CORPORATE GOVERNANCE, INCOME GROWTH, AND INCENTIVES TO REPORT IMPAIRMENT LOSS – CHINA PUBLICLY LISTED COMPANIES

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ABSTRACT

This study analyzes whether impairment recognition is associated with company's desire to manage earnings and to boost income growth in following years. Corporate governance, including ownership structure can also affect impairment recognition decision. We document the decision to recognize impairment loss is associated with earnings management behavior although the magnitude of it is not. Impairment recognition amount is in general higher with improved corporate governance. But institutional ownership, viewed by many studies as a corporate governance measure, reduces both impairment loss and impairment loss reversal amount.

Keywords: Impairment; Corporate governance; Earnings management.

INTRODUCTION

The advent of SFAS 142 and IAS 36 regarding handling of asset impairment has spawned research into how these standards are being implemented. When a company records an impairment loss, the loss reduces net income on the financial statements, but the loss is not deductible for tax purposes. This creates a deferred tax asset. Our research has to do with how Chinese companies are handling the asset impairment standards. We start with a brief discussion of deferred tax items in China. Deferred tax items in China have three major components: tax and financial reporting of temporary differences in depreciation; impairment losses; and previous losses, which can be carried forward for five years. While the temporary differences in depreciation typically create deferred tax liabilities (DTLs) that defer taxes to a future period, impairment losses and previous losses create deferred tax assets (DTAs). A deferred tax asset is created when a firm has overpaid its taxes and is due some form of tax relief. DTAs are viewed as less desirable than DTLs since DTLs result in lower taxable income in the current period, while DTAs cause taxable income, and income tax actually paid, to be higher in the current period and lower in some future period. Of course, it is more desirable to delay paying taxes. In our previous research (Wang et al., 2016), we documented that the median GAAP effective income tax rate for publicly listed Chinese companies is 13%, while the median cash effective income tax rate is 26%. This is less than optimal from a cash flow management standpoint. Many factors contribute to this result. In this research, we investigate some of the incentives of companies reporting impairment losses and thus creating deferred tax assets, which lower accounting net income and do not necessarily lower the taxable income.

Specifically, we attempt to determine whether impairment loss recognition is motivated by earnings management, and/or big bath behavior, and/or is a reflection of improved corporate governance. Earnings management is generally understood to mean attempts by company insiders to protect their positions and benefits by manipulating the financial information provided to outsiders. The big bath refers to firms that take big losses in one period to avoid a steady stream of annual losses or decreased earnings. Our process includes examination of many variables that could impact impairment loss decisions, including firm size, asset mix, leverage, ownership percentages of top shareholders, Board of Director and Board of Supervisor size and composition, duality of CEO and BOD Chair, income growth, previous year loss, and industry. We include all companies listed on the Shenzhen and Shanghai stock exchanges for the period 2011-2016. Our study greatly expands current research on impairment, which typically has been limited to addressing only goodwill impairment. Our study analyzes impairment as a whole, instead of focusing only on goodwill impairment.

Chinese Accounting Standard No. 8 (CAS No. 8) prohibits the reversal of long-lived asset impairments to constrain managerial opportunism with respect to previously recognized impairment loss. CAS No. 8 forbids the reversal of long-lived asset impairment losses only, while allowing the reversal of short-term asset impairment losses. Our analysis shows the influence of this differential treatment on firm impairment loss taking behavior.

LITERATURE REVIEW

Extensive research has been done regarding corporate governance and earnings management. Whether earnings management and/or goodwill impairment reflect big bath behavior forms another stream of study.

Corporate Governance and Earnings Management

Large investors as a mechanism of corporate governance has been documented by many, while disproved by others. Gillan and Starks (2003) studied the role and impact of institutional investors on corporate governance. Institutional investors may influence management's activities directly through their ownership, and indirectly by trading their shares, and sometimes more significantly by acting as a group. The specific ownership structures and governance characteristics vary by market and country. Based on their research, Gillan and Starks (2003) believed that institutional investors tend to increase the liquidity, volatility, and price informativeness of the markets in which they invest. The increased information generated by institutional investors should result in better monitoring of corporations and in better corporate governance structures. Li (2010) concluded that the primary governance mechanism in China was the state and informal networks. Sueyoshi, Goto and Omi (2010) concluded that stable shareholding was an important aspect of traditional Japanese corporate governance, although stable shareholding enhanced operational performance only when the ratio of shares held by stable shareholders was more than 61.21%. Chung, Firth and Kim (2002) found that managers who had an incentive to increase or decrease reported profit used income-increasing or decreasing accruals. They also found that institutional investors with large shareholdings inhibited managers from using these discretionary accounting accruals opportunistically. However, Leuz, Nanda, and Wysocki (2003) found that earnings management appeared to be lower in economies with large stock markets, dispersed ownership,

strong investor rights, and strong legal enforcement. Schmid and Zimmermann (2008) found strong evidence supporting the hypothesis that corporate governance index was positively related to firm value and neither the presence of a controlling shareholder nor large outside block-holders had a significant valuation impact. Leuz et al. (2003) and Schmid and Zimmermann (2008) contradicted Gillan and Starks (2003), Li (2010), Sueyoshi et al. (2010), and Chung et al. (2002) finding that large/state shareholding was an important governance mechanism.

Shlifer and Vishny (1989) believed that there was ample evidence to support the notion that entrenched managers made specific investments to increase their value to shareholders, to reduce the probability of being replaced, to extract higher wages and larger perquisites from shareholders and to obtain greater latitude in determining corporate strategy.

Elyasiani and Zhang (2015) investigated the relationship between corporate liquidity [(- cash + LCs)/assets] (lines of credit LC) and CEO entrenchment and found that corporate liquidity, including lines of credit, was positively related to management entrenchment. They believed that CEOs preferred greater than necessary liquidity (which is costly to shareholders) because it made their jobs less stressful and they could lobby more effectively for luxury personal perks.

Davidson, Goodwin-Stewart, and Kent (2005) found a significant positive relationship between having a board of directors comprised of a majority of non-executive directors and minimizing the amount of earnings management. They defined a non-executive director as a director who was not employed in the company's business activities and whose role was to provide an outsider's contribution and oversight to the board of directors. Their findings also supported an association between an audit committee comprising a majority of non-executives and a reduction in earnings management.

Extensive research has been done on the impact of board size and outside directors. Beasley (1996) studied 150 firms, 75 with no instances of fraud and 75 with fraud. He found that no-fraud firms had significantly higher percentages of outside members on their boards. He also found that as outside director ownership interest in the firm and outside director tenure increased, the likelihood of financial statement fraud decreased. Xie, Davidson, and DaDalt (2003) studied 110 S & P 500 firms for years 1992, 1994 and 1996. They found that earnings management was less likely to occur or occurred less often in companies whose boards included both more independent outside directors and directors with corporate experience. They also found that the composition of the audit committee (and to a lesser extent the executive committee) was associated with the level of earnings management. Musteen, Datta, and Kemmerer (2010) found that firms with a greater proportion of outside directors and those with larger boards exhibited better reputations than those with smaller boards and a higher proportion of insiders using 2000 Fortune List of America's Most Admired Corporations. Alves (2013) also found less earnings management when board size was large. Duchin, Matsusaka, and Ozbas (2010) concluded that the effectiveness of outside directors depends on the cost of acquiring information about the firm. When the cost of information acquisition was low, performance increased when outsiders were added to the board. When the information acquisition cost was high, performance worsened when outsiders were added to the board. As we discuss later, AbuGhazaleh, Al-Hares, and Roberts (2011) found that goodwill impairments were strongly associated with effective governance mechanisms.

Smaili and Labelle (2016) studied the extent to which corporate governance acts as an efficient means of protecting investors in Canadian companies against accounting irregularities. They found that level of noncompliance with financial reporting regulations was indeed, higher when firms: (1) had fewer independent and financial expert directors on their boards and audit committees and no block holders or individuals owning a significant portion of company shares; (2) had recently changed auditors; and (3) had a CEO who was also the Chair of the Board of Directors. These firms also appear to fulfill their financing requirements through private placements rather than public funds, which was consistent with the fact that firms with accounting irregularities, were less likely to be in a position to go to the public market to fulfill financing needs.

Earnings Management, Impairment, and Big Bath Behavior

The big bath or cookie jar approach refers to firms that take big losses in one period to avoid a steady stream of annual losses or decreased earnings. Using a sample of 33 Portuguese nonfinancial firms from the Euro next Lisbon stock exchange, Alves (2013) found that the goodwill impairment amount was significantly positively related to earnings management, suggesting that IAS 36 under IFRS provides managers with discretion for goodwill write-offs. Alves also found less earnings management when board size was large and cash flows were high and more earnings management when firms were highly leveraged and political costs were high.

Giner and Pardo (2015) studied Spanish firms to analyze the ethical behavior of managers who make decisions on recognizing impairment of goodwill. They found that managers decisions about whether or not to impair goodwill and about the magnitude of the impairment were influenced by big bath and smoothing strategies. Firm size and macroeconomic environment influence appeared significant in the analysis.

Duh, Lee and Lin (2009) studied Taiwanese companies subject to the IAS 36, which allows reversal of asset impairment losses. They matched 55 reversal firms with 55 similar non-reversal firms. They found that firms recognizing more impairment losses were more likely to reverse impairment losses when reversal would avoid an earnings decline in a subsequent period, which was consistent with big bath approach. They also found that this behavior was more pronounced for firms with higher debt ratios and consistent with earnings management being used to avoid violation of debt covenants.

Lee, Lev and Yeo (2015) studied the connection between big bath accounting and recognition of impairment losses in the telecommunication industry in Europe. They found a co-occurrence of goodwill impairments and big bath indicators and believe it showed a pattern of earnings management.

Hassine and Jilani (2017) studied how reporting incentives influence firms' accounting choices under IAS 36 to account for goodwill impairment. They examined whether earnings management motives were associated with the decision to record asset impairment and the magnitude of annual goodwill impairment losses reported. The study included a sample of 720 observations from 134 French firms. They found that firms that had a change in CEO were significantly more likely to record goodwill impairment losses and that managers overstated annual goodwill impairment

losses in order to meet earnings management incentives related not only to CEO change and financial crisis but also to earnings smoothing and big bath accounting.

Cheng, Peterson and Sherrill (2017) studied US firms to examine investor reaction to impairment write-offs. Previous studies found a negative stock price reaction after goodwill impairment write-offs both in the short term and in the long term. In 2002, the Financial Accounting Standards Board rules for accounting for goodwill changed. Cheng et al. (2017) examined data from after the rule change requiring goodwill to be reviewed for impairment and found that investors continued to perceive goodwill write-offs as negative events in the short term, but contrary to previous studies, that investors perceived goodwill write-offs as positive news in the long term. They also found that firms tend to incorporate all foreseeable future non-recurring charges into the good-will impairment. Decreased non-recurring charges in the years subsequent to the write-off resulted in improvement in overall firm performance after the write-off. However, firm operating performance improved only slightly.

Watts (2003a, 2003b) and Beatty and Weber (2006) both concluded that managerial incentives did affect accounting choices including decisions to accelerate or delay expense recognition. Ramanna and Watts (2009) investigated how managers were implementing SAFS 142 that requires annual unverifiable fair-value estimates of value of goodwill and other intangible assets with indefinite useful lives. Their results were consistent with the contention that managers were exploiting unverifiable fair value based discretion in SFAS 142 to avoid timely goodwill write-offs in circumstances where they had motives to do so as predicted by Watts (2003). The results did not confirm standard setters' arguments that unverifiable fair-value-based discretion in SFAS 142 would be used to convey more helpful private information on future cash flows.

Giacomino and Akers (2009) stated that the findings of several research studies, along with their own findings showed that goodwill write-offs increased during 2008 and were likely continue into 2009. Giacomino and Akers (2009) questioned whether goodwill write-offs provided the financial statement users with useful information for analyzing investments as the FASB intended. They noted that many firms carried substantial amounts of goodwill on their 2008 balance sheets. Because of the uncertainty of the economy and the financial markets, they believed the potential for big bath earnings management through the use of goodwill impairments existed for 2009 and that these goodwill impairments would significantly impact the quality of earnings.

Caruso, Ferrari, and Pisano (2016) studied goodwill impairments by Italian firms. The authors found income smoothing cases, as well as income maximization and big baths, almost equally distributed. It seemed that every firm pursued its own "strategy", and even those who seemed not to have a clear strategy could be enticed by the chance of a big bath under certain conditions. Overall, this study indicated that managerial behavior regarding goodwill impairment in Italian firms very likely included efforts to manage earnings due to the discretion offered by IAS 36 and IFRS accounting standards. The authors ended by questioning whether it was still appropriate to rely on financial reports as the main document of corporate communication to stakeholders.

Filp, Jeanjean and Paugam (2015) studied US firms and found that the recognition of impairment loss was associated with big bath accounting among firms that recorded impairments of goodwill that exhibited large and negative (income-decreasing) abnormal accruals (excluding the

impairment loss) during the year of impairment. They showed that firms that did not record impairments even though they were likely to carry impaired goodwill, had lower future stock returns and tended to exhibit smaller change in future operating performance than impairers.

AbuGhazaleh et al. (2011) studied managers' use of discretion in determining goodwill impairment losses in the top 500 UK firms during 2005 and 2006 following the mandatory adoption of IFRS 3 "Business Combinations," and whether this discretion reflected opportunistic reporting by managers or the provision of their private information. IFRS 3 has been criticized because of the managerial discretion inherent in impairment testing. The authors found that managers were exercising discretion in the reporting of goodwill impairments following the adoption of IFRS 3. Goodwill impairments were more likely to be associated with recent CEO changes, income smoothing and big bath reporting behaviors. However, the results also indicated that goodwill impairments were strongly associated with effective governance mechanisms which suggested that managers might be exercising their accounting discretion to convey their private information about the underlying performance of the firm rather than acting opportunistically. Given these results, the authors believed that IFRS 3 had provided managers with a framework to reliably convey their private information about future cash flows consistent with the IASB's objectives in developing the impairment standard.

Zang (2008) examined managers' behavior and market reaction to initial impairment losses recorded by US firms after adoption of SFAS No. 142. Zang found that managers did use discretion in determining the transitional goodwill impairment loss in a strategic manner. He also found that firms that had recent management changes reported greater impairment charges, which supports the idea that new managers may take a big bath so that they can report higher earnings in the future.

Sevin and Schroeder (2005) used a random sample of US firms. The results suggested that SFAS No. 142 adoption did allow companies to engage in earnings management. Findings indicated that small firms experienced a significantly greater negative impact and were much more likely than large firms to take big bath losses.

Zhou and Habib (2013) cited previous research, which documented that managers used impairment losses strategically to manage company earnings. They found that managers used fewer current asset write-downs and more reversals in the post CAS No. 8 period, but that these practices did not seem to be motivated by the desire to avoid losses or to report big bath losses. The international standard IAS No. 36 allows for the reversal of impairment losses on long-term assets if the asset value recovers.

Stenheim and Madsen (2016) studied the extent to which goodwill impairment losses reported under IFRS were associated with proxies of economic impairment, earnings management incentives and corporate governance. The findings suggested that goodwill impairment losses did seem to reflect economic impairment. The evidence of associations between proxies for earnings management incentives and impairment losses were weaker, but there were associations consistent with big bath proxies and impairment losses. Firms paying CFO cash-bonus payments were found to be more likely to report fewer and smaller impairment losses. Corporate governance mechanisms did not seem to play a significant role in the accounting for impairment losses in goodwill. However, in firms where the COB and CEO positions were held by the same individual

there were generally fewer and smaller impairment losses. There were also some indications that firms with more audit committee meetings report more and larger impairment losses.

METHODOLOGY

Hypothesis Development

Impairment loss recognition has long been associated with earnings management (Stenheim & Madsen, 2016; Giner & Pardo, 2015; Duh et al., 2009). Reversal of impairment loss to avoid earnings decline is documented by Duh et al. (2009). Earnings management is generally understood to mean attempts by company insiders to protect their positions and benefits by manipulating the financial information provided to outsiders. This often takes the form of income smoothing or income manipulation. We use the method defined by Leuz et al. (2003) to quantify earnings management. Recognizing an impairment loss can be an effective income manipulation technique, known as big bath, which results in lower net income in the current period, but higher net income in the following years (Sevin & Schroeder, 2005). Chinese Accounting Standard No. 8 (CAS No. 8) prohibits the reversal of long-lived asset impairments in order to constrain managerial opportunism with respect to previously recognized impairment loss. CAS No. 8 forbids the reversal of long-lived asset impairment losses only, while allowing the reversal of short-term asset impairment losses. Zhou and Habib (2013) find that Chinese managers do use short-term asset impairment reversals, but do not find strong evidence that such behavior is motivated by managerial propensity to avoid losses and/or engage in big bath accounting. Although previous research is not in consensus on this issue, we hypothesize that impairment loss recognition is positively associated with earnings management and following year income growth.

There are various related studies. Some show that institutional owners can improve corporate governance (Gillan & Starks, 2003; Cervantes, 1999; Li, 2010; Sueyoshi et al., 2010; Chung et al. 2002) while others disagree (Leuz et al., 2003; Schmid & Zimmermann, 2008). Empirical evidence on the impact of managerial entrenchment on financial reporting is mixed (Beasley, Carcello, Hermanson and Lapides, 2000; Beasley, 1996; Shlifer & Vishny, 1989; Elyasiani & Zhang, 2015; Stenheim & Madsen, 2016). We hypothesize that improved corporate governance will encourage proper impairment loss taking. Bigger BOD and BOS sizes, higher percentage of independent BOD members, and higher percentage of institutional ownership are all indicators of improved corporate governance. Management entrenchment is an indicator of compromised corporate governance, and we hypothesize that it will inhibit timely impairment loss taking. Since impairment loss can be reversed in later years, we exclude companies that have impairment loss reversals for this analysis.

H1: Ceteris paribus, there is a positive association between impairment loss and earnings management.
H2: Ceteris paribus, there is a positive association between impairment loss and the following year's net income growth.
H3: Ceteris paribus, there is a positive association between impairment loss and improved corporate governance.
H4: Ceteris paribus, there is a negative association between impairment loss and management entrenchment.

Model 1: $Impairment = \beta_0 + \beta_1 TopShareholderOwnership\% + \beta_2 Top_{2\text{-}10} ShareholderOwnership\% + \beta_3 DualityCEOBODChair + \beta_4 BODSize + \beta_5 IndependentBOD\% + \beta_6 BOSSize + \beta_7 IncomeGrowth + \beta_8 IncomeGrowth_{(t+1)} + \beta_9 EarningsManagement + \beta_{10} Financial + \beta_{11} Utilities + \beta_{12} RealEstate + + \beta_{13} Wholesale\&Retail + \beta_{14} Size + \beta_{15} AssetMix + \beta_{16} Leverage + \beta_{17} PreviousYearLoss + \varepsilon$

Where:
Impairment is the natural log of impairment loss if impairment loss is taken, 0 otherwise.
TopShareholderOwnership% is the top shareholder's ownership percentage.
$Top_{2\text{-}10}ShareholderOwnership\%$ is the total of the top 2 to 10 shareholders' ownership percentage.
DualityCEOBODChair is 1 if CEO also serves as BOD chair and 0 otherwise.
BODSize=BOD size scaled by log of sales.
IndependentBOD%=Percentage of independent BOD members.
BOSSize=Board of Supervisors size scaled by natural log of sales.
IncomeGrowth is the income growth percentage the year impairment loss is taken.
$IncomeGrowth_{(t+1)}$ is the income growth percentage the year following impairment loss being taken.
EarningsManagement is the earnings management measure quantified using Leuz et al. (2003) method. Please refer to appendix 1 for details.
Financial, Utilities, RealEstate, and Wholesale&Retail are different industries. The baseline are manufacturing and complex industries.
Size is the natural log of sales.
AssetMix is capital asset scaled by total asset.
Leverage=beginning total debt/ beginning total asset
Previous year loss=1 if previous year has a loss, 0 otherwise.

Data are separated into two groups, companies that have no impairment loss and companies who took impairment loss are in one group. Companies that reversed their impairment losses are separately analyzed. In Table 1, only companies without impairment loss reversals are included.

RESULTS

As shown in Table 1, top shareholder median ownership percentage for companies without impairment loss is 49.63%, which is significantly higher than companies with impairment loss (33.33%). While we do not find statistically significant support that impairment loss improves companies' performance in the following year, median income growth in the following year for companies with impairment loss is 3.5%versus a negative 2% for companies without impairment loss. In addition, although we do not find impairment loss recognition significantly lowers current year's income growth in comparison with companies that do not take impairment loss, a higher amount of impairment loss is associated with lower income growth in the current year as shown in Table 2. We do find support that companies with impairment loss are engaged in earnings management behavior, which supports hypothesis 1. Companies with impairment loss have a median earnings management indicator of 0.76 vs. 0.50 for companies without impairment loss. Companies with impairment loss only have 39% in capital asset, which is significantly lower than companies without impairment loss (71%). As previously mentioned, Chinese Accounting Standard No. 8 (CAS No. 8) prohibits the reversal of long-lived asset impairments in order to constrain managerial opportunism with respect to previously recognized impairment loss. CAS

No. 8 forbids the reversal of long-lived asset impairment losses only, while allowing the reversal of short-term asset impairment losses. We speculate that companies with a high percentage of capital assets are less likely to record impairments of these assets because reversals are not permitted. This is consistent with Change and Yen (2015) study that listed firms decrease the provision of long-term asset impairments while increase the provision of current asset impairments and reversals following the implementation of new asset impairment regulations.

Table 1. Descriptive Statistics*

	Companies with impairment loss		Companies without impairment loss		T-test	Kruskal-Wallis Test
	Mean	Median	Mean	Median	Mean	Median
TopShareholder Ownership%	35.1529	33.3300	47.1311	49.6250	<0.0001	<0.0001
$Top_{2\text{-}10}$Shareholder Ownership%	24.8097	23.7950	25.0072	21.4900	0.9435	0.6050
IncomeGrowth	-0.8301	0.1095	0.0358	0.1131	0.0254	0.8809
$IncomeGrowth_{(t+1)}$	-0.0840	0.0351	-12.8030	-0.0215	0.0876	0.2781
Earnings Management	3.4374	0.7617	3.7111	0.5032	0.9278	0.0147
Sales**	8,292,122	1,411,001	4,912,282	1,797,185	0.0367	0.9296
AssetMix	0.4104	0.3936	0.5567	0.7120	0.0153	0.0023
Leverage	0.4428	0.3910	0.4612	0.4737	0.6550	0.2084

*This table does not include companies with impairment loss reversals.
**Sales are in RMB.
***In thousands

As presented in Table 2, we do not find any support for our hypotheses 2, and 4. Earnings management is not associated with impairment loss quantity. However, as shown in Table 1 earlier, companies that do take impairment loss have significantly higher earnings management indicator than companies that do not. We speculate that the decision to take impairment loss is associated with earnings management behavior although the quantity of impairment loss is not. Our hypothesis 1 is partially supported. Impairment loss does not increase next year's income growth. CEO functions as BOD chair does not affect impairment loss, hypothesis 4 is not suported. We do find strong support of the association of corporate governance and impairment loss. Improved corporate governance, including bigger BOD size and bigger independent BOD percentage, encourage higher impairment loss taking, which is consistent with hypothesis 3. This is consistent with AbuGhazaleh et al. (2011) conclusion that goodwill impairments are strongly associated with effective governance mechanisms. Concentrated institutional ownership significantly decreases impairment loss taking amount. We cannot assume institutional ownership improves corporate governance in China since previous research on this issue is not in consensus. We can only conclude that improved corporate governance in general encourages higher impairment loss taking. While institutional ownership, which could potentially improve corporate governance, decreases impairment loss taking quantity. Higher impairment loss significantly lowers the income growth in the current year, which is expected. Other factors that affect impairment loss taking are industry, size, asset mix, and previous year has loss. The industry that has highest impairment loss

is the financial industry. We wonder if this is related to bad debt write offs. A breakdown of impairment loss in the financial industry will reveal more information. We are unable to secure breakdown data of impairment loss for the financial industry. The base industries are manufacturing and complex industries. Firms with higher sales and with previous year losses have significantly higher impairment loss. Firms with higher capital concentration have lower impairment loss. We speculate that this could be because impairment of long-term assets is not reversible under CAS No. 8.

Table 2. Impact of Selected Variables on Impairment Loss for Companies Without Impairment Loss Reversal
Overall Model: $p<0.0001$; Adjusted $R^2=0.3216$
Dependent Variable: Impairment=ln(impairment loss), if impairment loss>0, 0 otherwise.

Variable	Parameter	Standard	t Value	Pr > |t|	Variance
Intercept	0.6268	0.4032	1.55	0.1201	0
TopShareholderOwnership%	-0.0186	0.0016	-12.02	<.0001	1.3076
$Top_{2\text{-}10}$ShareholderOwnership%	-0.0141	0.0018	-7.97	<.0001	1.2835
DualityCEOBODChair	-0.0480	0.0491	-0.98	0.3283	1.0914
BODSize	1.0013	0.3155	3.17	0.0015	1.4927
IndependentBOD%	2.2485	0.4261	5.28	<.0001	1.2856
BOSSize	0.5170	0.4343	1.19	0.2340	1.2305
IncomeGrowth	-0.0036	0.0006	-5.81	<.0001	1.0092
$IncomeGrowth_{(t+1)}$	-0.0031	0.0024	-1.30	0.1948	1.0057
EarningsManagement	-0.0000	0.0003	-0.03	0.9784	1.0012
Financial	1.6143	0.1502	10.75	<.0001	1.2447
Utilities	-0.3583	0.0568	-6.30	<.0001	1.0560
RealEstate	-0.3366	0.0993	-3.39	0.0007	1.0845
Wholesale&Retail	-1.1448	0.1020	-11.22	<.0001	1.0434
Size	0.7297	0.0145	50.37	<.0001	1.2075
AssetMix	-0.7590	0.1037	-7.32	<.0001	1.1678
Leverage	0.0353	0.0223	1.59	0.1128	1.0411
PreviousYearLoss	1.2706	0.0862	14.74	<.0001	1.0803

*Companies with impairment loss reversal are excluded.

Since China is under IFRS standards, firms can reverse their impairment loss in the future. We perform further analysis for companies with impairment loss reversal. As illustrated in Table 3, for firms that do reverse impairment loss, the deciding factors for the magnitude of reversal are institutional ownership, size, industry, and previous year loss. While institutional ownership significantly reduces the size of impairment loss taking, it also significantly decreases the size of impairment loss reversal. Wholesale and retail industry has lower impairment loss reversal. Firms with higher sales and with previous year losses have higher impairment loss reversal.

Table 3: Impairment Loss Reversal Analysis
Overall Model: $p<0.0001$; Adjusted $R^2=0.1250$
Dependent Variable: Impairment=ln(-impairment loss)

Variable	Parameter	Standard	t Value	Pr > |t|	Variance
Intercept	5.5085	1.4553	3.79	0.0002	0
TopShareholderOwnership%	-0.0202	0.0052	-3.87	0.0001	1.3847
$Top_{2\text{-}10}$ShareholderOwnership%	-0.0227	0.0059	-3.81	0.0001	1.2799
DualityCEOBODChair	-0.1580	0.1840	-0.86	0.3908	1.0882
BODSize	-0.0000	1.0688	-0.00	1.0000	1.5644
IndependentBOD%	0.6865	1.6029	0.43	0.6686	1.2896
BOSSize	0.5906	1.4177	0.42	0.6771	1.3134
IncomeGrowth	-0.0003	0.0013	-0.22	0.8234	1.0231
$IncomeGrowth_{(t+1)}$	-0.0273	0.0233	-1.17	0.2425	1.0196
EarningsManagement	0.0017	0.0009	1.86	0.0626	1.0105
Financial	0.7484	0.6025	1.24	0.2145	1.2107
Utilities	-0.0391	0.1837	-0.21	0.8316	1.1597
RealEstate	0.2973	0.2605	1.14	0.2541	1.2260
Wholesale&Retail	-0.7338	0.2882	-2.55	0.0111	1.0844
Size	0.4655	0.0501	9.29	<.0001	1.3529
AssetMix	-0.4613	0.3250	-1.42	0.1561	1.2919
Leverage	-0.0524	0.0573	-0.91	0.3611	1.1074
PreviousYearLoss	0.9364	0.2617	3.58	0.0004	1.1433

*Only samples with impairment loss reversals are included.

CONCLUSION

We do not find support that impairment loss taking is associated with big bath behavior. Although the magnitude of impairment loss is not significantly associated with earnings management, the decision to take impairment loss is associated with earnings management behavior. Impairment loss amount is higher with improved corporate governance, such as bigger BOD and bigger independent BOD percentage. Institutional ownership, if viewed as an improvement of corporate governance, functions differently from other corporate governance measures. It reduces both impairment loss and impairment loss reversal amount.

As we have concluded, the decision to take impairment loss is significantly associated with earnings management. Future research focusing on the decision making process will help investors detect signs of earnings management. Many factors can contribute to the process, including income history, ownership composition, change in BOD, BOS composition, change in executives, executive compensation package, change in stock price.

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Appendix 1

We use the method defined by Leuz et al. (2003) to quantify earnings management. We first introduce accruals and cash flow.

The operational definition of accruals is:

Accruals= (ΔCA-ΔCash)-(ΔCL-ΔSTD-ΔTP)-Dep Equation (1)

Where:

ΔCA = change in total current asset;
ΔCash = change in cash/cash equivalents;
ΔCL = change in total current liabilities;
ΔSTD = change in short-term debt included in current liabilities;
ΔTP = change in income taxes payable;
Dep = depreciation and amortization expense.

We then calculate cash flow from operations:

Cash flow from operations = Operating earnings - Accruals Equation (2)

EarningsManagement = | Accruals|/|Cash flow from operations| Equation (3)

The larger EarningsManagement is indicative of large-scale use of discretion to manipulate reported accounting earnings.

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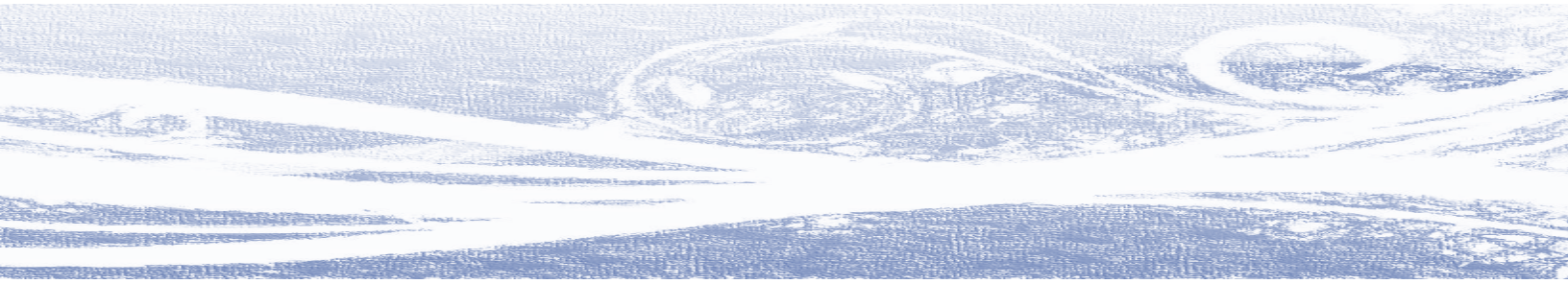

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