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The Impact of Financial Flexibility and Business Risk on Capital Structure with Firm Size as a Moderating Variable

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ABSTRACT
This study examines the impact of financial flexibility, business risk and moderating effect of firm size on the capital structure of listed manufacturing companies in Indonesia Stock Exchange for 2017 to 2019. The proxies for the financial flexibility are earning to total capital ratio, cash holding, operating cash flow to value ratio, and dividend pay-out ratio. Analysis used panel data regression models and *moderated regression analysis* (MRA). The results of the study indicate that financial flexibility which is measured by earning to total capital ratio has a negative and significant effect on capital structure. Meanwhile, financial flexibility which is measured by cash holding, operating cashflow to value ratio, and dividend pay-out ratio, have no significant effect on capital structure. Business risk has no significant effect on capital structure as well. Firm size as a moderating variable does not moderate the effect of financial flexibility and business risk on capital structure.

Keywords: *Capital structure, financial flexibility, risk, size*

1. INTRODUCTION

Companies must carefully consider all factors in making decisions related to their company so that they do not experience the risk of bankruptcy. The funding decision in the form of capital structure is a fairly important decision for the company. The capital structure emphasizes the combination of debt and equity to finance the company. Inappropriate decisions in determining the capital structure can cause the company to be illiquid, thereby reducing the value of the company [1].

This study examines the impact of financial flexibility, business risk and moderating effect of firm size on the capital structure of listed manufacturing companies in Indonesia Stock Exchange for 2017 to 2019. The proxies for the financial flexibility are earning to total capital ratio, cash holding, operating cash flow to value ratio, and dividend pay out ratio, as measured by Byoun [10]. Business risk as measured by degree of operating leverage (DOL) and capital structure as measured by debt to equity ratio (DER). Capital structure is a combination of debt and equity to finance company assets [2]. A good capital structure can increase a company's stock price, showing the percentage of debt and capital that has a balanced return and risk [3]. A good capital structure is formed because of the right funding decisions. Funding decisions for capital structure must be identified by looking at the financial composition of the company so that the resulting financial composition can be balanced and there are no mistakes in decision making. The right decision for the capital structure can lead the company towards increasing profitability and ultimately the company can achieve its goals [4].

Various studies have been conducted to look at the factors that influence the capital structure, such as tangibility, profitability, liquidity, business risk, growth opportunities, age, sales growth, effective tax rate, non-debt tax shield, firm size, financial flexibility, share price performance, asset utilization ratio, state ownership, managerial ownership, institutional ownership, efficiency, inflation, gross domestic product, dividend pay-out ratio, growth of asset, financial constraint, agency cost, bankruptcy cost, political risk, research and development. For this study, we focus on financial flexibility, business risk, and firm size as moderating variables.

The funding decision in the form of capital structure is a fairly important decision for the company so that they do not experience the risk of bankruptcy. The ability of a company to decide effectively what amount and timing of cash flows is referred to as financial flexibility. These skills are important so that companies can guard against unexpected risks and take advantage of existing opportunities [5]. Companies with high financial flexibility experience less impact during a crisis. One part of the company's business strategy is to create financial flexibility [6]. Financial flexibility is able to influence capital structure decisions to be taken by company managers. The biggest cause of the low flexibility of a company, caused by high financing using debt.

Denis [7] states that companies achieve financial flexibility through managing company liquidity, through capital structure policies and payment policies. The company will be inflexible if it has a high level of debt because of the large cash needs to pay off the debt. Holding cash allows companies to quickly fund investment opportunities. Companies that have a high degree of flexibility usually have no problems in obtaining capital. Research by Alipour, et al. [1] and Rapp, et al. [8] found that companies that have less debt levels are companies that have a higher level of financial flexibility. On the other hand, Anderson and Carverhill [9] found that firms' flexibility increased when they had higher levels of long-term debt because it would reduce short-term debt. The findings of Byoun [10] also show that to maintain financial flexibility, large companies prefer to use their own capital. Unlike small companies. Even though they have low leverage, they tend to use equity and increase their cash holdings in order to maintain financial flexibility. As a result, this finding contradicts the pecking order theory.

Business risk is an obstacle for companies in carrying out external funding. Business risk has a significant effect on capital structure [11 - 15]. If the costs associated with the debt are high, the business risk faced by the company will be even higher. The risks that are likely to occur are increased risk of financial distress, bankruptcy costs, reorganization costs, lack of investment, and asset replacement problems [16].

Company size is a measure of how big or small a company is. Firm size in this study acts as a moderating variable which aims to show whether it can strengthen or weaken the relationship between variable X and variable Y. In various studies, it was found that company size is able to moderate the relationship between independent variables and capital structure [4], [17 – 19]. The bigger the business, the higher the financing required. Due to the large amount of funds needed, companies tend to use foreign capital so that their operational activities can run as expected [20].

2. LITERATURE REVIEW

From the agency theory point of view, one way to reduce conflicts of interest is to create the right capital structure. Why is that? Because as an agent, managers want to have control over resources. So they will strengthen the resources they have. Furthermore, to reduce agency conflict through free cash flow is by way of debt. The existence of debt will cause managers to be forced to spend cash to return the interest.

The use of debt in the capital structure can prevent unnecessary company expenses and encourage managers to operate the company more efficiently [21]. This causes agency costs to decrease and subsequently company performance is expected to increase. Agency problems arise not only between shareholders and managers but also in the relationship between shareholders and lenders [22]. Lenders exercise oversight over managers acting on behalf of shareholders to take advantage of lenders, those oversight costs are called agency costs. The company has a choice of funding sources to invest, namely through internal funds and external funds. External funds whose cost of capital is cheaper is debt. The use of high debt in the capital structure may affect the behavior of managers. If the company is in a stable condition, managers can use cash flows for bonuses or expenses that are not needed and cause agency costs. Thus, it is expected that the debt can reduce agency costs [21], [23]. Agency costs can also occur if managers do not seize investment opportunities in new projects because they are worried about the risks they will bear. Capital structure has a positive effect on agency costs, meaning that debt policy increases agency costs. Agency theory predicts that debt will increase company efficiency through the risk of bankruptcy to service debt and reduce the cost of conflict between principal and agent.

According to Alipour et al. [1], internal funding is preferred by companies over external funding. In addition, funding from debt is prioritized over equity funding. According to Brigham & Houston [24], companies have a sequence in doing funding. First, using accounts payable and accruals. Second, is to use retained earnings. Third, in the event that retained earnings are not sufficiently available, the company will use debt. Only then, as the last one, does the company issue new common stock.

The Pecking Order Theory was first introduced by Donaldson in 1961[25]. He observed that management strongly favored internal generation as a source of new funds even to the exclusion of external funds except for occasional unavoidable 'bulges' in the need for funds. Pecking Order Theory [25] states that companies prefer internal finance and adjust their target dividend payout ratio to investment opportunities. If the cash flow generated internally is lacking, the company will first withdraw its cash balance or portfolio of securities. When external finance is required, companies will issue the safest securities first in the following order: debt, hybrid securities such as convertible bonds, and then equity as a last choice.

2.1. Capital Structure

Comparison of the level of debt and capital of a company is called the capital structure. The right composition between debt and equity is very important because it will facilitate daily operational activities. By adjusting the balance between debt and capital in the company, the company has prepared an optimal capital structure so that it gives rise to several benefits, such as increasing the value of the company concerned, minimizing financial and business risks, and maximizing the rate of return [26 - 29].

2.2. Financial Flexibility

Financial Flexibility relates to whether the company is able or unable to mobilize its financial resources when dealing with uncertain future risks. If expectations do not match reality, ex post financial flexibility companies are needed. If all this time in managing its finances, the company has taken the right attitude - even without special needs - then

this kind of company will have a valuable option in the future [10].

The main determinant of optimal capital structure is financial flexibility [1]. All companies in the world are required to be able to adapt to unexpected opportunities or needs. This can only be done if there is adequate financial flexibility. The company's ability to access and restructure financing at low costs is indicated by the level of financial flexibility it has. Financial flexibility also reflects the company's ability to adjust operations to increase operating cash flow, and the ability to sell assets without disrupting the company's operations [8].

2.3. Business Risk

Business risk is an uncertainty faced by the company. This uncertainty can increase the risk of bankruptcy as the company's debt increases. Business risk in a company must be really controlled so that debt does not increase drastically [24],[30]. When determining the right composition of capital structure, risk is the most important factor that must be considered by decision makers, based on Baranoff et al., in Alipour, et. al. [1]. Financial theory gives an important emphasis that companies with high risk so that they have a high probability of default, they should not be overly leveraged, according to Wiwattanakantang; Titman and Wessels, in Alipour et al. [1].

2.4. Firm Size

One of the factors that can describe the company's financial capability is the size of the company [13]. Because the size of the company is directly proportional to the assets they have. In addition to the number of assets, the size of the company can also be known from the number of sales, average sales and average total assets [31].

3. RESEARCH MODEL AND HYPOTHESES DEVELOPMENT

3.1. The Effect of Financial Flexibility as Measured by Earning to Total Capital Ratio on Capital Structure

Byoun [10] states that developing companies do not have sufficient funds to finance their operations, so they really need capital from outside. DeAngelo, DeAngelo, and Stulz in Byoun [10] found that one sign that a company is in the stage of needing capital is when they have low earned capital relative to total capital. On the other hand, firms with greater earned capital show that they are more stable because they have ample cumulative profits. Not surprisingly, such companies use more self-financing. Thus, it can be concluded that companies that are developing or have a low ratio of capital earned to total capital have a higher tendency for financial flexibility. On the other hand, large companies that are characterized by having a high earned to total capital ratio have a lower need for financial flexibility than companies that are developing.

H1: Financial flexibility as measured by earning to total capital ratio has a negative effect on capital structure.

3.2. The Effect of Financial Flexibility as Measured by Cash Holding on Capital Structure

According to the pecking order theory, managers prefer internal financing to external financing [1]. Companies with high cash holdings will prefer not to use debt financing [32]. Byoun [10] states that the decision to determine how much cash to hold will depend on the costs and benefits of holding the cash itself. Growing companies will have the marginal value of cash will be very high because they are dealing with uncertain future investment opportunities. Having low internal funds makes the company face bigger financing constraints. Furthermore, Byoun [10] states that in previous studies it was found that companies that hold large amounts of cash are companies with more growth opportunities, riskier cash flows, and limited access to capital markets.

H2: Financial flexibility as measured by cash holding has a negative effect on capital structure.

3.3. The Effect of Financial Flexibility as Measured by Cash Flow-To-Market Value on Capital Structure

Growing companies usually have low cash flow or face cash flow shortages. As a result, the demand for additional capital is high. On the other hand, increasing capital by issuing debt will be risky. Because this will have an impact on reducing financial flexibility because debt financing causes fixed payments [10].

H3: Financial flexibility as measured by cash flow-to-market value ratios has a positive effect on capital structure.

3.4. The Effect of Financial Flexibility as Measured by Dividend Pay-out Ratios on Capital Structure

Companies that have plans to pay dividends in large numbers will maintain lower leverage. Therefore, it is not surprising that the dividend pay-out ratio will be negatively related to the leverage ratio. In contrast, companies that do not pay dividends, on average, have a lower leverage ratio than companies that pay consistent dividends. Furthermore, Byoun [10] explains that the relationship between dividend pay-out ratio and financial flexibility is an inverse U relationship.

H4: Financial flexibility as measured by dividend pay-out ratios has a negative effect on capital structure.

3.5. The Effect of Business Risk on Capital Structure

As explained earlier, the capital structure is massively affected by business risk. The capital structure of a company reflects the amount of risk inherent in the company's operations. It does not mean that a company that does not use debt financing means that the business risk is low [24]. Companies with high business risk will reduce the use of debt as a source of funding so that the company's risk does not increase [19]. This is in line with research conducted by Alipour et al. [1] which states that business risk affects the capital structure.
H5: Business risk has a negative effect on capital structure.

3.6. The Moderating Role of Firm Size

The size of the company is determined by the number of assets owned. Large companies are easier to get capital than small companies. The easier the accessibility to the capital market, the greater the flexibility of the company [30].
H6: Firm size moderates the effect of financial flexibility as measured by earnings to total capital ratio on capital structure.
H7: Firm size moderates the effect of financial flexibility as measured by cash holding on capital structure.
H8: Firm size moderates the effect of financial flexibility as measured by cash flow-to-market value ratios on capital structure.
H9: Firm size moderates the effect of financial flexibility as measured by dividend pay-out ratios on capital structure.
H10: Firm size moderates the effect of business risk on capital structure.
The research model of this study as presented in Figure 1:

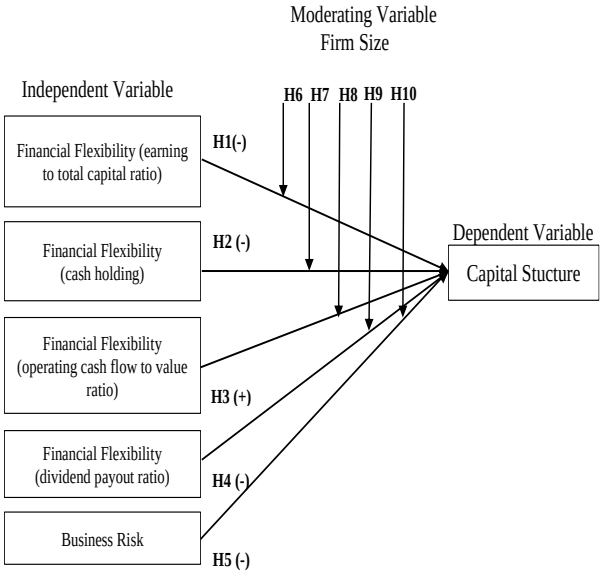

Figure 1 The Research Model

4. RESEARCH METHOD

The population of this study is all manufacturing companies listed on the Indonesia Stock Exchange for the 2017-2019 period. The selected research sample is 52 companies. The sample selection used purposive sampling with the following sample criteria: (1) manufacturing companies that are consistently listed on the IDX for the 2017-2019, (2) companies that use Rupiah as their currency, (3) companies that earn net profits during the 2017-2019, and (4) companies that consistently distribute dividends during the 2017-2019 period. A total of 156 panel data (52 samples times 3 periods) were analyzed using multiple regression analysis and moderated regression analysis (MRA). Data processing in this study using EViews software. Following are the operationalization of research variables as presented in Table 1:

Table 1 Operationalization of Research Variables

Variables	Description	Adopted From
Capital Structure	DER = $\frac{Total\ Debt}{Total\ Equity}$	Zulvia & Linda, 2019
Earning to total capital ratio	Earning to Total Capital Ratio = $\frac{Retained\ Earnings}{Total\ Assets}$	Byoun, 2011 & Alipour, 2015
Cash Holding	Cash Holdings = $\frac{Cash\ and\ Short\ Term\ Investment}{Total\ Assets}$	Byoun, 2011
Operating Cash Flow to Market Value Ratio	Operating Cash Flow to Value Ratio = $\frac{Operating\ Cash\ Flow}{Market\ Value\ of\ Assets}$	Byoun, 2011
Dividend Payout Ratio	Dividend Pay-out Ratio = $\frac{Dividend\ per\ Share}{Earnings\ per\ Share}$	Byoun, 2011
Business Risk	DOL = $\frac{\%\ Changes\ in\ EBIT}{\%\ Changes\ in\ Sales}$	Byoun, 2011
Firm Size	Firm Size = Ln (Total Asset)	Alipour, 2015

Based on the hypothesis above, the regression equations formed:

$CS = \alpha + \beta1.X1 + \beta2.X2 + \beta3.X3 + \beta4.X4 + \beta5.X5 + \varepsilon$..(1)

$CS = \alpha + \beta1.X1 + \beta2.X2 + \beta3.X3 + \beta4.X4 + \beta5.X5 + \beta6.Z + \beta7.X1*Z + \beta8.X2*Z + \beta9.X3*Z + \beta10.X4*Z + \beta11.X5*Z + \varepsilon$…..(2)

Note:
CS = Capital Structure
α = Constant or intercept value
β = Regression Coefficient
X1 = Earning to Total Capital Ratio
X2 = Cash Holding
X3 = Operating Cash Flow to Market Value Ratio
X4 = Dividend Pay-out Ratio
X5 = Business Risk
Z = Firm Size
ε = Error

5. RESULTS

Capital structure variable has a maximum value of 3.609272 and a minimum value of 0.090589. The mean value has a value of 0.705320 and a standard deviation of 0.657335. The financial flexibility variable measured by earning to total capital ratio has a maximum value of 0.824523 and a minimum value of 0.020456. The mean value is 0.370391 with a standard deviation of 0.206354. The financial flexibility variable measured by cash holdings has a maximum value of 0.632315 and a minimum value of 0.000864. The mean value is 0.128612 and the standard deviation is 0.116171. The financial flexibility variable measured by operating cash flow to value ratio has a maximum value of 0.712413 and a minimum value of -0.264585. The mean value is 0.085952 and the standard deviation is 0.130231. The financial flexibility variable measured by the dividend pay-out ratio has a maximum value of 3.521127 with a minimum value of 0.015091. The mean value is 0.472268 and the standard deviation is 0.398335. The business risk variable has a maximum value of 44,42426 and a minimum value of -353.8540. The mean value is -0.942851 and the standard deviation is 34.50158.
The data used in this study is a combination of time-series and cross-sectional data, namely panel data. This research used the multiple linear equations which were tested by fixed effect model (FEM). Due to the use of panel data, the classical assumption test used is the multicollinearity test and the heteroscedasticity test. Based on the results of the multicollinearity test, the R^2 coefficient of each independent variable was < 0.80, which means that the correlation between each independent variable is free from multicollinearity problems. Based on the results of heteroscedasticity testing before and with moderating variables, all variables have a probability value of > 0.5. It means that the two of regression models do not occur heteroscedasticity.
The results of the simultaneous significance test (F-test), the Prob value (F-Statistic) is 0.000000 which means that the independent variables in this study simultaneously affect the dependent variable. Table 2 is the results of hypotheses testing (before moderating variable):

Table 2 The Results of Hypotheses Testing (Before Moderating Variable)

Variable	Coefficient	Sig. Value	Results
Constants	0.852812	0.0000	
Earning To Total Capital Ratio	-0.540837	0.0051	H1 is supported
Cash Holdings	0.574334	0.0913	H2 is rejected
Operating Cash Flow To Value Ratio	0.002225	0.9867	H3 is rejected
Dividend Pay-out Ratio	-0.045476	0.4767	H4 is rejected
Business Risk	-0.000264	0.6071	H5 is rejected

Below are the results of hypotheses testing (before moderating variable):

Table 3 The Results of Hypotheses Testing (With Moderating Variable)

Variable	Coefficient	Sig. Value	Results
Constants	-9.346606	0.0155	
Earning To Total Capital Ratio (ETCR)	-6.413112	0.2136	H1 is rejected
Cash Holdings (CH)	2.345751	0.7227	H2 is rejected
Operating Cash Flow To Value Ratio (OPCVR)	1.209688	0.7295	H3 is rejected
Dividend Pay-out Ratio (DPR)	1.213237	0.4101	H4 is rejected
Business Risk (BR)	0.021272	0.1142	H5 is rejected
Firm Size (Z)	0.354177	0.0077	
ETCR*Z	0.198351	0.2518	H6 is rejected
CH*Z	-0.062238	0.7848	H7 is rejected
OPCVR*Z	-0.042152	0.7354	H8 is rejected
DPR*Z	-0.045075	0.3985	H9 is rejected
RISK*Z	-0.000769	0.1120	H10 is rejected

From the coefficient of determination test and simultaneous significance test result before moderating variable, the adjusted R^2 value is 0.93180 which means that the financial flexibility variable and business risk variable have a contribution in predicting the capital structure by 93.18%, while the remaining 6.82% of the variation in the capital structure is influenced by other variables not included in this research. From the coefficient of determination test and

simultaneous significance test result with moderating variable, the adjusted R^2 value is 0.93672, which means that the financial flexibility variable and business risk variable have a contribution in predicting the capital structure by 93.18%, while the remaining 6.33% of the variation in the capital structure is influenced by other variables not included in this research. The F-test (simultaneous test) conducted on the independent variables is used to determine whether the regression model is feasible or not. It can be seen that the prob (F-statistics) value of the test result is 0.0000 (< 0.05), which means that the regression model used is good fit. The multiple linear regression is obtained as follow:

CS = 0,852812 - 0,540837X1 + 0,574334X2 + 0,002225X3 –0,045476X4 – 0,000264X5 + €…..(1)

CS = -9,346606 – 6,413112X1 + 2,345751X2 + 1,209688X3 - 1,213237X4 + 0,021272X5 + 0,354177Z + 0,198351X1*Z - 0,062238X2*Z – 0,042152X3*Z – 0,045075X4*Z - 0,000769X5*Z + €…..(2)

6. DISCUSSION

Based on the results obtained and generated form this study, authors concluded several discussions. First, financial flexibility as measured with earning to total capital ratio has a negative effect on capital structure. According to Alipour et al. [1], managers prefer internal funding to external funding so that the company's financial weaknesses and strengths and whether debt financing is used depends on its financial flexibility. Companies that have a financial flexibility indicate that they also have less debt, because these companies eliminate the need for external financing by increasing their financial flexibility [1]. The results of this study are also in line with Alipour et al. [1] and Margaretha & Ginting [33], but not in line with Byoun [10]. Second, financial flexibility as measured by cash holding does not have significant effect on the capital structure. This indicates that even though companies hold more cash, they still choose to use external funds (debt), because cash is very important asset to deal with risks and uncertainties. In this study, the level of cash holding was found to have very little effect on the company's funding decisions. This is in line with research conducted by Yudhiarti & Mahfud [32] and Widodo [34], but not in line with Byoun [10]. Third, financial flexibility measured by operating cash flow to market value ratio does not have significant effect on the capital structure. Companies that grow with many investment opportunities tend to have low operating cash flow to value ratios, while more mature companies tend to have high operating cash flow to value ratios due to large operating cash flows [10]. In this study, the level of operating cash flow to market value ratio was found to have very little effect on the company's funding decisions. This is in line with research conducted by Byoun [10]. Fourth, financial flexibility measured by the dividend payout ratio does not have significant effect on the Capital Structure. Large dividend payments serve as an empirical indicator of a mature company, because large dividend payments are generally not feasible to develop companies that have not achieved high profitability [10]. According to Paramu in Joni & Lina [35], dividend distribution will increase the welfare of shareholders and can lead to positive expectations from the market, so that it is easier for companies to issue capital securities and reduce leverage levels. This is in line with research conducted by Byoun [10] and Paramu (2006) in Joni & Lina [35]. Fifth, business risk does not have significant effect on the capital structure. A high level of risk allows creditors to demand a higher rate of return. In addition, creditors can rely on the company's fixed assets as collateral for funding or loans. That way, the company's level of business risk cannot indicate with certainty the source of funding that will be chosen by the company [36]. This is in line with research conducted by Firnanti [36], Seftianne & Handayani [37], and Mufidah et al. [38], otherwise not line in Gómez et al. [11]; Lie Sha [12]; Primantara and Dewi [13]; Setyawan et al. [14]; and Wijandari [15]. Sixth, firm size is not a moderating variable for the effect of financial flexibility on capital structure. This evidence is not in line with Byoun [10]. Byoun [10] found that the companies that most needed financial flexibility were small companies. They tend to use more internal financing or prefer lower leverage. In contrast to small companies, growing companies tend to have high leverage. Meanwhile, in large companies, they prioritize internal equity for financing and maintain moderate leverage so that they have high financial flexibility. On the other hand, in order to maintain financial flexibility, small firms use their equity more and increase their cash holdings even though they have low leverage thereby reversing the external financing hierarchy suggested by the pecking-order theory. Seventh, firm size is not a moderating variable for the effect of financial flexibility and business risk on capital structure. Each company has its own business risks. Therefore, companies tend to minimize bankruptcy by reducing the use of debt for both small-scale companies and large-scale companies. Thus, the size of the company does not affect the company's funding decisions. The results of this study are in line with research conducted by Anum [30], but the other side not in line with Gunardi et al. [17]; Qayyoum [4]; Sari et. al. [18]; and Zulvia and Linda [19].

7. CONCLUSIONS

The results of this study conclude that financial flexibility as measured by earning to total capital ratio has a negative effect on capital structure. Meanwhile, financial flexibility as measured by cash holding, financial flexibility as measured by operating cashflow to value ratio, and financial flexibility as measured by dividend pay-out ratio, they do not have significant effect on capital structure. Business risk does not have significant effect on capital structure as well. Firm size is not a moderating variable for the effect of financial flexibility and business risk on capital structure.

This study has several limitations as follows. First, the research period are only three years. Second, the proxies for financial flexibility and business risk variables are limited. Third, authors do not conclude control variables. Some suggestions for further researchers are: use a longer observation period, use long-term credit rating as another proxy for the financial flexibility [10], use Altman (*Z-score*) as another proxy for the business risk and add some control variables. Implication according to empirical evidence in this study that *earning to total capital ratio* as a proxy for financial flexibility has a significant effect on capital structure, companies are recommended to maintain optimal *earning to total capital ratio* so that the company's management can determine its capital structure in such a way that the value of the company can be maximized.

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