ASSET IMPAIRMENT AND CORPORATE GOVERNANCE: EVIDENCE FROM THE FINANCE INDUSTRY

Tzong-Huei Lin, Ching-Chieh Lin**, Yueh Cheng***, Wen-Chih Lee*****

Abstract

The purpose of this paper is to explore whether asset impairment loss as stipulated in International Accounting Standards (IAS) No. 36 provides an opportunity for finance industry to engage in earnings management, and whether corporate governance mechanism can deter such behavior. Using a sample of Taiwan finance industry, our results show that the amounts of asset impairment losses are related to "income smoothing" incentive rather than "big bath" motive. We also find that directors/managers recognize asset impairment losses basing on self-interest consideration and corporate governance mechanism have significant effect on asset impairment decision. The result also shows that financial holding company recognizes less asset impairment losses than non-financial-holding financial institution. Our conclusions are robust to different model specification, and are free from multicollinearity and outliers effects. This study contributes to understand the asset impairment behavior of finance industry and the behavior differences between financial holding company and non-financial-holding financial institution.

Keywords: Assets impairment, Earnings management, Corporate governance

**Assistant Professor, Department of Accounting, National Kaohsiung University of Applied Sciences*
***Assistant Professor, Department of Accounting, I-Shou University*
****Lecture, Department of Business Administration, Chihlee Institute of Technology*
*****Professor, Graduate Institute of Commerce, National Kaohsiung University of Applied Sciences*

1. Introduction

The purpose of this paper is to explore whether asset impairment loss as stipulated in International Accounting Standards (IAS) No. 36 provides an opportunity for finance industry to engage in earnings management, and whether corporate governance mechanism can deter such behaviors. In addition, Taiwan encourages financial institutions to engage in acquisition or merger transactions to set up financial holding companies. This offer an opportunity to investigate whether there exist significant difference on asset impairment behavior between financial holding company and non-financial-holding financial institution.

The European Union (EU) required that companies listed in the EU prepare financial reports in accordance with the International Financial Reporting Standards (IFRS) starting in 2005. Since then, many countries announced similar requirements. For example, South Korea announced that, starting in 2011, all listed companies in South Korea would be required to prepare financial reports in accordance with IFRS. Japan and Taiwan adopted a similar policy. However, the quality of financial reporting is still determined by, among others, management incentives, legal systems and corporate governance (Ball & Wu, 2003; Leuz, 2003; Schipper, 2005). IAS No. 36 and Taiwan's SFAS No. 35 provide a setting for examining whether the impairment loss provides an earning management opportunity and whether an effective corporate governance mechanism can mitigate such behavior. Extant research tends to use aggregate measures, such as timeliness, conservatism (Ball & Wu, 2003), or discretionary accruals (Dechow, Sloan, & Sweeney, 1995) for empirical investigation. Our study supplements this line of research by focusing on the implementation of a particular financial reporting standard whereby policy implications with respect to an accounting issue can be more clearly drawn. As to corporate governance, focusing on a single standard may help members of board of directors or audit committee members identify accounting issues for special scrutiny.

Using a sample of Taiwan finance industry sample, our results show that the amounts of asset impairment losses are related to "income smoothing" motivation[7] rather than "big bath" motivation[8]. We also find that directors/managers recognize asset impairment losses basing on self-interest consideration and corporate governance mechanism have significant effect on asset impairment decision. The result also shows that financial holding company recognizes less asset impairment losses than non-financial-holding financial institution. Our conclusions are robust to different model specification, and are free from multicollinearity and outliers effects.

[7] A firm with unexpectedly high earnings performance has incentive to recognize a large amount of impairment loss to smooth out earnings.
[8] A firm with unexpectedly poor earnings performance has incentive to write-down the impaired assets to improve the financial performance in the future.

This paper makes three contributions to the literature. First, previous literature generally use manufacturing firms as the sample, there is scarce evidence about the asset impairment behavior of finance industry. This paper helps to understand the asset impairment behavior in such industry. Second, this study compares the behavior differences between financial holding company and non-financial-holding financial institution and fills the gap in the related literature. Third, findings show that corporate governance mechanisms have effects on firms' asset impairment decisions. This offers policy implication.

The remainder of this paper is organized as follows. The next section reviews the prior literature. Section 3 develops research hypotheses. Section 4 describes research design, including sample, variable measurement and empirical models. Section 5 reports the results. The final section is discussion and conclusion.

2. Literature review

Two strands of research are related to assets impairment. One examines market reactions to the announcement of the asset impairment loss. Another strand of research investigates the motivations of firms recognizing an impairment loss. Empirical findings are mixed in the first strand. For example, Francis, Hanna, and Vincent (1996) find that announcement of an impairment loss conveys information about decreases in economic values of assets. However, Strong and Meyer (1987) find negative average cumulative abnormal returns around the impairment announcement date, but the negative returns are reversed in six days after the impairment announcement. Finally, some studies do not find market reactions to be significant (Hogan & Jeter, 1998; Zucca & Campbell, 1992).

Subsequent studies have attempted to improve research design to resolve the inconsistent findings. Bunsis (1997) partitions the write-offs based on how the events underlying the write-off are expected to affect cash flows: decreasing, increasing or no effect on future cash flows. The results show that the market reacts negatively (positively) to events that are expected to decrease (increase) expected future cash flows. Alciatore, Easton, and Spear (2000) examine the case of the fall in oil and gas prices in late 1985 and early 1986. They find no significant correlation between the write-down amounts and contemporaneous returns because write-downs tend to be reported after the associated decline in share prices-- the market already knew at least some of the information implicit in the write-down amounts. Collins and Henning (2004) argue that many studies document associations between poor earnings performance for the firm as a whole and subsequent write-downs of only certain assets of the firm, which is indirect evidence. They examine the context of write-downs accompanying segment divestitures. Results show that the write-down magnitude is strongly associated with segment earnings declines, with earlier declines in segment earnings more heavily weighted in write-down measurement than more recent declines.

The second line of research focuses on the motivations of firms that recognize an impairment loss. Francis, Hanna, and Vincent (1996) examine factors driving write-down decisions during 1989-1992 that predate SFAS No.121 and find that the decisions can be accounted for by both impairment and manipulation factors. Loh and Tan (2002) examine firm-specific and macro-economic factors that are likely to influence the asset write-off decision in Singapore. They find that macroeconomic factors, such as unemployment rate, GDP growth rate and occupancy rate of properties, and firm-specific factors, including profitability and a change of board chairman, are the determinants. Elliott and Shaw (1988) and Strong and Meyer (1987) indicate that write-off decision is associated with manager's incentives.

Rees, Gill, and Gore (1996) find that abnormal accruals in the year of the asset write-down are significantly negative; however, the abnormal accruals in the write-down year do not reverse in subsequent years, suggesting that the firms have experienced a permanent shift in their accrual balances in the write-down year. The authors argue that managers provide credible signals to investors regarding future firm performance. Riedl (2004) contrasts the characteristics of write-offs reported prior versus subsequent to the issuance of SFAS No.121. Empirical results reveal that economic factors have a weaker association with write-offs relative to that between "big bath" reporting behavior and write-offs. In addition, this "big bath" reporting behavior more likely reflects opportunistic reporting by managers than the provision of their private information. Overall, the results suggest that the reporting quality of write-offs under SFAS No.121 has decreased.

Empirical studies related to assets impairment in Taiwan include Hsieh and Wu (2005) and Chao (2006). Hsieh and Wu (2005) investigate determinants of the timing and the amount of assets impairment decisions of Taiwan's SFAS No. 35. They also examine market reactions to impairment announcement. Empirical results show that determinants for early adopters include taking a "big bath" (the reporting motivation) and factors reflecting the accrual-based and cash flow-based recoverability of long-lived assets (operational motivations). The amount of an impairment loss is associated with only reporting motivations (the taking a "big bath" purpose, the income smoothing purpose, and the change in top management) for early adopters. For non-early adopters, the amounts of assets impairment are associated with not only the reporting (income smoothing) but also operational motivations. Market reactions to announcements of an impairment loss reveal that the stock market reacts significantly and negatively to fourth-quarter impairment loss. In addition, the stock market does not react significantly to first-quarter impairment loss. Chao (2006) has a similar finding.

In summary, prior researches do not discuss issues related to the finance industry and the asset impairment behavior difference between financial holding company and non-financial-holding financial institution. Our study could fill this void in the literature by examining the asset impairment decision of finance industry.

On the other hand, to improve the quality of financial reporting, extant research suggests that an effective corporate governance mechanism is helpful. For example, Beasley (1996) finds that outside directors can deter fraudulent financial reporting. Klein (2002) suggests that earnings management tends to decrease with the increase of independent directors. Peasnell, Pope, and Young (2005) find that the likelihood of managers making income-increasing abnormal accruals to avoid reporting losses and negative earnings changes is negatively associated with the proportion of outside directors. But, they do not find such an effect of audit committee. Ng and Tan (2003) present experimental findings that precise standards and effective audit committees are potential substitutes/compensating mechanisms for enhancing auditor effectiveness and financial reporting quality. Agrawal and Knoeber (1999) argue for larger size of boards in firms where information is otherwise difficult to obtain. Adams and Mehran (2002) find that banking firms with larger boards perform better.

Divergence between control right and cash flow right may weaken the monitoring function of financial reports and give managers the power to expropriate the minority shareholders (La Porta, Lopez-de-Silanes, & Shleifer, 1999). In an international context, Ali and Hwang (2000) show that countries with low demand for information from published financial reports tend to employ accounting practices that produce accounting data with low value relevance.

The above findings suggest that corporate governance mechanisms may mitigate the potential consequence of taking advantage of the discretion provided in an accounting standard. We thus examine this conjecture using the asset impairment loss as the research setting.

3. Research hypotheses

Under IAS No. 36 and Taiwan's SFAS No. 35, an enterprise should conduct an impairment test for the values of long-lived assets on the balance sheet date. If the carrying amount of a long-lived asset is higher than its recoverable amount, then an impairment loss should be recognized on the income statements instantly. Thus, managers play an important role in judging an impairment loss. Riedl (2004) argues that reporting discretion over write-offs may increase after adoption of SFAS No.121, as the standard's subjective criteria may enable managers to justify their reporting choices more easily than they could before the standard was adopted. Hsieh and Wu (2005) indicate that firms would early adopt Taiwan's SFAS No. 35 to recognize large impairment losses in the period of unexpected poor earnings performance to improve future earnings performance or to have the restoration flexibility of impairment losses in the future period. These studies suggest the potential that the provision of reversal may provide an opportunity for earnings management.

Since IAS No. 36 (and Taiwan's SFAS No.35) involves managers' estimation of parameters, the component of subjectivity during determining amount for recognizing an impairment loss may give rise to an opportunity for earnings management. Income smoothing has been indicated as an explanation for earnings management (e.g., Zucca & Campbell, 1992; Bartov, 1993). Levitt (1998) further points out "cookie jar" reserves as just such a technique by "overstating sales returns or warranty costs in good times and using those overstatement in bad times to reduce similar charges." Extending Levitt's argument, it appears that given an opportunity, a firm that recognizes a higher amount of impairment loss when current period's earnings performance is good (income smoothing) or bad (big bath). We thus posit the following hypotheses:

H1. Ceteris paribus, the amounts of asset impairment losses are associated with "big bath" motivation.

H2. Ceteris paribus, the amounts of asset impairment losses are associated with "earnings smoothing" motivation.

Since the directors'/managers' bonus and firms' share prices are conditional on the earnings of the firm. If directors/managers own high shareholdings, they would lose more if they recognize more asset impairment losses. Based on above arguments, we construct the following hypotheses:

H3A. Ceteris paribus, the percentage of shares owned by managers will be negatively related to the amounts of asset impairment losses.

H3B. Ceteris paribus, the percentage of shares owned by directors will be negatively related to the amounts of asset impairment losses.

As discussed in the literature review, an effective corporate governance mechanism can improve the quality of financial reporting. In the issue of the asset impairment loss, we expect that the "cookie jar" reserve type of earnings management will be deterred by an effective corporate governance mechanism. Based on above discussion, we thus develop the hypothesis as follows:

H4. Ceteris paribus, the difference between control rights and cash flow rights is positively related to the amounts of asset impairment loss.

As for the role of institutional investors, Pound (1988) proposes three different hypotheses about the relationship between the firm's performance and institutional investors. The three hypotheses are efficient monitoring hypothesis, conflict of interest hypothesis, and strategic alignment hypothesis. Because prior literature about institutional investors got mixed results, we do not specify the direction and construct the hypothesis as follows:

H5. Ceteris paribus, the percentage of shares owned by institutional investors has no relationship with the amounts of asset impairment losses.

In order to improve the operating efficiency and assets quality, Taiwan government encourages financial institutions to engage in acquisition or merger transactions to set up financial holding companies. This offer an opportunity to investigate whether there exist significant difference on asset impairment behavior between financial holding companies and non-financial-holding financial institutions. Based on above discussion, we develop the hypothesis as follows:

H6. Ceteris paribus, the financial holding company would recognize less asset impairment losses than the non-financial-holding financial institution.

4. Research design

4.1. Sample selection

This paper examines the asset impairment behavior of Taiwan financial industry. Since Taiwan's SFAS No. 35 was effective for financial statements ended on and after December 31, 2005 and some variables need past one year's accounting information, our sample period covers 2006 to 2008. The financial data resource comes from Taiwan Economic Journal (TEJ) Database [9]. After deleting observations missing accounting information need for our analysis, the final sample is 131 observations.

4.2. Empirical models

The empirical model used in this study is as follows:

$$IMP_{it} = \beta_0 + \beta_1 BATH_{it} + \beta_2 SMOOTH_{it} + \beta_3 MANHOLD_{it} + \beta_4 DIRHOLD_{it} + \beta_5 DEV_{it}$$
$$(-) \qquad (+) \qquad (-) \qquad (-) \qquad (+)$$
$$+ \beta_6 INSTI_{it} + \beta_7 D_{it} + \beta_8 \Delta CFO_{it} + \beta_9 \Delta ROA_{it} + \beta_{10} \Delta SALES_{it}$$
$$(?) \qquad (-)$$
$$+ \beta_{11} SIZE_{it} + \beta_{12} BTM_{it-1} + \varepsilon_i \quad (1)$$

where,

IMP_{it} : the impairment loss recognized by firm *i* in year t (reflected as a positive amount) deflated by total assets at the end of period t-1.

$BATH_{it}$: the proxy for "big bath" motivation, equals to the change in firm *i*'s pre-write-off earnings from period t-1 to t, divided by total assets at the end of year t-1, when below the median of nonzero negative values of this variable, and 0 otherwise.

$SMOOTH_{it}$: the proxy for "earnings smoothing" motivation, equals to the change in firm *i*'s pre-write-off earnings from period t-1 to t, divided by total assets at the end of year t-1, when above the median of nonzero positive values of this variable, and 0 otherwise.

$MANHOLD_{it}$: the percentage of shares owned by firm *i*'s managers at the end of year t.

$DIRHOLD_{it}$: the percentage of shares owned by firm *i*'s directors at the end of year t.

DEV_{it} : the difference between control rights and cash flow rights, equals to the control stockholder's control rights minus the control stockholder's cash flow rights.

$INSTI_{it}$: the percentage of shares owned by institutional investors at the end of year t.

D_{it} : a dummy variable that equals 1 for the financial holding company and 0 otherwise.

$\triangle CFO_{it}$: firm *i*'s changes in operating cash flows from period t-1 to t, divided by total assets at the end of year t-1.

$\triangle ROA_{it}$: the percentage change in firm *i*'s return of total assets from period t-1 to t.

$\triangle SALES_{it}$: the percentage change in firm *i*'s net sales from period t-1 to t.

$SIZE_{it}$: the logarithm transformation of firm *i*'s total assets at the end of year t.

BTM_{it-1} : firm *i*'s book to market ratio at the end of year t-1, measured by the ratio of book value of the stockholders' equity to the market value of firm *i*.

ε_{it} : regression residual.

Since the value of the dependent variable in eq. (1) would be a positive number if firm *i* recognized the impairment loss (reflected as a positive amount) in year t, otherwise it will be zero. It gives rise to a potential of being a censored data. We employ a Tobit regression to investigate the assets impairment decisions of finance industry in addition to the ordinary least squares (OLS) approach.

Following Riedl (2004), we use BATH to proxy "big bath" motivation. Hypothesis 1 expects that firms recognize the assets impairment loss as a result of big bath incentives. Hypothesis 1 will be supported if β_1 is significantly negative. The variable SMOOTH is used to proxy "earnings smoothing" motivation. β_2 will significantly positive if managers use assets impairment to smooth earnings. Hypothesis 3A and 3B expect that managers/directors recognize the assets impairment loss from the self-interest motivation, as a result, we expect β_3 and β_4 will be significantly negative. From the viewpoint of corporate governance, Hypothesis 4 predicts that β_5 will be significantly positive. As for the role of institutional investors, Pound (1988) proposes three different hypotheses. Thus we do not expect the direction of INSTI (β_6).

Referred to prior research, we include $\triangle$CFO, $\triangle$ ROA, ΔSALES, SIZE and BTM as control variables. $\triangle$ CFO represents the net measure of performance, which reflects more of return on investment in the asset, and ΔSALES represents the gross measure of performance, which reflects more of the recoverability of an asset value (Riedl 2004). Francis et al. (1996) state that managers will recognize more impairment losses when firm performance is deteriorated than last year, we expect the coefficient of $\triangle$ ROA will be negative. In addition, the last year's book to market ratio reflects

[9] TEJ is a company which provides various financial and corporate data commercially. It is the preferred data source of the most researchers in Taiwan.

the possibility for assets impairment, so we include the variable BTM as control variable. Finally, we include SIZE as another control variable. Elliott and Shaw (1988) provide evidence that firms disclosing large asset impairment losses are larger than other firms in their industries.

5. Empirical results

5.1. Descriptive statistics

[Insert TABLE 1 about here]

Table 1 provides descriptive statistics for our research variables. The mean of asset impairment losses is 0.2 percent of total assets. For the two earnings management incentives measures, the mean for $BATH_{it,}$ $SMOOTH_{it}$ is -0.019 and 0.009 respectively and is consistent with our expectation. The average percentage of shares owned by firms' managers or directors is about 0.35 percent ($MANHOLD_{it}$) and 21.61 percent ($DIRHOLD_{it}$) respectively. The difference between control rights and cash flow rights (DEV_{it}) is 7.49 percent on average. The mean percentage of shares owned by institutional investors is 60.86 percent. Table 1 also shows that 30.40 percent of our observations belong to financial holding companies. As for the control variable, the mean for $\triangle CFO_{it}$ is 0.017, and the mean for $\triangle ROA_{it}$ and $\Delta SALES_{it}$ is negative. The mean for firms size ($SIZE_{it}$) and last year's book to market ratio (BTM_{it-1}) is 18.169 and 0.893 respectively.

[Insert TABLE 2 here]

Correlation coefficients are reported in Table 2. From Pearson correlation coefficients matrix, we find that $BATH_{it}$ is significantly negative correlated with IMP_{it}, consistent with hypothesis H1's expectation. Table 2 also shows that DEV_{it} has a significantly positive relationship with IMP_{it} and support hypothesis H4. We also find that it is less likely for the financial holding company to recognize asset impairment losses. Overall, Table 2 shows that there is not serious multicollinearity within our research variables. However, we still check the variance inflation factors (VIFs) in subsequent analyses.

5.2. Multivariate results

[Insert TABLE 3 here]

Table 3 shows the multivariate OLS regression results. [10] [11] First, the explanation power of our independent variables is about 47 percent and the empirical model is highly significant. Second, the test results of our hypotheses are presented as follows. From the empirical results of Table3, we find that the coefficients of $BATH_{it}$ and $SMOOTH_{it}$ are both significantly positive. This means that the amounts of asset impairment losses are related to "income smoothing" motivation rather than "big bath" motivation. The above results support hypothesis H2, but are inconsistent with hypothesis H1. That is, in the period with good performance, managers of finance industry are inclined to recognize more asset impairment losses to smooth the earnings. However, in the period with poor performance, managers would not take a big bath by recognizing more asset impairment losses. We also find that the coefficients of $MANHOLD_{it}$ and $DIRHOLD_{it}$ are both significantly negative (one-tailed). The results mean that when directors/managers own more shareholdings of the firms, they would recognize less asset impairment losses. It may be result from the bonus and share prices are based on the earnings. The additional two corporate governance mechanisms (DEV_{it} and $INSTI_{it}$) in table 3 are both significantly negative. $\beta_5 > 0$ implies that when the firm's control right deviates from cash flow right more, the firm will recognize more asset impairment losses, $\beta_6 > 0$ means that firms will recognize more asset impairment losses with higher institutional investors' shareholdings. In addition, the coefficient of dummy variable D_{it} is significantly negative, this indicates that the financial holding company recognizes less asset impairment losses than the non-financial-holding financial institution.

Among the control variables, ΔCFO_{it} and ΔROA_{it} have negative relationship with IMP_{it} and are consistent with previous literature. We also find that BTM_{it-1} is negatively correlated with asset impairment losses (IMP_{it}). However, the direction of $\Delta SALES_{it}$ and $SIZE_{it}$ are inconsistent with prior research, it may reflect the industry differences between the manufacturing industry and finance industry.

Since the value of the dependent variable in eq. (1) would be a positive number if firm *i* recognized the impairment loss (reflected as a positive amount) in year t, otherwise it will be zero. It gives rise to a potential of being a censored data. As a result, we also employ a Tobit regression to investigate the assets impairment decisions of finance industry. The results are reported in Table 4. Generally speaking, the main findings of Table 4 are consistent with those of Table 3 and our Tobit specification is highly significant.

[Insert TABLE 4 here]

First, we find that the coefficients of $BATH_{it}$ and $SMOOTH_{it}$ are both significantly positive again in Table 4. This means that managers of finance industry recognizing the asset impairment loss base on the "income smoothing" motivation rather than "big bath" motivation. The above results also support hypothesis H2, but are inconsistent with hypothesis H1. That is, in the period with good performance, managers of finance industry recognize more asset impairment losses to smooth the earnings. Second, the

[10] The VIF values in the subsequent analyses are all below 10, suggesting that multicollinearity is not a serious concern.
[11] To avoid the effect of outliers, we also winsorize all variables at1% and 99% and redo all the tests. The conclusions are still the same.

two shareholdings variables ($MANHOLD_{it}$ and $DIRHOLD_{it}$) are both significantly negative again. Results imply that directors/managers recognizing asset impairment loss base on self-interest consideration. Third, the coefficients of DEV_{it} and $INSTI_{it}$ are both positive and β_5 is significant. It implies that when a firm's control right deviates from cash flow right more, it will recognize more asset impairment losses and supports hypothesis H5's argument. However, the hypothesis about institutional investors' shareholdings is not significant. At last, the coefficient of D_{it} is significantly negative again, this indicates that the financial holding company recognize less asset impairment losses than the non-financial-holding financial institution.

To sum up, our results show that the amounts of asset impairment losses are associated with "earnings smoothing" motivation rather than "big bath" motivation. Findings also show that directors/managers recognize asset impairment losses based on self-interest consideration and corporate governance mechanisms can mitigate such behavior. Results also show that financial holding companies recognize less asset impairment losses than non-financial-holding financial institutions. The validity of the conclusion is still hold by using different model specification and is not subject to multicollinearity and outliers effects.

6. Discussion and conclusion

Taiwan Financial Accounting Standards Committee of the Accounting Research and Development Foundation issued SFAS No.35 "Accounting for the Impairment of Assets" on July 1, 2004 and was effective on January 1, 2005. According to SFAS No.35, an enterprise shall conduct an impairment test for the values of long-lived assets on the balance sheet date. If the carrying amount of a long-lived asset is higher than its recoverable amount, then an impairment loss should be recognized on the income statements instantly.

Using a sample of Taiwan finance industry, we show that the amounts of asset impairment losses are related to "earnings smoothing" motivation rather than "big bath" motivation. We also find that directors/managers recognize asset impairment losses based on self-interest consideration and corporate governance mechanism have mitigation effect on such impairment decision. The result also shows that the financial holding company recognizes less asset impairment loss than the non-financial-holding financial institution. Our conclusions are robust to different model specification, and are free from multicollinearity and outliers effects.

There are some future research avenues as follows. First, we focus only on the consequence of a single accounting standard; the overall effect on the quality of financial reporting will be the net consequence of various forces arising from the application of many accounting standards. Second, the value relevance and earnings quality for those finance firms which recognized the asset impairment loss could be investigated in the future.

Table 1. Descriptive Statistics

Variable	Mean	Median	Std. Dev.	75%	25%
IMP_{it}	0.002	0.000	0.014	0.000	0.000
$BATH_{it}$	-0.019	0 .000	0.046	0.000	0.000
SMOOTHit	0.009	0.000	0.042	0.000	0.000
MANHOLDit	0.348	0.170	0.456	0.500	0.030
DIRHOLDit	21.607	15.090	18.238	30.040	8.380
DEVit	7.489	0.650	13.457	8.950	0.020
$INSTI_{it}$	60.860	64.900	17.706	72.940	50.680
D_{it}	0.304	0.000	0.461	1.000	0.000
$\triangle_{CFO_{it}}$	0.017	0.004	0.091	0.036	-0.021
$\triangle_{ROA_{it}}$	-1.180	-0.115	7.383	1.290	-3.650
$\triangle_{SALES_{it}}$	-13.414	2.055	213.562	17.870	-19.280
$SIZE_{it}$	18.169	18.376	1.448	19.160	17.024
BTM_{it-1}	0.893	0.866	0.299	1.053	0.680

Notes:

Variable definitions:

IMP_{it} : the impairment loss recognized by firm *i* in year t (reflected as a positive amount) deflated by total assets at the end of period t-1.

$BATH_{it}$: the proxy for "big bath" reporting, equals to the change in firm *i*'s pre-write-off earnings from period t-1 to t, divided by total assets at the end of year t-1, when below the median of nonzero negative values of this variable, and 0 otherwise.

$SMOOTH_{it}$: the proxy for "earnings smoothing" reporting, equasl to the change in firm *i*'s pre-write-off earnings from period t-1 to t, divided by total assets at the end of year t-1, when above the median of nonzero positive values of this variable, and 0 otherwise.

$MANHOLD_{it}$：the percentage of shares owned by firm *i*'s managers at the end of year t.
$DIRHOLD_{it}$： the percentage of shares owned by firm *i*'s directors at the end of year t.
DEV_{it}：the difference between control rights and cash flow rights, equals to the control stockholder's control rights minus the control stockholder's cash flow rights;
$INSTI_{it}$：the percentage of shares owned by institutional investors at the end of year t.
D_{it}： A dummy variable that equals 1 for financial holding company and 0 otherwise.
$\triangle CFO_{it}$：firm *i*'s changes in operating cash flows from period t-1 to t, divided by total assets at the end of year t-1.
$\triangle ROA_{it}$：the percentage change in firm *i*'s return of total assets from period t-1 to t.
$\Delta SALES_{it}$：the percentage change in firm *i*'s net sales from period t-1 to t.
$SIZE_{it}$：the logarithm transformation of firm *i*'s total assets at the end of year t.
BTM_{it-1}：firm *i*'s book to market ratio at the end of year t-1, measured by the ratio of book value of the stockholders' equity to the market value of firm *i*.
ε_{it}：regression residual.

Table 2. Correlation matrix

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13
1.IMP_{it}		-0.208*	-0.024	-0.079	-0.062	0.198*	0.056	-0.075	-0.022	-0.356**	0.002	-0.138	0.224**
2.$BATH_{it}$	-0.024		0.091	0.079	0.195*	0.092	0.035	-0.303**	-0.155*	0.753**	0.539**	0.182*	-0.165*
3.$SMOOTH_{it}$	-0.054	0.139		-0.082	-0.017	-0.107	0.105	0.254**	0.046	0.595**	0.193*	-0.019	-0.043
4.$MANHOLD_{it}$	-0.018	0.008	-0.120		-0.174*	0.018	-0.461**	-0.334**	-0.021	0.036	0.069	-0.256**	0.053
5.$DIRHOLD_{it}$	-0.004	0.196*	0.028	-0.323**		0.528**	0.452**	-0.210**	-0.003	0.147*	0.027	-0.105	-0.092
6.DEV_{it}	-0.113	0.059	-0.059	0.193**	-0.017		0.264**	-0.263**	0.035	-0.024	0.069	-0.278**	-0.053
7.$INSTI_{it}$	-0.064	0.069	0.196*	-0.448**	0.396**	0.079		0.222**	-0.071	0.043	-0.007	0.196**	-0.291**
8.D_{it}	-0.282**	-0.263**	0.197*	-0.385**	-0.129*	-0.087	0.216**		-0.125	-0.124	-0.160*	0.108	-0.218**
9. $\triangle CFO_{it}$	-0.072	-0.192*	0.101	0.036	0.020	0.029	0.015	-0.081		-0.128	0.082	-0.143*	-0.054
10. $\triangle ROA_{it}$	-0.101	0.692**	0.443**	0.060	0.114	0.034	0.028	-0.233**	-0.109		0.461**	0.075	-0.081
11. $\triangle SALES_{it}$	-0.189*	0.620**	0.303**	0.137*	0.154*	0.129*	-0.061	-0.319**	-0.084	0.759**		0.039	-0.215**
12.$SIZE_{it}$	0.180*	0.231**	-0.030	-0.285**	-0.008	-0.116	0.164*	0.077	-0.056	0.015	0.042		-0.210**
13.BTM_{it-1}	0.128	-0.049	-0.157*	0.180*	-0.052	-0.172*	-0.345**	-0.283**	-0.038	0.024	0.040	-0.225**	

Notes:
1.*, **, *** Significant at the 0.10, 0.05, and 0.01 level, respectively.
2. Upper (lower) triangular contains Pearson (Spearman) correlation coefficients.
3. See Table 1 for variable definitions.

Table 3. The OLS empirical results for eq (1)

$$IMP_{it} = \beta_0 + \beta_1 BATH_{it} + \beta_2 SMOOTH_{it} + \beta_3 MANHOLD_{it} + \beta_4 DIRHOLD_{it} + \beta_5 DEV_{it} + \beta_6 INSTI_{it} + \beta_7 D_{it} + \beta_8 \Delta CFO_{it} + \beta_9 \Delta ROA_{it} + \beta_{10} \Delta SALES_{it} + \beta_{11} SIZE_{it} + \beta_{12} BTM_{it-1} + \varepsilon_i \quad (1)$$

Variables	Predicted Sign	Parameter Estimate	t-statistic
Intercept		0.017	1.160
$BATH_{it}$	–	0.207	4.630***
$SMOOTH_{it}$	+	0.257	6.650***
$MANHOLD_{it}$	–	-0.005	-1.760*
$DIRHOLD_{it}$	–	-0.000	-1.440
DEV_{it}	+	0.000	2.660***
$INSTI_{it}$	?	0.000	1.680*
D_{it}	–	-0.007	-2.610***
$\triangle CFO_{it}$		-0.029	-2.690***
$\triangle ROA_{it}$		-0.003	-8.130***
$\triangle SALES_{it}$		0.000	2.060**
$SIZE_{it}$		-0.002	-2.300**
BTM_{it-1}		0.012	3.680***
Observations		131	
Adj. R^2		0.4708	
F-stat.		10.64***	

Notes:
1.*, **, *** Significant at the 0.10, 0.05, and 0.01 level, respectively.
2. See Table 1 for variable definitions.

Table 4. The Tobit empirical results for eq (1)

$$IMP_{it} = \beta_0 + \beta_1 BATH_{it} + \beta_2 SMOOTH_{it} + \beta_3 MANHOLD_{it} + \beta_4 DIRHOLD_{it} + \beta_5 DEV_{it} + \beta_6 INSTI_{it} + \beta_7 D_{it} + \beta_8 \Delta CFO_{it} + \beta_9 \Delta ROA_{it} + \beta_{10} \Delta SALES_{it} + \beta_{11} SIZE_{it} + \beta_{12} BTM_{it-1} + \varepsilon_i \quad (1)$$

Variables	Predicted Sign	Parameter Estimate	t-statistic
Intercept		-0.004	-0.140
$BATH_{it}$	-	0.158	2.120**
$SMOOTH_{it}$	+	0.311	4.760***
$MANHOLD_{it}$		-0.013	-2.450**
$DIRHOLD_{it}$		-0.000	-1.650
DEV_{it}		0.000	1.760*
$INSTI_{it}$		0.000	1.170
D_{it}		-0.024	-4.550***
$\triangle CFO_{it}$		-0.059	-3.110***
$\triangle ROA_{it}$		-0.003	-6.150***
$\triangle SALES_{it}$		0.000	1.900*
$SIZE_{it}$		-0.001	-0.790
BTM_{it-1}		0.017	2.920***
Observations		131	
Pseudo R^2		-0.393	
F-stat.		71.46***	
Log likelihood		126.677	

Notes:
1.*, **, *** Significant at the 0.10, 0.05, and 0.01 level, respectively.
2. See Table 1 for variable definitions.

References

1. Adams, R., & Mehran, H. (2002). Board structure and banking firm performance. Working paper, Federal Reserve Bank of New York.
2. Agrawal, A., & Knoeber, C. (1999). Outside directors, politics, and firm performance. Working Paper, North Carolina State University.
3. Alciatore, M., Easton, P., & Spear, N. (2000). Accounting for the impairment of long-lived assets: Evidence from the petroleum industry. *Journal of Accounting and Economics*, 29, 151-172.
4. Ali, A., & Hwang, L.S. (2000). Country-specific factors related to financial reporting and the value relevance of accounting data. *Journal of Accounting Research*, 38, 1-21.
5. Ball, A. R., & Wu, J. S. (2003). Incentives versus standards: Properties of accounting income in four East Asian countries. *Journal of Accounting and Economics*, 36, 235-270.
6. Bartov, E. (1993). The timing of asset sales and earnings manipulation. *The Accounting Review*, 68, 840-855.
7. Beasley, M.S. (1996). An empirical analysis of the relation between the board of director composition and financial statement fraud. *The Accounting Review*, 71, 443-465.
8. Bunsis, H. (1997). A description and market analysis of write-off announcements. *Journal of Business Finance and Accounting*, 24, 1385-1400.
9. Chao, C.-L. (2006). An examination of SFAS No. 35: Adoption timing motives, write-off characteristics, and market reaction. *International Journal of Accounting Studies*, Special Issue, 77-120.
10. Collins, D., & Henning, S. (2004). Write-down timeliness, line-of-business disclosures and investors' interpretations of segment divestiture announcements. *Journal of Business Finance and Accounting*, 31, 1261-1299.
11. Dechow, P., Sloan, R., & Sweeney, A., (1995). Detecting earnings management. *The Accounting Review*, 70, 193-225.
12. Elliott, J. A., & Shaw, W. H. (1988). Write-offs as accounting procedures to manage perceptions. *Journal of Accounting Research*, 26, 91-119.
13. Fields, T., Lys, T., & Vincent, L. (2001). Empirical research on accounting choice. *Journal of Accounting and Economics*, 31, 255-307.
14. Francis, J., Hanna, D., & Vincent, L. (1996). Causes and effects of discretionary asset write-offs. *Journal of Accounting Research*, 34, 117-134.
15. Hogan, C., & Jeter, D. (1998). The information content of restructuring charges: A contextual analysis. Working paper, Vanderbilt University.
16. Hsieh, W.-T., & Wu, T.-Z. (2005). Determinants and effects of assets impairment decision in Taiwan. *Taiwan Accounting Review*, 6, 59-95.
17. Klein, A. (2002). Audit committee, board of director characteristics, and earnings management. *Journal of Accounting and Economics*, 33, 375-400.
18. La Porta, R., Lopez-de-Silanes, F., & Shleifer, A. (1999). Corporate ownership around the world. *Journal of Finance*, 54, 471-517.
19. Leuz, C. (2003). IAS Versus US GAAP: Information asymmetry-based evidence from Germany's new market. *Journal of Accounting Research*, 41, 445-472.
20. Leuz, C., Nanda, D., & Wysocki, P. D. (2003). Earnings management and investor protection: An international comparison. *Journal of Financial Economics*, 69, 505-527.
21. Levitt, A. (1998). The numbers game. Remarks by Chairman Arthur Levitt, Securities and Exchange Commission, delivered at the NYU center for Law and Business, New York, NY, 28 September.
22. Loh, A. L. C., & Tan, T. H. (2002). Assets write-offs--managerial incentives and macroeconomics factors. *Abacus*, 38, 134-151.
23. Ng, T. B., & Tan, H.T. (2003). Effects of authoritative guidance availability and audit committee effectiveness on auditors' judgments in an auditor-client negotiation context. *The Accounting Review*, 78, 801-818.
24. Peasnell, K.V., Pope, P.F., & Young, S. (2005). Board monitoring and earnings management: Do outside directors influence abnormal accruals? *Journal of Business Finance and Accounting*, 32, 1311-1346.
25. Pound, J. (1988). Proxy contests and the efficiency of shareholder oversight. *Journal of Financial Economics*, 20, pp. 237- 265.
26. Rees, L., Gill, S., & Gore, R. (1996). An investigation of asset write-downs and concurrent abnormal accruals. *Journal of Accounting Research*, 34, 157-169.
27. Riedl, E. J. (2004). An examination of long-lived asset impairments. *The Accounting Review*, 79, 823-852.
28. Schipper, K. (2005). The introduction of International Accounting Standards in Europe: Implications for international convergence. *European Accounting Review*, 14, 101-126.
29. Strong, J., & Meyer, J. (1987). Asset write-downs: Managerial incentives and security returns. *Journal of Finance*, 42, 643-63.
30. Zucca, L. J., & Campbell, D. R. (1992). A closer look at discretionary writedowns of impaired assets. *Accounting Horizons*, 6, 30-41.