DEFERRED TAX AND EARNINGS MANAGEMENT
UNDER MASB 25

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ABSTRACT

This paper investigates whether Malaysian publicly listed companies in
10 sectors use deferred tax and discretionary accruals as tools to manage
earnings in order to meet earning targets: 1) to avoid an earning decline
and 2) to avoid a loss. This research examines financial statements
prepared during the period 2003 to 2005 when the Malaysian Accounting
Standard Board (MASB) 25 Accounting for Income Taxes was in place.
This study uses Burgstahler and Dichev’s approach to identify earnings
management firms. Healy’s model and a modified Jones model are also
employed to identify and separate accruals. The results show no evidence
that deferred tax has been used by firms as a tool to manage earnings
during the period of study. The finding suggests that the implementation
of the MASB 25 (now known as Financial Reporting Standard (FRS)
112), which is more comprehensive and specific than IAS 12, has reduced
the use of deferred tax by firms in managing their earnings. In contrast,
the findings of this study provide evidence that firms use discretionary
accruals to avoid reporting losses. The results of this study may be of use
to researchers studying earnings management behavior and for standard
setters with regard to establishing and monitoring standards.

Keywords: Deferred Tax, Earnings Management, MASB 25
INTRODUCTION

From 1981 to 2002, income tax accounting practices in Malaysia were governed by the Malaysian Accounting Standard Board (MASB) Approved Accounting Standard IAS 12 Accounting for Taxes on Income (the original IAS 12) (2002). The original IAS 12 focused on income statements and timing differences, which resulted in differences in the accounting and taxable profits (Hoe, 2003). This standard was superseded by the MASB 25 Accounting for Income Taxes, which came into effect from July 2002 (now known as the Financial Reporting Standard (FRS) 112), which focuses on balance sheets and temporary differences.

Under MASB 25 all temporary differences (also known as book tax differences) between accounting and tax rules should be accounted for in financial statements. Temporary differences occur when there are differences between the valuation of an asset or liability for tax purposes and its carrying amount in the financial statement balance sheet. This difference results in future tax liability or tax assets, also known as deferred tax. MASB 25 stipulates that any changes in deferred tax assets and deferred tax liabilities should be reflected in the Income Statement.

Previous studies have argued that book tax differences are influenced by managerial practices in smoothing accounting earnings by reducing or defecting tax payment to serve management interests (Mills and Newberry, 2001; Phillips et al., 2003; Plesko, 2004). Mills and Newberry (2001) argued that managers typically have more discretion in financial reporting than in tax reporting and can exploit such discretion to manage income upward in ways that do not increase current taxable income. Phillips et al. (2003) performed the first empirical study to evaluate the usefulness of book tax differences in detecting earnings management relative to various accrual measures. Phillips et al. (2004) proposed that such earnings management generates book-tax differences that increase a firm’s net deferred tax liabilities and consequently increases its deferred tax expense. In their study, they found that deferred tax expenses are useful in detecting earnings management. A similar study in Malaysia by Rohaya et al. (2007) concluded that firms use deferred tax expenses in managing earnings to avoid a loss.

Contrary to Rohaya et al. (2007), this study focuses on the change in net deferred tax liabilities as a proxy for book tax differences and the detection of earnings management. Furthermore, the study sample
considers all listed firms, other than financial institutions and focuses on the early implementation period (2003-2005) of the new MASB 25 accounting standard. The objective of this study is to determine whether Malaysian firms use net deferred tax liabilities to manage earnings in order to meet earnings targets, to avoid an earnings decline and to avoid losses. This paper also investigates the use of discretionary accruals in managing earnings to meet earnings targets.

The remainder of this paper is organised as follows: Section Two reviews the underlying literature of the study, Section Three discusses the research methodology, Section Four presents the results and Section Five concludes the paper.

LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

Earnings management has become one of the most important issues in accounting since such activity affects the quality of reported earnings. Beneish (2001) stated that an issue central to accounting research is the extent to which managers alter reported earnings for their own benefit. There are several definitions of earnings management in the literature; Healy and Wahlen (1999) defined earnings management as when managers use judgment in financial reporting and in structuring transactions to alter financial reports to either mislead some stakeholders about the underlying economic performance of the company or to influence contractual outcomes that depend on reported accounting number, Schipper (1989) defined earnings management as purposeful intervention in the external reporting process with the intention of obtaining private gains. In other words, earnings management is when managers manipulate earnings figures to achieve a firm’s targets.

There are a number of empirical methods by which earnings management can be detected and measured. Most of the previous studies have used discretionary accruals models to detect earnings management. For example, Healy (1985) used totals accrual as a proxy for discretionary accruals, whereas DeAngelo (1986) measured discretionary accruals as the difference between total accruals in the current year and the previous year. In order to control the effects of changes in a firm’s economic circumstances, Jones (1991) proposed a regression model that included change in revenue and gross property, plant and equipment variables.
Later, Dechow et al. (1995) modified the model further and is more commonly referred to as the modified Jones Model. The modified model takes into consideration adjustment for changes in receivables during the event period. Differences between accounting and tax rules have generated book-tax differences, which has been defined as the difference between accounting income and taxable income (Plesko, 2004). Mills and Newberry (2001) presented evidence that firms with incentives relating to earnings management have greater book tax differences. They stated that managers exercise discretion to manage the book income upward without increasing the taxable income in preparing financial statements. Phillips et al. (2003) provided further evidence on earnings management by using deferred tax expenses as a proxy for book-tax differences and found evidence that deferred tax expenses are useful in detecting earnings management. During examination of Malaysian public listed firms involved in consumer and industrial products, Rohaya et al. (2007) found evidence that firms used deferred tax expenses and discretionary accruals in managing tax earnings to avoid a loss.

MASB 25 states that increases and decreases in deferred tax liabilities will be added to and deducted from the tax expenses, respectively. This allows firms to manage net deferred tax liabilities and thus increase after tax earnings (Phillips et al., 2004). The presented study hypothesizes that Malaysian firms use changes in net deferred tax liabilities, as a proxy for book-tax differences, thereby managing earnings to meet earnings targets, avoid earnings decline and avoid a loss. Furthermore it is hypothesized that the mean change in net deferred tax liabilities and higher discretionary accrual for earnings management firms is higher than that for non-earnings management firms.

Therefore, the presented study tests the following hypotheses:

$H_{1a}$: The mean change in net deferred tax liabilities for earnings management firms is higher than that for non-earnings management firms in order to avoid an earnings decline.

$H_{1b}$: The mean discretionary accruals for earnings management firms is higher than that for non-earnings management firms in order to avoid an earnings decline.
H$_{2a}$: The mean change in net deferred tax liabilities for earnings management firms is higher than that for non earnings management firms in order to avoid a loss.

H$_{2b}$: The mean discretionary accruals for earnings management firms is higher than that for non-earnings management firm in order to avoid a loss.

**RESEARCH METHODOLOGY**

**Sample and Data Collection**

The sample consists of firms from all industries, excluding financial institutions, which are listed on the main and secondary boards of Bursa Malaysia and have available Thompson Datastream data for the period 2003-2005. Since changes in earnings and net deferred tax liabilities are needed; data for 2002 has also been included. This study excludes firms listed as financial institutions, since they are highly regulated and may have different incentives to manage earnings. The period 2003-2005 has been chosen because MASB 25 came into practice on 1st July 2002 and a new reporting regime; the International Financial Reporting Regime (IFRS) became mandatory for accounting periods beginning on or after 1st January 2006.

All the financial accounting variables used in this study were gathered from the Thompson Datastream. Firms which do not exhibit net deferred tax liabilities data in the Thompson Datastream were omitted yielding a final sample comprising of 1236 firm-year observations.

**Methodology and Hypothesis Testing**

This study adopts the Burgstahler and Dichev earnings distribution approach in order to identify earnings management firms, the Healy Model to compute total accruals and the modified Jones Model to estimate the discretionary accruals.

This study uses the t-test to evaluate all four hypotheses. Hypotheses H$_{1a}$ and H$_{2a}$ were evaluated with respect to the mean change in net deferred
tax liabilities (scaled by total assets) of identified earnings management firms with respect to non-earnings management firms in order to avoid an earnings decline and to avoid a loss, respectively.

Hypotheses $H_{1b}$ and $H_{2b}$ have been designed to test whether Malaysian firms use discretionary accruals as a means to manage earnings to meet earnings targets in order to avoid an earnings decline and to avoid a loss, respectively.

The Healy Model has been used to calculate the total accruals, which may be defined as income before extraordinary items (EBEI) minus cash flow from operations (CFO), according to Equation (1). All variables are scaled with respect to the total assets at the end of the previous year.

\[ T_{Acc_{it}} = EBEI_{it} - CFO_{it} \]  \hspace{1cm} (1)

where:

\[ T_{Acc_{it}} = \text{firm } i's \text{ total accruals in year } t; \]
\[ EBEI_{it} = \text{firm } i's \text{ income before extraordinary items in year } t; \]
\[ CFO_{it} = \text{firm } i's \text{ cash flow from operations in year } t. \]

The modified Jones Model was then used to separate the total accruals into nondiscretionary and discretionary components. Cross-sectional regression analysis was conducted to estimate the annual parameters for each industry for each year under study. If an industry has less than six observations, the sample firms representing the control firm-years are dropped from the samples in accordance with the works of Defond and Jiambalvo (1994), Subramanyam (1996) and Eighme (2001). All variables are scaled with respect to the total assets at the beginning of the year in order to mitigate size effects. The following equations have been used to estimate the annual parameters:

\[ T_{Acc_{it}} = \alpha + \beta_1 (\Delta Sales_{it}) + \beta_2 PPE_{it} + \epsilon_{it} \]  \hspace{1cm} (2)

where:

\[ T_{Acc_{it}} = \text{firm } i's \text{ total accruals in year } t; \]
\[ \Delta Sales_{it} = \text{change in firm } i's \text{ sales from year } t-1 \text{ to } t; \]
\[ PPE_{it} = \text{firm } i's \text{ gross property, plant and equipment in year } t. \]
\[ \epsilon_{it} = \text{error term for firm } i \text{ in year } t \]
Deferred Tax and Earnings Management under MASB 25

All parameters derived from Equation (2) are substituted into Equation (3) to derive the discretionary accruals for earnings management firms (EM=1) for both conditions; to avoid an earnings decline and to avoid a loss. All variables in Equation (3) are scaled with respect to the total assets.

\[ TAcc_{it} = \alpha + \beta_1 (\Delta Sales_{it}, \Delta REC_{it}) + \beta_2 PPE_{it} + \epsilon_{it} \]  

(3)

where:

\[ \Delta REC_{it} = \text{change in firm } i \text{'s receiving accounts from operating activities from year } t-1 \text{ to } t \]

\[ \epsilon_{it} = \text{error term for firm } i \text{ in year } t \]

The discretionary accruals were then calculated as the difference between total accruals and nondiscretionary accruals for earnings management firms and non-earnings management firms for each condition. The mean discretionary accruals for the earnings management firms and non-earnings management firms were compared in order to evaluate H_{ib} and H_{2b}.

RESEARCH FINDINGS

Earnings Management to Avoid an Earnings Decline and to Avoid A loss

The results using the Burgstahler and Dichev earnings distribution approach using scaled earnings changes is presented in Figure 1. A firm is considered to be an earnings management firm in order to avoid an earnings decline if a scaled earnings change in year \( t \) is greater than or equal to 0 and less than 0.01 of its equity market value at the beginning of year \( t-2 \). However, if a firm reports a scaled earnings change in year \( t \) greater than or equal to -0.01 and less than 0 of its equity market value at the beginning of year \( t-2 \), it is considered to be a non-earnings management firm. The results indicate that there are an unusually high number of observations in the slightly positive earnings change interval.
and an unusually low frequency of observations in the slightly negative earnings change interval. This is consistent with findings of similar studies by Burgstahler and Dichev (1997), Phillips et al. (2003) and Rohnaya et al. (2007). The number of observations is 177 firm-years for the slightly positive earnings change interval and 134 firm-years for the slightly negative earnings change interval.

**Figure 1:** Frequency of Firms across Intervals of Scaled Earnings.

**Figure 2:** Frequency of Firms across Intervals of Scaled Earnings Level.

Figure 2 presents the results using the Burgstahler and Dichev earnings distribution approach using scaled earnings level. If a firm reports a scaled earnings level in year $t$ of at least 0 and less than 0.02,
it is considered to be an earnings management firm in order to avoid a loss. Otherwise, a firm is considered to be a non-earnings management firm if a scaled earnings change in year \( t \) is greater than or equal to -0.02 or less than 0 of its beginning-of-year \( t-1 \) market value of equity. The results presented are consistent with previous studies, in that there is an unusually high frequency of observations in the zero and slightly positive earnings interval compared to the slightly negative intervals. The number of observations is 164 firm-years or 13.3% out of 1236 firm-years for the slightly positive earnings interval and 62 firm-years or 5.0% for the slightly negative earnings interval.

DESCRIPTIVE STATISTICS AND T-TEST ANALYSIS

Earnings Management to Avoid an Earnings Decline

Table 1 presents a summary of the statistics for the comparison of firm-years with zero or slightly positive earnings change (\( EM_1 = 1 \)) and firm-years with slightly negative earnings change (\( EM_1 = 0 \)). For earnings management firms (\( EM_1 = 1 \)), the mean change in net deferred tax liabilities is 0.0049 or 0.49% of the beginning-of-year total assets (median = 0.0006) with values ranging from -2.50 to 8.58% of total assets. The mean discretionary accruals is -0.0092 or -0.92% of the beginning-of-year total assets (median = -0.0002), and the range is between -94.97 to 40.58%. These findings are consistent with the work of Phillips et al. (2003), whereby the mean change in net deferred tax liabilities is higher than the mean discretionary accruals.

For the non-earnings management firms (\( EM_1 = 0 \)) the changes in net deferred tax liabilities and discretionary accruals both exhibit positive means, which is inconsistent with the results obtained by Phillips et al. (2003) and Rohaya et al. (2007). This study finds that the mean change in net deferred tax liabilities is 0.0030 or 0.3% of the beginning-of-year total assets (median = 0.0005) and the mean discretionary accruals is -0.0100 or -1% of the beginning-of-year total assets (median = 0.0071). This means that the mean discretionary accruals is higher than the mean change in net deferred tax liabilities for non-earnings management firms.
Table 1: Descriptive Statistics Earnings Management to Avoid an Earnings Decline

<table>
<thead>
<tr>
<th>Type</th>
<th>N</th>
<th>Mean</th>
<th>Median</th>
<th>Std Deviation</th>
<th>Maximum</th>
<th>Minimum</th>
</tr>
</thead>
<tbody>
<tr>
<td>EM₁ = 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Change in Net DTL</td>
<td>177</td>
<td>0.005</td>
<td>0.0006</td>
<td>0.0145</td>
<td>0.0858</td>
<td>-0.0250</td>
</tr>
<tr>
<td>DAnc</td>
<td>175</td>
<td>-0.009</td>
<td>-0.0002</td>
<td>0.1390</td>
<td>0.4058</td>
<td>-0.9497</td>
</tr>
<tr>
<td>EM₁ = 0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Change in Net DTL</td>
<td>134</td>
<td>0.003</td>
<td>0.0005</td>
<td>0.0156</td>
<td>0.0952</td>
<td>-0.0372</td>
</tr>
<tr>
<td>DAnc</td>
<td>131</td>
<td>0.010</td>
<td>0.0071</td>
<td>0.1073</td>
<td>0.5640</td>
<td>-0.3534</td>
</tr>
</tbody>
</table>

Notes: Change in Net DTL = Annual change in net deferred tax liabilities, calculated by deducting deferred tax assets from deferred tax liabilities, between year t-1 and t, scaled by total assets at year t-1. DAnc = Discretionary accruals computed using modified Jones Model (Dechow et al., 1995)

In order to evaluate hypotheses H₁ₐ and H₁ₐ, the two types of management firm are statistically compared using the t-test; the results for which are presented in Table 2. It is expected that if firms manage earnings upward to avoid reporting an earnings decline, then the earnings management metrics should reflect such activity. It is expected that there will be greater changes in net deferred tax liabilities and greater discretionary accruals in earnings management firm-years than in control firm-years. The results indicate that the mean changes in net deferred tax liabilities is larger for EM₁ = 1 samples in firm-years that just avoid an earnings decline than in the non-earnings management firms. The results are consistent with Rohaya et al. (2007), but the difference is not significant. It is of interest that in this study the mean discretionary accruals for earnings management firms is lower than that for non-earnings management firms, although the difference is not significant, but this is inconsistent with the findings of Phillips et al. (2003) and Rohaya et al. (2007). Based on the t-test, the presented study cannot provide sufficient evidence to infer that Malaysian firms utilize changes in net deferred tax liabilities and discretionary accruals to avoid an earnings decline. Therefore, H₁ₐ and H₁ₐ cannot be proven.
Table 2: T-test Analysis Earnings Management to Avoid an Earnings Decline

<table>
<thead>
<tr>
<th></th>
<th>$EM_i = 1$</th>
<th>$EM_i = 0$</th>
<th>F-value</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>Mean</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Change in Net DTL</td>
<td>0.005</td>
<td>0.003</td>
<td>0.915</td>
<td>0.340</td>
</tr>
<tr>
<td>DAcc</td>
<td>-0.009</td>
<td>0.010</td>
<td>1.129</td>
<td>0.289</td>
</tr>
</tbody>
</table>

Earnings Management to Avoid A loss

Table 3 presents a summary of the descriptive statistics for earnings management and non-earnings management firms in order to avoid a loss. The mean change in net deferred tax liabilities is 0.0052 for the earnings interval of 0 to less than 0.02 of the market value of equity. The mean is higher than the mean for non-earnings management firms, which is only 0.0022, and indicates that the mean change in net deferred tax liabilities for both scaled earnings level samples is positive, which is inconsistent with that obtained by Phillips et al. (2003). However, the positive mean change in net deferred tax liabilities for $EM_2 = 1$ is consistent with that determined by Rohaya et al. (2007). The positive mean implies that the average firm in $EM_2 = 1$ earnings level sample reports book-income higher than taxable income.

Table 3: Descriptive Statistics Earnings Management to Avoid an Earnings Loss

<table>
<thead>
<tr>
<th></th>
<th>$EM_2 = 1$</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>Mean</td>
<td>Median</td>
<td>Std Deviation</td>
<td>Maximum</td>
<td>Minimum</td>
</tr>
<tr>
<td>Net DTL</td>
<td>164</td>
<td>0.0052</td>
<td>0.0000</td>
<td>0.0213</td>
<td>0.2159</td>
<td>-0.0632</td>
</tr>
<tr>
<td>DAcc</td>
<td>156</td>
<td>-0.0265</td>
<td>-0.0229</td>
<td>0.1305</td>
<td>0.5017</td>
<td>-1.0283</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>$EM_2 = 0$</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>Mean</td>
<td>Median</td>
<td>Std Deviation</td>
<td>Maximum</td>
<td>Minimum</td>
</tr>
<tr>
<td>Net DTL</td>
<td>62</td>
<td>0.0022</td>
<td>0.0000</td>
<td>0.0138</td>
<td>0.0733</td>
<td>-0.0337</td>
</tr>
<tr>
<td>DAcc</td>
<td>61</td>
<td>-0.0598</td>
<td>-0.0282</td>
<td>0.2161</td>
<td>0.2631</td>
<td>-1.3376</td>
</tr>
</tbody>
</table>

As with the previous hypotheses, $H_{2a}$ and $H_{2b}$ were evaluated using the t-test. The results presented in Table 4 indicate that even though the mean change in net deferred tax liabilities for $EM_2 = 1$ is higher than that for $EM_2 = 0$, the difference is not significant, which is inconsistent with the
findings of Phillips et al. (2003) and Rohaya et al. (2007). Since there is no significant difference between the means for both samples, the study cannot be used to provide evidence that Malaysian firms use changes in net deferred tax liabilities in managing earnings in order to avoid a loss and therefore H$_{2a}$ cannot be proven.

The mean discretionary accruals for the earnings management firms sample is -0.0265, which is higher than the mean for non-earnings management firms, Table 4. Statistically there is a significant difference between the means for both samples with a p-value of 0.05. Therefore there is evidence that Malaysian firms use discretionary accruals to manage earnings in order to avoid reporting a loss and H$_{2b}$ is supported, which agrees with the findings of Rohaya et al. (2007).

Table 4: T-test Analysis Earnings Management to Avoid an Earnings Loss

<table>
<thead>
<tr>
<th></th>
<th>EM$_2$ = 1 Mean</th>
<th>EM$_2$ = 0 Mean</th>
<th>F-value</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net DTL</td>
<td>0.0052</td>
<td>0.0022</td>
<td>0.616</td>
<td>0.433</td>
</tr>
<tr>
<td>DAcc</td>
<td>-0.0265</td>
<td>-0.0598</td>
<td>4.524</td>
<td>0.035*</td>
</tr>
</tbody>
</table>

*Notes:* *significant at 0.05

DISCUSSION AND CONCLUSION

This paper has examined the use of changes in net deferred tax liabilities and discretionary accruals by Malaysian firms in managing earnings to meet earnings targets. The results indicate that only discretionary accruals have been used as a means to avoid reporting a loss. However there is no evidence that Malaysian firms use changes in net deferred tax liabilities in managing earnings to meet both earnings targets. This study also provides no conclusive evidence that firms use discretionary accruals in managing earnings to avoid an earnings decline. It is of note that the results are consistent with the findings of Phillips et al. (2004), which found no evidence that changes in net deferred tax liabilities is applicable in the detection of earnings management to avoid an earnings decline.
The findings suggest that the implementation of MASB 25 was effective in minimizing opportunities for Malaysian firms to manage their earnings through deferred tax. As suggested by Hoe (2003), MASB 25 is more comprehensive and more specific compared to the previous standard; the original IAS 12, whereby detailed explanation is given on how to account for the tax effect, so that all assets and liabilities are stated net of their tax effect. MASB 25 also requires detailed disclosure on taxation items, so that the users of financial statements have adequate information to perform their own evaluation of the tax position of a company. Kiam (2004) noted that MASB 25 addressed a number of issues, which were not previously addressed in the old standard, with respect to future tax consequences arising from past transactions and events within the reporting framework.

The results of this study contribute to earnings management literature and would be of use to the researchers studying earnings management behaviour. By examining specific accruals, such as deferred tax, this study also provides evidence that there are areas where standards work well and where there may be room for improvement, which would be of interest to standard setters. This study could be extended by examining the use of specific components of deferred tax to manage earnings and future studies should consider how those components influence the quality of reported earnings.

REFERENCES


