Analysis on Reversals of Impairment losses under IFRS in Japan*

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ABSTRACT

The purpose of this survey is to clarify the status of reversing impairment losses of firms applying IFRS by examining the tendency of firms to reverse impairment losses. The results revealed a certain bias in specific firms and industries in reversing impairment losses in Japanese IFRS firms. I find that the types of assets with impaired losses that can be reversed are slightly more intangible fixed assets than tangible fixed assets. In addition, I statistically examine whether there is a difference in performance between the reversal firm and no-reversal firm. Results indicate a significant difference in both net income and operating cash flow in the medical product and food industries, which have a high rate of reversing impairment losses on intangible assets. On the other hand, the difference in business performance disappeared as the industry reversed more tangible fixed assets. In some actual disclosure examples in practice, there are cases in which detailed disclosure regarding the reversal of impairment is not appropriately made, which is considered to be an institutional issue in IFRS.

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1. Introduction

The purpose of this paper is to improve the understanding of the actual reversals of impairment losses under IFRS in Japan by examining the tendency of firms that do so. Japanese GAAP (J-GAAP) and US GAAP prohibit the reversal of impairment losses, but it is permitted under IFRS, under IAS 36 “Impairment of Assets” (IASB 2004) (IAS36, par. 114). There are several reasons to reverse impairment losses under IFRS. First, the reversal of impairment losses is consistent with the definition of assets in the Conceptual Framework. Reversing an impairment loss means that it is more likely that future economic benefits will flow into the firm that were not expected to arise from the previously impaired asset. Therefore, revaluing the asset is more consistent with the definition of assets in the framework (IAS36, BCZ184).[1)] Second, it is also supported by the fact that the reversal of impairment losses is a change in estimates. Since the impairment is performed based on the estimated recoverable amount, if the estimation changes and the new estimation reduces the impairment, then it is necessary to reverse the impairment loss (Business Accounting Council of Japan (BACJ) 2002, par. 4・3(2)). Third, reversing the impairment loss provides useful information for users of financial statements. As users of financial statements expect information about future cash flows, reversing impairment losses provides them with useful information about the potential future benefits of an asset or group of assets (IAS36, BCZ184).

In contrast, J-GAAP prohibits reversal of impairment losses because (1) impairment losses are recognized only when the existence of impairment is reasonably certain

1） The reasons for reversing the impairment loss are (a) it is against cost-based accounting, (b) it causes fluctuations in profit, and (c) it is not useful to users of financial statements, (d) it leads to the recording of internally generated goodwill, (e) it is used as a means for leveling profits, and (f) it increases the administrative burden (IAS36, BCZ183).

based on the “probability criterion,” and (2) reversal may increase the administrative burden (BACJ 2002, par. 4・3(2). Besides, US GAAP also prohibits the reversal of impairment loss. SFAS No. 121 (FASB 1995) adopts a fair value measurement rather than a removable amount as the measurement of an impairment loss; thus, the carrying amount after impairment losses is considered to be its new cost (FASB 1995, ASC 360-10-35-17, pars. 11, 20, 105).

2. Previous research

Previous studies on impairment loss reversals are minimal. One reason is that empirical analysis using regressions is infeasible because of the small sample (Gordon & Hsu, 2018, p.207). There are a few investigations of the relationship between impairment reversals earnings management. Duh et al. (2009) analyze firms in Taiwan to clarify impairment losses. Consistent with the earnings management hypothesis associated with incentives to avoid debt management breaches, they observe impairment reversal behavior in firms with higher debt ratios. However, effective corporate governance mechanisms can mitigate such behavior. Trottier (2013) analyzes the relationship between reversal of impairment loss and management compensation in Canada based on a questionnaire survey. The results suggest that permitting reversals increases the likelihood that a manager will recognize the impairment, especially if the manager has a bonus plan. Cao et al. (2018) document evidence that firms with high levels of abnormal accruals and weak corporate governance avoid earnings decline by reversing previously recognized impairments. In addition, they find that firms engaging in big baths, as evidenced by high accumulated impairment balances and prior changes in top management, use impairment reversals to avoid earnings declines. Tan and Trotman (2018) use an

experimental method to analyze the effect of revertive behavior on disclosure behavior. They find that managers are more willing to impair when they can reverse impairment losses than when they cannot do so, but this effect does not vary with disclosure transparency. Chen et al. (2009) investigate the actual situation of impairment loss reversals in China and show that managerial opportunism may have reduced the reliability of otherwise value-relevant reversal information. On the contrary, Shaari et al. (2017) analyzes the impact of reversing impairment losses in Malaysia and report that firms reversing impairments are not more incentivized to engage in earnings management and do not actually engage in more earnings management than a control sample matched on size and industry.

Researchers tend to regard impairment reversals as an earnings management tool and find evidence consistent with this belief. Overall, prior studies show no positive aspect of impairment reversals. However, the reversal of impairment losses, which provides direct information about future cash flows, must be useful as information on future cash flows is of paramount importance in contemporary accounting standards. Usually, it is difficult to obtain information on future cash flows in companies as an outsider. In this regard, the impairment reversal is expected to communicate the management's outlook on future business performance. This study attempts to reveal the usefulness of impairment reversals, unlike prior research. I conduct a basic analysis with a limited sample in Japan, focusing on a point that prior studies do not address, such as the characteristics of the industry and the types of fixed assets.

3. Understanding impairment reversals among IFRS firms in Japan

3.1. Sample selection

The data of impairment losses and impairment reversals of IFRS firms are hand-collected from annual reports. Other data are collected from Nikkei Media Marketing, NEEDS Financial QUEST.[2] The analysis period is limited to the general operations of IFRS-adopting companies from 2011 to 2019, when impairment reversals occurred. Thus, the data sample consists of 861 firm-year observations.

3.2. Status of IFRS firms and reversal implement firms

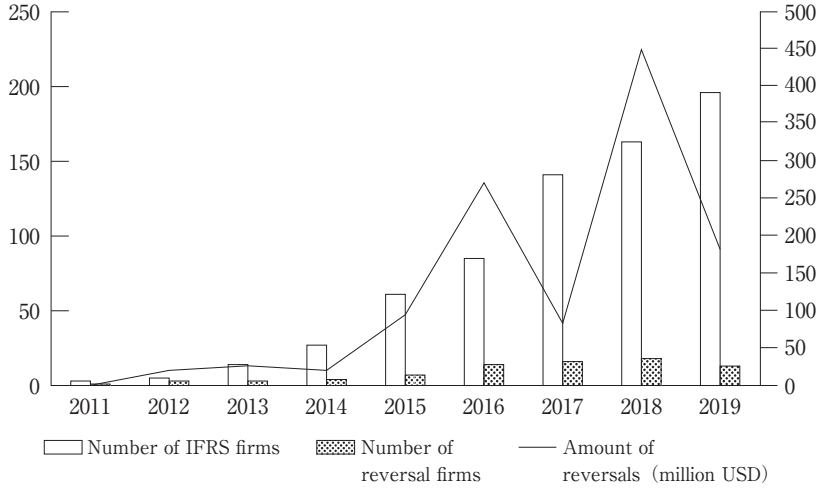
Figure 1 shows the implementation status of IFRS firms in Japan. The number of firms performing impairment reversal is increasing annually; however, it has not increased in proportion to the number of firms applying IFRS.[3] Considering the number of firms that carried out impairment reversals, it seems that the reversal amounts (cumulative) in 2016 and 2018 are significant. This may be because some firms have large amounts of impairment reversals at one time, and that firms experienced improving future cash flows simultaneously.

Figure 2 shows the firms that implement impairment reversals by industry, classified based on Nikkei-Middle-Industry Classification codes. The left side of Figure 2 presents the classification of firms that apply IFRS by industry, sorted based on the number of samples rather than the number of firms.

2） For operating cash flow, I use “subtotal,”, but when data for subtotal are missing, I instead use the “Nikkei Adjusted Operating Cash Flow” from NEEDS Financial QUEST.

3） Gordon and Hsu (2018) observe 38 impairment reversals out of 1,412 samples (tangible long-lived assets) among 289 firms in major IFRS countries such as France, Germany, and the United Kingdom from 2005 to 2011, which is 0.2% of total assets at the beginning of the period on average.

Figure 1: Number of firms reversing impairment (left) and the amount of implemented reversals (right, unit: million USD, cumulative)



The pharmaceutical industry most frequently implements impairment reversals, followed by food, electrical equipment, and ceramics (glass). There is an example of one firm carry out 9 reversals in consecutive years. One of the reasons that certain firms intensively reverse impairment losses is that the firm's management system for the impairment reversals is sufficient. According to this article, a specific company that develops fixed asset management software created new software for firms applying IFRS that supports the reversal of impairment losses. Since many firms that reversed impairment losses introduced this software, the implementation of impairment reversal highly depends on the existence of the management system.

Figure 2: Firms applying IFRS by industry (left) and firms implementing impairment reversal (right)

Industry	Number of firms	Obsavations	Ratio
Service	50	216	25.1%
Electrical Equipment	23	100	11.6%
Medical Supplies	16	81	9.4%
Trading	12	73	8.5%
Automobile	15	70	8.1%
Chemicals	13	45	5.2%
Machinery	11	39	4.5%
Precision Machinery	8	36	4.2%
Other Financial Services	7	33	3.8%
Food	9	30	3.5%
Communication	8	29	3.4%
Retailer	5	20	2.3%
Glass and Ceramic	2	16	1.9%
Metal Products	4	15	1.7%
Rubber	4	14	1.6%
Real Estate	2	12	1.4%
Land Transportation	2	11	1.3%
Steel Industry	3	10	1.2%
Fiber	1	7	0.8%
Oil	1	4	0.5%
Total	196	861	100.0%

Industry	Number of reversal firms	Obsavations	Ratio
Medical Supplies	8	13	16.5%
Food	3	11	13.9%
Electrical Equipment	5	10	12.7%
Glass and Ceramic	1	9	11.4%
Service	3	7	8.9%
Chemicals	3	6	7.6%
Trading	3	5	6.3%
Automobile	3	4	5.1%
Other Financial Services	1	4	5.1%
Machinery	1	3	3.8%
Land Transportation	2	2	2.5%
Oil	1	2	2.5%
Precision Machinery	1	1	1.3%
Real Estate	1	1	1.3%
Retailer	1	1	1.3%
Total	37	79	100.0%

3.3. Comparison of impairment reversal by asset type

Figure 3 summarizes the reversal of impairment losses by asset type. IAS 36 requires disclosure of the details of reversed impairment losses when they are material to the financial statements as a whole, including (1) the events and circumstances that led to the reversal of the impairment loss, (2) the amount of the impairment loss reverted, and (3) the amount of the impairment loss reverted for each asset type (IAS 36, par.130). Using these disclosures, I aggregate the types of fixed assets that actually saw impairment loss reversals in IFRS-adopting firms in Japan. Tangible fixed assets are categorized into “land and buildings,” “machinery and equipment,” and “construction in progress/ invested real estate/others (“Others” in Figure 3).” If the specific tangible fixed asset reversed is unknown, then I include it in “Others” in Figure 3.

Figure 3: Aggregate impairment reversal by asset type (Unit: million USD, cumulative)

Year	IFRS firms	Reversal firms	Amount of Reversal	**Tangible**	(Land/Buildings)	(Machinery/Equipment)	(Others)	**Intangible**
2011	3	1	0.01	0.01	0.00	0.01	0.00	0.00
2012	5	3	0.20	0.08	0.01	0.05	0.02	0.12
2013	14	3	0.28	0.28	0.01	0.02	0.25	0.00
2014	27	4	0.19	0.19	0.03	0.16	0.00	0.00
2015	61	7	0.95	0.54	0.42	0.12	0.00	0.40
2016	85	14	2.71	0.51	0.11	0.02	0.38	2.20
2017	141	16	0.83	0.69	0.51	0.18	0.00	0.13
2018	163	18	4.47	1.49	0.27	0.36	0.87	2.98
2019	194	13	1.82	1.71	0.37	0.59	0.75	0.11
Total		79	**11.45**	**5.50**	1.72	1.51	2.27	**5.95**

Figure 3 indicates that the intangible fixed assets with reversed impairment is slightly larger than that of tangible fixed assets. It is possible that a large amount of impairment loss due to uncertainty in measuring the impairment of intangible fixed assets was reversed at once due to the improvement of the recoverable amount. One of the possible reasons that several intangible fixed assets saw reversals is that some firms applying IFRS have many intangible assets in their specific industries, such as the medical industry. As a type of reversed impairment, firms disclose “land and buildings” separately. Based on the contents, there are many cases of reversing the impairment of “land.” The reason for this result is that the improvement of the recoverable value can be objectively identified because the market value of land is easy to grasp.

3.4. Analysis of the reasons for impairment reversals

When reversing an impairment loss, firms must mention the reason for performing the reversal (IAS36, pars.130, 131). Basically, the reason should be that the recoverable amount improved, but the actual case in Japan can be summarized in Figure 4 as follows.

Figure 4: Reasons for impairment reversals in practice

① Changes in the situation after a natural disaster	Regarding the impairment loss recorded when a typhoon or flood occurred, there are cases in which the impairment loss is reversed due to the subsequent improvement in the situation, and the recoverable value is reassessed. When a natural disaster occurs, the existing loss is so great that many impairment losses are recorded due to the suspension of operations. However, it is conceivable that cash flow will improve in the future due to the resumption of operations, etc., depending on the passage of time thereafter.
② Improving the market value of land	There are also cases where the impairment loss is reversed due to improvements in the market value of the land. If the land is idle, then it will be a unit of cash generation, and if the market price rises independently, then it can be returned. In some cases, firms conduct a new real estate appraisal to reverse the land's impairment loss.
③ Deciding to sell	In some cases, an impairment loss is recorded because the asset was idle, but then the firm decides to sell the impaired asset, and the past impairment loss is reversed. In other cases, non-current assets classified as held for sale have their fair values subsequently increased, and the impairment losses are reversed.
④ Progress in research and development	The medical industry has a high degree of uncertainty in the R&D of new products, so an impairment loss may be recorded during the development process. However, in some cases, the recoverable amount will improve due to the prospect of actual commercialization as the development plan progresses. The amount of work-in-process R&D acquired through the acquisition of a company is also large, so the amount of money to be returned is also large.
⑤ Performance improvement of unprofitable stores	In the service industry, such as in restaurants and clothing sales, the unit of cash generation is often a "store." In this case, an impairment loss is recorded for each store due to the deteriorating business performance, and if the business performance of the store is likely to Improve thereafter, the impairment loss recorded in the past will be reversed.
⑥ Others	• Reassessment of recoverable amount (improvement of the recoverable amount of specific business subject to impairment loss) • Updated business plan • Restart operations of a halted production line • Change from the suspension of operation to the usage method (such as changing the closed building structure to continuous use) • Future oil and gas prices expected to rise in exploration and development investment • Improved product sales prospects • Increasing demand overseas

4. Comparison of reversals in implementation and non-implementation firms

Many IFRS-adopting firms in Japan do not reverse impairment losses. Therefore, the firms that reverse impairment losses may have special and characteristics. Assuming that firms that carried out an impairment loss reversal even once tend to implement a reversal in the future, I classify such firms as a “reversal firm.” On the other hand, I classify the sample of firms that have never performed a reversal as a “no-reversal firm” and examine whether there is a difference between these two groups.

4.1. Basic statistics of reversal and no-reversal firms

Figure 5 compares the average impairment reversal, impairment loss (including goodwill impairment loss), and performance in terms of net income and operating cash flow (OCF) for both reversal and no-reversal firms. All figures are standardized by total assets at the end of the period. Since a past impairment loss that can be reversed is an impairment (except for goodwill impairment), the potential reversible impairment loss is the amount of deduction of goodwill impairment from the overall impairment loss. Firms that carry out reversals appear to have more opportunities for reversals, as they recorded higher average amounts of past impairment losses. Next, focusing on the differences in performance, the average firm that carries out reversals tends to show higher performance for both net income (net income after tax) and operating cash flow. Therefore, it is possible that firms with better performance are reversing impairment losses.

Figure 5: Basic statistics: Reversal and no-reversal firms

		Reversal	Impairment	(GW impairment)	Net income	OCF
Reversal firms	Average	0.0003	0.0059	0.0009	0.0478	0.0823
216 observations	SD	0.0009	0.0078	0.0021	0.0359	0.0479
	Min	0.0000	0.0000	0.0000	－0.0614	－0.0972
	Max	0.0056	0.0467	0.0146	0.1598	0.2462
Non-reversal firms	Average	－	0.0055	0.0016	0.0426	0.0682
645 observations	SD	－	0.0227	0.0081	0.0581	0.0664
	Min	－	0.0000	0.0000	－0.3605	－0.3360
	Max	－	0.4793	0.1430	0.3671	0.5489
Total	Average	0.0001	0.0056	0.0014	0.0439	0.0926
861 observations	SD	0.0005	0.0201	0.0071	0.0535	0.0625
	Min	0.0000	0.0000	0.0000	－0.3605	－0.3360
	Max	0.0056	0.4793	0.1430	0.3671	0.5489

4.2. Average difference test (statistical analysis)

I conduct a t-test to analyze whether there is a difference in the mean value between reversal and no-reversal firms. First, I perform an F-test to test whether the variances of the two groups differ, and after confirming that the variances are different, I conduct the Welch t-test for analysis. First, I analyze whether there is a significant difference between reversal and no-reversal firms for the average value of net income and operating cash flow using the full sample, as shown in the upper part of Figure 6. I find a significant difference in both net income and operating cash flow between the reversal and no-reversal firms. Reversal of impairment loss influences earnings without current cash flow generation and is a kind of “accrual” at the time of recording; however, the difference in other accruals is that indicates the recoverable amount (future cash flow) is expected to improve. This aspect is consistent with the reason that the impairment standard permits impairment reversal.

However, the reversal of impairment losses tends to be biased toward specific industries. Therefore, I conduct a comparative analysis between reversal and no-reversal firms for the pharmaceuticals, foods, trading companies, chemical industries, electrical equipment, and service industries, which have a sample size that allows for

Figure 6: Comparison of average values (t-test)

		No-reversal firms	Reversal firms	p-value	Ratio of Tangible	Ratio of Intangible
Full sample	Observation	(645)	(216)		47.7%	52.3%
	Net income	0.042	0.048	0.009*		
	OCF	0.068	0.081	0.002***		
Medical Supplies	Observation	(36)	(45)		3.6%	96.4%
	Net income	−0.017	0.054	0.003**		
	OCF	−0.010	0.084	0.001***		
Food	Observation	(14)	(16)		12.7%	87.3%
	Net income	0.038	0.068	0.001***		
	OCF	0.076	0.094	0.022***		
Trading	Observation	(51)	(22)		36.3%	63.7%
	Net income	0.027	0.035	0.156		
	OCF	0.051	0.047	0.468		
Chemicals	Observation	(29)	(16)		100.0%	0.0%
	Net income	0.052	0.060	0.304		
	OCF	0.085	0.101	0.144		
Electrical Equipment	Observation	(74)	(27)		100.0%	0.0%
	Net income	0.038	0.051	0.138		
	OCF	0.065	0.087	0.003***		
Service	Observation	(198)	(18)		100.0%	0.0%
	Net income	0.064	0.044	0.008***		
	OCF	0.122	0.135	0.392		

***, **, and * indicate two-sided statistical significance at the 0.01, 0.05, and 0.10 levels.

statistical analysis.[4)]

The right side of Figure 6 shows the proportion of fixed assets with reversed impairment for tangible and intangible assets. As Figure 3 shows, firms reverse intangible fixed assets at slightly higher rates than they do tangible fixed assets. In the pharmaceutical and food industries, where a large amount of intangible fixed assets are reversed, I find a significant difference in both net income and operating cash flow between reversal and no-reversal firms. The reversal of impairment losses in the pharmaceutical and food industries reflects more specific cash flow improvements, such as progress in new drug development and new product

4) The ceramics industry is excluded from the analysis because the full sample contains only one firm.

development. Therefore, reversals of impairment losses in these industries or in intangible assets may transmit a positive signal to the market, such as improving future performance.

On the other hand, in industries where many tangible fixed assets are reversed for impairment, the average performance is basically higher than in no-reversal firms in the same industry. However, except for the net income in the service industry and the operating cash flow in the electrical equipment industry, I find no significant difference in the average performance between reversal and no-reversal firms. The reversal of impairment loss related to tangible fixed assets may be triggered by just "land price increase" or "decision to sell." These causes do not necessarily indicate that the ongoing improvement of earnings and cash flows will increase. It is possible that such differences influence the reversal of impairment losses on intangible assets.

Regarding the service industry, no-reversal firms have significantly higher averages in net income, but no significant difference in operating cash flow. Impairment reversals in the service and retail industries are done on a store-by-store basis and tend to be of small value in practice. It is conceivable that the performance of each store, such as restaurants and clothing stores, may represent small performance fluctuations. If management could systematically grasp the reversal of impairment loss for each store every time the outlook for each store would change, they could implement impairment reversals automatically.

5. Conclusion

The findings of an investigation into the actual reversals of impairment losses in Japanese firms applying IFRS are as follows. First, although reversal of impairment loss events are not limited to a specific firm or industry, specific firms and industries

tend to implement it in practice. This may be because the impairment reversal creates an administrative burden, and the importance of the impairment loss differs for each industry and firm. In addition, intangible fixed assets saw slightly more reversed impairment than tangible fixed assets. This can make a difference in the information content. Analyzing the actual reason for the reversals, the impairment reversals on intangible fixed assets are associated with higher average operating cash flow, due to research and development progress, whereas the reversal of tangible fixed assets is not linked to the continuous improvement of future cash flows, such as increasing market prices and decision-making on sales.

Next, I examine whether the difference in the types of fixed assets reversed is related to the difference in performance by determining whether there are differences in business performance between reversal and no-reversal firms. First, I confirm some differences in both net income and operating cash flow between reversal and no-reversal firms in the full sample. This result implies that reversing an impairment loss is essentially an indication of an increase in cash flow; therefore, it is consistent with the purpose of the impairment standard. However, the implementation of reversing impairments is biased toward particular industries. Second, I analyze the industries for which a comparative analysis is possible. I find a significant difference in both net income and operating cash flow for the pharmaceutical and food industries, which have a high rate of impairment loss reversals on intangible assets. Therefore, the reversal of the impairment losses of intangible fixed assets may be useful information for evaluating a firm's future performance. On the other hand, the more industries that reverse tangible fixed assets, the smaller the difference in average performance. From this point of view, it is necessary to focus on the factors of impairment reversals and utilize them for future predictions, rather than to unequivocally capture the reversal of impairment losses. Therefore, it is necessary to

further strengthen the disclosure of details about impairment reversals in the footnotes. In the actual disclosure examples, the detailed content is unclear in some cases, which is considered to be an institutional issue.

U.S. and Japanese standards do not permit reversals of impairment losses, which is a specific provision of IFRS. The reversal of impairment losses, which provide direct information on improvement in future cash flows, must be useful information about future performance because the information on future cash flows is of paramount importance in contemporary accounting standards. Usually, it is difficult to obtain information on future cash flows from companies as an outsider. In this regard, reversing an impairment loss should have the effect of communicating management's outlook for future business performance. However, it is unclear whether the reversal of all impairment losses is worthwhile, and there is a need for improvements such as strengthening the disclosure contents related to the reversal and reducing the burden and promoting its application in practice. Given that the number of firms applying IFRS in Japan will continue to increase, further analysis of the reversal of impairment losses is highly required.

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