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QUARTERLY EARNINGS MANAGEMENT AROUND THE WORLD: LOSS AVOIDANCE OR EARNINGS DECREASE AVOIDANCE?

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Abstract

The purpose of this study is to identify and explain the differences in the characteristics of earnings management around the world through an examination of quarterly earnings. First, we identify an earnings target in each country. We find that corporations in Finland, Germany, Italy, and Japan tend to avoid making losses and those in Israel and the U.S. tend to avoid earnings decrease. Second, we measure the extent of earnings management in each country. Our findings show that corporations in Japan, Germany, and Israel tend to manage earnings to achieve an earnings target, meanwhile those in Finland, Singapore, and the U.S. don't tend to manage earnings relatively. Third, we examine the dividend and investment policies. Corporations in Japan and Finland are dividend focused, meanwhile those in Israel and the U.S. are investment focused. Fourth, we calculate an institutional factor to identify the reasons for earnings targets, procedures, and dividend and investment behavior. Our results show that earnings targets, procedures, and dividend and investment behavior are closely related to the accountability for investment and the propensity to take risk in each country.

Topics: Earnings management
Keywords: Quarterly earnings management, international comparison, earnings attributes, loss avoidance, earnings decrease avoidance
JEL Descriptors: M41, G35, M62
Data Availability: Data used in this study are available from public sources

I. *Introduction*

The purpose of this study is to identify and explain differences in the characteristics of earnings management in countries around the world via an examination of quarterly earnings. Since 1910, companies in the United States have voluntarily disclosed their quarterly financial reports. Later, in 1970, the U.S. Securities and Exchange Commission (SEC) required listed corporations to disclose quarterly financial reports. As a result, many studies by using quarterly

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financial data have accumulated around the world, especially in the U.S. Why should we now examine international differences of quarterly earnings management? We have three reasons to do so.

First, in the 2000s, a number of financial regulators began to adopt or amend quarterly financial reporting standards. For example, the SEC has required listed corporations to review quarterly financial reports at the end of each quarter since March 2000, following the Blue Ribbon Committee in February 1999.

Meanwhile, in the European Union, the Transparency Obligations Directive (Directive 2004/109/EC) was published in December 2004. It permitted EU countries to decide whether they would require corporations to disclose quarterly financial reports, and subsequently corporations have been required to disclose quarterly financial reports in Austria, Finland, Italy, Portugal, Spain, and Sweden. In addition, standards for quarterly financial reports have recently been announced in Asia, including Singapore, China, Hong Kong, Korea, and Japan. Thus, we can collect quarterly financial data and analyze economic consequences of corporate behaviors by introduction of standards for quarterly financial reports around the world. However, there are as yet few studies on those effects or behaviors.

Second, we have been keenly interested in international differences in earnings attributes. In particular, accounting standards setters and academies have a variety of interests in the international differences in earnings attributes because movements for the adoption of or convergence toward the International Financial Reporting Standards (IFRS) are growing worldwide, leading many researchers to compare earnings attributes internationally (e.g., Ball, Kothari, and Robin 2000; Leuz, Nanda, and Wyoscki 2003). Such studies show that law origins, systems for investor protection, and tax systems have all affected earnings management behavior, in areas including the smoothness of earnings, discretionary accruals, and loss avoidance.

There are many studies that examine differences in earnings management around the world by using annual financial data, on the other hand, few studies have used quarterly financial data. The objectives or roles of quarterly financial reports are different from those of annual financial reports, and we may, therefore, clarify the characteristics of earnings management in each country by considering quarterly financial data.

Third, there are major differences in the standards for quarterly financial reports worldwide. For example, all listed corporations have been required to disclose quarterly financial reports in the U.S. and Japan, while in some European and Asian countries, only corporations, listed in the particular exchanges or included in certain categories, have been required to disclose them. Also, in making quarterly financial reports, accounting standards procedures in Japan have put more emphasis on each quarterly term, not on annual term more than those of the United States of America and Europe. For example, Accounting Principles Board Opinion (APBO) No.28 allows corporations to adopt original accounting procedures of quarterly financial reports, which may not reflect the procedures followed annual financial reporting. In addition, there are some differences in the audit or review of quarterly financial reports around the world. Japanese corporations have been required to review their quarterly financial reports, while corporations in the EU are not required to audit or review their quarterly financial reports. However, despite the international differences in quarterly financial reports, we cannot directly investigate whether those differences affect their stock market valuation or corporate behaviors. Recently, accounting standards setters in each country have

moved to adopt of or converge toward the IFRS, and must review the design of disclosure systems. For now, it is more important to clarify the economic effects of disclosing quarterly financial information.

This research focuses on earnings reversals in the fourth quarterly financial statements. Our primary objective is to identify and explain the differences in earnings management worldwide by examining quarterly financial data.

The rest of this paper is organized as follows. The next section reviews prior literature and develops our research themes. Section III describes our research design and data. Section IV presents result, and section V offers some conclusions.

II. *Prior Literature and Conceptual Underpinnings*

1. International Comparison of Earnings Attributes

We review prior literature on the international comparison of earnings attributes. Recently, a number of papers have raised issues about that comparison, with particular focus on value relevance, timeliness, conservatism, and transparency (earnings management).

Ali and Hwang (2000) examine international differences in value relevance and why such differences exist. They find that value relevance is lower in countries with bank-oriented financial systems and continental accounting models, wherein private-sector bodies are not involved in the standards-setting process and tax rules significantly influence financial accounting measurements. They also find that value relevance is higher in countries where more is spent on external auditing services[1].

Ball, Kothari, and Robin (2000), Bushman and Pitroski (2006) , and Ball, Robin, and Sadka (2008) conduct international comparison of timeliness or conservatism in accounting income. Ball, Kothari, and Robin (2000) show that differences in the demand for accounting income in different institutional contexts cause its properties to vary from country to country. Their sample includes Australia, Canada, the U.S., the U.K., France, Germany, and Japan, and shows that accounting income in common-law countries is significantly more timely than in code-law countries, due entirely to faster incorporation of economic losses (income conservatism). Conversely, information asymmetry is more likely resolved in code-law countries by institutional features other than timely and conservative public financial statements, notably through closer relations with major stakeholders. Bushman and Pitroski (2006) explore how reported accounting numbers are shaped by the institutional structure of the countries in which firms are domiciled. They empirically analyze relationship between key characteristics of institutions and accounting numbers by using firm data from 38 countries, and find that investor protections embodied in corporate law and the efficiency and impartiality of the judicial system play a significant role in creating incentives for timely loss recognition. In short, they find that firms in countries with strong investor protections and high quality judicial systems reflect bad news in reported earnings numbers in a more timely fashion. Ball, Robin, and Sadka (2008)

[1] Some studies focus on firm-level data rather than country-level data, out of the belief that firms-specific factors are more influential on earnings attributes than country factors (e.g., Haw, Hu, Hwang, and Wu 2004; Gassen, Fulbier, and Sellhorn 2006).

explore relations between the type of demand for financial reporting and earnings attributes across 22 countries. They pay close attention to differences in demand for financial reporting in debt and equity market, and find that the size of debt markets, but not equity markets, are positively associated with important financial reporting properties, consistent with their hypothesis. Briefly, countries that have markets with larger debts demand more timely recognition of losses than other countries and are also less value relevant than other countries. In other words, these countries demand the financial data under contracting view, not value relevant view.

Leuz, Nanda and Wysocki (2003) examine differences in earnings management across 31 countries. Using measures of earnings management, like earnings smoothing measures (standard deviation of operating incomes divided by cash flows from operating activities and the correlation between the changes in total accruals and changes in cash flows from operating activities) and earnings discretion measures (absolute value of total accruals divided by absolute value of cash flows from operating activities and the magnitude of small profits divided by that of small losses), they analyze relationship between institutional factors and earnings management, and find that international differences in earnings management stem from the extent to protect private control benefits of top management, which promote the earnings management to conceal real firm performance. We can interpret their results to imply that weaker investor protection tends to make earnings management increase, because strong protection limits insiders' ability to acquire private control benefits, which in turn reduces their incentive to mask real firm performance[2].

Prior literature focuses on the relation between accounting measures and institutional factors (law and economic system) under the information perspectives. It shows that corporations are reluctant to manage earnings and tend to recognize economic losses as soon as possible if countries put more emphasis on the investor protection. In addition, other studies show that corporations in common law countries are reluctant to manage earnings and tend to recognize economic losses in a more timely fashion because of the pressures from external investors. Those studies focus on the international differences of information usefulness for investors. However, few studies focus on international differences in accounting attributes under the contracting perspectives. To examine them, it is necessary to examine the relation between the earnings targets, procedures, and corporate behavior because the purposes of contracts are to control the corporate behavior through accounting information. This research focuses on them.

2. Quarterly Earnings Management

Recently, a number of studies using quarterly financial data have raised issues about earnings management. These fall into four types.

First, some studies focus on discretionary accruals in quarterly financial reports. Jeter and Schivakumar (1999) address certain methodological issues that arise in estimating discretionary accruals for the detection of event-specific earnings management, using annual and quarterly data. They show that their model is more powerful than the cross-sectional Jones model in

[2] Bhattacharaya, Daouk, and Welker (2003) examine how earning opacity affects cost of capital and share transactions turnover by using the data from 34 countries and they find that earning opacity makes cost of capital increased and share transactions turnover decreased.

detecting earnings management. In particular, they address the management of earnings that corporations may undertake in the fourth quarter[3].

Second, other studies center accounting procedures in the fourth quarter. For example, Dhaliwal, Gleason, and Mills (2004) examine changes in tax expenses from the third to fourth quarter as a tool of detecting earnings management. They insist that tax expense is a powerful context in which to study earnings management, because it is one of the last accounts to be closed prior to earnings announcements. The authors analyze effective tax rate changes from the third to fourth quarter and find that firms lower their projected effective tax rates when they miss consensus forecasts. Fan, Barua, Cready, and Thomas (2010) study classification shifting, by which corporations shift core expenses to special item categories from interim quarters to fourth quarters. They find that classification shifting is more likely in the fourth quarters than in interim quarters. For their part, though, both Mendenhall and Nicholes (1988) and Brown and Pinello (2007) show evidence that earnings management is less likely in the fourth quarter, because quarterly financial reports in the period are audited.

Third, studies have focused on earnings distributions in quarterly financial data. For example, Jacob and Jorgensen (2007) use earnings distributions, as proposed by Burgstahler and Dichev (1997), using histograms of quarterly financial data, and find that there are more discontinuities around the zero and prior year earnings in histograms of earnings of the U.S. corporations in the fourth quarter than in other quarters.

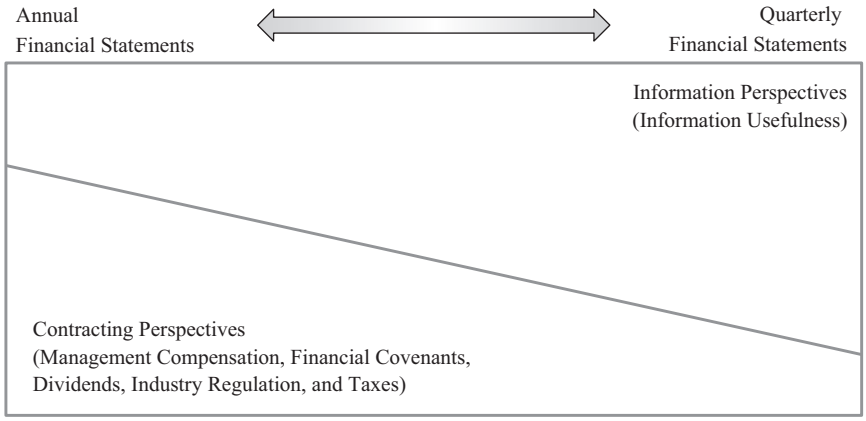
Fourth, still other studies address earnings reversal as earnings management. Earnings reversal is the phenomenon in which financial performance shifts profits-making to losses and losses to profits, or increasing earnings to decreasing earnings, and vice versa, from quarter to quarter, especially from the third to fourth quarter. Kerstein and Rai (2007), for example, examine earnings distribution in the fourth quarters and they show that a higher proportion of firms with small cumulative profits or losses at the beginning of the fourth quarter report small annual profits rather than small annual losses. Das, Shroff, and Zhang (2009) examine firms that have experienced a reversal in the pattern of their quarterly earnings changes and find that firms in the U.S perform poorly in interim quarters may attempt to increase earnings in the fourth quarter to achieve a desired level of annual earnings, whereas those performing well in interim quarters may attempt to decrease earnings in the fourth quarter to build reserves for the future.

Das, Shroff, and Zhang (2009) explain that potential earnings management in the fourth quarter implicitly suggests that managers have great incentives to manage annually rather than quarterly results. They show evidence of earnings management in the fourth quarter, like discretionary accruals, shifting special items, and discretionary research and development expenditure, and changes in tax expenses.

A lot of contracts, for items such as management compensation, financial covenants, taxes and dividends, and industry regulations, are based on annual , not quarterly, financial data in the first place, therefore we can show the characteristics of earnings targets and the timing of earning management by analyzing the changes of quarterly earnings, rather than via another approach of detecting earnings management. However, to our knowledge, there are no studies about international differences in quarterly earnings management under contracting perspectives. What are earnings targets in each country and why are the targets and processes for earnings management different? In particular, we focus on the relation between earnings targets,

[3] Givoly and Ronen (1981) examine earnings smoothing in the fourth quarter and show evidence of it.

FIG. 1. THE RELATION BETWEEN ANNUAL FINANCIAL STATEMENTS AND QUARTERLY FINANCIAL STATEMENTS



procedures, and dividend and investment behavior.

3. Institutional Factor and Corporate Behavior

Prior literature shows that earnings attributes are closely related to law origins, investor protection, development of capital markets, and financial systems at the country level.

Why are earnings attributes closely related to institutional factors? One reason is that the characteristics of corporate or financial systems reflect earnings attributes, because annual financial data are used by corporations in a variety of contracts and have important roles to play in the corporate and financial systems in each country.

Leuz (2010) proposes two stylized financial systems: an 'outsider' system and a 'relationship-based' or 'insider' system. He explains that the two systems differ fundamentally in the way they channel capital to investment opportunities, and that they reduce information asymmetries between contracting and financing parties. He also explains that corporate reporting and disclosure is crucial to resolve information asymmetries among firms and investors, and that stakeholders put more emphasis on transparency in an 'outsider' system. On the other hand, corporate reporting and disclosure has another role to play in a 'relationship-based' or 'insider' system, because financial data is often used in a variety of contracts with stakeholders, not only in the arm's length transaction of the company.

There could be major differences of the extent of earnings management between the 'outsider' system and the 'relationship-based' or 'insider' system. 'Outsider' systems put more emphasis on the transparency of corporate reporting and disclosures. Information users in an 'outsider' system are reluctant to engage in earnings management, because earnings management may enlarge information asymmetries between top executives and outsiders. On the other hand, earnings management has a more important role in a 'relationship-based' system, because corporations need smoothed income to develop and maintain the transactions with core stakeholders under a 'relationship-based' system.

Most of core stakeholders want stable and long-term transactions, because they need to

invest relationship-specific capital to create corporate value (Robert 2004, Itami 2010). Earnings management may support stable and long-term transactions through the smoothing of earnings in a 'relationship-based' system.

These studies indicate that the characteristics of earnings management are closely related to the financial systems or corporate systems operating in each country. If some countries are close to the 'outsider' system, then their corporations are reluctant to manage earnings. while, in other countries closer to a 'relationship-based' system, then corporations tend to manage earnings more consistently for the sake of stability. We will examine the relationship between earnings management (earnings targets and process) and financial systems by using quarterly financial data.

III. *Research Design*

1. Research Approach

We investigate four research themes to clarify the relation between earnings targets, procedures and dividend and investment behavior.

Earnings Targets

We examine earnings targets around the world. This research focuses on the two targets; loss avoidance and earnings decrease avoidance. Prior literature shows that corporations tend to manage earnings to avoid making losses or earnings decreases (Burgsthaler and Dichev 1997). We measure the percentage of profits-making or earnings increase corporations in the total sample in each country at the fiscal year. If the ratio of profits-making corporations is higher than other countries, we define the country as loss avoidance oriented. If the ratio of earnings increase corporations is higher than other countries, we define the country as earnings decrease avoidance oriented.

Earnings Procedures

We analyze international differences in earnings procedures to manage earnings. Especially we focus on the earnings in the fourth quarter. To examine them, we focus on four measures of earnings management.

First, we analyze the earnings reversal around the world. Prior studies have shown that some U.S. corporations have experienced reversals from third to fourth quarters (Kerstein and Rai 2007; Das, Shroff, and Zhang 2009). Those studies analyze the changes in earnings because corporations focus on earnings growth as earnings targets (Graham, Harvey, and Rajgopal 2005). On the other hand, Japanese corporations may put more emphasis on the profits-making as earnings targets (Suda and Hanaeda 2008). Therefore, we analyze profits-losses reversal and earnings increase-decrease reversal in each country.

Second, we calculate discontinuity in earnings distribution in each country. Burgstahler and Dichev (1997) explain that there is a magnitude of discontinuity around zero in a histogram of earnings (earnings distribution) . They contend that the magnitude of the discontinuity around zero is evidence of earnings management to avoid a loss or an earnings decrease. They show that the percentage of corporations with small negative performance is much lower and

that of corporations with small positive performance is much higher because corporations with small negative performance have the incentives to manage earnings. We examine the discontinuity in earnings distributions of profits or earnings changes at the fiscal year in each country to identify the earnings managements.

Third, we calculate the percentage of corporations with positive performance in the fourth quarter in the sample of corporations with small negative performance in the third quarter in each country. For example, if corporations make small losses in the third quarter, they have stronger incentives of managing earnings to achieve profits-making. If countries are loss avoidance oriented, the percentage of corporations with profits in the fourth quarter in the sample of corporations with small losses in the third quarter is higher than other countries. We calculate the percentage of earnings decrease avoidance corporations in the total sample in the same way.

Do corporations with small negative performance in the third quarter and positive performance in the fourth quarter manage earnings for making positive performance? To examine it, we calculate discretionary accruals of corporations with small negative performance in the third quarter and positive performance in the fourth quarter. If some corporations with small cumulative losses or small cumulative earnings decrease manage earnings in the fourth quarter, then their abnormal accruals are larger than others. Prior literature distinguishes "abnormal" from "normal" accruals by directly modeling the accruals process (Dechow, Ge, and Schrand 2010). We define "normal" accruals as total accruals in previous quarter and each industry' mean of changes in total accruals in the previous quarter in this research, because we cannot collect the data from our database to calculate the abnormal accruals based on the prior literature[4]. 'Abnormal' accruals are defined as total accruals minus 'normal' accruals.

Fourth, we analyze the percentage of corporations with earnings decreases in the fourth quarter in the sample of corporations with profits making in the third and fourth quarter in each country. We call the ratio "smoothing". If a country is loss avoidance oriented, the ratio of "smoothing" in the country is higher than other countries because corporations in the country put more emphasis on the profits-making, not on earnings increase. On the other hand, we analyze the percentage of corporations with earnings increase in the fourth quarter in the sample of corporations with losses making in the third and fourth quarter in each country. We call the ratio "improving". If a country is earnings decrease avoidance oriented, the ratio of "improving" in the country is higher than other countries because corporations in the country put more emphasis on the earnings increase, not on profits-making.

Dividend and Investment Behavior

We examine the dividend and investment policy in each country.

At first, we calculate the changes in dividend per share and divide into four groups (increase, decrease, no dividend, and stable). Second, we calculate the changes in total amount of investment and divide into three groups (Increase; more than 5% increase from the previous year, Stable;-5% to 5% change from the previous year, Decrease; more than 5% decrease from the previous year). Investment includes the capital expenditures and research and development expenditures.

[4] To calculate abnormal accruals, prior literature proposes a variety of models. However, we cannot obtain the quarterly data across the globe, because standards for quarterly financial reports differ among countries.

We make the matrix of dividend and investment policy based on the changes in dividend or investment. We calculate the percentage of the each cell in the total sample in each country.

If countries are dividend-oriented, the ratio of "Dividend increase-investment nonincrease" corporations (②+③) or "dividend stable-investment decrease" corporations (⑫) are higher than other countries (Table 10, Panel C).

In addition, we focus on the ratio of "stable dividend-investment nondecrease" corporations (⑩+⑪), because we think that those countries focus on the dividend to invest actively.

If countries are investment-oriented, the ratio of "Investment increase-dividend non-increase" corporations (④+⑦+⑩) or "investment stable-dividend decrease" corporations (⑤) are higher than other countries.

In addition, we focus on the ratio of "investment increase-no dividend" corporations (⑦), because we think that those countries can invest without dividend.

Institutional Factor

At last, we analyze institutional factors in each country. Prior literature shows that the extent of earnings management depends on the law origins, law enforcement, and outsider investor protection (Leuz, Nanda and Wyoski 2003, Bhattacharya, Daouk and Welker 2003, Burgstahler, Hail, and Leuz 2006). On the other hand, those factors affect the conditional conservatism in each country (Ball, Kothari, and Robin 2000, Ball, Robin and Wu 2003, Bushman and Pitroski 2006).

We focus on three types of institutional factor. First, we calculate the dependence on shareholders' equity, because the strength of shareholders affects the accessibility of managing earnings. To examine it, we calculate two measures. The one is the total shareholders' equity divided by total assets and the other is market capitalization of all listed companies divided by GDP.

Second, we focus on the strength of protection for borrowers, lenders, and shareholders. To examine them, we calculate three measures. First is the measure of "legal enforcement" from the World Bank. This measure shows the degree to which collateral and bankruptcy laws protect the rights of borrowers and lenders and thus facilitate lending. The index ranges from 0 to 10, with higher scores indicating that these laws are better designed to expand access to credit. Second is the legal protection of minority shareholders. Djankov, La Porta Lopez-De-Silanes, and Shleifer (2005) present a new measure of legal protection of minority shareholders against expropriation by corporate insiders. We focus on the three measures (ex ante control, ex post control, and public enforcement), grade the top ten countries (top; 10, second; 9, ••••, tenth; 1)and calculate the average of three scores.

The third is the extent of developing stock market. La Porta, Lopez-De-Silanes, and Shleifer (2006) present the measures of the extent to development of stock market system. We focus on three measures (disclosure requirements, liability standard, and public enforcement), grade the top ten countries (top; 10, second; 9, ••••, tenth; 1) and calculate the average of three scores.

We examine the relation between earnings targets, earnings procedures, and dividend and investment behavior in each country by using those measures.

TABLE 1. SAMPLE SIZE OF EARNINGS REVERSALS

Earnings/Sales				Δ Earnings/Sales			
DEU	1,256	NOR	452	DEU	891	NOR	300
FIN	428	PAK	351	FIN	312	PAK	225
ISR	387	SGP	797	ISR	310	SGP	508
ITA	353	SWE	989	ITA	225	SWE	691
JPN	14,602	USA	33,067	JPN	11,189	USA	27,972
KOR	5,609	World	77,880	KOR	4,168	World	60,815

2. Data

Our initial sample consists of non-U.S. and non-Japanese firms from the Compustat Global Vantage, U.S. corporations from the Compustat North America, and Japanese firms from the NEEDS-Financial Quest, for the period 2000-2010. We collect data for non-financial companies with positive quarterly sales. As a result, our sample contains 391,446 quarterly observations of earnings before taxes and extraordinary items and 311,594 quarterly observations of changes in earnings before taxes and extraordinary items.

Next, we focus on corporations for which we can get the data of four consecutive quarters in a year to examine the characteristics of earnings reversal during profits-losses or earnings increase-decrease in each country. We can collect 311, 520 quarterly observations of earnings before taxes and extraordinary items and 243,260 quarterly changes for the analysis of earnings reversals.

In addition, we calculate the country data for an international comparison of quarterly earnings management. Our country data includes Germany (DEU), Finland (FIN), Israel (ISR), Italy (ITA), Japan (JPN), South Korea (KOR), Norway (NOR), Singapore (SGP), Sweden (SWE), and the United States (USA)[5], because we can get more than 200 samples from 2000 to 2010 and these countries have more than US$ 10, 000 in GDP per capita as a control for economic conditions in each country. Table 1 shows the numbers of observations.

IV. *Results*

1. Earnings Targets

We calculate the percentage of corporations with profits-making or earnings increase in the total sample in each country.

The results are shown in table 2. Panel A shows the percentage of corporations with profits-making and earnings reversal in the fourth quarter in the total sample in each country. This presents that the ratios of Singapore, Japan, Germany, Finland, and South Korea are higher than other countries, and we define those countries as loss avoidance countries. Panel B shows the percentage of with earnings increases and earnings reversals in the fourth quarter in the total sample in each country. This presents that the ratios of Israel, the United States of

[5] Corporations are not legally required to disclose quarterly financial reports in Australia, the United Kingdom, and France, and we cannot collect quarterly financial data from those countries.

TABLE 2. EARNINGS REVERSAL (Q3 → Q4)

Panel A Profits-Losses Reversal

	Losses→Profits	Profits→Losses	Profits→Profits	Losses→Losses	Profits
DEU	4.78%	4.94%	72.37%	17.91%	77.15%
FIN	3.27%	3.74%	71.50%	21.50%	74.77%
ISR	2.58%	4.91%	55.30%	37.21%	57.88%
ITA	2.83%	3.68%	69.41%	24.08%	72.24%
JPN	6.13%	3.72%	75.33%	14.82%	81.46%
KOR	3.51%	4.90%	69.69%	21.89%	73.20%
NOR	2.21%	6.64%	65.27%	25.88%	67.48%
SGP	2.01%	3.64%	79.67%	14.68%	81.68%
SWE	2.22%	3.84%	67.14%	26.79%	69.36%
USA	2.78%	4.02%	57.87%	35.33%	60.65%
Average	3.23%	4.40%	68.36%	24.01%	71.59%

Panel B Earnings Increases-Decreases Reversal

	Decrease→Increase	Increase→Decrease	Increase→Increase	Decrease→Decrease	Increase
DEU	8.98%	8.87%	46.24%	35.91%	55.22%
FIN	6.73%	7.05%	39.10%	47.12%	45.83%
ISR	7.42%	6.13%	51.61%	34.84%	59.03%
ITA	9.78%	11.11%	36.89%	42.22%	46.67%
JPN	9.10%	7.56%	40.39%	42.94%	49.49%
KOR	9.50%	8.23%	43.98%	38.29%	53.48%
NOR	6.67%	12.00%	45.67%	35.67%	52.34%
SGP	9.65%	7.48%	43.70%	39.17%	53.35%
SWE	6.66%	7.38%	46.31%	39.65%	52.97%
USA	7.66%	6.77%	49.76%	35.82%	57.42%
Average	8.22%	8.26%	44.37%	39.16%	52.58%

FIG. 2. EARNINGS MATRIX OF EARNINGS TARGETS

	Earnings decreases avoidance	Others
Losses avoidance	DEU, KOR, SGP	FIN, JPN
Others	ISR,USA	ITA, NOR, SWE

America, Germany, South Korea, and Singapore are higher than other countries, thus we define those countries as earnings decreases avoidance countries.

We make the matrix of earnings targets in figure 2.

2. International Differences in Quarterly Earnings Management

Earnings Reversal

We calculate the percentage of corporations with earnings reversals from the first to fourth quarter, country by country. These results appear in Table 3. Panel A presents losses to profits reversal;, Panel B presents profits to losses reversal;, and Panel C presents the percentage of losses to profits reversal corporations minus the percentage of profits to losses reversal corporations in the fourth quarter (Q4 L→P-P→L) . Corporations in Finland and Japan have more experience of losses to profits reversal than do other countries (Panel A), and the percentage of profits to losses reversal corporations in the first quarter is higher than in other countries (Panel B). Meanwhile, the ratio of losses to profits reversal corporations in the fourth quarter and the ratio of profits to losses reversal corporations are lower in Israel, South Korea, Singapore, Sweden, and the U. S. (Panel C).

Table 4 contains information on companies with earnings reversal during an earnings increases and decreases from the first to fourth quarter. Panel A presents an earnings decreases to increases reversal; Panel B presents earnings increases to decreases reversal; and Panel C presents the percentage of earnings increases to decreases reversal corporations minus that of earnings increases to decreases reversal corporations (Q4 D→I - I→D). Panel C indicates that the percentage of earnings decreases to increases reversal corporations is lower than percentage of losses to profits reversal corporations for most over the world, except for Israel, Korea, and the U.S.

Earnings Discontinuities in Earnings Distributions

We can construct a histogram of the fourth quarter earnings, country by country, based on Burgstahler and Dichev (1997). Table 5 shows those results.

This table shows histograms of the ratio of earnings before taxes and extraordinary items divided by sales in the fiscal year. It reveals that the magnitude of the discontinuity around zero is larger in Germany and Japan, and lower in Israel and the U.S.. Corporations in Germany and Japan tend to reverse losses to profits in the fourth quarter, if they make small cumulative losses at the third quarter.

Table 5 also presents histograms of the ratio of changes in earnings before taxes and extraordinary items divided by sales in the fiscal year. It reveals that the kinks of earnings histogram of changes in earnings are smaller than those of earnings histogram by amount, and the magnitude of discontinuity around zero is larger in Germany and the U.S. relatively. Corporations in Israel and the U.S. tend to reverse earnings decreases to increases in the fourth quarter, compared with the losses to profits, if they make small cumulative earnings decreases at the third quarter.

In addition, we calculate the percentage of corporations with positive performance in the fourth quarter in the sample of corporations with small negative performance in the third quarter in each country. For example, if corporations make small losses in the third quarter, they have stronger incentives of managing earnings to achieve profits-making. If countries are loss avoidance oriented, the percentage of corporations with profits in the fourth quarter in the sample of corporations with small losses in the third quarter. We calculate the percentage of earnings decrease avoidance corporations in the total sample in the same way.

The results are shown in table 5.

TABLE 3. PROFITS-LOSSES REVERSAL (Q1 → Q4)

Panel A L→P Reversal

	DEU	FIN	ISR	ITA	JPN	KOR	NOR	SGP	SWE	USA	Average
Q1	7.88%	6.78%	11.37%	6.52%	5.44%	11.32%	9.96%	5.40%	7.18%	9.26%	8.11%
Q2	5.26%	6.31%	3.10%	7.93%	7.88%	5.90%	7.30%	3.39%	5.16%	5.09%	5.73%
Q3	3.67%	4.67%	3.36%	2.55%	4.59%	3.14%	4.20%	1.25%	3.03%	3.42%	3.39%
Q4	4.78%	3.27%	2.58%	2.83%	6.13%	3.51%	2.21%	2.01%	2.22%	2.78%	3.23%

Panel B P→L Reversal

	DEU	FIN	ISR	ITA	JPN	KOR	NOR	SGP	SWE	USA	Average
Q1	12.74%	16.59%	8.53%	14.45%	16.44%	9.32%	13.27%	7.03%	10.01%	10.07%	11.85%
Q2	3.75%	3.74%	4.91%	4.82%	3.88%	6.22%	2.43%	2.76%	3.74%	3.95%	4.02%
Q3	3.11%	2.80%	3.10%	2.83%	2.99%	3.01%	4.87%	2.13%	3.03%	3.09%	3.10%
Q4	4.94%	3.74%	4.91%	3.68%	3.72%	4.90%	6.64%	3.64%	3.84%	4.02%	4.40%

Panel C The ratio of changes from Q2 to Q4 (the sum of L→P minus that of P→L in the fourth quarter)

	DEU	FIN	ISR	ITA	JPN	KOR	NOR	SGP	SWE	USA	Average
Q4	-0.16%	-0.47%	-2.33%	-0.85%	2.41%	-1.39%	-4.43%	-1.63%	-1.62%	-1.24%	-1.17%

TABLE 4. EARNINGS INCREASES-DECREASES REVERSAL (Q1 → Q4)

Panel A D→I Reversal

	DEU	FIN	ISR	ITA	JPN	KOR	NOR	SGP	SWE	USA	Average
Q1	15.04%	16.67%	22.26%	17.33%	19.58%	21.33%	22.00%	19.29%	16.35%	20.11%	19.00%
Q2	6.18%	8.68%	6.45%	10.22%	10.40%	11.73%	12.00%	8.46%	9.41%	8.32%	9.19%
Q3	8.31%	7.40%	5.81%	4.44%	7.34%	6.81%	9.67%	3.94%	6.08%	6.99%	6.68%
Q4	8.98%	6.73%	7.42%	9.78%	9.10%	9.50%	6.67%	9.65%	6.66%	7.66%	8.22%

Panel B I→D Reversal

	DEU	FIN	ISR	ITA	JPN	KOR	NOR	SGP	SWE	USA	Average
Q1	22.22%	27.56%	19.03%	21.33%	21.57%	22.02%	23.33%	16.93%	23.01%	21.25%	21.83%
Q2	10.00%	8.36%	7.42%	5.78%	9.73%	10.99%	9.33%	9.25%	9.26%	8.00%	8.81%
Q3	7.64%	6.75%	5.16%	5.78%	7.45%	6.53%	8.33%	7.28%	5.64%	6.10%	6.67%
Q4	8.87%	7.05%	6.13%	11.11%	7.56%	8.23%	12.00%	7.48%	7.38%	6.77%	8.26%

Panel C The ratio of changes from Q2 to Q4 (the sum of D→I minus that of I→D from Q2 to Q4 or Q4)

	DEU	FIN	ISR	ITA	JPN	KOR	NOR	SGP	SWE	USA	Average
Q4	0.11%	-0.32%	1.29%	-1.33%	1.54%	1.27%	-5.33%	2.17%	-0.72%	0.89%	-0.04%

Table 5. Earnings Distributions

	Profits/Sales Histograms (annual)							Δ Earnings/ Sales Histograms (annual)						
	-0.06～ -0.03①	-0.03～ 0②	0～ 0.03③	0.03～ 0.06④	Discontinuity =③/②	Discontinuity =(③+④)/(①+②)	Reversals Q3②,Q4+	-0.06～ -0.03①	-0.03～ 0②	0～ 0.03③	0.03～ 0.06④	Discontinuity =③/②	Discontinuity =(③+④)/(①+②)	Reversals Q3②,Q4+
DEU	5.61%	5.61%	24.93%	23.21%	4.442	4.289	44.72%	8.04%	19.01%	34.13%	10.82%	1.795	1.662	36.05%
FIN	4.98%	6.94%	17.44%	20.64%	2.513	3.194	28.89%	12.59%	24.24%	25.87%	11.66%	1.067	1.019	21.36%
ISR	3.56%	6.53%	13.27%	13.86%	2.030	2.686	25.81%	5.17%	13.44%	13.70%	11.11%	1.019	1.333	28.85%
ITA	5.57%	7.00%	21.01%	19.93%	3.000	3.257	32.61%	9.35%	26.91%	28.05%	7.93%	1.042	0.992	25.00%
JPN	3.25%	6.75%	27.43%	23.57%	4.06	5.097	50.32%	9.44%	28.47%	32.93%	8.79%	1.157	1.101	25.08%
KOR	3.22%	4.33%	20.14%	19.22%	4.65	5.210	33.00%	8.36%	18.36%	21.84%	10.45%	1.189	1.208	29.78%
NOR	3.80%	4.43%	15.03%	13.61%	3.393	3.481	30.77%	9.29%	10.62%	15.71%	8.85%	1.479	1.233	28.85%
SGP	2.49%	3.69%	12.63%	13.32%	3.419	4.194	24.07%	9.66%	16.94%	20.58%	11.42%	1.215	1.203	28.03%
SWE	3.85%	5.33%	14.43%	16.88%	2.708	3.411	36.76%	8.76%	18.73%	24.47%	8.06%	1.306	1.183	25.99%
USA	4.09%	6.30%	14.88%	14.95%	2.360	2.870	26.92%	6.78%	15.36%	23.07%	8.68%	1.501	1.434	26.94%
Average	4.04%	5.69%	18.12%	17.92%	3.258	3.769	33.39%	8.74%	19.21%	24.03%	9.78%	1.277	1.237	27.59%

Table 6. Differences Analysis of Earnings Reversals

Losses to Profits versus Losses to Losses in the fourth quarter

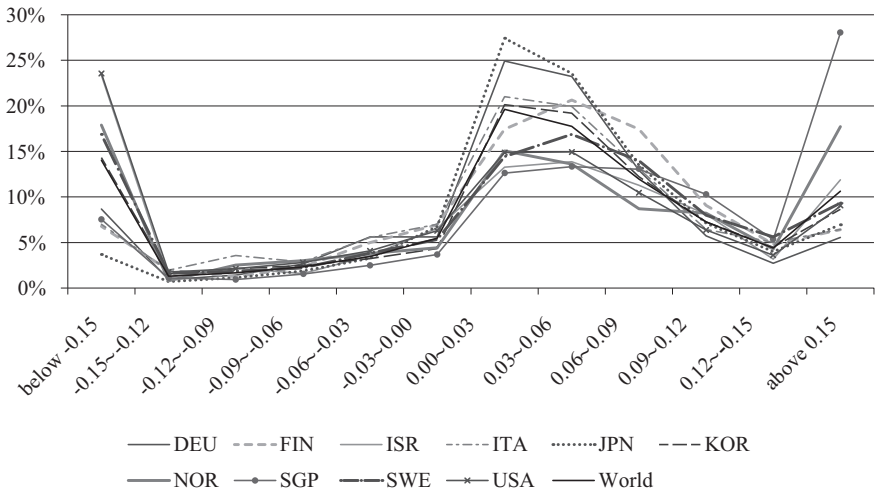
		Δ Accruals	Δ Accruals industry_adjusted
Mean	L→P	0.098	0.088
Mean	L→L	-0.067	-0.053
Student' T-test	t value	5.781	4.848
	p value	0.000	0.000
Median	L→P median	0.044	0.046
Median	L→L median	-0.037	-0.021
Mann-Whittney's U-test	Z value	9.394	8.003
	p value	0.000	0.000
Sample Size		3,587	3,306

Earnings Decreases to increases versus Earnings Decreases to Decreases in the fourth quarter

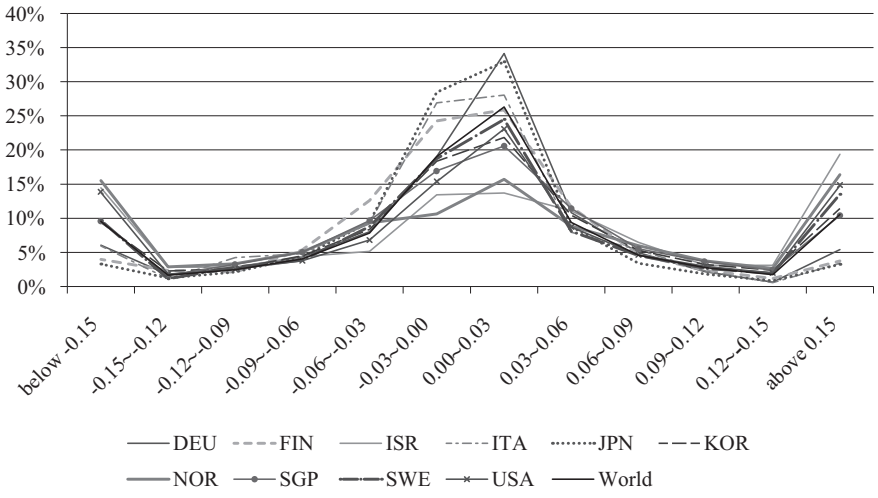
		Δ Accruals	Δ Accruals industry_adjusted
Mean	D→I	0.171	0.164
Mean	D→D	-0.097	-0.079
Student' T-test	t value	12.311	11.415
	p value	0.000	0.000
Median	D→I	0.073	0.071
Median	D→D	-0.024	-0.006
Mann-Whittney's U-test	t value	26.579	21.168
	p value	0.000	0.000
Sample Size		10,128	9,255

FIG. 3. EARNINGS DISTRIBUTIONS

Panel A Profits/Sales Histograms (annual)



Panel B Δ Earnings/ Sales Histograms (annual)



Discretionary Accruals

We analyze abnormal accruals to examine earnings management by corporations with a loss-to-profit or an earnings decrease-to-increase reversal. We calculate abnormal accruals of corporations with small cumulative losses or small cumulative earnings decreases at the end of the third quarter (from -0.03 to 0), and divide the samples into two groups. One group is made up of corporations with losses (or earnings decreases) to profits (or earnings increases) from the third to fourth quarter (L → P or D → I, reversal corporations), and the other contains

TABLE 7. EARNINGS MATRIX (annual earnings)

	P/I	P/D	L/I	L/D	P/D-L/I
DEU	51.9%	25.3%	6.2%	16.6%	19.1%
FIN	42.3%	32.5%	7.0%	18.2%	25.5%
ISR	39.8%	18.1%	17.1%	25.1%	1.0%
ITA	41.1%	31.2%	6.5%	21.2%	24.6%
JPN	47.3%	34.2%	3.8%	14.8%	30.4%
KOR	46.6%	26.6%	8.0%	18.8%	18.6%
NOR	44.9%	22.6%	8.4%	24.1%	14.2%
SGP	48.9%	32.7%	5.0%	13.3%	27.7%
SWE	44.7%	24.7%	10.4%	20.2%	14.3%
USA	41.5%	19.2%	14.5%	24.8%	4.6%
Average	44.90%	26.71%	8.69%	19.71%	18.00%

Notes: P/I means the ratio of corporations with making profits and increasing earnings in the total sample in each country or area.
P/D means the ratio of corporations with making profits and decreasing earnings in the total sample in each country or area.
L/I means the ratio of corporations with making losses and increasing earnings in the total sample in each country or area.
L/D means the ratio of corporations with making losses and decreasing earnings in the total sample in each country or area.

	Earnings Increase	Earnings Decrease
Profits	P/I	P/D
Losses	L/I	L/D

corporations with maintaining losses (or earnings decreases) from the third to fourth quarter (L→L or D→D, non-reversal corporations). Here, we set two abnormal accruals. First one is defined as changes in total accruals at each corporation and second one is the amount of difference between the changes in total accruals at each corporation and the median for it in the same industry. We examine the differences of abnormal accruals between L→P and L→L, or D→I and D→D by using the Student's t-test and Mann-Whittney's U-test.

Table 6 shows the results of differences analyses between reversal and non-reversal corporations. This table shows the differences between L→P and L→L corporations. This shows that the abnormal accruals of L→P corporations are higher than those of L→L corporations at a statistically significant level.

Table 6 also shows the differences between D→I corporations and D→D corporations. This table suggests that abnormal accruals of D→I corporations is higher than those of D→D corporations at a statistically significant level.

Smoothing or Improving

From the analyses above, we can conjecture that each country has different earnings targets, and actively manages earnings to achieve them. In fact, which does each country prefer either loss avoidance or earnings decrease avoidance as an earnings target?

To examine this question, we construct earnings matrices, based on annual and quarterly earnings. The earnings matrix based on annual earnings is classified into four groups. We classify corporations, based on making profits or losses, or earnings increases or decreases during the fiscal year. The first group is composed of corporations with profits and earnings

increases (P/I), the second group is of corporations with profits and earnings decreases (P/D), the third group is made up of corporations with losses and earnings increases (L/I), and the fourth group consists of corporations with losses and earnings decreases(L/D).

Table 7 shows the results. We assume that the higher the ratio of P/D is, the stronger motivation for loss avoidance corporations have in some countries, because we can speculate that this group permits earnings decreases, but is stringent in avoiding losses. Table 7 reveals that Finland, Italy, Japan, and Singapore are higher than other countries by this measure, and Israel and the U.S. are lower.

The earnings matrix based on quarterly earnings is classified into 16 groups. Each group is composed of corporations, which make profits or losses, or which increase or decrease earnings from the third to fourth quarters. We focus on eight groups to analyze smoothing behavior under profit-making and improving behavior under loss-making. We assume that corporations would tend to smooth earnings while making profits in the countries motivated by loss avoidance and corporations would tend to improve earnings under making losses in the countries motivated by earnings decrease avoidance. We measure the 'smoothing' as the percentage of corporations making profits in the third and fourth quarter and decreasing earnings in the fourth quarter (P→P/I→D, P→P/D→D), and the 'improving' as the percentage of corporations making losses in the third and fourth quarter and increasing earnings in the fourth quarter (L→L/I→I, L→L/D→I). The results are shown in table 8.

Table 8 shows that corporations in Finland, Italy, Japan, and Singapore are more likely to smooth earnings than those in other countries, while corporations in Israel and the U.S. are lower among countries making profits in the third and fourth quarters. Meanwhile, Israel and the U.S. improve earnings more than other countries under loss- making in the third and fourth quarters.

We show the results of four earnings measures in Table 9. We rank the top five countries in each country in decreasing order. We calculate total sum of four measures about earnings management in each earnings target. Corporations in Japan and Germany tend to manage earnings to avoid making losses, meanwhile those in Finland and Singapore don't tend to make profits relatively. Corporations in Israel and Germany tend to manage earnings to increase earnings, meanwhile those in Singapore and the United States of America don't tend to make profits relatively.

3. Dividend-oriented or Investment oriented

We calculate the changes in dividend per share and divide into four groups (increase, decrease, no dividend, and stable). Next, we calculate the changes in total amount of investment and divide into three groups (Increase; more than 5% increase from the previous year, Stable; -5% to 5% change from the previous year, Decrease; more than 5% decrease from the previous year). Investment includes the capital expenditures and research and development expenditures.

We make the matrix of dividend and investment policy based on the changes in dividend or investment. We calculate the percentage of the each cell in the total sample in each country (Table 10 Panel C).

If countries are dividend-focused, the ratio of "Dividend increase-investment nonincrease" corporations (②+③) or "dividend stable-investment decrease" corporations (⑫) are higher than other countries. In addition, we focus on the ratio of "stable dividend-investment nondecrease"

TABLE 8. EARNINGS MATRIX (Q3→Q4 earnings)

	P→P/D→D ①	P→P/D→I ②	P→P/I→I ③	P→P/I→D ④	L→L/D→D ⑤	L→L/D→I ⑥	L→L/I→I ⑦	L→L/I→D ⑧	Smoothing =(①+④)/(①+②+③+④)	Improving =⑥+⑦/(⑤+⑥+⑦+⑧)
DEU	17.3%	6.5%	43.0%	5.6%	11.3%	1.8%	3.4%	1.4%	31.63%	29.05%
FIN	23.8%	4.4%	36.9%	6.3%	14.5%	0.9%	5.4%	0.7%	42.16%	29.30%
ISR	14.5%	2.8%	35.4%	2.6%	19.9%	3.4%	12.4%	1.6%	30.92%	42.36%
ITA	21.8%	5.4%	34.6%	7.6%	16.4%	2.3%	3.7%	1.7%	42.36%	24.90%
JPN	25.2%	6.5%	37.6%	6.0%	10.9%	1.1%	2.1%	0.7%	41.43%	21.62%
KOR	19.7%	5.5%	39.0%	5.5%	13.9%	2.6%	4.3%	1.2%	36.15%	31.36%
NOR	14.4%	3.5%	40.7%	6.6%	17.3%	3.1%	3.8%	1.8%	32.21%	26.54%
SGP	25.7%	7.0%	41.2%	5.8%	9.8%	1.5%	2.8%	0.6%	39.52%	29.25%
SWE	18.6%	4.5%	39.1%	4.9%	15.4%	2.3%	7.7%	1.4%	35.02%	37.31%
USA	14.6%	4.0%	35.8%	3.6%	19.7%	3.0%	10.5%	2.0%	31.38%	38.35%
Average	19.56%	5.01%	38.33%	5.45%	14.91%	2.20%	5.61%	1.31%	36.28%	31.00%

Notes: P→P/D→D means the ratio of corporations with making profits in the third and fourth quarter and decreasing earnings in the third and fourth quarter in the total sample in each country. P→P/D→I means the ratio of corporations with making profits in the third and fourth quarter and decreasing earnings in the third and increasing earning in the fourth quarter in the total sample in each country. Other cell are calculated as the same as above.

Q3→Q4	D→D	D→I	I→I	I→D
P→P	①	②	③	④
P→L				
L→P				
L→L	⑤	⑥	⑦	⑧

TABLE 9. EARNINGS MANAGEMENT AROUND THE WORLD

	Loss avoidance					Earnings decreases avoidance				
	Earnings Reversal	Discontinuity	Reversal Q3②,Q4+	Smoothing	Total	Earnings Reversal	Discontinuity	Reversal Q3②,Q4+	Improving	Total
DEU	4	3.5	4		11.5		5	5		10
FIN	3			4	7				1	1
ISR					0	3	1.5	3	5	12.5
ITA	2		1	5	8					0
JPN	5	3.5	5	3	16.5	4				4
KOR		5	2	1	8	2	1	4	2	9
NOR		1			1		2.5	3		5.5
SGP		1		2	3	5	0.5	1		6.5
SWE		1	3		4		1		3	4
USA	1				1	1	4		4	9

Notes: Earnings Reversal=We calculate the ratio of "Q3 NP→Q4 PP" – the ratio of "Q3 PP→Q4 NP" in each country, grade the top five countries, and rank them in decreasing order (top; 5, second; 4, third; 3, fourth; 2, fifth; 1).

Discontinuity=We calculate the range between 0 and 0.03 divided by the range between -0.03 and 0 in the total sample and the range between 0 and 0.06 divided by the range between -0.06 and 0 in the total sample country by country. We grade the top five countries of the extent to discontinuity (top; 5, second; 4, third; 3, fourth; 2, fifth; 1). We calculate the average of two scores of discontinuities in each country.

Reversal Q3②, Q4+ = We calculate the ratio of corporations with small losses (earnings decrease) in the third quarter and profits-making (earnings increase) in the fourth quarter in the sample of corporations with small losses(earnings decrease) in the third quarter and grade the top five countries (top; 5, second; 4, third; 3, fourth; 2, fifth; 1).

Smoothing=We calculate the ratio of corporations with earnings decrease in the fourth quarter in the sample of corporations with profits-making in the third and fourth quarter and grade the top five countries. (top; 5, second; 4, third; 3, fourth; 2, fifth; 1).

Improving=We calculate the ratio of corporations with earnings increase in the fourth quarter in the sample of corporations with losses-making in the third and fourth quarter and grade the top five countries (top; 5, second; 4, third; 3, fourth; 2, fifth; 1).

TABLE 10. DIVIDEND POLICIES AND INVESTMENT POLICIES

Panel A Capital Expenditures

	C.E. Increase	C.E. Stable	C.E. decrease	Dividend-oriented	Investment-oriented	Investment-oriented (decrease dividends)	Investment-oriented (no dividends)	Stable dividends-investment-oriented
DEU	45.23%	7.36%	47.41%	14.78%	35.04%	4.90%	25.69%	5.62%
FIN	45.25%	6.86%	47.89%	23.22%	26.78%	13.06%	8.84%	5.54%
ISR	49.21%	5.70%	45.09%	6.96%	42.72%	8.54%	34.02%	0.16%
ITA	48.17%	5.96%	45.87%	18.60%	32.75%	8.51%	18.92%	6.52%
JPN	46.82%	7.22%	45.97%	32.31%	31.01%	7.92%	5.81%	20.06%
KOR	49.52%	4.43%	46.05%	16.49%	37.22%	8.41%	23.62%	5.85%
NOR	54.52%	5.60%	39.88%	10.12%	44.76%	8.33%	34.05%	3.10%
SGP	47.02%	5.12%	47.86%	16.02%	35.62%	10.78%	21.29%	4.05%
SWE	47.07%	6.02%	46.91%	14.59%	35.52%	4.09%	27.68%	4.25%
USA	47.95%	7.71%	44.33%	9.96%	40.36%	1.45%	35.86%	3.88%
Average	48.08%	6.20%	45.73%	16.30%	38.35%	6.77%	28.53%	3.57%

Panel B R&D Expenditures

	R&D Increase	R&D Stable	R&D decrease	Dividend-oriented	Investment-oriented	Investment-oriented (decrease dividends)	Investment-oriented (no dividends)	Stable dividends-investment-oriented
DEU	46.70%	20.47%	32.83%	14.13%	35.03%	8.63%	22.25%	6.51%
FIN	44.86%	21.26%	33.88%	18.69%	30.84%	17.06%	8.18%	10.05%
ISR	51.87%	14.72%	33.41%	2.80%	46.96%	5.61%	41.36%	0.00%
ITA	49.38%	20.37%	30.25%	17.90%	35.80%	13.58%	16.67%	7.41%
JPN	38.41%	28.42%	33.17%	29.35%	27.41%	9.54%	3.57%	26.80%
KOR	53.32%	11.15%	35.53%	11.58%	40.53%	9.49%	25.45%	7.09%
NOR	45.66%	16.18%	38.15%	14.45%	39.88%	8.09%	31.79%	0.58%
SGP	55.61%	9.09%	35.29%	10.96%	41.44%	15.24%	22.73%	4.28%
SWE	47.70%	20.86%	31.44%	13.19%	33.90%	7.67%	22.85%	6.44%
USA	48.94%	16.30%	34.76%	7.02%	43.30%	1.34%	39.58%	4.01%
Average	48.17%	18.06%	33.77%	14.01%	40.60%	7.85%	29.91%	4.19%

Panel C Definitions

		Investment Policy		
		Increase	Stable	Decrease
Dividend policy	Increase	①	②	③
	Decrease	④	⑤	⑥
	No dividend	⑦	⑧	⑨
	stable	⑩	⑪	⑫

TABLE 11. DIVIDEND AND INVESTMENT POLICY

	Dividend					Investment				
	Capital Expenditures		R&D Expenditures			Capital Expenditures		R&D Expenditures		
	Dividend-oriented ②+③+⑫	Stable dividends, investment-oriented ⑩+⑪	Dividend-oriented ②+③+⑫	Stable dividends, investment-oriented ⑩+⑪	Total	Investment-oriented ④+⑦+⑩+⑤	Investment-oriented (no dividends) ⑦	Investment-oriented ④+⑦+⑩+⑤	Investment-oriented (no dividends) ⑦	Total
DEU		2	1	1	4		1			1
FIN	4	1	4	4	13					0
ISR					0	4	3	5	5	17
ITA	3	4	3	3	13					0
JPN	5	5	5	5	20					0
KOR	2	3		2	7	2		2	2	6
NOR			2		2	5	4	1	3	13
SGP	1				1	1		3		4
SWE					0		2		1	3
USA					0	3	5	4	4	16

Notes: We calculate the ratio of each cell in the total sample in each country and grade top five countries in each policy. We rank them in decreasing order (top; 5, second; 4, third; 3, fourth; 2, fifth; 1).

corporations (⑩＋⑪), because we think that those countries focus more on the dividend to invest actively.

If countries are investment-focused, the ratio of "Investment increase-dividend nonincrease" corporations (④+⑦+⑩) or "investment stable-dividend decrease" corporations (⑤) are higher than other countries. In addition, we focus on the ratio of "investment increase-no dividend" corporations (⑦), because we think that those countries can invest without dividend. The results are shown in table 10.

In addition, we rank them in decreasing order and show them in table 11. Japan, Finland, and Italy are dividend-focused, meanwhile Israel, the United States of America, and Norway are investment-oriented. Germany is relatively dividend-focused and Singapore is relatively investment-focused.

Those results indicate that earnings targets are closely related to dividend and investment policy. If countries tend to be loss avoidance oriented, corporations in those countries are required to take priority of dividend. If countries tend to be earnings decrease avoidance oriented, corporations in those countries are required to take priority of investment.

4. Financial Policy and Institutional Factor

Our findings show that corporations in Japan and Finland are loss avoidance oriented, meanwhile corporations in Japan tend to manage earnings and those in Finland don't tend to manage earnings relatively. They also present that corporations in Israel and the United States of America are earnings decrease avoidance oriented, meanwhile corporations in Israel tend to manage earnings and those in the United States of America don't tend to manage earnings. Our findings show that corporations in Germany and Singapore are loss and earnings decrease avoidance oriented, meanwhile corporations in Germany tend to manage earnings and those in Singapore don't tend to manage earnings relatively. Why do some countries tend to manage earnings to achieve earnings targets? To examine it, we focus on the dependence on shareholders' equity.

Our measures of shareholders' equity are composed of two measures. One is the total shareholders' equity divided by total assets in each country and the other is the ratio of market capitalization of listed corporations divided by GDP in each country. The ratio of total shareholders' equity divided by total liabilities in Finland and Singapore is higher than other countries. The ratio of market capitalization of listed corporations divided by GDP in Singapore, the United States of America, and Finland is higher than other countries. The results are shown in table 12.

In addition, we grade the top ten countries and rank them in decreasing order in each measure and calculate the mean of two scores. The scores of Singapore, Finland, Sweden, and the United States of America show that those countries depend on total shareholders' equity. The results are shown in table 13.

These results indicate that the dependence on shareholders' equity is closely related to the extent of earnings management in each country. Corporations in Singapore, Finland, Sweden, and the United States of America don't tend to manage earnings relatively, at the same time they depend on shareholders' equity more than other countries. When corporations in those countries are more dependent on shareholders' equity, corporations are required to disclose transparent earnings because investors put pressure upon corporations. On the other hand

TABLE 12. FINANCIAL POLICY AND INSTITUTIONAL FACTOR

	Total Shareholders' equity/Total Liabilities (country based)	Market capitalization of Listed Companies (% of GDP)	Strength of legal rights index (median)	Djankov, La Porta Lopez-De-Silanes, and Shleifer(2005)			La Porta, Lopez-De-Silanes, and Shleifer(2006)			The Ratio of the Sequent Corporations	Standard deviation of ROS (mean)
				Ex ante control	Ex post control	Public Enforcement	Disclosure Requirements	Liability Standard	Public Enforcement		
DEU	0.325	47.787	7.667	0.14	0.43	1	0.42	0	0.22	67.69%	0.365
FIN	0.759	117.731	7.000	0.14	0.78	0	0.5	0.66	0.32	88.63%	0.098
ISR	0.257	79.745	9.000	0.5	0.95	0.5	0.67	0.66	0.63	74.95%	0.996
ITA	0.348	43.152	3.000	0.17	0.68	1	0.67	0.22	0.48	77.59%	0.738
JPN	0.517	77.531	6.833	0.22	0.78	0	0.75	0.66	0	94.90%	0.081
KOR	0.486	66.312	7.000	0.25	0.69	0	0.75	0.66	0.25	93.27%	0.701
NOR	0.609	53.724	7.000	0.42	0.43	0.5	0.58	0.39	0.32	59.33%	5.727
SGP	0.898	182.240	10.000	1	1	1	1	0.66	0.87	40.16%	1.226
SWE	0.601	105.144	4.833	0.17	0.5	1	0.58	0.28	0.5	70.47%	2.354
USA	0.497	127.808	8.000	0.33	0.98	1	1	1	0.9	42.90%	7.949
Average	0.530	85.930	6.926	0.334	0.693	0.556	0.658	0.466	0.399	74.11%	1.365

TABLE 13. FINANCIAL POLICY AND INSTITUTIONAL FACTOR (rank)

	Dependence on shareholders' equity	Legal Enforcement (World bank)	Djankov, La Porta Lopez-De-Silanes, and Shleifer(2005)	La Porta, Lopez-De-Silanes, and Shleifer(2006)	The Ratio of the Sequent Listed Corporations	Standard deviation of ROS
DEU	2.0	7.0	4.7	1.3	7.0	3.0
FIN	8.5	6.0	4.0	5.3	3.0	2.0
ISR	3.5	9.0	7.3	7.7	5.0	6.0
ITA	2.0	1.0	6.0	4.7	4.0	5.0
JPN	5.5	3.0	5.0	6.0	1.0	1.0
KOR	4.0	6.0	4.7	6.7	2.0	4.0
NOR	5.5	6.0	5.0	4.3	8.0	9.0
SGP	10.0	10.0	10.0	9.3	10.0	7.0
SWE	7.0	2.0	5.7	4.7	6.0	8.0
USA	7.0	8.0	8.7	10.0	9.0	10.0

Notes: Dependence on Shareholders' equity = We calculate two ratios. One is total shareholders' equity divided by total assets and the other is market capitalization of listed corporations divided by GDP in each country. We grade the top ten countries in order of the dependence on shareholders' equity and calculate the average of two scores.

Legal Enforcement=Strength of legal rights index is calculated as the degree to which collateral and bankruptcy laws protect the rights of borrowers and lenders and thus facilitate lending. The index ranges from 0 to 10, with higher scores indicating that these laws are better designed to expand access to credit (from World Bank).

Djankov, La Porta Lopez-De-Silanes, and Shleifer (2005) present a new measure of legal protection of minority shareholders against expropriation by corporate insiders. We focus on the three measures (ex ante control, ex post control, and public enforcement), grade the top ten countries (top; 10, second; 9,‥‥, tenth; 1) and calculate the average of three scores.

La Porta, Lopez-De-Silanes, and Shleifer (2006) present the measures of the extent of development of stock market system. We focus on three measures (disclosure requirements, liability standard, and public enforcement), grade the top ten countries (top; 10, second; 9,‥‥, tenth; 1) and calculate the average of three scores.

The ratio of sequent corporations shows the ratio of corporations which listed in each stock market from 2001 to 2009 in the total sample and grade the top ten countries (top; 1, second; 2,‥, tenth; 10).

Standard deviation of ROS shows the mean of standard deviation of corporation in each country and grade the top ten countries countries (top; 10, second; 9,‥‥, tenth; 1).

corporations in Japan, Germany, and Israel are not always applied pressure by investors, and it is possible for corporations to manage earnings.

Why do some countries tend to adopt loss avoidance and dividend-oriented policy and other countries tend to adopt earnings decrease avoidance and investment-oriented policy? To examine them, we focus on three measures on legal enforcement. The first measure is the legal enforcement from the World Bank. World Bank announces the measures of the legal enforcement for borrowers and lenders every year. The measures show the degree to which collateral and bankruptcy laws protect the rights of borrowers and lenders and thus facilitate lending. The results are shown in table 12.

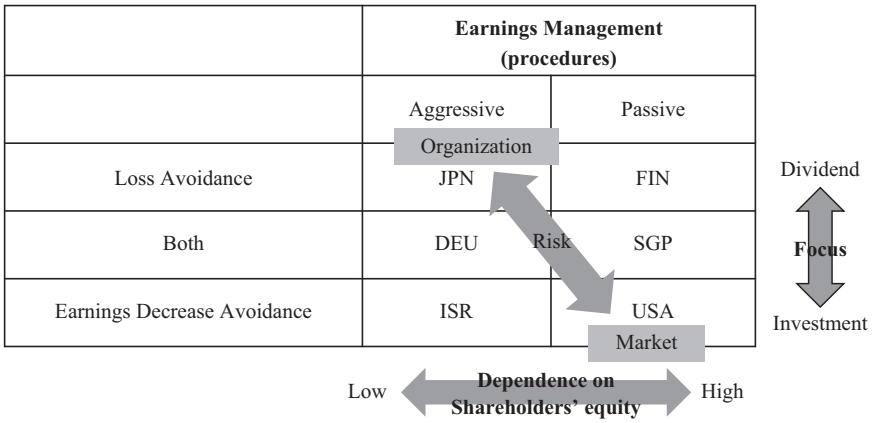
Singapore, Israel, the United States of America, and Germany have stronger legal rights for borrowers and lenders in collateral and bankruptcy laws than other countries.

The second measures the legal protection for minority investors. Djankov, La Porta Lopez-De-Silanes, and Shleifer (2005) present a new measure of legal protection of minority shareholders against expropriation by corporate insiders. We focus on the three measures (ex ante control, ex post control, and public enforcement). The measure of ex ante control is composed of four measures. First is the approval by disinterested shareholders, second is the disclosures by buyer, third is the disclosures by Mr. James[6], and the last is independent review. The measure of ex post is composed of five measures. First is the each of the elements in the index of disclosure in periodic filings. Second is the standing to sue. Third is the recession; ease of holding Mr. James liable. Fourth is the ease of holding the approving body liable, and fifth is the access to evidence. The public enforcement is composed of four measures. First are the fines for the approving body, second are the jail sentences for the approving body, third are the fines for Mr. James, and fourth is the jail sentence for Mr. James. We rank the ten countries in decreasing order in each measure and calculate the average. These measures show that Singapore has the stronger ex ante control than other countries, Singapore and the United States of America have stronger ex post control than other countries, and Singapore, the United States of America, Sweden, and Germany have the stronger public enforcement than other countries. The results are shown in table 12.

La Porta, Lopez-De-Silanes, and Shleifer (2006) present the measures of the extent of development of stock market system. We focus on three measures. First is the index of disclosure requirements. This measure equals the arithmetic mean of (1) prospectus, (2) compensation, (3) shareholders, (4) inside ownership, (5) contracts irregular, and (6) transactions (each measure is defined in La porta et al (2006)). Disclosure requirements in Singapore and the United States of America are stronger than other countries. Second is the index of liability. This measure equals the arithmetic mean of (1) liability standard for the issuer and its directors, (2) liability standard for distributors, and (3) liability standard for accountants (each measure is defined in La Porta et al (2006)). Liability standards in the United States of America are stronger than other countries. Third is the index of public enforcement. This measure equals the arithmetic mean of (1) supervisor characteristics index, (2) rule-making power index, (3) investigative powers index, (4) orders index, and (5) criminal index (each measure is defined in La Porta et al (2006)). Public enforcement in the United States of America and Singapore is higher than other countries.

[6] Djankov et al (2005) define Mr. James as the controlling shareholder of Buyer company and Seller company. He can enter into transaction between Buyer and Seller.

FIG. 4. THE RELATION BETWEEN EARNINGS TARGETS AND EARNINGS MANAGEMENT



We rank the top ten countries in decreasing order and show the result in table 13. This table shows that Singapore, the United States of America, and Israel have stronger legal enforcement than other countries. These results suggest that legal enforcement is closely related to the earnings target and investment policy. Israel, Singapore and the United States of America have stronger protection for borrowers, lenders, and investors, thus corporations in those countries can invest in the expenditures under the earnings increase, even if corporations pay no dividend or make losses. On the other hand, corporations in Japan, Germany and Finland are required to pay stable dividend or increase dividend to invest actively. Investors are not protected by laws, thus they are risk averse and require the corporations to pay stable dividend or make profits persistently.

The behavior is closely related to major risk taker in each country. To examine it, we calculate two measures. The one is the ratio of corporations which listed in each country from 2001 to 2009 sequentially in the total sample in each country. The ratio shows the activation of the stock market in each country. The other is the mean of standard deviations of ROS of corporations in each country. In addition, we rank them in decreasing order. The results are shown in table 13.

More corporations in Singapore, the United States of America, Norway, and Germany are often listed in the stock exchange newly or delisted from the stock exchange. Standard deviations of ROS show the mean of standard deviations of corporations in each country and rank the top ten countries in decreasing order. Corporate performance in the United States of America, Norway, Sweden, and Singapore are more volatile than other countries. Investors can diversify their risk through the market in the United States of America or Singapore, thus corporations can invest in expenditures without dividend or profits-making. On the other hand, it is difficult for investors to diversify their risk through the market enough in Japan, Germany and Finland, thus corporations can't take their business risk without dividend or making-profits. Namely, corporations in loss avoidance countries use dividend or making-profits for accountability of investment.

V. *Conclusions*

The purpose of this study is to identify and explain what differences in the characteristics of earnings management are around the world through an examination of quarterly earnings.

First, we specify earnings targets in each country. To examine it, we calculate the ratio of profits making or earnings increase corporations in the total sample in each country. We find that corporations in Germany, Finland, Japan, South Korea and Singapore put more emphasis on making profits and those in Germany and Japan tend to reverse losses to profits from the third to fourth quarter. On the other hand, we find the corporations in Germany, Israel, Korean, Singapore and the U.S. put more emphasis on improving earnings, compared with the previous quarterly earnings and that those in Germany, Israel, South Korea, and Norway tend to reverse earnings decreases to increases from the third to fourth quarter especially.

Second, we examine earnings management in each earnings target. We focus on four measures in each earnings targets. First is the earnings reversal from the third to fourth quarter in each country. Second is the earnings discontinuity in earnings distribution in each country. Third is the percentage of corporations with positive performance in the sample of small negative performance in each country. Fourth is the "smoothing" and "improving" ratio. Corporations in Japan and Germany tend to manage earnings to avoid losses, meanwhile those in Finland and Singapore don't tend to make earnings relatively. Corporations in Israel and Germany tend to manage earnings to increase earnings, meanwhile Singapore and those in the United States of America don't tend to make earnings relatively.

Third, we identify the policy of dividend and investment. To examine it, we calculate the changes in the dividend and investment in each country and investigate which behavior each country is oriented to. Japan, Finland, and Italy are dividend-focused, meanwhile Israel, the United States of America, and Norway are investment-focused. Germany is relatively dividend-focused and Singapore is relatively investment-focused.

Fourth, we investigate the reasons for the international differences of earnings target, procedures, and dividend and investment behavior. We focus on three measures. First is the measure of dependence on shareholders' equity to examine the international differences of earnings management. This measure shows that the dependence on shareholders' equity is closely related to the extent of earnings management in each country. Corporations in Singapore, Finland, Sweden, and the United States of America don't tend to manage earnings relatively, at the same time they depend on shareholders' equity more than other countries. When corporations in highly equity-dependent countries are required to disclose transparent earnings because investors put pressure upon corporations. On the other hand corporations in Japan, Germany, and Israel are not always applied pressure by investors, thus it is accessible for corporations to manage earnings.

Second is the legal enforcement for borrowers, lenders, and investors. These measures present that Singapore, the United States of America, and Israel have stronger legal enforcement than other countries. These results suggest that legal enforcement is closely related to the earnings target and investment policy. Israel, Singapore and the United States of America have stronger protection for borrowers, lenders, and investors, thus corporations in those countries can invest in the expenditures under the earnings increase, even if corporations make no dividend or make losses. On the other hand, corporations in Japan, Germany and Finland are

required to pay stable dividend or increase dividend to invest in expenditures actively. Investors are not protected by laws, thus they are risk averse and require the corporations to pay stable dividend or make profits persistently.

How do the characteristics of earnings target, procedures, and dividend and investment policy affect the attitudes for taking the business risk in each country? To examine it, we focus on two risk measures. One is the ratio of corporations which listed in each country from 2001 to 2009 sequentially in the total sample in each country. The ratio shows the activation of the stock market in each country. The other is the mean of standard deviations of ROS of corporations in each country. In addition, we rank them in decreasing order. The results show that more corporations in Singapore, the United States of America, Norway, and Germany are often listed in the stock exchange newly or delisted from the stock exchange. In addition, we show that corporate performance in the United States of America, Norway, Sweden, and Singapore are more volatile than other countries. Investors can diversify their risk through the market in the United States of America or Singapore, thus corporations can invest in expenditures without dividend or profits-making. On the other hand, it is difficult for investors to diversify their risk through the market enough in Japan, Germany and Finland, and corporations cannot take their business risk without dividend or making-profits. Namely, corporations in loss avoidance countries use dividend or making-profits for accountability of investment.

This study has some limitations. First, we cannot calculate abnormal accruals under the model presented in prior literature, because standards for quarterly financial reports are not consistent internationally, and thus we cannot collect the requisite data. Second, this study does not adequately examine differences in the accounting standards of each country. These problems will provide the focus of future research.

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