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Tone at the Top and Shifts in Earnings Management: Evidence from Japan

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I. Introduction

"Tone at the top (TATT)" influences the ethics inherent in the firm's operations. TATT refers to the ethical atmosphere created in the workplace by the organization's leadership (Association of Certified Fraud Examiners 2006, 1). COSO (1992, 6) states that management, in particular, the chief executive officer (CEO), is ultimately responsible and should assume "ownership" of the system. More than any other individual, the CEO sets the TATT, and this tone affects integrity, ethics, and other factors underlying a positive control environment. TATT in the upper levels of the firm is important for an effective internal controls system (Ahamed and Epps 2011). Since internal controls are a responsibility of the CEO, previous studies found a significant association between the management involvement and internal controls (Okuda and Nakashima 2014).

Prior empirical studies suggest that if internal control is effective, the quality of earnings improves (Bedard 2006; Lobo and Zhou 2006; Machuga and Teitel 2008; Nakashima 2015). We examine whether the TATT is positively associated with earnings quality. In this study, we use accruals quality, discretionary accruals, and the accuracy of cash flow predictions as surrogates for earnings quality. We also investigate whether there is a significant positive association between TATT and internal controls.

Second, since TATT relates to corporate governance, we investigate the determinants of TATT, including 1) top management's attributes, such as age or compensation; 2) corporate governance, such as stock structure and capital composition; and 3) audit quality. TATT is important for the establishment, implementation,

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and promotion of a good internal control system. Since the internal control system is ultimately a responsibility of the CEO, Okuda and Nakashima (2014) analyze management involvement and internal control effectiveness through a covariance structure analysis. They find there is a significant association between management involvement and internal control effectiveness.

On the other hand, previous literature documents that internal control regulation influences the manager's choice of earnings management (Graham et al., 2005; Suda and Hanaeda 2008). Cohen et al., (2008) and Nakashima (2015) document that in response to improvements in internal controls, a manager shifts from accruals management to real management. This shift improves cash flow prediction accuracy while accruals quality remains constant. Third, this study examines the relationship between TATT and trade-off between accruals and real management.

This study contributes to literature in the following ways. First, we find it is difficult to judge a manager's attitude and/or the actual internal control of a firm using official firm disclosures, especially when the disclosure of internal control deficiencies seems to be decreasing. However, we are able to develop an indicator of TATT using a survey instrument. By surveying management, we are able to assess management attitudes and perceptions of TATT. Second, we also provide evidence regarding corporate governance in Japan based upon TATT. Based upon our results, we find an association between TATT and the effectiveness of internal control, and this suggests that auditors can use TATT as a factor in judging their detection risk levels.

Roychowdhury (2006) suggested that real management affects long-term corporate value negatively. Burnet et al., (2012) pointed out that stock repurchases motivated by earnings management incentives potentially obfuscates earnings quality. Third, this study examines not only the association between TATT and earnings quality, but also the association between TATT and earnings management. We find that there is no significant association between TATT and accruals quality, and we suggest that real management potentially obscures earnings quality. In addition, this study examines the association between TATT and the trade-offs between types of earnings management. We find that less objective

management decision-making is associated with a trade-off between accruals management and real management.

The remainder of this study proceeds as follows. Section II develops hypotheses; Section III shows the research design; Section IV presents descriptive statistics and our results; and Section V includes a summary and our conclusions.

II. Prior Research and Hypotheses Development

2.1. The Association between Tone at the Top and Earnings Quality/Internal Controls

Fraud by management and fraud by employees are the two major categories of fraud (Oyanagi 2014). Poor TATT lead to fraud by management for Olympus and Daio Seishi in Japan. A strong TATT in the upper level of firm management should lead to an ethical atmosphere that permeates the organization and enhances the internal control system. If the internal control system is good, segregation of duties will be the norm, and earnings management is controlled. This situation should lead to an improvement in earnings quality.

Since internal controls are a responsibility of the CEO and TATT depends upon the CEO, it is likely a significant association exists between the TATT and internal controls. Okuda and Nakashima 2014 provide evidence of this association. The Committee of Sponsoring Organization of the Treadway Commission (COSO) states that the effectiveness of internal controls cannot rise above the integrity and ethical values of the people who create, administer, and monitor them. Prior research evidence shows that an effective internal control system is significantly associated with better earnings quality (Bedard 2006; Lobo and Zhou 2006, Machuga and Teitel 2008; Nakashima 2015). Accordingly, we employ the following hypotheses:

H1 (1): There is a significant association between TATT and earnings quality.

H1 (2): There is a significant association between TATT and internal controls.

2.2. Determinants of Tone at the Top

It is said that TATT is primarily determined by top management's vision, values, and strategy established

by the firm (NBA 2011, 6). We contend that numerous attributes of the firm, the executives, and the environment may drive managers to create an ethical atmosphere in a firm. Do the characteristics of management such as the age of key executives, management compensation, and the managers' holding of corporate shares relate to TATT? Is the TATT impacted by outside monitoring (via outside directors or a financial institution)?

H2: There exist determinants of TATT.

There are three features of the Japanese management system in Japan: longtime employment, a seniority-based promotion system, and a union inside firms. People are taught that juniors in Japan respect seniors. Serfling (2014) documented that risk-taking behavior decreases as CEOs become older. An older CEO may be more ethical due to the respect provided by the junior employees. Huang et al., (2012) find the relationship between CEO's age and higher quality financial reporting manifested in evidence regarding firms meeting or beating the analyst earnings forecast and the occurrence of financial restatements. Karcher (1996), Deshpande (1997), and Hunt and Jennings (1997) provide evidence that the CEO's age is positively related to ethical decision making.

On the other hand, Vintila and Gherghina (2012) examined the impact of corporate governance mechanisms and CEO characteristics on U.S. public firms' performance and suggested a negative relationship between the age of the CEO and firm performance. Accordingly, we explore the following hypothesis:

H2 (1): A firm with 'older' managers will have a more positive TATT.

The use of stock-based executive compensation schemes has increased manager's incentives to manipulate earnings number. However, in Japan, the compensation systems is generally seniority-based. Therefore, the managers do not have a willingness to meet the targets by manipulating earnings. We predict that there is no significant association between manager's compensation and TATT in Japan. On the compensation dimension, we investigate the following hypothesis:

H2 (2): A firm with managers with high compensation will have a more positive TATT.

Xie et al., (2003) found that earnings management is less likely to occur when the corporate board includes more independent outside directors. In addition, management holding higher levels of shares is associated with higher earnings quality and a greater level of earnings informativeness (Kimura 2006; Shuto 2006). We predict that a higher percentage of outside directors and a higher percentage of foreign investors are associated with a more positive TATT. Accordingly, we investigate the following hypothesis:

> **H2(3): In firms with a higher percentage of outside directors, larger share holdings by management, or a higher percentage of a foreign investors, the influential voice of an outside director or a foreign investor improves corporate governance, and TATT becomes positive.**

Ofek (1993) finds that highly leveraged firms react faster to a decline in performance than do less-leveraged companies. This difference suggests a disciplining role for debt. Osano (2001) states that leverage works as monitoring as well as governance by ownership. High leverage appears to induce a firm to respond operationally and financially to adversity after a short period of poor performance, helping to avoid lengthy periods of losses with no response. Bushee (1998) documents that managers are less likely to cut R&D to reverse an earnings decline when institutional ownership is high, implying that institutions are sophisticated investors who typically serve a monitoring role in reducing pressure for earning management. Suda (2005) finds that high-leverage firms are more willing to set up an effective internal control system. We also hypothesize that firms with a higher degree of bank monitoring will have better corporate governance and a higher TATT:

> **H2 (4): The firms with high debt-to-equity ratio from a main financing bank tends to take strategic action, and the TATT becomes positive.**

Becker et al., (1998) suggest that the discretionary accruals are smaller for firms audited by a Big 5 auditor. Therefore, we predict that higher audit quality improves corporate governance and pushes the TATT to be more positive:

H2 (5): The higher audit quality the firms have, the more positive the TATT become.

Prior survey research (Graham et al., 2005; Suda and Hanaeda 2008) and some prior empirical studies (Cohen et al., 2008; Nakashima 2015)[1] provide results that the regulation of internal control reporting may shift from accruals management to real management. Burnett et al., (2012) suggest that firms with high audit quality are more likely to use accretive stock repurchase which is a form of real management and less likely to use accrual management to meet or beat consensus analyst' forecasts.

D'Aquia and Bean (2011) document that the TATT that fosters ethical decisions impact financial reporting decision. Accordingly, we predict a linkage between the TATT and the trade-off between accruals and real management by management. Therefore, we investigate the following hypothesis:

H3: The trade-off between accruals management and real management is related to TATT.

We predict that firms, which have a positive attitude toward internal controls, do not trade-off between accruals management and real earnings management, and decrease both types of earnings management. Thus, the following working hypothesis is set up:

Working hypothesis 3 (a): The trade-off between accruals and real management is associated with a more positive attitude towards internal control improvement in the TATT.

Since corporate governance does not work well for firms whose managers have lower objectivity in their decision processes, we predict that the firms are likely to trade-off between accruals and real earnings management. Thus, we investigate the following hypothesis:

Working hypothesis 3 (b): The trade-off between accruals and real management is associated with an objective decision-making in the TATT.

[1] Cohen et al., (2008) suggest that public firms switched accounting earnings management to real transaction earnings management. Nakashima (2015) suggests that SEC-standard Japanese public firms change accounting management to real management in the post-SOX period as well as the public firms in the U.S. Thus, the investigation by external auditors and regulatory agencies, combined with the threat of penalty and improvements in internal controls pushed public firms to restrain their accounting earnings management. Nakashima (2015) suggests that the public firms in Japan which disclosed material weaknesses engaged in more earnings management. Pan (2009) finds that Japanese firms engage in earnings management through the manipulation of real activities by employing a sample of 650 firms that report a small positive profit.

A manager who is aggressive with regard to meeting or exceeding targets, such as sales, net income, and/or earnings per share, is likely to have greater incentives for earnings management. However, since accounting earnings management is controlled via a strong internal control environment, the manager is likely to shift from accounting earnings management to real earnings management:

Working hypothesis 3 (c): The trade-off between accruals and real earnings management is associated with aggressive attitudes towards meeting earnings targets.

In Figure 1, we provide a summary of our propositions and hypotheses. [see Figure 1, pg 311]

III. Survey Evidence and Sample Selection

3.1. The Survey Evidence

Nakashima and Okuda (2014) surveyed public firms in Japan in order to investigate their attitudes regarding internal controls and accounting information system in September 2012.[2] A questionnaire was sent to the president offices of 3,605 public firms in Japan (First and Second Section of Tokyo Stock Exchange and Mothers of Tokyo Stock Exchange, First and Second Section of Osaka Stock Exchange and Heracles of Osaka Stock Exchange, First and Second Section of Nagoya Stock Exchange, Fukuoka Stock Exchange, Sapporo Stock Exchange). Two hundred twelve firms responded to the survey, for a response rate of about five percent.[3]

Figure 2 presents the breakdown by the different stock markets for the responses to the questionnaire request. Figure 2 shows that more than seventy-five percent of the listed firms in Japan belong to the Tokyo stock market, and it seems that firms listed on the Tokyo Stock Exchange have a more positive attitude regarding internal control (compared with firms on the other markets in Japan). The industrial

[2] This study focuses on the following questions in the survey instrument: 1) managers' attitudes which cover sub-questions, 1 improving internal controls system, 2.an objective decision-making, 3.aggresiveness of earnings management; 2) quality of external auditors' auditing (See Appendix). The survey through regular mailing was conducted in September 2012. A receipt for the payment to the post office for mailing the survey and the document that the author asked whether Fukushima College allowed her to conduct the survey provides evidence of the actual survey being conducted.

[3] Our research staff input the answers from each firms into the excel sheet. An e-mail trail between the research staff and the authors along with documentation of the data entry can provide additional assurance of the response collection.

distribution based on *Nikkei's Intermediate Classification* for public firms in Japan is presented in Figure 3. [see Figure 2 and Figure 3, pg 312]

We used the following process for sample selection to analyze the two hundreds twelve firms that responded to the Nakashima and Okuda (2014) survey. We dropped nine firms that are financial institutions and seventy-six firms without Nikkei Data, forty-three firms whose fiscal year ended in other than March and did not have complete data from 2002 through 2012, and two firms without OCF data. Data was obtained from the Nikkei Economic Electronic Databank System (NEEDS). Table 1 outlines the sample selectin process. [see Table 1, pg 214]

IV. Research Design

4.1. Three Proxy of Tone at the Top

How should we measure "TATT"?[4] TATT is defined as the visible willingness by top management to prioritize corporate value above other values in decision-making, and to expect all others in the organization do the same (NBA 2012). COSO released an updated Framework (COSO 2013), and they described focus points to employ in designing, implementing, and maintaining internal control. Considering this description, TATT captures both approaches used by top management to prevent fraud along with the characteristics of the top management. Thus, we apply Cressey' theory using the following three elements: opportunity, rationalization, and pressure.

Mitigation of Opportunity*: Whether a manager has a willingness of improving internal controls system:*
Since internal controls are a responsibility of the CEO and the CEO sets TATT, a significant association between the TATT and internal controls is expected. In addition, an assessment of the TATT can be used as part of an entity's evaluation of controls for Sarbanes-Oxley reporting or for assessment of consistency

[4] COSO (1994, 4) asserts the following: Internal control consists of five interrelated components. As one of the components, the control environment sets the tone of an organization, influencing the control consciousness of its people. It is the foundation for all other components of internal control, providing discipline and structure. Control environment factors include the integrity, ethical values, and competence of the entity's people; management's philosophy and operating style; the way management assigns authority and responsibility, and organizes and develops its people; and the attention and direction provided by the board of directors.

with the compliance and ethics recommendation of the U.S. Federal Sentencing Guidelines (Ahmed and Epps 2011, p.3). Nakashima and Okuda (2014) developed the following survey questions: how do you assess your own attitude as the CEO regarding J-SOX and your internal control system, focusing on complying with the requirements of J-SOX and improving internal controls in the firm in order to measure top management's willingness to improve internal controls and conform with Japanese internal control regulations[5] (the Financial Instruments and Exchange Act of 2006, J-SOX[6]).

***Rationalization**: Whether a manager have an objectivity of decision-making:*

Whether top management makes an objective decision affects their tone at top. Thus, Nakashima and Okuda (2014) develop the following question: If the independent third parties assess the objectivity of decisions made by you as the CEO, do they assess your decision-making objectivity?

***Pressure**: Whether a manager has aggressiveness of earnings management:*

Due to top management having pressure to meet a target, he or she may be more sympathetic to aggressive earnings management (Patelli and Pedrini 2015). Thus, Nakashima and Okuda (2014) develop the following question: How do you assess earnings management as the CEO regarding the meeting or exceeding targets, such as sales, net income and/or earnings per share?

Nakashima and Okuda (2014) develop questions framed around the above triangle. Respondents were asked to respond using a seven-point scale for each of these questions (see Appendix). With regard to Q1.1, the conformity to J-SOX, Q1.2, improvements in internal control, and Q1.3, the importance of targets, more than half of the respondent firms answered greater than six on the seven-point scale. This result suggests that many firms evaluate their internal control positive and have a positive attitude toward target setting. However, concerning question 1.3 the objectivity of decision-making, few respondents

5 The Business Accounting Council, which is an advisory body of the Financial Services Agency, released On the Setting of the Standards and Practice Standards for Management Assessment and Audit concerning Internal Control Over Financial Reporting (Council Opinions) in February 2007. See http://www.fsa.go.jp/en/news/2007/20070420.pdf

6 Although the Financial Instruments and Exchange Act of 2006 is not an exact Japanese version of Sarbanes-Oxley Act of 2002 (SOX), Japanese media generally calls it J-SOX. Thus, we refer to the terminology of J-SOX for the internal control regulations in Japan in this paper.

provided a seven. This result suggests that they evaluate management's decision making to be less objective. Figure 4 shows results from the respondents with regard to Q1.1.1, Q1.1.2, Q1.2, and Q1.3. [see Figure 4, pg 313]

4.2. Effectiveness of Internal Controls

Nakashima and Okuda (2014) ask question 2.2 regarding the function considered to effective in improving internal control or governance for each firm by conforming to the J-SOX. Figure 5 shows the result of the internal controls. As an effective function, more than half of the respondents reply that the expectation for reliability of the financial reporting is high, and the original purpose of J-SOX is understood among the firms. Also high is the expectation of compliance and the expectation of property preservation. In addition, many respondents consider J-SOX to be positive, since J-SOX is effective for improving internal controls and governance enforcement. [see Figure 5, pg 313]

4.3. Audit Quality

In archival studies, audit firm size is used as a proxy for audit quality. In the survey, we asked about the quality of the financial statement audit, and more than half of the firms answered a five or more. This response suggests that Japanese firms consider their audits to be of high quality. [see Figure 6, pg 314]

4.4. Earnings Quality Proxy

Earnings management which falls within GAAP can be focused on three types of earnings management: conservative accounting, neutral accounting, and aggressive accounting (Dechow and Skinner 2000)[7]. Managers can use their discretion not only in order to misstate their firms' performance for opportunistic purposes, but also to convey their inside information for informative purposes (Watts and Zimmerman, 1986; Subramanyam 1996; Suda 2000; Leuz et al., 2003, p.510). This study uses discretionary accruals

7 According to Dechow and Skinner (2000), conservative accounting includes overly aggressive recognition of a provision or reserve, overvaluation of acquired in-process R&D in purchase acquisitions, overstatement of restructuring charges and asset write-offs for accruals management, and delaying sales, accelerating R&D or advertising expenditures for real management. Neutral accounting includes earnings that result from a neutral operation of the process, such as income smoothing accounting (Suda 2007). Aggressive accounting includes the understatement of the provisions for bad debts and drawing down provisions or reserves in an overly aggressive manner for accruals management, and postponing R&D or advertising expenditures and accelerating sales for real management.

estimated by the Jones (1991) model each year as a cross-section for all sample firms, using the following regression model.

$$\Delta WC_t=\beta_0+\beta_1\Delta SALES_t+\beta_2 PPE_t+\varepsilon_t$$

Managers can take real actions that affect cash flows by delaying or accelerating sales and accelerating or postponing R&D or advertising expenses (Dechow and Skinner 2000). We follow previous studies for methods to identify real earnings management. However, it is difficult to document the extent to which managers engage in real management to manipulate earnings. Merely observing that a firm enters into a transaction that receives favorable accounting treatment is not evidence that the firm entered into the transaction just because of its accounting consequence (Dechow and Schrand 2004).

Graham et al., (2005) and Suda and Hanaeda (2008) find strong evidence that managers employ real earnings management such as "decrease discretionary spending on R&D, advertising, and maintenance" to meet an earnings target much more than accounting accruals earnings management such as "book revenue now rather than next quarter" and "alter accounting assumptions." Thus, following Roychowdhury (2006) and Cohen et al., (2008), this study focuses on production manipulation. Production costs manipulation includes reporting lower *COGS* by reducing production costs per unit by an increase in production. We estimate one proxy, abnormal production costs (*abnPROD*).

We compute abnormal production costs by subtracting the normal level of the sum of *COGS* and change in inventory from actual production costs. We estimate the normal level of production costs as the following equation.

$$PROD_t = COG_t+\Delta INV_t$$

$$= \alpha_0+\alpha_1 SALES_t+\alpha_2\Delta SALES_t+ \alpha_3\Delta SALES_{t-1}+\varepsilon_t$$

4.5. Test Hypothesis

In order to test H1, we estimate the following regression equation and examine the association between the TATT and earnings quality/internal control.

H1(1) $$TATT= \theta_0+\theta_1 MGT\_AGE_t + \theta_2 MGT\_IR_t+\theta_3 SO_t +\theta_4 CMPS\_DAMT_t$$

$$+\theta_5 FRGN_t+\theta_6 CROSS_t+\theta_7 RTO\_TBPC_t+\theta_8 RTO\_TKBKD_t+\theta_9 IDRTO_t$$

$$+\ \theta_{10} LOSSPORTION_t\ +\theta_{11} ROA_t+\theta_{12} OC_t+\theta_{13} GROWTH_t+\theta_{14} FIRM\_AGE_t$$

$$+\theta_{15} SEGMENT_t+\theta_{16} OCF_t+\theta_{17} DEBT_t+\theta_{18} AUDIT_t+\theta_{19} EQ_t+\varepsilon_{t+1}$$

H1(2) $$IC= \theta_0+\theta_1 MGT\_AGE_t+\ \theta_2 MGT\_IR_t+\theta_3 SO_t\ +\theta_4 CMPS\_DAMT_t$$

$$+\theta_5 FRGN_t+\theta_6 CROSS_t+\theta_7 RTO\_TBPC_t+\theta_8 RTO\_TKBKD_t+\theta_9 IDRTO_{t\,t}$$

$$+\ \theta_{10} LOSSPORTION_t\ +\theta_{11} ROA_t+\theta_{12} OC_t+\theta_{13} GROWTH_t+\theta_{14} FIRM\_AGE_t$$

$$+\theta_{15} SEGMENT_t+\theta_{16} OCF_t+\theta_{17} DEBT_t+\theta_{18} AUDIT_t\ +\theta_{19} TATT_t+\varepsilon_{t+1}$$

TATT	A composite of three respondent regarding (1) management's attitude toward internal controls, (2) objective decision, and (3) aggressive operating style.
MGT_AGE	The average age of management
MGT_IR	Rate of management's sharing
SO	If the firm has stock-option system, 1, if the firm has no stock-option system, 0.
CMPS_DAMT	Total of compensation which management received including bonus.
FRGN	Rate of foreign investors sharing
CROSS	Rate of cross sharing among public firms which can have cross-sharing.
RTO_TPBK	Rate of main bank sharing
RTO_TKBKD	Rate of depending on main bank=borrowings from main bank/total borrowing*100
IDRTO	Rate of independent outside directors=outside directors/total directors*100
LOSSPORTION	The number of years which have decrease earnings during total years
ROA	Return on assets: Net income/Average assets
OC	OPERATING CYCLE=The log of the average of[(sales/360)/(Average Accounts Receivable)+(Cost of Goods Sold/360)Average Inventory)] .
GROWTH	Growth rate in sales: Sales in the beginning of the year / Sales in the end of the year
FIRM_AGE	The years when the firm passed since the firm was established
SEGMENT	Number of reported business segments
OCF	OCF (cash flows from operations) minus mean of OCF
DEBT	LDEBT (=long-term debt /average assets) minus mean of LDEBT
AUDIT	Respondent of management perception for financial statement auditing quality

To test H2, we estimate the following regression equation. We include a number of control variables.

H2 $$TATT= \theta_0+\theta_1 MGT\_AGE_t\ +\ \theta_2 MGT\_IR_t+\theta_3 SO_t\ +\theta_4 CMPS\_DAMT_t$$

$$+\theta_5 FRGN_t+\theta_6 CROSS_t+\theta_7 RTO\_TBPC_t+\theta_8 RTO\_TKBKD_t+\theta_9 IDRTO_t$$

$$+\theta_{10}LOSSPORTION_t +\theta_{11}ROA_t+\theta_{12}OC_t+\theta_{13}GROWTH_t+\theta_{14}FIRM\_AGE_t$$

$$+\theta_{15}SEGMENT_t+\theta_{16}OCF_t+\theta_{17}DEBT_t+\theta_{18}AUDIT_t+\varepsilon_{t+1}$$

To test H3, a dummy variable coded 1 if DA increases and PROD is decreasing, 1 , is included along with dummy variables for: 1) attitude towards internal control improvement/maintenance; 2) the objectivity of managerial decision-making; and 3) manager's aggressiveness for meeting or beating targets.

H3 $$TATT= \theta_0+\theta_1MGT\_AGE_t + \theta_2MGT\_IR_t+\theta_3SO_t +\theta_4CMPS\_DAMT_t$$

$$+\theta_5FRGN_t+\theta_6CROSS_t+\theta_7RTO\_TBPC_t+\theta_8RTO\_TKBKD_t+\theta_9IDRTO_t$$

$$+\theta_{10}LOSSPORTION_t +\theta_{11}ROA_t+\theta_{12}OC_t+\theta_{13}GROWTH_t+\theta_{14}FIRM\_AGE_t$$

$$+\theta_{15}SEGMENT_t+\theta_{16}OCF_t+\theta_{17}DEBT_t+\theta_{18}AUDIT_t +\theta_{19}DAPROD_t+\varepsilon_{t+1}$$

4.6. Control variables

In our multivariate analyses, we control for factors associated with firm characteristics. Japanese firms manage reported earnings to avoid decreases in earnings and losses (Suda and Shuto 2007). We include an indicator *LOSSPORTION* as the number of years that have a decrease in earnings during total years. The firms may have incentives to increase accruals management to report an increase in earnings or no loss in the pre-J-SOX. However, it is harder for them to use discretionary accruals to report an increase in earnings or no loss in the post-SOX, so managers may shift to manage earnings through real activities.

Leverage is one of the determinants for R&D expenditures, and debt covenants affect a manager's accounting choices (Suda 2000, 224-225). In addition, firms with high leverage have a willingness to set up a strong internal control system (Suda and Sasaki 2008). On the other hand, since firms with high leverage need to satisfy debt covenant requirements, they have a greater incentive to increase earnings (Lobo and Zhou 2006). Accordingly, there is mixed evidence regarding whether leverage incentivizes or constrains earnings management. Firms with strong operating cash flow performance have no incentive to manage earnings through discretionary accruals (Lobo and Zhou 2006). We also predict that firms with larger operating cash flows do not need to manage earnings to report increases in earnings or income, but we might consider that firms with larger operating cash flows might have an incentive to manage

earnings through real management using OCF. In our analyses, we adjust for differences from the mean for leverage and *OCF* using Yoshida's (2005) approach.

The discretionary accruals of the firm not audited by a Big 5 auditor is larger than the discretionary accruals of a firm which is audited by a Big 5 auditor (Becker et al., 1998). This result suggests that auditor quality constrains earnings management. Therefore, we include the variable *AUDIT* to control for the effect of auditor quality. *AUDIT*, is 1 if the firm is audited by a Big N audit firm, and 0 otherwise.[8] We predict the coefficient to be negative.

V. Empirical Results

5.1. Descriptive Statistics

Table 2 provides descriptive statistics of our variables. The descriptive statistics indicate that the mean (standard deviation) of TATT is 5.605 (0.888). The mean (standard deviation) of the age of the senior manager is 59.1 years old (3.290), and the mean (standard deviation) of the management's ratio of shareholding is 2.880 (5.041), and the value of management shareholding is 242,146 million yen (183,555) respectively. The mean corporate governance index is 10.521 (9.841), while the mean foreign stock holding ratio is 9.638 (9.232). The mean cross holding ratio is 2.464 (1.798), while the mean bank-financing ratio is 20.827 (21.793). The mean main financing bank debt-to-equity ratio is 9.044 (11.870). [see Table 2, pg 315]

5.2. Empirical Results 1-H1: The Association between Tone at the Top and Earnings Quality

Table 3 shows the correlation coefficient between the question response result of TATT, the effectiveness of internal control, and the audit quality, and the trade-off between earnings management. With regard to the correlation coefficient of TATT and internal control, the Pearson correlation (Spearman correlation) of TATT, and creditability of financial reporting, and the Pearson coefficient (spare man coefficient) of TATT,

[8] We label the Japanese auditors that are the partners with Big 4, such as AZUSA (KPMG), ARATA (Pricewaterhouse) and Shinnihon yugen sekinin (Ernst &Young), and TOMATSU (Detroit Touché Tomatsu) as Japanese Big 4 since Misuzu has been dissolved since July, 2007. Since, in previous years, the partnership relationship had been different before 2006, there might be a possibility to have a mix sample.

and enforcement of compliance are 0.563 (0.552) and 0.613, respectively (0.633), and it has positive correlation. [see Table 3, pg316]

Table 4 shows the regression analysis result of using the effectiveness of internal control as the dependent variable. Our results indicate that TATT is significantly associated with effectiveness of operation, efficiency of operation, enforcement of law compliance, and promotion of property preservation. These results means that TATT is significantly positively associated with the effectiveness of internal controls. [see Table 4, pg 317]

Our results in Table 5 indicate mixed evidence of a link between TATT and accruals quality, discretionary accruals (DA), abnormal OCF/PROD, and the accuracy of cash flow predictions. We observe a statistically significant relation between our measure of cash flow prediction accuracy and TATT,[9] which suggests that TATT is significantly associated with accuracy of cash flow predictions and this supports H1(1). [see Table 5, pg 318]

Table 6 shows the regression analysis result of using the effectiveness of internal control as the dependent variable. Table 7 indicates that TATT is significantly associated with effectiveness of operations, efficiency of operations, enforcement of law compliance, and promotion of property preservation. This association means that TATT is significantly positively associated with the effectiveness of internal controls, and therefore, supports H1(2). [see Table 6, pg 319]

5.3. Empirical Results 1-H2: Determinants of Tone at the Top

Table 7 provides our results where attributes of management and corporate governance are the dependent variables in the regression analysis. Table 7 results indicate a positive link between TATT and age of management, outside directors' ratio, foreign investors' ratio, and audit quality. The results also indicate a negative relation between TATT and the loss indicator. [see Table 7, pg 320]

[9] In this study, accruals quality and accuracy of cash flow prediction are errors. Accordingly, a smaller error is indicative of higher quality earnings and/or accruals.

The TATT is significantly associated with the management's age and compensation. TATT is also significantly associated with cross sharing and audit quality. Hofsted (2001) suggests that there is a positive link between power distance in the country and stronger decision-making. The indices (ranks) of Japan and the U.S. on power distance are 54(33), 40 (38) respectively. This ranking may assist in explaining the link between management age, decision strength, and a more positive TATT (which supports H2).

TATT is associated with cross sharing, and this association suggests that management has a positive attitude toward internal control through monitoring mutually by cross sharing firms. We provide a scatter diagram based on the corporate governance index and the Japanese traditional management index of our sample in Figure 7. Apparently, Japanese traditional firms are associated with a stronger corporate governance index. [see Figure 7, pg321

5.4. Empirical Results 3-H3: The Tone at the Top and Trade-off between Earnings Management

Our evidence and prior work suggests that the implementation of internal control reporting regulations resulted in changes in manager's earnings management. Figure 8 shows the time-series plots of accruals management and real management. We can observe that while discretionary accruals (*DA*) decreased, abnormal production cost (*abnPROD*) increased. Assuming the trade-off is between accruals and real management, we should verify which factor of the TATT is associated with the trade-off between accruals and real management. [see Figure 8, pg 322]

We test H3, the relation between TATT and the trade-off between accruals management and real management using a regression approach where the dependent variables are from the questionnaire data. Table 4 shows the Pearson correlation (Spearman correlation) between objectivity of management's decision and the trade-off between earnings managements is -0.219 (-0.188). This negative correlation supports only H3 (2). Table 8 reports that the results from our regression with the mean of Q1-1-1, and Q1-1-2, Q1-2, and Q1-3 as the dependent variables. Table 8 reports that Q1-2 is significantly negatively associated with the trade-off between *DA* and *PROD*. This negativity indicates that when management is

less objective decision- oriented, there is a trade-off between accruals and real management, which suggests that we have a mixed result regarding TATT and trade-off between earnings management. [see Table 8, pg 323]

VI. Conclusion and Future Research

This study investigates: 1) whether the TATT is associated with earnings quality and the effectiveness of internal controls; 2) determinants of TATT; and 3) whether the TATT is related to the trade-off between earnings management approaches. We find the following: First, our regression results of indicate mixed evidence of a link between TATT and accruals quality, discretionary accruals (DA), abnormal OCF/PROD, and the accuracy of cash flow predictions. We observe a statistically significant relation between our measure of cash flow prediction accuracy and TATT. This significance suggests that TATT is significantly associated with accuracy of cash flow predictions. The regression analysis results indicate that TATT is significantly associated with effectiveness of operations, efficiency of operations, enforcement of law compliance, and promotion of property preservation. These results means that TATT is significantly positively associated with the effectiveness of internal controls. This positive association is expected, since the TATT relates to the effectiveness of the internal controls system.

Second, the results indicate a positive link between TATT and age of management, outside directors' ratio, foreign investors' ratio, and audit quality. This positive link suggests that since there is a seniority system in Japan, older managers may possess a higher degree of leadership. It is easier for a manager to set up an atmosphere, since people may be more willing to follow a more senior manager. Outside directors and foreign investors work as a monitoring mechanism. This monitoring suggests a link between the outside directors' ratio, the foreign investors' ratio, higher audit quality, and the ethical culture in the firm. In addition, TATT is associated with cross sharing, which suggests that management has a positive attitude toward internal control through monitoring mutually by cross sharing firms.

Third, we find that less objective management decision-making is associated with a trade-off between accruals management and real management. This finding indicates that when management is less

objective decision oriented, there is a trade-off between accruals and real management. In addition, the results indicate that there is a significant correlation between the objectivity of management's decision and the trade-off between earnings management. This correlation suggests that we have a mixed result regarding TATT and trade-off between earnings management. Further research is needed to validate the survey results on which we conduct our analyses. We also believe that our results should be replicated across other times and samples in order to better understand the generalizability of our results.

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FIGURE1: Summary of Propositions

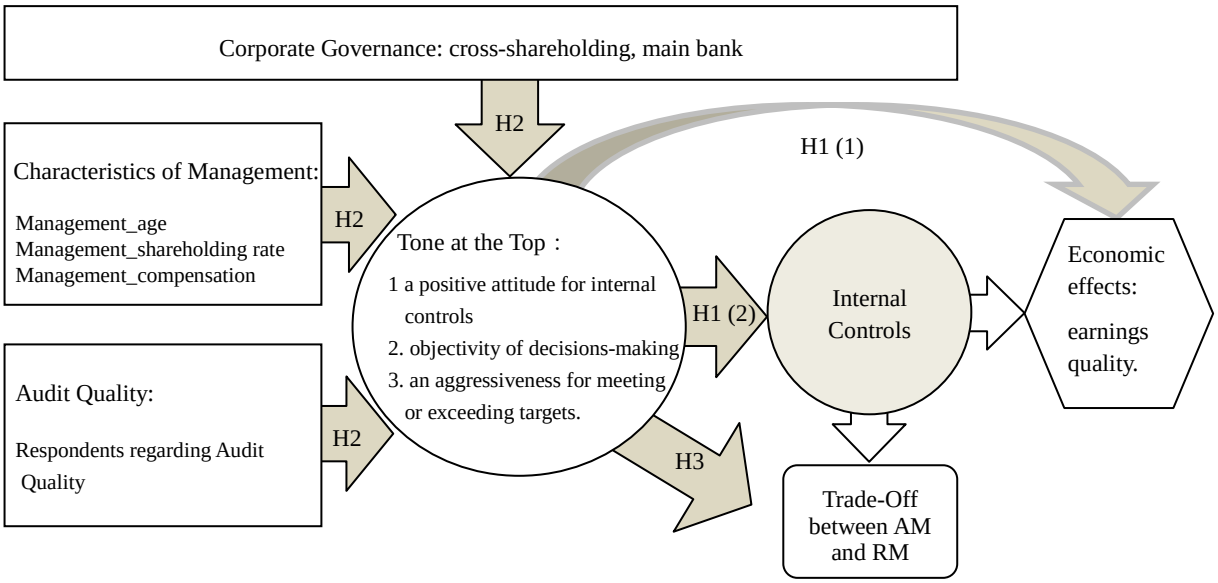


FIGURE 2: Stock Market Composition

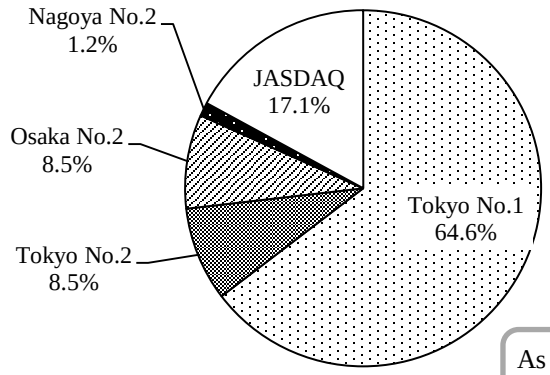


FIGURE 3: Industry Composition

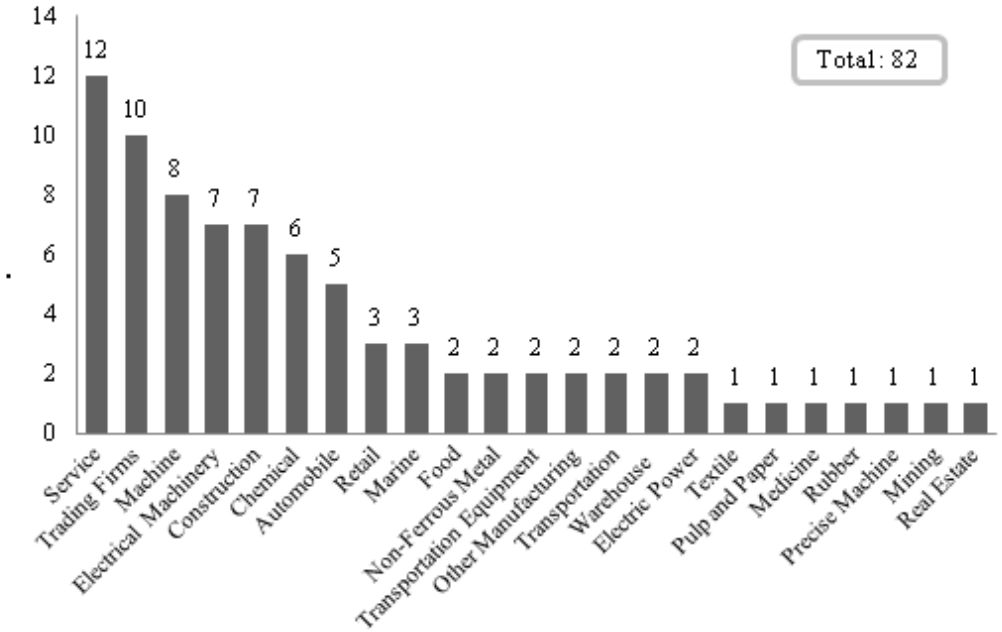


FIGURE 4: Repondents regarding Tone at the Top

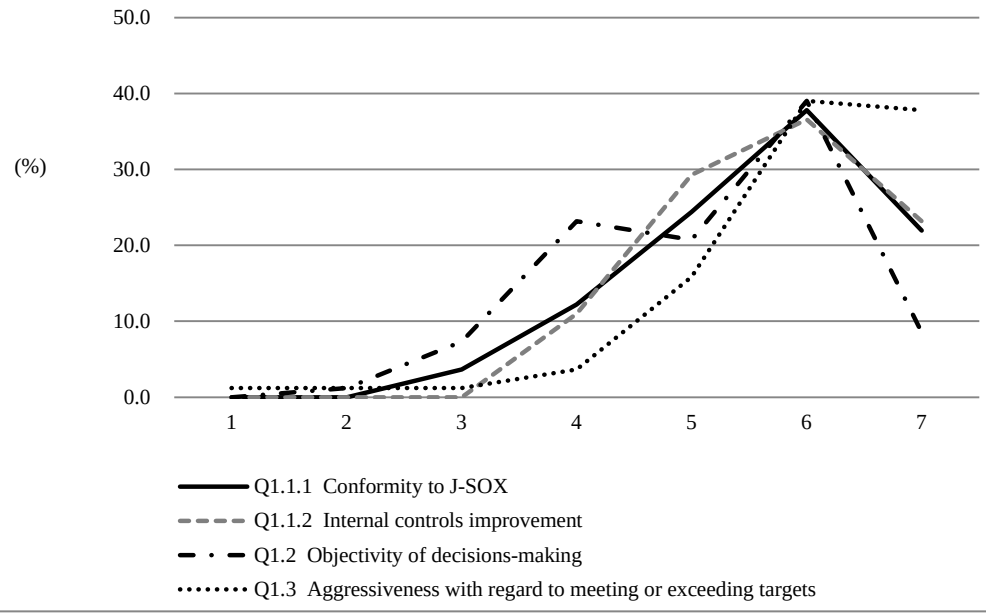


FIGURE 5: What J-SOX Helps for Their Internal Controls and Governance

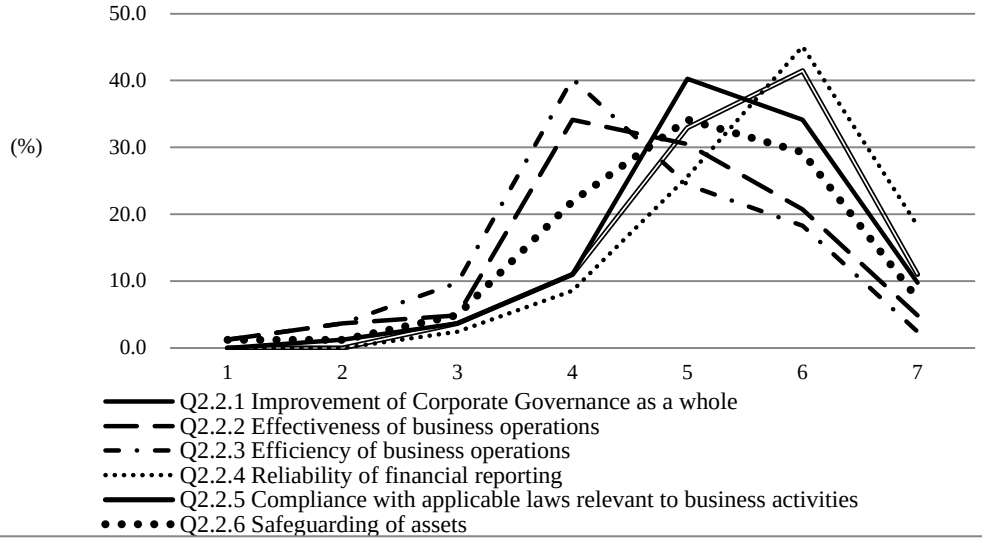


FIGURE 6: Result of Respondences regarding Audit Quality

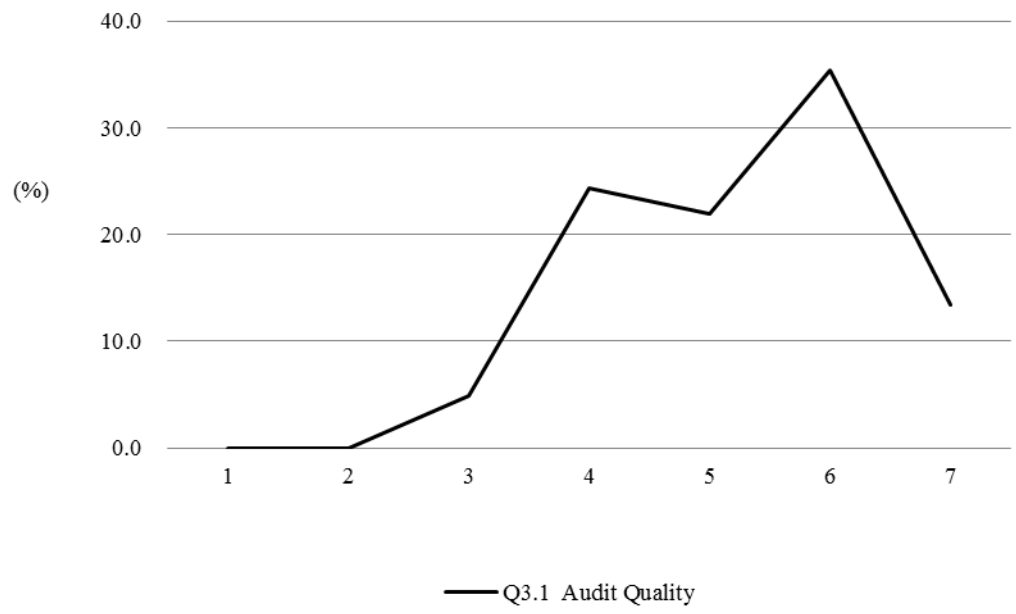


TABLE 1 : Sample Selection	
Net Respondents	212
Less Financial institutions	Δ 9
	203
Less firms with Nikkei data and non consolidated firms	Δ 76
Less firms with missing data and closing month other than March	Δ 43
Less firms with missing OCF data	Δ 2
Final Sample	**82**

TABLE 2 : Descriptive Statistics (N =82)

	MEAN	MEDIAN	S.D.	MIN	MAX	Q1	Q3	
TATT	5.605	5.667	0.888	2.833	7.000	5.167	6.333	
AQ	0.006	0.002	0.011	0.000	0.095	0.001	0.006	
DA	-0.001	-0.001	0.024	-0.084	0.135	-0.011	0.007	
abnOCF	0.005	0.001	0.030	-0.067	0.123	-0.011	0.018	
abnPROD	-0.002	-0.001	0.015	-0.044	0.047	-0.008	0.004	
MAPE	0.178	0.103	0.241	0.003	1.000	0.034	0.188	
MGT_AGE	59.159	59.000	3.290	49.000	65.000	57.750	61.000	age
MGT_IR	2.880	0.691	5.041	0.017	28.780	0.134	3.202	%
SO	0.207	0.000	0.408	0.000	1.000	0.000	0.000	
CMPS_DAMT	242.146	189.500	183.555	13.000	997.000	103.750	340.250	million yen
FRGN	10.521	7.530	9.841	0.000	33.470	0.865	18.988	%
CROSS	9.638	7.935	9.232	0.000	39.970	0.940	15.250	%
RTO_TPBK	2.464	2.800	1.798	0.000	5.030	0.000	4.003	%
RTO_TKBKD	20.827	19.440	21.793	0.000	100.000	0.000	33.597	%
IDRTO	9.044	0.000	11.870	0.000	50.000	0.000	14.286	%
LOSSPORTIO	0.153	0.091	0.178	0.000	0.818	0.000	0.273	%
ROA	0.038	0.043	0.047	-0.183	0.148	0.013	0.068	
OC	3.925	3.783	0.910	0.000	7.050	3.614	4.288	
GROWTH	6.435	5.019	16.050	-40.343	67.340	-0.119	12.693	
FIRM_AGE	4.129	4.159	0.306	3.466	4.812	3.984	4.357	
SEGMENT	1.520	1.792	0.726	0.000	2.398	1.609	1.946	
OCF	0.000	0.001	0.058	-0.180	0.148	-0.029	0.038	
DEBT	0.000	-0.023	0.080	-0.075	0.282	-0.070	0.041	
AUDIT	5.280	5.000	1.125	3.000	7.000	4.000	6.000	
DA/PROD	0.280	0.000	0.452	0.000	1.000	0.000	1.000	
Q1_1mean	5.668	6.000	0.957	3.500	7.000	5.000	6.500	
Q1_2	5.146	5.000	1.167	2.000	7.000	4.000	6.000	
Q1_3	6.000	6.000	1.144	1.000	7.000	6.000	7.000	
Q2_2_1	5.927	5.000	5.577	2.000	55.000	5.000	6.000	
Q2_2_2	4.701	5.000	1.191	1.000	7.000	4.000	6.000	
Q2_2_3	4.470	4.000	1.166	1.000	7.000	4.000	5.000	
Q2_2_4	5.677	6.000	0.954	3.000	7.000	5.000	6.000	
Q2_2_5	5.451	6.000	0.958	3.000	7.000	5.000	6.000	
Q2_2_6	5.030	5.000	1.156	1.000	7.000	4.000	6.000	

Each variable is defined below.

TATT	A composite of three respondent regarding (1) management's attitude toward internal controls, (2) objective decision, and (3) aggressive operating style.
AQ	Accrual Quality =AQ, The standard deviation of the residuals from Francis's (2005) measure,
DA	$\Delta WC_t = \beta_0 + \beta_1 OCF_{t-1} + \beta_2 OCFt + \beta_3 OCF_{t+1} + \beta_4 \Delta REV_t + \beta_5 PPEt + \varepsilon_t$
abnOCF	Abnormal OCF, residuals by estimated $OCF_t = \alpha_0 + \alpha_1 SALES_t + \alpha_2 \Delta Sales_t + \varepsilon_t$
abnPROD	Abnormal Production Costs, residuals by estimated $COGt + \Delta INVt = SALES_t + \Delta SALESt + \Delta SALES_{t-1}$
MAPE	Mean absolute percentage errors estimating by accrual components model $\sum_{t=1}^{n} \frac{\lvert e_t \rvert}{\lvert Y_t \rvert}$ e_t = Predictive Error in t, Y_t = Actual value in t
MGT_AGE	The average age of management
MGT_IR	Rate of management's sharing
SO	If the firm has stock-option system, 1, if the firm has no stock-option system, 0.
CMPS_DAMT	Total of compensation which management received including bonus.
FRGN	Rate of foreign investors sharing
CROSS	Rate of cross sharing among public firms which can have cross-sharing.
RTO_TPBK	Rate of main bank sharing
RTO_TKBKD	Rate of depending on main bank=borrowings from main bank/total borrowing*100
IDRTO	Rate of independent outside directors=outside directors/total directors*100
LOSSPORTION	The number of years which have decrease earnings during total years
ROA	Return on assets: Net income/Average assets
OC	OPERATING CYCLE=The log of the average of [(sales/360)/(Average Accounts Receivable) +(Cost of Goods Sold/360)/Average Inventory)] .
GROWTH	Growth rate in sales: Sales in the beginning of the year / Sales in the end of the year
FIRM_AGE	The years when the firm passed since the firm was established
SEGMENT	Number of reported business segments
OCF	OCF (cash flows from operations) minus mean of OCF
DEBT	LDEBT (=long-term debt /average assets) minus mean of LDEBT
AUDIT	Respondent of management perception for financial statement auditing quality
DA/PROD	If there is a trade-off between accounting management and real management, 1, if no trade-off, 0.
Q1_1mean	The mean of respondent of Q1.1.1and Q1.1.2: Top management's attitude toward J-SOX conformity and internal control improvement
Q1_2	The respondent of Q1.2: Objective decision-making of management
Q1_3	The respondent of Q1.3: Management's aggressiveness with regard to meeting or exceeding targets
Q2_2_1	The respondent of Q2.2.1: Improvement of governance
Q2_2_2	The respondent of Q2.2.2: Effectiveness of operation
Q2_2_3	The respondent of Q2.2.3:Efficiency of operation
Q2_2_4	The respondent of Q2.2.4: Creditability of financial reporting
Q2_2_5	The respondent of Q2.2.5: Enforcement of law compliance
Q2_2_6	The respondent of Q2.2.6: Promotion of asset protection

TABLE 3 : Correlations for Variables Used in Test of H1(1) and H2

	TATT	*AQ*	*DA*	*abnOCF*	*abnPROD*	*MAPE*	*MGT_AGE*	*MGT_IR*	*SO*	*CMPS_DAMT*	*FRGN*	*CROSS*	*RTO_TPBK*	*RTO_TKBKD*	*IDRTO*	*LOSSPORTION*	*ROA*	*OC*	*GROWTH*	*FIRM_AGE*	*SEGMENT*	*AUDIT*	*DA/PROD*
TATT	1.000	-0.043	-0.146	-0.191*	0.093	-0.194*	0.241**	-0.109	0.025	0.336***	0.287***	0.081	-0.140	-0.097	0.196*	-0.209*	0.154	-0.022	0.035	0.125	0.016	0.600***	-0.172
	.	0.704	0.191	0.085	0.403	0.081	0.029	0.329	0.827	0.002	0.009	0.470	0.210	0.384	0.078	0.060	0.167	0.842	0.752	0.264	0.886	0.000	0.123
AQ	-0.157	1.000	0.022	0.029	0.204*	0.025	-0.199*	0.013	0.256**	-0.159	-0.152	-0.138	-0.033	-0.125	-0.144	0.323***	-0.446***	0.115	-0.218**	-0.163	0.037	0.149	-0.045
	0.159	.	0.844	0.794	0.066	0.825	0.074	0.905	0.020	0.155	0.173	0.215	0.768	0.263	0.196	0.003	0.000	0.304	0.049	0.143	0.739	0.181	0.690
DA	-0.104	-0.031	1.000	0.567***	-0.121	0.044	0.092	-0.113	0.033	-0.024	-0.037	-0.099	-0.152	0.052	0.064	0.229**	-0.136	0.004	-0.098	0.036	0.142	-0.125	-0.082
	0.352	0.784	.	0.000	0.279	0.695	0.410	0.311	0.772	0.830	0.744	0.375	0.173	0.641	0.566	0.038	0.222	0.972	0.382	0.750	0.202	0.265	0.463
abnOCF	-0.150	0.181	0.410***	1.000	-0.041	0.035	-0.050	-0.148	0.145	-0.011	0.070	-0.029	-0.078	0.011	-0.037	0.086	0.248**	-0.010	-0.178	0.126	0.128	-0.090	-0.064
	0.180	0.105	0.000	.	0.717	0.753	0.655	0.186	0.195	0.919	0.531	0.793	0.485	0.919	0.744	0.443	0.025	0.930	0.110	0.260	0.250	0.420	0.568
abnPROD	0.054	0.115	0.047	0.108	1.000	0.127	-0.107	0.065	-0.175	-0.059	-0.232**	0.004	-0.033	0.071	-0.343***	-0.152	0.092	0.042	0.039	-0.064	-0.010	0.132	-0.088
	0.627	0.302	0.673	0.334	.	0.255	0.340	0.564	0.116	0.596	0.036	0.971	0.769	0.525	0.002	0.172	0.413	0.707	0.726	0.566	0.928	0.237	0.433
MAPE	-0.337***	0.195*	0.154	0.023	0.083	1.000	-0.191*	-0.043	0.156	-0.092	-0.105	-0.112	-0.148	-0.106	0.013	0.079	-0.062	0.156	0.018	-0.079	-0.072	0.021	-0.152
	0.002	0.079	0.168	0.836	0.456	.	0.086	0.698	0.162	0.412	0.349	0.318	0.184	0.341	0.907	0.483	0.581	0.161	0.876	0.482	0.521	0.849	0.173
MGT_AGE	0.274**	-0.082	0.058	-0.041	-0.069	-0.199*	1.000	-0.350***	-0.144	0.432***	0.207*	0.154	0.140	-0.014	0.239**	-0.308***	0.190*	-0.317***	0.009	0.486***	0.301***	-0.052	0.127
	0.013	0.461	0.603	0.715	0.540	0.073	.	0.001	0.196	0.000	0.063	0.168	0.209	0.898	0.031	0.005	0.086	0.004	0.937	0.000	0.006	0.642	0.254
MGT_IR	-0.257**	0.148	-0.145	-0.040	0.248**	0.047	-0.444***	1.000	-0.028	-0.378***	-0.332***	-0.216*	0.067	0.301***	-0.303***	0.067	-0.196*	0.184*	-0.085	-0.373***	-0.112	0.075	-0.162
	0.020	0.184	0.193	0.718	0.024	0.675	0.000	.	0.805	0.000	0.002	0.051	0.552	0.006	0.006	0.551	0.078	0.098	0.448	0.001	0.316	0.502	0.147
SO	-0.010	0.163	0.114	0.187*	-0.133	0.040	-0.150	0.013	1.000	-0.002	0.109	-0.021	0.021	-0.058	0.112	0.191*	-0.032	0.073	-0.051	-0.038	-0.058	0.087	0.016
	0.932	0.143	0.309	0.092	0.234	0.721	0.178	0.905	.	0.988	0.329	0.852	0.851	0.606	0.317	0.085	0.775	0.513	0.648	0.737	0.607	0.437	0.890
CMPS_DAMT	0.309***	-0.206*	-0.043	-0.040	-0.104	-0.148	0.507***	-0.680***	-0.052	1.000	0.551***	0.089	-0.151	-0.172	0.214*	-0.277**	0.217**	-0.089	0.061	0.425***	0.172	0.053	0.163
	0.005	0.064	0.699	0.723	0.351	0.185	0.000	0.000	0.642	.	0.000	0.429	0.175	0.123	0.053	0.012	0.050	0.427	0.583	0.000	0.122	0.635	0.142
FRGN	0.329***	-0.171	0.002	0.062	-0.215*	-0.244**	0.264**	-0.627***	0.126	0.611***	1.000	0.021	-0.146	-0.181	0.456***	-0.235**	0.386***	0.035	0.040	0.264**	0.186*	0.014	0.224**
	0.003	0.124	0.983	0.577	0.052	0.027	0.017	0.000	0.260	0.000	.	0.850	0.190	0.104	0.000	0.034	0.000	0.754	0.724	0.017	0.094	0.898	0.043
CROSS	0.057	-0.039	-0.062	0.067	0.013	-0.135	0.131	-0.114	-0.017	0.214*	0.096	1.000	0.482***	0.027	-0.121	-0.013	0.073	-0.158	0.131	0.390***	-0.026	-0.100	-0.052
	0.613	0.726	0.583	0.551	0.910	0.228	0.241	0.309	0.883	0.054	0.389	.	0.000	0.809	0.277	0.909	0.514	0.157	0.241	0.000	0.815	0.371	0.641
RTO_TPBK	-0.244**	0.196*	-0.144	0.026	-0.012	-0.115	0.054	0.240**	-0.015	-0.173	-0.222**	0.544***	1.000	0.357***	-0.216*	0.001	0.029	-0.290***	0.170	0.380***	-0.131	-0.102	0.093
	0.027	0.078	0.198	0.818	0.913	0.303	0.630	0.030	0.891	0.120	0.045	0.000	.	0.001	0.052	0.992	0.794	0.008	0.126	0.000	0.242	0.363	0.405
RTO_TKBKD	-0.113	-0.014	0.125	0.105	0.064	-0.126	-0.043	0.245**	-0.112	-0.120	-0.274**	0.078	0.389***	1.000	-0.182	0.051	-0.017	-0.064	0.087	0.066	0.032	-0.034	0.029
	0.312	0.900	0.262	0.348	0.571	0.260	0.700	0.027	0.315	0.283	0.013	0.488	0.000	.	0.101	0.650	0.882	0.567	0.435	0.554	0.776	0.763	0.796
IDRTO	0.262**	-0.148	0.090	0.007	-0.215*	-0.109	0.225**	-0.555***	0.053	0.333***	0.424***	-0.013	-0.229**	-0.189*	1.000	-0.078	0.033	-0.042	-0.016	0.203*	0.276**	0.094	0.195*
	0.017	0.184	0.423	0.951	0.053	0.328	0.042	0.000	0.634	0.002	0.000	0.905	0.038	0.090	.	0.488	0.767	0.707	0.889	0.067	0.012	0.401	0.079
LOSSPORTION	-0.249**	0.053	0.302***	0.071	-0.214*	0.100	-0.158	0.061	0.207*	-0.291***	-0.213*	0.001	0.075	0.004	-0.059	1.000	-0.669***	0.115	-0.059	-0.111	-0.104	0.052	-0.163
	0.024	0.635	0.006	0.528	0.053	0.371	0.156	0.584	0.063	0.008	0.055	0.990	0.502	0.969	0.599	.	0.000	0.302	0.601	0.322	0.352	0.643	0.143
ROA	0.175	-0.023	-0.126	0.274**	0.096	-0.051	0.080	-0.188*	0.021	0.278**	0.381***	-0.045	-0.141	-0.051	-0.036	-0.582***	1.000	-0.094	0.245**	0.220**	0.061	-0.128	0.186*
	0.116	0.837	0.258	0.013	0.392	0.647	0.476	0.091	0.852	0.011	0.000	0.691	0.206	0.651	0.750	0.000	.	0.399	0.027	0.047	0.588	0.250	0.095
OC	-0.023	-0.053	0.049	0.038	0.079	0.067	-0.272**	0.087	0.054	-0.088	0.066	-0.125	-0.290***	-0.131	-0.013	0.141	-0.156	1.000	-0.156	-0.439***	-0.041	-0.007	-0.116
	0.835	0.637	0.665	0.734	0.482	0.549	0.013	0.437	0.630	0.433	0.557	0.262	0.008	0.239	0.907	0.207	0.161	.	0.161	0.000	0.717	0.948	0.299
GROWTH	0.132	0.028	-0.038	-0.110	0.063	-0.073	0.054	-0.124	-0.055	0.111	0.116	0.093	0.055	0.082	0.066	-0.181	0.331***	-0.260**	1.000	0.189*	-0.284***	-0.048	0.073
	0.238	0.801	0.734	0.326	0.572	0.513	0.631	0.265	0.622	0.320	0.300	0.404	0.621	0.466	0.557	0.103	0.002	0.018	.	0.088	0.010	0.671	0.516
FIRM_AGE	0.071	0.054	0.040	0.175	-0.145	-0.185*	0.514***	-0.468***	-0.011	0.491***	0.325***	0.414***	0.304***	0.136	0.240**	-0.004	0.156	-0.345***	0.144	1.000	0.144	-0.052	0.107
	0.525	0.633	0.719	0.116	0.194	0.096	0.000	0.000	0.919	0.000	0.003	0.000	0.005	0.222	0.030	0.975	0.163	0.002	0.198	.	0.197	0.644	0.337
SEGMENT	0.234**	0.038	0.109	0.133	-0.045	-0.124	0.439***	-0.248**	-0.015	0.196*	0.268**	0.015	-0.043	0.021	0.302***	-0.013	-0.006	-0.018	-0.086	0.255**	1.000	0.018	-0.033
	0.035	0.738	0.329	0.234	0.686	0.266	0.000	0.025	0.895	0.077	0.015	0.895	0.700	0.848	0.006	0.911	0.955	0.871	0.442	0.021	.	0.873	0.766
AUDIT	0.565***	0.073	-0.099	-0.055	0.048	-0.080	-0.023	-0.003	0.083	-0.072	0.023	-0.034	-0.157	-0.068	0.147	-0.008	-0.059	0.062	0.050	-0.067	0.119	1.000	-0.157
	0.000	0.514	0.377	0.623	0.670	0.473	0.841	0.979	0.458	0.522	0.840	0.758	0.160	0.544	0.187	0.944	0.598	0.581	0.658	0.548	0.288	.	0.160
DA/PROD	-0.171	0.005	-0.119	-0.025	-0.057	-0.060	0.094	-0.147	0.016	0.252**	0.219**	-0.029	0.089	0.037	0.195*	-0.142	0.176	-0.072	0.069	0.090	0.058	-0.165	1.000
	0.125	0.963	0.288	0.826	0.612	0.591	0.403	0.186	0.890	0.022	0.049	0.794	0.429	0.739	0.078	0.202	0.114	0.519	0.536	0.421	0.603	0.137	.

Correlations above (below) the diagonal are Pearson (Spearman) correlations.
The bottom number in each is a two-tail p-value. * significant at 10% level; ** significant at 5% level; *** significant at 1% level.
See Table 2 for definition of each variable.

TABLE 4 : Correlations for Variables Used in Test of H1(2) and H3

	TATT	*Q1_1mean*	*Q1_2*	*Q1_3*	*Q2_2_1*	*Q2_2_2*	*Q2_2_3*	*Q2_2_4*	*Q2_2_5*	*Q2_2_6*	*AUDIT*	*DA/PROD*
TATT	1.000	0.805***	0.856***	0.781***	0.096	0.464***	0.346***	0.563***	0.613***	0.482***	0.600***	-0.172
	.	0.000	0.000	0.000	0.389	0.000	0.001	0.000	0.000	0.000	0.000	0.123
Q1_1mean	0.840***	1.000	0.611***	0.414***	0.139	0.569***	0.451***	0.608***	0.633***	0.475***	0.480***	-0.096
	0.000	.	0.000	0.000	0.214	0.000	0.000	0.000	0.000	0.000	0.000	0.392
Q1_2	0.861***	0.624***	1.000	0.463***	0.155	0.432***	0.330***	0.431***	0.548***	0.400***	0.551***	-0.219**
	0.000	0.000	.	0.000	0.163	0.000	0.002	0.000	0.000	0.000	0.000	0.048
Q1_3	0.740***	0.489***	0.426***	1.000	-0.050	0.163	0.093	0.362***	0.338***	0.318***	0.432***	-0.096
	0.000	0.000	0.000	.	0.654	0.143	0.408	0.001	0.002	0.004	0.000	0.393
Q2_2_1	0.542***	0.599***	0.435***	0.300***	1.000	0.016	0.130	0.129	0.175	0.168	0.143	-0.099
	0.000	0.000	0.000	0.006	.	0.885	0.246	0.248	0.116	0.131	0.200	0.374
Q2_2_2	0.496***	0.521***	0.448***	0.240**	0.437***	1.000	0.767***	0.297***	0.488***	0.453***	0.252**	-0.072
	0.000	0.000	0.000	0.030	0.000	.	0.000	0.007	0.000	0.000	0.022	0.522
Q2_2_3	0.364***	0.403***	0.338***	0.095	0.426***	0.720***	1.000	0.324***	0.482***	0.468***	0.261**	-0.066
	0.001	0.000	0.002	0.393	0.000	0.000	.	0.003	0.000	0.000	0.018	0.559
Q2_2_4	0.552***	0.624***	0.437***	0.337***	0.569***	0.263**	0.322***	1.000	0.729***	0.589***	0.528***	-0.074
	0.000	0.000	0.000	0.002	0.000	0.017	0.003	.	0.000	0.000	0.000	0.512
Q2_2_5	0.633***	0.629***	0.552***	0.371***	0.674***	0.425***	0.428***	0.752***	1.000	0.679***	0.431***	-0.182
	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	.	0.000	0.000	0.102
Q2_2_6	0.495***	0.500***	0.445***	0.287***	0.436***	0.404***	0.428***	0.580***	0.653***	1.000	0.321***	0.102
	0.000	0.000	0.000	0.009	0.000	0.000	0.000	0.000	0.000	.	0.003	0.364
AUDIT	0.565***	0.489***	0.555***	0.356***	0.389***	0.229**	0.256**	0.502***	0.443***	0.329***	1.000	-0.157
	0.000	0.000	0.000	0.001	0.000	0.038	0.020	0.000	0.000	0.003	.	0.160
DA/PROD	-0.171	-0.075	-0.188*	-0.134	-0.188*	-0.090	-0.067	-0.053	-0.182	0.085	-0.165	1.000
	0.125	0.505	0.091	0.229	0.091	0.424	0.549	0.634	0.101	0.450	0.137	.

Correlations above (below) the diagonal are Pearson (Spearman) correlations.

The bottom number in each is a two-tail p-value. * significant at 10% level; ** significant at 5% level; *** significant at 1% level.

See Table 2 for definitions of each variable.

TABLE 5 : Results of The Regression of Tone at theTop

Variable	Predicted Sign	A : TATT (AQ)	B : TATT (DA)	C : TATT (abnOCF)	D : TATT (abnPROD)	E : TATT (MAPE)
		B	B	B	B	B
		(t-statistics)	(t-statistics)	(t-statistics)	(t-statistics)	(t-statistics)
(Constant)		-0.458	-0.444	-0.669	-0.420	-0.258
		-0.207	-0.198	-0.307	-0.191	-0.119
MGT_AGE	+	0.061	0.060	0.058	0.062	0.053
		1.987*	1.925*	1.932*	2.025**	1.782*
MGT_IR	?	0.011	0.008	0.007	0.010	0.006
		0.546	0.434	0.367	0.523	0.302
SO	?	-0.007	0.023	0.039	0.042	0.070
		-0.036	0.117	0.200	0.212	0.362
CMPS_DAMT	+	0.001	0.000	0.000	0.000	0.000
		0.876	0.807	0.795	0.811	0.719
FRGN	+	0.010	0.011	0.010	0.012	0.009
		0.924	0.982	0.905	1.095	0.790
CROSS	+	0.021	0.019	0.019	0.019	0.018
		1.997*	1.921*	1.875*	1.927*	1.799*
RTO_TPBK	?	-0.096	-0.095	-0.101	-0.089	-0.099
		-1.590	-1.561	-1.714*	-1.474	-1.683*
RTO_TKBKD	+	0.002	0.002	0.002	0.002	0.001
		0.529	0.474	0.411	0.424	0.265
IDRTO	+	0.006	0.004	0.002	0.006	0.004
		0.663	0.531	0.296	0.738	0.484
LOSSPORTION	?	-0.242	-0.262	0.007	-0.183	-0.386
		-0.370	-0.399	0.010	-0.276	-0.602
ROA	+	3.733	3.062	3.310	3.309	2.346
		1.092	0.892	1.032	1.015	0.726
OC	+	0.034	0.037	0.025	0.033	0.062
		0.355	0.377	0.263	0.342	0.642
GROWTH	+	0.000	-0.001	-0.003	-0.001	0.000
		-0.082	-0.094	-0.488	-0.161	0.053
FIRM_AGE	?	-0.101	-0.082	0.039	-0.111	-0.001
		-0.271	-0.219	0.105	-0.299	-0.002
SEGMENT	_	-0.174	-0.161	-0.154	-0.171	-0.167
		-1.435	-1.352	-1.321	-1.437	-1.439
OCF	?	-1.528	-1.457	0.399	-1.707	-0.844
		-0.784	-0.664	0.175	-0.879	-0.433
DEBT	+	0.129	0.037	-0.181	0.158	0.233
		0.117	0.034	-0.168	0.144	0.218
AUDIT	+	0.482	0.484	0.475	0.476	0.488
		6.978***	6.900***	7.010***	6.814***	7.252***
AQ	_	4.551				
		0.517				
DA	_		-0.548			
			-0.144			
abnOCF	_			-5.717		
				-1.606		
abnPROD	_				4.629	
					0.782	
MAPE	_					-0.588
						-1.754*
Adjusted R^2		0.434	0.432	0.455	0.437	0.459
F		4.274	4.244	4.553	4.315	4.614

See Table 2 for Variable Definitions ;*, **, and *** indicate significance at p< 10 %, p< 5%, p<1%;.
t-value is based on White's (1980) standard error.
Dependent Varialbe is TATT.

TABLE 6 : Results of The Regression of Effectiveness of Internal Controls

		A:Q2_2_1 Governance improvement	B:Q2_2_2 Effectiveness of Oparation	C:Q2_2_3 Efficiency of Opeariton	D:Q2_2_4 Creditablity of Financial Reporitng	E:Q2_2_5 Enforcement of Compliance	F:Q2_2_6 Promotion of Asset Protection
Variable	**Predicted Sign**	**B**	**B**	**B**	**B**	**B**	**B**
		(t-statistics)	**(t-statistics)**	**(t-statistics)**	**(t-statistics)**	**(t-statistics)**	**(t-statistics)**
(Constant)		-21.737	2.148	2.665	3.228	2.644	2.877
		-1.188	0.615	0.710	1.292	1.023	0.871
TATT	+	-0.527	0.759	0.397	0.224	0.635	0.507
		-0.503	3.793***	1.848*	1.563	4.291***	2.681***
MGT_AGE	+	0.386	-0.009	0.043	0.060	0.051	0.054
		1.487	-0.171	0.801	1.694*	1.395	1.150
MGT_IR	+	0.033	0.019	0.011	-0.004	-0.003	-0.022
		0.214	0.653	0.333	-0.188	-0.116	-0.799
SO	?	-2.096	-0.409	-0.679	0.067	-0.255	-0.313
		-1.292	-1.320	-2.040**	0.300	-1.111	-1.070
CMPS_DAMT	?	-0.004	0.001	0.001	0.001	-0.001	0.000
		-0.858	0.555	0.559	1.625	-0.703	0.311
FRGN	+	0.132	0.002	-0.004	-0.010	0.002	0.019
		1.421	0.086	-0.206	-0.814	0.142	1.118
CROSS	+	0.049	-0.039	-0.017	0.000	-0.009	-0.026
		0.576	-2.350**	-0.937	-0.036	-0.742	-1.691*
RTO_TPBK	?	-0.521	0.008	0.028	0.056	-0.021	0.021
		-1.030	0.083	0.266	0.804	-0.301	0.235
RTO_TKBKD	+	0.025	-0.008	-0.003	-0.004	-0.003	0.007
		0.734	-1.288	-0.389	-0.892	-0.624	1.158
IDRTO	+	0.044	-0.023	-0.010	0.009	0.004	0.009
		0.635	-1.752*	-0.725	1.003	0.405	0.743
LOSSPORTION	+	10.010	0.945	0.682	-0.528	0.101	0.672
		1.855*	0.917	0.616	-0.716	0.132	0.689
ROA	+	25.046	2.683	3.053	2.200	-1.423	0.708
		0.920	0.516	0.547	0.592	-0.370	0.144
OC	_	-0.257	-0.025	0.034	-0.069	-0.126	-0.259
		-0.321	-0.163	0.208	-0.632	-1.108	-1.785*
GROWTH	_	-0.125	-0.003	0.004	-0.001	0.000	0.000
		-2.797***	-0.305	0.455	-0.176	-0.074	-0.056
FIRM_AGE	?	0.892	-0.071	-0.923	-0.945	-0.737	-0.887
		0.290	-0.120	-1.462	-2.249**	-1.694*	-1.597
SEGMENT	_	-1.234	0.001	0.086	-0.194	-0.101	0.084
		-1.239	0.003	0.420	-1.428	-0.719	0.469
OCF	?	-5.776	0.283	0.085	0.711	0.743	1.840
		-0.358	0.092	0.026	0.322	0.325	0.631
DEBT	+	-2.216	3.474	2.108	-0.170	-0.264	-0.888
		-0.246	2.021**	1.141	-0.138	-0.207	-0.546
AUDIT	+	0.986	-0.080	0.114	0.344	0.052	0.071
		1.292	-0.551	0.725	3.299***	0.484	0.516
Adjusted R^2		0.250	0.401	0.278	0.522	0.492	0.431
F		1.090	2.185	1.258	3.562	3.162	2.470

See Table 2 for Variable Definitions ;*, **, and *** indicate significance at p< 10 %, p< 5%, p<1%;.
t-value is based on White's (1980) standard error.
Dependent Varialbe is A：Q2_2_1, B：Q2_2_2, C：Q2_2_3, D：Q2_2_4, E：Q2_2_5, F：Q2_2_6.

TABLE 7 : Determinants of Tone at the Top

Variable	Predicted Sign	TATT B (t-statics)
(Constant)		-0.392
		-0.178
MGT_AGE	+	0.059
		1.953*
MGT_IR	+	0.008
		0.445
SO	?	0.024
		0.121
CMPS_DAMT	?	0.001
		0.821
FRGN	+	0.011
		0.991
CROSS	+	0.020
		1.945*
RTO_TPBK	?	-0.094
		-1.570
RTO_TKBKD	?	0.002
		0.471
IDRTO	+	0.005
		0.545
LOSSPORTION	?	-0.273
		-0.422
ROA	+	3.211
		0.989
OC	?	0.037
		0.387
GROWTH	?	-0.001
		-0.102
FIRM_AGE	?	-0.086
		-0.233
SEGMENT	-	-0.162
		-1.370
OCF	?	-1.604
		-0.830
DEBT	+	0.060
		0.055
AUDIT	+	0.486
		7.116***
Adjusted R^2		0.441
F		4.549

Each variable is defined below.;*, **, and *** indicate significance at p< 10 %, p< 5%, p<1%;.
t-value is based on White's (1980) standard error. Dependent Varialbe is TATT.

MGT_AGE	The average age of management
MGT_IR	Rate of management's sharing
SO	If the firm has stock-option system, 1, if the firm has no stock-option system, 0.
CMPS_DAMT	Total of compensation which management received including bonus.
FRGN	Rate of foreign investors sharing
CROSS	Rate of cross sharing among public firms which can have cross-sharing.
RTO_TPBK	Rate of main bank sharing
RTO_TKBKD	Rate of depending on main bank=borrowings
IDRTO	Rate of independent outside directors=outside directors/total directors*100
LOSSPORTION	The number of years which have decrease earnings during total years
ROA	Return on assets: Net income/Average assets
OC	*OPERATING CYCLE* =The log of the average of [(sales/360)/(Average Accounts Receivable) +(Cost of Goods Sold/360)/Average Inventory)] .
GROWTH	Growth rate in sales: Sales in the beginning of the year / Sales in the end of the year
FIRM_AGE	The years when the firm passed since the firm was established
SEGMENT	Number of reported business segments
OCF	OCF (cash flows from operations) minus mean of *OCF*
DEBT	LDEBT (=long-term debt /average assets) minus mean of *LDEBT*
AUDIT	Respondent of management perception for financial statement auditing quality

FIGURE 7: Scatter Diagram for Determinants of Sample Firms

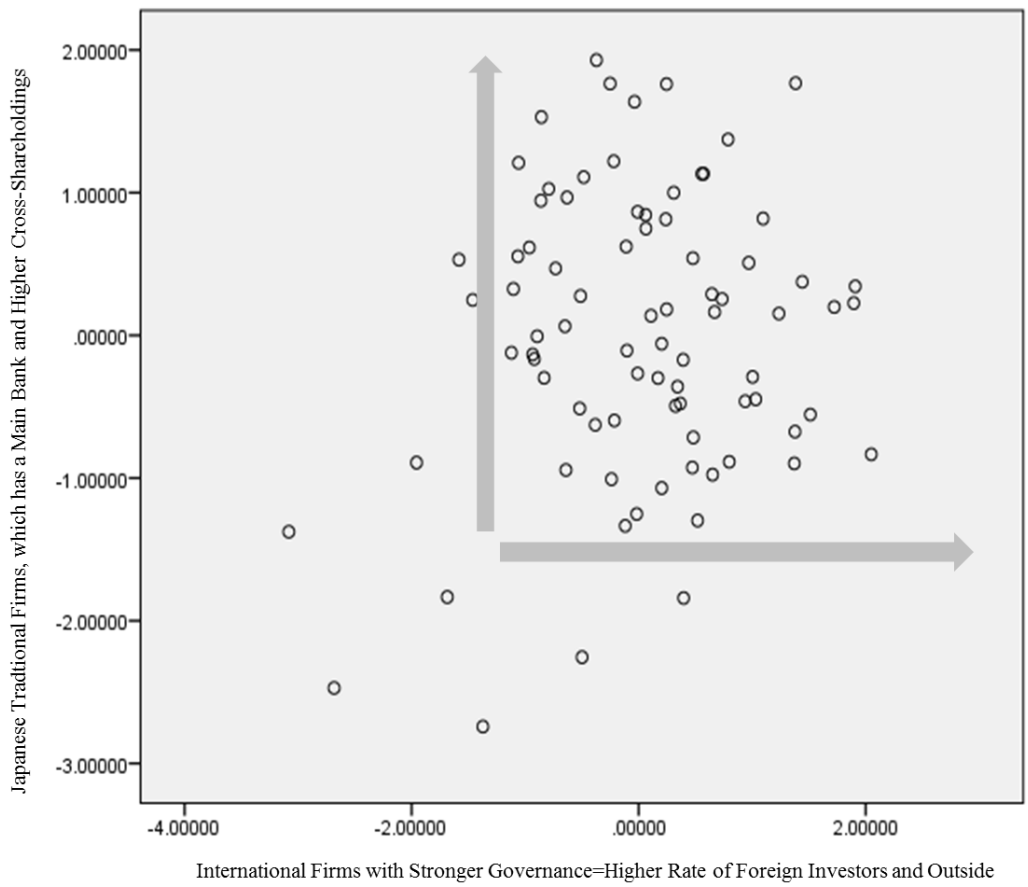
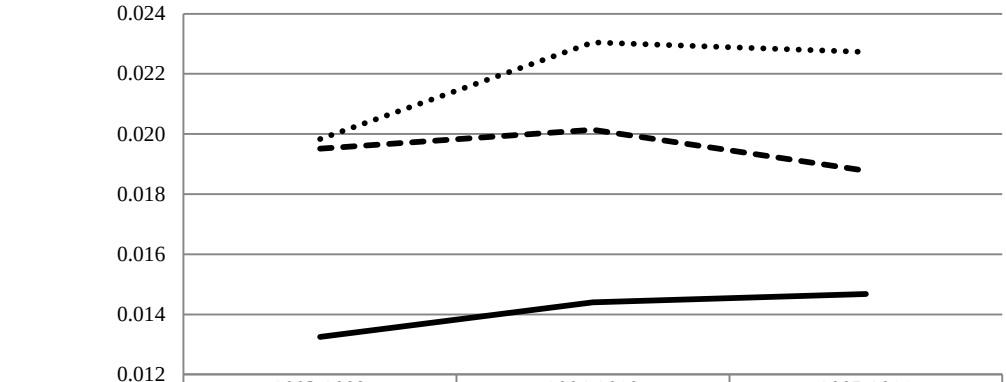


FIGURE 8 : Time-Series Plot of Accruals and Real Managements



	2003-2009	2004-2010	2005-2011
DA	0.020	0.020	0.019
abnOCF	0.020	0.023	0.023
abnPROD	0.013	0.014	0.015

Variable Definitions are the following:

DA $\Delta WC_t = \beta_0 + \beta_1 OCF_{t-1} + \beta_2 OCFt + \beta_3 OCF_{t+1} + \beta_4 \Delta REV_t + \beta_5 PPEt + \varepsilon_t$

abnOCF Abnormal OCF, residuals by estimated $OCF_t = \alpha_0 + \alpha_1 SALES_t + \alpha_2 \Delta SALES_t + \varepsilon_t$

abnPROD Abnormal Production Costs, residuals by estimated $COG_t + \Delta INV_t = SALES_t + \Delta SALES_t + \Delta SALES_{t-1}$

TABLE 8 : Results of the Regression of Trade-Off between Earnings Management

Variable	Predicted Sign	A:Q1_1mean	B:Q1_2	C:Q1_3
		B	B	B
		(t-statics)	(t-statics)	(t-statics)
(Constant)		2.205	-5.116	3.547
		0.799	-1.715*	1.110
MGT_AGE	+	0.053	0.110	0.011
		1.419	2.694***	0.241
MGT_IR	?	0.016	-0.021	0.018
		0.666	-0.816	0.670
SO	?	-0.231	0.013	0.285
		-0.953	0.048	1.015
CMPS_DAMT	?	0.001	0.000	0.000
		1.505	0.509	0.408
FRGN	+	0.003	0.014	0.020
		0.220	0.963	1.245
CROSS	+	0.011	0.002	0.038
		0.850	0.153	2.575**
RTO_TPBK	+	-0.090	-0.088	-0.045
		-1.202	-1.078	-0.515
RTO_TKBKD	+	0.001	-0.001	0.008
		0.278	-0.271	1.354
IDRTO	+	0.014	-0.005	0.014
		1.370	-0.458	1.134
LOSSPORTION	?	0.515	0.831	-2.238
		0.639	0.953	-2.398**
ROA	+	5.780	6.722	-1.433
		1.428	1.535	-0.306
OC	-	-0.043	0.146	-0.045
		-0.356	1.124	-0.320
GROWTH	-	-0.004	-0.008	0.009
		-0.603	-1.047	1.181
FIRM_AGE	?	-0.483	0.111	-0.104
		-1.046	0.222	-0.195
SEGMENT	-	-0.107	-0.269	-0.184
		-0.724	-1.684*	-1.076
OCF	?	-2.610	-1.733	-1.106
		-1.085	-0.666	-0.397
DEBT	+	0.877	0.550	-1.624
		0.650	0.377	-1.040
AUDIT	+	0.391	0.575	0.418
		4.537***	6.160***	4.181***
DA/PROD	-	-0.217	-0.547	-0.349
		-0.967	-2.254**	-1.343
Adjusted R^2		0.257	0.415	0.302
F		2.475	4.018	2.846

See Table 2 for Variable Definitions ;*, **, and *** indicate significance at p< 10 %, p< 5%, p<1%;.
t-value is based on White's (1980) standard error.
Dependent Varialbe is A：Q1_1mean, B：Q1_2, C：Q1_3.

Appendix

Survey for Internal Controls And IT

<Tone at the Top>

1.1. *Mitigation of Opportunity:* How do you assess your own attitude as the CEO regarding J-SOX and your internal controls system?

1. Complying with the requirements of J-SOX

Very negative — Neutral — Highly positive

1 2 3 4 5 6 7

2. Improving internal controls in the firm

Very negative — Neutral — Greatly positive

1 2 3 4 5 6 7

1.2. *Rationalization:* If the independent third-parties assess the objectivity of decisions made by you as the CEO, do they assess your decision making objective?

Not objective — moderately — Highly objective

1 2 3 4 5 6 7

1.3. *Pressure*: How do you assess earnings management by you as the CEO regarding the meeting or exceeding targets, such as sales, net income and/or earnings per share?

Not aggressive — moderately — Highly aggressive

1 2 3 4 5 6 7

<Enforcement of Internal Controls and Governance>

2.2. To what extent does complying with the requirement of J-SOX contribute to the following?

1. Improve corporate governance in your firm

Not effective — moderately — Highly effective

1 2 3 4 5 6 7

2. Improve the effectiveness of operations such as meeting the targets

Not effective — moderately — Highly effective

1 2 3 4 5 6 7

3. Improve the efficiency of operations, such as rational use of resources

Not effective moderately Highly effective

1 2 3 4 5 6 7

4. Improve the credibility of financial reporting

Not effective moderately Highly effective

1 2 3 4 5 6 7

5. Enforce compliance with the requirements of laws

Not effective moderately Highly effective

1 2 3 4 5 6 7

6. Promote the protection of assets

Not effective moderately Highly effective

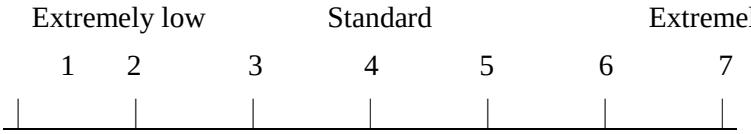
1 2 3 4 5 6 7

<Audit by Audit Firms or CPAs>

3.1 What is the quality of *financial statements audits* by your external auditors?

Extremely low Standard Extremely high

1 2 3 4 5 6 7



3.2 What is the quality of *internal controls audits* by your external auditors?

Extremely low Standard Extremely high

1 2 3 4 5 6 7