

The Effect of Tax Avoidance, Real and Accrual Earnings Management on Cost of Equity

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Abstract: This research aims to examine the effect of tax avoidance, accrual earnings management, and real earnings management on the cost of equity. The independent variables used in this study are tax avoidance measured by abnormal book-tax differences (ABTD), earnings accrual management as measured by performance-adjusted current discretionary accruals (PACDA), and real earnings management measured by abnormal discretionary expense and abnormal production cost. Meanwhile, the dependent variable used is the cost of equity as measured by the equity cost formula. The equity cost formula is obtained by summing the book value per share in period t plus the earnings per share in the period $t+1$ then subtracted from the stock price in period t which is divided by the share price in period t . The population in this study were manufacturing companies listed on the Indonesia Stock Exchange from 2012 to 2016. Samples were taken using the purposive sampling method. This study uses panel data regression analysis techniques. The results showed that tax avoidance had a significantly positive effect on the cost of equity while accrual earnings management and real earnings management had no effect on the cost of equity.

1 INTRODUCTION

All funding decisions contain risks which are cost for the company. If funding comes from debt, the company will bear the cost of debt. Meanwhile, if funding comes from equity by issuing shares, the company will bear the cost of equity. Risk assessment becomes important to determine the cost of equity, especially for investors. Investors consider risk to be a cost that must be borne and affect the expected rate of return on investment in a company. Investors can see these risks from disclosures or information contained in financial statements. The disclosure and quality of information affects the cost of equity (Botosan, 2006; Botosan & Plumlee, 2002; Francis et al., 2004; Lambert et al., 2007).

One of the management actions that can influence the quality of information in financial statement, which can ultimately affect the cost of equity, is tax avoidance. Tax avoidance is carried out in order to reduce the tax or cash burden that the company must pay to the tax authority. With tax avoidance, companies will obtain greater cash availability that can be used in production or

investment activities, thus will increase company future cash flow. This expected future cash flow will affect the cost of equity (Lambert et al., 2007).

Hutchens and Rego (2015) shows that tax avoidance is positively correlated with cost of equity. Investors regards tax avoidance as a risky management action that increase uncertainty over their investment which means increasing the cost of equity. Meanwhile, Cook et al. (2017) shows that investors respond differently too the level of tax avoidance. For companies with low level tax avoidance, an increase in tax avoidance will reduce the cost of equity. And for companies with high level tax avoidance, an increase in tax avoidance will increase the cost of equity.

Other management actions that can affect the cost of equity are earnings management. The management discretion in preparing financial statements make management freely choose the accounting method used in financial reporting that can increase or support the performance of management. Francis et al. (2004) show that accrual earnings management had positive impact to cost of equity. On the other hand, Febrininta and Siregar

(2014) show different result that accrual earnings management does not affect the cost of equity.

Another form of earnings management is real earnings management. Lambert et al. (2007) shows that real earnings management can be intended to cover the actual profits or performance of the company, so will be distorts the equality of earning, which are indicators of future cash flow. In line with this, Kim and Sohn (2013) shows that real earning management is positively related to the cost of equity because it increases noises and reduces investor expectations of future cash flows. Different results are shown in Meini and Siregar (2014) and Febrininta and Siregar (2014).

The inconsistency of previous research are the motivation of this research. This research examine the effect of tax avoidance, real and accrual earnings management on cost of equity in Indonesia manufacturing sector companies. Using data from 2012 until 2016, the result showed that tax avoidance had a significantly positive effect on the cost of equity while accrual and real earnings management had no effect on the cost of equity.

2 HEORICAL FRAMEWORK

2.1 The Relation between Tax Avoidance and Cost of Equity

Frank et al. (2009) revealed that tax avoidance is related to the aggressiveness of financial reporting, while Balakrishnan et al. (2018) revealed that tax avoidance increases the obscurity of the company's information environment. Tax avoidance can reduce the quality of financial statement information. Lambert et al. (2007) shows that when the quality of information is low, information held by investor to assess future cash flow is less accurate. As a result, investor assume there is uncertainty about the company's future cash flows. Future cash flows are indicators of investment returns in the form of dividends so that the uncertainty of future cash flow will increase uncertainty in return on investment or increase the cost of equity. This is confirmed by Cook et al. (2017) and Hutchens and Rego (2015) that for companies with high levels of tax avoidance, an increase in tax avoidance will increase the cost of equity. Based on previous research, the first hypothesis in this research is:

H1 : Tax avoidance has a positive effect on the cost of equity.

2.2 The Relation between Accrual Earnings Management and Cost of Equity

Low accrual earnings quality can be caused by accrual quality in financial reporting (Geraldina, 2013). Aggressive accrual earning management contains discretionary accrual elements such as discretion in the selection of accounting method and estimates in determining the useful life on an asset loaded with uncertainty. This will have an impact on the quality of accruals in financial reporting so that the quality of earnings reported in financial statement is doubtful. Profits reported in financial statements do not reflect actual company profits. As a result, investors do not have accurate information in predicting the company's future cash flow.

Francis et al. (2004) shows that accrual quality has a positive effect on cost of equity. This is confirmed by the research of Kim and Sohn (2013) and Meini and Siregar (2014) which provide empirical evidence that accrual earnings management has a positive effect on the cost of equity.

Investors consider there are risks or uncertainties in the company's future cash flow. Thus, investors consider accrual earnings management to be risky so that the information presented in financial statements also contains risks. As a results, investors want a higher rate of return in the presence of these risks or in other words, the cost of equity increases. Based on previous research, the second hypothesis in this research is

H2 : Accrual earnings management has a positive effect on the cost of equity.

2.3 The Relation between Real Earnings Management and Cost of Equity

Real earnings management is an action that aims to change reported earnings in a certain direction achieved by changing the time or structure of operations, investments, or funding that have suboptimal business consequences (Zang, 2011). According to Kim and Sohn (2013), manager are more likely to do real earnings management than accrual earnings management. In real earnings management, management can change the time and scale of real activities such as production, sales, investment, and funding throughout the accounting period. These real earnings management actions include sales manipulation, reduce discretionary, and excessive production (Roychowdhury, 2006).

Real earnings management can generate abnormal profits, so they do not reflect actual profits or real company performance. Real earnings management can distort the quality of reported

earnings which is an indicator of future cash flow. Investors want a higher rate of return for companies whose income is susceptible to interference (noisier) and lower than expected levels of future cash flow (Lambert et al., 2007).

In line with this, real earnings management is positively related to the cost of equity because it increases noise to company profits and reduces investor expectations of future cash flow which are indicators of investment returns. Kim and Sohn (2013) shows empirical evidence that real earnings management is positively correlated with the cost of equity. Thus, investors demand a higher risk premium for this activity by increasing the cost of equity. Based on previous research, the third hypothesis in this study is

H3 : Real earnings management has a positive effect on cost of equity

3 RESEARCH METHOD

This research uses descriptive quantitative methods. Thus, it carried out by processing data and conducting analysis to obtain a conclusion on existing data. This conclusion is in the form of relationship between the independent variable and the dependent variable.

This research using all manufacturing companies, covering the basic industrial sector and chemicals, various industries, and consumer goods industries, listed on the Indonesia Stock Exchange for period of 2012-2016. To get the desired sample, this research using purposive sampling method, with the following criteria :

1. Manufacturing sector company
2. Listed on Indonesia Stock Exchange before 1 Januari 2012
3. Use the rupiah currency in financial reporting
4. Has complete financial reports elements for the period 2011 – 2015

The operationalization of this research variable consists of one dependent variable, three independent variables, and three control variables which will be explained as follows:

1. Cost of equity

The measurement of the cost of equity in this research used the modified Ohlson Model Approach. The cost of equity is calculated based on the discount rate used by investors to evaluate the future cash flow (Dechow & Dichev, 2002).

$$r = (B_t + X_{t+1} - P_t) / P_t$$

where,

r : cost of equity

B_t : Book value per share period t

P_t : Stock price period t

X_{t+1} : Earnings per share

1. Tax Avoidance

The measurement of tax avoidance in this research using Tang and Firth (2011) approach for measuring book tax differences (BTD).

$$BTD_{it} = \beta_0 + \beta_1 \Delta INV_{it} + \beta_2 \Delta REV_{it} + \beta_3 NOL_{it} + \beta_4 TLU_{it} + \varepsilon_{it}$$

where,

BTD_{it} : pretax income – current tax expense/tax rate

ΔINV_{it} : investment changes in gross PPE and intangible assets

ΔREV_{it} : changes of revenue

NOL_{it} : Net Operating Losses

TLU_{it} : Total compensation for Loss

ε_{it} : company residual value

All the above variables are scaled with total assets in year t

2. Accrual Earnings Management

Jaggi *et al.* (2009) use performance-adjusted discretionary accruals (PACDA) to measure accrual earnings management, because it can better capture accrual earnings management and management usually has the most discretion in current accrual activities. PACDA is calculated by the following steps :

- a. Calculating the total current accrual estimated every year

$$TCA_{it} / A_{it-1} = \alpha_0 (1 / A_{it-1}) + \alpha_1 (\Delta REV_{it} / A_{it-1}) + \alpha_2 (ROA_{it-1}) + \varepsilon_{it}$$

- b. Using the coefficients generated from previous calculations to predict current accruals (*expected current accrual/ECA*)

$$ECA_{it} / A_{t-1} = \alpha_0 (1 / A_{it-1}) + \alpha_1 \{(\Delta REV_{it} - \Delta AR_{it}) / A_{t-1}\} + \alpha_2 (ROA_{it-1})$$

- c. Determine PACDA

$$PACDA = (TCA_{it} / A_{it-1}) - (ECA_{it} / A_{t-1})$$

Where,

TCA : total current accruals, from net income before extraordinary items and terminated operations plus depreciation and amortization minus cash flows from operating activities

ΔREV : changes in net revenue

ΔAR : changes in account receivables

ROA : Return of Assets

ECA : Expected current accrual

A : Net assets

ε_{it} : residual value

3. Real Earnings Management

This research using the model from Cohen and Zarowin (2010) to measure real earning management

$$REM = (- R_DISX) + R_PROD$$

From these equation, Cohen and Zarowin (2010) multiply R_DISX with negative 1 to make the relationship unidirectional. Meanwhile, R_PROD is not multiplied by negative 1 because the higher production cost indicate that overproduction reduces the COGS. Thus, the greater REM, the greater manipulation of discretionary expense and production cost to increase company profits.

4. Control Variables

This research using Size, Book-to-Market Ratio (BM), and Leverage as control variable

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company. The higher the value of the cost of equity, the higher the minimum rate of return expected by investors on their investment in the company's shares, and vice versa. The negative number on the average cost of equity in the table 1 shows that the average investor loses their investment during period of 2012 – 2016. Meanwhile, the highest of the cost of equity indicates investors get a profit on their investment in the company's shares.

The negative value of tax avoidance shows that the average accounting profit before corporate tax is smaller than the company's taxable income. However, the negative average value does not mean that the average tax avoidance is negative at every year. This is interesting to observe especially for the tax authorities in assessing corporate tax avoidance, especially in the period when tax avoidance is positive. However, it does not rule out the possibility of companies making tax evasion in the period when tax evasion in the period when tax avoidance is negative.

Accrual earnings management is an intervention in financial reporting so that it can increase or decrease accounting profit, by changing the accounting method or estimation used when presenting transaction in financial statements. The negative average accrual earnings management indicates, in average, management does not conduct earnings management, or in other words, management does not increase accounting profit through accrual activity.

Real earnings management is an act of changing accounting profits through real activities with sales manipulation, decreasing discretionary expenses, and excessive production. The negative average value of real earnings management indicates that, in average, management does not carry out real earnings management through decreasing expenses and not overproducing.

4 ANALYSIS AND RESULTS

4.1 Descriptive Statistics

Table1: Descriptive Statistics

| Var. | Mean | Median | Maximum | Minimum | Std. Dev |
|------|-------------|----------|-------------|----------|-------------|
| COE | 0.332329793 | -0.6655 | 2.751675676 | -1.00457 | 0.794277932 |
| TAV | 0.003904788 | 0.003113 | 0.248129374 | -0.18731 | 0.035441605 |
| AEM | 0.001376103 | -0.0108 | 0.331800509 | -0.42883 | 0.092062715 |
| REM | 0.002338702 | 0.091353 | 0.421388071 | -0.86604 | 0.271704568 |
| BM | 1.320144759 | 0.944231 | 8.35500342 | 0.039695 | 0.039694863 |
| SIZE | 28.57575569 | 28.21839 | 33.19881203 | 25.60818 | 1.560040955 |
| LEV | 0.438261154 | 0.457244 | 0.943143815 | 0.05046 | 0.201749511 |

Cost of equity are the minimum rate of return that an investor expects for his investment in a

4.2 Hypothesis Result

Table 2: Determination coefficient result

| | | | |
|---------------------------|----------|---------------------------|----------|
| <i>R-squared</i> | 0,427938 | <i>Mean dependent var</i> | -0,0579 |
| <i>Adjusted R-squared</i> | 0,416971 | <i>S.D. dependent var</i> | 0,27696 |
| <i>S.E. of regression</i> | 0,211477 | <i>Sum squared resid</i> | 13,99811 |
| <i>F-statistic</i> | 39,02384 | <i>Durbin-Watson stat</i> | 1,575138 |
| <i>Prob(F-statistic)</i> | 0,003 | | |

Adjusted R-squared value of 0.4169, shows that the variation in the value of cost of equity can be explained by the independent variable and the control variable in the regression model of 41.40%. The remaining 58.30% is explained by other factors outside the research model.

The probability value of F statistic is below the 0.05 significance level, meaning that the independent variables affect the dependent variable.

Table 3: T test result

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|----------|-------------|------------|-------------|---------|
| TAV | 0,468314 | 0,1890 | 2,47740 | 0,0138* |
| AEM | -0,13334 | 0,1102 | 1,20955 | 0,2274 |
| REM | 0,079118 | 0,1084 | 0,72925 | 0,4664 |
| BM | 0,271431 | 0,0305 | 8,87609 | 0,0000 |
| SIZE | -0,15928 | 0,0135 | -11,746 | 0,0000 |
| LEV | 0,385968 | 0,2456 | 1,57103 | 0,1172 |
| C | 3,689984 | 0,3024 | 12,1989 | 0,0000 |

The effect of Tax Avoidance on Cost of Equity

The results in table 3 showed that tax avoidance had a positive and significant effect (below the 0.05 significance value) on the cost of equity. Thus, it can be concluded that the first hypothesis (H1) which states "tax avoidance has a positive effect on the cost of equity" can be accepted.

This positive relationship means that the greater the tax avoidance by the company, the more the cost of equity that must be borne by the investor. The results of this study are in line with the results of the Hutchens and Rego (2015) who also revealed in his research that corporate risk (tax avoidance proxy) has a positive effect on the cost of equity. This is confirmed by Cook et al. (2017) that for companies with high levels of tax avoidance, an increase in tax avoidance will increase the cost of equity.

The effect of Accrual Earnings Management on Cost of Equity

The results in table 3 showed that accrual earnings management did not affect the cost of equity. Thus, H2 which states "accrual earnings management has a positive effect on the cost of equity unacceptable. This negative relationship means that the greater the accrual earnings management carried out by the company, the smaller the cost of equity. The results of this study are in line with the results of Reizky Ifonie (2012) who conducted research on the effect of information asymmetry and earnings management

on the cost of equity capital. The results of his research show that earnings management has no significant effect on the cost of equity. Reizky Ifonie (2012) said the results were due to investors evaluating at this time, while issuers or companies issued new ordinary shares to cover their operational and investment debts so the company was less attractive to investors. In addition, investors consider other things in investing in a company.

The results of this study prove that the greater the profit management performed by the company, the smaller the cost of equity. Accrual earnings management actions do not affect investors. Investors consider accrual earnings management actions to be non-risky so that the information presented in financial statements is in accordance with reality. Another guess is the type of mutual fund investor as one of the biggest types of investors who invest in bonds. In mutual fund products, total risk can be minimized and spread so that these investors become less concerned with accrual earnings management by the company. In addition, it is suspected that the inability of creditors or bond investors to detect the existence of management profit actions made by the company because the method of detecting both types of earnings management (accruals and real) is fairly sophisticated.

The Effect of Real Earnings Management on Cost of Equity

The results of the study show that real earnings management does not affect the cost of equity. Thus, the third hypothesis (H3) which states that "real earnings management has a positive effect on the cost of equity" cannot be accepted. This negative relationship means that the greater the real earnings management by the company, the lower the cost of equity. The results of this study indicate that management does not carry out real earnings management through manipulation of discretionary expenses and excessive production.

The probability level that is above 0.05 is in line with the average real earnings management which is negative, which means that the average manufacturing company in Indonesia in the study period did not carry out real earnings management. Manipulation of discretionary burden is carried out by reducing the burden of research and development, advertising, sales, administration and general. This reduction will increase profit for the year. This occurs when these expenses do not directly lead to profits and income. This decrease will also increase the cash flow for the period if the

company issues the burden in the form of cash. However, this risks lower cash flows in the coming period. Decreasing the burden of discretion causes abnormal discretionary expenses. Managers also carry out real earnings management through manipulation of production by increasing production more than is needed to increase revenue. When a company produces more units, the fixed cost per unit will be lower. This strategy can reduce cost of goods sold and increase operating profit margins. Excessive production will produce abnormal production costs (abnormal production cost). The combination of abnormal discretionary costs and abnormal production costs will cover actual profits or company performance.

5 CONCLUSIONS

Tax is one of the significant components of corporate profits. In Indonesia, the tax rate that applies to companies is 25% or a quarter of company profits. This large tax burden has made the company make efforts to reduce the tax burden that must be paid to the tax authorities by tax evasion which clearly violates the law and with tax avoidance. Tax avoidance is still in the realm of the legal framework of tax law by utilizing loopholes in tax law carried out in order to reduce the tax burden that must be paid to the tax authorities.

The company's actions to increase company value are in line with what investors expect. With the value of the company increasing, company management hopes to get compensation for the achievements they have achieved. However, tax avoidance measures carry risks, which means that there are additional risks that must be borne by investors which can harm investors. tax avoidance can reduce the quality of financial statements. As a result, investors assume there is uncertainty about the company's future cash flows. Disrupted future cash flows will increase the cost of equity. This is in accordance with the results of the study.

Earnings management is an opportunistic act of management to increase or decrease accounting profits with the intention of gaining personal gain. Earnings management is done to cover actual earnings or company performance so that it distorts the quality of earnings reported in the financial statements. The management discretion in preparing financial statements makes management freely choose the accounting method used in financial reporting that can increase or support the performance of management. Accrual earnings

management is achieved by changing the accounting method or estimation used when presenting transactions in financial statements. Aggressive accrual earnings management contains discretionary accrual elements such as discretion in the selection of accounting methods and estimates that are loaded with uncertainties that will impact accrual quality in financial reporting.

The results of this study prove that accrual earnings management actions do not affect investors. Investors consider accrual earnings management actions to be non-risky so that the information presented in financial statements is in accordance with reality.

Management opportunistic behavior in earnings management is not only done through the selection of estimates and accounting methods (accrual earnings management), but also with the real activities of companies by changing the structure of operations, investments, or funding that have suboptimal business consequences (real earnings management). The results of the study show that real earnings management does not affect the cost of equity. Technological advances and the ease with which investors can capture information on the market make management rethink the management of earnings

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