Factors Affecting the Capital Structure of Non-financial Business Entities Listed in the IDX for the 2016–2020 Period

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Abstract. This research aims to analyze the determinants of a firm's factors that influence capital structure. The variables used were profitability, growth, tangibility, non-debt tax shield, liquidity, and size. This research used a quantitative approach by using multiple linear regression. This research samples were from all non-financial sector companies listed on Indonesia Stock Exchange that issued financial statements in 2016–2020 and were not under the delisting process. The final samples utilized in this research were equal to 1,650 observations. This research used the fixed effect model, and the research findings indicate that the non-debt tax shield has no significant effect on capital structure, while profitability, growth, tangibility, liquidity, and size have a significant effect on debt in all non-financial sector companies listed on the Indonesia Stock Exchange for the period 2016–2020.

Keywords: capital structure · debt · trade-off theory · pecking order theory

1 Introduction

The capital structure becomes one interesting finance topic to be further studied related to the balance between risk and rate of return, which, if defined optimally, can increase the corporate value and the welfare of the shareholders [1]. Every decision in managing capital structure will bring financial consequences to the company [2]. A capital structure that is not optimum will make the company's unstable financial position, therefore leading to bankruptcy. This will indeed bring loss to the investors. Therefore, defining capital structure need to consider every correlated factor. Endang Ernawati [3] considered the measure of affect, productivity, tangibility, non-debt assess shield, working hazard, and development against the capital structure of non-finance companies, which are recorded in IDX amid the 2007–2011 period. The comes about appeared that firm estimate, tangibility, and commerce hazard factors have a critical positive affect on a company's liabilities, productivity variable contains a critical negative affect on liabilities, whereas development and non-debt assess shield factors have no critical affect. Saif-Alyousfi [4] researched non-finance companies listed on Malaysia Stock Exchange. The research results showed that profitability, growth, opportunity, tax shield, liquidity,

and cash flow volatility have a significant negative impact on capital structure. [5] investigated the aspects of defining capital structure in companies in Indonesia. The research results showed that profitability, business risk, firm size, liquidity, and share price performance have an impact on capital structure. [6] researched factors that impact the capital structure, profitability, and rate of share return. The results showed that the firm's size, tangibility, and liquidity have no significant impact on capital structure. This research used research objects of companies listed on the Indonesia Stock Exchange from 2016 to 2020. The companies chosen were all companies except companies from the finance sector.

These were due to most of the finance sector companies having high liabilities. These liabilities are confirmed from the third parties' deposits by the public in the form of savings or deposits. Therefore, the financial sector was not used as an object in this study. Research by Endang Ernawati [3], Rajagopal, and Haron [7] showed a significant negative impact on the debt. Haron [5] stated that a high rate of profitability means the company can generate high profit from its assets. The high profit earned will be suspended profit and become the company's internal source of funds. According to the pecking order theory, the company will first use an internal source of funds to fulfill its needs. On the off chance that the inside source of the support is tall, the company employments no obligation. In this manner, the higher the productivity rate, the obligation is likely to be lower.

This is also supported by the research of Acaravci [8], which expressed that benefit incorporates a noteworthy negative affect on obligation. The reason was that companies with a moo rate of productivity would moreover have a moo inner source of stores. In case the inner source of a finance does not suffice, at that point companies tend to utilize more obligation as their source of reserves.

Hypothesis 1: Profitability has a negative effect on debt.

The research of Chandra [6] and Vo [9] found that growth positively impacted debt. According to pecking order theory, companies will use an internal source of funds first and use debt if they have no sufficient internal source of funds. This is also supported by the research of Acaravci [8], which stated that growth has a significant positive impact on the debt. This was due to growing companies being pressured to fund the investment opportunity beyond the available suspended profit; therefore, companies will use debt as an external fund to fund their investment. Therefore, companies with high growth tend to use high debt as well.

Hypothesis 2: Growth has a positive impact on debt.

Research Jaworski [10] appeared that tangibility incorporates a positive impact on obligation. Companies that have more substantial resources require more reserves, which can result in expanded obligation. In expansion, this variable can be utilized as collateral to diminish charges and make leasers feel more secure. Companies that have large resources are anticipated to have a lower hazard of disappointment and permit them to urge more obligation. Chadha [11] also stated that tangibility had a critical positive impact on obligation. Typically reliable with the agency hypothesis, to be specific that supervisors attempt to require advantage of the company's settled resources to get subsidizing that's more than the ideal level. Companies that have huge resources are

anticipated to have a lower hazard of disappointment and permit them to utilize more obligation.

Hypothesis 3: Tangibility has a positive influence on debt.

Research by Rajagopal [7] stated that a non-debt tax shield had a negative impact on the debt. This is due to if the variable is high, then it indicates there is another component besides debt that can reduce the tax without having to use debt. The company will use a non-debt component to reduce tax. This will make the suspended profit, which is an internal source of funds increases, therefore, according to pecking order theory, the use of debt will be lessened.

Kalyanaraman [12] also stated that a non-debt assess shield features a noteworthy negative affect on the obligation. The reason was that assess benefits from obligation may well be supplanted with a non-debt assess shield; subsequently, the company as it were has to utilize the charge sparing from the non-debt charge shield. It implies that the higher the non-debt charge shield, the lower the obligation.

Hypothesis 4: Non-debt tax shield (NDTS) has negative impact on debt.

Kalyanaraman [12] and Haron [5] found a significant negative result between liquidity and debt. Kalyanaraman [12] mentioned that companies in Malaysia with high liquidity will tend to reduce their debt. This is due to companies with high liquidity rates that can pay a short-term debt that will soon be overdue. With a high liquidity rate, companies have a current asset that generates cash quickly, increases suspended profit and reduces debt use. Haron [5] revealed that current assets can be used as the source of funds; this implicates that funding activities in Indonesia are according to pecking order theory. The higher the current ratio, the more the companies will use internal funds to pay off short-term debt; hence, the debt proportion will decrease.

Hypothesis 5: Liquidity has a negative impact to debt.

In Chadha [11]] and Endang Ernawati [3] investigate found that estimate features a positive affect on obligation. Expansive estimate companies can utilize more obligation than little companies. Expansive companies too tend to have more resources to ensure obligation and diminish the hazard of insolvency. The moo chance of liquidation can increment creditors' believe to grant credits to the companies to fulfill the higher operational capital. Aside from that, huge companies will utilize assess reserve funds more by utilizing more obligation.

Jaworski [10] explained that company sizes can generate bargaining power and large companies have a reputation, which is also recognized by the public; therefore, issuing company obligations can attract individual or institution investors.

Hypothesis 6: Firm size has a positive impact on debt.

2   Research Methods

The targeted population in this research was all non-finance companies listed on the Indonesia Stock Exchange from 2016 to 2020. Population characteristics were companies that Acaravci [8] have issued a coherent financial statement every year during the period 2016–2020 and had been audited and Chadha [11] were not beneath delisting prepare and suspended. After screening with the populace characteristic, the overall test was 330 non-finance companies. This inquire about utilized panel data with 5 years' time period; subsequently, the overall perception was 1,650.

The dependent variable in this research was the capital structure (debt). In contrast, the independent variables were profitability, growth, tangibility, non-debt tax shield, liquidity, and firm size of non-finance companies listed in IDX from 2016 to 2020. Below is the equation model of this research.

$$DEBT\_it = \alpha\_it + \beta1PROF\_it + \beta2GROW\_it + \beta3TANG\_it$$
$$+ \beta4NDTX\_it + \beta5LIQ\_it + \beta6SIZE\_it + e\_it$$

where: $DEBT_{it}$ = Debt to Asset Ratio of non-finance companies i year of t which listed in IDX period 2016–2020, α_{it} = Constanta coefficient i company year of t, $GROW_{it}$ = i company's growth year of t, $TANG_{it}$ = Tangibility of i company year of t, $NDTX_{it}$ = Non-debt Tax Shield i company year of t, LIQ_{it} = Liquidity i company year of t, $\beta1$, $\beta2$, $\beta3$, $\beta4$, $\beta5$, $\beta6$ = regression coefficient, and e = Standard error.

3   Results and Discussion

330 research samples were collected after selecting non-finance companies listed in IDX from 2016 to 2020. As this research used panel data, the total observation collected was 1,650. Below is the descriptive data from the research sample used. Some time recently handling information employing a relapse demonstrate, a classic presumption test has to be conducted. The ordinariness test results show that the information were not disseminated ordinarily. This will be illuminated utilizing the huge test presumption since the test utilized was greater than 30. The information have no multicollinearity issue.

An autocorrelation test could not be done since panel data were used. The data had a heteroscedasticity issue but could be solved with cross-section weight. Hereinafter, model selection was conducted using the Chow test and Hausman test. The suitable model was the fixed effect model. The results of the regression analysis are presented in Table 2.

$$DEBT = (-1.82094) + (-0.32512)PROF + (0.02155)GROW$$
$$+ (-0.09383)TANG + (0.15799)NDTS + (-0.02359)LIQD + (0.082467)SIZE.$$

Table 1. Descriptive Data

	DEBT	PROF	GROW	TANG	NDTS	LIQD	SIZE
M	0.461	0.061	0.078	0.345	0.011	2.195	28.88
Med	0.467	0.055	0.045	0.310	0.003	1.510	28.85
Max	0.980	0.702	3.279	0.963	0.202	24.88	33.49
Min	0.034	−0.43	−0.70	0.000	0.000	0.015	24.60
Std. Dev	0.199	0.096	0.240	0.243	0.023	2.034	1.572
Obs	1,650	1,650	1,650	1,650	1,650	1,650	1,650

Source: data processing from the EViews program.

Table 2. Results for Regression Analysis.

Variable	Coefficient	Prob.	Hypothesis	Remark
C	−1.82094	0.0000***		
PROF	−0.32512	0.0000***	−	Accepted
GROW	0.02155	0.0000***	+	Accepted
TANG	−0.09383	0.0000***	+	Rejected
NDTS	0.15799	0.2702	−	Rejected
LIQD	−0.02359	0.0000***	−	Accepted
SIZE	0.08246	0.0000***	+	Accepted
R-squared		0.98655		
Adjusted R-squared		0.98312		
F-statistic		287.7107		
Prob (F-statistic)		0		

Source: Data processing by the EViews program Remark: *** Significant 1%.

The profitability variable has a coefficient value of −0.32512 with a significance level of 0.0000, which means the profitability variable has a significant negative impact on the debt variable of non-finance companies listed in IDX during the 2016–2020 period. This proves that when the profitability variable increases, it will cause a decrease in the debt variable and vice versa. This is in line with the pecking order theory that states a company with a high level of profitability will likely choose internal funding first rather than external funding such as debt. The high profitability rate will make companies choose to hold some profits or retained earnings, which will be used to cover their operational need or other development. The high level of retained earnings will lead to companies' tendency to use internal funding first than external funding like debt.

One of the reasons was that external funding would have more risk than internal funding; therefore, it can be concluded that the higher the internal fund amount, the lower debt will be used by the companies. These findings are in line with Endang Ernawati [3], Liem [1], and Haron [5], who stated a significant negative correlation between profitability with debt.

The growth variable has a coefficient value of 0.02155 with a significance level of 0.0000, which means the growth variable has a significant positive impact on the debt variable of non-finance companies listed in IDX during the 2016–2020 period; thus, hypothesis 2 is accepted. This correlation shows that when the growth variable increase, it will cause an increase in the debt variable and vice versa. Companies with a high growth rate will require a large number of funds. If internal funding is insufficient, companies will conduct external funding, such as debt. Companies with a high growth rate also mean that their total annual asset increases. This shows that companies have large and relatively stable cash flow.

Stable cash flow indicates that companies are capable of paying interest rates from debt received. These results are in line with Chen [12], Acaravci [8], who stated that growth has a significant positive impact on the debt. A tangible variable has a coefficient value of 0.09383 with a significance level of 0.000, which means the tangibility variable has a significant negative impact on the debt variable of non-finance companies listed in IDX during the 2016–2020 period. This proves that hypothesis 3 is rejected. This correlation shows that if the tangibility variable increases, it will cause a decrease in the debt variable and vice versa. This negative direction contradicts the trade-off theory that states fixed assets can be used as a warranty to a creditor to collect a debt. However, this negative direction is in line with agency and pecking order theories for debt usage will increase agency costs; therefore, companies with a high fixed asset will first use internal funding. These results are also found by Acaravci [8], which stated a negative significance between tangibility to debt. Aside from that, Chandra [6] also explained that companies in Indonesia with high fixed assets did not use an asset as collateral/warranty in collecting the debt.

Non-debt tax shield variable has a coefficient value of 0.15799 with a significance level of 0.2702, which means the non-debt tax shield variable has an insignificant positive impact on the debt variable of non-finance companies listed in IDX during the 2016–2020 period. This proves that hypothesis 4 is rejected. This correlation shows that if the non-debt tax shield variable has increased, then it will cause an increase in the debt variable and vice versa. However, in this research, the result was insignificant, meaning that a high or low non-debt tax shield (depreciation) has no impact on the high or low of the company's debt. This is due to the descriptive statistic table's average non-debt tax shield value being only 1%. The small average value of the non-debt tax shield will be challenging to influence management's decision on whether to use debt, while the management's decision to use debt was based on investment needs. If the investment needs are the company's opportunity to grow, it will influence management decisions about using debt. This insignificant result is in line with Endang Ernawati [3] and Haron [5] research results that stated if non-debt tax shield has an insignificant impact on the debt.

The liquidity variable has a coefficient value of 0.02359 with a significance level of 0.0000 which means the liquidity variable has a significant negative impact on the debt variable to non-finance companies listed in IDX during the 2016–2020 period. This proves that hypothesis 5 is accepted. This correlation shows that when the liquidity variable increases, it will cause a decrease in the debt variable and vice versa. Companies with a high level of liquidity will be able to pay short-term debts that will be overdue. High liquidity means a company has fast current assets to be used as cash. The additional cash will make the company also able to pay off long-term debt; therefore, total debt can be paid off from some amounts from cash. This aligns with the pecking order theory, which states that companies tend to use internal sources of funding first; therefore, there will be a decrease in external sources of funding, one of which is debt. These findings align with Saif-Alyousfi [10] and Haron [5] research which stated that liquidity has a negative sign on debt.

The size variable has a coefficient value of 0.08246 with a significance level of 0.0000 which means the size variable has a significant positive impact on the debt variable of

non-finance companies listed in IDX during the 2016–2020 period. This shows that hypothesis 6 is accepted. This correlation shows that when the size variable increases, it will cause the debt variable to increase, and vice versa. According to trade-off theory, the company will adjust the funding source so that the capital structure becomes optimum every year. Large-size companies tend to diversify their funding source, and they are easier to get bank loans than smaller companies. This is due to the bank will trust larger size companies more. These findings align with Endang Ernawati [3] and Thanh [10] research, which stated that size has a significant positive impact on debt.

4   Conclusion

Therefore, it can be concluded that profitability, tangibility, and liquidity have a significant negative impact on debt, while growth and firm size have a positive significance on debt. However non-debt tax shield has no significant impact on the debt. The coefficient determination value result was 0.983121. This shows that debt changes can be explained by profitability, growth, tangibility, non-debt tax shield, liquidity, and size for 98.3%. In comparison, the rest 1.7% were explained by other variables outside profitability, growth, tangibility, non-debt tax shield, liquidity, and size variable. This research has limitations in object, period, and variable of research. Further research is expected to study companies with a broader object, not only in Indonesia, while for period usage can use newer period and can add some new issuers. Aside from that, independent variables used in this research were also limited, which were only profitability, growth, tangibility, non-debt tax shield, liquidity, and size; hence, future research can add other variables such as cash flow volatility, earning volatility, tax shield, corporate tax, business risk, and dividend.

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