

# Earnings Management, Effective Tax Rate (ETR) And Book-Tax Gap (BTG)\*

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## ABSTRACT

**Objective** – This research examines the effect of company size, changes in out-cash flow, return on assets, conservatism, and profit levelling on earnings management.

**Methodology/Technique** – The results of this research show that banking capital structure, capital intensity, intensity of inventory, and intensity of R & D have a significant impact on effective tax rates. Further, the results also show that, with respect to the non-banking sector, R & D expenditure contributes significantly to effective tax rates. Simultaneously, earnings management and effective tax rates, as well as other factors, also have an effect on book tax gap.

**Findings** – This study shows that profit management has a significantly positive effect on book tax gap, and effective tax rates has a significant negative effects o book tax gap. In terms of the non-banking sector, earnings management and effective tax rate have no effect on book tax gap. Deferred tax expenses have a lower capability to detect earnings management than accrual, in both the banking and non-banking sector.

**Novelty** – The study of management capabilities optimizes the role of book tax gap and effective tax rate for earning management. Both tax management and earnings management are closely related to behavior management in managing a company based on the agency theory. Furthermore, the study identifies a relationship between earnings management and book tax gap.

**Type of Paper:** Empirical.

**Keywords:** Book Tax Gap; Effective Tax Rate; Earnings Management; Accrual Total; Indonesia.

**JEL Classification:** H26, H29.

## 1. Introduction

Tax management and earnings management are strongly associated with behavior management which is related to the agency theory. Tax management refers to the management of taxes, including planning, payment and the control of the tax, while earnings management refers to the regulation of profit to reflect the goals of management, or stakeholders or special purpose income settings (Pohan, 2009). Taxable income refers to the net income (loss) for the examined period and is calculated based on the applicable tax

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regulations. It is also calculated where there is a difference or gap, known as different book-tax, or the difference between accounting income to taxable profits. The phenomenon of book-tax gap (BTG) gives rise to the possibility of earnings management (Martani and Persada, 2009). However, Pohan (2009) has shown that earnings management is negatively affected by BTG. To overcome the emergence of BTG, Richardson and Lanis (2007) suggest the use of effective tax rates (ETR). Effective tax rates are often used by decision-makers to develop the tax system to be adopted by a company because it describes the tax incentives. In addition, the ETR is often the size of the effectiveness of tax management (Rego, 2002). In addition, the intensity of earnings management may also affect the ETR that a company is looking for. It is clear that earnings management has an influence on BTG and ETR. However, problems arise when earnings management, BTG and ETR are influenced by other factors.

Philips, et.al (2003) states that earnings management is influenced by deferred tax expenses (DTE) and accrual. Further, Richardson and Lanis (2007) prove that ETR is influenced by firm size, capital structure, capital intensity, inventory, R & D expenditure and return on assets. BTG is influenced by management and ETR, controlled by income smoothing, company size, and conservatism (Pohan, 2009). Thus, determining the effect of earnings management on BTG and partially on ETR should be approached with caution, as it can be misleading. In addition to treating the factors that influence earnings management and ETR, it is also necessary to examine the set of variables that affect BTG. Based on this, the problem in this research is: how does earnings management and ETR effect BTG either partially or simultaneously. In addition, the research also aims to determine the factors that influence earnings management and ETR.

## **2. Literature Review**

### **2.1 Deferred Tax Expenses, Accrual, Earnings Management, and BTG**

Earnings management refers to the efforts of management to maintain a company's fluctuations in earnings at a level that is considered normal according to sound accounting and management practices. One of the motivations for earnings management is taxation; raising income to reduce tax expenses in the following year. The phenomenon of BTG increases the occurrence of earnings management and the quality of corporate profits (Martani and Persada, 2009). Mills and Newberry (2001) state that companies have an incentive to improve BTG earnings management. Contrary to this, Pohan (2009) as the result of research by Palepu et. al (2000) and Yulianti (2004), proved that earnings management has a negative effect on tax evasion, and also reduces BTG. Further, Philips et. al (2003) suggests that companies can undertake earnings management without generating temporary BTG. Philips et.al (2003) proves that deferred tax expenses (DTE) increase the ability to detect earnings management than the total accruals and abnormal accruals, by controlling the impact of changes in operating cash flow ( $\Delta$ CFO). Based on this, the following hypotheses are proposed:

H1: Earnings management has an influence on BTG.

H2: Deferred Tax Expenses (DTE) have the ability to detect the presence of earnings management more than the total accruals.

### **2.2 Factors Affecting ETR and BTG**

Pohan (2009) identifies an association between the ETR generated by BTG, while Richardson and Lanis (2007) highlight the existence of factors that affect the ETR. These factors are: firm size (size), capital structure (debt), capital intensity, inventory, and R & D expenditure. The intensity of inventory is positively related to ETR while the size of the company, capital structure, capital intensity, and the intensity of R & D is significantly and negatively associated with ETR. Pohan (2009) and Richardson and Lanis (2007) examines

the relationship between ETR and BTG and the factors of ETR with ETR partially. The interpretation of the partial relationship to the direct relationship can be misleading; previous studies have used the ETR as a proxy for tax management, while tax management and profit management itself are inextricably linked to the generation of BTG. Based on this, the following two hypotheses are proposed:

H3: ETR has an effect on BTG.

H4: Capital structure, capital intensity, the intensity of R & D, and the intensity of the inventory have an effect on ETR.

### **3. Research Methodology**

The study population consists of all companies listed on the Stock Exchange between 2001 and 2009. The population is divided into two categories: banking and non-banking companies. The final sample was obtained after applying the selection criteria, being: active operation and access to measurement data for all of the variables of the study.

The dependent variable in this study is endogenous Book-Tax Gap (BTG), whereas the endogenous variables are earnings management and Effective Tax Rate (ETR). The exogenous variables for earnings management are deferred tax expenses (DTE) and total accruals (TA), while the exogenous variables for BTG are the size of the company (SIZE), capital structure (SM), capital intensity (CI), inventory intensity (II) and R & D intensity (RDI). The control variables for earnings management are operating cash flow (CFO) and SIZE, while the control variable for ETR is the return on assets. The control variables for BTG are income smoothing (PL), firm size (SIZE) and conservatism (CONS). Below is an operational definition of each of these variables.

#### **3.1 Book-Tax Gap (BTG)**

The preparation of financial statements is intended to meet two interests: to comply with generally accepted accounting principles and to comply with tax laws. Both are prepared using the accrual basis (Hanlon, 2005). However, because they reference different rules, income statement accounting (book) there is still a difference (gap) in the income statements with respect to tax (tax). This is called the book-tax gap which becomes a proxy for measuring tax evasion, in addition to other proxies. It must be noted that it is difficult to know the exact amount of tax paid by a company, and instead, estimates are used (Plesko, 2004).

#### **3.2 Earnings Management (DA)**

Earnings management refers to discretionary accounting practices achieved through the use of operating cash flow. This research uses the accrual variables to detect the presence of earnings management. This study uses the discretionary accruals developed by Healy (1985), as modified by Jones (1991).

#### **3.3 Effective Tax Rate (ETR)**

Philips (2003) states that ETR is defined as the ratio of total income tax burden (total income-tax expense) to earnings before tax (pre-tax income). Generally, ETR is a proxy of tax management which is a tax reduction strategy, so that the company obtains a higher after-tax income.

#### **3.4 Deferred Tax Expenses (DTE)**

DTE can be used to identify earnings management by the following objectives: (1) to avoid reporting a decrease in earnings, (2) to avoid reporting losses, and (3) to avoid the failure of analysts' earnings forecasts.

DTE is a component of the total tax burden of the income (total income tax expense) of a company and reflects the tax effect of temporary differences between accounting profits and income taxes that generally arise from the accrual of income and expenses (Philips et.al, 2003).

### 3.5 Total Accruals (TA)

This study uses the total accruals (Healy, 1985), modified by Jones (1991) as a model of abnormal accruals, following the formula of Dechow et. al (2003) as follows:

$$TAcc_{it} = \gamma_0 + \gamma_1(\Delta Sales_{it} - \Delta AR_{it}) + \gamma_2 PPE_{it} + \varepsilon_{it} \dots \dots \dots 1)$$

Where,

$TAcc_{it}$  = total accruals for firm i in year t,

$\Delta Sales_{it}$  = change in sales of firm i from year t-1 to t,

$\Delta AR_{it}$  = change in accounts receivable firm i from operating activities from year t-1 to t,

$PPE_{it}$  = property, plant and equipment companies i year t, and

$\varepsilon_{it}$  = error variance.

### 3.6 Changes in Operating Cash Flow ( $\Delta CFO$ )

Referring to the research by Philips et. al (2003), this study uses changes in  $\Delta CFO$  to control the effect of changes in operating cash flow on earnings management. An increased in CFO reflects efficient corporate performance and reduces the occurrence of earnings management.

### 3.7 Company Size (SIZE)

There are two opposing viewpoints regarding the relationship between ETR and SIZE: the cost of political theory and the theory of political power. According to the cost of political theory, the company with a larger size is the main target of government regulation and the transfer of wealth from the company to the state (Watts and Zimmerman, 1986). This theory claims that the bigger a company is, the greater its ETR will be. On the other hand, the political power theory states that the a larger SIZE will reduce ETR because the company is deemed to have the resources available to manipulate political processes to benefit themselves, through tax management and organizational activities, to obtain optimum tax savings. This variable is measured by the natural logarithm of total assets at book value. In addition to the effect on ETR, firm size also has an effect on earnings management and BTG, hence both of these variables are treated as control variables.

### 3.8 Capital Structure (SM)

The decision of the capital structure can affect a company's ETR because tax rules generally allow differences in the application of tax laws depending on capital structure (Gupta and Newberry, 1997). For example, interest of debt is tax deductible, while dividends are not. Hence, companies with higher debt have a lower ETR. SM is measured based on the ratio of total debt to total assets (Dhaliwal et al., 1994) that  $Lev = TU_{it} / TA_{it}$ .

### 3.9 Capital Intensity (CI)

Investment decisions may also affect the ETR. As tax laws allow taxpayers to write-off the cost of depreciated assets, companies with more capital intensity are expected to have a lower ETR (Stickney and

McGee, 1982). Capital intensity is measured by net property, plant and equipment divided by total assets (book value).

### **3.10 Inventory Intensity (II)**

As an extension, inventory intensity is incorporated into intensity capital. Intensity inventory companies are expected to have higher ETRs (Zimmerman, 1983). Inventory intensity is measured by dividing inventories by total assets (book value).

### **3.11 R & D Intensity (RDI)**

Expenditure related to R & D investments tend to complement tax shields to the intensity of R & D companies. This shows a negative relationship with ETR (Gupta and Newberry, 1997). R & D intensity is measured by dividing R & D expenditure by net sales.

### **3.12 Return on Assets (ROA)**

A company's operating results also affect ETR. Wilkie (1998) found that the ETR is a function of the ratio of tax incentives to accounting profit, where tax incentives (such as depreciation) are the items that cause accounting profit to differ from profit taxes. To the extent that tax incentives are not proportionally related to accounting income, ETR causes a change in accounting profit. Referring to research by Richardson and Lanis (2007), this study uses ROA to control changes to the company's operating results. ROA is measured as income before taxes divided by total assets. The expected ROA is positive because of an increase in ROA means an increase in ETR (Gupta and Newberry, 1997).

### **3.13 Income Smoothing (PL)**

Pohan (2009) states that the income smoothing has a significantly negative effect on BTG. The aim of income smoothing is to minimize tax expenses. Income smoothing is measured by the Eickel Index, which is used to determine whether a company is shifting their allocation of income between different periods. This required data on the profit and sales for the specified period period of at least 5 average and standard deviations. In order to calculate the index, the coefficient of variation changes in earnings in the specified period must be divided by the coefficient of variation of the change of sales in the same period. If the result is greater than 1, this indicates a shift in profits. Conversely, if the result is less than 1, this indicates a shift in profits. This shift is indicative of earnings management practices used to shift tax expenses from one period to another through income smoothing (Shaviro, 2007).

### **3.14 Conservatism (CONS)**

There is a significant positive relationship between CONS with BTG (Heltzer, 2008). CONS is measured by index of conservatism developed by Penman (1999), namely:  $INV_{it} \text{ plus } DEPRECIATION_{it} \text{ divided by } NOA_{it}$ .  $INV_{it}$  refers to the inventory of firm  $i$  in year  $t$ , while  $DEPRECIATION_{it}$  is the depreciation of the assets of company  $i$  in year  $t$  and  $NOA_{it}$  is the net operating assets of company  $i$  in year  $t$ . An analysts' method developed using regression model ordinary least squares (OLS) were prepared and analyzed using path analysis.

Equations (2) to (4) are used to prove the hypotheses of this study.

Testing the effect of DTE and TA, as well as the control variable ( $\Delta$ CFO and SIZE) on earnings management (DA) is conducted using the equation developed by Philips et.al (2003), as modified below.

$$DA_{it} = \beta_0 + \beta_1 DTE_{it} + \beta_2 TA_{it} + \beta_3 \Delta CFO_{it} + \beta_4 SIZE_{it} + \varepsilon_{it} \dots \dots \dots 2)$$

Where,

$DA_{it}$  = earnings response coefficient ( $\beta_i$ ),

$DTE_{it}$  = *deferred tax expense* of firm i in year t, divided by total assets at the end of the year t-1,

$TA_{it}$  = measure of total accruals for firm i in year t,

$\Delta CFO_{it}$  = change in cash flows of firm i of the operation, from t-1 to t, divided by total assets at the end of the year t-1,

$SIZE_{it}$  = the size of the company measured by the natural logarithm of total assets at book value of firm i in year t, and

$\varepsilon_{it}$  = error variance

Testing the influence of SIZE on SM, CI, II, and RDI as well as the control variable (ROA) on ETR is conducted using the equations developed by Lanis and Richardson (2007), as modified below.

$$ETR_{it} = \alpha_0 + \alpha_1 SIZE_{it} + \alpha_2 SM_{it} + \alpha_3 CI_{it} + \alpha_4 II_{it} + \alpha_5 RDI_{it} + \alpha_6 ROA_{it} + \varepsilon_{it} \dots \dots \dots 3)$$

Where,

$ETR_{it}$  = effective tax rate, measured by the *income tax* expense divided by income before tax (*pre-tax income*) for firm i in year t;

$sSIZE_{it}$  = the size of the company measured by the natural logarithm of total assets at book value of firm i in year t;

$SM_{it}$  = the capital structure of the company i in year t as measured by the ratio of total debt to total assets (Dhaliwal et.al, 1994) that  $Lev = TU_{it} / TA_{it}$ ;

$CI_{it}$  = Capital intensity firm i in year t, measured by property, plant and equipment net divided by total assets (book value);

$II_{it}$  = inventory intensity of firm i in year t, measured as a stock divided by total assets (book value);

$RDI_{it}$  = R& D Intensity of firm i in year t, measured by the expenditure of R & D divided by net sales;

$ROA_{it}$  = return on assets of firm i in year t, measured by earnings before taxes divided by total assets; and

$\varepsilon_{it}$  = error variance.

Testing the effect of earnings management (DA), ETR and the control variables (PL, SIZE, and CONS) on BTG is conducted using the equation developed by Pohan (2009), as modified below.

$$BTG_{it} = p_0 + p_1 DA_{it} + p_2 ETR_{it} + p_3 PL_{it} + p_4 SIZE_{it} + p_5 CONS_{it} + \varepsilon_{it} \dots \dots \dots 4)$$

Where,

$BTG_{it}$  = Book-Tax Gap firm i in year t;

$DA_{it}$  = earnings management, measured by discretionary accruals obtained from Healy (1985), modified by Jones (1991), follows the formula Dechow et. al (2003),  $DA_{it} = TA_{it} - NonDA_{it}$ ;

$ETR_{it}$  = the effective tax rate, measured by the income taxes expenses divided by income before taxes for firm i in year t;

$PL_{it}$  = income smoothing of firm i in year t, measured using an index Eickel;

$SIZE_{it}$  = the size of the company measured by the natural logarithm of total assets at the book value of firm i in year t;

$CONS_{it}$  = conservatism of accounting profit and taxable income, measured by index of conservatism Penman (1999); and

$\varepsilon_{it}$  = error variance.

Testing of the simultaneously influence of DA, ETR, and the control variables (PL, SIZE, and CONS) on BTG can be seen from R2 in the Reduced Form Equations from the path analysis of the Structural Equation Model (SEM). If the R2 is significant, then the hypotheses are supported.

Refer Wijanto (2008) and Ghozali (1998), prior to the estimation of simultaneous equations representing the model specified, first check the identification of simultaneous equations. It is expected that the model is over-identified.

1. the number of observed variables is 15, so the amount of data that is known is  $(n \times (n + 1)) / 2 = (15 \times (15 + 1)) / 2 = 120$ .
2. there are 29 parameters to be estimated.
3. the degree of freedom is the number of known data minus the number of parameters to be estimated. So the degree of freedom =  $120 - 29 = 91 > 0$  which is positive, meaning that the model is over-identified.
4. The analytical method starting from the evaluation of the fit of the data to the model. The evaluation through the stages of the overall fit of the model and the structural fit of the model.

#### **4. Overall Model Fit**

This paper uses absolute fit measures and incremental fit measures including Chi-Square ( $\chi^2$ ), non-centrality parameter (NCP), Goodness-of-Fit Index (GFI), Root Mean Square Residual (RMR), Root mean Square Error of Approximation (RMSEA). Adjusted Goodness of Fit Index (AGFI), Non-normed Fit Index (NNFI), normed Fit Index (NFI), Relative Fit Index (RFI), Incremental Fit Index (IFI), and Comparative Fit Index (CFI).

#### **5. Structural Model Fit**

The evaluation or analysis of the structural model includes an examination of the significance of the estimated coefficients. SEM provides value estimated coefficients and the value of the t-test for each coefficient. By specifying the significance level (typically  $\alpha = 0.05$ ), each coefficient representing the hypothesized causal relationships can be tested for statistical significance (if different from zero).

#### **6. Results**

The population of this study consisted of 24 national banks and 350 non-bank companies listed on the Stock Exchange from 2001 to 2009. After applying the sampling criteria, the final sample included: 23 banking companies and 267 non-banking companies. The data and analysis can be divided into two types, the banking industry and the non-banking industry, in order to avoid any bias in respect of the characteristics of the two. Thus, the entire hypothesis testing is treated differently for each type of company. After adjusting the data to be processed using SEM models, the statistical description of each type is presented as follows.

Table1. Description of Statistics Data Bank and Non-bank

Variable	Min	Max	Mean		Std. Deviation	
			Non-Bank	Bank	Non-Bank	Bank
Book Tax Gap (BTG)	1.00	5.00	2.9925	2.9565	1.22932	1.49174
Discretionary Accrual (DA)	1.00	5.00	2.9551	3.0435	1.25874	1.49174
Effective Tax Rate (ETR)	1.00	5.00	2.9738	2.8696	1.23059	1.42396
Total Accrual (TA)	1.00	5.00	3.0000	2.8696	1.23544	1.42396
Deferred Tax expense (DTE)	1.00	5.00	3.0262	3.0000	1.22753	1.50756
Capital Structure (SM)	1.00	5.00	3.0000	3.0000	1.22934	1.20605
Capital Intensity (CI)	1.00	5.00	2.9888	2.7391	1.22776	1.42118
Inventory Intensity (II)	1.00	5.00	2.9888	2.8696	1.22776	1.35862
R and D Intensity (RDI)	1.00	5.00	2.9925	2.8261	1.22932	1.37021
Cash Out Flow (CFO)	1.00	5.00	2.9925	3.0000	1.22626	1.50756
Firm Size (SIZE)	1.00	5.00	2.9888	2.8696	1.22776	1.45553
Return on Asset (ROA)	1.00	5.00	2.9850	2.7826	1.22619	1.47576
Conservatism (CONS)	1.00	5.00	2.9925	2.8261	1.22932	1.55657
Income Smoothing (PL)	1.00	5.00	3.0075	2.9565	1.22932	1.55149

Samples: Bank: 23; Non-bank: 267

From Table 1, it can be argued that for non-banking companies, the variable with the highest average value is DTE (3.0262), while the lowest average value is DA (2.9551). The DA variable for banking companies has the highest average value (3.0435), while the lowest average value is CI (2.7391). ROA for non-banking companies has the lowest standard deviation (1.22619), and DA has the highest standard deviation (1.25874). The SM variable in banking companies has the lowest standard deviation (1.20605), and CONS has the highest standard deviation (1.55657).

From Table 1 it appears that the data for non-banks is more varied, with a relatively small standard deviation when compared to the banking data. This may be the result of the fact that there are much more non-banking companies examined in this study than banking companies. The test results for the banking data shows an overall match to the model data. Similarly, the test results also indicate a match of the data for non-banks. The stability index for the data of the banks is  $0.004 < 1$  and for the non-banks is  $0.006 < 1$ . Considering that most of the overall suitability criteria are met, in particular the stability model index is  $< 1$ , then the path analysis can be conducted. The analysis of the data is summarized and presented in Table 2.

Table 2. Summary of Research Variables Influence Between the Data Bank and Non-bank

Var	DA		ETR		BTG			
	Total Effects		Total Effects		Total Effects		Indirect Effects	
	Bank	Non-Bank	Bank	Non-Bank	Bank	Non-Bank	Bank	Non-Bank
DA	--	--	--	--	0.02**	0.05	--	--
ETR	--	--	--	--	-0.06***	-0.06	--	--



Var	DA		ETR		BTG			
	Total Effects		Total Effects		Total Effects		Indirect Effects	
	Bank	Non-Bank	Bank	Non-Bank	Bank	Non-Bank	Bank	Non-Bank
TA	-1.01***	-0.33***	--	--	-0.02**	-0.02	-0.02**	-0.02
DTE	0.81***	0.17***	--	--	0.02**	0.01	0.02**	0.01
SM	--	--	0.13**	0.07	-0.01**	0.00	-0.01**	0.00
CI	--	--	-0.23***	0.07	0.01***	0.00	0.01***	0.00
II	--	--	-0.32***	0.00	0.02***	0.00	0.02***	0.00
RDI	--	--	0.33***	-0.43***	-0.02***	0.03	-0.02***	0.03
Variable Control								
CFO	-0.57***	0.23***	--	--	-0.01**	0.01	-0.01**	0.01
SIZE	0.43**	0.57***	0.08*	-0.02	0.94***	0.70***	0.01	0.03
ROA	--	--	-0.46***	-0.01	0.03***	0.00	0.03***	0.00
CONS	--	--	--	--	0.05***	-0.02	--	--
PL	--	--	--	--	-0.06***	0.09	--	--
R2	0.60	0.36	0.69	0.21	0.97	0.52	0.97	0.52

\*\*\* Significant at  $\alpha = 1\%$  level, the t-value > 2576

\*\* Significant at the level  $\alpha = 5\%$ , the t-value > 1.960

\* Significant at the level  $\alpha = 10\%$ , t-value > 1.65

## 7. Discussion

The results of the testing based on Table 2 shows that accruals (TA) and deferred tax expenses (DTE), which is controlled by cash flow out (CFO) and the size of the company (SIZE), have a significant effect on earnings management (DA). The effect of TA on DA is negative among both banking and non-banking companies, which means that the higher the accrual, the less likely it is that a company will experience earnings management. These results are consistent with research by Philip, et. al (2003).

Meanwhile DTE has a significant effect on earnings management in both banking and non-banking companies, which means that a higher DTE is indicative of earnings management. DTE therefore has the ability to detect earnings management, however to a lesser extent than TA. It is apparent from the estimated coefficient effect on DA that TA higher than the estimated coefficients DTE effect on DA. These results are inconsistent with the findings of Philip, et. al (2003) which states that DTE is more efficient than TA in detecting earnings management.

Both total effect and indirect effect on banking data show that DA has a significant effect on BTG, while the data for DA among non-banking companies showed no significant effect on BTG. The significantly positive effect of earnings management on BTG means that there is a greater gap between the earnings management accounting income statement and income statement developed in accordance with applicable tax regulations. The results are inconsistent with those of Pohan (2009), Palepu et.al (2000) and Yulianti (2004), which uncover a negative relationship between earnings management and BTG. The test results on

the data of DA among non-banks show no effect on BTG, which is supported by research conducted by Philip et. al (2003) which states that DA does not generate temporary BTG.

The tests on the banking data shows an indirect and significantly negative effect of DA on TA to BTG, while there is an indirect and significantly positive effect of DA on DTE to BTG. Thus, with respect to the banking data, H1 (earnings management influence on BTG) is supported and H2 (DTE has the ability to detect the presence of earnings management more than total accruals) is not supported. Meanwhile, with respect to the data for non-banking companies, neither H1 and H2 are supported.

The testing of the third hypothesis shows that, in the data for banking companies, ETR has a significant negative effect on BTG. Those results confirm the relationship between BTG and ETR as identified by Pohan (2009). With respect to the data for non-banking companies, ETR does not have an effect on BTG.

The testing of the fourth hypothesis with respect to banking companies shows that capital structure, capital intensity, the intensity of the inventory, the intensity of R & D has a significant influence on ETR, although the relationship between the variables varies. Meanwhile, with respect to the non-banking companies, only the intensity of R & D has a significant negative effect on ETR, while the other factors are influential. These results are consistent with the findings of Pohan (2009) however the direction of the relationship is varied. The effect of capital structure and the intensity of R & D is positive on ETR, while Pohan (2009) suggests that the relationship is negative. Further, the intensity of inventory negatively effects ETR, while Pohan (2009) suggests this relationship is positive. Only the finding that capital intensity has a significant negative effect on ETR is consistent with the findings by Pohan (2009). Thus, H3 (ETR effect on BTG) and H4 (capital structure, capital intensity, the intensity of R & D, and the intensity of the inventory effect on ETR) is supported with respect to the data on banking companies. However, with respect to the data for non-banking companies, H3 and H4, are only supported with respect to the variable of intensity of R & D that has a significant negative effect. On the other hand, the indirect effect of BC and the intensity of R & D to BTG through ETR is significantly negative. Further, CI and II have a significant and positive effect on BTG.

Based on the results for hypothesis 1 and 2, it can be concluded that for the banking industry, earnings management has an influence on book the tax gap. Meanwhile for the non-banking industry, earnings management does not have an effect on the book tax gap. For both industries however, the ability of deferred tax expenses to detect the presence of earnings management is lower than the ability of accrual. Simultaneously, the effect of deferred tax expenses and total accrual to detect earnings management for the banking industry is 60%, while for the non-banking industry it is 36%.

Based on the results for hypothesis 3 and 4, it can be concluded that in the banking industry, the effective tax rate negatively effects the book tax gap, while for the non-banking industry, the effective tax rate does not effect the book tax gap. Capital structure and the intensity of R & D have a significantly positive effect on the effective tax rate, while capital intensity and inventory intensity have a significantly negative effect on the effective tax rate. Simultaneously, capital structure, the intensity of R & D, capital intensity, inventory intensity, which is controlled by the size of the company and return on assets have an effects on the effective tax rate: 69% for the banking industry and 21% for the non-banking industry. Meanwhile, the effective tax rate has an indirect and significantly negative effect on the book the tax gap, capital structure and the intensity of R & D while capital intensity and inventory intensity have a significantly positive effect. Simultaneously, the effect of earnings management, the effective tax rate, capital structure, capital intensity, and the intensity of R & D to book tax gap is 97% for the banking industry and 52% for the non-banking industry. Opportunities for further research can be seen from different contexts, for example a comparison between years, industry types and even between countries.

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