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Income Smoothing and Cost of Capital

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Abstract---This study aims to obtain empirical evidence about the effects of income smoothing on the cost of capital. Four additional control variables are used, namely information risk, company size, institutional ownership, and leverage. The population in this study are all manufacturing companies listed on the Indonesia Stock Exchange from 2014 to 2018, based on purposive sampling technique, the samples used in this study were 213 companies. Test results show that (1) income smoothing has a negative effect on the cost of capital, (2) Information risk, company size, and institutional ownership have no influence on the relationship between income smoothing and the cost of capital, (3) leverage affects the relationship between income smoothing and the cost of capital.

Keywords---capital cost, control variable, income smoothing, institutional ownership, leverage.

Introduction

Income smoothing is part of earnings management practices that are considered reasonable and normal in a company because this is done as a deliberate action to reduce volatile earnings values (Beidleman, 1973). According to Mahmud et al. (2012), income smoothing is a deliberate action by management to make profit levels good without sharp changes in fluctuations. In this study, income smoothing focuses on reducing abnormal earnings but remains within the limits desired by management. The income smoothing action will not occur if the company's profit for the period does not differ too greatly from the actual profit value.

The manager's approach to income smoothing is superior compared to other earnings management methods because income smoothing is assumed to be able to estimate the value of the company's future profits and current profits and earnings in the past. Two reasons underlie this, first, the realization of earnings is often used to predict earnings in the future, earnings information can be indirectly used by investors in predicting the return that will be obtained when combining it with information from other sources. Based on stock prices, the income smoothing approach allows investors to assume the returns they will obtain in the future (Tucker & Zarowin, 2006). Second, changes in future earnings may be caused by shocks that do not have too high a current impact. Both of these information will not affect current earnings but will affect the company's stock price.

The cost of capital is an important part of accounting, and is a better proxy than the realization of stock returns, and this is more evident in showing expected stock returns. Income smoothing has a strong influence on reducing the cost of capital. Company executives tend to always want to report stable forms of profit flow without fluctuations. And corporate executives tend to prefer a flat rate of profit compared to the value of the long-term company. This is because executives have the belief that income smoothing reduces company risk and makes investors demand high

risk premiums (Graham, Harvey, & Rajgopal, 2005).

The real costs that must be incurred by the company and its origin from debt, stock, and retained earnings and used as capital to fund new projects or new investments are called the cost of capital. Understanding the cost of capital is closely related to the expected return desired by investors (or can be called the required rate of return) and this can be seen from two sides, namely investors and companies. The size of the required rate of return desired by investors shows the level of risk and assets owned by the company. From the company side, the desired RRR (required rate of return) capital usage is the amount of cost of capital that must be provided and issued by the company to get the capital back. In general, high company risk results in a high level of return requested by investors, and the required cost of capital is also high.

Tucker & Zarowin (2006) provide empirical evidence about income smoothing is informative company information because when many companies do this earnings management system, future earnings from companies can be chosen from the current stock price. Research Francis, Lafond, & Schipper (2004) added that income smoothing is part of earnings attributes that will negatively influence the amount of cost of capital that must be incurred by the company, in addition to that income smoothing with a discretionary accruals type of accounting policy system will have more effect a large decrease in value or the amount of cost of capital.

Income smoothing can be explained by approaching theory agencies. Income smoothing includes information asymmetry because management gets more information than information obtained by users of financial statements. Some argue that income smoothing is an accounting policy practice that can harm information users. In the information that does not present the actual conditions are reasonable because it has been manipulated by the information maker (management). On the other hand, some researchers argue that it is considered reasonable as long as it is done following existing regulations or does not violate accounting standards even though it reduces the reliability of the information. Fudenberg & Tirole (1995) add that investors are assumed to be those who certainly reject risk. Managers also reject risk, especially managers who avoid loans from the capital market or debt of equity, so managers are encouraged to practice income smoothing so that capital from equity is more secure.

Based on this background, this study is interested in empirically testing the relationship between income smoothing and the cost of capital, using four control variables, namely information risk, company size, institutional ownership, and leverage. Research on the cost of capital is still relatively rare in Indonesia and research is usually conducted on the debt market. The advantage of this research compared to previous research is the use of income smoothing as an independent variable which is a special part of earnings management rather than using earnings management in general.

Literature Review and Hypothesis

Agency theory explains things that can motivate an agent is a contract made by the principal that contains the interests of the parties involved fairly (Sukartha, 2008). One of the terms of an efficient contract is that the agent and principal have symmetrical information. When there is symmetrical information, it means that the company's management honestly presents the financial statements that are made and shareholders have the same information about the company's condition so that shareholders can get the expected informative side. However, when information asymmetry shows symptoms that efficient contracts fail to be implemented so that the relationship between management and shareholders is based on information asymmetry, here management can utilize the flexibility it has to perform earnings management. One of the earnings management actions used is income smoothing. Income smoothing here is done because of differences in information between management and shareholders. This difference in information makes the efficient contract not implemented, which means the weakness of the parties involved in the company so that the agency theory tries to motivate the agent and principal in designing the contract.

Tucker & Zarowin (2006) provide empirical evidence that income smoothing provides an informative side of a company's future earnings. Income smoothing in this study is called income smoothing is one of the actions of earnings management in addition to income minimization and income maximization. Beidleman (1973) adds empirical evidence that managers who do income smoothing want to create a stable profit stream to reduce covariance or the level of fluctuations in return with market prices. Managers who make income smashes have hopes to reduce earnings fluctuations and increase investors in predicting future cash flow because this is the determinant of market risk for shares (Barnea, 2012).

The concept that is often used by investors to analyze investments so that they can show the level of profitability that must be obtained and must be spent on these investments is the concept of cost of capital. So if the investment

value made does not reach the minimum value of the costs that must be incurred for the investment, the investment project should not be carried out. The cost of capital is the average cost of capital collected to fund an investment. Also, the cost of capital can be interpreted as a part of the rate that must be provided or issued by the company so that it can provide satisfaction to investors based on a certain level of risk.

Although income smoothing is part of earnings management practice, several studies provide empirical opinions that with income smoothing information obtained by investors will be more informative than actual earnings information. Cost of capital is a cost that must be borne by the company, so this value is also a minimum limit of the level of results that must be achieved by the company so that the company is not declared to be a loss. Managers who conduct income smoothing are assumed to be able to reduce the real costs that must be incurred by the company or reduce the cost of capital. The higher the income smoothing practice undertaken by managers, the lower the cost of capital spent by the company. Based on this it can be concluded that the more companies do income smoothing, the cost of capital can be reduced or reduced. Then the hypothesis in this study is:

H₁: income smoothing has a negative effect on the cost of capital.

Research Methods

The population used in this study are all companies listed on the Indonesia Stock Exchange in the period 2014 - 2018. The method of determining the sample by certain criteria was chosen as a way of determining the sample, and the criteria determined in this study are divided into three, namely: (1) Companies in the manufacturing industry registered on the IDX during the period 2014 - 2018; (2) companies belonging to the ICMD industry group; (3) companies published in ICMD and have complete financial ratios according to research needs; (4) companies that fall into sectors 3, 4 and 5 according to JASICA classification on the IDX. Based on the results of purposive sampling obtained 153 companies that meet the criteria for five years of observation, obtained 213 research samples. The data analysis technique used in this study is multiple linear regression analysis techniques.

The grouping of variables used in this study is divided into as follows: (1) The dependent variable in this study is the cost of capital (Y); (2) The independent variable in this study is income smoothing (X); and (3) The control variable used in this study is a statistical control, the researcher already has information about the controlled variable. The control variables in this study are information risk, company size, institutional ownership, and leverage. Simple linear regression and multiple linear regression were used in this study.

Result Discussion

Model 1 testing was conducted to determine the effect of variable X₁ (income smoothing) on the Y variable (cost of capital) without using control variables, this test uses simple linear analysis techniques. The test results are shown in Table 1.

Table1
Model 1(Simple Linear Regression)

	<i>Unstandardized coefficients</i> B	T	Sig.
(Constant)	0,308	21,368	0,000
X ₁	-0,083	-1,768	0,079
Sig. F		0,079	
<i>Adjusted R Square</i>		0,012	

Source: Primary data, 2020

Based on Table 1. shows the regression coefficient of -1.768 with a significance value of 0.079 means that X₁ has no significant negative effect on Y. However, this study uses four control variables to control the effect of the independent variables on the dependent variable to remain constant and not be influenced by external factors that are

not examined in this study. The test results using the control variables are shown in Table 2. The test uses multiple linear regression.

Table 2
Model 2 (Multiple Regression Analysis)

	<i>Unstandardized coefficients</i> B	t	Sig.
(Constant)	0,521	5,533	0,000
X ₁	-0,092	-2,248	0,026
X ₂	-0,381	-0,789	0,431
X ₃	-0,007	-1,438	0,140
X ₄	0,033	0,758	0,449
X ₅	0,002	9,114	0,000
Sig. F		0,000	
<i>Adjusted R Square</i>		0,328	

Source: Primary data, 2020

Based on Table 1. and Table 2. above it can be explained that by adding a control variable a coefficient value changes from 0.083 to 0.092 and a change in the significance value from 0.079 to 0.026. The control variable functions to control the effect of the independent variable on the dependent variable so that it remains constant and is not influenced by external factors not examined in this study. This means that if the value of variable X1 is controlled by the presence of variable X5 of zero, then the Y value of 0.092. The coefficient value of X1 of -0.092 shows that if the value of X1 rises by 1 percent then the Y issued by the company decreases by 9.2%. This value is different from the X1 coefficient value on Y without using a control variable. This means that there is a change in the coefficient value of the effect of income smoothing on the cost of capital when entering control variables, namely Total Current Assets, Company Size, Institutional Ownership, and Leverage.

From Table 2. the significance value obtained for variable X2 is 0.431 greater than $\alpha = 0.05$, so that means the Total Current Asset variable cannot be a control variable. Total Current Assets are measurement indicators used in this study to measure information risk. [Diamond & Verrecchia, \(1981\)](#) states that information risk will reduce information asymmetry and will ultimately reduce the cost of capital. [Lobo & Zhou \(2001\)](#) and [Veronica & Bachtiar \(2003\)](#) add that companies that manage earnings in any form, income smoothing, one of which will reveal little information in the financial statements so that the actions of beautifying their financial statements are not detected. The cost of capital issued by the company is closely related to the risk of information, the smaller the information asymmetry that occurs between managers and shareholders or other stakeholders, the smaller the cost of capital borne by the company ([Tyasari & Imam, 2018](#)). But in this study, the measured risk of information from TCA is not too high so it is unable to control the effect of income smoothing on the cost of capital because the average value of TCA used as a sample of the company is not too high.

The significance value for the Company Size variable is 0.140 greater than $\alpha = 0.05$, so that means that the X3 variable cannot be a control variable. Classification of the size of a company can be done in various ways or can be seen from a variety of variables such as the total assets, sales value, and market capitalization that can ultimately show the scale of the company ([Arafat & Kurnia, 2015](#); [Fonseca & Gonzalez, 2008](#); [Atik, 2009](#); [Elgers et al., 2003](#)). The size of this company will indicate the amount of information that can be provided by the company. The larger the size of a company, the costs incurred to provide information to the public will be greater because the size of a large company must show public information that is more information so that this affects the size of the cost of capital that must be spent by the company. But in this study, the size of the company is not able to control the effect of income smoothing on the cost of capital.

The results of the significance can be seen in Table 2. The significance value of the KI variable is 0.449 greater than $\alpha = 0.05$, so that means that the X4 variable cannot be a control variable. One way that can be used to reduce agent and principal conflicts is with institutional ownership. The greater ownership by the institution requires the company to conduct more detailed and effective oversight of management, and this pressures management to disclose information about the company more correctly and following the actual condition of the company. That way the information disclosed by management will become more detailed and numerous and ultimately can reduce the

company's cost of capital. [Amelia & Yadnyana \(2016\)](#) support this statement by providing empirical evidence that institutional ownership provides a significant negative effect on the cost of capital. However, in this study institutional ownership is not able to control the effect of income smoothing on the cost of capital.

The significance value for the LV or Leverage variable is 0,000 less than $\alpha = 0.05$, so that means the LV variable can be a control variable. Debt to Equity Ratio (DER) is the leverage ratio used in this study, this ratio assesses the level of corporate leverage by comparing the value of debt and own capital used by companies to produce capital. If the interest costs from the debt taken by the company can be paid off and the net receipts from taking the debt are high then it can cover the cost of capital that must be incurred by the company to make investments according to [Nurdin \(2013\)](#). [Pratiwi & Ghofar \(2011\)](#) add that if the leverage ratio is high, it means the cost of capital used for investment is also high.

Income smoothing can be explained by the agency approach. A contract occurs between two or more parties, whereby the party is the party who accepts responsibility and is called an agent. In this case, the manager is the party that gives authority called the principal. Some parties argue income smoothing is an act that harms users of information. In the information that does not present the actual conditions are reasonable because it has been manipulated by the information maker (management). On the other hand, some researchers argue that it is considered reasonable as long as it is done following existing regulations or does not violate accounting standards even though it reduces the reliability of the information. Agency theory asserts that to motivate the agent, the principal designs the contract so that it can accommodate the interests of the parties involved in the agency contract ([Sukartha, 2008](#)). One of the terms of an efficient contract is that the agent and principal have symmetrical information.

[Fudenberg & Tirole \(1995\)](#) provide empirical evidence that income smoothing assumes investors are people who resist risk. Managers also reject risk, especially managers who avoid loans from the capital market or debt of equity, so managers are encouraged to practice income smoothing so that capital from equity is more secure. Income smoothing will reduce company risk so that investors do not feel worried about the expected rate of return. Based on this, it can be assumed that earnings management techniques with income smoothing can reduce the company's cost of capital. [Tucker & Zarowin \(2006\)](#) obtained empirical evidence that income smoothing can be an informative side of a company, and is supported by [Huang et al. \(2009\)](#) and [Abou El Sood \(2012\)](#) which found empirical evidence that income smoothing has a strong impact on reducing the cost of capital.

Income smoothing provides investors with better and informative information than actual company profits. Cost of capital is a cost that must be borne by the company, then these costs are the minimum limit of the level of results that must be achieved by the company so that the company is not a loss. Managers who conduct income smoothing are assumed to be able to reduce the real costs that must be incurred by the company to reduce the cost of capital. Based on this it can be concluded that companies that do income smoothing can reduce or reduce the value of the cost of capital.

Several studies have found that income smoothing can provide investors with better information than actual earnings, even though income smoothing is part of earnings management practices. [Beidleman \(2014\)](#) provides empirical evidence that managers who do income smoothing can create a stable profit stream and reduce fluctuations in returns to the market. [Barnea \(2012\)](#) states that managers do income smoothing to reduce fluctuations in reported earnings and increase the ability of investors to predict future cash flows because fluctuations in earnings and unpredictability of future earnings are the causes of market risk determinants of shares. The control variable in this study controls the effect caused by income smoothing on the cost of capital. Cost of capital is a cost that must be borne by the company, so this value is also a minimum limit of the level of results that must be achieved by the company so that the company is not declared to be a loss. The manager who practices income smoothing on his company's financial statements, the cost of capital issued by the company will be lower or smaller.

Conclusion and Recommendation

Based on the research analysis and discussion that has been described in full in the previous section, the conclusions of this study are as follows:

- 1) Income smoothing has a negative and significant effect on the cost of capital. The use of four control variables namely information risk, company size, and institutional ownership does not affect the effect of income smoothing on the cost of capital, unless the leverage variable based on the test results can be a control variable.
- 2) The first suggestion is for company management, where management of perli companies gives special attention to the phenomenon of income smoothing and the cost of capital concerning the implementation of

good corporate governance. The second suggestion is for further research by conducting research specifically aimed at developing a more accurate measurement model of earnings management, for example by industry. By developing this industry model, it can also identify differences in earnings management patterns in each industry.

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