

頻繁變動資產減損認列對盈餘品質 之影響：論公司治理的角色

Do Rapid Reversals of Prior-Quarter Asset Impairment Recognition and the Strength of Corporate Governance Influence Earnings Quality?

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摘要

本研究探討企業頻繁變動資產減損認列對盈餘品質之影響。首先，檢測同一年度不同季別同時有認列減損及迴轉(視為變動組)的公司其盈餘品質是否高於同一年度中僅認列資產減損或減損迴轉(視為未變動組)的公司。其次，進一步將公司按照治理機制好壞劃分兩組，探討前述頻繁變動資產減損認列對盈餘品質的影響，在不同的公司治理條件是否有所不同。

本研究以裁決性應計數絕對值作為盈餘品質的衡量，實證結果發現，頻繁變動前期資產減損的公司(變動組)，相較於同一年度僅認列減損或迴轉之公司(未變動組)，有較高的盈餘品質。此外，前述變動組有較佳盈餘品質的結論僅存在公司治理較佳的樣本，而在公司治理較差的樣本，變動組與未變動組的盈餘品質並無顯著差異。

關鍵詞：資產減損、盈餘品質、裁決性應計數、公司治理

Abstract

This study primarily explores the influence of rapid and frequent reversals of prior-quarter asset impairment recognition on the earnings quality of firms. Firms that recognize asset impairment losses in a quarter and reverse them in the subsequent quarters of the same year and firms that recognize impairment reversals in a quarter and recognize impairment losses in the subsequent quarters are examined.

We use the absolute level of abnormal accruals as a proxy for earnings quality and compare the earnings quality of firms that reverse asset impairment losses or loss reversals recognized in the prior quarter of the year (the changed group) with the earnings quality of firms that do not (the unchanged group). The empirical results reveal that the changed group has lower abnormal accruals than those of the

unchanged group, implying that rapid and frequent reversals of prior-quarter asset impairment recognition are used for reflecting changes in asset values rather than earnings manipulation. The changed group has higher earnings quality relative to the unchanged group.

We classified the sample firms into two subgroups according to the strength of their corporate governance. We find that the aforementioned higher earnings quality in the changed group exists only in the strong governance subgroup. This finding supports the hypothesis that strong corporate governance guarantees rapid and frequent reversals of prior-quarter asset impairment recognition for timely reflection of asset value changes.

Keywords: Asset Impairments, Earnings Quality, Abnormal Accruals, Corporate Governance, SFAS No. 35

1. Introduction

For adherence to the International Accounting Standards No. 36 (IAS 36), *Impairment of Assets*, which has been effective since 1998, the Accounting Research and Development Foundation (ARDF) in Taiwan issued Statement of Financial Accounting Standard No. 35 (SFAS No. 35 (Taiwan)), *Accounting for Impairment of Assets*, in July 2004. SFAS No. 35 applies to fixed, leased, intangible, and long-lived assets; equity investments; and goodwill. On each balance sheet date, firms must evaluate the value of their assets to determine whether any assets are impaired, and any impairment loss must be recognized in their income statement. On indication that the impairment loss may have decreased, firms can reverse the previously recognized impairment loss.

SFAS No. 35 was implemented to allow firms to reduce the difference between the book value and actual value of assets by recognizing asset impairment

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losses and reversals, thereby increasing the transparency of financial reporting. However, uncertainty regarding changes in asset values gives rise to managerial discretion in the timing and amount of asset write-off recognition. Studies document that the timing and amount of asset write-offs are related to the motivation for implementing “big bath” and “income smoothing.” Through asset write-offs, managers can manipulate earnings and ensure timely reflection of asset value changes. Therefore, whether implementing SFAS No. 35 has improved the quality of financial reporting, as anticipated by the competent authorities, warrants investigation.

An understudied phenomenon: Unchanged group vs. changed group

Managerial motivation for asset write-offs is extensively explored. Nevertheless, this paper focuses on how firms recognize both asset impairment losses and their reversals, which is an understudied phenomenon. By observing how Taiwanese listed firms recognize asset write-offs, we find that some firms recognize either impairment losses or reversals in a given year (i.e., the “unchanged group”), whereas some firms frequently adjust their expectations of the value of a given asset and recognize impairment losses and their reversals in the same year (i.e., the “changed group”).

Panel A of Table 1 presents two examples of firms in the unchanged group. Taiwan Cement Corp (company code: 1101) reported impairment losses of NT\$1,024,236 (thousand) in the annual income statement for 2005; the entire loss was recognized in quarter 1, and no losses were recognized in quarters 2, 3 and 4.

Panel B of Table 1 presents three examples of firms in the changed group. Advanced Semiconductor Engineering Inc. (company code: 2311) recognized gain on reversals of prior-year losses of NT\$3,540,364 (thousand) in quarter 2 and recognized another loss of the same magnitude in quarter 3. Long Bon International Co Ltd (company code: 2514) recognized impairment loss of NT\$144,795 (thousand) in quarter 1, reversed it in quarter 2, recognized another loss of NT\$80,287 (thousand) in quarter 3, and reversed it in quarter 4.

Table 1 Examples for “unchanged group” and “changed group”

Panel A: Examples for “Unchanged Group”					(Unit: thousand)
Company Code	Year	Quarter	Accumulative impairment loss (reversal) reported in quarterly income statement	Impairment loss (reversal) recognized for each single quarter	
1101	2005	Q1	1,024,236	1,024,236	
1101	2005	Q2	1,024,236	0	
1101	2005	Q3	1,024,236	0	
1101	2005	Q4	1,024,236	0	
1216	2006	Q1	(594)	(594)	
1216	2006	Q2	(3,211)	(2,617)	
1216	2006	Q3	(3,954)	(743)	
1216	2006	Q4	(7,265)	(3,311)	
Panel B: Examples for “Changed Group”					(Unit: thousand)
Company Code	Year	Quarter	Impairment loss (reversal) reported in quarterly income statement	Impairment loss (reversal) recognized for each single quarter	
1103	2005	Q1	215,371	215,371	
1103	2005	Q2	134,377	(80,994)	
1103	2005	Q3	134,377	0	
1103	2005	Q4	134,377	0	
2311	2006	Q1	0	0	
2311	2006	Q2	(3,540,364)	(3,540,364)	
2311	2006	Q3	0	3,540,364	
2311	2006	Q4	0	0	
2514	2005	Q1	144,795	144,795	
2514	2005	Q2	130,043	(14,752)	
2514	2005	Q3	210,330	80,287	
2514	2005	Q4	130,043	(80,287)	

Data Resource: Taiwan Economics Journal

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This paper focuses on firms in the changed group. An ideal recognition of impairment losses and their reversals is one that is based on asset value change according to SFAS No. 35. However, studies find that asset impairment recognition is occasionally related to the motivation for implementing big bath and income smoothing. Is recognizing both asset impairment losses and their reversals in different quarters of a fiscal year motivated by earnings manipulation or the timely reflection of changes in true asset values? If such recognition is used to manipulate earnings, then the earnings quality should be lower for the changed group. Conversely, if recognition is intended for the timely reflection of asset value changes, then the earnings quality should be higher for the changed group. The first objective of this study is to identify managerial motivation for recognizing impairment losses and their reversals in the changed group and to compare the earnings qualities of firms in the changed and unchanged groups.

Reliable governance mechanisms can reduce opportunistic behaviors. Regulators and investors are concerned about whether board members have sufficient independence and expertise to effectively monitor financial reporting. Research relates independence and expertise of the board (or audit committee) with earnings manipulation behavior (Beasley, 1996; Dechow et al., 1996; Klein, 2002; Xie et al., 2003; Abbott et al., 2004; Dhaliwal et al., 2010). The second objective is to examine whether reliable governance mechanisms can ensure that frequent reversals in the changed group are intended to reflect asset value changes and not earnings manipulation.

The contribution of this paper is as follows. Literature related to asset impairments primarily addresses factors that are influential in recognizing asset impairments and market reactions to impairment announcements. Such studies focus on the total number of asset impairments reported in annual financial reports to explore the determinants of impairment recognition. However, little research focuses on firms that recognize asset impairment losses in a quarter and reverse the losses in the subsequent quarters of the same year or on the firms that recognize impairment reversals in a quarter and impairment losses in the subsequent quarters. Chen et al. (2013) is the first to detect this phenomenon. They compare the earnings response coefficient (ERC) of the changed and unchanged groups and

report that firms in the changed group have a higher ERC than that of firms in the unchanged group. However, they do not clarify the mechanisms underlying this phenomenon. Our paper extends Chen et al. (2013) and compares the earnings quality, measured as the degree of abnormal accruals, of firms in the changed and unchanged groups. The study sample covers all industries in the Taiwan stock market. Our results indicate that abnormal accruals are lower in the changed group. We infer that the higher ERC in Chen et al. (2013) is partially attributable to the lower abnormal accruals. Rapid reversals of asset impairments are thus not for opportunistic earnings manipulation.

2. Literature Review and Hypotheses

2.1 Managerial Motivations for Asset Impairments

Literature related to asset impairment announcements primarily addresses the determinant factors of and motivation for recognizing impairment losses. Such studies show that this motivation can be classified into two categories. The first category is related to various managerial opportunistic motivations: the recognition of asset impairment losses enables managers to manipulate earnings for realizing income smoothing or big bath (Strong & Meyer, 1987; Zucca & Campbell, 1992; Francis et al., 1996; Riedl, 2004). In the second category, managers recognize impairment losses for economic factors, enabling them to reflect changes in the values of firm assets (Elliott & Shaw, 1988; Rees et al., 1996; Alciatore et al., 1998).

Zucca & Campbell (1992) find that excessively high or low earnings within a year may lead firm managers to recognize asset impairment losses as a method of earnings management for realizing income smoothing or big bath. Riedl (2004) reports that after implementing SFAS No. 121 (U.S.), managers use more discretion to manage earnings through asset impairment losses, thus reducing

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transparency in financial reporting. Strong & Meyer (1987) examine motives for recognizing asset impairments from 1981 to 1985 and find that asset impairment recognition is related to high-level management changes. New senior managers manage earnings to facilitate future improvements in earnings. Francis et al. (1996) examine the reasons for asset impairment loss recognition from 1989 to 1992 and the responses of stock prices to the announcements of these asset impairments. Their study shows that most firms that recognize asset impairments replaced senior managers during the previous year and recognize the impairment to eliminate poor performance caused by the incompetence of the preceding senior managers, allowing the newly-appointed managers to meet high profit targets. These studies support the argument that managers manipulate earnings through asset impairment announcements.

By contrast, Rees et al. (1996) examine the association between asset impairment loss recognition and earnings management and find that managers recognize asset impairment losses to reflect changes in economic conditions and not to manipulate earnings. Alciatore et al. (1998) investigate the association between asset impairment losses and stock price responses and show that announcements of impairment losses result in significant negative returns. In a similar study, Elliott & Shaw (1988) find that firms that report asset impairments generally have lower returns on assets and returns on equity compared with their peers. Additionally, the asset growth rates and price-to-earnings ratios of these firms decline. These studies suggest that asset impairments are recognized by firms to reflect changes in the actual values of firm assets.

Taiwanese authorities issued SFAS No. 35 *Accounting Standards for Asset Impairments* in July 2004 under the assumption that asset valuation is best expressed through fair market pricing; that is, SFAS No. 35 was issued to reflect the actual values of firm assets. However, several scholars contend that this approach adjusts only financial reports and argue that firms have the motivation and incentives to manipulate profits through earnings management. Hsieh & Wu (2005) examine the correlation of the timing of asset impairment recognition by publicly listed Taiwanese firms that have applied SFAS No. 35 in advance with the managers' reporting motivation and the firms' economic factors. They find that

these firms are influenced by the motivation for implementing big bath or income smoothing. By contrast, in firms that apply SFAS No. 35 at the appropriate time, asset impairment recognition is related to the managers' reporting motivation and the firms' economic factors. Chen (2007) examines whether the Taiwanese firms that have recognized asset impairments used SFAS No. 35 in advance when their actual earnings deviated from their forecasted earnings. Their empirical results reveal that a wide deviation is associated with the early adoption of SFAS No. 35, indicating that SFAS No. 35 is used as a tool for manipulating earnings. Moreover, Chao (2007) find that firms that apply SFAS No. 35 in advance tend to perform well in their industries and have a relatively large firm scale and impairment losses, indicating that asset impairment recognition may be related to earnings management behavior.

SFAS No. 35 allows firms to recognize reversals of asset impairment losses, thereby making it distinct from the corresponding American accounting standard. However, numerous studies suggest that allowing reversals provides firms with more discretion to manipulate earnings. For example, the empirical results in Moehrle (2002) indicate that firms manage earnings through reconstruction cost reversals. Managers tend to recognize reversals when earnings are lower than analyst projections, when the firm experiences net losses, and when earnings are lower than the earnings from the previous year. In relevant literature on Taiwanese firms, Duh et al. (2009) find that firms that recognize a relatively high number of impairment losses may apply impairment loss reversals to prevent a reduction in their earnings, suggesting that a reduction in earnings may lead firms to apply impairment loss reversals to achieve income smoothing. However, effective corporate governance may reduce the occurrence of earnings management.

2.2 Corporate Governance and Earnings Quality

Klein (2002) asserts that earnings management is positively related to poor corporate governance. Warfield et al. (1995) indicate that managerial ownership affects the informativeness of accounting earnings and managerial accounting choices.

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Dechow et al. (1996) study firms subject to enforcement action by the Securities and Exchange Commission and report that firms manipulating earnings are more likely to have a chief executive officer (CEO) who also serves as the chairman of the board. Klein (2002) examine whether audit committee and board characteristics are related to earnings management and show that boards independent of the CEO are relatively more effective in monitoring corporate financial accounting.

Studies using data from Taiwan also confirm that stronger corporate governance leads to higher earnings quality and less earnings management. Chen et al. (2007) demonstrate that corporate governance mitigates the abuse of accounting discretion.

Studies on the determinants of asset impairment yield inconsistent results. Some studies support that asset impairment accounting is dominated by economic factors, whereas some assert opportunistic motivation as the dominant factor. Using data from Taiwan, Young & Wu (2009) examine the effects of corporate governance on both the determinants and earning informativeness of asset impairments. They find that when firms have strong (weak) corporate governance, the magnitude of asset impairment is mainly explained by the economic factors (opportunistic motivation), thereby enhancing (reducing) earning informativeness. Their results provide evidences for the importance of corporate governance in monitoring asset impairment recognition.

In related literature, the recognition of impairment losses and reversals is related to various managerial opportunistic motivations (Strong & Meyer, 1987; Zucca & Campbell, 1992; Francis et al., 1996; Riedl, 2004) and to reflection of changes in the values of firm assets (Elliott & Shaw, 1988; Rees et al., 1996; Alciatore et al., 1998). Because of our study objectives, our study sample consists of firms that have recognized impairment losses or loss reversals in any quarter of the study period.

We propose that rapid reversals of asset impairment recognition are used for the timely reflection of asset value changes because a one-off recognition in a given quarter adequately satisfies the objectives of opportunistic earnings management (e.g., big bath). Thus, our prediction is that the earnings quality of

firms in the changed group does not differ from (i.e., is not higher than) those of firms in the unchanged group. Furthermore, if corporate governance is sound and asset impairment recognition is adequately monitored, then governance authenticates impairment recognition. In other words, sound corporate governance guarantees that managerial motivation for repeatedly changing the direction of asset impairment recognition in the same year is related to the timely revision of asset value changes and not to opportunistic behavior. In this study, we employ abnormal accruals to measure earnings quality, as is common in related studies.

H1: The earnings quality of firms that rapidly reverse prior-quarter asset impairment recognition in a year (changed group) is higher than those of firms that recognize either impairment losses or reversals in a year (unchanged group).

H2: When corporate governance is sound, the earnings quality of firms in the changed group is higher than that in the unchanged group. However, when corporate governance is not sound, the earnings qualities in the two groups do not differ significantly.

3. Research Methodology

3.1 Data Description

Our sample consists of all listed firms in Taiwan that recognized impairment losses, loss reversals, or both in any quarter of a fiscal year from 2005¹ to 2010. Data are collected from the Taiwan Economic Journal Data Bank. Firms in financial sectors and firms with missing variable values are excluded. Our final sample has 1224 firm–quarter observations.

The sample is classified into two subgroups: changed and unchanged groups.

¹ SFAS No.35 (Taiwan) *Accounting Standards for Asset Impairments* was implemented on January 1, 2005. Therefore, the starting point of our research period was 2005.

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Firms that recognize asset impairment losses in a quarter and reverses these losses in the subsequent quarters of the same year and firms that recognize impairment reversals in a quarter and recognizes impairment losses in the subsequent quarters of the same year form the changed group. Firms that recognize either impairment losses or reversals in a given year form the unchanged group.

Table 2 stratifies the samples by year (panel A) and industry (panel B). Most samples overall and in the changed group are from 2005; the number of samples in each year decreased thereafter. Most samples in the unchanged group were from 2008, followed by 2005. The unchanged and changed groups have 805 and 419 firm-quarter observations, respectively, from 17 industries. Overall, most samples (644 samples, 52.61%) in the unchanged (410 samples, 33.50%) and changed (234 samples, 19.1%) groups are from the electronics industry. The glass and ceramics industry was the least represented. No firms from the glass and ceramics and tourism industries were present in the changed group.

Table 2 the yearly and industry distribution of the samples

Panel A: Yearly distribution					
Year	Number of unchanged group (firms recognizing only impairment losses or loss reversals in the same year)	Number of changed group (firms recognizing both impairment losses and loss reversals in the same year)	Number of sample	Percentage	
2005	150	107	257	21.00%	
2006	139	74	213	17.40%	
2007	127	76	203	16.58%	
2008	152	64	216	17.65%	
2009	128	59	187	15.28%	
2010	109	39	148	12.09%	
Total	805	419	1224	100%	

Panel B: Industry distribution						
Industry Code	Industry Name	Number of unchanged group	Number of changed group	Number of sample	Percentage	
11	Cement	8	2	10	0.82%	
12	Food	23	9	32	2.61%	
13	Plastic	25	14	39	3.19%	

14	Textile	53	29	82	6.70%
15	Electric Machinery	52	39	91	7.43%
16	Electrical and Cable	16	14	30	2.45%
17	Biotechnology & Medical Care	46	28	74	6.05%
18	Glass and Ceramic	3	0	3	0.25%
19	Paper and Pulp	6	7	13	1.06%
20	Iron and Steel	38	10	48	3.92%
21	Rubber	10	1	11	0.90%
23	Electronics	410	234	644	52.61%
25	Building Material and Construction	77	21	98	8.01%
26	Shipping and Transportation	15	3	18	1.47%
27	Tourism	8	0	8	0.65%
29	Trading and Consumers' Goods	10	7	17	1.39%
97	Oil, Gas and Electricity	5	1	6	0.49%
		805	419	1224	100%

Data source: this research

3.2 Variable Measurements

1. Measure of earnings quality

Absolute values of abnormal accruals (*ABACC*) are employed as the variable for measuring firm earnings quality. Abnormal accruals are measured as the residuals of the performance-controlling modified-Jones model estimated cross-sectionally for each two-digit industry code and year combination (Kothari et al., 2005). Abnormal accruals are widely adopted as a proxy for the degree of earnings management (e.g., Jones, 1991; Erickson & Wang, 1999).

2. Measures of the reversals of prior-quarter impairment recognition

Two proxies are employed to measure the reversals of prior-quarter impairment recognition. The first is a dummy variable *Dchange*. *Dchange* = 1 if a firm is in the changed group and 0 otherwise. The second measure is *CHANGE#*, which measures the number of recognition direction reversals by a firm in year *t*. For firms in the unchanged group, *CHANGE#* = 0, indicating that the firm did not change the direction of its recognition within a given year. For firms in the changed group, *CHANGE#* is at least 1 and at most 3.

3. Corporate governance index

We construct a “governance index” (GI) to measure the quality of corporate governance by considering seven characteristics of the governance structure: CEO duality (*DUALITY*), the number of directors on the board (*BOARD*), board independence (*INDEPENDENT*), supervisor independence (*SUPERVISOR*), board ownership (*OWN*), block shareholders’ holding (*BLOCK*), and the share board collateralization ratio (*PLEAGE*). The indicator variable equals 1 for each characteristic presumed to enhance the quality of financial reporting and 0 otherwise. The GI is the sum of the seven binary indicators. The seven governance indicator variables are explicitly defined as follows.

<i>DUALITY</i>	Indicator variable of CEO duality: 0 if the CEO is also the board chair and 1 otherwise.
<i>BOARD</i>	Indicator variable of board size: 1 if the number of directors in the board is higher than the sample median and 0 otherwise.
<i>INDEPENDENT</i>	Indicator variable of board independence: 1 if the board has at least one independent director and 0 otherwise.
<i>SUPERVISOR</i>	Indicator variable of supervisor independence: 1 if at least one independent supervisor is present in the firm and 0 otherwise.
<i>OWN</i>	Indicator variable of director ownership: 1 if director ownership is higher than the sample median and 0 otherwise.

<i>BLOCK</i>	Indicator variable of block shareholders' holding: 1 if block shareholders' holding is higher than the sample median and 0 otherwise.
<i>PLEAGE</i>	Indicator variable of the share collateralization ratio of the board members: 1 if the collateralization ratio is lower than the sample median and 0 otherwise.

GI

$$= \text{DUALITY} + \text{BOARD} + \text{INDEPENDENT} + \text{SUPERVISOR} + \text{OWN} + \text{BLOCK} + \text{PLEAGE}$$

Thus, the GI ranges from 0 to 7. We use this index as a proxy for the effectiveness of firm governance. Firms with indices of 0 (7) are presumed to have the weakest (strongest) governance structure.

Table 3 presents a summary of the variable definitions.

Table 3 Variable definition

Variable	Definition
<i>ABACC</i>	Absolute values of discretionary accruals (Kothari et al., 2005);
<i>DChange</i>	Indicator variable: One if the company reversed prior-quarter impairment recognition in a fiscal year (changed group) and zero otherwise (unchanged group).
<i>CHANGE#</i>	Number of change in recognitions of impairment in a fiscal year t ranged between 0 and 3.
<i>MB</i>	Market-to-book value ratio
<i>LEV</i>	Ratio of debt to Total Asset
<i>OCF</i>	Cash flows from operating activities
<i>DIV</i>	Cash dividend yield
<i>GI</i>	Governance index to measure the quality of corporate governance. The GI is the sum of the seven binary indicators -- <i>DUALITY</i> , <i>BOARD</i> , <i>INDEPENDENT</i> , <i>SUPERVISOR</i> , <i>OWN</i> , <i>BLOCK</i> , and <i>PLEAGE</i> .
<i>DUALITY</i>	Indicator variable of CEO duality: 0 if the CEO is also board chair and 1 otherwise.

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<i>BOARD</i>	Indicator variable of board size: one if number of directors in the board is greater than sample median and zero otherwise.
<i>INDEPENDENT</i>	Indicator variable of board independence: one if there is at least one independent director on board and zero otherwise
<i>SUPERVISOR</i>	Indicator variable of supervisor independence: one if there is at least one independent supervisor in the firm.
<i>OWN</i>	Indicator variable of director ownership: one if the director ownership is higher than sample median and zero otherwise.
<i>BLOCK</i>	Indicator variable of block shareholders' holding: 1 if block shareholders' holding is higher than the sample median and 0 otherwise.
<i>PLEAGE</i>	Indicator variable of share collateralization ratio of board members: one if collateralization ratio is higher than sample median and zero otherwise

Data source: this research

3.3 Empirical Models

1. Earnings qualities in the changed and unchanged groups

To test *H1*, we apply Equation (1) to compare the *ABACC* between changed group and unchanged group.

$$ABACC_{it} = \alpha_0 + \alpha_1 * Dchange_{it} + \alpha_2 * MB_{it} + \alpha_3 * LEV_{it} + \alpha_4 * OCF_{it} + \alpha_5 * DIV_{it} + \varepsilon_{it} \quad (1)$$

where *ABACC* and *Dchange* are as described in the Variable Measurements section. *MB* is the market-to-book value ratio, *LEV* is the ratio of debt to total asset, *OCF* is the cash flows from operating activities, and *DIV* is the cash dividend yield. Studies identify the potential effects of these variables on abnormal accruals.

If reversals of prior-quarter impairment recognition were for the timely reflection of value changes in firm assets, the earnings quality in the changed group should be higher than that in the unchanged group, meaning that α_1 in Equation (1)

should be negative. Conversely, if the reversals were for manipulating earnings, then α_1 should be positive.

Furthermore, we examine whether the frequency of reversals in a given year is directly proportional to earnings quality by using Equation (2):

$$ABACC_{it} = \beta_0 + \beta_1 * CHANGE\#_{it} + \beta_2 * MB_{it} + \beta_3 * LEV_{it} + \beta_4 * OCF_{it} + \beta_5 * DIV_{it} + \varepsilon_{it} \quad (2)$$

The variables have the same definitions as those in Equation (1). If the frequent reversals are used for reflecting the actual asset values and are not driven by opportunistic motivation, then *ABACC* should be inversely proportional to *CHANGE#* and β_1 should be significantly negative, implying that firms with such frequent changes have higher earnings quality.

2. Role of Corporate Governance

To examine the role of corporate governance, we reclassified the sample into two groups on the basis of the GI scores and reapplied Equation (1). Firms with GIs lower than the median are considered to have inadequate corporate governance and form the “lower GI group”. Firms with a GI of at least 3 are considered to have some degree of power to monitor financial reporting and form the “higher GI group”. The coefficient of *Dchange* in Equation (1) should be negative for the higher GI group and not significantly different from 0 for the lower GI group, which implies that appropriate corporate governance guarantees that frequent and rapid reversals of prior-quarter impairment recognition are intended for the timely reflection of asset value changes.

4. Empirical Results and Analysis

4.1 Descriptive Statistics

Table 4 presents the descriptive statistics of the variables used in this study.

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The mean of the dependent variable *ABACC* was 3.95%. Regarding independent variables, mean *Dchange* was 0.3423, indicating that 34.23% and 65.77% of the sample was in the changed and unchanged groups, respectively. Mean *CHANGE#* was 0.4575: the average number of reversals of prior-quarter recognition in a year is 0.4575. The mean GI score was 3.1417. Table 5 shows the correlation between variables pairs; the Table indicates that *ABACC* is inversely associated with *Dchange* (correlation coefficient = -0.058 ; significance level = 5%). In addition, *ABACC* is inversely associated with *CHANGE#* (correlation coefficient = -0.054 ; significance level = 10%). Both these results are consistent with our predictions.

Table 4 Descriptive statistics

Variable	Number	Mean	Std. Dev.	Min.	Q1	Medium	Q3	Max.
<i>ABACC</i>	1224	0.0395	0.0395	0.0001	0.0120	0.0285	0.0542	0.307
<i>DChange</i>	1224	0.3423	0.4747	0	0	0	1	1
<i>CHANGE#</i>	1224	0.4575	0.7107	0	0	0	1	3
<i>OCF</i>	1224	0.4369	1.2544	-13.0675	-0.0182	0.2527	0.6711	12.4729
<i>DIV</i>	1224	2.4766	2.9929	0	0	1.26	4.5425	15.86
<i>MB</i>	1224	1.4815	1.8246	0.05	0.73	1.125	1.79	45.58
<i>LEV</i>	1224	0.3892	0.1782	0.0158	0.2590	0.3806	0.4958	0.9375
GI	1224	3.1471	1.4296	0	2	3	4	7

Data source: this research

Table 5 Pearson Correlation Coefficients

Variable	<i>ABACC</i>	<i>DChange</i>	<i>CHANGE#</i>	<i>OCF</i>	<i>DIV</i>	<i>MB</i>	<i>LEV</i>
<i>ABACC</i>	1	-0.058**	-0.054*	0.181***	-0.076***	0.057**	0.118***
<i>DChange</i>		1	0.893***	-0.010	0.039	0.036	0.004
<i>CHANGE#</i>			1	-0.008	0.035	0.031	0.016
<i>OCF</i>				1	0.041	-0.137***	0.080***
<i>DIV</i>					1	0.015	-0.203***
<i>MB</i>						1	0.063***
<i>LEV</i>							1

Data source: this research

Table 6 shows the differences between the changed and unchanged groups. The average number of abnormal accruals for the changed and unchanged groups differed significantly (0.0363 and 0.0412, respectively), indicating that firms that frequently reverse prior-quarter impairment recognition have significantly lower abnormal accruals compared with firms that do not. This finding provides preliminary evidence for the earnings quality of the changed group being higher than that of the unchanged group. The average number of changes (*CHANGE#*) in the changed group within a year was 1.3365, which differs significantly from that in the unchanged group. However, no significant differences are observed between the groups for the control variables *OCF*, *DIV*, *MB*, and *LEV*, indicating that the firms' characteristic variables in the model, excluding *CHANGE#*, did not differ significantly between the groups.

Table 6 Comparison between the changed group and the unchanged group

Variable	Changed group (N=419)		Unchanged group (N=805)		Difference	t-stat
	Mean	Std.dev	Mean	Std.dev		
<i>ABACC</i>	0.0363	0.0353	0.0412	0.0413	-0.00486	-2.15**
<i>CHANGE#</i>	1.3365	0.5481	0	0	1.3365	49.9***
<i>OCF</i>	0.4198	1.2043	0.4458	1.2803	-0.026	-0.35
<i>DIV</i>	2.6390	2.9462	2.3921	3.0153	0.2469	1.38
<i>MB</i>	1.5729	2.4753	1.4340	1.3682	0.1389	1.07
<i>LEV</i>	0.3902	0.1789	0.3887	0.1779	0.00154	0.143

Data source: this research

4.2 Analysis of the Empirical Results

Table 7 presents the results of the OLS regression of reversals of prior-quarter impairment recognition on *ABACC*. In the first column of Table 7 (column for model 1), *Dchange* was used as the explanatory variable to examine whether earnings quality differed between the changed and unchanged groups. The second

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column shows the results of the regression of earnings management with *CHANGE#*.

Column (1) of Table 7 shows that *Dchange* is inversely associated with *ABACC* at a 5% significance level (coefficient = -0.0048), which indicates that firms in the changed group engage in less earnings management compared with firms in the unchanged group. Reversing prior-quarter recognition is therefore intended to reflect changes in the asset values, which is consistent with Hypothesis 1.

The correlation of control variables with the book value ratio (*MB*) was nonsignificant, indicating that *MB* did not influence abnormal accruals *ABACC*. The debt ratio (*LEV*) was directly associated with the degree of earnings management at a 5% significance level (coefficient = 0.0194), indicating that firms with higher debt engaged in higher levels of earnings management, consistent with relevant literature. Operating cash flow (*OCF*) was significantly directly associated, and cash dividends (*DIV*) were significantly inversely associated.

Column (2) of Table 7 shows an inverse association between *ABACC* and *CHANGE#* at a 5% significance level (coefficient = -0.0030), indicating that frequent reversals are for reflecting changes in asset values, thus supporting Hypothesis 1.

**Table 7 OLS regression of reversals of prior quarter impairment recognition
on absolute values of abnormal accruals**

$$ABACC_{it} = \alpha_0 + \alpha_1 * DChange_{it} + \alpha_2 * MB_{it} + \alpha_3 * LEV_{it} + \alpha_4 * OCF_{it} + \alpha_5 * DIV_{it} + \varepsilon_{it} \quad (1)$$

$$ABACC_{it} = \beta_0 + \beta_1 * CHANGE\#_{it} + \beta_2 * MB_{it} + \beta_3 * LEV_{it} + \beta_4 * OCF_{it} + \beta_5 * DIV_{it} + \varepsilon_{it} \quad (2)$$

Dependent Variable: *ABACC*

	Model (1)		Model (2)	
	Coef.	t-stat	Coef.	t-stat
Intercept	0.0301***	(6.90)	0.0299***	(6.91)
<i>DChange</i>	-0.0048**	(-2.19)		
<i>CHANGE#</i>			-0.0030**	(-2.07)
<i>MB</i>	0.0017	(1.01)	0.0017	(0.99)
<i>LEV</i>	0.0194**	(2.46)	0.0195**	(2.47)

<i>OCF</i>	0.0059***	(3.08)	0.0059***	(3.09)
<i>DIV</i>	-0.0009**	(-2.17)	-0.0009**	(-2.18)
Adj R ²	5.26%		5.23%	
N	1224		1224	

The sample period covers 2005-2010.

t-values are adjusted by clustered robust standard errors suggested by Petersen (2009) and reported in parentheses.

***, **, * represent 1%, 5%, and 10% significant levels, respectively.

Data source: this research

Table 8 presents the results of the OLS regression of *Dchange* on *ABACC* in the higher and lower GI groups.

For firms in the higher GI group, the coefficient of *Dchange* is negative at a 10% significance level (coefficient = -0.0054), suggesting that the earnings quality of the changed group is higher than that of the unchanged group. However, for firms in the lower GI group, the coefficient of *Dchange* did not differ significantly from 0, suggesting that the earnings qualities in the changed and unchanged groups do not differ significantly. The empirical results show that corporate governance is crucial in monitoring asset impairment recognition and that strong governance systems guarantee that the rapid reversals of prior-quarter impairment recognition are intended for the timely reflection of changes in asset values and not for earnings manipulation, which is consistent with Hypothesis 2.

Table 8 OLS regressions of reversals of prior quarter impairment recognition on absolute values of abnormal accruals by corporate governance Index (GI)

$$ABACC_{it} = \alpha_0 + \alpha_1 * DChange_{it} + \alpha_2 * MB_{it} + \alpha_3 * LEV_{it} + \alpha_4 * OCF_{it} + \alpha_5 * DIV_{it} + \varepsilon_{it} \quad (1)$$

	Dependent Variable: <i>ABACC</i>			
	Strong governance firms (GI>=3)		Weak governance firms (GI<3)	
	Coef.	t-stat	Coef.	t-stat
Intercept	0.0338***	(6.02)	0.0256***	(3.15)
<i>DChange</i>	-0.0054*	(-1.94)	-0.0061	(-1.57)

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<i>MB</i>	0.0012	(0.50)	0.0020	(0.86)
<i>LEV</i>	0.0159	(1.59)	0.0240	(1.52)
<i>OCF</i>	0.0092***	(3.26)	0.0060**	(2.08)
<i>DIV</i>	-0.0018***	(-3.59)	0.0003	(0.37)
Adj R ²	10.31%		3.97%	
N	817		407	

The sample period covers 2005-2010.

t-values are adjusted by clustered robust standard errors suggested by Petersen (2009) and reported in parentheses.

***, **, * represent 1%, 5%, and 10% significant levels, respectively.

Data source: this research

5. Summary and Conclusions

Using data on listed firms in Taiwan that recognized impairment losses, loss reversals, or both in any quarter of a given year from 2005 to 2010, this study investigates the impact of frequent and rapid reversals of prior-quarter impairment recognition in a year on earnings quality. Literature related to asset impairments primarily focuses on the accumulated number of asset impairments in annual financial reports, and few studies observe changes in impairment recognition across quarters in a given year. Our study extends current research on asset impairments. SFAS No. 35 allows the recognition of both asset impairment losses and their reversals and is intended for allowing managers to enable timely reflection of changes in the values of assets. By contrast, accounting standards in the United States allow firms to recognize only asset impairment losses and not reversals. The U.S. authorities presume that allowing reversals offers firms with more discretion for manipulating earnings. Whether earnings manipulation through reversals exists in Taiwanese firms after they adopt the IFRS edition of asset impairments instead of the U.S. FASB edition warrants examination.

We examine and compare the earnings qualities of firms that reverse the prior-

quarter impairment recognition in a year (the changed group) with those of firms that recognize either asset impairment losses or their reversals in a year (the unchanged group). The empirical results reveal that firms in the changed group have lower degrees of earnings management, thus supporting our research hypothesis: the earnings quality of the changed group is higher than that of the unchanged group. Regarding the role of corporate governance, we find that for firms with a higher corporate GI, the absolute values of abnormal accruals of firms in the changed group are significantly lower than those in the unchanged group, but this variable does not differ significantly for firms with lower corporate governance in the unchanged group. These results indicate that corporate governance is vital in monitoring the implementation of SFAS No. 35.

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