

# The Effect of Tax Avoidance on Firm Value with Tax Risk as Moderating Variable

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**Abstract:**

This study aims to examine the effect of corporate tax avoidance and tax risk on firm value. Furthermore, this study examines the moderating effect of tax risk on the relationship between tax avoidance and firm value. This study uses panel data analysis based on purposive sampling method and involves 124 companies listed in Indonesia Stock Exchange from 2014 - 2017. The results show that tax avoidance has positive effect on firm value, tax risk has positive effect on firm value, and tax risk moderates the positive relationship between tax avoidance and firm value. This research also shows robust results using different tax avoidance and tax risk measure. This study makes new contribution in Indonesia related to the association between tax risk and firm value, including the effect of moderating tax risk on the relationship between tax avoidance and firm value.

**Keywords:** firm value, tax avoidance, tax risk.**INTRODUCTION**

The primary objective of the firm is to maximize shareholder wealth (Ehrhardt and Brigham, 2011; Titman, Keown, and Martin, 2014). Shareholder wealth is reflected in the company's stock price (Gitman and Zutter, 2012). Therefore, shareholder encourage manager to perform optimally to increase company's stock price. Stock price reflects information available to investors (Ehrhardt and Brigham, 2011). Investors respond to fundamental information reported by companies in the financial statements such as profit number and revenue growth.

Investor also value tax policies and corporate tax activities. Tax policies set by government are responded by capital market with both positive and negative sentiments. Tax amnesty program was one of the main factors that gave positive sentiment to the movement of the composite stock price index in early 2017 (<https://www.tempo.co>, January, 3 2017). Companies that take part in tax amnesty are eliminated from the obligation to pay tax sanctions and are free from the Directorate General of Tax's audit of fiscal years prior to the

implementation of the tax amnesty. Therefore, the firm tax risk becomes smaller. Based on this phenomenon, it can be concluded that the reduction in tax risk is viewed positively by investors so that it can increase the firm value. In the other hand, some taxation policies also have negative impact on stock prices. Policies related to Automatic Exchange of Information (AEOI) through the ratification of Government Regulation in Lieu of Law Number 1 of 2017 have caused negative sentiment towards banking stock prices (<https://www.kompas.com>, May 17, 2017).

Management makes various efforts to increase firm value. An important component that must be considered by managers in making business decisions is risk and return in the form of cash inflows to the company (Gitman and Zutter, 2012). One mean used by management is tax avoidance. Tax avoidance can reduce the amount of money that must be paid to the government so that it provides more cash for company and investors (Drake, Lusch, and Stekelberg, 2019). However, tax avoidance can also increase the risk of future cash outflows if the company is proven to practice aggressive tax planning and

has potential to get sanction or penalty from the tax authority (Hanlon and Slemrod, 2009). Managers will consider tax avoidance activities at an acceptable risk level.

Taxes have an important role in corporate financing decision (Titman, Keown, and Martin, 2014) that have consequences on firm value (Fama and French, 1998). Tax avoidance can be seen as a management strategy in carrying out effective tax planning and generating more profits or cash flows in the future (Desai and Dharmapala, 2009; Inger, 2014). Another view states that tax avoidance is a risky action and can cause companies to bear a greater burden in the future through sanction, penalty, and other payments, as well as reputation costs (Hanlon and Slemrod, 2009; Armstrong et al., 2015).

Tax risk is also an important consideration for investors in making investments. The risk of uncertainty in future tax payments influences investors' valuation of corporate tax avoidance practices (Drake, Lusch, and Stekelberg, 2019). Drake, Lusch, and Stekelberg (2019) stated that their research was the first study to examine the effect of tax avoidance and tax risk on firm value. So far, there have not been many studies in Indonesia that discuss the effect of tax risk on firm value and the effect of tax risk on the relationship between tax avoidance and firm value. Based on the phenomena, facts, and concepts described earlier, research related to tax risk and firm value is an interesting topic and provides new contributions to accounting and taxation research in Indonesia.

## LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

### Firm value

The company's main goal is to maximize shareholder value (Brealey, Myers, and Allen, 2011). Shareholder value is reflected in the company's stock price which forms the firm value. The company's stock price is the simplest and best measure for shareholder prosperity (Gitman and Zutter, 2012). The higher the stock price, the greater the level of shareholders' prosperity. Titman, Keown, and Martin (2014)

described that stock market prices reflect information. Investors will respond to new information available to buy or sell their stock. The stock price will move quickly when the company's financial statements are published. The movement will increase if the company performance exceeds investor expectations, and conversely the stock price will decrease if the company performance is less than market expectations (Titman, Keown, and Martin, 2014).

### Tax Avoidance

Tax avoidance can be interpreted as the use of tax law loopholes carried out by companies to obtain profits by significantly reducing corporate tax payments (Braithwaite, 2005). Tax reduces net income and after-tax net cash flow available to investors, so it tends to provide greater motivation for companies to conduct tax avoidance practices (Kovermann, 2018). Dyreng, Hanlon, and Maydew (2010) defined tax avoidance as "anything that reduces the firm's taxes relative to its pretax accounting income" (p. 1164). Hanlon and Heitzman (2010) described tax planning strategies as a continuum. If tax compliance is at one end, then tax noncompliance is in a position closer to the other end of the continuum.

Frank, Lynch, and Rego (2009) stated that tax avoidance activities carried out by the company can be described through tax avoidance, tax planning, and aggressive tax reporting. Tax avoidance is an activity to reduce the amount of tax that can be done by choosing tax-free investment up to conducting aggressive tax planning (Dyreng, Hanlon, and Maydew, 2008). Tax avoidance is seen as a strategy that benefits companies and shareholders because it provides resources needed to develop company through investment or increase cash available to shareholders through dividend distribution (Drake, Lusch, and Stekelberg, 2019). Conversely, tax avoidance can be viewed negatively by investors and market because it can cause additional costs for the company (Hanlon and Slemrod, 2009; Kovermann, 2018).

## **Tax Risk**

Neuman, Omer, and Schmidt (2013) stated that tax avoidance can be a source of tax risk because it increases the potential variability of future tax payments. Wilde and Wilson (2019) added that the concept of tax risk was introduced in various literature and became one of the fields of interest in tax research. However, “there is not yet a general consensus on the definition of tax risk” (Drake, Lusch, and Stekelberg, 2019, p. 152). Hutchens and Rego (2015) formulated tax risk as “all tax-related uncertainties that surround a firm’s transactions, operations, financial reporting decisions, and corporate reputation” (p. 1). Interactions between economic risk, tax law uncertainty, and inaccurate information processing can cause tax risk (Neuman, Omer, and Schmidt, 2018). Neuman, Omer, and Schmidt (2018) also defined tax risk as a failure to take actions that cause future taxes to differ from those expected.

Guenther, Matsunaga, and Williams (2017) concluded that the measured tax risk uses the volatility of annual cash tax payments related to company risk including uncertainty about future tax payments, investment risk, and potential deviation of after-tax net cash compared to the amount expected by investors. Inger (2014) stated that the effect of tax avoidance on firm value is influenced by tax risk, benefits potential, and costs borne by the company. Firmansyah and Muliana (2018) argued that tax avoidance can increase firm risk because it increases uncertainty in future tax payments and becomes an indicator of a firm investment risk.

## **Previous Studies**

Desai and Dharmapala (2009) conducted a study to examine the effect of corporate tax avoidance on firm value moderated by institutional ownership as a measure of corporate governance. The results show that tax avoidance has a positive effect on firm value in companies with strong institutional ownership. Hanlon and Slemrod (2009) examined the effect of corporate tax aggressiveness on stock price reactions. The results show that tax sheltering activity has a negative effect on stock prices. The market views tax sheltering as an activity that has the

potential to generate future costs due to tax avoidance. Goh et al. (2016) examined the effect of corporate tax avoidance on cost of equity. The results show that tax avoidance has a negative effect on the cost of equity which means increasing firm value.

Drake, Lusch, and Stekelberg (2019) stated that the research was the first study to examine the effect of tax risk on the relationship between tax avoidance and firm value. The study made a new contribution in the form of the importance of considering tax risk in assessing tax avoidance practices by companies. Drake, Lusch, and Stekelberg (2019) concluded that tax risk must be distinguished from tax avoidance, but still tested simultaneously. The results show that tax avoidance is positively related to firm value, tax risk is negatively related to firm value, and tax risk moderates the positive relationship between tax avoidance and firm value.

Chasbiandani and Martani (2012) conducted a study to examine the effect of long-term tax avoidance on firm value in Indonesia. The results show that short-term tax avoidance does not affect firm value significantly, while long-term tax avoidance has a positive effect on firm value. Law enforcement and tax supervision in Indonesia are still weak, so investors see tax avoidance will result in greater benefits for the company compared to the risk detected by the tax authority (Chasbiandani and Martani, 2012).

## **Hypothesis Development**

Previous research on the relationship between tax avoidance and firm value has different results. Goh et al. (2016) and Cook, Moser, and Omer (2017) found that tax avoidance reduces cost of equity thereby increasing firm value. Desai and Dharmapala (2009) and Wilson (2009) showed a positive relationship between tax avoidance and firm value and driven by good corporate governance. Neuman (2014) argued that a right tax planning strategy can contribute significantly to firm value. Tax planning strategy that is often used by companies is a strategy of sustainability in achieving consistent tax payments over time and a strategy to minimize corporate tax burden as low as possible (Neuman,

2014). According to Jacob and Schütt (2013), tax planning score has positive impact on the relationship between pre-tax income and market-to-book ratio. Chasbiandani and Martani (2012) and Kurniawan and Syafruddin (2017) also found positive effect of tax avoidance on firm value. The tax law enforcement that are less effective in Indonesia is considered to be one of the factors that causes tax avoidance benefits the company (Chasbiandani and Martani, 2012).

Conversely, some studies concluded the negative relationship between tax avoidance and firm value. Kim, Li, and Zhang (2011) found positive relationship between tax avoidance and stock price crash, based on idea that tax avoidance creates unclear environment and can bring bad news to the company. Rego and Wilson (2012) argued that aggressive tax planning detected by the tax authority can impose large costs on firms such as consultant fees, legal fees, and other firm resource expenditures. Tax avoidance activities can have detrimental effect on companies and investors such as decreasing company stock prices and other indirect costs (Hanlon and Slemrod, 2009).

Although there are different results related to the relationship between tax avoidance and firm value, tax avoidance can be seen as management strategy that can increase firm value. Tax avoidance can provide greater resources for companies to invest or provide distribution to shareholders. In countries with level of supervision and enforcement of tax laws that are not yet strict, the benefits obtained from tax avoidance outweigh the risks that must be borne by company. Thus, the first hypothesis in this study is formulated as follows:

**H1: Tax avoidance has positive effect on firm value.**

In recent research, there is not much discussion about the effect of tax risk on firm value. Drake, Lusch, and Stekelberg (2019) claimed that their research is the first study to examine the effect of tax risk on firm value. Guenther, Matsunaga, and Williams (2017) stated that the standard deviation of annual cash tax

payments relates to the volatility of future stock returns. This finding shows that the company risk increases in line with the increase in tax risk. Dhaliwal et al. (2017) concluded that the volatility of taxable income is positively related to firm risk. Basically, investors prefer investments that provide high returns with minimal risk (Ehrhardt and Brigham, 2011). Drake, Lusch, and Stekelberg (2019) concluded that tax risk was valued negatively by investors which meant lowering the value of the company. Tax risk provides uncertainty about future cash inflows and outflows. Therefore, the second hypothesis in this study is formulated as follows:

**H2: Tax risk has negative effect on firm value.**

Drake, Lusch, and Stekelberg (2019) explained that their research was the first study to have broad impact on the topic of discussing the effect of tax risk on firm value. Their result show that tax risk affects the relationship between tax avoidance and firm value. Investors distinguish less volatile tax avoidance with more volatile tax avoidance (Drake, Lusch, and Stekelberg, 2019). Less volatile tax avoidance has lower risk so that it provides more accurate information regarding corporate tax avoidance in the future. Whereas more volatile tax avoidance means more risk, making it more difficult for investors to predict the level of corporate tax avoidance in the future. In line with the result of the study, the third hypothesis is formulated as follows:

**H3: Tax risk moderates the positive relationship between tax avoidance and firm value.**

## METHODOLOGY

### Research Method

The research model used in this study replicates the study conducted by Drake, Lusch, and Stekelberg (2019) with some adjustments. Some control variables according to Drake, Lusch, and Stekelberg (2019) are not used in this study. Net operating loss carryforwards (NOL) variable are not used in this research because there are different regulations related to compensation for fiscal losses in the United States and Indonesia. Research and development cost

(R&D) variable are not used in this study because most of the firms in Indonesia do not reveal the costs of research and development as a separate component in the financial statements.

This study replicates the three models as research by Drake, Lusch, and Stekelberg (2019). Drake, Lusch, and Stekelberg (2019) explained that the purpose of statistical testing using three models is to test tax avoidance and tax risk as two different things. However, they concluded that the effect of tax avoidance and tax risk must be tested together. The first research model examines the effect of tax avoidance on firm value. The first model is formulated as follows:

$$\text{FIRMVAL}_{it} = \alpha_{0it} + \beta_1 \text{TAXAVOID}_{it} + \beta_2 \text{ROA}_{it} + \beta_3 \text{VOLROA}_{it} + \beta_4 \text{ROA} * \text{VOLROA}_{it} + \beta_5 \text{LN\_SALES}_{it} + \beta_6 \text{LEV}_{it} + \beta_7 \text{FOREIGN}_{it} + \beta_8 \text{CAPEX}_{it} + \beta_9 \text{GROWTH}_{it} + \beta_{10} \text{ADVERT}_{it} + \beta_{11} \text{INTANG}_{it} + \beta_{12} \text{DEPREC}_{it} + \varepsilon_{it}$$

The second research model examines the effect of tax risk on firm value. The second model is formulated as follows:

$$\text{FIRMVAL}_{it} = \alpha_{0it} + \beta_1 \text{TAXRISK}_{it} + \beta_2 \text{ROA}_{it} + \beta_3 \text{VOLROA}_{it} + \beta_4 \text{ROA} * \text{VOLROA}_{it} + \beta_5 \text{LN\_SALES}_{it} + \beta_6 \text{LEV}_{it} + \beta_7 \text{FOREIGN}_{it} + \beta_8 \text{CAPEX}_{it} + \beta_9 \text{GROWTH}_{it} + \beta_{10} \text{ADVERT}_{it} + \beta_{11} \text{INTANG}_{it} + \beta_{12} \text{DEPREC}_{it} + \varepsilon_{it}$$

The third research model examines the effect of tax risk on the relationship between tax avoidance and firm value. The third model is formulated as follows:

$$\text{FIRMVAL}_{it} = \alpha_{0it} + \beta_1 \text{TAXAVOID}_{it} + \beta_2 \text{TAXRISK}_{it} + \beta_3 \text{TAXAVOID}_{it} * \text{TAXRISK}_{it} + \beta_4 \text{ROA}_{it} + \beta_5 \text{VOLROA}_{it} + \beta_6 \text{ROA} * \text{VOLROA}_{it} + \beta_7 \text{LN\_SALES}_{it} + \beta_8 \text{LEV}_{it} + \beta_9 \text{FOREIGN}_{it} + \beta_{10} \text{CAPEX}_{it} + \beta_{11} \text{GROWTH}_{it} + \beta_{12} \text{ADVERT}_{it} + \beta_{13} \text{INTANG}_{it} + \beta_{14} \text{DEPREC}_{it} + \varepsilon_{it}$$

### Operational Definition and Variable Measurement

The operational definitions of the research variables are presented in Table 1.

Table 1. Operational Definition and Variable Measurement

| No | Variable                 | Definition and Measurement  |
|----|--------------------------|---|
| 1  | Firm value (FIRMVAL)     | FIRMVAL is measured using the natural logarithm of market value of equity (Drake, Lusch, and Stekelberg, 2019). Market value of equity is measured using the stock price three months after the end of the reporting year multiplied by the number of outstanding shares.   |
| 2  | Tax avoidance (TAXAVOID) | TAXAVOID uses long-run cash ETR (CETR5) proxy. CETR5 is calculated based on the amount of cash tax payments reported in the company's cash flow statement for five years (t-4 to t) divided by income before tax in the same period (Dyreg, Hanlon, and Maydew., 2008; Shevlin, Urchan, and Vasvari, 2013; McGuire et al., 2016). ETR is inversely related to tax avoidance. The greater the ETR level, the smaller the level of tax avoidance. To facilitate the interpretation of the result of the study, the CETR5 is multiplied by negative one (-1) to form TAXAVOID proxy. |
| 3  | Tax risk (TAXRISK)       | TAXRISK measurement uses standard deviation of five-year cash ETR (Hutchens and Rego, 2015; Guenther, Matsunaga, and Williams, 2017; Drake, Lusch, and Stekelberg, 2019), namely period t-4 through t. The greater the standard deviation, the greater the corporate tax risk. Measurement of tax risk using standard deviation of long-run cash ETR can accommodate ETR changes caused by tax strategies that are temporary, non-repetitive, and eliminate bias between years (Drake, Lusch, and Stekelberg, 2019).  |
| 4  | Return on assets (ROA)   | The level of profitability as measured by ROA has positive effect on firm value. ROA is measured by dividing pre-tax income against total assets (Chasbiandani and Martani, 2012; Chen et al., 2014; Kurniawan and  |

| No | Variable                    | Definition and Measurement  |
|----|-----------------------------|---|
| 5  | ROA Volatility (VOLROA)     | Syafruddin, 2017; Su, Wan, and Song, 2018; Drake, Lusch, and Stekelberg, 2019).<br>VOLROA measures the level of ROA variability in the last five years. VOLROA is measured using standard deviation of ROA for five years from t-4 to t (Drake, Lusch, and Stekelberg, 2019). VOLROA is negatively related to firm value.                               |
| 6  | Firm size (LN_SALES)        | The greater the number of sales, the more likely the company can increase its value. Firm size is measured using natural logarithm of total sales (Desai and Dharmapala, 2009; Jacob and Schütt, 2013; Drake, Lusch, and Stekelberg, 2019).   |
| 7  | Leverage (LEV)              | The greater the level of leverage, the more likely the company can increase its value. Leverage is measured by dividing total debt by total assets (Desai and Dharmapala, 2009; Chasbiandani and Martani, 2012; Jacob and Schütt, 2013; Goh et al., 2016; Kurniawan and Syafruddin, 2017; Su, Wan, and Song, 2018; Drake, Lusch, and Stekelberg, 2019). |
| 8  | Foreign income (FOREIGN)    | The greater the income earned abroad, the more positive the investor's valuation of the company (Jacob and Schütt, 2013). FOREIGN is measured using the amount of foreign income and export income divided by total revenue in the same period.   |
| 9  | Capital expenditure (CAPEX) | Capital expenditure is positively related to firm value. Capital expenditures are measured using the amount of cash outflows for procuring fixed assets and intangible assets reported in the statement of cash flows divided by the total assets (Jacob and Schütt, 2013; Drake, Lusch, and Stekelberg, 2019).   |
| 10 | Sales growth (GROWTH)       | Sales growth was measured using percentage of sales growth for two years (Su, Wan, and Song, 2018). The higher the value of GROWTH, the more positive the investor's valuation of the company.  |

| No | Variable  | Definition and Measurement   |
|----|---|--|
| 11 | Advertising, promotion, and marketing expenses (ADVERT) | Advertising, promotion, and marketing expenses can enhance company reputation, create market share, and expand the consumer base, thereby increasing the value of the company (Drake, Lusch, and Stekelberg, 2019). ADVERT is measured using advertising, promotion, or marketing expenses reported in the company's financial statements divided by total assets. |
| 12 | Intangible assets (INTANG)                              | Drake Lusch, and Stekelberg (2019) showed negative relationship between INTANG and firm values. INTANG is measured using intangible assets and goodwill divided by total assets.   |
| 13 | Depreciation and amortization expenses (DEPREC)         | The greater the depreciation expense, the smaller the firm value. DEPREC is measured using depreciation and amortization expense divided by total assets.  |

### Data and Sample

This study uses secondary data with balanced data panel analysis. The sample used in this study includes all companies listed on the Indonesia Stock Exchange in the period 2014-2017. Data are sourced from the company's financial statements obtained through [www.idx.co.id](http://www.idx.co.id). Company's stock price data is obtained through <https://finance.yahoo.com>. All sectors were used in this study except the financial sector and property, real estate, and construction sector. Sector classification refers to the Jakarta Stock Exchange Industrial Classification (JASICA). The sample selection process using purposive sampling method are shown in Table 2.

Table 2. Sample Selection Process

| Description   | Total |
|---|-------|
| Companies listed in IDX as of September 31, 2018  | 607   |
| Companies in the financial sector   | (91)  |
| Companies in the property, real estate and construction sectors, as well as companies with the majority of their income subject to final tax income | (73)  |
| Companies that conduct initial public offering after January 1, 2010  | (125) |
| Companies with negative income before tax   | (170) |
| Companies with incomplete data  | (15)  |
| Companies with long-run cash ETR value greater  | (9)   |

|                                      |     |
|--------------------------------------|-----|
| than 1 or negative                   |     |
| <b>Total sample (firms)</b>          | 124 |
| Year                                 | 4   |
| <b>Total observation (firm-year)</b> | 496 |

Companies in the financial sector are eliminated because they have performance, characteristics, regulations and tax policies that are relatively different from other sectors. Whereas companies in the property, real estate and construction sectors are not used in the study because the majority or all of their income is subject to final income tax. Measurement of effective tax rates (ETR) in the sector will cause bias because tax rates are different from other sectors.

## RESULTS

This study uses large number of observations so that it is assumed that there is no normality problem in the research model (Gujarati and Porter, 2009). Then, to overcome heteroscedasticity problem, this study uses General Least Square (GLS) method (Nachrowi and Usman, 2006). Autocorrelation problem is overcome using GLS variants with cross-section weights and covariance coefficient model of White cross-section. Furthermore, correlation analysis is shown in Appendix A. Based on Appendix A, there is no correlation value between variables that exceed 0.8 so it can be concluded that there is no multicollinearity problem in the research model. Therefore, it can be concluded that there is no problem of heteroscedasticity, autocorrelation, normality, and multicollinearity for all research models.

Descriptive statistics present data that includes the number of observations, mean, median, maximum, minimum, and standard deviation of each variable as shown in Table 3. The selection of panel data regression models using the Chow test and the Hausman test resulted in Fixed Effect Model. Simultaneous testing (F-test) shows that the three research models have significant effect on the dependent variable so that partial testing of the variable (t-test) can be done. The regression test results are shown in Table 4.

## DISCUSSION

### The Effect of Tax Avoidance on Firm Value

The statistical test result in model 1 shows that TAXAVOID has significant positive effect on FIRMVAL. The result is in accordance with the research of Desai and Dharmapala (2009); Wilson (2009); Chasbiandani and Martani (2012); Goh et al. (2016); Cook, Moser, and Omer (2017); Kurniawan and Syafruddin (2017); and Drake, Lusch, and Stekelberg (2019). According to Cook, Moser, and Omer (2017), tax avoidance activities are carried out by the company to minimize the amount of tax paid to the government so that it can provide after-tax cash flow to its shareholders. Investors assessing tax avoidance as an efficient and effective investment activity that increases the firm value.

Chasbiandani and Martani (2012) argued that tax laws enforcement that are less effective in Indonesia is considered to be one of the factors that causes tax avoidance to benefit the company. Tax avoidance can provide more cash resources for investors in the future so as to increase the value of the company. Investors view tax avoidance as an efficient tax planning activity and provide future benefits. Although it is a risky activity, the benefits obtained by investors from tax avoidance activities are greater than the possibility of costs or losses that must be borne by the company in the future.

Table 3. Descriptive Statistics

| Variable | O  | Mean  | Median | Maximum | Minimum | Std. Dev. |
|----------|----|-------|--------|---------|---------|-----------|
| FIRMVA   | 49 | 28.63 | 28.67  | 33.76   | 23.57   | 2.26      |
| L        | 6  | 306   | 027    | 863     | 233     | 455       |
| TAXAVO   | 49 | (0.30 | (0.27  | (0.001  | (0.97   | 0.13      |
| ID       | 6  | 343)  | 881)   | 45)     | 843)    | 422       |
| TAXRIS   | 49 | 0.347 | 0.113  | 15.25   | 0.008   | 1.27      |
| K        | 6  | 86    | 82     | 544     | 76      | 612       |
| ROA      | 49 | 0.105 | 0.078  | 0.709   | 0.001   | 0.10      |
|          | 6  | 26    | 71     | 15      | 00      | 339       |
| VOLROA   | 49 | 0.040 | 0.026  | 0.238   | 0.001   | 0.04      |
|          | 6  | 13    | 95     | 22      | 20      | 055       |
| ROA*VO   | 49 | 0.005 | 0.002  | 0.152   | 0.000   | 0.01      |
| LROA     | 6  | 44    | 11     | 30      | 01      | 265       |
| LN_SAL   | 49 | 28.64 | 28.57  | 32.95   | 21.37   | 1.82      |
| ES       | 6  | 374   | 422    | 917     | 947     | 411       |
| LEV      | 49 | 0.432 | 0.433  | 0.953   | 0.000   | 0.18      |
|          | 6  | 62    | 37     | 34      | 25      | 265       |
| FOREIG   | 49 | 0.120 | 0.005  | 0.995   | 0.000   | 0.23      |

|        |    |       |       |       |       |      |
|--------|----|-------|-------|-------|-------|------|
| N      | 6  | 45    | 77    | 83    | 00    | 072  |
| CAPEX  | 49 | 0.059 | 0.046 | 0.335 | 0.000 | 0.04 |
|        | 6  | 56    | 09    | 55    | 00    | 978  |
| GROWT  | 49 | 0.083 | 0.064 | 3.774 | (0.78 | 0.24 |
| H      | 6  | 64    | 43    | 50    | 637)  | 619  |
| ADVERT | 49 | 0.021 | 0.003 | 0.511 | 0.000 | 0.05 |
|        | 6  | 40    | 29    | 06    | 00    | 090  |
| INTANG | 49 | 0.028 | 0.000 | 0.945 | 0.000 | 0.09 |
|        | 6  | 78    | 76    | 65    | 00    | 969  |
| DEPREC | 49 | 0.034 | 0.031 | 0.169 | 0.000 | 0.02 |
|        | 6  | 32    | 06    | 20    | 17    | 162  |

### The Effect of Tax Risk on Firm Value

The statistical test result in model 2 shows that TAXRISK has a significant positive effect on FIRMVAL. The result of this study is different from research conducted by Drake, Lusch, and Stekelberg (2019). The differences in data, state conditions, and longer period of previous research are indicated to be the cause of differences in the relationship direction of TAXRISK on FIRMVAL.

Without involving tax avoidance activities, investors value tax risk positively. Even though the corporate tax risk is high, the average amount of tax payments made by the company is still above the corporate tax rate of 25%. Based on the descriptive statistics, the average corporate cash tax expenditure is at the level of 30.343%. This is indicated to be a cause of tax risk positively related to firm value. Despite the volatility of high tax payments, the amount of tax paid to the government is still above the corporate tax rate so that investors are not worried about taking the risk of being audited by the tax authority. As explained earlier, the level of tax law enforcement in Indonesia is relatively weak compared to developed countries (Chasbiandani and Martani, 2012). With tax control mechanism that is not too strict, the firm can make tax savings in one year and pay more taxes in another year to reduce the risk of being audited by the tax authority. Although the volatility of tax payments fluctuates every year, companies can receive benefits greater than the amount spent to pay taxes.

Table 4. Regression Test Results

| Variable | Pred. | Model 1 |       | Model 2 |       | Model 3 |       |
|----------|-------|---------|-------|---------|-------|---------|-------|
|          |       | Coef.   | Prob. | Coef.   | Prob. | Coef.   | Prob. |

|                         | Sign |        |     |        |     |        |     |     |     |
|-------------------------|------|--------|-----|--------|-----|--------|-----|-----|-----|
| TAXA                    | +    | 0.4    | 0.0 | *      | -   | -      | 0.7 | 0.0 | *   |
| VOID                    |      | 71     | 00  | *      |     |        | 66  | 00  | *   |
|                         |      |        | 4   | *      |     |        |     | 0   | *   |
| TAXRI                   | -    | -      | -   |        | 0.0 | 0.0    | *   | -   | 0.0 |
| SK                      |      |        |     |        | 34  | 25     | *   | 0.0 | 03  |
|                         |      |        |     |        |     | 7      |     | 40  | 8   |
| TAXA                    | -    | -      | -   |        | -   | -      |     | -   | 0.0 |
| VOID*                   |      |        |     |        |     |        |     | 0.1 | 00  |
| TAXRI                   |      |        |     |        |     |        |     | 41  | 0   |
| SK                      |      |        |     |        |     |        |     |     |     |
| ROA                     | +    | 2.0    | 0.0 | *      | 2.3 | 0.0    | *   | 1.8 | 0.0 |
|                         |      | 05     | 00  | *      | 88  | 00     | *   | 44  | 00  |
|                         |      |        | 0   | *      |     | 0      | *   |     | 0   |
| VOLR                    | -    | -      | 0.0 | *      | -   | 0.0    | *   | -   | 0.0 |
| OA                      |      | 1.0    | 00  | *      | 0.8 | 15     | *   | 1.2 | 00  |
|                         |      | 95     | 0   | *      | 03  | 0      |     | 16  | 0   |
| ROA*                    | -    | 4.3    | 0.0 | *      | 3.3 | 0.1    |     | 5.0 | 0.0 |
| VOLR                    |      | 53     | 20  | *      | 48  | 03     |     | 38  | 10  |
| OA                      |      |        | 8   |        |     | 0      |     |     | 4   |
| LN_S                    | +    | 0.3    | 0.0 | *      | 0.3 | 0.0    | *   | 0.3 | 0.0 |
| ALES                    |      | 70     | 00  | *      | 74  | 00     | *   | 84  | 00  |
|                         |      |        | 0   | *      |     | 0      | *   |     | 0   |
| LEV                     | +    | -      | 0.0 | *      | -   | 0.0    | *   | -   | 0.0 |
|                         |      | 0.7    | 00  | *      | 0.8 | 00     | *   | 0.8 | 00  |
|                         |      | 52     | 0   | *      | 13  | 0      | *   | 16  | 0   |
| FOREI                   | +    | -      | 0.0 | *      | -   | 0.0    | *   | -   | 0.0 |
| GN                      |      | 0.9    | 00  | *      | 1.1 | 00     | *   | 1.3 | 00  |
|                         |      | 69     | 0   | *      | 69  | 0      | *   | 81  | 0   |
| CAPE                    | +    | -      | 0.0 | *      | -   | 0.0    | *   | -   | 0.0 |
| X                       |      | 0.6    | 00  | *      | 0.5 | 00     | *   | 0.6 | 00  |
|                         |      | 75     | 0   | *      | 68  | 0      | *   | 90  | 0   |
| GROW                    | +    | -      | 0.0 | *      | -   | 0.0    | *   | -   | 0.0 |
| TH                      |      | 0.1    | 00  | *      | 0.1 | 00     | *   | 0.1 | 00  |
|                         |      | 55     | 0   | *      | 56  | 0      | *   | 50  | 0   |
| ADVE                    | +    | -      | 0.0 | *      | -   | 0.0    | *   | -   | 0.0 |
| RT                      |      | 0.6    | 00  | *      | 0.6 | 00     | *   | 0.5 | 00  |
|                         |      | 41     | 0   | *      | 47  | 0      | *   | 47  | 0   |
| INTA                    | -    | -      | 0.3 |        | -   | 0.4    |     | -   | 0.3 |
| NG                      |      | 0.0    | 63  |        | 0.0 | 45     |     | 0.0 | 84  |
|                         |      | 60     | 8   |        | 25  | 5      |     | 48  | 2   |
| DEPR                    | -    | -      | 0.0 | *      | -   | 0.0    | *   | -   | 0.0 |
| EC                      |      | 4.2    | 00  | *      | 4.1 | 00     | *   | 4.4 | 00  |
|                         |      | 28     | 0   | *      | 69  | 0      | *   | 20  | 0   |
| C                       |      | 18.    | 0.0 | *      | 18. | 0.0    | *   | 18. | 0.0 |
|                         |      | 63     | 00  | *      | 35  | 00     | *   | 42  | 00  |
|                         |      | 9      | 0   | *      | 8   | 0      | *   | 0   | 0   |
| Adjusted R <sup>2</sup> |      | 99.61% |     | 99.58% |     | 99.62% |     |     |     |
| Prob. (F-statistic)     |      | 0.0000 |     | 0.0000 |     | 0.0000 |     |     |     |

\*) significant at 90% confidence level  
 \*\*) significant at the 95% confidence level  
 \*\*\*) significant at 99% confidence level



The tax amnesty program implemented at the end of 2016 until the beginning of 2017 is considered to affect investors' views on tax risk. Participation in the tax amnesty program will provide guarantees for companies not to be audited for past tax obligations. Although taxpayers carry out tax non-compliance in the past, all tax risks can be minimized because past tax obligations are considered to have been completed by participating in the tax amnesty program. The issuance of PSAK 70 concerning accounting for tax amnesty assets and liabilities indicates that investors want guarantees in terms of accounting and financial reporting for participation in tax amnesty programs. The tax amnesty program is not seen as a redemption of past tax non-compliance that must be assessed negatively, but is a facility to remove tax sanctions in the past and provide certainty that corporate tax obligations have reached minimal risk. Thus, the results of this study indicate that tax risk is positively related to firm value.

### **The Moderating Effect of Tax Risk on the Relationship between Tax Avoidance and Firm Value**

The statistical test result in model 3 shows that TAXRISK moderates the positive relationship between TAXAVOID and FIRMVAL. The result is in line with the research of Drake, Lusch, and Stekelberg (2019). Meanwhile, the direction of the TAXRISK to FIRMVAL relationship reverses to negative. This shows that tax risk is negatively related to firm value in the presence of tax avoidance. This confirms the study conducted by Drake, Lusch, and Stekelberg (2019) which stated that TAXRISK is a separate component from TAXAVOID, but regression must be done simultaneously. Risk is basically the possibility of deviation from the goal, where risk is something that has not happened. Thus, tax risk cannot be separated from tax avoidance. Tax risk arises if the company carries out tax avoidance.

PSAK 46 concerning income tax regulates the recognition, measurement, presentation and disclosure of corporate income tax. The company

can arrange tax planning in such a way that the amount of current tax and deferred tax obtained through positive and negative corrections in fiscal reconciliation is beneficial for the company. However, temporary differences as stipulated in PSAK 46 are basically only a matter of time when income tax must be paid. The use of long-run cash ETR proxies can capture the phenomenon of long-term corporate tax planning. The use of this proxy can minimize the bias due to tax planning carried out by the company in the short term. In the long run, corporate tax planning is seen as an investment activity that produces benefits for investors so that it is viewed positively on the value of the company.

Investors consider tax avoidance can increase the value of the company, but the existence of tax risk will reduce investor valuation of the company. Tax risk increases the likelihood of future tax audits and allows investors to bear greater costs in the future. Tax risk can cause cash flow for investors to be uncertain in the future with the potential payment of tax sanctions. Therefore, tax risk is significantly negatively related to the value of the company in the event the company carries out tax avoidance activities.

### **CONCLUSION**

This research suggests that tax avoidance has positive effect on company value. In Indonesia, the supervision and enforcement of tax laws is still relatively weak so that the benefits obtained by investors from tax avoidance activities outweigh the risks detected by the tax authority. Then, tax risk has a positive effect on firm value. Even though the volatility of corporate tax payments fluctuates, the amount of tax paid is still at higher level than the corporate tax rate so that the possibility of companies being examined and getting tax sanctions can be minimized. The tax amnesty policy is also indicated to cause tax risk to be positively related to company value. Furthermore, tax risk moderates the positive relationship between tax avoidance and firm value. The existence of tax risk cannot be separated from tax avoidance activities.

This study has several limitations. This research does not involve companies in the financial sector and property, real estate, and construction sectors that have different tax characteristics and policies than other sectors. Future research is expected to measure the right proxies related to tax avoidance in both sectors so that samples and research results become more comprehensive. This study only covers period of 4 years (2014-2017), so further research is expected to use longer period. Thus, tax avoidance measurements use 10-year long-run cash ETR can be done. Measurement of tax risk proxies is still limited to STDCETR5 and STDGETR5 and can be developed more in future studies. The measurement of tax risk that can be used includes tax risk index as developed by Neuman, Omer, and Schmidt (2013). Furthermore, further research is needed to prove the effect of the tax amnesty program on the relationship between tax risk and firm value.

## ROBUSTNESS TEST

This study conducted robustness test using long-run GAAP ETR (GETR5) proxy to measure TAXAVOID and 5-year GAAP ETR standard deviation (STDGETR5) to measure TAXRISK as used by Drake, Lusch, and Stekelberg (2019) in additional analysis. Regression analysis show consistent results compared to previous test as shown in Appendix B. Using GETR5, tax avoidance has a positive effect on firm value. Then, the measurement of tax risk using STDGETR5 also shows a positive effect on firm value in model 2. Similarly, model 3 using STDGETR5 as moderating variable indicates that tax risk moderate positive relationship between tax avoidance and firm value.

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## APPENDIX

### AppendixA. Correlations Test

| Variabel    | 1     | 2     | 3     | 4     | 5     | 6     | 7     | 8     | 9    | 10    | 11    | 12    | 13   |
|-------------|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|-------|-------|------|
| 1. FIRMVAL  | 1.00  |       |       |       |       |       |       |       |      |       |       |       |      |
| 2. TAXAVOID | 0.11  | 1.00  |       |       |       |       |       |       |      |       |       |       |      |
| 3. TAXRISK  | -0.06 | -0.31 | 1.00  |       |       |       |       |       |      |       |       |       |      |
| 4. ROA      | 0.49  | 0.16  | -0.13 | 1.00  |       |       |       |       |      |       |       |       |      |
| 5. VOLROA   | 0.09  | 0.16  | 0.03  | 0.29  | 1.00  |       |       |       |      |       |       |       |      |
| 6. LN_SALES | 0.80  | -0.10 | -0.07 | 0.28  | -0.06 | 1.00  |       |       |      |       |       |       |      |
| 7. LEV      | -0.04 | -0.12 | -0.03 | -0.12 | -0.20 | 0.25  | 1.00  |       |      |       |       |       |      |
| 8. FOREIGN  | -0.06 | -0.07 | 0.04  | -0.06 | 0.06  | 0.03  | 0.01  | 1.00  |      |       |       |       |      |
| 9. CAPEX    | 0.20  | 0.15  | 0.02  | 0.11  | 0.11  | 0.10  | 0.12  | -0.10 | 1.00 |       |       |       |      |
| 10. GROWTH  | 0.10  | 0.14  | -0.01 | 0.02  | -0.10 | -0.06 | 0.02  | -0.06 | 0.05 | 1.00  |       |       |      |
| 11. ADVERT  | 0.06  | 0.10  | -0.07 | 0.14  | 0.02  | -0.11 | -0.12 | -0.11 | 0.08 | -0.01 | 1.00  |       |      |
| 12. INTANG  | 0.21  | -0.02 | -0.03 | -0.01 | -0.05 | 0.13  | 0.09  | -0.07 | 0.13 | 0.11  | -0.07 | 1.00  |      |
| 13. DEPREC  | 0.13  | 0.09  | -0.03 | 0.17  | 0.13  | 0.15  | 0.05  | 0.00  | 0.26 | -0.09 | 0.06  | -0.13 | 1.00 |

### Appendix B. Regression Test Results Using GAAP ETR

| Variable                | Pred. Sign | Model 1 |            | Model 2 |            | Model 3 |            |
|-------------------------|------------|---------|------------|---------|------------|---------|------------|
|                         |            | Coef.   | Prob.      | Coef.   | Prob.      | Coef.   | Prob.      |
| TAXAVOID                | +          | 0.221   | 0.0000 *** | -       | -          | 0.684   | 0.0000 *** |
| TAXRISK                 | -          | -       | -          | 0.075   | 0.0000 *** | -0.017  | 0.1517     |
| TAXAVOID*<br>TAXRISK    | -          | -       | -          | -       | -          | -0.292  | 0.0000 *** |
| ROA                     | +          | 2.289   | 0.0000 *** | 2.469   | 0.0000 *** | 2.425   | 0.0000 *** |
| VOLROA                  | -          | -0.913  | 0.0008 *** | -0.874  | 0.0120 **  | -1.159  | 0.0042 *** |
| ROA*VOLROA              | -          | 3.642   | 0.0669 *   | 3.446   | 0.1028     | 4.380   | 0.0684 *   |
| LN_SALES                | +          | 0.369   | 0.0000 *** | 0.374   | 0.0000 *** | 0.387   | 0.0000 *** |
| LEV                     | +          | -0.738  | 0.0000 *** | -0.792  | 0.0000 *** | -0.802  | 0.0000 *** |
| FOREIGN                 | +          | -0.952  | 0.0000 *** | -1.373  | 0.0000 *** | -1.523  | 0.0000 *** |
| CAPEX                   | +          | -0.654  | 0.0000 *** | -0.575  | 0.0000 *** | -0.677  | 0.0000 *** |
| GROWTH                  | +          | -0.154  | 0.0000 *** | -0.154  | 0.0000 *** | -0.146  | 0.0000 *** |
| ADVERT                  | +          | -0.676  | 0.0000 *** | -0.597  | 0.0000 *** | -0.534  | 0.0000 *** |
| INTANG                  | -          | -0.046  | 0.3999     | -0.029  | 0.4412     | -0.0343 | 0.4285     |
| DEPREC                  | -          | -3.822  | 0.0000 *** | -4.524  | 0.0000 *** | -4.043  | 0.0000 *** |
| C                       |            | 18.528  | 0.0000 *** | 18.375  | 0.0000 *** | 18.213  | 0.0000 *** |
| Adjusted R <sup>2</sup> |            |         | 99.59%     |         | 99.63%     |         | 99.63%     |
| Prob. (F-statistic)     |            |         | 0.0000     |         | 0.0000     |         | 0.0000     |

\*) significant at 90% confidence level

\*\*) significant at the 95% confidence level

\*\*\*) significant at 99% confidence level