



## The Effect of Earnings Opacity on Cost of Equity With Earnings Persistence as Moderating Variable

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**Abstract:**

*The purpose of this study was to determine the effect of earnings opacity as measured by earnings aggressiveness and earnings smoothing on the cost of equity with earnings persistence as a moderating variable. This research focuses on manufacturing companies listed on the Indonesia Stock Exchange in 2017-2021. The population used in this study amounted to 16 manufacturing companies using purposive sampling method based on certain criteria. This research uses associative technique with quantitative methodology. The technique used in collecting data is by using library research derived from the company's annual financial statements. The hypothesis test used is the Multiple Linear Regression Test and Moderated Regression Analysis using the SPSS 25 program. The results of this study show a significant positive effect of earnings aggressiveness on the cost of equity, earnings smoothing has a positive effect on the cost of equity but is not significant, earnings persistence is able to weaken the relationship between earnings aggressiveness and the cost of equity, and earnings persistence is not able to moderate the relationship between earnings smoothing and the cost of equity.*

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## Introduction

Financial statements have an important function as a medium of information about the company's financial condition, in addition to presenting the company's income statement, financial statements also provide information about the company's equity. The greater the profit earned by the company, the company also carries out operational activities well and has a good impact on equity as well.

Companies in running their business and operations, of course, need capital from both creditors and investors. Companies in obtaining equity can come from debt, preferred shares, ordinary shares, or retained earnings to fund an investment or company operations (Amelia and Yadnyana, 2016). The capital market is a place for transactions between parties who want to invest in a company and companies that need funds as their business capital. Arafat, 2015). The Indonesia Stock Exchange (IDX) as one of the capital market players can be used as another alternative for companies seeking funding by issuing or selling shares on the capital market or Stock Exchange. In the capital market, investors can choose to make investments according to their risk profile and desired level of profit (Amelia and Yadnyana, 2016).

Company management must be able to collect and manage funds obtained from within or outside the company effectively and efficiently. Companies in obtaining funding in the form of equity require equity costs. Therefore, management decisions in collecting and managing funding must be able to minimize the cost of equity that must be borne by the company (Malau *et al.*, 2019). Sunarto *et al.* (2016) stated that the cost of capital borne by the company is very risky with misinformation. Information discrepancies that occur between management and owners can lead to an increase in the cost of equity that must be borne by the company (Andriani and Afriyenti, 2019).

Misinformation that occurs can be caused by management who manipulate earnings which results in earnings *opacity*.level *Earnings opacity* in a company can be measured using two variables, namely *earnings aggressiveness* and *earnings smoothing* (Bhattacharya *et al.* 2003). The quality of an earnings not only affects investors, but can also affect the company. One way to reduce the risk of rising cost of equity caused by by the low quality of published earnings information, namely by using profit attributes that can reduce information risk by improving the quality of the company's financial reporting (Candra and Ekawati, 2015). In the accounting research literature, earnings persistence is seen as a measure of earnings quality. One of them is in research (Gamayuni, 2012) which states that earnings quality is earnings persistence.

Research on the effect of *earnings opacity* on the cost of equity has been carried out by several researchers including Andriyani and Afriyenti (2019) which shows that *earnings opacity* as proxied by *earnings aggressiveness* has a significant positive effect on the cost of equity and *earnings smoothing* has a positive but not significant effect on the cost of equity. . In the research of Malau *et al.* (2019) research results shows that *earnings aggressiveness* has a significant positive effect on the cost of equity and *earnings smoothing* has a significant positive effect on

the cost of equity. Meanwhile, research by Delita and Mulyani (2018) states that *Earning aggressiveness* has a significant negative effect on the cost of equity. Then in the research of Sunarto *et al.* (2016) also show that *earnings aggressiveness* and *earnings smoothing* have a negative effect on the cost of equity. Moderation of earnings persistence on the relationship between *earnings opacity* (which consists of *earnings aggressiveness* and *earnings smoothing*) and the cost of equity is still rarely studied in Indonesia.

This study carried out several updates from the main research references, namely the research of Andriani and Afriyenti (2019); and Delita and Mulyani (2018). The update made in this study is that this study uses earnings persistence as a moderating variable. Meanwhile, in Andriani and Afriyenti's research (2019) used accrual quality as a moderating variable, and in Delita and Mulyani's (2018) research only used *earnings aggressiveness* as a proxy for *earnings opacity*. Meanwhile, in this study, *earnings aggressiveness* and *earnings smoothing* as proxies for *earnings opacity*. Based on this explanation, it can be seen that there are still differences in previous research on the effect of *earnings opacity* on the cost of equity.

The basic theory used in this research is *agency* (Jensen and Mackling, 1976). Theory *Agency* is related to the relationship between the *principal* and *agency*, where what is meant by the *principal* is the owner of the company and what is meant by the *agency* is the person who is delegated to run the business. theory *Agency* shows the importance of separation between company management and the owner-manager relationship. The purpose of this separation is to create efficiency and effectiveness by hiring a professional to manage the company. However, this separation turned out to cause problems, where the agent has more control over company information than the principal. This is caused when there is an unequal purpose between the *principal* and *agency*. Between *principal* and *agency* have their respective goals, the *principal* wants to get a high return on investment, on the other hand the agent also wants to get a large compensation from the results of his work.

#### Hypothesis test

- H1: Earnings aggressiveness has a positive effect to the cost of equity.
- H2: Earnings smoothing has a positive effect on the cost of equity.
- H3: Earning persistence weakens the relationship between earnings aggressiveness and cost of equity.
- H4: Earnings persistence weakens the relationship between earnings smoothing and cost of equity.

#### Research Method

This study uses associative techniques with quantitative methods. The data used in this study is secondary data in the form of financial statements of manufacturing companies for the 2017-2021 period. In this study the sample was taken from the financial statements of manufacturing companies in the 2017-2021 interval based on the following criteria:

1. Manufacturing companies listed on the Indonesia Stock Exchange during the study period (2017-2021).
2. The company always distributes dividends.
3. The financial statements are stated in rupiah currency.
4. Displays the available complete data as a whole during the 2017-2021 period related to the variables in the study.

The data processing in this study uses SPSS 23. Because this program has quite high statistical analysis capabilities and data management in a graphical environment using descriptive menus and simple dialog boxes, so it is easy to understand how to operate (Ghozali, 2016). The dependent variable in this study uses the cost of equity variable. The cost of equity in this study is measured by:

$$\text{CoEt} = \text{Dt}(1 + \text{Gt})$$

Note:

CoEt = Cost of Equity  
Dt = Dividend period t  
Gt = Dividend growth period  
 $t = [(Dt - Dt_{-1}) / Dt_{-1}]$

The independent variable in this study uses earnings aggressiveness and earnings smoothing. Measurement *earnings aggressiveness* in this study uses the measurement model developed by bhattacharya *et al.* (2003). The earnings aggressiveness in this study is measured by:

$$\text{AGGRS} = (\Delta \text{CA}_t - \Delta \text{CL}_t - \Delta \text{CASH}_t - \Delta \text{STD}_t - \text{DEP}_t + \Delta \text{TP}_t) / \text{TA}_{t-1}$$

Note:

$\Delta \text{AGGRS}$  = Earnings aggressiveness  
 $\Delta \text{CA}_t$  = Delta/difference current assets year t  
 $\Delta \text{CL}_t$  = Delta/difference current liabilities year t  
 $\Delta \text{CASH}_t$  = Delta/difference cash year t  
 $\Delta \text{STD}_t$  = Delta/difference short term debt year t  
 $\text{DEP}_t$  = Depreciation year t  
 $\Delta \text{TP}_t$  = Delta/difference tax payable year t  
 $\text{TA}_{t-1}$  = Total assets year t-1

Measurement earnings smoothing uses the model developed by Francis et al. (2004). The earnings smoothing in this study is measured by:

$$SMTH = \frac{\sigma(NIBE/Asset_{t-1})}{\sigma(CFO/Asset_{t-1})}$$

Dimana:

- SMTH = Earnings smoothing  
 $\sigma(NIBE/Asset_{t-1})$  = Standard deviation of net income before extraordinary divided by assets last year  
 $\sigma(CFO/Asset_{t-1})$  = Standard deviation of operating cash flow divided by last year's assets

The measurement of earnings persistence uses net income before extraordinary items (NIBE) and total assets for the previous period developed by Francis et al. (2004). The earnings persistence in this study is measured by:

$$SMTH = \frac{\sigma(NIBE/Asset_{t-1})}{\sigma(CFO/Asset_{t-1})}$$

Note:

- $NIBE_t$  = Earnings before extraordinary items of the company in year  
 $TA_t$  = Total assets of the company period t  
 $TA_{t-1}$  = Total assets of the company in the previous period  
 $\alpha$  = Constanta value  
 $\beta$  = Slope earnings persistence  
 $\varepsilon$  = Error component

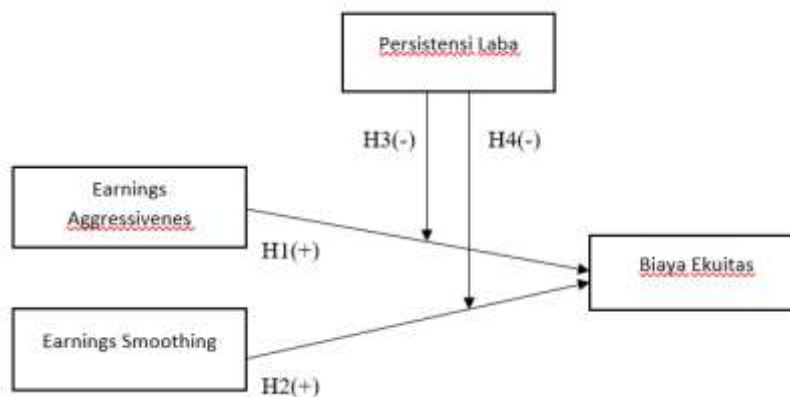


Figure 1. Conceptual Framework

## Result and Discussion

The results of research and testing should be displayed in the form of pictures or tables. The format of table is as follows:

<b>Result of Data Processing</b>						
Model		Unstandardized Coefficients		Standardized	t	Sig.
		B	Std. Error	Coefficients		
				Beta		
1	(Constant)	-16,999	7,713		-2,204	,031
	LN_EA	82,495	35,435	5,286	2,328	,023
	LN_ES	-21,418	15,520	-1,380	-1,380	,172
	LN_PL	19,452	7,485	1,389	2,599	,011
	LNEA*LNPL	-76,051	34,323	-5,158	-2,216	,030
	LNES*LNPL	19,608	14,610	1,329	1,342	,184

a. Dependent Variable: LN\_COE

Source: SPSS 23 Output Results, Processed Data

The hypothesis in this study assumes that *earnings aggressiveness* has a positive effect on the cost of equity. Based on the t-test in table 4.14 the regression coefficient for variable 1 is 82.495 and the significance value for the *earnings aggressiveness*  $0.023 < 0.05$ . with a value of = 5% or 0.05,  $df = nk (74-4)$  then the  $t_{table}$  is 1.667. Then the value of  $t_{count}$  is 2,553  $> t_{table}$  1,667. Based on the results of the data processing shows that the value of the constant coefficient is -16.999. This can be interpreted if *earnings aggressiveness* is constant, then the value of the cost of equity will be -16.999. The regression coefficient of *earnings aggressiveness* is 82.495, which means, if the level of *earnings aggressiveness* increases by one unit, then the cost of equity figure will increase by 82,495 units. This regression equation shows that the regression coefficient of *earnings aggressiveness* has a positive effect of 82.495 on the company's cost of equity. This means that the higher the level of *earnings aggressiveness* made by manufacturing companies, the higher the cost of equity that must be incurred by manufacturing companies.

The second hypothesis predicts a positive effect of *earnings smoothing* on the cost of equity. variable is *earnings aggressiveness*  $0.172 > 0.05$ . with a value of = 5% or 0.05,  $df = nk (74-4)$  then the  $t_{table}$  is 1.667. Then the value of  $t_{count}$  is  $0.076 < t_{table}$  1.667. From the results of the regression equation, a constant coefficient value of -16.999 means that when *earnings smoothing* is in a constant state, the value of the cost of equity will be at a value of -16.999. regression coefficient *earnings smoothing* is -21.418, which means that when *earnings smoothing* increases by one unit, the cost of equity will decrease by -21.418. So it can be concluded that *earnings smoothing* has a negative effect on the cost of equity. The resulting significance value is 0.939 which is greater than the 5% or 0.05 level of confidence. This indicates that the *earnings smoothing* has no significant effect on the cost of equity.

The third hypothesis in this study suggests that earnings persistence can weaken the relationship between *earnings aggressiveness* and the cost of equity. Based on the results of the MRA test in the table, it proves that the interaction variable (*earnings persistence\*earnings aggressiveness*) can moderate with a significance value of  $0.030 < 0.05$ . In addition, the interaction variable (*earnings persistence\*earnings aggressiveness*) shows a negative result on the cost of equity with a regression coefficient of 3 of -76,051. It can be concluded that the earnings persistence variable can weaken the relationship between *earnings aggressiveness* and the cost of equity.

The fourth hypothesis in this study suggests that earnings persistence can weaken the relationship between *earnings smoothing* and the cost of equity. Based on the results of the MRA test in the table, it shows that the interaction variable (*earnings persistence\*earnings smoothing*) cannot be moderated with a significance value of  $0.184 > 0.05$ . In addition, the interaction variable (*earnings persistence\*earnings smoothing*) shows positive results on the cost of equity with a regression coefficient of 4 of 19.608. So it can be concluded that earnings persistence cannot weaken the relationship between *earnings smoothing* and the cost of equity.

## Conclusion

Based on the discussion of the research results, the following conclusions are obtained: *Earnings aggressiveness* has a significant positive effect on the Cost of Equity. This proves that the higher the company performs *earnings aggressiveness*, the higher the level of cost of equity that must be paid by the company. *Earnings smoothing* has a negative but not significant effect on the Cost of Equity. This result proves that the higher the company performs *earnings smoothing*, the lower the cost of equity to be paid by the company, but not significant. Earnings persistence can weaken the effect of *earnings aggressiveness* on the Cost of Equity. These results prove that earnings persistence as earnings quality is able to predict future earnings so as to reduce *earnings opacity* caused by *earnings aggressiveness* and prevent the impact of rising costs of equity. Earnings persistence cannot weaken the effect of *earnings smoothing* on the Cost of Equity. These results prove that earnings persistence as earnings quality is not able to predict the earnings of companies that perform *earnings smoothing*.

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