

## The Effect of Profitability and Financial Leverage on Cost of Debt Moderated Earnings Management

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**Abstract:** *This study aims to determine the effect of profitability and Financial Leverage on the Cost of Debt, and the role of Earnings Management as a moderating variable. In this study, profitability is measured by the ratio of return on equity, financial leverage is measured by the proxy debt ratio, earnings management as measured by discretionary accruals, and cost of debt is measured by the ratio of interest expense divided by the average total debt. The population in this study are publicly traded companies listed on the IDX, and the sample used is manufacturing companies listed on the IDX for the 2016-2019 period. Based on the purposive sampling method, the samples obtained were 69 manufacturing companies and 276 observations. The results showed that profitability has a negative effect on the cost of debt, while financial leverage has no effect on the cost of debt, earnings management cannot weaken the negative effect of profitability on the cost of debt and earnings management cannot weaken the negative effect of financial leverage on the cost of debt.*

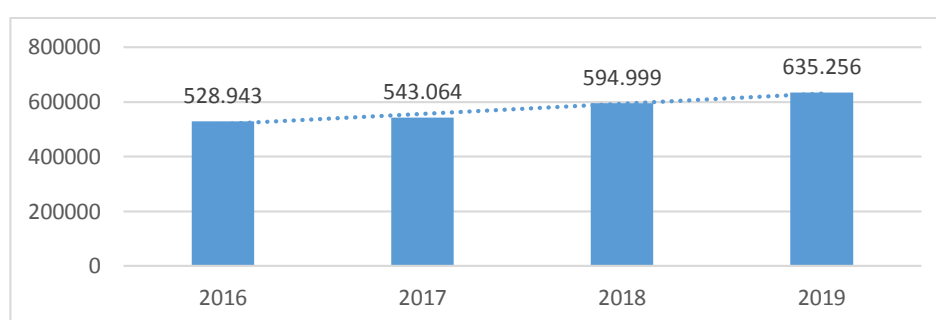
**Keywords:** *cost of debt, profitability, financial leverage and earning management.*

**Abstrak:** Penelitian ini bertujuan untuk mengetahui pengaruh dari profitabilitas dan *Financial Leverage* terhadap *Cost of Debt*, dan peran *Earnings Management* sebagai variabel moderating. Dalam penelitian ini, profitabilitas diukur dengan rasio *return on equity*, financial leverage diukur dengan proksi debt ratio, *earnings management* yang diukur dengan *discretionary accrual*, serta *cost of debt* diukur dengan rasio biaya bunga dibagi dengan rerata total utang. Populasi dalam penelitian ini ialah perusahaan *go public* yang terdaftar di BEI, dan sampel yang digunakan adalah perusahaan manufaktur yang terdaftar di BEI periode 2016-2019. Berdasarkan metode *purposive sampling*, sampel yang diperoleh sebanyak 69 perusahaan manufaktur dan 276 observasi. Hasil penelitian menunjukkan profitabilitas berpengaruh negatif terhadap *cost of debt* sedangkan *financial leverage* tidak berpengaruh terhadap *cost of debt*, *earnings management* tidak dapat memperlemah pengaruh negatif profitabilitas pada *cost of debt* dan *earnings management* tidak dapat memperlemah pengaruh negatif *financial leverage* pada *cost of debt*.

**Kata kunci:** *cost of debt, profitabilitas, financial leverage dan earnings management.*

## INTRODUCTION

Determination of capital structure is important in companies where Myers (1984) examines the choice of the company's capital structure, and he mentions that there is a conundrum in the choice of funding. This conundrum also occurs when companies need external financing in the form of debt. The problem with the company is the decision to use a large amount of debt composition or only a very small amount. In this regard, the correct theoretical approach to the capital structure used by creditors in analyzing the risk of lending to companies is very important. There is a phenomenon of an increase in the amount of debt or loans provided by state-owned banks and national private banks from 2016-2019 based on data from Bank Indonesia as follows:



**Figure 1.** The Position of Bank Credit Increase 2016-2019 in the Manufacturing Sector (Billion Rupiah)

Nevertheless, the total number of manufacturing companies listed on the Indonesia Stock Exchange in the 2016-2019 period was very small: in 2016 there were no companies, no companies were listed, in 2017 there was one company, then there were three companies in 2018 and 2019 there was only one company (www.idx.com). Delisting is an act of delisting the company's shares from the Indonesia Stock Exchange because the company is declared not meeting the requirements. According to Lestari (2019), several reasons for listed companies are due to insufficient capital, very large debt costs, and interest.

**Table 1.** Debt to Equity Ratio of Textile Companies in Indonesia 2019

Textile Issuers	DER	Total Payable	Total Equity	Stock price
PT Century Textile Industry Tbk	25,70	US\$ 47,8 million	US\$ 1,86 million	Rp 260
PT Asia Pacific Investama Tbk (MYTX)	9,37	Rp 3,46 trillion	Rp 369,57 billion	Rp 52
PT Ever Shine Tex Tbk (ESTI)	3,54	US\$ 47,65 million	US\$ 13,46 million	Rp 50
PT Pania Indo Resources Tbk (HDTX)	3,15	Rp 337,19 billion	Rp 106,88 billion	Rp 120
PT Eratex Djaya Tbk (ERTX)	2,49	US\$ 49,31 million	US\$ 19,83 million	Rp 122
PT Ricky Putra Globalindo Tbk (RICY)	2,42	Rp 1,09 trillion	Rp 450,85 billion	Rp 108
PT Argo Pantes Tbk (ARGO)	2,00	US\$171,78 million	US\$ 85,66 million	Rp 825
PT Sri Rejeki Isman Tbk (SRIL)	1,63	US\$966,58 million	US\$592,67million	Rp 161
PT Sunson Textile Manufactur	1,36	Rp 295,54million	Rp 217,19million	Rp 615
PT Pan Brothers Tbk (PBRX)	1,28	US\$ 340,96million	US\$266,80million	Rp 174
PT Asia Pasific Fibers Tbk (POLY)	1,25	US\$ 1,8billion	US\$ 0,94billion	Rp 50
PT Trisula Textile Industries Tbk (BELL)	1,13	Rp 313,83billion	Rp 277,05billion	Rp 700

PT Golden Flower Tbk (POLU)	1,09	Rp 176,91billion	Rp 161,44billion	Rp 680
PT Indo-Rama Syntethic Tbk (INDR)	1,03	US\$ 382,13million	US\$371,43million	Rp 2000
PT Uni-Charm Indonesia Tbk (UCID)	0,91	Rp 3,97 trillion	Rp 4,34trillion	Rp 1635
PT Mega Perintis Tbk (ZONE)	0,76	Rp 233,34billion	Rp 305,30billion	Rp 418
PT Trisula International Tbk (TRIS)	0,74	Rp 486,63billion	Rp 660,61billion	Rp 274
PT Nusantara Inti Corpora Tbk (UNIT)	0,70	Rp 172,6billion	Rp 246,72billion	Rp 149
PT Polychem Indonesia Tbk (ADMG)	0,19	US\$ 41,77million	US\$ 222,1million	Rp 100
PT Tifico Fiber Indonesia Tbk (TFCO)	0,06	US\$ 17,98million	US\$292,69million	Rp 242

Data from CNBC Indonesia (2020) above relates to textile subsector issuers from the highest to the lowest Debt to Equity Ratio (DER) levels, sourced from the 2019 financial reporting. In September 2019, it was found that several textile companies had high debt ratio values, but until now, all of these companies are still listed on the Indonesia Stock Exchange and have not had any legal problems related to debt payments. Concerning the value of the Debt to Equity Ratio (DER), it is indeed very difficult to find companies with a DER value of less than one time, unless these companies are small-scale companies. Companies with medium and upper scale usually have a DER value of more than one time. It is understandable and is not a red light for investors to invest in these big companies.

The two phenomena above reflect the pecking order theory approach in calculating default risk in providing loans. Where external funding with debt is the company's choice because it has a smaller risk than issuing shares, and if the company decides its funding needs by going into debt, it will get a positive response from the market because of the signal that the company's management can pay off all its obligations regularly the market will read it. Charging a certain interest rate in providing loans as a requirement for the rate of return or cost of debt is a way to anticipate default risk for creditors (Rahmawati, 2015).

According to Magnanelli and Izzo (2017), performance and risk are two elements that are closely related, very important in the investment decisions of any economic agent. According to Kasmir (2016), financial performance assessment can be done through the use of financial ratios, which include liquidity ratios, profitability ratios, and solvency ratios. Profitability is a ratio used to assess the company's capacity to generate profits and a measuring tool for the level of management effectiveness (Kasmir, 2016: 196). The inability of the company to generate positive profits is considered a sign of economic difficulties, and the resulting factors can increase the possibility of a corporate crisis and the cost of debt from debt financing (Santoso, 2014). The effect related to profitability on the cost of debt is explained in the research of Safiq et al. (2018), where it can be stated that profitability harms the cost of debt. Research by Magnanelli and Izzo (2017) supports the results of this study where the more companies get to profit from an operating point of view, the lower the cost of debt that must be paid. The use of debt has a lower risk sequence than the issuance of shares (Myers, 1984). The negative relationship is illustrated in the research results by Swissia and Purba (2018), where the high and low levels of debt are inversely proportional to the cost of debt.

Suppose the profits of a company do not match the expectations of readers or users of the report, which indicates poor or poor performance. In that case, management will try to meet the expectations of those users, where there is the freedom of managers in choosing accounting standards which they consider appropriate among several existing accounting standards (Namazi and Khansalar, 2011), resulting in the emergence of motivation from the company to implement earnings management. A positive relationship occurs between the

cost of debt and earnings management. It can be concluded from the results of research by Prevost et al. (2008) that company management that has poor performance tends to carry out earnings management to get a good response from creditors where a good response can be achieved—avoiding the higher cost of debt in refinancing. The research results by Safiq et al. (2018) reinforce this, which concludes that earnings management moderates, namely weakens the relationship between performance and cost of debt.

## **THEORETICAL REVIEW**

Pecking Order Theory, developed by Stewart C. Myers and Nicholas Majluf in 1984. The pecking order theory states that companies tend to seek minimal risk funding sources. There is no optimal capital structure in the pecking order theory because the choice of company funding is based on the order of preference (hierarchy) of risk. The company's long-term funding can be obtained through 3 sources: retained earnings, debt, and equity (additional capital/issuance of new shares). In pecking order theory, the company will choose funding based on order preference. It starts from prioritizing funding that has no risk, minimum risk to those with high risk.

Agency theory based on Jensen and Meckling (1976) is a contract between one or more owners (principal) who hires a manager (agent) to perform more than one service on behalf of the owner, including the delegation of decision-making authority to the agent. Suppose there are problems in the interaction between the principal and agent. In that case, it can result in asymmetric information (asymmetric information), according to Widyaningdyah's (2001) statement where asymmetric information, namely the principal and the agent, has an imbalance of information when the principal does not have sufficient information about the performance of the agent, while the agent has much more information about various things, including the capabilities of themselves, the work environment and the company as a whole. Management will be motivated to carry out the presentation of financial information reports related to performance measures that are not true because of conflicts of interest and asymmetric information between the principal and the agent.

Cost of Debt (CoD) refers to the cost of debt incurred by a company due to long-term and short-term debt. The cost of debt can be seen directly from the interest rate charged on the company's overall debt. Juniarti (2012) explains that the interest rate charged on debt can be seen directly as a borrowing cost. Accumulatively, the Cost of Debt can easily be obtained in the financial statements recorded as interest expense.

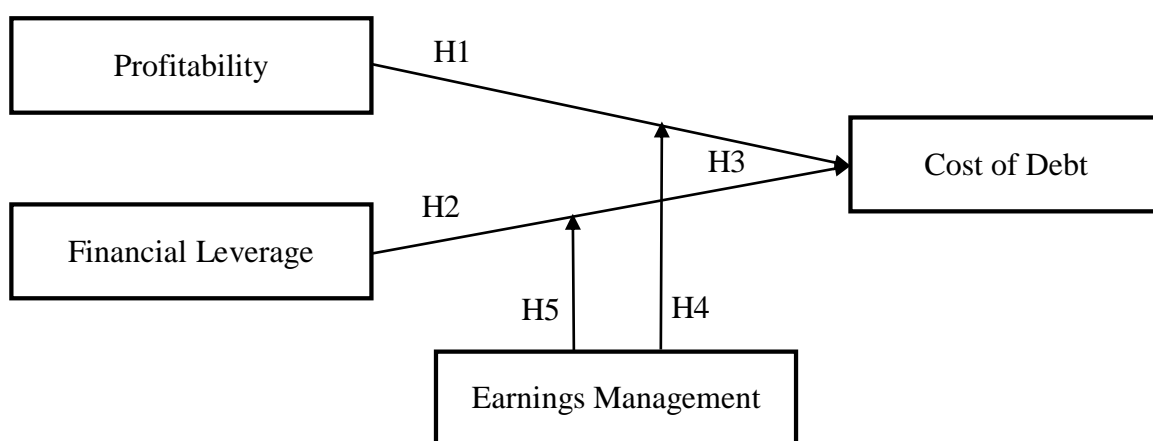
The profitability ratio proposed by Kasmir (2016) is a ratio to take into account the company's capabilities when looking for profit. The efficiency level of the company can be shown by using this ratio. It is shown by obtaining a profit through sales and investment income. Profitability is a group of ratios that combines liquidity, asset management, and debt on operating results. From the definition above, it can be seen that the ratio provides information about the ability of a company to make a profit by utilizing the resources available within the company (Brigham and Houston, 2014).

Financial Leverage uses sources of funds that have fixed expenses to trigger an increase in profit available to shareholders to generate a greater increase in profit compared to fixed expenses (Sartono, 2012). Financial Leverage or debt ratio, in order to calculate the percentage of funds available from creditors. Calculating financial leverage in financial

ratios through a comparison between the company's total debt and total assets, also known as the leverage ratio in the company's financial statements.

According to Scott's (2015) opinion, earnings management is a choice of accounting policies (accruals) by managers or concrete steps that impact profits so that they can meet several goals in reporting profits. Earning management actions in a negative perspective are carried out by management by making decisions that change financial statement information, so that published reports describe the company in a consistent condition as expected by external parties where conditions tend to be favorable. In this perspective, earnings management has violated the objective of financial reporting, which is to provide useful information for the decision-making of interested parties (Situmeang et al., 2017).

The framework in this study is described below.



**Figure 3.** Framework

The hypothesis based on the model built above is:

H1: Profitability has a negative effect on the cost of debt.

H2: Financial leverage has a negative effect on the cost of debt.

H3: Profitability and financial leverage have a simultaneous effect on the cost of debt.

H4: Earnings management can moderate (weaken) the negative effect of profitability on debt costs.

H5: Earnings management can moderate (weaken) the negative effect of financial leverage on debt costs.

## METHODS

The object of this research focuses on all manufacturing companies listed on the Indonesia Stock Exchange during 2016-2019, where financial reports are obtained through the website [www.idx.co.id](http://www.idx.co.id). The sample selection was carried out by purposive sampling method with the criteria specified in the sampling of this study as follows: a.) Manufacturing companies consecutively listed on the Indonesia Stock Exchange (IDX) during the period 2016-2019, b.) Financial reports manufacturing companies that ended on December 31, c.) Manufacturing companies did not get any losses during the observation period, namely

2016-2019, d.) The financial statements of the manufacturing companies were published using the rupiah currency, e.) The company had interest expenses, f.) Complete financial statement information from 2016 to 2019.

The operational variables in this study consist of profitability, financial leverage as the independent variable and cost of debt as the dependent variable, and earnings management as the moderating variable. Profitability is a percentage measure to assess a company's ability through operational activities to generate profits at an acceptable level by utilizing available resources (Kasmir, 2016: 204). The use of the Return on Equity (ROE) ratio in this study is to measure profitability as follows:

$$\text{ROE} = \frac{\text{Earning After Interest and Tax (EAT)}}{\text{Equity}} \quad (1)$$

Financial Leverage describes a ratio that calculates how much the total number of company assets is funded by the total amount of debt/loan (Sartono, 2012; Kasmir, 2016). The use of Debt Ratio in this study to measure Financial Leverage is as follows:

$$\text{Debt Ratio} = \frac{\text{Total Amount of debt}}{\text{Total Asset}} \quad (2)$$

Cost of Debt is the amount of interest expense paid by the company in one year divided by the total average loan that generates this interest (Sutrisno, 2012). The formula for measuring the Cost of Debt in this study is as follows:

$$\text{CoD} = \frac{\text{Interest Expense}}{\text{Long Term Debt}} \quad (3)$$

Meanwhile, measurement of earnings management can be done by calculating discretionary accruals. Modification of the Jones model (1991), namely the Modified Jones Model, is used to calculate the proxy for earnings management by measuring discretionary accruals (Dechow et al., 1995). The use of this model is because it has the best level of accuracy compared to other detection models (Abdurrahin, 2014). Obtaining the discretionary accrual value uses the following steps:

Calculation of total accruals

- 1)  $TA_t = NI_t - CFO_t$  (4)

- 2) The accrual value calculation uses a simple linear regression equation
 
$$\frac{TA_t}{A_{t-1}} = \alpha_1 \left( \frac{1}{A_{t-1}} \right) + \alpha_2 \left( \frac{\Delta REV}{A_{t-1}} \right) + \alpha_3 \left( \frac{PPE_t}{A_{t-1}} \right) + \varepsilon$$
 (5)

- 3) Calculation of the value of non-discretionary accruals
 
$$NDA_t = \alpha_1 \left( \frac{1}{A_{t-1}} \right) + \alpha_2 \left( \frac{\Delta REV - \Delta REC}{A_{t-1}} \right) + \alpha_3 \left( \frac{PPE_t}{A_{t-1}} \right)$$
 (6)

- 4) Calculation of discretionary accrual value

$$DA_t = \left( \frac{TA_t}{A_{t-1}} \right) - NDA_t \quad (7)$$

Information:

TAt: Total Accruals in year t

NIt: Net Income (net income) in year t

CFOt: Cash Flow from Operation (cash from operations) in year t

At - 1: Total assets in year t - 1

ΔREV: Change in income (revenue in year t minus revenue in year t - 1)

PPEt: Fixed assets in year t

NDA<sub>t</sub>: Non-Discretionary Accrual in year t

ΔREC: Change in receivables (net receivables in year t less net receivables in year t - 1 divided by total assets in year t - 1)

DA<sub>t</sub>: Discretionary Accrual in year t

Panel data in regression method is used in this study, where the author uses a computer program, namely Eviews 10, to manage the data in this study. According to Basuki and Prawoto (2017: 275), the combination of time-series and cross-section data is data panel. Where this research is conducted using a data panel in regression equation model from the combination of cross-section data and time-series data to test whether there is a relationship between the independent variable and the dependent variable where there is a moderating variable so that the regression model is:

$$\text{Model (1): } Y_{it} = \alpha + \beta_1 X_{1it} + \beta_2 X_{2it} + \varepsilon_{it} \quad (8)$$

$$\text{Model (2): } Y_{it} = \alpha + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + \beta_4 X_{1it} X_{3it} + \beta_5 X_{2it} X_{3it} + \varepsilon_{it} \quad (9)$$

Information:

Y = Variable Cost of Debt

α = Constant

β<sub>1</sub>, β<sub>2</sub>, β<sub>3</sub> = Regression coefficient of each independent variable

β<sub>4</sub> = Regression coefficient of the interactions of X<sub>1</sub> and X<sub>4</sub>

β<sub>5</sub> = Regression coefficient of the interaction of X<sub>2</sub> and X<sub>4</sub>

X<sub>1</sub> = Profitability variable

X<sub>2</sub> = Variable Financial Leverage

X<sub>3</sub> = Variable Earnings Management

X<sub>1</sub> \* X<sub>3n</sub> = The interaction between profitability variables and earnings management

X<sub>2</sub> \* X<sub>3n</sub> = The interaction between financial leverage and earnings management variables

ε = Error term

i = Company data

t = Time period data

There are three types of panel data models: The Common Effect model or so-called Pool least square (PLS), Fixed Effect, and the Random Effect (RE) model. In selecting which model is suitable to test the results of data analysis, among the three models, it is necessary to carry out several tests, including Chow Test, Hausman Test, and Random Effects test.

## RESULTS

After carrying out the classical assumption test consisting of the multicollinearity test and heteroscedasticity test, it can be concluded that the data has passed the classical assumption test.

**Statistical Test Results.** The descriptive statistical test provides an overview or description of data, seen from the minimum value, maximum value, average value (mean), and standard deviation. The descriptive statistics of this study are as follows.

**Table 2.** Descriptive Statistics

	<b>COD</b>	<b>ROE</b>	<b>DR</b>	<b>DA</b>
Mean	0,087097	0,126145	0,420853	-0,0786
Maximum	0,26097	1,399665	0,844782	0,794703
Minimum	0,000793	0,000353	0,09038	-0,385378
Std. Dev.	0,038466	0,168448	0,173506	0,094402
Observations	276	276	276	276

Source: E-views Processed Data, 2021

Based on the results of descriptive statistics in Table 2, the cost of debt (COD) has a maximum value of 0.26097 and a minimum value of 0.000793. The average value (mean) is 0.087097, and the standard deviation for the cost of debt variable is 0.038466. The profitability variable, which is proxied by Return on Equity (ROE), has a maximum value of 1.399665 and a minimum value of 0.000353. The average (mean) value of profitability is 0.126145 with a standard deviation of 0.168448. The financial leverage variable, which is proxied by the Debt Ratio (DR), has a maximum value of 0.844782 and a minimum value of 0.09038. The average value (mean) of financial leverage is 0.420853, with a standard deviation of 0.173506. Meanwhile, the earnings management variable proxied by Discretionary Accrual (DA) has a maximum value of 0.794703 and a minimum value of -0.385378. The average (mean) earnings management value is -0.0786 with a standard deviation of 0.094402.

Chow test. Chow test for determining which estimation model is suitable between Common Effect Model and Fixed Effect Model. The decision-making method on the chow test uses the Fixed Effect Model if the probability value of the chi-square cross-section is  $< \alpha$  (5%). Use the Common Effect Model if the value of the probability of cross-section chi-square  $> \alpha$  (5%). The results of the Chow test can be seen in the following table.

**Table 3.** Chow Test Results

<b>Effects Test</b>	<b>Statistic</b>	<b>d.f.</b>	<b>Prob.</b>
Cross-section F	5,427561	-68,202	0,0000
Cross-section Chi-square	286,8334	68	0,0000

Source: Eviews Processed Data, 2021



In table 3, the chi-square cross-section probability is obtained with a value of 0.0000, which is smaller than 0.05, thus using the Fixed Effect model following the decision criteria in the Chow test. Then a Hausman test is required to determine the Fixed and Random models.

**Hausman Test.** Determination of decision making on the Hausman test is to use the Fixed Effect Model if the results of the Probability Cross-section are Random  $< \alpha$  (5%), and use the Random Effect Model if the results of the Probability Cross-section are Random  $> \alpha$  (5%). The Hausman test results can be seen in the following table.

**Table 4.** Hausman Test Results

Test Summary	Chi-Sq.Statistic	Chi-Sq.d.f.	Prob.
Cross-section random	9,606587	5	0,0872

Source: Eviews Processed Data, 2021

The probability of a Random Cross section of 0.0872 is shown in Table 4, where it exceeds 0.05, which means that the Hausman test chooses to use the Random Effect Model. Based on the results of the panel data model selection carried out above, then to test panel data regression using a random model in determining the decision of the results of this study.

Random Effect Test. Data panel regression analysis in this study used the Random Effect Model. The results of the Random Effect Model regression are shown in table 5 as follows:

**Table 5.** Results of Panel Data Regression Analysis with Random Effect Model

Variable	Coefficient	Std. Error	t-Statistic	Prob
C	0,10276	0,011181	9,190998	0,0000
ROE	-0,058621	0,026202	-2,237284	0,0261
DR	-0,023468	0,023176	-1,012624	0,03121
DA	-0,051142	0,074666	-0,684938	0,494
ROE_DA	0,131477	0,183404	0,71687	0,4741
DR_DA	0,036868	0,14355	0,256831	0,7975

Source: Eviews Processed Data, 2021

Processing with the random effect method is appropriate if the total cross-section data exceeds the total time series data (Gujarati, 2012) with the results below.

**Table 6.** Panel data regression, t test and F Model 1 test

Variable	Coefficient	Std. Error	t-Statistic	Prob
C	0,108115	0,008286	13,048360	0,0000000
ROE	-0,072266	0,019535	-3,699245	0,0000300
DR	-0,028279	0,018027	-1,56867	0,1179
Weighted Statistics				
R-squared	0,066247	Mean dependent var		0,036303
Adjusted R-squared	0,059406	S.D. dependent var		0,026272
S.E. Of regression	0,02548	Sum Squared resid		0,177235
F-statistic	9,684279	Durbin Watson stat		1,289746
Prob(F-Statistic)	0,000086			

Source: Eviews Processed Data, 2021

Based on the regression results in table 6, the regression model for profitability (X1) is proxied by ROE on the cost of debt (Y). In table 6, the  $\alpha$  constant is 0.108115, which means that if the X variable is constant, then the Y variable is 0.108115. The regression coefficient X1 (ROE) of -0.072266 means that each addition of one unit of variable X1 (ROE) will reduce the Y (cost of debt) variable by 0.072266, assuming the other independent variables are constant. The probability X1 (ROE) value of 0.000300 is lower than 0.05 and a t-statistic value of -3.699245. Meanwhile, the effect of financial leverage (X2) is proxied by DR on the cost of debt (Y). The regression coefficient X2 (DR) of -0.028279 means that each addition of the X2 (DR) variable by one unit will reduce the Y (cost of debt) variable by 0.028279, assuming the other independent variables are constant. The probability X2 (DR) value is higher than 0.05, namely 0.1179, and a t-statistic value of -1.56867. The F test (simultaneous) aims to find the results of the simultaneous influence (jointly) on the independent variables on the dependent variable in a model. In table 5, the results of the F-Test Model 1 show that the F-statistic value is 9.684279 with a probability (F-statistic) of 0.000086. The probability value (F-statistic) is smaller than the significance value  $\alpha = 0.05$ .

Furthermore, the test results using model 2 are shown below.

**Table 7.** Panel data regression and t-test Model 2 (ROE\_DA)

Variable	Coefficient	Std. Error	t-Statistic	Prob
C	0,093618	0,005098	18,36418	0,0000
DR	-0,062729	0,025753	-2,435842	0,0155
DA	-0,0359	0,029632	-1,211527	0,2267
DR_DA	0,154675	0,180461	0,857109	0,3921

Source: Eviews Processed Data, 2021

Based on the regression results in table 6 above, a regression line equation can be obtained as follows  $\alpha$  constant of 0.093618, which means that if variable X is constant, then variable Y is 0.093618. The profitability regression coefficient (X1) is proxied by an ROE of -0.062729, which means that each addition of one unit of the profitability variable (X1) will reduce the cost of debt variable (Y) by 0.062729 where assuming other independent

variables are constant. Furthermore, the regression coefficient of earnings management (X2) is proxied by DA of -0.0359, meaning that each addition of one unit of the earnings management variable (X2) will reduce the cost of debt variable (Y) by 0.0359, assuming the other independent variables are constant. The regression coefficient of the interaction between profitability and earnings management is proxied by ROE\_DA (X3) of 0.154675, meaning that each addition of one unit of the ROE\_DA (X3) variable will increase the cost of debt (Y) variable by 0.154675, where assuming other independent variables are constant. The probability value of ROE\_DA (X3) is 0.3921, which exceeds 0.05, equal to and with a t-statistic value of 0.857109.

**Table 8.** Panel data regression and t-test Model 2 (DR\_DA)

Variable	Coefficient	Std. Error	t-Statistic	Prob
C	0,09974	0,011271	8,849088	0,0000
DR	-0,034704	0,023364	-1,485384	0,0138
DA	-0,054945	0,076122	-0,721803	0,471
DR_DA	0,07264	0,145683	0,498617	0,6185

Source: Eviews Processed Data, 2021

Based on the regression results in Table 8, it is found that a regression line equation with a constant  $\alpha$  of 0.09974 means that if the variable X is constant, then the Y variable is 0.09974. The financial leverage regression coefficient (X2) is proxied by DR of -0.034704, meaning that each addition of one unit of the financial leverage variable (X2) will reduce the cost of debt variable (Y) by 0.034704, assuming the other independent variables are constant. Furthermore, the earnings management regression coefficient (X2) is proxied by DA of -0.054945, meaning that each addition of one unit of earnings management variable (X2) will reduce the cost of debt variable (Y) by 0.054945 were assuming the other independent variables are constant. The regression coefficient of the interaction between financial leverage and earnings management is proxied by DR\_DA (X3) of 0.07264, meaning that each addition of one unit of the DR\_DA (X3) variable will increase the cost of debt (Y) variable by 0.07264, which assumes the other independent variables are constant. The DR\_DA probability value (X3) is 0.6185, which exceeds 0.05, and the t-statistic value is 0.498617.

## DISCUSSION

The results of tests that have been carried out with the t-test between the profitability variable and the cost of debt show that the t value is -3.699245 and 0.000300 is the probability value that is less than 0.05. A negative t value indicates a negative effect on the cost of debt; thus, profitability has a negative effect on the cost of debt. A good level of profitability is a signaling theory that management can convey to show good performance. So it can be explained that good profitability can reduce the risk of inability to meet the company's obligations (default risk), thereby reducing the cost of debt. Several research findings that have been carried out support the results of this study, namely research by Santosuosso (2014), Magnanelli and Izzo (2017), Safiq et al. (2018), and Sherly and Fitria (2019), which show an inverse relationship between profitability and cost of debt.

The tests that have been carried out with the t-test between the variable financial leverage and the cost of debt show the t value of -1.56867, and 0.1179 is the probability value that exceeds 0.05. A negative t value indicates a negative effect on the cost of debt; thus, it can be stated that financial leverage has a negative effect on the cost of debt but not significant. In pecking order theory (Myers, 1984), debt has a lower risk than the issuance of shares. Also, there is no debt ratio targeting in the pecking order theory so that the size of a company's debt ratio cannot indicate a large default risk for creditors. If the company decides its funding needs by going into debt, it will get a positive response from the market because the signal that the company's management can pay off all its obligations will be read regularly by the market (Tarver, 2018). Thus, the low use of debt by companies can result in a high cost of debt. The research results by Swissia and Purba (2018), where financial leverage has a negative relationship to the cost of debt, align with this study.

Based on the F test (simultaneous) between the profitability and financial leverage variables and the cost of debt, the results show 9,684279 for the F-statistic value and 0.000086 for the probability value (F-statistic), which is less than 0.05. Thus, it can be stated that profitability and financial leverage have a significant effect simultaneously on the Cost of Debt. Other research findings, namely Magnanelli and Izzo (2017), reveal the same issue related to the simultaneous effect of profitability and financial leverage on the cost of debt supports the results of this study.

The test results with the t-test between profitability and cost of debt show the value of t -2.435842, which shows a negative effect of profitability on the cost of debt. The result of the t-test for the interaction variable of profitability and earnings management on cost of debt shows a t-value of 0.857109 which means positive and weakens the relationship between profitability and cost of debt. This test result is not significant because it has a probability value of 0.3921 exceeding 0.05. So it can be stated that Earnings management cannot moderate (weaken) the effect of Profitability on the Cost of Debt. Furthermore, the test results that have been carried out with the t-test between financial leverage and cost of debt show a t-value of -1.485384, which shows the negative effect of financial leverage on debt. The result of the t-test for the interaction variable of financial leverage with earnings management on the cost of debt shows a t value of 0.498617 which means positive and weakens the effect of financial leverage on the cost of debt which has a probability value of 0.6185 exceeding 0.05. Thus, Earnings management cannot moderate (weaken) the negative effect of financial leverage on the Cost of Debt.

In agency theory, there are significant gaps in the information managers convey to shareholders or creditors. This gap makes managers, as company managers, have the opportunity to take earnings management actions so that creditors give a good response regarding the company's performance. Earnings management is considered a practice that covers the company's actual financial performance and can overestimate information related to prospects so that risk assessment by creditors becomes higher, which results in a high cost of debt. The two results of the research on the interaction of profitability with earnings management on cost of debt and the interaction of financial leverage with earnings management on cost of debt are contradictory to the agency theory that has been presented above, which can be caused by the debt market in Indonesia which is not as big as the capital market where the total companies are listed. On the Indonesia Stock Exchange, there are only 137 public companies that issue bonds from a total of 692 companies or 19.80% ([www.idx.co.id](http://www.idx.co.id)). Therefore, compared to the capital market, the debt market in Indonesia

does not respond to information, including information on earnings management. The results of this study are in line with the findings of Safiq et al. (2018), where earnings management cannot moderate (weaken) the relationship of profitability on the cost of debt.

## CONCLUSION

The relationship between profitability and cost of debt has a negative and significant effect. It means that incorporate financing activities, if the company's profitability is good, it will not be followed by an increase in the cost of debt. Creditors have a lower risk if the company's profitability is good so that the cost of debt is also low. Financial leverage has a negative but insignificant effect on the cost of debt. In the choice of funding by the company, if the company's financial leverage is high, it is not balanced with an increase in the cost of debt. The high financial leverage indicates that creditors have confidence in the company that they can pay off its obligations regularly or have a good performance. Profitability and financial leverage simultaneously affect the cost of debt. It means that the regression model for this study is suitable for predicting the cost of debt.

The negative effect of Profitability on the Cost of Debt cannot be moderated (weakened) by Earnings Management. It means that earnings management does not play a very important role in weakening the negative effect of profitability on the cost of debt. The negative effect of Financial Leverage on the Cost of Debt cannot be moderated (weakened) by Earnings Management. Earnings management does not play a very important role in weakening the negative effect of financial leverage on the cost of debt. These two things are related to all companies listed on the Indonesia Stock Exchange. The debt market is only 19.80%, so that it does not respond to earnings management information submitted by companies, especially the population in this study, namely manufacturing companies listed on the Indonesia Stock Exchange.

This study has several limitations, namely: a.) The two variables reveal variation in the Cost of Debt of 5.34%, 94.66% is expressed by other variables in this model so that there are still many variables that influence. However, not included, b.) Manufacturing companies listed on the Indonesia Stock Exchange are the specific object of this study, with only 69 samples of companies observed so that there are still many issuers that have not been included in this study, c.) This study only uses four observation periods. Years: 2016-2019.

Based on the limitations contained in the results of this study, so that for further research, it is recommended that several potential inputs be applied in order to obtain better research results, so that some suggestions for further research can be described, namely: a.) It is better if further research is expected to be able to expand the timeframe. the research is more than five years, b.) It is better if further research adds other variables such as company growth and asset structure related to the principle of 5C lending by financial institutions.

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