The Effect of Tax Avoidance on Audit Costs

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ABSTRACT
This research aims to analyze the impact of tax avoidance on audit fees in Indonesian Stock Exchange (IDX) companies in 2013-2015. This research used book-tax differences and book-tax conformity as a proxy for tax avoidance. The result of book-tax differences as a proxy of tax avoidance showed a significant effect on audit fees, indicating that the bigger the negative book-tax differences, the more the audit fees. On the other hand, the result of book-tax conformity as a proxy of tax avoidance showed that there is no significant effect on audit fees. Thus, book-tax differences is preferable to book-tax conformity as a proxy for tax avoidance. This research does a difference test of the impact of large book-tax differences and small book-tax differences on the audit fees as an additional analysis. The result showed that large book-tax differences is more significant than the other. This research also does a difference test of the impact of large positive book-tax differences and large negative book-tax differences on audit fees. It indicates no significant difference between the effect of large positive book-tax differences and large negative book-tax differences on audit fees.

KEYWORDS

ARTICLE INFORMATION
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1. Introduction
Paying taxes seems like a burden for everyone, but for the government, collecting taxes is an important activity (Palil, 2016). Taxes are everywhere. Every transaction does not escape the existence of a tax or some kind of tax that must be paid and/or collected by the government through a designated company/agency (Harnanto, 2017). Furthermore, Harnanto argues that the purpose of taxation is to obtain revenue that will be used to finance the implementation of government functions and activities. In Indonesia, the Ministry of Finance (MoF), through the Directorate General of Taxes (DG of Taxes), is the authorized agency to collect tax funds from the public (Minister of Finance Regulation Number 100/PMK.01/2008 concerning Organization and Work Procedures of the Ministry of Finance).

Tax avoidance has received much attention over the past 25 years (Dyreng et al., 2008). For companies, tax is a very burdensome component. Various company activities cannot escape the imposition of taxes that contribute to reducing the profit the company earns. In fact, Michael Graetz (in Desai & Dharmapala, 2006), revealed that “done by very smart people that, absent tax considerations, would be very stupid”.

Corporate stakeholders provide incentives to managers in return for the policies taken in conducting tax avoidance (Desai & Dharmapala, 2006). Tax avoidance expected by stakeholders needs to be done sufficiently to avoid losses in the form of bad reputation and economic sanctions (Armstrong et al., 2015). Management will not report earnings excessively to avoid excess
taxes. Otherwise, management will not reduce earnings reporting for tax savings because they will be reprimanded by their shareholders (Hanlon & Heitzman, 2010). Thus, companies take various policies as necessary to benefit from tax avoidance. Last year, the world was shocked by the actions taken by Google in tax avoidance. In carrying out its actions, Google conducted transfer pricing on revenue recognition worth 10.7 Million Euros or 12 Million US Dollars to a company in Bermuda, thus successfully avoiding taxes worth 2.4 Billion US Dollars (Kahn & Drucker, 2016). In general, this is done by multinational companies (companies that operate in various countries) by utilizing the benefits of differences in tax systems between countries, which is called international tax avoidance. Even large companies such as Amazon, Apple, Bank of America, Boeing, Cadbury, Chevron, eBay, Exxon Mobil, Google, IKEA, Microsoft, News Corporation, Hewlett-Packard, and Starbucks have a bad reputation for their tax practices (Dowling, 2014).

Legal tax avoidance is tax avoidance, while illegal tax avoidance is tax evasion. Together with tax evasion, tax avoidance is included in tax noncompliance. Both have similarities, namely the desire to reduce the payment of tax costs and taxpayers get tax benefits (Paulauskas, 2006). The difference lies in the legality of the actions taken. Tax avoidance is done by utilizing loopholes or weaknesses in existing regulations. In contrast, tax evasion is done by reducing the basis for tax determination, namely hiding some taxable income items so that these actions can be said to violate regulations.

Tax avoidance that is carried out causes differences in profit based on accounting standards with profit based on tax standards. The accounting standards used in Indonesia are the Statement of Financial Accounting Standards (PSAK) and then adjusted through the fiscal reconciliation process for existing tax regulations in Indonesia. The difference in profit has an impact on the calculation of taxable income that the company must pay. This is better known as Book Tax Differences (BTD). Conversely, the conformity between earnings based on accounting standards and earnings based on tax standards is known as Book Tax Conformity (BTC) (Hanlon & Shevlin, 2005). Nevertheless, earnings differences based on the two standards have received attention and analysis in recent years (Hanlon & Shevlin, 2005). As noted, various high-profile accounting scandals such as Enron, Worldcom, Adelphia, and Qwest have overstated their financial statements, and there is a large gap between earnings based on accounting standards and earnings based on tax standards (Hanlon et al., 2005).

Book tax differences can be divided into positive book-tax differences and negative book-tax differences. Positive book-tax differences occur if there is a positive difference between profit based on accounting standards and profit based on tax standards. Conversely, if the difference between profit based on accounting standards and profit based on tax standards is negative, it is called negative book-tax difference. (Hanlon, 2005) concluded that there is a positive correlation between book-tax differences and the risk of fraud, which is indicated by the existence of a "Red Flag" for investors.

Tax avoidance also reflects the agency problem between interest holders as principals and managers as an agency (Desai & Dharmapala, 2006). As explained earlier, stakeholders are interested in maximizing profits, including reducing tax payments, while managers are interested in getting incentives for their performance. Therefore, the stakeholders incentivize managers to make efficient taxation policies (Hanlon & Heitzman, 2010). This is what forces managers to make decisions to carry out earnings management policies.

The existence of earnings management also affects the size of book-tax differences (Kuo and Lee, 2016). If book-tax differences provide information to the market on earnings management, then recording book-tax differences can reduce the credibility of corporate earnings reporting (Hanlon & Heitzman, 2010). Vice versa, the credibility of corporate earnings reporting can increase if the company stabilizes book-tax conformity, which reduces earnings management in this case (Desai, 2003; Kuo & Lee, 2016).

Whether or not the risk of earnings management in a company will affect the audit costs required to ensure the fairness of the financial statements. (Mills, 1998) states that the magnitude of book-tax differences positively correlates with the audit quality required to adjust financial reporting. Managers' Earnings management can potentially increase the audit risk element (Donohoe & Robert Knechel, 2014). Furthermore, auditors must be cautious and obtain sufficient information on their clients' tax positions to evaluate their tax accruals and tax benefits from tax avoidance. As a result, auditors must add the necessary audit quality, including additional observations, audit procedures, documentation, and consulting tax experts (Donohoe & Robert Knechel, 2014).

The increase in conformity between earnings based on accounting standards and earnings based on tax standards also simplifies tax accruals and reduces audit workload because tax accruals contain substantial information on the complexity of financial statement audits (Kuo & Lee, 2016). Furthermore, Kuo and Lee said book-tax conformity could reduce audit workload by eliminating the gap between accounting and tax standards. Reduced tax accruals can also reduce audit complexity, which can reduce audit costs incurred.
Previous research has been conducted by (Blaylock et al., 2015; Hanlon et al., 2008), which shows that there is an increasing level of book-tax conformity associated with lower earnings management by companies. Donohoe & Robert Knechel (2014) suggest in their research that the complexity of tax aggressiveness carried out by companies has an impact on the risk and complexity of the company. Furthermore, this results in auditors having to be more familiar with the company’s tax conditions and adjusting the necessary audit procedures according to the risk and complexity of the company (Hanlon and Heitzman, 2010). This is what makes (Donohoe & Robert Knechel, 2014) conclude that tax aggressiveness also affects audit costs.

In their research, (Hanlon et al., 2008) show that the existence of conformity between earnings based on accounting standards and earnings based on tax standards leads to reduced earnings management information contained in financial statements. This follows the results of research conducted by (Blaylock et al., 2015), namely that the high conformity of accounting profit based on accounting standards with tax standards has an impact on weak earnings management.

Research conducted by (Donohoe & Robert Knechel, 2014) suggests that tax aggressiveness has a positive effect on determining audit costs. Tax aggressiveness positively affects audit costs because it affects the substantial complexity of financial statement audits (Kuo & Lee, 2016). (Kuo & Lee, 2016) show that an increase in profit conformity based on accounting standards with tax standards worth 10% will reduce tax costs by an average of 2.6%. Even (Desai, 2003) said that the benefits of high conformity of earnings based on accounting standards with earnings based on tax standards reflected in book-tax conformity have not been explored. The purpose of this study is to empirically examine the effect of tax avoidance carried out by companies on audit costs.

2. Literature Review

2.1 Tax Avoidance

Palil (2016) suggest that tax payment requires a strong financial commitment in various countries, especially in developing countries. Many taxpayers tend to avoid taxes rather than pay the right amount of tax. Tax avoidance occurs due to various factors involved in it (Hanlon & Heitzman, 2010). Tax avoidance is related to the company’s policy setting in utilizing the weaknesses contained in the tax standard.

Hanlon & Heitzman (2010) define tax avoidance broadly as an explicit tax reduction. This is similar to what Dyreng, Hanlon, and Maydew (2010) said and reflects any transaction that has an impact on the company’s tax obligations explicitly (Dyreng, Hanlon, and Maydew, 2010 in (Hanlon & Heitzman, 2010)). Tax avoidance is still classified as an action that is allowed in existing regulations, whereas tax evasion is an action that violates regulations. Tax evasion itself can be defined as a policy of reducing the amount of tax payable by not reporting a number of income, activities, or other actions that are in violation of tax regulations, while tax avoidance is a company policy in reducing taxes by paying the amount of tax payable no more than it should and is still allowed or allowed by tax regulations.

The difference between accounting standards and tax standards is what makes company managers take policies in such a way as to obtain tax savings legally so that tax costs become minimal and after-tax accounting profit becomes maximum (Harnanto, 2017). Accounting standards follow the conceptual framework of Generally Accepted Accounting Principles (PABU) in providing information that is useful for stakeholders making decisions, such as investors and shareholders, while tax standards are more towards the political process, namely setting tax regulations in encouraging a country’s economy (Hanlon & Heitzman, 2010). The difference between the two standards causes differences in revenue and cost recognition, which is the main reference for companies in conducting tax avoidance (Kuo & Lee, 2016), which (Desai & Dharmapala, 2006) call the term “book-tax gap”. Furthermore, (Hanlon et al., 2008) said that there is a trade-off between financial accounting and tax.

2.1.1 Book-Tax Differences

Differences in methods, measurement procedures, recognition, and treatment of income and expenses between the two standards involved, namely accounting standards and tax standards, cause book-tax differences. Differences between the two measures can be classified into temporary and permanent differences. Temporary here means the difference in the revenue and expense recognition timing allowed by accounting standards and tax standards (Oh, Park, Hong, 2016), while permanent is more about awarding a company’s business activities based on accounting standards than tax standards. In addition, a transaction can be recognized for the benefit of tax standards if it reflects revenues and costs. In contrast, for accounting standards, revenues are recognized or recorded in the accounting period when costs have been incurred (Hanlon, 2005). Furthermore, income is generally recorded when cash is received; thus, unearned or deferred revenue is not recognized.

Various academic works of literature also investigate book-tax differences or differences in earnings based on accounting standards, with earnings based on tax standards as an indicator of earnings management that influences companies’ tax avoidance (Hanlon, 2005; Phillips et al., 2003). (Hanlon, 2005) argues that the large gap between earnings based on accounting standards and earnings based on tax standards can indicate the poor quality of earnings in the financial statements. Earnings
management is intended to beautify the financial statements. Tax standards limit the existence of earnings management compared to accounting standards. Therefore, the higher the earnings management carried out, the higher the book-tax differences that occur, and affect the size of determining tax avoidance. The use of book-tax differences is used as a measure of tax avoidance (Allen et al., 2016; Blaylock et al., 2015; Chen et al., 2013; Chyz & White, 2014; Hanlon et al., 2012; Kuo & Lee, 2016; Mills, 1998). Even (Desai, 2003) and (Desai & Dharmapala, 2006) revealed that book-tax differences are the best measurement of tax planning compared to other alternative measures that are based only on retrieving data obtained in financial statements.

2.1.2 Book-Tax Conformity

Increased conformity between accounting-standard earnings and tax-standard earnings, or Book-Tax Conformity (BTC), still has its pros and cons (Chen et al., 2013; Hanlon & Shevlin, 2005). However, the benefits of increasing book-tax conformity are still under-explored, and the evidence is still anecdotal (Kuo and Lee, 2016). Research by (Chen et al., 2013; Desai, 2003) said that an increase in book-tax conformity can increase information on financial accounting earnings by suppressing earnings management. In contrast, (Alford et al., 1993, Ali & Hwang, 2000 and Hanlon et al., 2008) explain that increasing conformity between earnings based on accounting standards and earnings based on tax standards reduces the information contained in financial statements.

2.2 Earning Management

Earnings management can be defined as an action or policy of management in managing their earnings to achieve certain interests by the company. This is similar to the definition by (Katherine, 1989) in his research, which reveals that earning management or earnings management can be associated with disclosure by management that is carried out intentionally in the external financial reporting process to obtain some private benefits. Earnings management is useful for beautifying accounting profits in financial statements, so it can provide a halo effect and mislead users of financial statements.

Earnings management is carried out by managers using accounting standards that use the accrual basis. The accrual basis must be used in accounting standards to represent the company’s business activities better. However, it does not rule out the possibility that managers use the accrual basis to carry out earnings management policies to beautify financial statements, so that this deviates from the real purpose of using the accrual basis in financial statements and does not represent the company’s actual business activities. In general, earnings management is carried out towards the end of the period.

The high incentives given to managers help align the different interests of owners and managers and encourage managers to be more aggressive in carrying out earnings management to increase firm value through tax avoidance (Desai & Dharmapala, 2006). This research was continued by (Armstrong et al., 2015), which measures corporate governance, incentives, and tax avoidance. Previously, (Dyreng et al., 2008) examined the executive effect on corporate tax avoidance.

2.3 Audit Fee

Rusmanto & Waworuntu (2015) define audit fee or audit fee as the cost incurred by the company to the public accounting firm to request an audit of the company’s financial statements. Audit fees are costs paid by the company to the auditor for the audit services provided, the amount of which is influenced by various factors, such as complexity, company characteristics, audit period, premium risk, audit committee size, public accounting firm characteristics (C. Ben Ali & Lesage, 2014; Kang, 2012; Nugrahani & Sabeni, 2013).

Nugrahani & Sabeni (2013) reveal that audit committee size has a negative effect on audit costs. The larger the size of the audit committee, the better the financial statements are expected to be made so that the external auditor’s efforts can be minimized and audit costs will be lower. (Abbott et al., 2003) reveal that influential audit committees tend to have big six KAPs with more expensive rates. (Elifissen et al., 2001) state that some clients may require external auditors to put more effort into the audit process, impacting high costs. (C. Ben Ali & Lesage, 2014) Stated that the greater the complexity of the audit, the greater the fees that must be paid. (Goodwin-Stewart & Kent, 2006) suggest that the existence of an audit committee, the size of the audit committee characteristics and internal audit influence audit costs.

In the process of determining audit costs, there is information asymmetry between the company (auditee) as the party that pays the audit fee and requests the implementation of the audit and KAP (auditor) as the party that carries out the audit request by the company. Information asymmetry in determining audit costs occurs because only auditors can say how much effort is needed to audit following professional standards in the company (Causholli & Knechel, 2012).

Research related to audit costs has been conducted by (Hanlon et al., 2012), who interpret evidence of high audit costs for companies with large book-tax differences (large BTDs) as evidence for auditors in linking large book-tax differences with increased risk of earnings management. Bell, Landsman, Shackelford (2001), Seetharaman Gul, and Lynn (2002), and Gul, Chen, and Tsui (2003) (Hanlon, 2005) suggest that there is a relationship between weak earnings quality or the risk of earnings management with
high audit risk, and, then high audit fees. In carrying out his responsibilities, an auditor must assess the risk of earnings management for two reasons: it can increase the risk of misstatements or restatements and inherent risk (Krishnan & Visvanathan, 2007). Thus, audit fees are also higher as compensation for the more significant effort and high risk of loss expected from litigation risk and/or loss of reputation (Hanlon, 2005).

3. Methodology
This study seeks to see the effect of tax avoidance on audit costs. In this case, tax avoidance consists of book-tax differences and book-tax conformity. The framework of the thinking model in the study is explained through the following figure.

![Figure 1. Conceptual Framework](image)
Source: Author’s processed results

The population in this study is the financial statements of companies listed on the Indonesia Stock Exchange (BEI) in 2013-2015. Sample selection was based on the purposive sampling method based on certain criteria, resulting in a sample of 164 companies in the 2013-2015 time span. This study produced 492 samples in total. The type of data used in this research is secondary data. The data analysis method in this study is divided into three major parts: descriptive statistical analysis, heteroscedasticity analysis, Pearson correlation analysis, and panel data method.

4. Results and Discussion
4.1 Descriptive Statistical
Descriptive statistical analysis is needed to assess the characteristics and fairness of the data used in this study and explain the distribution of the variable data by looking at the mean, median, minimum, maximum, and standard deviation values of each variable. The results of the data tabulation of each variable in this study are presented in Table 1 as follows.

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Mean</th>
<th>Median</th>
<th>Std Dev</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUDFEE</td>
<td>492</td>
<td>1,488 Billion</td>
<td>743.5 Million</td>
<td>3,189 Billion</td>
<td>35 Million</td>
<td>39,943 Billion</td>
</tr>
<tr>
<td>LNAUDFEE</td>
<td>492</td>
<td>20.369</td>
<td>20,427</td>
<td>1,179</td>
<td>17,371</td>
<td>24,046</td>
</tr>
<tr>
<td>BTD</td>
<td>492</td>
<td>(133,071 Million)</td>
<td>(8,165 Million)</td>
<td>871 Million</td>
<td>(5,439 Billion)</td>
<td>4,123 Billion</td>
</tr>
<tr>
<td>BTC</td>
<td>492</td>
<td>0.10</td>
<td>0.000</td>
<td>0.304</td>
<td>0.000</td>
<td>1,000</td>
</tr>
<tr>
<td>TA</td>
<td>492</td>
<td>10.077 Billion</td>
<td>3.620 Billion</td>
<td>18.025 Billion</td>
<td>46,8 Billion</td>
<td>166.173 Billion</td>
</tr>
<tr>
<td>LNTA</td>
<td>492</td>
<td>21.996</td>
<td>22,010</td>
<td>1,546</td>
<td>17,661</td>
<td>25,836</td>
</tr>
<tr>
<td>INVREC</td>
<td>492</td>
<td>1.445 Billion</td>
<td>639.404 Billion</td>
<td>1.843 Billion</td>
<td>867,967 Million</td>
<td>8.045 Billion</td>
</tr>
<tr>
<td>DLOSS</td>
<td>492</td>
<td>0.215</td>
<td>0,000</td>
<td>0,411</td>
<td>0,000</td>
<td>1,000</td>
</tr>
<tr>
<td>ROA</td>
<td>492</td>
<td>0.042</td>
<td>0,039</td>
<td>0,076</td>
<td>(0,190)</td>
<td>0,324</td>
</tr>
<tr>
<td>LEV</td>
<td>492</td>
<td>0.270</td>
<td>0,245</td>
<td>0,192</td>
<td>0,000</td>
<td>1,000</td>
</tr>
<tr>
<td>ACC</td>
<td>492</td>
<td>(0.026)</td>
<td>(0.022)</td>
<td>0,090</td>
<td>(0,327)</td>
<td>0,286</td>
</tr>
<tr>
<td>DBIGN</td>
<td>492</td>
<td>0.472</td>
<td>0,000</td>
<td>0,500</td>
<td>0,000</td>
<td>1,000</td>
</tr>
<tr>
<td>AUDCOM</td>
<td>492</td>
<td>0.750</td>
<td>0,8</td>
<td>0,154</td>
<td>0,3</td>
<td>1</td>
</tr>
</tbody>
</table>
The descriptive statistical results above are the results after removing data containing outliers. In this study, outlier data is data that is outside the range of Mean values plus/minus three times the standard deviation (3*SD and mean-3*SD). Outlier data is excluded to prevent biased results in this study's model testing and conclusion drawing.

The results shown in Table 1 illustrate that the LNAUDFEE variable has an average value of 20.369. This value results from the natural logarithm of the company's audit fee. On average, the audit fee paid is IDR 1,488,000,000. The audit fees paid also vary greatly from IDR 35,000,000 to IDR 39,943,000,000. This shows that determining audit fees depends on the company's condition being audited (auditee).

The value of the Book-Tax Differences (BTD) variable is in the range of (IDR 5,439,000,000) to IDR 4,123,000,000. The existence of a negative value of the book-tax differences variable indicates that the value of profit according to tax standards is greater than profit according to accounting standards, while the positive value of the book-tax differences variable indicates that the value of profit according to accounting standards is greater than profit according to tax standards. On average, the value of the book-tax differences variable is negative, namely (Rp133,071,000). The average value of negative book-tax differences indicates that the company makes tax avoidance efforts.

The average value of the Book-Tax Conformity (BTC) variable is 0.10. This explains that the book-tax conformity variable is obtained from the highest 10% percentile of the book-tax conformity value. The 90% percentile after that is categorized as a company that does not apply book-tax conformity in making its financial reporting. The minimum and maximum values of book-tax conformity itself are in the range of 0 to 1. The company gets a value of 1 if it is in the highest 10% percentile range and 0 if it is in the field of 90% after that.

Descriptive statistics for the Total Asset (TA) variable are displayed as the natural logarithm of total assets with an average value of 21.996 or IDR 10,077,000,000. The range of variation in this variable is quite large, which is reflected in the difference between the minimum value of Rp46,800,000,000 and the maximum value of Rp166,173,000,000. This shows the diverse scale of the total assets of companies listed on the IDX.

The dummy LOSS variable is obtained by looking at the company's net income, whether it is experiencing a profit or loss. If the company is experiencing a loss (loss), it gets a value of 1, and 0 if it is earning a profit, so the minimum and maximum values on these variables range from 0 to 1. On average, the dummy loss variable is 0.215, indicating that most companies were experiencing profits during the sampling time.

The LEV variable shows the ratio between the value of total debt and the total assets of the company. On average, the LEV value is 0.270 or in other words, the composition of corporate funding on the IDX is still dominated by capital compared to debt. The maximum LEV value of 1 indicates that some companies experience capital deficiencies.

The ACC (Accrual) variable reflects the difference between net income and net cash flow from operating activities to total assets. The average accrual value is (0.026). The negative value here indicates more net cash from conducting activities than the company's net income. The minimum value of the variable ranges from (0.327) to 0.286.

The following variable is BIGN, namely the size of the Public Accounting Firm, which is worth one if included in the four largest public accounting firms in Indonesia (Big4) and 0 if others. The average value of the BIGN value is 0.472, indicating a balance between the use of the services of the four largest public accounting firms in Indonesia and other general accounting firms. Because the BIGN variable is a dummy variable, the minimum and maximum values of the variable are 0 to 1.

The last variable is AUDCOM (Audit Committee). The AUDCOM variable shows the number of scores received by the company based on the assessment of the ASEAN CG Scorecard. In the audit committee variable, companies listed on the IDX from 2013 to 2015 have an average score of 7.5 out of 10. This value is relatively high because some assessment items are mandatory in Indonesia. The minimum and maximum values of these variables range from 0.3 to 1, indicating a gap in quality audit committees in companies listed on the Indonesia Stock Exchange.

4.2 Econometric Test

As explained earlier, econometric tests are needed to overcome the main problems that often arise and violate basic assumptions, namely normality, Multicollinearity, Heteroscedasticity, and autocorrelation. The test is conducted with a fixed effect model. The following is an explanation of the classical assumption test results.
4.2.1 Normality
The sample used in this study is free of outliers to obtain a normally distributed sample. Outlier samples are samples outside the average value mined by three times the standard deviation value (Mean + 3 Standard Deviation and Mean - 3 Standard Deviation). In this study, all outlier data have been treated by winsorizing.

4.2.2 Multicollinearity
Multicollinearity testing is done to see if there is a strong relationship between independent variables. To detect Multicollinearity in this study by looking at the tolerance statistic value in Stata 12.0. If the VIF value is less than ten, then the model does not experience multicollinearity problems. A good model should not experience Multicollinearity.

In multiple regression models, Multicollinearity often appears in interaction variables (interaction terms). The interaction variable is the arithmetic multiplication of two or more independent variables, resulting in a high correlation with one or more of the original variables. Multicollinearity exists between the total assets and audit committee variables, so the centering method is carried out to eliminate the problem. After centering, there is no violation of the multicollinearity assumption.

4.2.3 Heteroscedasticity
Heteroscedasticity testing is carried out to see if there is an inequality of variance from the residuals of one observation to another in a model. To detect Heteroscedasticity in this study by looking at the tolerance statistic value in Stata 12.0. Heteroscedasticity testing is done using the modified Wald test for groupwise Heteroscedasticity.

In this study, H0 is accepted because the probability value \( < \alpha = 5\% \), so there is a heteroscedasticity problem. Therefore, various ways are needed to perform the treatment to produce an unbiased test, one of which is using the generalized least squared method. If the generalized least squared generation method is used, it is assumed that there is no heteroscedasticity problem. Generalized Least Squared (GLS) is a form of least square regression that is a form of estimation made to overcome the problem of Heteroscedasticity that can maintain the efficiency properties of the estimator. This study has a problem of Heteroscedasticity, which impacts biased research results. The use of generalized least squared can overcome the problem of Heteroscedasticity without losing its unbiased and consistent properties so that the model can be used as a reference in hypothesis testing.

4.2.4 Pearson Correlation Analysis
Another test that can also be used to test for correlation between variables is the Pearson correlation test. This study uses Pearson correlation to see the correlation in the logit and multinomial logit models. The range of values in this analysis ranges from 0 to 1. The relationship between variables is very strong if the coefficient of the relationship between variables is greater than 0.8.

If a variable has a very strong relationship with other variables (>0.80), it will cause biased results in testing and drawing conclusions from the model. From the Pearson correlation test results, it was found that none of the variables had a very strong relationship (>0.80). The results of Pearson correlation testing can be seen in Table 2 as follows.

<table>
<thead>
<tr>
<th>Variable</th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
<th>(6)</th>
<th>(7)</th>
<th>(8)</th>
<th>(9)</th>
<th>(10)</th>
<th>(11)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LNAUDFEE</td>
<td>1,000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BIGN</td>
<td>0,551*</td>
<td>1,000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AUDCOM</td>
<td>0,425*</td>
<td>0,309*</td>
<td>1,000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LNTA</td>
<td>0,740*</td>
<td>0,368*</td>
<td>0,364*</td>
<td>1,000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>INVREC</td>
<td>0,513*</td>
<td>0,257*</td>
<td>0,221*</td>
<td>0,690*</td>
<td>1,000</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>LOSS</td>
<td>0,013</td>
<td>-0,030</td>
<td>0,026</td>
<td>0,059</td>
<td>-0,081</td>
<td>1,000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ROA</td>
<td>0,117*</td>
<td>0,200*</td>
<td>-0,022</td>
<td>0,035</td>
<td>0,109*</td>
<td>-0,659*</td>
<td>1,000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LEV</td>
<td>0,104*</td>
<td>-0,004</td>
<td>0,048</td>
<td>0,152*</td>
<td>-0,008</td>
<td>0,363*</td>
<td>-0,435*</td>
<td>1,000</td>
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<tr>
<td></td>
<td>0,035</td>
<td>0,930</td>
<td>0,331</td>
<td>0,002</td>
<td>0,860</td>
<td>0,000</td>
<td>0,000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Variable</td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
<td>(6)</td>
<td>(7)</td>
<td>(8)</td>
<td>(9)</td>
<td>(10)</td>
<td>(11)</td>
</tr>
<tr>
<td>----------</td>
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<td>-------</td>
<td>-------</td>
<td>-------</td>
<td>-------</td>
<td>-------</td>
</tr>
<tr>
<td>BTD</td>
<td>-0.162*</td>
<td>0.011</td>
<td>-0.041</td>
<td>-0.187*</td>
<td>-0.104*</td>
<td>-0.320*</td>
<td>0.407*</td>
<td>-0.248*</td>
<td>1.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.001</td>
<td>0.815</td>
<td>0.400</td>
<td>0.000</td>
<td>0.035</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ACC</td>
<td>-0.120*</td>
<td>-0.110*</td>
<td>-0.126*</td>
<td>-0.114*</td>
<td>0.012</td>
<td>-0.408*</td>
<td>0.458*</td>
<td>-0.210*</td>
<td>0.379*</td>
<td>1.000</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.014</td>
<td>0.025</td>
<td>0.010</td>
<td>0.020</td>
<td>0.801</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BTC</td>
<td>-0.315*</td>
<td>-0.158*</td>
<td>-0.198*</td>
<td>-0.412*</td>
<td>-0.207*</td>
<td>-0.098*</td>
<td>0.011</td>
<td>-0.015</td>
<td>0.051</td>
<td>-0.001</td>
<td>1.000</td>
</tr>
<tr>
<td></td>
<td>0.000</td>
<td>0.001</td>
<td>0.000</td>
<td>0.000</td>
<td>0.0460</td>
<td>0.811</td>
<td>0.755</td>
<td>0.298</td>
<td>0.970</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Description: AUDFEE = Audit Fee; BTC = Book-Tax Conformity; BTD = Book-Tax Differences; BIGN = KAP size, 1 if Big 4, 0 if other; AUDCOM = Audit committee; LNTA = Natural logarithm of total assets; ROA = Percentage of net income to total assets; INVREC = Percentage of total receivables and total inventory to total assets; LOSS = Company loss, 1 if loss, 0 if other; LEV = Percentage of total debt to total assets; ACC = Difference between net income and net cash flow from operating to total assets.

**Signifikansi pada α = 1%**

*Signifikansi pada α = 10%

### 4.3 Selection of Estimation Method

In selecting the estimation method, three approaches are used: Pooled Least Square, Random Effect, and Fixed Effect. To provide the right results, researchers use econometric testing in this study so that the tests used are the Chow test, LM test, and Hausman test. Table 3 illustrates that the model used the fixed effect model estimation method in its test.

<table>
<thead>
<tr>
<th>Test</th>
<th>Probabilities</th>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chow test</td>
<td>0.000</td>
<td>RE</td>
</tr>
<tr>
<td>LM test</td>
<td>0.000</td>
<td>RE</td>
</tr>
<tr>
<td>Hausman test</td>
<td>0.092</td>
<td>FE</td>
</tr>
</tbody>
</table>

### 4.4 Hypothesis Testing

Before conducting hypothesis testing, researchers have removed outlier data and sought no violation of classical assumptions, so the expected data is BLUE. The model used in the hypothesis testing method is Generalized Least Squares (GLS). The research model in Table 4 is used to see the effect of tax avoidance on audit costs.

**H1:** There is a significant influence between tax avoidance on audit costs

#### Table 4 Model Test

**AUDFEE = α₀ + α₁BTC + α₂BTD + α₃BIGN + α₄AUDCOM + α₅LNTA + α₆ROA + α₇INVREC + α₈LOSS + α₉LEV + α₁₀ACC + Fixed Effects + e**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Predict</th>
<th>Coef.</th>
<th>Prob</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cons</td>
<td>10,647</td>
<td>0.000</td>
<td>***</td>
<td></td>
</tr>
<tr>
<td>BTC</td>
<td>-</td>
<td>-0.044</td>
<td>0.722</td>
<td></td>
</tr>
<tr>
<td>BTD</td>
<td>+</td>
<td>-0.001</td>
<td>0.016</td>
<td>**</td>
</tr>
<tr>
<td>BIGN</td>
<td>+</td>
<td>0.668</td>
<td>0.000</td>
<td>***</td>
</tr>
<tr>
<td>AUDCOM</td>
<td>+/-</td>
<td>0.972</td>
<td>0.000</td>
<td>***</td>
</tr>
<tr>
<td>LNTA</td>
<td>+</td>
<td>0.420</td>
<td>0.000</td>
<td>***</td>
</tr>
<tr>
<td>ROA</td>
<td>+</td>
<td>1.608</td>
<td>0.021</td>
<td>**</td>
</tr>
<tr>
<td>INVREC</td>
<td>+</td>
<td>0.649</td>
<td>0.806</td>
<td></td>
</tr>
<tr>
<td>LOSS</td>
<td>+</td>
<td>0.026</td>
<td>0.818</td>
<td></td>
</tr>
<tr>
<td>LEV</td>
<td>+</td>
<td>0.205</td>
<td>0.316</td>
<td></td>
</tr>
<tr>
<td>ACC</td>
<td>+</td>
<td>-0.209</td>
<td>0.646</td>
<td></td>
</tr>
</tbody>
</table>

*** Significance at α = 0.01 (1-tailed)

** Significance at α = 0.05 (1-tailed)
Based on the hypothesis testing carried out as described in Table 4, it can be concluded that there is a significant influence between tax avoidance on audit costs. Based on the model previously described, tax avoidance is measured using book-tax differences and book-tax conformity. The test results of the model above show that book-tax differences significantly affect audit fees. Another interpretation is that the negative value contained in the test results of book-tax differences is negative book-tax differences, so the greater the negative book-tax differences will increase audit costs. The other proxy, book-tax conformity, does not significantly impact audit fees. This also reflects that the measurement of tax avoidance using the size of book-tax differences is better than book-tax conformity on audit costs. Thus, partially, the hypothesis is accepted.

4.5 Difference Test
After testing the hypothesis, additional analysis is carried out, namely in the form of a difference test to see the difference in the effect between Large Book-Tax Differences (LBTD) and small book-tax differences (SBTD) on audit costs and the difference in the effect of Large Positive Book-Tax Differences (LPBTD) and Large Negative Book-Tax Differences (LNBTD) on audit costs. The Difference Test uses Stata software version 12.

4.5.1 Large Book-Tax Differences and Small Book-Tax Differences
The following are the t-test results of the difference between Large Book-Tax Differences (LBTD) and Small Book-Tax Differences (SBTD) data on audit fees displayed in Table 5.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Std Deviation</th>
<th>Std Error</th>
<th>T</th>
</tr>
</thead>
<tbody>
<tr>
<td>LBTD</td>
<td>3,338,758,498</td>
<td>5,631,166,498</td>
<td>614,000,000</td>
<td>6,234</td>
</tr>
<tr>
<td>SBTD</td>
<td>1,010,834,971</td>
<td>1,888,624,792</td>
<td>105,000,000</td>
<td></td>
</tr>
</tbody>
</table>

Interpretation
Sig = 0.000 < α = 0.01, H₀ rejected, H₁ accepted
Conclusion : H₁ accepted. There is a significant difference between the effect of Large Book-Tax Differences (LBTD) and small book-tax differences (SBTD) on audit fees.

Based on the difference test results, as shown in Table 5 above, it is known that large book-tax differences are more influential than small-book tax differences in influencing the determination of audit fees. Researchers argue that companies that are included in the group of companies that set large book-tax differences in their financial reporting are very at risk of earnings management, and vice versa. The risk of earnings management in an effort to avoid taxes increases the audit’s complexity and risk, which impacts the audit costs of a company.

4.5.2 Large Positive Book-Tax Differences and Large Negative Book-Tax Differences
The following are the t-test results of the difference between Large Positive Book-Tax Differences (LPBTD) and Large Negative Book-Tax Differences (LNBTD) data on audit costs shown in Table 6.
While using the OSIRIS software, there is no audit fee for the company concerned. There is a significant difference between Large Positive Book-Tax Differences (LPBTD) and Large Negative Book-Tax Differences (LNBTD) data on audit fees. Researchers argue that the independent test of the effect between Large Positive Book-Tax Differences and Large Negative Book-Tax Differences on audit fees still has shortcomings, namely the limited sample used in conducting the independent test. Therefore, the difference test results between Large Positive Book-Tax Differences and Large Negative Book-Tax Differences on audit fees still have weaknesses.

5. Conclusion

Based on the results of research and discussion, it can be concluded that the proxy book-tax differences on audit costs show that there is a significant relationship in determining audit costs, where the greater the negative book-tax differences, namely the greater the profit based on tax standards against profit based on accounting standards will significantly increase audit costs. The results of testing the proxy book-tax conformity on audit fees do not show a significant relationship to audit fees. So, in this study, book-tax differences are superior as a proxy for tax avoidance compared to book-tax conformity on audit fees.

In this study, additional analysis, namely the difference test, is also carried out to determine the effect of large book-tax differences with small book-tax differences on audit costs. The test results show that large book-tax differences have more effect on audit fees. Researchers argue that companies included in the group that set large book-tax differences in their financial reporting are at risk of earnings management, which impacts increasing audit risk. Increased audit risk will have an impact on increasing audit costs.

After getting the results of the test of the difference in the effect of large book-tax differences with small book-tax differences on audit costs, the researcher then continued to test the difference in the effect between large positive book-tax differences and large negative book-tax differences on audit costs with the result that there was no significant difference between the data of large positive book-tax differences and large negative book-tax differences on audit costs. Due to the lack of samples and total observations to see the difference in the effect between significant positive book-tax differences and large negative book-tax differences on audit fees, the test results cannot be appropriately generalized.

5.1 Limitation

This research cannot be separated from various research limitations that contribute to the research results. The research sample is very limited due to the lack of data needed for conducting research. One of them is audit fee data, which in this study only relies on the annual report issued by the company. While using the OSIRIS software, there is no audit fee for the company concerned. In addition, some financial statement data is also incomplete, reducing the number of samples that can be taken so that the number of samples is only around 31.2% of the total companies listed on the Indonesia Stock Exchange.

5.2 Suggestion

As in this study, research on tax avoidance is still very limited in Indonesia, especially on tax avoidance on audit costs. Therefore, to complement this research, tax avoidance research should use a variety of available proxies and control variables over audit costs so that the various studies that have been conducted can be confirmed and compared between one study and another. In addition, it can also expand the research observation time so that the total sample obtained can be more appropriate for generalization.

<table>
<thead>
<tr>
<th>Table 6 LPBTD and LNBTD</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>H₀</strong> = no significant difference exists between Large Positive Book-Tax Differences (LPBTD) and Large Negative Book-Tax Differences (LNBTD) data on audit fees.</td>
</tr>
<tr>
<td><strong>H₁</strong> = There is a significant difference between Large Positive Book-Tax Differences (LPBTD) and Large Negative Book-Tax Differences (LNBTD) data on audit fees.</td>
</tr>
<tr>
<td>Variable</td>
</tr>
<tr>
<td>-----------</td>
</tr>
<tr>
<td>LPBTD</td>
</tr>
<tr>
<td>LNBTD</td>
</tr>
</tbody>
</table>

Interpretation

**Sig** = 0.164 < **α** = 0.01, **H₀** accepted, **H₁** rejected

Conclusion:

**H₀** accepted, there is no significant difference between Large Positive Book-Tax Differences (LPBTD) and Large Negative Book-Tax Differences (LNBTD) data on audit fees.

*** Significance at **α** = 0.01 (1-tailed)

** Significance at **α** = 0.05 (1-tailed)

* Significance at **α** = 0.10 (1-tailed)
The Effect of Tax Avoidance on Audit Costs

Furthermore, future research should add corporate governance as a moderating variable between the effect of tax avoidance on audit costs.

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References