DOES DISCLOSURE METHOD OF DEFERRED TAX MATTER FOR INVESTORS IN STOCK VALUATION BASED ON EARNINGS?

Arum Kusumaningdyah Adiati*  
*Universitas Sebelas Maret

Rahmawati  
*Universitas Sebelas Maret

Bandi  
*Universitas Sebelas Maret

ABSTRACT

In the Statement of Financial Accounting Standards No. 46 (PSAK 46), a deferred tax should be disclosed in the notes to financial statements. In following the PSAK, some companies do not only disclose deferred taxes in the notes to financial statements but also provide them voluntarily in the income statement. This study aims to test whether the voluntary presentation of deferred taxes in the income statement is more useful to investors. Using a sample of 1,229 firm-year observations in the non-financial sector for 2008-2013, the results of this study indicate that deferred taxes negatively affect the value relevance of earnings when deferred tax is reported in the income statement and is disclosed in the notes to the financial statements (N = 852) but deferred tax does not affect the value relevance of earnings when the deferred tax is only disclosed in the notes to the financial statements (N = 377). These results indicate that information on deferred taxes that is only disclosed in the notes to the financial statements tend to lead to mispricing. Thus, the findings of this study indicate that the capital market in Indonesia has not been fully efficient in semi-strong form. The implication of these findings is that the deferred tax should not only be disclosed in the notes to the financial statements but also must be presented in the income statement so that the information about the deferred tax is more useful for the investor.

Keywords: Deferred tax; PSAK 46; Disclosure; Value relevance; Earnings.

1. INTRODUCTION

Investors need relevant information in process of the stock valuation analysis for stock investment decision making. Earnings information is important information for investors in the stock valuation analysis process and so is the quality of that information. Many previous studies such as Nichols and Wahlen (2004), Cahan et al. (2009), Moneva and Cuellar (2009), Balachandran and Mohanram (2011) used various proxies for earnings quality or tested factors that impacted the quality of earnings information. Tax-related information as an indicator of earnings quality has also been a concern in previous studies such as the Hanlon (2005) and Blaylock et al. (2012). This study further

*Corresponding author: Faculty of Economics and Business, Universitas Sebelas Maret, Jl. Ir. Sutami 36A, Surakarta 57126, Indonesia. Email: adiati_rk@yahoo.com
investigates the previous studies by examining the impact of deferred tax and deferred tax disclosure methods on the value relevance of earnings. A relatively large deferred tax can have a negative impact on the quality of earnings information, and vice versa. In the Statement of Financial Accounting Standard 46 (PSAK 46), deferred tax should be disclosed in the notes to financial statements. Based on the decision usefulness approach to financial reporting, relevant information remains useful to investors as long as the information is disclosed regardless of the method of disclosure. This approach is based on the assumption that the market is efficient in semi-strong form, that is the market responds to all published information. Nevertheless, some previous studies such as Sloan (1996) and Hanlon (2005) provide findings that indicate that not all information has been 'captured' by investors. This study looks at the phenomenon of deferred tax disclosure. Following PSAK 46, some companies not only disclose deferred taxes on notes to the financial statements but also voluntarily provide them in the income statement. The presentation of deferred taxes in the income statement is relatively easier to be "captured" by users of financial statements (investors) and relatively easier to understand the impact on net income (loss), while the deferred tax presentation in the notes to the financial statements is not immediately 'readable' by investors. Therefore, this study aims to examine: (1) whether the deferred tax has a negative impact on the value relevance of earnings, and (2) whether the deferred tax disclosure method impacts the value relevance of the earnings.

2. LITERATURE REVIEW AND HYPOTHESES

2.1. Deferred Tax and the Value Relevance of Earnings

The value relevance of earnings indicates that the earnings information is relevant in determining the value of the stock. The earnings information that is part of the accounting information is intended to be useful for investors in making investment decisions. This is based on the conceptual framework (FASB, 2010; IAI, 2016) which use the decision usefulness approach to financial reporting (Scott, 2015), i.e. that financial reporting aims to inform users, especially investors and creditors in investment decision-making. Stock prices reflect the results of investment decisions based on the results of the valuation of the relevant stocks before investing.

Previous studies of the usefulness of accounting information suggest that the value relevance of accounting information can be influenced by contextual variables, such as firm size, dividend, and return on equity (Rees, 1999), mergers (Cal and Jones, 2004), corporate life cycle (Jenkins et al., 2004; Habib, 2010), companies earning profit versus loss (Papadaki and Siougle, 2007; Takacs, 2012), employee stock bonus (ESB) (Lin and Wang, 2008) (Kumar and Krishnan, 2008), adoption of IFRS (Chalmers et al., 2011; Kargin, 2013; Khanagha, 2011; Lestari and Takada, 2014; Maharani and Siregar, 2014), companies experiencing audit failure (Dang et al., 2011), comparison of earnings relevance to sales and cash flows (El-SayedEbaid, 2011), social reporting (Cardamone et al., 2012), earnings versus value book (Shamki and Rahman, 2012), Return On Net Worth (RONW) and various other financial ratios (Sharma et al., 2012), voluntary disclosures (Karami and Hajiazimi, 2013), foreign ownership and trading volumes (Shamki, 2013). Several previous studies examined quality indicators such as good news versus bad news (Ball and Brown, 1968), earnings persistence (Nichols and Wahlen, 2004), investor protection (high versus low) and information environment (relatively open versus less open) (Cahan et al., 2009), disclosure of the financial and nonfinancial environments and compulsory and voluntary (Moneva and Cuellar,
conservatism (Balachandran and Mohanram, 2011), and sustainability reporting awards (Sutopo et al. 2018).

Previous studies examined deferred tax-related information, such as the study of differences in book-tax differences and deferred taxes with different focuses, such as the relevance of net deferred tax liability based on SFAS 109 on Accounting for Income Taxes (Ayers 1998), the influence of tax and non-tax costs on book-tax reporting differences (Mills and Newberry, 2001), the impact of large book-tax differences on earnings persistence and the relevance of earnings value, the comparison of tax-accounting earnings differences in public companies trading its shares in the stock exchange) on a non-public company (a company that does not trade its shares in the stock exchange) as well as the characteristics of companies that have large tax-accounting differences (Moneva and Cuellar, 2009), fair disclosure linkages with the quantity of information available for community (in addition to information on tax-accounting income differences) (Balachandran and Mohanram, 2011), the ratio of profit by accounting and profit by tax to predict earnings growth (Lim and Park, 2011), for firms with high effective tax rates, changes in tax costs have higher value relevance in countries that have conformity (Yoon, 2008), taxable income with higher value relevance compared with financial accounting income (Rohaya et al., 2009), the ability of book-tax differences (BTD) to predict the declining returns for firms with an information environment (Weber, 2009), the effect of changes in tax-accounting earnings differences on credit rating (Ayers et al., 2010), the relationship between accounting profit differences with book-tax differences (BTD) and market uncertainty about information submitted in the financial statements proxied by (1) stock turnover, (2) analysts for forecasting dispersion, and (3) stock return variances (Comprix et al., 2011), the association of book-tax differences with tax avoidance and earnings persistence (Blaylock et al., 2012).

The present study examines the impact of the deferred tax on the relevance of earnings values. The relevance of the value of earnings is indicated by the positive effect of current earnings on stock returns. Deferred tax is predicted to weaken the effect of earnings on stock returns since deferred taxes contain accruals that affect earnings quality. Deferred tax expense can also be as the basis for determining earnings management (Phillips et al., 2003). The hypothesis of the relationship between deferred tax and profit value relevance is formulated as follows.

The value relevance of earnings is indicated by the positive effect of current earnings on stock returns. Deferred tax is predicted to weaken the effect of earnings on stock returns. Thus, the hypothesis can be formulated as follows.

**H1**: Deferred tax negatively affects the value relevance of earnings.

### 2.2. Value Relevance of Earnings - The Impact of Deferred Tax Disclosure Methods

Statement of Financial Accounting Standards No. 46 (PSAK 46) requires companies to disclose deferred tax information in the notes to the financial statements. However, there are companies that provide information on the deferred tax in the income statement in addition to disclosing it in the notes to the financial statements. From the perspective of signaling theory, the willingness of the manager to present the deferred tax information in the income statement is as an effort to convey the signal on the quality of information that can increase the usefulness of accounting information. Signaling theory developed by Spence (1973) in the context of job market signaling, namely that the level of education of job applicants is a signal of the applicant's competence. Applicant's
education level as a job applicant's competence signal, since high-type applicants are easier to achieve higher levels of education than low-type applicants. Signaling theory has been developed in the field of finance or accounting, such as dividend signaling theory, i.e. dividend as a signal of profitability or firm value (e.g., Miller and Rock, 1985; Ashley and Yang, 2004; He et al., 2011; Karasek III and Bryant, 2012; Mi Choi et al., 2012).

This study uses signaling theory in the formulation of hypothesis 2a (H2a) and hypothesis 2b (H2b). The deferred tax presentation in the income statement indicates the manager's willingness to convey relevant information to the investor so as not to mislead and be useful in predicting future performance, stock valuation, and investment decision making. The deferred tax information presented in the income statement is more easily "captured" by investors than the deferred tax information disclosed in the notes to the financial statements. Therefore, the deferred tax presented in the income statement is predicted to have a negative impact on the relevance of the profit value, while disclosed in the notes to the financial statements is predicted to have no effect on the effect of earnings on stock returns. Hypotheses about the deferred tax disclosure methods with the value relevance of earnings are formulated as follows:

H2a: The deferred tax presented in the income statement negatively affects the value relevance of earnings.
H2b: Deferred taxes disclosed in the notes to the financial statements do not affect the value relevance of earnings.

3. RESEARCH METHODS

3.1. Regression Model and Variable Measurement

The statistical model to test the hypothesis of value relevance of earnings is the regression equation without the control variable (Model 1) and the regression equation with the control variable (Model 2). To test hypothesis 1, Models (1) and Model (2) were applied to a full sample that included both firm-year observations that presented deferred taxes in the income statement as well as firm-year observations that disclosed deferred taxes in notes to the financial statements. To test hypothesis 2a, Models (1) and Model (2) were applied to samples that included firm-year observations that presented the deferred taxes in the income statement, while for testing hypothesis 2b, Models (1) and Model (2) were applied to the sample which includes a firm-year observation that disclosed deferred tax in the notes to the financial statements. Models (1) and Model (2) are as follows:

\[
\text{Returns } t_0 = \alpha + \beta_1 \text{Earnings } t_0 + \beta_2 \text{AbsDT } t_0 + \beta_3 \text{Earnings } t_0 \times \text{AbsDT } t_0 + \varepsilon \\
\text{Returns } t_0 = \alpha + \beta_1 \text{Earnings } t_0 + \beta_2 \text{AbsDT } t_0 + \beta_3 \text{Earnings } t_0 \times \text{AbsDT } t_0 + \beta_4 \text{Sector1} + \beta_5 \text{Sector2} + \beta_6 \text{Sector3} + \beta_7 \text{Sector4} + \beta_8 \text{Sector5} + \beta_9 \text{Sector6} + \beta_{10} \text{Year2009} + \beta_{11} \text{Year2010} + \beta_{12} \text{Year2011} + \beta_{13} \text{Year2012} + \beta_{14} \text{Year2013} + \varepsilon
\]  

where

Returns are stock returns measured using market adjusted return that is the annual stock return - market return / IHSG. Earnings are the current year earnings that are deflated by the average total asset. AbsDT is a deferred tax that is deflated by the average total asset. Earnings x AbsDT is the
interaction variable that is the multiplication between Earnings and AbsDT. Sector1 is a dummy variable that uses a value of 1 if the firm is included in industry sector 1 and assigned a value of 0 if not in that sector. Sector2 and other sectors are measured in the same manner as Sector1. Year2009 is a dummy variable that uses a value of 1 if the company data is included in 2009 and is rated 0 if not included in the year. Year 2010 through Year2013 is measured in the same manner as Year 2009.

3.2. Sample

The sample frame of this study is "Financial Data and Ratios" in Fact Book 2009 - Fact Book 2014 which contains data and financial ratios for 2008-2013 (6 years). Measurement of research variables require financial statements data from 2007-2013 (7 years) due to that the average asset measurement requires t-1 data, while for testing the research hypotheses required 6 years data. The company-year is included in the sample using the following criteria: (1) the company is included in the non-financial sector (Sector 1-7 and Sector 9); (2) the company uses the December 31 financial statements, or it is not a delisted firm, or it is not a newly listed firm within the year of observation; (3) data to calculate the return can be obtained completely; (4) financial data for at least 3 consecutive years can be obtained; (5) the company uses the Rupiah currency in its financial statements; (6) deferred tax data and or deferred tax disclosure method can be obtained completely; and (7) the data is not an outlier. From the "Financial Data and Ratios" in Fact Book 2009 - Fact Book 2014, there were 2,643 observations (firm-year observations). Furthermore, using the various criteria is produced a final sample of 1,229 observations.

4. RESULTS

4.1. Descriptive Statistics

Table 1 presents descriptive statistics. The full sample size presented in Table 1 of Panel A is 229 observations. Subsidy for the presentation of deferred tax in the income statement in Panel B is 852 (69.3%) observations, while the subsample for deferred tax disclosure in the notes to the financial statements (CALK) is 377 (30.7%). The comparison between the maximum values of Earnings for Panel B of the maximum value of Earnings for Panel C tends to follow the same pattern with the comparison of the maximum value of MAR. This could be an indication of the impact of the method of deferred tax disclosure on the value relevance of earnings.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Panel A: Full Sample (N = 1229)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MAR</td>
<td>-1.440</td>
<td>3.950</td>
<td>0.050</td>
<td>0.692</td>
</tr>
<tr>
<td>Earnings t0</td>
<td>-0.346</td>
<td>0.457</td>
<td>0.059</td>
<td>0.107</td>
</tr>
<tr>
<td>AbsDeferredTax t0</td>
<td>0.000</td>
<td>0.222</td>
<td>0.008</td>
<td>0.016</td>
</tr>
<tr>
<td>Earnings t0 X AbsDeferredTax t0</td>
<td>-0.030</td>
<td>0.060</td>
<td>0.000</td>
<td>0.003</td>
</tr>
<tr>
<td>Panel B: Subsample of Presentation of Deferred Tax in the Income Statement</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MAR</td>
<td>-1.440</td>
<td>3.950</td>
<td>0.034</td>
<td>0.713</td>
</tr>
</tbody>
</table>
4.2. **Regression Results**

The results of the regression to test hypothesis 1, i.e. the deferred tax impact on the value relevance of earnings are presented in Table 2. The regression results to test hypothesis 2, i.e. the deferred tax impact on the value relevance of the earnings for deferred tax presentation in the income statement and deferred tax disclosure in the notes to the statements are presented in Table 3.

**4.2.1. Deferred Tax and Value Relevance of Earnings**

The regression results of Model 1 show that the regression coefficient Earnings t0 x AbsDT t0 is negative and significant at p < 5%, while the result of Model 2, using the control variable, shows that the regression coefficient Earnings t0 x AbsDT t0 is negative and significant at p < 10%. These results support the hypothesis that deferred taxes negatively affect the value relevance of earnings, or that the deferred tax weakens the effect of earnings on stock returns. The regression coefficient of control variables in 2009, 2010, and 2013 are negative and significant, which mean that the stock returns in those years are lower than the stock returns in 2008. The regression coefficient of the control variable for Sector 5 is positively significant at p < 5%, which means that Sector 5 stock returns are higher than Sector 3 stock returns.
### Table 2: Regression Results: Impact of Deferred Tax on the Value Relevance of Earnings

<table>
<thead>
<tr>
<th>Variable</th>
<th>Dependent Variable</th>
<th>Model 1</th>
<th>Model 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Coef.</td>
<td>Sig.</td>
</tr>
<tr>
<td>(Constant)</td>
<td>-0.057</td>
<td>0.031</td>
<td>0.075</td>
</tr>
<tr>
<td>Earnings t0</td>
<td>1.520</td>
<td>0.000</td>
<td>1.413</td>
</tr>
<tr>
<td>AbsDT t0</td>
<td>2.392</td>
<td>0.063</td>
<td>2.208</td>
</tr>
<tr>
<td><strong>Earnings t0 X AbsDT t0</strong></td>
<td><strong>-16.153</strong></td>
<td><strong>0.029</strong></td>
<td><strong>-12.534</strong></td>
</tr>
<tr>
<td>Year 2009</td>
<td></td>
<td>-0.440</td>
<td>0.000</td>
</tr>
<tr>
<td>Year 2010</td>
<td></td>
<td>-0.153</td>
<td>0.022</td>
</tr>
<tr>
<td>Year 2011</td>
<td></td>
<td>-0.073</td>
<td>0.275</td>
</tr>
<tr>
<td>Year 2012</td>
<td></td>
<td>-0.078</td>
<td>0.231</td>
</tr>
<tr>
<td>Year 2013</td>
<td></td>
<td>-0.159</td>
<td>0.015</td>
</tr>
<tr>
<td>Sector 4</td>
<td></td>
<td>0.059</td>
<td>0.323</td>
</tr>
<tr>
<td>Sector 5</td>
<td></td>
<td>0.137</td>
<td>0.015</td>
</tr>
<tr>
<td>N</td>
<td>1229</td>
<td></td>
<td>1229</td>
</tr>
<tr>
<td>F</td>
<td>17.776</td>
<td>0.000</td>
<td>105.811</td>
</tr>
<tr>
<td>R Square</td>
<td>0.042</td>
<td>0.088</td>
<td></td>
</tr>
<tr>
<td>Adjusted R Square</td>
<td>0.039</td>
<td>0.080</td>
<td></td>
</tr>
</tbody>
</table>

4.2.2. **The Impact of Disclosure Method of Deferred Tax on Value Relevance of Earnings**

The result of regression of Model 1 Panel A presented in Table 3 shows that the regression coefficient of Earnings t0 x AbsDT t0 is negative and significant at p <1%. These results remain consistent when the Year and Sector control variables are included in the model. These results support the hypothesis that deferred tax negatively affects the value relevance of earnings, or that the deferred tax weakens the effect of earnings on stock returns when the deferred tax is presented in the income statement. The coefficient of the control variable is not significant except Year 2012 which has a significant negative coefficient at p <5%, which means that stock returns in 2012 are lower than the stock returns in 2008. In contrast to the results presented in Table 2, the results of Model 1 and Model 2 of Panel B show that the regression coefficient of Earnings t0 x AbsDT t0 is positive but not significant. These results indicate that deferred tax does not affect the value relevance of the earnings when the deferred tax is disclosed in notes to financial statements.

### Table 3: Regression Results: The Impact of Deferred Tax Disclosure Method on Value Relevance of Earnings

<table>
<thead>
<tr>
<th>Variable</th>
<th>Dependent Variable</th>
<th>Model 1</th>
<th>Model 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Coef.</td>
<td>Sig.</td>
</tr>
<tr>
<td>(Constant)</td>
<td>-0.072</td>
<td>0.023</td>
<td>0.028</td>
</tr>
<tr>
<td>Earnings t0</td>
<td>1.763</td>
<td>0.000</td>
<td>0.948</td>
</tr>
<tr>
<td>AbsDT t0</td>
<td>2.924</td>
<td>0.045</td>
<td>0.044</td>
</tr>
</tbody>
</table>
The results of hypothesis testing of the impact of deferred tax on the relevance of earnings value for all samples, with or without control variables (Model 1 and Model 2) support the hypothesis that the deferred tax has a negative effect on the relevance of profit value, or that the deferred tax weakens the effect of earnings on stock returns. The findings of this study indicate that the market responds to deferred tax information in stock price valuations. In other words, stock prices reflect relevant information from deferred tax. Large deferred taxes are responded by the market as an indication of low earnings quality, and small, deferred taxes are responded by the market as an indication of high earnings quality. Therefore, deferred taxes negatively impact the value relevance of earnings. Deferred tax shows the temporary differences between accounting income and tax profit. This difference is related to the accrual component of profit. In previous studies such as Hanlon (2005) and Blaylock et al. (2012) in studies on large book-tax differences by using deferred
tax-based measurement is indicated that companies with large book-tax differences tend to have large accruals, and vice versa.

This study finds that the deferred tax has a negative effect on the value relevance of earnings, or that the deferred tax weakens the effect of earnings on stock return when the deferred tax is presented in the income statement, but the results of this study do not show that the deferred tax has a negative effect on the value relevance of earnings when deferred taxes are disclosed in notes to the financial statements. The decision usefulness approach to financial reporting, especially on the value relevance of accounting information, assumes that investors make rational decisions i.e. the make decisions based on relevant information. As a consequence of the assumption, the decision usefulness to financial reporting also assumes that the market is efficient (in the semi-strong form), that the stock price reflects all relevant published information including accounting information (Scott 2015). Therefore, the market should respond negatively to the deferred tax information whether presented in the income statement or disclosed in the notes to the financial statements. The results of this study indicate that the market response to deferred tax information only occurs when the deferred tax is presented in the income statement and does not occur when the deferred tax is only disclosed in the notes to the financial statements. These findings indicate that the deferred tax can be 'caught' as a signal when the deferred tax is presented in the income statement (not only disclosed in the notes to the financial statements). Empirical testing of signaling theory indicates that the signal tested is easily captured, such as job applicant's education as a signal of applicant qualities (Spence 1973) and dividends as a good signal about future performance of the company (Miller and Rock 1985; He et al. 2011; Karasek III and Bryant 2012). Thus, these results indicate that the capital market in Indonesia has not been fully efficient in semi-strong form.

5. CONCLUSION

This study finds that deferred taxes negatively impact the value relevance of earnings. The greater the deferred tax the lower the effect of earnings on stock returns, and vice versa. Deferred tax shows the temporary difference between accounting income and tax income. The accrual component of earnings contributes to the occurrence of the difference. Accrual particularly discretionary accruals are often used to measure earnings management, and earnings management is often used as a proxy for earnings quality. Thus, the greater the accrual the lower the profit quality, and vice versa. Since deferred taxes contain accruals, large deferred taxes have an impact on decreasing the value relevance of earnings. Deferred tax cost is also the basis for determining earnings management. The positive association between earnings and stock returns for firms with large deferred taxes is lower than that of the positive associations between earnings and stock returns for companies with small deferred taxes.

Further, the study finds that the deferred tax impact on the value relevance of earnings for firms that present deferred taxes in the income statement differs from the deferred tax impact on the value relevance of earnings for firms that disclose deferred taxes in the notes to the financial statements. Deferred taxes presented in the income statement have a negative impact on the relationship of earnings with stock returns, whereas deferred taxes disclosed in the notes to the financial statements have no impact on the value relevance of earnings. The deferred tax information disclosed in the notes to the financial statements may not be "captured" by the investor so that the market response to earnings does not take into account deferred tax information.
The implication of the findings of this study is that if based on the decision usefulness approach to financial reporting, accounting information including deferred tax information whether presented in the income statement or those disclosed in the notes to the financial statements should be useful to investors because the approach is based on the assumption that the market is efficient in particular efficient in the form of semi-strong. However, the results of this study indicate that the capital market in Indonesia has not been fully efficient in the semi-strong form.

In interpreting the results of this study it is necessary to consider the limitations of this study, especially in the case of the selection of observations as samples using certain criteria, such as December 31 as the date of the financial statements, the use of Rupiah in financial statements, companies in the non-financial sector. With these criteria, the results of this study cannot be generalized to all observations outside the sample. However, this criterion is used to reduce the likelihood of bias in the selection of samples. Further studies are suggested using different criteria such as the date of the financial statements other than December 31, the use of foreign currency in financial statements, and companies in the financial sector. The further studies can be used to test the external validity of the results of this study.

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