

THE INFLUENCE OF EXTERNAL MONITORING ON EARNINGS MANAGEMENT IN JAPAN

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Abstract: *The primary objective of this paper is to investigate the influence different size combinations of external monitors, i.e., main banks and accounting firms, have on earnings management in Japan. Our second objective is to determine whether existing stock markets have a stronger impact on earnings management than main banks. We draw our sample from the population of firms listed in Japanese stock exchanges. We find that, contrary to our expectations based on previous research (e.g., Ashbaugh-Skaife et al. 2008; Becker et al. 1998; Berger et al., 2005; Lobo and Zhou 2006; Uchida et al., 2008), the combination of being monitored by a small and mid-sized bank (SMB) and a big Japanese accounting firm does not mitigate a firm's earnings management behavior. Our findings further show that main banks no longer play an important role in corporate governance, and nor does the size of the auditing firm – and thereby assumed quality of the auditing reports – influence earnings management; it is rather the content of the auditor's report that influences a firm's level of earnings management behavior.*

Keywords: *Main banks, Earnings management, Corporate governance*

1. INTRODUCTION

As Japanese firms did not have strong relationships with stock markets during the post-war period (Aoki, Patrick, and Sheard, 1994), they were forced to deal with only a few banks to obtain financing. Though this relationship has weakened over the past couple decades (Numata and Takeda, 2010), it is still relevant to look at when investigating Japanese firms' corporate governance systems. Among these banks, the bank with which each firm has the closest relationship is called the main bank. Previous studies highlight the Japanese financial keiretsu (e.g., Douthett and Jung, 2001; Fan and Wong, 2002; Weinstein and Yafeh, 1998). Specifically, firms maintain long-term and multi-dimensional relationships with these banks (Numata and Takeda, 2010). Traditionally, a firm's main bank has generally been its largest creditor (Numata and Takeda, 2010) as well as had the largest shareholdings in the firm (Kawai, Hashimoto, and Izumida, 1996; Numata and Takeda, 2010). A main

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bank has thus had strong incentives to become well-informed about its affiliated firms and their investment opportunities, and to use the information to ensure that good choices were made. In fact, banks traditionally collect more precise information on debtors than other creditors (Numata and Takeda, 2010). The main banks have thus played an important role in monitoring the performance of firms within their own financial keiretsu (Douthett and Jung, 2001).

However, as Weinstein and Yafeh (1998) point out, the main bank relationship may have previously had a negative effect on the performance of a firm if it made use of its monopoly power to lend funds at relatively high interest rates compared to those available on financial markets.

Over the past two decades the dependence of firms on bank financing and monitoring has been reduced. This decrease in the banks' power over firms has occurred due to bad debts at banks in the early 1990's that led to substantial restructuring of the keiretsu-system, and in the late 1990's there were a significant number of mergers and acquisitions that took place (Numata and Takeda, 2010). Furthermore, due to the international convergence of accounting practices, Japan adopted the accounting standards for financial instruments in 2000, which led to a decrease in the traditional cross-shareholding between banks and firms.

Although many aspects of the relationships between main banks and firms have been explored in the literature, to the best of our knowledge no previous studies have empirically explored the governance systems that operate among banks, accounting firms, stock markets and firms. Pong and Kita (2006) show that firms in Japan tend to be audited by the same firm that audits their main banks, and that the main banks generally choose an audit firm that is used by other companies within their associated financial keiretsu. It suggests that main banks have an option to select the client firms' accounting firms. Although the researchers find close relationships between main banks and accounting firms and propose a framework for categorizing monitoring systems among main banks, accounting firms and client firms, they have not performed any statistical analyses or evaluated the quality of firms' earnings or audit reports.

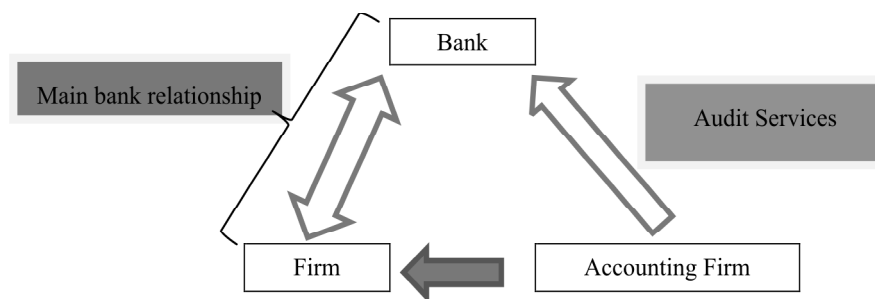


Figure 1: Framework of the findings of Pong and Kita (2006)

The primary objective of this paper is to investigate the influence different size combinations of external monitors, i.e., main banks and accounting firms, have on earnings management in Japan. This research thus explores the efficiency of the current corporate governance systems that Japanese firms operate under. While firms are typically family controlled in many other East Asian nations, the dominant owners of Japanese firms are institutions, i.e., the main banks of the large industrial conglomerates known as financial keiretsu. The ownership structure of Japanese firms is also quite different from those of companies in other East Asian countries, both in the degree of control and in cash-vote divergence (Fan and Wong, 2002:16).

Their research has inspired ours in two important ways. First, the study of Pong and Kita (2006) examines a sample of firms taken from the year 2000. However, the business environment has changed dramatically since then. For example, a number of mergers have occurred among both firms and banks, while one major auditing firm, ChuoAoyama, affiliated with the global network of Price water house Coopers, has since been dissolved; the economic environment have given rise to these events in Japan. Second, in the 2000's, the traditional role of the main banks decreased, while that of auditors increased (Numata and Takeda, 2010). Specifically, the main banks' monitoring authority over large listed firms weakened, as such firms began to raise funds from stock markets rather than using indirect financing. Further investigation is thus called for to gain an improved understanding of this new situation.

This study is thus motivated by the lack of research examining earnings management in the face of the current external monitoring environment made up by the main banks, accounting firms and stock markets in Japan. A discussion of this unique governance system is necessary. This paper represents an exploratory study designed to investigate how the relationships among main banks and accounting firms affect accounting practices in Japan in recent years. Overall, this study has two objectives. The first, as noted above, is to examine the relationships among main banks, accounting firms, and firms based on the methodology of Burgstahler and Dichev (1997). Although previous research (e.g., Shuto, 2009; Shuto, 2010; Thomas *et al.*, 2004) also uses this approach, these studies do not examine the issue of monitoring in terms of the combinations external institutions like banks and accounting firms based on their size. Our second objective is to analyze whether existing stock markets have a stronger impact on earnings management than main banks. Raising funds in stock markets may force managers to focus more on shareholder value. They would thus select accounting firms with good audit reputations in order to obtain working funds at more favorable rates. However, the problem seems to lie in the fact some managers might have a motivation of earnings management to obtain the working funds.

The remainder of the paper is structured as follows. The next section discusses the institutional background and hypotheses, while the theoretical background,

sample and methodology used in this work are introduced in the third section. The fourth section presents the results of this work. Finally, the fifth section presents the conclusions of this study, as well as its implications.

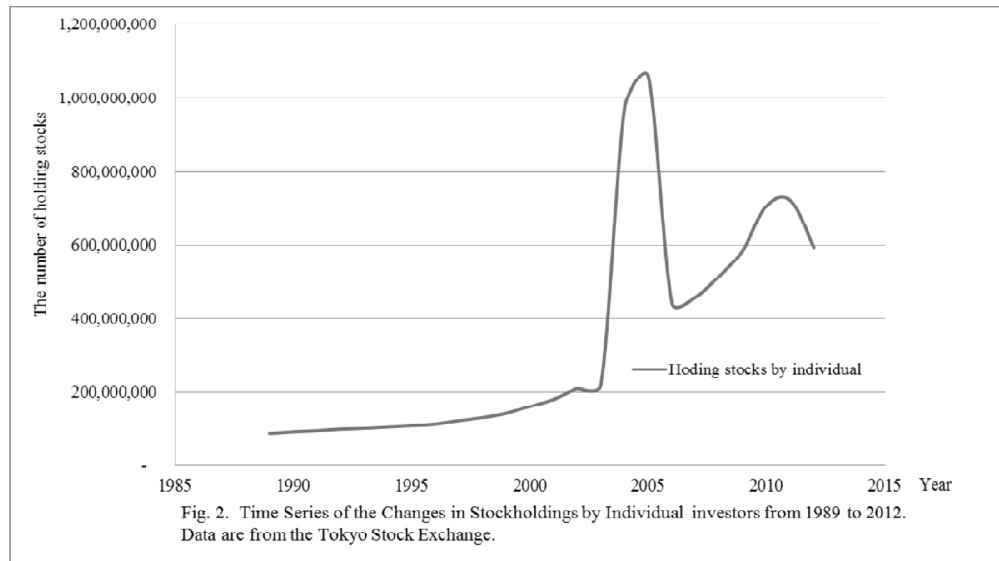
2. LITERATURE REVIEW AND HYPOTHESES

2.1. Changes in the Firm-main Bank Financing Relationship

There have been significant changes to the financing approaches adopted by Japanese firms in recent years. There are several reasons for why this has occurred. First, after the economic bubble burst in 1991, a large restructuring of banks and firms began. This led to a reduction in the power main banks held over firms (Numata and Takdea, 2010). Second, due to recession, a number of mergers and acquisitions occurred in the late 1990's that further weakened these links. The dependence of firms on main bank financing and monitoring was further reduced by the breaking of the traditional cross-shareholding system¹ between main banks and firms. Specifically, due to the international convergence of accounting practices for financial instruments in 2000, cross-held stocks that have fallen in price are now generally sold so that firms can avoid showing losses in their earnings statements. This is because stocks, which all listed firms are now required to classify² and report their holding intentions of, are now assessed at fair market value; the difference between this and the carrying amount is recognized as a loss during periods of decline. This fair market value is then used as the carrying amount of the stocks at the beginning of the next year, thereby influencing the management of cross-shareholdings. Due to these changes in accounting standards, stable shareholding and cross-shareholding decreased by 18 percent and 11 percent, respectively, from 1991 to 2003 (Patrick, 2004). The above dramatic changes in the relationships between main banks and firms since the 1990's has led firms, especially large firms, to no longer depend heavily on indirect financing from their main banks; instead firms now more often pursue direct financing by raising funds from stock markets (Sakai and Shikano, 2011). This shift in financing method has led loan repayments to banks from firms to exceed the bank loans taken out every year since 1996. It has furthermore increased the importance of auditor reports, as these are an important source of information for stock market investors.

In sum, changes in the financing system in Japan have weakened the relationship between banks and listed firms, with firms now relying more on direct financing via stock markets. According to lose the support of main banks, managers have to show investors stockholder's value to obtain the working capital from stock markets. Some managers might have a motivation of earnings management. We therefore propose the following hypothesis:

Hypothesis 1: *Existing stock markets have a stronger impact on firms' earnings management than main banks.*



2.2. City Banks vs. Small and Mid-sized Banks

The main bank system is a system unique to Japan that acts as a corporate governance system (Fan and Wong, 2002), and that has a major influence on both firms and accounting firms (Pong and Kita, 2006). The banks in Japan can be classified into two groups. The first includes the six giant city banks that serve as coordinators of their financial keiretsu's activities. They also help their group's members raise funds. These city banks account for most cross-shareholdings, which has functioned as a protection of incumbent managers from the pressures of capital markets (Hanazaki and Horiuchi, 2003). The other group includes small and mid-sized banks (SMBs), which are also known as regional banks. These regional banks, which have fewer large corporations as their customers, tend to invest their surplus funds in the call market (Hoshi *et al.*, 1993).

According to previous research, main banks play a major role in the corporate governance of their borrower firms (e.g., Aoki *et al.*, 1994; Hoshi, Kashyap, and Loveman, 1994; Teranishi, 1993). This body of research mainly focuses on the agency problems that may arise with regard to managerial behavior, based on the information asymmetry between lenders and borrowers. However, there have been few studies on the relationship between SMBs and firms. Recent research in the US and Japan suggests that SMBs have an advantage over large banks in providing credit to SMEs because they have stronger relationships with the firms than large banks do (e.g., Berger, Miller, Petersen, Rajan, and Stein, 2005; Uchida, Udell, and Watanabe, 2008; Stein, 2002). This allows the SMBs to access soft information about the borrowing firms in order to screen loans and make risk assessments before a loan is approved, and also improves the SMBs ability to monitor the loan after its

approval (Fama, 1985). The insider positions that such banks have thus allow them to mitigate information asymmetries and agency costs (Diamond, 1984; Berger and Udell, 2002; Boot, 2000). Large banks, on the other hand, often need to resort to transaction lending, which is based on hard information and consists of financial statement lending, asset based lending and credit scoring (Berger and Udell, 2001). Large banks thus require time and effort to assess information about potential borrowers. Because SMBs use relationship-based lending and thereby make use of the soft information they collect from the borrowing firms in order to reduce information asymmetry and strengthen monitoring, these banks have a profound influence on their borrowers' corporate governance that large banks would not have. In addition, SMBs' ability to monitor their borrowers' managers is further improved by their often close geographical proximity⁵ (Aoki, 1994). These factors all tend to decrease the likelihood of earnings management by client firms of SMBs. We thus propose the following hypothesis:

Hypothesis 2: *SMBs mitigate earnings management by client firms' to a greater extent than city banks do.*

2.3. Big Accounting Firms vs. Non-big Accounting Firms

A role of auditors that has attracted considerable attention from researchers is investor protection through audit quality. Several studies based on DeAngelo (1981) find strong evidence for a link between larger accounting firms and higher audit quality. Teoh and Wong (1993), for example, find evidence to show that the earnings response coefficients of big accounting firms' clients are significantly higher than those of non-big accounting firms' clients. They thus provide evidence that the quality of the audits conducted by big accounting firms is higher. Becker, DeFond, Jiambalvo, and Subramanyam (1998) and Francis, Maydew, and Sparks (1999) further find that clients of big accounting firms have lower discretionary accruals, which results in higher earnings quality. Other research finds similar results (e.g., Ashbaugh-Skaife, Collins, Kinney, and LaFond, 2008; Francis et al., 1999; Lobo and Zhou, 2006; Nelson, Elliott, and Tarpley, 2002).

Previous research suggests that one of the reasons big accounting firms provide higher quality audits is to avoid litigation risk. For example, the clients of big accounting firms make more conservative earnings reports than those of non-big accounting firms (Basu, Hwang, and Jan, 2001). This is especially true for larger clients, which pose greater litigation risks. In addition, big accounting firms' auditors tend to give up their audit contracts with firms if they deem the risk of litigation has increased (Shu, 2002). Auditors at big accounting firms' also seem better able to prevent earnings management (Becker et al., 1998; Francis et al., 1999). It has further been suggested that the behavior of auditors of big accounting firms, i.e., providing higher quality auditor reports, is influenced by the wish to protect their firms' reputations (Reynolds and Francis, 2001).

In sum, big accounting firms have a tendency to provide higher quality audits, and avoid audit contracts with risky firms in order to maintain their good reputations and avoid litigations. As such, it is reasonable to conclude that clients of big accounting firms manage earnings less than clients of non-big accounting firms. Based on the discussion in sections 2.2. and 2.3., we formulate the following hypothesis:

Hypothesis 3: *The combination of an SMB and a big accounting firm has a negative effect on client firms' level of earnings management.*

3. SAMPLE AND METHODOLOGY

Our sample consists of firms listed on Japanese stock exchanges in the year 2010, using the following criteria:

1. The firm was listed on at least one stock exchange in Japan.
2. The firm's fiscal year starts on April 1 and ends on March 31 of the following year.
3. The firm does not belong to the banking, securities, insurance or utilities industries.
4. The firm's main bank is a first ranked bank in main banks as shown in the EOL database.
5. Compliance with foreign accounting standards was not required.

Firms' listing information, audit reports and data on their related main banks are obtained from the EOL database (Pronexus Inc., 2014, February 28), while the firms' financial data are collected from their consolidated financial statements. The final sample consists of 1,931 firm-year observations over the period 2009-2010⁶.

We investigate the impact the size of main banks and audit firms have on a firm's earnings management behavior, as well as investigate our Hypothesis 1 and 2, this study applies a multiple regression analysis. Specifically, we examine whether the factors identified in this paper affect discretionary accruals, looking at the influence of the factors independently rather than in combination with each other. The discretionary accruals are estimated as total accruals minus nondiscretionary accruals. Nondiscretionary accruals are calculated using the modified Jones model (Kasznik, 1999). This analysis uses the cross-sectional accruals model to control for the effects of changing industry-wide economic conditions on total accruals. By estimating the cross-sectional accruals model, each sample point is assigned to an estimation portfolio that consists of similar firms matched on the basis of the industry classification code and the fiscal year. The modified Jones model is used by Shuto (2010) and is appropriate to use for our study.

We estimate each sample firm's nondiscretionary accruals as follows:

$$(IB_{it} - CFO_{it}) / AT_{it-1} = \beta_1 (1/AT_{it-1}) + \beta_2 \{(SALE_{it} - SALE_{it-1}) - (AR_{it} - AR_{it-1})\} / AT_{it-1} + \beta_3 (PPE_{it} / AT_{it-1}) + \mu \quad (1)$$

where i is the index of the firm, t is the index of the time period, and all variables and their definitions are as follow:

IB = net income before extraordinary items; defined as net income minus gains from extraordinary items plus losses from extraordinary items;

CFO = net cash flow from operational activities;

AT = total assets;

$SALE$ = sales revenue;

AR = accounts receivable;

PPE = gross property, plant and equipment;

ε = error term.

Table 1
Descriptive statistics

Variables	N	Mean	Std. dev.	Minimum	Maximum
IB^a	1,931	3438.48	15514.10	(58013.00)	297744.00
CFO	1,931	13688.68	50517.47	(76942.00)	1177226.00
AT_{t-1}	1,931	180765.28	531045.71	397.00	10239540.00
$SALE$	1,931	166221.90	452400.92	105.00	7517277.00
$SALE_{t-1}$	1,931	188022.54	520127.05	153.00	8436974.00
AR	1,931	30371.76	76733.18	0.00	948200.00
AR_{t-1}	1,931	28695.57	73522.75	0.00	1082569.00
PPE	1,931	66677.96	266043.41	0.00	5878266.00
Total accruals ^b	1,931	(0.05)	0.06	(0.55)	0.36
Non-discretionary accruals ^c	1,931	(0.03)	0.07	(0.47)	0.49
Discretionary accruals ^d	1,931	(0.02)	0.05	(0.49)	0.37

a IB is net income before extraordinary items defines as net income, minus gain from extraordinary items, plus loss from extraordinary items.

b Total accruals are the difference between IB and CFO , deflated by lagged total assets.

c Non-discretionary accruals are estimated for each firm-year as the expected value of accruals based on Eq.(1).

d Discretionary accruals are Total accruals minus Non-discretionary accruals.

Our external monitoring model is as follows:

$$|DACC|_{it} = \beta_0 + \beta_1 MB_{it} + \beta_2 CPA_{it} + \beta_3 STOCK_{it} + \beta_4 UNQUALIFIED_{it} + \beta_5 GOING_{it} + \beta_6 SUBSEQUENT_{it} + \beta_7 AF_{it} + \beta_8 NAF_{it} + \mu \quad (2)$$

where i is the index of the firm, t is the index of the time period, and all variables and their definitions are as outlined below:

$ DACC $	= absolute value of discretionary accruals;
MB	= 1 if the main bank is anSMB, and 0 otherwise;
CPA	= 1 if the auditor is a big accounting firm, and 0 otherwise;
$STOCK$	= 1 if the stock market is an existing market ⁷ , and 0 otherwise;
$UNQUALIFIED$	= 1 if additional information is contained in an auditor's unqualified opinion, and 0 otherwise;
$GOING$	= 1 if going-concern information is contained in an auditor opinion, and 0 otherwise;
$SUBSEQUENT$	= 1 if subsequent event information is contained in an auditor opinion, and 0 otherwise;
AF	= audit fees divided by sales revenues;
NAF	= non-audit fees divided by sales revenues;and
μ	= error term.

We control for confounding factors that may be related to our measure of discretionary accruals based on previous research. First, we include control variable $STOCK$, as an indicator variable because listing in the existing stock markets might have a stronger effect on earnings management than main bank. We provide an assurance that listing in the existing stock markets affect earnings management to address the endogeneity problem. Next, we control for the variables of three audit report qualities, $UNQUALIFIED$, $GOING$, and $SUBSEQUENT$, as these are indicator variables that capture the effect of accounting specialists on earnings management (Bartov, Gul, and Tsui, 2000; Bradshaw, Richardson, and Sloan, 2001; Francis and Krishnan, 1999; Rosner, 2003; Suda, Yamamoto, and Otomasa, 2007; Takeda, 2007). Third, we also control for the variables of accounting firm service fees, AF and NAF , as these have an effect on earnings management; previous research offers mixed findings on the relationship between these audit fees and earnings management (e.g., Antle, Gordon, Narayanamoorthy, and Zhou, 2006; Ashbaugh, LaFond, and Mayhew, 2003; Chung and Kallapur, 2003; DeFond, Raghunandan, and Subramanyam, 2002; Frankel, Johnson, and Nelson, 2002; Mitra and Hossain, 2007; Reynolds, Deis, and Francis, 2004; Ruddock, Taylor, and Taylor, 2006).

We present the descriptive statistics of the variables included in Table 2.

Table 2
Descriptive statistics

<i>Variables</i>	<i>N</i>	<i>Mean</i>	<i>Std. dev.</i>	<i>Minimum</i>	<i>Maximum</i>
Accruals					
DACC	1,931	0.0290	0.0420	0.0000	0.4931
CPA	1,931	0.7126	0.4527	0.0000	1.0000
MB	1,931	0.1709	0.3765	0.0000	1.0000
STOCK	1,931	0.7815	0.4134	0.0000	1.0000
UNQUALIFIED	1,931	0.2294	0.4206	0.0000	1.0000
GOING	1,931	0.0181	0.1334	0.0000	1.0000
SUBSEQUENT	1,931	0.1020	0.3028	0.0000	1.0000
AF	1,931	60.1398	87.1853	7.0000	1734.0000
NAF	1,931	1.6044	9.9487	0.0000	316.0000

In testing Hypothesis 3, this work employs essentially the same methodology as Burgstahler and Dichev (1997)⁸. We examine the earnings thresholds that have previously been examined for U.S. and Japanese firms by Shuto (2009), Shuto (2010) and Thomas, Herrmann, and Inoue, (2004), who present evidence that the frequency of reported earnings for firms in both countries is abnormally high or low at intervals just above or below these earnings levels, implying that earnings are managed to meet these thresholds. These studies further find single-peaked, bell-shaped earnings distributions⁹, implying that the figures for earnings cluster around 0.

This paper uses the size of a firm's related bank and accounting firm when testing their impact on the level of earnings management. We divide the banks into two groups, city banks and SMBs. We also categorize the accounting firms into two groups, big accounting firms and non-big accounting firms¹⁰. Next, the banks and accounting firms are grouped by size combination, as shown in Table 3. We predict that the combined monitoring roles of the banks and accounting firms will show evidence of different levels earnings management behavior at the two earnings thresholds.

4. RESULTS

4.1. Main banks, accounting firms and stock markets' impact on discretionary accruals

This research investigates whether external monitors, i.e., main banks and accounting firms, affect firms' earnings management. The results of estimating the discretionary accruals using multiple regression analysis for all sample firms in 2010 are presented in Table 4. That is to say, the results in Table 4 show whether the size of the main bank and accounting firm, the quality of the auditor's report and the age of the stock market have an effect on the absolute value of discretionary accruals.

Table 3
Descriptive statistics for scaled values of changes in earnings

Panel A: Scaled change in earnings by each combination						
Combinations	N	Mean	SD	25%	50%	75%
City banks and big accounting firms	1,132	0.0127	0.0515	(0.0092)	0.0061	0.0281
City banks and non-big accounting firms	469	0.0228	0.0883	(0.0100)	0.0084	0.0380
Middle and small banks and big accounting firms	244	0.0089	0.0432	(0.0060)	0.0040	0.0226
Middle and small banks and non-big accounting firms	86	0.0171	0.0637	(0.0026)	0.0092	0.0342
Total	1,931					
Panel B: Scaled earnings by each combination						
Combinations	N	Mean	SD	25%	50%	75%
City banks and big accounting firms	1,132	0.0149	0.0477	0.0029	0.0160	0.0355
City banks and non-big accounting firms	469	(0.0167)	0.1723	(0.0181)	0.0096	0.0265
Middle and small banks and big accounting firms	244	0.0104	0.0492	0.0013	0.0146	0.0312
Middle and small banks and non-big accounting firms	86	0.0057	0.0700	0.0008	0.0148	0.0326
Total	1,931					

Notes: AT_t : Total asset at the end of fiscal year t .

Earnings: Net income in period t .

Scaled change in Earnings: $(Earnings_t - Earnings_{t-1})/AT_{t-2}$.

Scaled earnings: $Earnings_t/AT_{t-1}$.

The F -test for the statistical goodness-of-fit of the empirical model is significant at the 0.001 level. The adjusted R^2 value is 0.0092. This suggests that our model makes a good prediction of the dependent variable in terms of the independent variables included. The results of our model show that the SMB is not significantly related to the absolute value of discretionary accruals (i.e., $|DACC|$). That is to say, SMBs do not necessarily limit client firms' use of discretionary accruals to a greater degree than city banks do, and thus do not play a stronger monitoring role when it comes to the use of earnings management by firms, and therefore rejects our Hypothesis 2.

The results also show that the size of the accounting firm (i.e., CPA) is not significantly associated with firms' use of discretionary accruals. Thus it can be presumed that the big accounting firms do not necessarily provide their clients with higher quality auditing services than the non-big accounting firms do in our sample.

Interestingly, our results show, however, that all three audit report quality variables are significantly related to discretionary accruals. Specifically, *UNQUALIFIED* is strongly and negatively related to $|DACC|$ ($c = -0.0101$, $p < 0.00$), while *GOING* and *SUBSEQUENT* are positively related to $|DACC|$ ($c = 0.0206$, $p < 0.05$; $c = 0.0108$, $p < 0.05$, respectively). These results suggest that auditors' opinions play an important role in moderating earnings managements, as has been suggested by previous studies. However, it is important to note that our results for the impact going-concern opinions in audit reports have on earnings management

are not consistent with the findings of previous research (e.g., Rosner, 2003; Takada, 2007). The cause of these results is that the existing stock markets indeed have become a more important source of financing than firms' main banks, and thereby our Hypothesis 1 is supported.

Our findings further show that being listed on an existing stock market (i.e., *STOCK*) is significantly and positively related to discretionary accruals ($c = 0.0069$, $p < 0.00$). This signifies that being listed on an existing stock market increases the likelihood that a firm will manage earnings when compared to being listed on a new market. This may be because the listing application requirements for existing stock markets are much looser than for new markets, thereby weakening the former's monitoring efficiency. In addition, it is noted that large firms do not always experience earnings' stability given the rapidly changing industry conditions; this suggests that these firms, when listed on existing stock markets, are more likely to manipulate their discretionary accruals. That is to say, due to the credit crash experienced by the main banks in the early 1990's and the generally weakened power these banks now hold over firms, firms listed on existing markets might recognize the significant impact making a profit has on their ability to raise funds from stock markets; this may lead them to therefore engage more heavily in earnings management behavior if so allowed. This further supports our Hypothesis 1.

Finally, our auditing fee related control variables, *AF* and *NAF*, are found not to have a significant impact on the use of discretionary accruals. In terms of the results of non-audit fees, our results are consistent with those of previous research (e.g., Ashbaugh *et al.*, 2003; Chung and Kallapur, 2003; DeFond *et al.*, 2002; Reynolds *et al.*, 2004). On the other hand, the result of audit fee is not consistent with previous research (Antle *et al.*, 2006).

Table 4
Multiple regression model Absolute value of discretionary accruals

<i>Explanatory variables</i>	<i>Coefficient</i>	<i>t -Statistic</i>	<i>Prob.</i>
Intercept	0.0265	10.1500	<.0001 ***
<i>MB</i>	(0.0006)	(0.2500)	0.7995
<i>CPA</i>	(0.0028)	(1.2600)	0.2067
<i>STOCK</i>	0.0069	2.9100	0.0037 ***
<i>UNQUALIFIED</i>	(0.0101)	(3.4400)	0.0006 ***
<i>GOING</i>	0.0206	2.7600	0.0059 **
<i>SUBSEQUENT</i>	0.0108	2.6900	0.0072 **
<i>AF</i>	(0.0000)	(0.0200)	0.9865
<i>NAF</i>	0.0000	0.3000	0.7627
Adjusted R-square	0.0092		
<i>N</i>	1,931		

Note: p-values are one-tailed; ***, **, * denote $p < 0.01$, < 0.05 , < 0.10 , respectively.

The next two sections present the results based on Burgstahler and Dichev's model (1997), where we examine external monitoring effects of different size combinations of banks and accounting firms on sample firms' levels of earnings management. Our goal is to empirically investigate the governance system created by these external influences. The results of our four size combinations are presented and discussed separately for the two earnings thresholds. Specifically, we investigate the level of earnings management employed to avoid (1) declines in earnings, with the results shown in Figure 3 and Tables 5 and 6, and (2) losses, with the results shown in Figure 4 and Tables 7 and 8.

4.2. Existence of Earnings Management to Avoid Earnings Declines under each Size Combination of Banks and Accounting Firms

Table 5 shows the earnings changes scaled by total assets $\{(Earnings_t - Earnings_{t-1}) / Total Assets_{t-2}\}$. Figure 3 presents a histogram for each size combination of banks and accounting firms, namely city banks and big accounting firms (CB), city banks and non-big accounting firms (CN), SMBs and big accounting firms (SB) and SMBs and non-big accounting firms (SN). Hypothesis 3 predicts that the distributions of earnings will be less non-continuous at zero earnings for the SB combination than for the other combinations.

The standardized difference results are presented in Table 6, which shows the results of the one-tailed test. Panels B (sd: -3.6514, $p < 0.00$) and C (sd: -2.0351, $p < 0.05$) indicate that the statistically significant figures are to the right of zero. The evidence thus shows that these combinations approximate earnings in excess of zero. That is to say, the CN and SB combinations are empirically irregular near zero, while the CB and SN combinations are not. This suggests that firms under the monitoring of CB or the SN are more likely to manage their earnings in order to avoid earnings declines, and therefore rejects our Hypothesis 3.

Panel A: City banks and big accounting firms

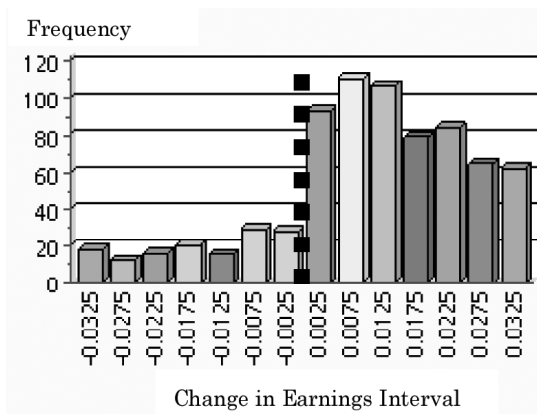
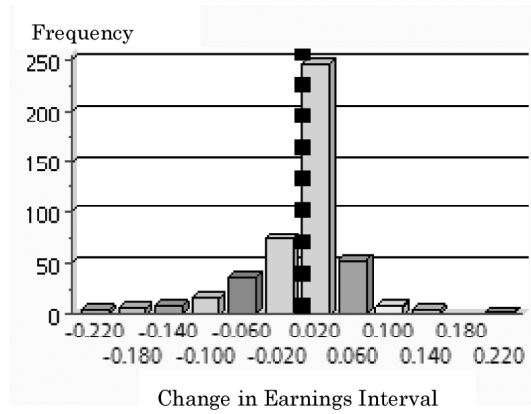


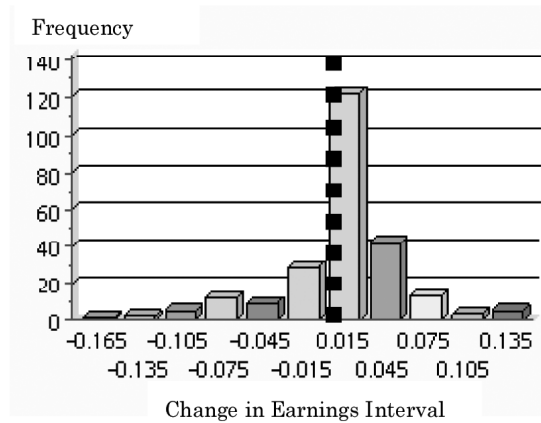
Table 5
Range of Earnings Management to avoid Earnings Declines under each Size Combination of Banks and Accounting Firms

Panel A: City banks and big accounting firms																	
From	Infinity	-0.0325	-0.0275	-0.0225	-0.0175	-0.0125	-0.0075	-0.0025	0	0.0025	0.0075	0.0125	0.0175	0.0225	0.0275	0.0325	Sum
To	-0.0325	-0.0275	-0.0225	-0.0175	-0.0125	-0.0075	-0.0025	0	0.0025	0.0075	0.0125	0.0175	0.0225	0.0275	0.0325	Infinity	Sum
N	104	13	26	51	45	71	84	46	48	103	97	58	64	33	39	250	1132
Panel B: City banks and non-big accounting firms																	
From	Infinity	-0.26	-0.22	-0.18	-0.14	-0.1	-0.06	-0.02	0	0.02	0.06	0.1	0.14	0.18	0.22	0.26	Sum
To	-0.26	-0.22	-0.18	-0.14	-0.1	-0.06	-0.02	0	0.02	0.06	0.1	0.14	0.18	0.22	0.26	Infinity	Sum
N	0	3	2	2	7	11	54	91	128	90	34	19	7	6	15	0	469
Panel C: Small and mid-sized banks and big accounting firms																	
From	Infinity	-0.195	-0.165	-0.135	-0.105	-0.075	-0.045	-0.015	0	0.0015	0.0045	0.0075	0.0105	0.0135	0.0165	0.195	Sum
To	-0.195	-0.165	-0.135	-0.105	-0.075	-0.045	-0.015	0	0.0015	0.0045	0.0075	0.0105	0.0135	0.0165	0.195	Infinity	Sum
N	0	0	2	1	5	7	28	49	79	36	18	12	4	3	0	0	244
Panel D: Small and mid-sized banks and non-big accounting firms																	
From	Infinity	-0.13	-0.11	-0.09	-0.07	-0.05	-0.03	-0.01	0	0.01	0.03	0.05	0.07	0.09	0.11	0.13	Sum
To	-0.13	-0.11	-0.09	-0.07	-0.05	-0.03	-0.01	0	0.01	0.03	0.05	0.07	0.09	0.11	0.13	Infinity	Sum
N	0	0	0	3	3	5	7	8	19	17	9	5	10	0	0	0	86

Panel B: City banks and non-big accounting firms



Panel C: SMBs and big accounting firms



Panel D: SMBs and non-big accounting firms

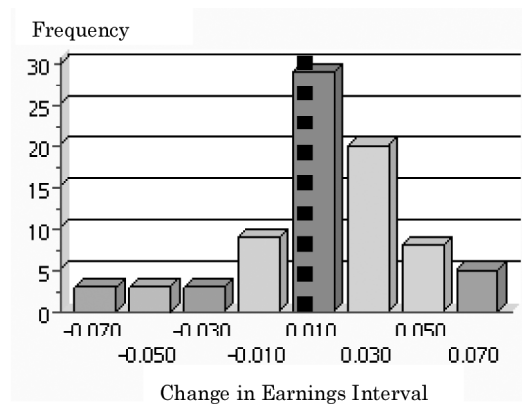


Figure 3: Distribution of scaled changes in earnings by each combination of variables

Table 6
Standardized differences for Figure 3

	Values for test intervals		Values for standardized differences for remaining intervals			
	Standardized difference left of 0	Standardized difference right of 0	mean	median	minimum	maximum
Panel A	0.7931	1.0509	0.3453	-0.0099	-1.2095	4.0647
Panel B	0.0000	-3.6514 ***	0.2313	0.0974	-1.1685	1.9961
Panel C	0.251	-2.0357 **	0.1487	0.0698	-0.0837	0.6972
Panel D	0.8489	-1.1036	0.0232	0.0000	-1.2733	0.8489

***Denotes significance at the 0.01 level. **Denotes significance at the 0.05 level.

4.3. Existence of earnings management to avoid losses under each size combination of banks and accounting firms

Hypothesis 3 is further tested in the context of earnings management to avoid losses by firms that are monitored by the different size combinations of banks and accounting firms.

Figure 4 shows the distribution of earnings scaled by total assets ($Earnings_t / Total Assets_{t-1}$). It presents four histograms for the size combinations of CB, CN, SB, and SN, which show single-peaked, bell-shaped distributions that are discontinuous near zero. Table 7 shows the number range for earnings management to avoid losses for each combination. Table 8 shows that the standardized differences of the intervals are between those to the left of zero (Panel A, sd: 2.1291, $p > 0.05$; Panel C, sd: 2.3523, $p > 0.00$; Panel D, sd: 2.0721, $p > 0.05$) and the right of zero (Panel A, sd: -5.2681, $p > 0.00$; Panel B, sd: -1.9214, $p > 0.05$; Panel C, sd: -5.6056, $p > 0.00$; Panel D, sd: -4.8797, $p > 0.00$). The statistical tests confirm that all of the size combinations are empirically irregular near zero, and thus that loss avoidance, i.e., earnings management, is associated with all combinations, CB, CN, SB, and SN, thus rejecting Hypothesis 3.

Panel A: City banks and big accounting firms

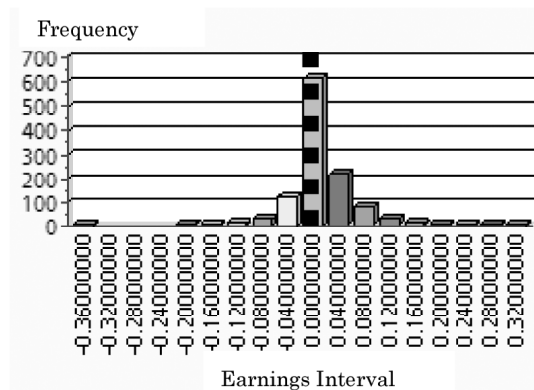
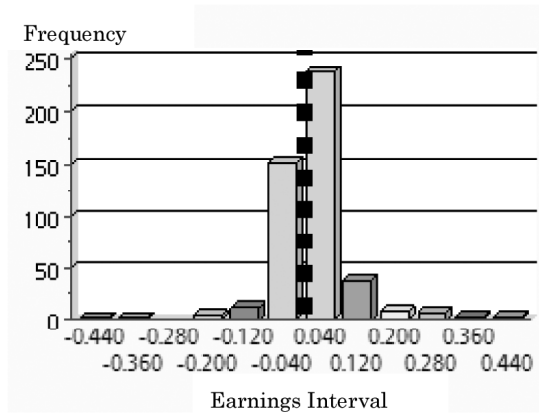


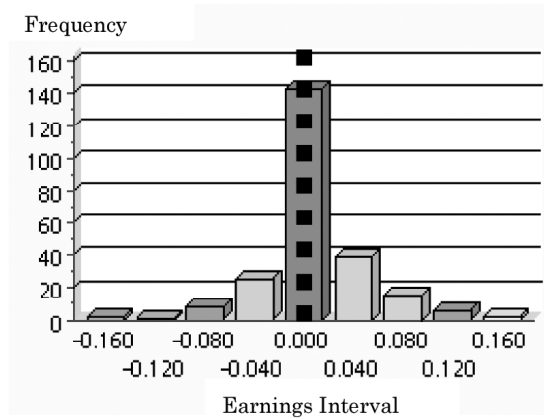
Table 7
Range of earnings management to avoid losses under each size combination of banks and accounting firms

Panel A: City banks and big accounting firms																		
From	-0.36	-0.32	-0.28	-0.24	-0.20	-0.16	-0.12	-0.80	-0.40	0	0.40	0.80	0.12	0.16	0.20	0.24	0.28	Sum
To	-0.36	-0.32	-0.28	-0.24	-0.16	-0.12	-0.80	-0.40	0	0.40	0.80	0.12	0.16	0.20	0.24	0.28	Infinity	0.28
N	1	0	0	2	3	5	7	18	50	155	171	35	8	4	0	3	1	1132
Panel B: City banks and non-big accounting firms																		
From	-0.68	-0.60	-0.52	-0.44	-0.36	-0.28	-0.20	-0.12	-0.04	0	0.04	0.12	0.20	0.28	0.36	0.44	0.52	Sum
To	-0.68	-0.60	-0.52	-0.44	-0.36	-0.28	-0.20	-0.12	-0.04	0	0.04	0.12	0.20	0.28	0.36	0.44	0.52	Infinity
N	0	0	0	1	1	0	3	6	32	127	189	77	15	7	4	3	4	469
Panel C: Small and mid-sized banks and big accounting firms																		
From	-0.36	-0.32	-0.28	-0.24	-0.20	-0.16	-0.12	-0.08	-0.04	0	0.04	0.08	0.12	0.16	0.20	0.24	0.28	Sum
To	-0.36	-0.32	-0.28	-0.24	-0.20	-0.16	-0.12	-0.08	-0.04	0	0.04	0.08	0.12	0.16	0.20	0.24	0.28	Infinity
N	0	0	0	0	0	2	2	8	15	32	143	30	7	5	0	0	0	244
Panel D: Small and mid-sized banks and non-big accounting firms																		
From	-0.36	-0.32	-0.28	-0.24	-0.20	-0.16	-0.12	-0.08	-0.04	0	0.04	0.08	0.12	0.16	0.20	0.24	0.28	Sum
To	-0.36	-0.32	-0.28	-0.24	-0.20	-0.16	-0.12	-0.08	-0.04	0	0.04	0.08	0.12	0.16	0.20	0.24	0.28	Infinity
N	0	0	0	0	0	0	0	3	6	12	49	13	2	1	0	0	0	86

Panel B: City banks and non-big accounting firms



Panel C: SMBs and big accounting firms



Panel D: SMBs and non-big accounting firms

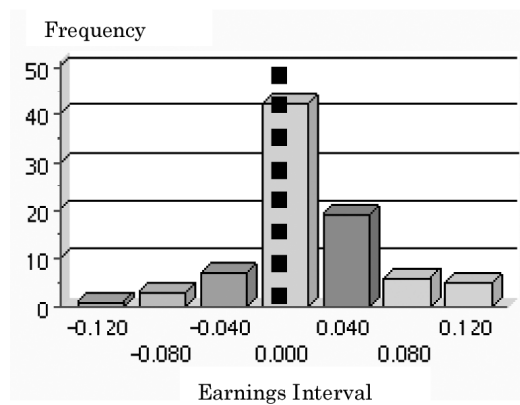


Figure 4: Distribution of scaled earnings to avoid losses by each combination of variables

Table 8
Standardized differences for Figure 3

	<i>Values for test intervals</i>		<i>Values for standardized differences for remaining intervals</i>			
	<i>Standardized difference left of 0</i>	<i>Standardized difference right of 0</i>	<i>mean</i>	<i>median</i>	<i>minimum</i>	<i>maximum</i>
Panel A	2.1291	**	-5.2681	***		0.2231
0.0234	-0.0312	1.8844				
Panel B	-0.3644		-1.9214	**		0.1601
0.0221	-0.0552	0.7619				
Panel C	2.3523	***	-5.6056	***		0.2324
0.0125	-0.0751	2.2523				
Panel D	2.0721	**	-4.8797	***		0.2005
0	0	1.6711				

***Denotes significance at the 0.01 level. **Denotes significance at the 0.05 level.

5. CONCLUSION AND DISCUSSION

The purpose of the current study is to investigate the impact the external monitoring of banks and accounting firms have on firms' earnings management behavior in Japan. This work investigates these relationships using two different empirical methods.

First, we apply an earnings management proxy using line items, i.e., discretionary accruals, and conduct a multiple regression analysis. The results indicate that the size of a firm's main bank does not impact its earnings management behavior.

In addition, contrary to what we expected, our findings show that big accounting firms do not always successfully regulate firms' use of discretionary accruals. This implies that the auditing quality of big accounting firms is not necessarily higher than that of non-big accounting firms. The quality of the auditor reports, based on the auditor opinions, on the other hand, appear to play an important role in influencing earnings management behavior. Unqualified audit reports with additional information reduce earnings management. This suggests that listed firms recognize the importance of complete auditing reports that are of high quality with regard to raising working capital from financial markets, i.e., direct financing, due to the weakening financing role of main banks, i.e., indirect financing. In addition, certain specific information points contained in the auditor reports, i.e., going concern and subsequent information, are found to be positively related to earnings management behavior. This may show that a firm that does not receive a going-concern opinion from the auditor feels extra pressure to manage earnings to try and convince investors the firm is still worth investing in.

Last, the results suggest that firms are more likely to engage in earnings management, especially related to abnormal accruals, when they are listed on existing stock exchanges. This may be because managers may be afraid of decreasing their ability to raise funds on the stock market due to operating below the earnings thresholds, and thus engage in earnings management. Our results may further highlight the weakened financing role main banks play for their client firms.

Second, we apply the method presented in Burgstahler and Dichev (1997), looking at benchmark models, i.e., earnings thresholds. Our findings indicate that the external monitoring provided by the size combinations of large main banks and big accounting firms, and SMBs and non-big accounting firms, mitigate management's motivation to manage earnings; these results are inconsistent with the findings of previous research (e.g., Ashbaugh-Skaife et al., 2008; Berger et al., 2005; Francis et al., 1999; Lobo and Zhou, 2006; Nelson et al., 2002; Uchida et al., 2008). These findings are in contrast to what we expected. A possible explanation may be that, traditionally, big banks have used big accounting firms and thereby so have the firms in the big banks' financial keiretsu, and vice versa, leading these relationships between the two external monitors as well as the monitors and the firms to be stronger than the other two combinations, which may have evolved more over the past couple decades. This can be further investigated in future studies. It is interesting to note that when looking at the size combinations and their effect earnings management to avoid losses, we find that none of the combinations have a mitigating effect. Overall, our results based on benchmark models suggest that the changes in the main bank-firm relationships brought about by the dramatic changes in economic conditions in Japan, as posited by Pong and Kita (2006), may not be accurate. We thus provide new evidence regarding the main bank-firm relationship.

There are several limitations to this study, which suggest some directions for further research. First, the sample used in this work is just drawn from the fiscal year 2010, which is after the deregulation the firewall, large barrier, between banking and broker/dealer operations within a financial institution. Our findings are thus only generalized to cover main bank relationship effects on earnings management, and panel data research may find different results. Moreover, while previous research suggests that bank-appointed directors impact earnings management (e.g., Iwasaki, 2009), we do not include this variable in our study as it is fairly difficult to access information regarding bank-appointed directors in Japan; it is not precisely disclosed to the general public. However, if future studies are able to collect this data, they can further clarify how the various factors that influence earnings management do so in Japan. Finally, future research could explore some of the same issues raised in this study using panel data as well as other scientific research models. They may be able to uncover additional findings regarding the effect lending banks, accounting firms and stock markets have on Japanese firms' earnings management behavior.

The findings of this study have at least three implications for investors and researchers. The first is that our study contributes to the literature describing the changing relations between client firms and main banks in Japan. Second, we uncover that auditing services from big accounting firms do not mitigate earnings management, as may be expected based on previous research findings. Investors should therefore look at other influencing factors, e.g., the content of the auditing report, rather than which accounting firm conducted the audit, when trying to determine the likelihood that a firm's earnings may have been managed. This would influence their decisions regarding investments, transactions or lending of business funds. Finally, we provide insights into the positive relationship between existing stock markets and discretionary accruals that might help investors to invest Japanese firms.

Acknowledgements

The authors appreciate the helpful comments and suggestions from Akinobu Shuto, Robert Huchinson. All errors are the responsibility of the authors.

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