a business entity. Of the four theories explaining different concepts about the determinants of the capital structure of the enterprise.

### Signaling Theory

Signaling theory assumes the existence of asymmetric information, where managers have more information than investors outside the company. The manager will give a signal a particular signal to investors to demonstrate that the entities they manage is the most competent (Megginson, 1997, p. 315 in Ernawati and Murhadi, 2013).These signals can lead to high costs and are not easily imitated by competitors. One form given signal is to increase debt in the capital structure of the company. Only enterprises that performed that may face the risk of financial distress due to the application of high levels of debt in their capital structure. Agency poor business performance will not dare to use large amounts of debt because it increases the risk of financial distress (Megginson, 1997, p.342 in Silvyasari, 2016).

### Leverage

Debt (long-term debt) are long-term loans of the company, including bonds (Gitman, 2006, p.326) in Ernawati and Murhadi (2013). Debt can be called also as a source of external funding from equity.Leverage ratio of book value to use long-term debt will be used as a measuring tool for variable leverage for two reasons: 1) Banerjee, et al. (2000) in the Cloud, et al. (2011), which revealed that the company's debt payment is based on the book value of debt and not the market

value of debt. 2) Long-term debt is generally used for fixed asset investment decisions, research and development activities.

**Profitability**

Profitability is the company's ability to generate profit after deducting revenue load (Gitman, 2006, p.629) in Ernawati and Murhadi (2013). Bevan and Danbolt (2002) in Murhadi (2011) states that the higher rate of the profitability of a business entity, then the greater the company's internal funds, so the use of debt should be reduced.Rahmawati (2012) in Subagyo (2015) stated that ROA is a profitability ratio that is used to measure the effectiveness of the company in generating profits by exploiting its total assets.

**Tangibility**

Gaud et al. (2003) in Atansil (2011) describes the tangibility an intangible asset that is owned by a company. Intangible assets have a higher value than the intangible assets when the bankruptcy occurs. When linked with the capital structure, the amount of tangible assets owned by the company can be used as collateral to raise the proportion of its debt.

**Size**

According Bouallagui (2006) in Ernawati and Murhadi (2013), size is the size of a company can be measured by total assets. A healthy business activity hopes to expand the size of the company. Size size can be calculated by the logarithm of total assets.

**Growth**

Akhtar (2002) in Ernawati and Murhadi (2013) suggests that growth can be measured by the growth in total assets. If sales grow, the company will also increase capacity through added investment in assets, so the asset growth reflects the growth of a company.

**Liquidity**

Liquidity is the ratio that indicates the ability of the enterprise to meet its short-term liabilities (Murhadi, 2013, p. 57). Liquidity is very important for a company because it is concerned with turning assets into cash, so often used by enterprises and investors to determine the level of the company's ability to meet its obligations.

**THE EFFECT OF PROFITABILITY ON LEVERAGE**

According Oino and Ukaegbu (2015) profitability has a significant negative effect on leverage. Myers (1984) in Murhadi (2011) also stated that the company is better to use internal sources of funds derived from retained earnings, and issuing debt and proceed with the issuance of shares. Thus, in this caseMyers more supportive pecking order theory.

$H_1$ : Profitability has a negative effect on leverage.

## THE EFFECT OF TANGIBILITY ON LEVERAGE

According Abdeljawad et al. (2013) tangibility has a significant positive effect on leverage. This is supported by research conducted by Murhadi (2011) which states where the company has more tangibility of assets will have a better position when owe creditors.

$H_2$ : Tangibility has a positive effect on leverage.

## THE EFFECT OF SIZE ON LEVERAGE

Oino and Ukaegbu (2015) stated size positive significant effect on leverage. Bevan and Danbolt (2002) in Murhadi (2011) also states that the size of the larger companies will use more debt proportion.Homaifer et al. (1994) in Murhadi (2011) states that companies with a large size can use a greater proportion of debt than firms with a smaller size, because large companies have the capacity to pay the debt the better.

$H_3$ : Size has a positive effect on leverage.

## THE EFFECT OF GROWTH ON LEVERAGE

According Oino and Ukaegbu (2015) growth has a positive significant effect on leverage. Um (2001) in Murhadi (2011) also states that the entities growing pressure to fund investment opportunities that exceed retained earnings held. This is consistent with the pecking order theory, where enterprises tend to use debt rather than equity.

$H_4$ : Growth has a positive effect on leverage.

## THE EFFECT OF LIQUIDITY ON LEVERAGE

According Syahara and Sukarno (2015) liquidity has a significant negative effect on leverage. This is consistent with the pecking order theory. Where companies with high liquidity tend to use less debt. Thus it can be said liquidity had a negative effect on leverage.

$H_5$ : Liquidity has a negative effect on leverage.

## RESEARCH METHODS

This research included in this type of basic research is research to develop research that has been done before. Based on the purpose, this study include the type of causal research for this study was conducted to test the effect of independent variables (profitability, tangibility, size, growth, and liquidity) on the dependent variable (leverage) enterprises in all sectors of the non finance listed on the Indonesia Stock Exchange the period 2011 - 2015.The data used in this research is quantitative data by using a lot of time (time series) with a lot of samples (cross section) or also called panel data. The data used is secondary data sourced from the company's financial statements in all non-finance sectors listed in Indonesia Stock Exchange in the period 2011-2015.

Data collection procedures used in the study is to establish the data required in accordance with the variables measured in this study, secondary data from the data provider's site (www.idx.co.id) or (www.icamel.co.id), processing

the raw data obtained from the data provider's website in accordance with the needs analysis, tabulation data into Microsoft Excel.

This study uses data processing multiple linear regression to determine the effect of independent variables on the dependent variable. Variables used in this research is the dependent variable and independent variables. The dependent variable in this study is the leverage, while the independent variable is profitability, tangibility, size, growth, and liquidity.

$$LEV_{it} = \propto -\beta_1 . PROF_{1it} + \beta_2 . TANG_{2it} + \beta_3 . SIZE_{3it} + \beta_4 . GROWTH_{4it} - \beta_5 . LIQ_{5it} + e \dots\dots\dots\dots(1)$$

Description :

| | |
|---|---|
| $LEV_{it}$ | : leverage ratio entity i in period t |
| $Prof_{it}$ | : the profitability of the enterprise i in period t |
| $Tang_{it}$ | :asset tangibility business entity i in period t |
| $Size_{it}$ | : sized enterprises i in period t |
| $Growth_{it}$ | :The growth rate of enterprise i in period t |
| $Liq_{it}$ | : liquidity entity i in period t |
| $\propto$ | : constant coefficients |
| $\beta$ | : regression coefficients |
| $e$ | : *error* |

This study will be performed using the Eviews 8 in data processing. Before performing linear regression, necessary to test the classical assumption of normality test, multicollinearity, autocorrelation, and heteroscedasticity test. Then after that, will be tested Chow and Hausman test to determine the appropriate method of processing models.

## RESULTS AND DISCUSSIONS

**Tabel 1**
**Regression Test Results**

| Variabel Dependen: *Leverage* | | | |
|---|---|---|---|
| **Independent Variable** | **Coefficient** | **Probability** | **Hypothesis** |
| PROF | -0.008630 | 0.3643 | - |
| TANG | 0.084365 | 0.0129** | + |
| SIZE | 0.076760 | 0.0000*** | + |
| GROWTH | -0.000228 | 0.1545 | + |
| LIQ | -0.000224 | 0.1970 | - |

Sumber: results of data processing with program Eviews 8 for Windows
Description:      *      : signifikansipada 10%
                        **    :signifikansipada 5%
                        *** : signifikansipada 1%

The regression equation in Table 1 isLEV = -0,725287+ (-0,008630).Prof + 0,084365.Tang + 0,076760.Size + (-0,000228).Growth + (-0,000224).Liq, where LEV is a dependent variable of profitability, tangibility, size, growth, and liquidity as independent variables.

Variable profitability has a coefficient of -0.008630 and a significance level of 0.3643. That is, the variable profitability have significant negative effect on the variable leverage. These results are supported by research conducted by Syahara and Sukarno (2015), Yadav (2014), as well as Nugrahani and Sampurno (2012). However, contrary to research conducted by Oino and Ukaegbu (2015), Daskalakis et al. (2014), Abdeljawad et al. (2013) and Murhadi (2011) who found a significant negative results among the variables of profitability and leverage.Then, the hypothesis in this study suggested a significant negative relationship between the variables of profitability on leverage. This means that H1 is rejected. Profitability negatively affect leverage means that the greater the profitability of a business entity, then the use of debt will decrease.Nonsignificant results are consistent with the signaling theory, where the level of profit does not affect the use of debt. When enterprises use large amounts of debt, it is not because of the level of profit it was used as a positive signal for investors. The positive signal indicates that the entities are in a healthy condition so bold owed.In other words, the company believes to be able to pay its obligations at maturity. In addition, the positive signal lead to higher costs in the form of interest on debt that is not easily replicated by competitors. Thus, the profitability factor of enterprises do not have a significant impact on the level of leverage (Megginson, 1997, p.342 in Silvyasari, 2016).

Variable tangibility has a coefficient of 0.084365 and a significance level of 0.0129. That is, the variable tangibility has a significant positive effect on the variable leverage. These results are supported by research conducted Oino and Ukaegbu (2015), Abdeljawad, et al., (2013), and Murhadi (2011). However, contrary to research conducted by the Daskalakis et al., (2014) who found a significant negative relationship between tangibility and leverage.Moreover, contrary Similarly, the research conducted by Syahara and Sukarno (2015) who found no significant negative relationship between tangibility and leverage.Tangibility positive effect on leverage means greater enterprise value of tangible assets, the company's debt will increase. This is because the company has more tangibility of assets will have a better position when owe creditors. Tangibility assets can be used as a guarantee given by the company.

Variable size has a coefficient of 0.076760 and a significance level of 0.0000. That is, the variable size has a significant positive effect on the variable leverage. These results are supported by research conducted by Oino and Ukaegbu (2015), Daskalakis et al., (2014), Syahara and Sukarno (2015), Abdeljawad, et al., (2013), and Murhadi (2011).Size positive effect on leverage means the greater the size of the enterprise, the higher the debt used. This is because companies with a large size can use a greater proportion of debt than firms with a smaller size, because large companies have the capacity to pay the debt the better.In addition, these results are in accordance with the signaling theory that saw the debt as a signal indicating that a corporation has a good performance. When the greater the size of the enterprise, then the credibility of the company will be more recognized, more transparent and business entities tend to have lower volatility assets so as to increase the leverage used.

Growth variable has a coefficient of -0.000228 and a significance level of 0.1545. That is, the variable growth has no significant negative effect on the variable leverage. Thus, H1 is rejected. These results are supported by research conducted by Zuhro (2016). However, contrary to research conducted by Oino and Ukaegbu (2015), Daskalakis, et al., (2014), Syahara and Sukarno (2015), and Abdeljawad, et al., (2013) who found a positive relationship significantly between the variable growth to leverage. Moreover, contrary to research conducted Murhadi (2011) who found a significant negative correlation between the variables to leverage growth.Growth negative effect on leverage means that the higher the growth rate of business entities, the use of debt will decrease. No significant effect is caused by the creditor (bank) in lending not only look at the growth of the company's assets. However, in giving loans lenders have consideration for minimizing risk. Such considerations related to goodwill as well as the ability of borrowers to repay the loan and interest thereon commonly known as 5C.According Megginson (2010) 5C consists of character, capacity, capital, collateral, condition of economy. Of factors - factors considered by the creditors, growth is not the main factor that visits the bank to provide credit. Growth reflects just one part of 5C capital, while there are still 4C on which the judgment creditor in lending.Entity that has a high level of asset growth may not necessarily meet the 5 key criteria that assessed the creditors before granting a loan, otherwise the enterprise with low asset growth is not necessarily meet the five criteria. So the growth factor enterprises do not have a significant effect on the level of leverage.

Liquidity variable has a coefficient of -0.000224 and a significance level of 0.1970. That is, a negative liquidity effect but not significant to the variable leverage. Thus, H1 is rejected. These results are supported by research conducted by Srivastava (2014). However, contrary to research conducted by Syahara and Sukarno (2015) who found a significant negative relationship between the variables of liquidity to leverage. Liquidity negative effect on leverage means higher liquidity level of the enterprise, the use of debt will decrease.Nonsignificant results are consistent with the signaling theory, in which the high and low levels of liquidity does not affect the use of debt. When enterprises use large amounts of debt, it is not because of the high and low levels of liquidity; it was used as a positive signal for investors. The positive signal indicates that the entities are in a healthy condition so bold owed. In other words, the company believes to be able to pay its obligations at maturity. In addition, the positive signal lead to higher costs in the form of interest on debt that is not easily replicated by competitors. Thus, the liquidity factor enterprise does not have a significant impact on the level of leverage (Megginson, 1997, p.342 in Silvyasari, 2016).

Testing of the independent variables together - equal to the dependent variable is done by using the F test results showed statistical calculations F count = 16.51739 with a probability of 0.000000 <0.05. This means that together - the same variable profitability, tangibility, size, growth, and liquidity has a significant effect on leverage.

The coefficient of determination used is adjusted-$R^2$ with a value of 0.758643 for the dependent variable leverage. This coefficient has the meaning

that the leverage variable change can be explained well by the variable profitability, tangibility, size, growth, and liquidity amounted to 75.86%, while the remaining 24.14% is explained by variables - other variables not included in this study.

## CONCLUSIONS AND RECOMMENDATIONS

Based on the results of hypothesis testing by t-test, the result is that the variable size tangibility and significant effect on leverage. While the effect is not significant profitability variables with a negative correlation direction, growth effect is not significant, but with the direction of negative relationships, and liquidity effect is not significant to the direction of a negative relationship.

This research can be a reference and consideration for investors to consider the factors - factors relating to leverage business entities such as tangibility and size. Instead, investors need not take into account profitability, growth, and liquidity of the enterprise. In addition, this study can also be used as consideration for investors who wish to invest in a business entity listed on the Indonesia Stock Exchange.

In enterprises in all sectors listed on the Stock Exchange, this study can be considered to make the decision to use debt as a source of external funding. Then, enterprises also need to look at the proportion of debt to be tailored to the business entity's ability to pay in order to prevent a default that will lead to financial distress in the future.

This research can be used as a recommendation for further research. The limitations in this study is the lack of the number of variables and the results do not support the robustness test. Be able to do further research on the addition of independent variables or control variables to make research on the factors that may affect leverage enterprise.

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