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AVOIDANCE OF REPORTED EARNINGS DECREASES AND LOSSES: EVIDENCE FROM MALAYSIA

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The study investigates the existence of earnings management practices by companies listed in the KLSE. Prior studies suggest that managers manage earnings to avoid reporting losses and earnings decreases. This study tests the effects of size and code of corporate governance on the incidence of managing earnings to avoid reporting earnings decrease and losses by Malaysian companies. Using the discontinuity test and level of smoothness test around zero reported earnings, this study finds a significant incidence of companies reporting positive earnings while avoiding showing losses. This finding is consistent with that of previous studies. The study also provides evidence that earnings management practices were reduced following the introduction of a code of corporate governance by the Malaysian government in 2001.

Introduction

Recent studies provide evidence consistent with the intention of managers to maintain a positive earnings number and to avoid earnings decreases. Burgstahler and Dichev (1997) found compelling evidence that about 30% to 44% of managers are managing earnings to avoid reporting losses. A study by Holland and Ramsay (2003) showed that managers of Australian firms also manage earnings for the same reason.

Avoidance of reported losses and earnings decreases is the most important objective of managers engaged in the practice of earnings management. It is argued that consistently positive financial performance has significant positive influence on the market perception (Barth et al., 1999) and at the same time secures management position (DeFond and Park, 1997). Conversely, DeAngelo et al. (1996) found that firms with positive earnings for at least ten years and experience a decline in earnings in the current year, experience on average, a large magnitude of negative abnormal returns over the year. For most companies, maintaining a positive earnings pattern is important to the perceived image of the firm (Bowen et al., 1995).

This incentive is usually accomplished by means of structuring actual transactions and accounting choices. Research studies that follow positive accounting theory suggest income-increasing accounting choices are adopted by firms close to violating their debt covenant limit in order to successfully avoid costly technical violation of debt contracts. Positive accounting theory also predicts that manager will shift earnings from future period to current period to maximize the amount of compensation (Healy, 1985; Watts and Zimmerman, 1986). However, this paper does not focus on specific contracting incentives such as debt covenant or management compensation since there is no evidence that these incentives are dominant in firms with small losses. This paper focuses on avoidance of reported earnings decreases and losses incentive, similar to Burgstahler and Dichev (1997) and Holland and Ramsay (2003).

In an international study by Bhattacharya et al. (2003), Malaysia was categorized among the top ten countries with the highest earnings opacity from thirty-four countries under study. In their study, earnings opacity is measured by earnings aggressiveness, loss avoidance and earnings smoothing. Nevertheless, so far there is a lack of research studies conducted in a developing country utilizing similar method as Burgstahler and Dichev (1997) and Holland and Ramsay (2003). When the market is efficient, all information are known and fully impounded in the share prices. If this is the case, there is no purpose to manage earnings because users are able to unravel managed numbers. Thus, we expect that the level of market efficiency could have some influence on the pervasiveness of managing earnings. We argue that when users are less sophisticated and financial market is less efficient, as in the less developed countries than the situations in the more developed countries, the practice of earnings management could be more severe.

This study investigates whether managers in Malaysia are managing earnings to avoid reported losses and earnings decreases similar to their counterparts in other countries with a more developed financial market in place. A study of this nature is very limited in developing countries that have fewer financial analysts and more smaller size firms (Holland and Ramsay, 2003). An understanding of the real picture of earnings management among companies could help analysts and other financial statement users make proper evaluation of the performance of a firm for the basis of making more accurate economic decisions.

As an extension to prior research, this study tests the effect of size on the practice of avoiding losses. Studies show that size has a negative relation to accounting choices that can increase income because large sized firms are more vulnerable to political actions. Therefore, we expect to find less income increasing practices to avoid losses in large sized firms compared to small sized firms. We also test the effect of the Code of Corporate Governance introduced in Malaysia recently. If the code is implemented and effective in monitoring managers' action, then it can be expected to observe less earnings management practices (to avoid losses) after the code was adopted. This is because the Code promotes audit committee to be independent from the management and knowledgeable to ensure that no misstatements and unbiased financial reporting to the users.

The remainder of the paper is structured into the following sections. Section 2 describes the theory used as the basis of this study that leads us to believe that managers have the intention to manage earnings. Research methods used and data collection procedure are described in section 3. Section 4 discusses the findings and conclusions are contained in section 5.

Management Intention to Avoid Losses and Decreases in Earnings

The behavior of managers for firms to report slightly positive earnings can be explained by using: 1) prospect theory, 2) capital market motivation, and 3) compensation contracts. These are discussed in turn.

First, earnings management surrounding zero profit can be explained by prospect theory (Kahneman and Tversky, 1979). Their study is on the behavior of people in managing risk and uncertainty. Loss aversion is one important concept introduced by Kahneman and Tversky (1979).¹ The theory suggests that individuals are risk averse in the domain of gains and loss averse in the domain of losses. With respect to value, the theory suggests that individual value function is S shaped with the steepest slope around a reference point (a point between gains and losses). Therefore, one would experience the highest marginal increase in value when moving from a loss to a gain. In short, the largest gains for the managers to manage earnings are to bring earnings from a slightly negative to a slightly positive figure (Burgstahler and Dichev, 1997; Holland and Ramsay, 2003).

Another motivation that leads to the same result is to manage impression in the capital market. Barth et al. (1999) found earnings multiple for firms with at least five years of increasing earnings is significantly larger than earnings multiple for other firms without the pattern, in relation to share price. The result implies that the market rewards consistent pattern of increasing earnings. However, the market penalizes firms (firms experiencing on average negative abnormal returns over the year) when the growth pattern is deteriorated by a loss (DeAngelo et al., 1996).

Third, managers may also manage earnings to secure their position in the job market. Managers are expected to meet earnings benchmarks and the basic benchmark is last year's earnings. DeFond and Park (1997) found that when the future expected earnings are good and current earnings are poor, managers use their discretion to shift earnings from the future to the current period. Results in Healy (1985) also show that income-decreasing behavior is prevalent when non-discretionary earnings either fall reasonably far below the lower bound, or are higher than the upper bound specified by a bonus plan.

These explanations show that there are strong incentives for managers to report positive earnings and to maintain the positive pattern of changes in earnings.

Research Method and Data Collection

Since the above discussion predicts that managers have the intention to manage earnings in order to avoid losses and decreases in earnings, we examine the distribution of earnings level and changes data around zero. This method is used to avoid misinterpretation due to measurement error problem inherent in the contemporary unexpected accrual models (Thomas and Zhang, 2000; Pourjajali, Iskandar and Aman, 2002). Following Burgstahler and Dichev (1997) and Holland and Ramsay (2003), we analyzed the distribution of earnings and earnings changes using histograms. If there is no earnings management, we should expect to see that the observations are normally distributed with mean 0 and standard deviation 1 (Burgstahler and Dichev, 1997). If there exist earnings management around

zero profit, there should be a discontinuity (not smooth) in the interval immediately before and after zero.

The discontinuity around zero is tested by using Burgstahler and Dichev's (1997) procedures. The numerator is the expected number of observations in an interval i.e. the average of the two adjacent intervals. The denominator is the estimated standard deviation of the difference. The test statistics (also called 'standardized difference') is approximately normally distributed. For example, the test for the interval just above zero:

$$\text{Test statistic} = \frac{F_i - (F_{i+1} + F_{i+2})/2}{[Np_i(1-p_i) + (1/4)N(p_{i-1} + p_{i+1})(1 - p_{i-1} - p_{i+1})]^{1/2}}$$

Where F is the frequency in interval i, N is the total number of observations and p is the probability of an observation to fall into interval i.²

We select all firms listed on the Kuala Lumpur Stock Exchange (KLSE) available in Datastream from year 1990 to 2001. Since the change in earnings data is needed, we also include the year 1989. We eliminate firms listed under "banks", "insurance", "investment companies" and "specialty and other finance" industry categories because these industries are highly regulated and may have different incentives to manage earnings.³ This procedure yields 4,858 observations (firm-years) distributed across all industries (see Table 1).

We focus on profit before tax, changes in profit before tax and the components of earnings represented by operating cash flows and accruals. Two types of accruals are analyzed i.e. total accruals and working capital accruals. Total accruals are defined as profit before tax minus operating cash flows. Working capital accruals is defined as changes in working capital in the cash flows statement. We deflate all variables with prior period's total assets to enable meaningful analyses. The use of market value of equity may not be appropriate because some firms may have been suspended by KLSE but the previous share price of these firms are captured in the DataStream. Therefore, the market value of equity may not be an appropriate measurement at that point of time.⁴ However, alternative deflators yield similar results, such as the beginning of year book value of equity and the previous year's sales. These are used to test the stability of the conclusion.

Table 2 shows descriptive statistics for scaled profit before tax (PbTS) in Panel A and change in profit before tax (CPS) in Panel B. The total number of observations is 4,858 and the number of available observations per year increases steadily from 157 for 1990 to 630 by year 2001. To maintain the originality of the data, these statistics are calculated without eliminating extreme value observations.⁵ In addition, we only describe the frequency of the data distribution around zero profit and no attempt was made to analyse the magnitude of each variable at each positive or negative end.

Table 2 (Panel A) shows that mean and median for PbTS is positive in all periods. Panel B in Table 2 also shows that mean for CPS is positive in all periods except in year 2000. Meanwhile, the median for CPS is also positive except in 1998 and 2001. This indicates the existence of positive skewness in the profit data in these two years.⁶ Panel A and B of Table 2 also show that the mean is always greater than the median.

Table 1: Sample firm-years

N

Industry	firm-years
Automobiles & Parts	170
Beverages	12
Chemicals	98
Construction & Building Mats.	921
Distributors	142
Diversified Industrials	233
Electricity	77
Electronic & Electrical	271
Engineering & Machinery	490
Food Producers & Processors	653
Food & Drug Retailers	6
Forestry & Paper	27
Gas Distribution	29
General Retailers	106
Health	19
Household	253
IT Hardware	21
Leisure & Entertainment & Hotels	176
Media & Photography	57
Mining	24
Oil & Gas	74
Packaging	196
Pharmaceuticals	5
Real Estate	437
Software & Computer Services	27
Steel & Other Metals	55
Support Services	65
Telecommunication Services	39
Tobacco	24
Transport	138
Water	13
Total	4858

Table 2: Descriptive Statistics Analysis

Panel A: Profit before Tax Scaled by Total Assets_{t-1} (PbTS)

Year	N	Mean	Median	Std. Dev.
1990	157	0.0924	0.0778	0.1157
1991	191	0.1655	0.0875	0.9305
1992	221	0.6213	0.0876	7.7616
1993	253	0.1268	0.0842	0.2409
1994	320	0.1325	0.1029	0.1806
1995	375	0.1277	0.1145	0.1068
1996	431	0.1265	0.1113	0.1224
1997	511	0.1048	0.0929	0.1490
1998	571	0.5898	0.0410	8.5430
1999	587	1.6688	0.0472	32.1768
2000	610	0.1149	0.0482	1.7012
2001	630	6.2692	0.0379	149.5756
Total	4858	1.1838	0.0713	55.1245

Panel B: Change in Profit Scaled by Total Assets_{t-1} (CPS)

Year	N	Mean	Median	Std. Dev.
1990	157	0.0274	0.0179	0.0979
1991	191	0.0916	0.0179	0.9371
1992	221	0.5374	0.0126	7.7813
1993	253	0.0380	0.0049	0.2372
1994	320	0.0375	0.0157	0.1673
1995	375	0.0272	0.0173	0.0729
1996	431	0.0249	0.0164	0.0911
1997	511	0.0080	0.0060	0.1252
1998	571	0.0122	-0.0349	0.8765
1999	587	0.2525	0.0103	5.2307
2000	610	-0.0809	0.0049	2.5448
2001	630	2.0440	-0.0025	39.9911
Total	4858	0.3255	0.0068	14.6494

Results

Results are discussed in two parts, i.e. earnings levels and earnings changes.

Earnings Levels

Theoretical discussions in previous section propose that earnings are managed to avoid earnings decreases. Therefore, we address this issue thoroughly. Under the assumption

of no earnings management, the cross-sectional distributions of earnings levels and earnings changes are expected to be relatively smooth.

Figure 1 is a histogram of PbTS scaled over beginning total assets for the range -0.25 to $+0.25$ with an interval width of 0.01 . The figure shows a single-peaked distribution with an abnormality at zero. Visual inspection shows fewer observations in the interval immediately below zero and a high concentration of observations in the interval immediately above zero. This result suggests that the frequency of firms in the interval slightly less than zero is not significantly less than the expected frequency given the smoothness of the remainder of the distribution (the test statistics is 3.1517). Whereas the frequency of firms in the interval slightly greater than zero is more than the expected frequency under the smoothness assumption (the test statistic is -5.9640). Thus, assuming that the standardised differences are approximately normal, the test statistic for the interval immediately above zero is significant. This would lead to a conclusion that the distribution is relatively not smooth and there is a discontinuity at zero in the distribution.

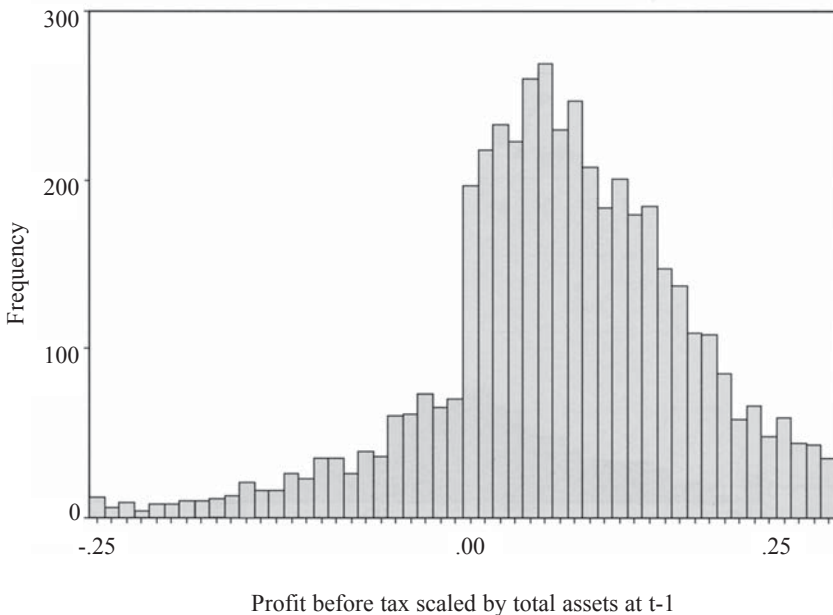


Figure 1: Empirical Distribution of Earnings Scaled by Total Assets at t-1

This result confirms evidence provided by Burgstahler and Dichev (1997) for U.S. firms and Holland and Ramsay (2003) for Australian firms. There are two competing explanations that can describe the result. First, the management is legitimately exercising their discretion to signal private information about the firm's expected future profitability (DeFond and Park, 1997; Holland and Ramsay, 2003). Alternatively, the management has the intention to mislead investors and other financial statement users by managing earnings. This second explanation to the phenomenon is unobservable to researchers (Dechow and Skinner, 2000; Holland and Ramsay, 2003). Hence the distribution of reported earnings

approach may provide some indication about the extent of possible earnings management. However, this study does not cover the investigation into these competing explanations.

Earnings Changes

The second prediction is that earnings are managed to sustain the previous year's profit performance. A histogram in Figure 2 displays the pooled, cross-sectional distribution of changes in CPS scaled over the beginning total assets. The range of the scale is from -0.15 to $+0.15$ with an interval width of 0.01 . An inspection of the histogram in Figure 2 shows a single-peaked distribution with a slight discontinuity at zero. This visual is consistent with the intention of the management to avoid earnings decreases. The frequency of firms with earnings changes in slightly less than zero interval is less than the expected frequency given the smoothness of the remainder of the distribution (Burgstahler and Dichev's test statistic is -4.624). Conversely, the frequency of firms with earning changes slightly greater than zero is higher than the expected frequency (the test statistic is -4.122).

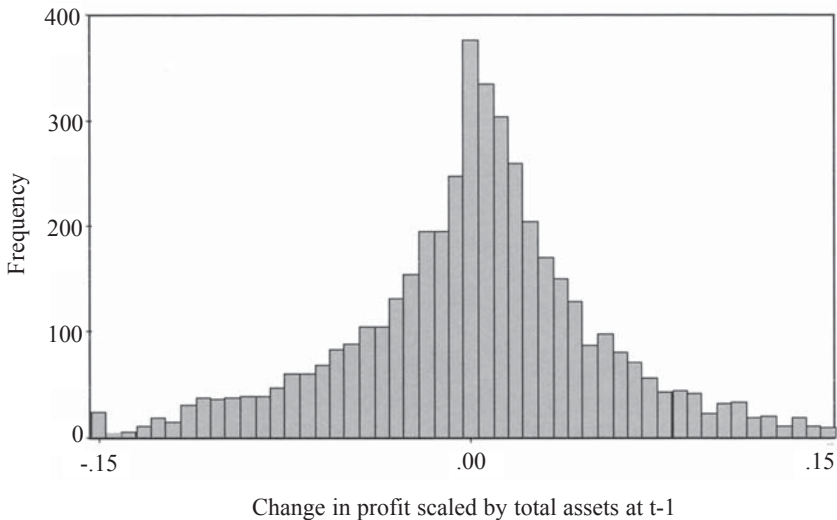


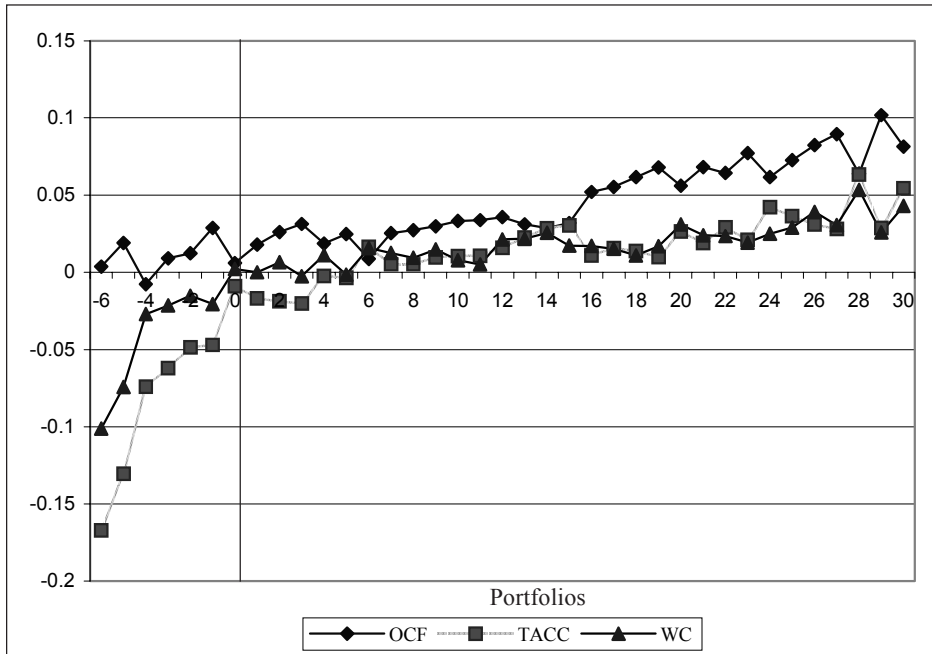
Figure 2: Empirical Distribution of Changes in Earnings Scaled by Total Assets at t-1

Thus, assuming that the standardised differences are approximately normal, the test statistics are extremely significant. The result shows there is a discontinuity at zero in the distribution of earnings changes. This result supports the evidence provided by Burgstahler and Dichev (1997) and Holland and Ramsay (2003).

The Methods Used

We investigated the components of earnings, namely operating cash flows (OCF), total accruals (TACC) and working capital accruals (WC) in order to detect the pattern of these

components surrounding zero earnings. Firms are grouped in portfolio of 100 firms using zero earnings as a starting point. The first 100 firms just above zero earnings are in the first portfolio (denoted as portfolio 0). The adjacent portfolio (next 100 firms) is named as portfolio 1 and so on. Since there are many firms recording positive earnings, the grouping process yields 37 portfolios of firms to the right of portfolio 0 (see Figure 3). The adjacent portfolio (100 firms) with earnings less than zero is denoted as portfolio -1. Figure 3 shows that TACC and WC are extremely negative in firms with extremely negative earnings. The focus of this paper is from portfolio -4 to portfolio 4. A sharp increase of TACC and WC occurs from portfolio -1 to portfolio 0. This result is consistent with Burgstahler and Dichev (1997) study that found accruals are managed upward to increase earnings in firms with slightly positive earnings.



Note: Earnings portfolio of 100 observations each and the median of operating cash flows (OCF), total accruals (TACC) and working capital accruals (WC) scaled by total assets at t-1. Portfolio 0 consists the first 100 firms reporting positive earnings.

Figure 3: Portfolios of Operating Cash Flows, Total Accruals and Working Capital Accruals

However, a contrast pattern occurs for the OCF. There is a sharp decrease in the OCF from portfolio -1 to portfolio 0. This result shows that managers are not using actual transactions to increase earnings. If actual transactions are managed to increase earnings (such as by increasing cash sales), there should be an increase in the OCF when we move from portfolio -1 to portfolio 0.

Size Effect

Positive accounting theory predicts larger firms to adopt income decreasing accounting choices due to the more vulnerability to political actions compared to smaller firms. Therefore, we examine this effect on the practice of avoiding losses i.e. whether larger firms have less incentive to increase earnings compared to smaller firms. Holland and Ramsay (2003) compared the mean of earnings level as well as the mean of earnings changes between large and small firms categorized based on each year's median of total asset. However, this section investigates the smoothness of the histogram around zero earnings in firms categorized according to different sizes. We partition the sample into five equal quintiles and draw a histogram using the same attributes as used in section 4.1, i.e. ranging from -0.25 to 0.25 with 0.01 interval width. If large firms have the intention to reduce political costs, we should observe a less significant discontinuity test around zero earnings compared to small firms.

Table 3: Smoothness Tests Based on Quintiles

Quintiles	Slightly positive	Slightly negative
1	2.3098*	-2.5821*
2	2.2945*	-3.3187*
3	1.1100	-2.8383*
4	0.7857	-3.0293*
5	0.6300	-2.0386*

* Significant at 0.05 or less. The number of observations per quintile is 971 for quintiles 1 and 5, and 972 for quintiles 2 to 4.

The result in Table 3 shows that the significance level of smoothness tests in the slightly positive interval diminishes as sample size increases. The standardized difference between expected and actual number of observations in the slightly positive interval is only significant in the first and second quintiles. This suggests that for quintiles 3 to 5, the actual number of firms reporting slightly positive earnings is not significantly far from the expectation. Nevertheless, all quintiles show significantly less than expected observations in the slightly negative interval. Overall, the results suggest that there may be earnings management occurring in firms of different sizes, however the evidence is weaker in large firms. This result gives limited support to our earlier expectation that larger firms have less incentive to increase earnings compared to smaller firms.

Code of Corporate Governance

In order to enhance the level accountability and transparency, a high-level Finance Committee on Corporate Governance was set up in March 1998.⁷ The committee has issued 'The Finance Committee Report on Corporate Governance' on 25 March 1999. One of the aspects covered in the report is to set out the first Malaysian Code on Corporate

Governance, which comprises the principles and best practices for good governance that listed firms can follow (Securities Commission, 2004).

Malaysian code on corporate governance was introduced in 2000 as a response to the recent financial crisis (Malaysian Code on Corporate Governance, 2000) and the disclosure about compliance with the code was made mandatory in 2001 (KLSE Practice Note No. 9/2001). Among other matters, this code specifies the characteristics and the duties of the board of directors, audit committee, and the management in promoting good corporate practices. Most firms follow the code of best practice in year 2001 onwards. We predict that this landmark event reduces the possibility of earnings management and consequently the firm's income is smoothly distributed in year 2001. We also predict that in other years, the discontinuity around zero earnings persists. Due to a lack of data in the years prior to crisis that report negative earnings (less than 20 firms with available data), we only report the yearly smoothness test from 1998 to 2001.

The result in Table 4 shows that there are significant discontinuities around zero earnings in years 1998 to 2000. However, the result in year 2000 is weaker i.e., actual observations is not significantly higher than expected in the slightly positive interval, but significantly lower than expected in the slightly negative interval. The weaker result could be due to firms improving their reporting practices after the corporate governance issue being scrutinized. The earnings management practice (to avoid losses) is reducing further in year 2001 subsequent to the introduction of the code of corporate governance. There is no significant discontinuity around zero earnings detected for the year.

Therefore, it can be argued that it is timely to have stricter monitoring by regulatory bodies amidst the tarnished image of the accounting profession engaging in earnings management practices. The evidence supports the belief that better corporate governance would reduce management propensity to engage in earnings management to avoid losses.

Table 4: Smoothness Tests Based on Financial Year

Years	N	Slightly positive	Slightly negative
1998	571	1.9823*	-4.1838*
1999	587	2.1772*	-2.5945*
2000	610	1.1281	-2.2833*
2001	630	0.6576	-0.8515

* Significant at 0.05 or less.

Conclusion

This is an exploratory examination on the existence of earnings management practices by companies listed in the KLSE. The availability of some allowable accounting methods or the application of different assumptions or estimates within an accounting method is expected to result in earnings management. Hence, the manager may choose an accounting method that can meet the need of the management to reflect a good performance.

Results show two main findings. Firstly, the cross-sectional distribution of earnings level shifts from slightly negative to slightly positive. This shows more companies report positive earnings while avoiding reporting losses. This finding is consistent with that of the previous studies (e.g. Burgstahler & Dichev 1997; Holland & Ramsay 2003). Secondly, the cross-sectional distribution of changes in earnings scaled by the beginning total assets shows similar results. The study also finds managers of firms reporting slightly positive earnings use accounting accruals to increase earnings.

The study provides evidence of the existence of earnings management among listed companies in Malaysia. Results suggest that companies manage earnings in order to give a good picture of the company economic performance or to influence contractual outcomes that depend on reported financial numbers (Healy & Wahlen 1999). Results are also consistent with the argument that larger firms have less incentive to manage earnings upward. With the introduction of the Malaysian Code of Corporate Governance, the evidence shows less firms attempt to manage earnings to avoid losses. A further study is necessary in order to determine which particular corporate governance variables are effective in controlling the practice.

Notes

- ¹ In prospect theory, loss aversion refers to the tendency for people to strongly prefer avoiding losses than acquiring gains.
- ² This test is not free from criticism. See Holland and Ramsay (2003) for discussions.
- ³ For example, there are studies examining the effect of the minimum regulatory capital requirement on bank's loan loss provision and loan write-offs (Beatty et al, 1995; Collins et al., 1995; Moyer, 1990).
- ⁴ The same problem encountered by Holland and Ramsay (2003) that some firms have a constant market value of equity over several years.
- ⁵ Burgstahler and Dichev (1997) exclude top and bottom 1% of observations sorted according to net profit after tax. Tests show that exclusions of extreme observations do not alter the conclusions.
- ⁶ Skewness tests indicate that the skewness for 1998 equals 17.187 and for 2001 equals 23.245.
- ⁷ The high-level Finance Committee is chaired by the Secretary General of Treasury and the Minister of Finance and its members comprise the Governor of the Central Bank, the Chairman of the Securities Commission, the Chairman of the Kuala Lumpur Stock Exchange, the Chairman of the Financial Reporting Foundation and representatives from various industry organizations.

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