

The relationship between Material Weaknesses in Internal
Controls over Financial Reporting and Executive
Turnover : Evidence from Japan

Hiroshi Uemura
(Graduate School of Commerce and Management
Hitotsubashi University)

April 2012

No.141

**The Relationship between Material Weaknesses in Internal
Controls over Financial Reporting and Executive Turnover :
Evidence from Japan**

Hiroshi Uemura
Graduate School of Commerce and Management
Hitotsubashi University , 2-1 Naka, Kunitachi, Tokyo, Japan 186-8601
Email: cd102001@g.hit-u.ac.jp

First draft: 2011, October

Current draft: 2012, March

The relationship between Material Weaknesses in Internal Controls over Financial Reporting and Executive Turnover : Evidence from Japan

ABSTRACT :

This study examines the relationship between material weaknesses in internal controls over financial reporting and executive turnover. The result of the analysis of 3,391 listed company in Japan show that corporations that disclose material weaknesses change chief executives more frequently. This suggests that corporations' boards believe that the quality of internal controls critically impacts the credibility of financial statements. In a sample corporations with a material weakness, this study further examines the relationship between remediation of previously- disclosed material weaknesses and executive turnover. The results indicate that chief executive turnover does not have a statistically significant correlation with material weakness disclosures for two consecutive years. In contrast, both a board members' expertise and a proportion of outside shareholders have significant negative correlations with material weakness disclosures for two consecutive years. These results suggest that internal and external monitoring functions have a greater impact on the remediation of material weaknesses than chief executive turnover. In addition, these sample companies are used to examine the relationship between chief executive turnover and audit fees. This result reveals that chief executive turnover after the disclosing material weaknesses has a significantly negative correlation with the difference of the audit fees between the previous and the following terms. This finding suggests the possibility that auditors perceive chief executive turnover after disclosure of material weakness as the board's response to a legitimacy crisis.

Keywords: internal controls audit; material weaknesses; executive turnover.

Date availability: Dates used in this study are available from public sources.

JEL classification: M41; M42; J63; K20

The relationship between Material Weaknesses in Internal Controls over Financial Reporting and Executive Turnover: Evidence from Japan

1. Introduction

Sarbanes-Oxley Act (hereafter, SOX) was enacted in the U.S. and Financial Instruments and Exchange Act (hereafter, J-SOX) was initiated in Japan. Then material weaknesses have been disclosed in management reports. However, the relationship between the existence of material weaknesses and the responsibility of executives has not yet been fully studied. Understanding the relationship is important because the responsibility of executives to the financial reporting process has become much more important after SOX (e.g., Feldmann et al. 2009). Thus, this study focuses on post-SOX disclosure of material weaknesses and executive turnover, and provides evidence regarding their relationship. Also, this study provides evidence regarding factors that remediates material weaknesses.

The purpose of this study is to examine how the quality of internal controls over financial reporting influences the board of directors' decisions regarding executive performance evaluation. Several previous studies have examined how financial statement reliability problems (e.g., financial restatements) influence a board's decision-making regarding executive performance appraisal (Desai et al., 2006; Arthaud-Day et al., 2006; Hennes et al., 2008; Collins et al., 2009). Moreover, there is even more evidence that financial restatement is positively correlated with executive turnover after SOX (Wang and Chou, 2009). However, the findings of these studies are inconsistent. Furthermore, these studies focus on financial restatement, not on the

problems of the financial reporting process.

On the other hand several studies that investigate the relationship between the quality of corporate governance and internal controls show that corporate governance structure influences the quality of internal controls (Krishnan, 2005; Hoitash et al., 2009). In particular, corporations that have strongly structured corporate governance have a higher quality of internal controls, where the strong structure is defined based on the experience and the expertise of the member that constitutes the audit committee. These results demonstrate that the characteristics of the personnel who conduct monitoring function are determinants of the disclosure of material weaknesses. However, these studies do not focus on the responsibility of executives. In addition, studies regarding whether and how corporations that disclose material weaknesses subsequently restructure corporate governance including executives have not been conducted.

A material weakness is defined as a deficiency, or a combination of deficiencies, in internal financial reporting controls such that there is a reasonable possibility that a material misstatement of a company's annual or interim financial statements will not be prevented or detected on a timely basis (PCAOB AS 5, 2007, Appendix A-7). According to this definition, it is clear that the quality of internal controls affects the credibility of financial statements. In particular, where there are deficiencies in internal controls, the risk of misstatement of financial statements increases, and thus the board of directors demands higher levels of management accountability. And, the risk is considered to be higher when a material weakness is disclosed in the management's report.

In addition, a material weakness in internal controls can lead to considerable economic losses for the corporation. Since the enactment of J-SOX, it has been noted that the costs of internal controls have increased significantly (Matsumoto et al., 2008;

Hayashi et al., 2009)¹. The costs associated with the internal control audit involve two kinds of costs. The first kind of cost is audit fees for paid to an external auditor. This can be further divided into audit fees for statutory audits and fees for non-audit services (such as supporting or advising services for designing internal controls). Previous studies have shown that these costs dramatically increased with the enactment of SOX.²

The second kind of cost is internal costs for reacting to the internal control audit. Corporations are required to respond to SOX (J-SOX) in various ways. The costs associated with the internal control audit include costs for documenting the status of internal controls functions, including maintaining the resulting documents, and costs for establishing an organizational department for the internal audit function (e.g., an internal audit office) and its related staff resources as well as costs for strengthening day-to-day monitoring. The management is further charged with decisions about allocation of these costs/resources.

For corporations that bear considerable costs, the failure of successfully designing and operating internal controls is a serious problem. Therefore, for the management with the responsibility of maintaining effective internal controls, the level of accountability has become even higher.

Moreover, top managers have symbolic roles in organizations and can serve as scapegoats, rewarded when things go well, fired when things go poorly (Pfeffer and Salancik, 1978). Schwartz and Menon (1985) argued that replacing CEOs may help to change both internal and external perceptions of companies' images and help restore

¹ The costs associated with internal control audits in the U.S have been examined in many studies such as Raghunandan and Rama (2006), Krishnan et al. (2008), and Ghosh and Pawlewicz (2009). These studies found that the costs associated with the internal control audit dramatically increased in the U.S. after SOX.

² According to Hayashi et al. (2009), for the fiscal year 2008, the average audit fee of 3,576 Japanese listed companies increased by 53% (median, 49%) compared to the previous year. In addition, among 1,314 companies that disclosed non-audit service fees, 1,087 companies paid internal control related non-audit fees. The amount of non-audit service fees for these companies increased by about 80% (median, 75%) on an average compared to the previous year.

confidence in their future. Corporations, which disclose material weaknesses, may forfeit their confidence. For example, the disclosure of deficiencies in internal controls has a significant negative correlation with stock price (Hemmersley, et al., 2008). Therefore, because they have to restore their confidence, the boards of directors of corporations, which disclose material weaknesses, change their CEOs.

In sum, material weaknesses disclosed in management reports are related to the credibility of financial statements and the management's performance evaluation to design and operate effective internal controls. Also, they are related to the corporation's confidence after disclosing material weaknesses. Therefore, because of the need to improve the quality of internal controls, the board of directors is expected to be more likely to implement executive turnover when material weaknesses are disclosed. The findings of this study support this expectation.

This study also examines the effect of chief executive turnover on subsequent improvement in quality of internal control. Many of the previous studies report inconsistent results regarding the effect of chief executive turnover (Finkelstein and Hambrick, 1990; Kesner and Sebor, 1994; Shen and Cannella, 2002; Khurana, 2002,). Furthermore, results of previous studies that investigated the relationship between chief executive turnover and the subsequent improvement in corporate performance are not consistent (Khurana and Nohria, 2000; Husion et al., 2004).

On the other hand, Daily and Dalton (1995) find that bankrupt companies frequently separate the positions of CEO and the chairperson. If a company has the structure of corporate governance with low independency, and the CEO retains the right of representation or new CEO is promoted from within after CEO turnover, it will be hard to think that the quality of internal controls improves in the short term, even if it causes a CEO turnover.

The results of this study demonstrate that corporations that changed chief executives after disclosing a material weakness did not remediate the material weakness, although the board's high-level expertise and the high shareholding ratio of foreign investors and trust funds did.

Also, the results of this study show that the chief executive turnover moderates the positive relationship between the disclosure of a material weakness and audit fee increase in the subsequent year. These results suggest that while CEO turnover does not influence the remediation of the quality of internal controls in the short term, it can restore the auditor's impression of their clients.

The paper is organized as follows. In Section 2, literature regarding corporate restructuring is reviewed, and it is suggested that the quality of internal controls influences executive turnover. Section 3 presents hypotheses addressed in this study, and Section 4 describes the research method. Section 5 reports empirical results with their implications and additional analyses. Section 6 provides concluding remarks.

2. Review of Previous Studies

2-1 Corporate Restructuring

Many reasons influence corporations to implement reforms through restructuring, such as business revitalization, personnel downsizing, and scale expansion. However, the primary outcome that corporations seek from restructuring is improvement in financial performance. Bowman et al. (1999) categorized corporate restructurings into three types: (1) asset restructuring (e.g., divestiture of subsidiaries, departments, or assets), (2) financial restructuring (e.g., cutting debt and recapitalization), and (3) organizational restructuring (e.g., chief executive turnover, workforce reduction, and overhaul of the reward system). The results show that financial restructuring is the most effective and

organizational restructuring is the least effective.

John et al. (1992) investigated voluntary restructurings that corporations conducted to cope with downturns in business. According to this study, the most common restructuring method to address poor performance was business scale down, followed by personnel reduction and then debt reduction. In addition, the rate of chief executive turnover for the benchmark year with a net deficit and the next three years reached 50%.

Kang and Shivdasani (1997) also examined the restructuring behaviors of 92 Japanese listed companies (manufacturers) with poor business performance.³ The result showed that although ROA for the first year after restructuring exhibits a declining trend, it improves over a span of three years. Likewise, Denis and Kruse (2000) examined corporations that conducted asset and organizational restructuring. In this research, event studies were conducted for 377 corporations that had announced restructuring plans, with a focus on the announcement day and the prior day. The results suggested that asset restructuring exerted a positive impact on the share price performance, whereas workforce reduction had a negative effect.

2-2 Credibility of Financial Statements and Restructuring

Agrawal and Cooper (2007) examined the impact of accounting scandals on the reform of corporate governance, particularly changes of the CEO, CFO, and external auditor. The result of this study suggested that corporations, which modify and restate their financial statements change their CEO and CFO more often than those that do not.

Desai et al. (2006) also examined the relationship between financial restatements regarding earnings management and executive turnover. According to their study, financial restatements have positive relation with executive turnover.

³ In their study, corporations with poor performance are defined as manufacturers who had ROA higher than the industrial average between 1985 and 1989 and who later experienced a 50% or more decline in business profit.

Hennes et al. (2008) distinguished between error and fraud as causes of financial restatements and examined the relationship between each cause and executive turnover. Their study suggested that financial restatement associated with fraud has a significantly positive influence on executive turnover. Except in cases of neglect of adequate controls by the executive team, many cases of financial statement fraud can be detected in advance or prevented if the internal controls function effectively. Therefore, the executive turnover examined in their study can be regarded as being caused by an internal controls system problem.

Wang and Chou (2009) examined the relationship between financial restatements and executive turnover after SOX implementation. This study that financial restatements and CEO turnover have a significant positive correlation, identified the cause of each financial restatement, and examined the relationship between the cause and executive turnover. The results show that the likelihood of turnover is the highest when the financial restatements are prompted by companies themselves.

These studies assumed that a problem with financial statement credibility will be revealed ex post facto by financial restatements. In contrast, the credibility problem in financial statements may also be revealed, and possibly prevented, by implementing internal controls audit in advance. The information disclosed in the management's report and its audit report assures the credibility of financial statements. Thus, when the management's report discloses a material weakness, it is highly likely that the financial statements to be disclosed at the fiscal year end will cause a problem. Even when the financial statements disclosed at the end of the fiscal year do not cause a problem, it is more likely that subsequent statements will cause a problem unless the issue of internal controls has been resolved.

SOX explicitly require that the CEO and CFO accept responsibility for the

financial reporting process (Geiger and Taylor, 2003; Marden et al., 2003). Therefore, in case of problems of internal controls, corporations must take appropriate action. The problem of insufficient internal controls affects financial statement credibility (Doyle et al., 2007; Ashbaugh–Skife et al., 2008), and corporations may also conduct restructuring, particularly executive turnover, in order to address this problem.⁴

3. Hypothesis

In this study, the quality of internal controls is assumed to influence executive turnover based on the following three arguments. The first is that material weaknesses in internal controls jeopardize the credibility of financial statements. The second is that the quality of internal controls depends upon the executives' ability to design and operate effective internal controls. Finally, the disclosure of material weaknesses influences the corporation's confidence. Therefore, when the chief executive fails to assure the effectiveness of internal controls, it is highly likely that the board of directors will replace the executive who is responsible for it.

Hence, the following hypothesis is proposed:

H.1: Corporations that disclose their material weaknesses in internal controls change their chief executive more often than those that do not.

Hammersley (2010) focused on consecutive disclosure of material weakness internal controls' material weaknesses and examined the factors for the failure to

⁴ Considering the contents of management reports and audit opinions disclosed in Japan to date, it is found that out of 3,816 corporations reporting financial statements between the end of March 2009 and March 25, 2010, 100 corporations (2.62%) disclosed material weaknesses. A review of these corporations' management assessments and other financial reports revealed that many of them subsequently executed "turnover of CEO," "reappointed chairperson as president," or "appointed a new CFO."

remediate the weakness during the second term. As a factor that remediate the material weakness, the turnover of CEOs and CFOs is used in this study.⁵

This study assume that the characteristic of the Japanese corporate governance system influence the remediation of the quality of internal controls in the short term. The so-called “Anglo-Saxon corporate governance model” emphasizes a single-tiered board of directors composed of a mixture of executives from the company and non-executive directors, all of whom are elected by shareholders. Non-executive directors are expected to outnumber executive directors and hold key posts, including audit and compensation committees.⁶

On the other hand, in Japan no outside directors exist on board of directors, or out of the persons involved in the same group (a main bank, a subsidiary company, etc.) in many cases. Furthermore, the managements elect the internal auditor (company auditor) who undertakes the role that secures the fairness of the financial statements of a company on behalf of a shareholder’s right, and the managements also pays remuneration to them. Also, after CEO turnover, the CEO retains the right of representation or new CEO is promoted from within. Thus, Japanese company that has the structure of corporate governance with low independency may maintain former CEO’s representation right or intentionality after the CEO turnover. That is, the CEO turnover may be a temporary scheme to restore their external confidence. In this situation, CEO turnover does not influence the improvement of the quality of internal controls in the short term.

From the above, the following hypothesis is proposed:

⁵ This shows that consecutive disclosure of material weakness is not significantly correlated to turnover of CEO and CFO.

⁶ The U.S. and the U.K. differ in one critical respect with regard to corporate governance: In the U.K., the CEO generally does not also serve as chairman of the board, whereas in the U.S. having the dual role is the norm, despite major misgivings regarding the impact on corporate governance.

H.2: The change chief executive after disclosing material weaknesses in internal controls does not influence the remediation of material weaknesses in the sort term.

4. Research Method

4-1 Research Model

The model developed to test the hypothesis 1 above is based on the models used by Desai et al. (2006), Hennes et al. (2008), and Wang and Chou (2009). This model is expressed by the following formula.

$$\begin{aligned}
 TO = F(\alpha + \beta_1 MW + \beta_2 LNSIZE + \beta_3 ROA + \beta_4 CFO / A + \beta_5 GC \\
 + \beta_6 BORAD + \beta_7 BOARDYER + \beta_8 OUTSIDE + \beta_9 BOARDOWN \\
 + \beta_{10} BIGSHARE + \beta_{11} FOREIGNOWN + \beta_{12} BANKING + \beta_{13} TRUST)
 \end{aligned}
 \tag{1}$$

[Insert Table 1 here]

The details of each variable are described in Table 1. Executive turnover (TO) is the dependent variable, and the existence of a material weakness (MW) in the internal controls is an independent variable, which is in interest.⁷ As mentioned in the hypothesis, this is predicted to be positively correlated with chief executive turnover. If this relationship is verified after controlling for other variables, it will support hypothesis H.1.

The control variables are described as follows. The first is the size of a company (SIZE), in particular, the natural log of the total assets. Size was also considered as a factor affecting chief executive turnover in previous studies (e.g., Hennes et al., 2008) although they showed no correlation with executive turnover.

⁷ In addition to executive turnover, several previous studies (e.g., Hennes et al., 2008) considered CFO' turnover as a dependent variable. Because few Japanese corporations have a CFO and also because it is difficult to definitely identify the CFO, this study considers only turnover of the top executive (CEO).

Consider the risk-related variables, in particular, profitability (ROA), the ratio of operating cash flow to total assets (CFO/A), and the presence of going concern reports (GC). These variables were also adopted by Desai et al. (2006), Hennes et al. (2008), and Wang and Chou (2009). Wang and Chou (2009), for example, showed that ROA was negatively correlated with chief executive turnover. This implies that corporations that recognize these risks are more likely to make managerial changes. Accordingly, ROA and CFO/A are also presumed to be negatively correlated with executive turnover, and GC is presumed to be positively correlated with executive turnover.

The variables related to corporate executives are the number of board members⁸ (BOARD), their average terms in office (BOARDYER), and the ratio of outside directors to the total number of directors (OUTSIDE).⁹ These variables were also considered by Wang and Chou (2009) although no significant correlation between executive turnover and these variables was demonstrated. This study presumes that in corporations with a large board and a high proportion of outside directors, the directors can effectively monitor operations. It is also presumed that corporations with directors having shorter average terms in office are more likely to change their chief executive.

The variables related to corporate ownership structure are the shareholding ratios of the board of directors (BOARDOWN), large shareholders (BIGSHARE), foreign investors (FORIGNOWN), financial institutions (BANKING), and investment trust funds

⁸ This includes auditing officers as well as directors.

⁹ For example, Hoitash et al. (2009) examined audit committees to measure the intensity of corporate governance. In Japan, the number of corporations that have established a committee is relatively low, and many of them have a corporate auditor system instead. The functions of corporate auditors are similar to those of "audit committees" in the U.S. with some difference. Corporate auditors are ordinary employees of the company with less authority. Corporate auditors are to be elected at a shareholders' meeting, and his/her role is to "audit" the activities of directors. This audit function includes both a "business audit" and a "financial audit." A business audit is an assessment of whether or not the directors are appropriately complying applicable laws and the company's charter provisions while managing the company, and is commonly referred to as a "compliance audit." Their audit report contains the results of both the financial and business audits.

(TRUST). These variables suggest that in corporations with high proportion of shareholding directors, the directors have more power in the board, while in corporations with high proportion of large shareholders, foreign investors, financial institutions, and investment trust funds, external pressure is high (e.g., Morck et al., 1988; Shleifer and Vishny, 1989; Weisbach, 1989; Kaplan and Minton, 1994). It is presumed, therefore, that the shareholding ratio of board members has negative correlations with chief executive turnover, whereas ratios of large shareholders, foreign investors, financial institutes, and investment trust funds have positive correlations with chief executive turnover.

Moreover, the model to test the hypotheses 2 is applied using the existence of material weakness in two consecutive years (CONTIMW) as a dependent variable, and chief executive turnover as an independent variable which is in interest.¹⁰ The model formula used is as follows. Variable definitions for the model are shown in Table 2.

$$\begin{aligned}
 \text{CONTIMW} = F(\alpha + \beta_1\text{TO} + \beta_2\text{ENVIRONMW} + \beta_3\text{LNSIZE} + \beta_4\text{LNSEGMENTS} \\
 + \beta_5\text{FOREIGNSALE} + \beta_6\text{M \& A} + \beta_7\text{GROWTH} + \beta_8\text{ROA} + \beta_9\text{CFO / A} + \beta_{10}\text{BIG4} \\
 + \beta_{11}\text{EXPERT} + \beta_{12}\text{OUTSIDE} + \beta_{13}\text{BIGSHARE} \\
 + \beta_{14}\text{FOREIGNOWN} + \beta_{15}\text{TRUST})
 \end{aligned}
 \tag{2}$$

[Insert Table 2 here]

This model also uses the disclosure of material weakness in a control environment (ENVIRONMW) as a control variable. The material weakness in a control environment is the primary factor that affects other constituent elements of internal controls, and seems to be difficult to remediate on a short-term basis¹¹. It is considered, therefore, that the

¹⁰ The term “executive turnover” here refers to turnover that occurred within six months of material weakness disclosure for the previous term, limiting the factor for turnover to material weakness disclosure.

¹¹ Hammersley et al. (2010) find that companies are less likely to remEDIATE previous-disclosed material weaknesses when the weaknesses are more pervasive (i.e., when they are described as at the entity level).

material weakness in a control environment is positively correlated with the existence of material weakness in two consecutive years.

Control variables related to size and complexity are the natural log of total assets (LNSIZE), the natural log of business segments (LNSEGMENTS), foreign sales divided by total assets (FOREIGNSALE), M&A (M&A), and sales growth (GROWTH). Previous studies show that size was negatively correlated with material weaknesses (Ge and McVay, 2005; Doyle et al., 2007; Ashbaugh-Skaif et al., 2007). Also, complexity variables were positively correlated with material weaknesses in those studies. Hammersley et al. (2010) show that companies are less likely to remEDIATE previous-disclosed material weaknesses when operations are more complex (i.e., they have more segments and foreign operations). In this study, the correlations of these variables with (CONTIMW) are assumed to be similar to the relationships between these variables and material weaknesses.

Also, this model uses auditor size (Big4) as a control variable. Previous studies show that auditor size was positively correlated with material weaknesses (e.g., Ge and McVay, 2005). Accordingly, auditor size is presumed to be positively correlated with (CONTIMW) as well.

In addition, this model adopts variables of regarding the board's composition and human characteristics (EXPERT and OUTSIDE) as well as the stock ownership structure as control variables (BIGSHARE, FOREIGNOWN and TRUST) because corporations that have strongly structured corporate governance have a higher quality of internal controls (Krishnan, 2005; Hoitash et al., 2009). The variables of the human characteristics of the board are the proportion of external board members to the number of members of the entire board and the proportion of certified public accountants, tax accountants, lawyers, and directors in charge of internal controls to the number of

members of the entire board. Goh (2009) found that companies are more likely to remediate material weaknesses when their audit committees have nonaccounting financial expertise and their boards are independent. Additionally, Johnstone et al. (2010) reported that companies hiring new CFOs who are certified public accountants with public accounting experience are more likely to remediate. Therefore, it is believed that monitoring the financial reporting function is more effective when the board has a high proportion of external members and highly professional members. Thus, a given term's material weakness would presumably be more likely to be remediated in the successive term.¹² With respect to the ownership structure's effect, a corporation with a high shareholding ratio of foreign investors, investment trust funds, and large shareholders can exert more pressure by such external monitoring. Therefore, it is presumed that the material weakness of a given term is more likely to be remediated in the successive term.

4-2 Sample and Date

Details of the samples used in this study are shown in Table 3.

[Insert Table 3 here]

There are 3,676 listed corporations that had the fiscal year end between the end of March 2009 and March 25, 2010 in Japan. Out of these companies, I excluded 188 corporations in finance, securities, insurance, and other industries whose financial statements have a substantially different structure from the others. Similarly, a total of 97 corporations were excluded whose financial data were unavailable, which were then IPO companies, or were delisted after the closing date. Thus, this study used the sample of

¹² For example, Krishnan (2005) and Hoitash et al. (2009) found that professionalism of the audit committee has a significant negative correlation with the disclosure of material weakness in internal controls. In addition, Agrawal and Chadha (2005) found that the probability of restatement is lower in companies whose boards or audit committees have an independent director with financial expertise.

3,391 corporations whose data were ultimately available. Of these, 108 corporations disclosed material weaknesses.¹³ Their financial data were extracted from Nikkei NEEDS Financial QUEST; data relating to internal controls reports (management's internal control reports), audit reports, and the number of business segments were extracted from the EDINET database. Data on chief executive turnover and directors were obtained from Toyo Keizai's Directors' Quarterly Journals.

5. Results

5-1 Descriptive Statistics

Many Japanese corporations that had disclosed material weaknesses in their management assessments of their internal controls subsequently restructured corporate governance, including executive turnover. In particular, of the 2,437 listed corporations that submitted management reports and audit reports for the fiscal year ending in March 2009, 57 (2.33%) disclosed material weaknesses, out of which 18 (31.5%) corporations then restructured their corporate governance staff and/or model.¹⁴ Within six months after their disclosure of material weakness in internal controls, one or more directors of 13 corporations (22.8%) resigned or were replaced. Further examination of these corporations' disclosed information suggests that the content of the material weakness reported in the management assessment is a factor in the subsequent executive turnover.¹⁵ This indicates that the board of directors places greater emphasis on the internal controls process as the root cause of the problems than on financial reporting.

¹³ Nine corporations that reported that internal controls' effectiveness could not be assessed were included.

¹⁴ Restructurings of corporate governance, here, include turnover of executive team, representative director, finance officer, executive officer, and auditor, and establishment of a monitoring department.

¹⁵ For example, a corporation that stated in the management assessment report that "a material weakness in the corporate governance function led to the failure achieving fair financial statements", subsequently announced the president's resignation prior to a general shareholders' meeting.

Table 4 shows the descriptive statistics of the variables included in the analysis, divided between the corporations with and without disclosure of material weaknesses.

[Insert Table 4 here]

According to Table 3, corporations that disclosed material weaknesses implements chief executive changes more frequently than those that did not (TO, $p < 0.001$). Corporations that disclosed material weaknesses were also smaller in size (LNSIZE, $p = 0.001$), less profitable (ROA, $p < 0.001$), and had more risk (GC, $p < 0.001$). While they had fewer directors (BOARD, $p = 0.001$), the proportion of external board members was higher (OUTSIDE, $p < 0.001$). With respect to the ownership structure, corporations disclosing material weaknesses showed relatively low shareholding rates of foreign investors (FORIGNOWN, $p = 0.043$), financial institutions ($p < 0.001$), and investment trust funds ($p = 0.003$), while they had high rates of large shareholders (BIGSHARE, $p = 0.002$).

[Insert Table 5 here]

Table 5 shows the correlation matrix. It reveals that chief executive turnover is positively correlated with the size (LNSIZE), the number of board members (BOARD), and the ratios of foreign investors (FOREIGN) and large shareholders (BIGSHARE), while it is negatively correlated with profitability (ROA), the board members' length of terms in office (BOARDYER), and the board members' shareholding ratio (BOARDOWN). These results are consistent with the aforementioned prediction.

5-2 Result of Logistic Regression Analysis

Material Weakness and Chief Executive Turnover

Table 6 shows the result of logistic regression analysis based on the model that considered the existence of material weaknesses as an independent variable. In this

model, χ^2 of Hosmer and Lemeshow is 11.803, and the significance probability is 0.160. R^2 of Cox-Snell and Nagelkerke are 0.054 and 0.080, respectively.

[Insert Table 6 here]

It shows a statistically significant positive correlation between disclosure of material weaknesses and chief executive turnover ($p < 0.001$). This result supports hypothesis H.1, suggesting that disclosure of material weaknesses in internal controls is a factor of chief executive turnover.¹⁶

With respect to the relationships between other variables and chief executive turnover, ROA is negatively correlated with chief executive turnover ($p = 0.027$), suggesting that corporations with low profitability have a greater tendency to implement a managerial change. Meanwhile, GC is positively correlated with chief executive turnover ($p = 0.091$), suggesting that corporations with more risk have a greater tendency to change the chief executive.

Considering director-related variables, it is found that corporations with more board members (BOARD) or with shorter terms in office (BORDYER) have a greater tendency to change the chief executive. The proportion of external board members also has a positive correlation with chief executive turnover ($p = 0.030$), suggesting that under external monitoring pressure, the likelihood of chief executive turnover increases.

With respect to the variables related to corporate structure, the shareholding ratio of board members (BOARDOWN) has a significant negative correlation with chief executive turnover ($p < 0.001$). When the shareholding ratio of board members is low, the board has a relatively small voice within the corporation, and such corporations are regarded as more prone to chief executive turnover.

¹⁶ Even when chief executive turnovers are limited to the ones that occur within six months after the term end, disclosures of serious breaches still have a significant positive correlation with these turnovers ($\beta = 1.421$, wald = 41.26, at the 1% significance level).

Chief Executive Turnover and Disclosure of Material Weaknesses in Two Consecutive Years

Table 7 shows the result of logistic regression analysis based on the model (2). In this model, χ^2 of Hosmer and Lemeshow is 5.483, and the significance probability is 0.705. R^2 of Cox-Snell and Nagelkerke are 0.343 and 0.628, respectively.

[Insert Table 7 here]

The result shown in Table 7 suggests that chief executive turnover does not have a significant correlation with consecutive disclosures of material weakness ($p=0.738$). This finding suggests that the material weakness is not always remediated during the second term despite a change in chief executive after disclosures of the weakness in the previous year. The material weakness in a control environment also has a significant positive correlation with consecutive disclosure of material weakness ($p=0.039$). This result suggests that the material weakness on a control environment is not easily remediated in the short term.

In contrast, the board's high level of expertise has a significant negative correlation with consecutive disclosures of material weakness ($p=0.031$). This result suggests that corporations with highly expert board members are more likely to remediate the material weakness on a short-term basis. With respect to the variables of ownership structure, shareholding ratios of foreign investors and investment trust funds have significant negative correlations with consecutive disclosures of material weakness ($p=0.089, 0.080$, respectively). This result suggests that corporations under greater pressure from external monitoring are more likely to remediate the material weakness.

5-3 Additional Analysis

Chief Executive Turnover and Audit Fees

Based on the preceding analysis, it is observed that chief executive turnover in a corporation that discloses material weakness is not significantly correlated with remediation of the material weakness. This is the same as the result shown by Hammersley et al. (2010). It is then difficult to consider chief executive turnover as a factor in the remediation of the reported material weakness, at least for the term following its disclosure. Then, what is the effect of executive turnover? This is a next research question.

Munsif et al. (2011) show that remediating firms have lower audit fees when compared to firms that continue to report material weaknesses. Hoag (2011) show that audit fees decline for companies that remediate a material weakness. Moreover, Feldmann et al. (2009) examined the effect of CFO turnover on the change in audit fees. They found that for corporations that modify and restate their financial statements, CFO turnover moderates the next term's increase in audit fees. The theoretical background of this relationship is that "audit fee increases reflect the costs of both increased perceived audit risk and the loss of organizational legitimacy."¹⁷ Chief executive turnover is then a response to a legitimacy crisis, in which case, the turnover understandably moderates the increased audit fees.

Several empirical studies of audit fees document the fact that higher audit fees are associated with higher-risk clients (e.g., Hay et al., 2006). Therefore, the presence of a material weakness in internal controls can be regarded as a factor causing increased audit fees.¹⁸ If audit firms interpret chief executive turnover as a response to a legitimacy

¹⁷ Arthand–Day et al. (2006) argued that a financial restatement leads to damaged organizational legitimacy. Similarly, Menon and Williams (2008) argued that executive turnover signals to the investors the directors' intention to restore reporting credibility following an auditor resignation.

¹⁸ For corporations that ended on March 31, 2009 (2,437 corporations), regression analysis was performed based on the model formula presented by Simunic (1980) and Simunic and Stein (1996). The result showed that corporations which disclosed material weakness in internal

crisis, namely, disclosure of material weakness, then they may moderate the increased audit fees (Feldmann et al., 2009). The relationship between chief executive turnover and change in audit fee for corporations disclosing material weakness was examined from this perspective. The model formula used for this examination is as follows.

$$\begin{aligned}
 \text{CHANGEFEE} = & \beta_0 + \beta_1 \text{TO} + \beta_2 \text{CONTIMW} + \beta_3 \Delta \text{LN SIZE} \\
 & + \beta_4 \Delta \text{SEGMENTS} + \beta_5 \Delta \text{SUBSIDIARIES} + \beta_6 \text{M \& A} \\
 & + \beta_7 \text{AUDITORCHANGE} + \beta_8 \Delta \text{AUDITORS} + \varepsilon.
 \end{aligned}
 \tag{3}$$

[Insert Tables 8 and 9 here]

Variable definitions for the model are shown in Table 8, and the result of the ordinary least square regression based on this model is shown in Table 9. This result suggests that chief executive turnover within six months of material weakness disclosures has a significant negative correlation with the moderation of audit fees ($p=0.028$). Thus, there is a possibility that chief executive turnover after the disclosure of material weakness will moderate the increased audit fees in the subsequent period. This suggests that audit firms interpret chief executive turnover as the corporation's response to its legitimacy crisis. Therefore, CEO turnover after disclosure of material weaknesses has an effect on restoration of the auditor's impression.

6. Conclusion and Future Research Challenges

This study examined the relationship between the quality of internal financial controls and executive turnover. The results show that corporations that disclose material weaknesses in their internal controls change their chief executive more often than those

controls (66 corporations) experienced higher audit fee ($\beta = 0.322$, $t = 6.04$, at the 1% significance level). This result corresponds with the those of Hoitash et al. (2008) and Hogan and Wilkins (2008).

that do not.

However, chief executive turnover itself is not significantly correlated with two years consecutive disclosures of material weaknesses. This suggests the possibility that chief executive turnover is not a particularly effective short-term measure for improving the quality of internal controls. In contrast, the results revealed that the corporate board's expertise and owners' characteristics are negatively correlated with consecutive disclosures of material weaknesses. This suggests the possibility that the characteristics of the board, which performs the internal monitoring, and the ownership structure of the corporation's stockholders can improve the quality of internal controls.

Furthermore, the result of this study shows that chief executive turnover has a significant negative correlation with the change in audit fees for the term immediately following the disclosure of material weakness. The result suggests that chief executive turnover moderates the increase of audit fees.

There are some limitations to the verification of this study. The first is that the impacts of modification and restatement of financial statements on chief executive turnover are not considered.¹⁹ The second is that the examination period is limited to 12 months, before and after the disclosure of material weakness. Finally, this study did not directly identify factors that CEO turnover does not influence the remediation of the quality of internal controls in the short term. Probably, the Japanese corporate governance structure is considered to have influenced this result. It is important to examine this issue in the future research.

There are some issues that are promising for future research. The first is to extend the examination period and investigate how a managerial change influences

¹⁹ Although the presence and absence of modification and restatement of financial statements during the examination period was considered as an independent variable in models (1) and (3) in this study, there was no significant correlation with executive turnover.

improvement of internal controls. The second is to multilaterally analyze the corporation's corporate governance, which influences the quality of internal controls and their improvement. The third is to explore other corporate characteristics upon which chief executive turnover could exert influence besides the change in audit fees.

REFERENCES

- Agrawal, A., and S. Chadha. 2005. Corporate Governance and Accounting Scandals. *Journal of Law and Economics* 48:371-406.
- _____, and T. Cooper. 2007. Insider Trading before Accounting Scandals. *Working Paper*, University of Alabama.
- Arthaud-Day, M. L., S. T. Certo, C. M. Dalton, and D.R. Dalton. 2006. A Changing of the Guard: Executive and Director Turnover Following Corporate Financial Restatements. *Academy of Management Journal* 49:1119-1136.
- Ashbaugh-Skife, H., D.W. Collins, and W.R. Kinney, Jr. 2007. The Discovery and Consequences of Internal Control Deficiencies prior to SOX-Mandated Audits. *Journal of Accounting and Economics* 44:166-192.
- _____, _____, and _____, R.LaFond. 2008. The Effect of SOX Internal Control Deficiencies and Their Remediation on Accrual Quality. *Accounting Review* 83:217-250.
- Bowman, E., H. Singh, M. Useem, and R. Bhadury. 1999. When does restructuring improve economic performance? *California Management Review* 44:33-54.
- Denis, D. K., and T. Kruse. 2000. Managerial Discipline and Corporate Restructuring Following Performance Declines. *Journal of Financial Economics* 55:391-424.
- Collins, D., A. Masli, A. L. Reitenga, and J. M. Sanchez. 2009. Earnings Restatements, the Sarbanes-Oxley Act and the Disciplining of Chief Financial Officers. *Journal of Accounting, Auditing and Finance* 24:1-34.
- Committee of Sponsoring Organizations of the Treadway Commission (COSO). 1994. *Internal Control-Integrated Framework*.
- Desai, H., C. Hogan, and M. S. Wilkins. 2006. The Reputational Penalty for Aggressive Accounting: Earnings Restatements and Management Turnover. *The Accounting Review* 81:83-112.
- Doyle, J.T., W. Ge, S. McVay. 2007. Accruals Quality and Internal Control over Financial Reporting. *Accounting Review* 82:1141-1170.
- Feldmann, D., R.J. William, and A. J. Mohammad. 2009. Financial Restatements, Audit Fees, and the Moderating Effect of CFO Turnover. *Auditing: A Journal of Practice and Theory* 28:205-223.
- Financial Services Agency, Business Accounting Council. 2007. *On the Setting of the Standards and Practice Standards for Management Assessment and Audit Concerning Internal Control over Financial Reporting (Council Opinions)*. Financial Service Agency, Government of Japan.
- Finkelstein, S., and D. C. Hambrick. 1990. Top-Management-Team Tenure and Organizational Outcomes: The Moderating Role of Managerial Discretion. *Administrative Science Quarterly* 35:484-503.
- Ge, W., and S. McVay. 2005. The Disclosure of Material Weaknesses in Internal Control after the Sarbanes-Oxley Act. *Accounting Horizons* 19:137-158
- Geiger, M.A., and P.L.I. Taylor. 2003. CEO and CFO Certifications of Financial Information. *Accounting Horizons* 17:357-368.
- Ghosh, A., R. Pawlewicz. 2009. The Impact of Regulation on Auditor Fees: Evidence from the Sarbanes-Oxley Act. *Auditing: A Journal of Practice and Theory* 28:171-197.

- Goh, B. W. 2009. Audit Committees, Boards or Directors, and Remediation of Material Weaknesses in Internal Control. *Contemporary Accounting Research* 26:549-579.
- Hennes, K. M., A. J. Leone, and B. P. Miller. 2008. The Importance Role of Distinguishing Errors from Irregularities in Restatement Research: The Case of Restatements and CEO/CFO Turnover. *The Accounting Review* 83:1487-1519.
- Hoitash, U., R. Hoitash, and J. C. Bedard. 2008. Internal Control Quality and Audit Pricing under the Sarbanes-Oxley Act. *Auditing: A Journal of Practice & Theory* 27:5-30.
- _____, _____, and _____. 2009. Corporate Governance and Internal Control over Financial Reporting: A Comparison of Regulatory Regimes. *The Accounting Review* 84:839-867.
- Hammersley, J. S., L. Meyers, and C. Shakespere. 2008. Market Reaction to the Disclosure of Internal control Weaknesses and to the characteristics of the those weaknesses under 302 of the Sarbanes-Oxley Act of 2002. *Review of Accounting Studies* 13:141-165.
- _____, _____, and J. Zhou. 2010. The Failure to Previously-Disclosed Material Weaknesses in Internal Controls. *Working Paper*, University of Georgia.
- Hay, D.C., W. R. Knechel, and N. Wong. 2006. Audit Fees: A Meta-analysis of the Effect of Supply and Demand Attributes. *Contemporary Accounting Research* 23:141-191
- Hayashi, T., Y. Matsumoto, and Y. Machida. 2009. *White Paper: Listed Company Auditor and Audit Fee in Japan 2010*.
- Hoag, M. L., and W. Hollingsworth. 2011. An In temporal Analysis of Audit Fees and Section 404 material Weaknesses. *Auditing: A Journal of Practice and Theory* 173-200.
- Hogan, C. E., and M.S. Wilkins. 2008. Evidence on the audit risk model: Do Auditors Increase Audit Fees in the Presence of Internal Control deficiencies? *Contemporary Accounting Research* 25:219-242
- Huson, M. R., P. H. Malatesta, and R. Parrino. 2004. Managerial Succession and Firm Performance. *Journal of Financial Economics*, 74:237-275.
- Johnstone, K. M., C. Li, and K. H. Rupley. 2010. Change in Corporate Governance Associate with the Revelation of Internal Control Material weaknesses and Their Subsequent Remediation. *Contemporary Accounting Research* 28:331-383.
- John, K., L. Lang, and J. Netter. 1992, The Voluntary Restructuring of Large Firms in Response to Performance Decline. *Journal of Financial Economics* 46:20-65.
- Kang, J., and A. Shivdasani. 1997. Corporate Restructuring during Performance Declines in Japan. *Journal of Financial Economics* 46:29-65.
- Kaplan, S., N. and B.A. Minton. 1994 Appointments of Outsiders to Japanese Boards: Determinants and Implications for Managers. *Journal of Financial Economics* 36: 225-258.
- Kesner, I.F., and T.C. Sebor. 1994. Executive Succession: Past, Present and Future. *Journal of Management*, 20:329-372.
- Khurana, R. and N. Nohria. 2000. The Performance Consequences of CEO Turnover *Working Paper*, Harvard Business School.

- _____. 2002. The Curse of the Superstar CEO. *Harvard Business Review* 80 (9)
- Krishnan, J. 2005. Audit Quality and Internal Control: An Empirical Analysis. *The Accounting Review* 80:649-675.
- _____, D. Rama, and Y. Zhang. 2008. Cost to Comply with SOX Section 404. *Auditing: A Journal of Practice and Theory* 27:169-186.
- Machida Y., T. Hayashi, Y. Matsumoto, and K. Yazawa. *White Paper: Listed Company Auditor and Audit Fee in Japan 2010*.
- Marden, R.E., R.K. Edwards, and W.D. Stout. 2003. The CEO/CFO Certification Requirement. *The CPA Journal* 73:36-44.
- Matsumoto, Y., Y. Machida, and T. Hayashi. 2008. White Paper: Listed Company Auditor and Audit Fee in Japan 2009.
- Menon, K., and D.D. Williams. 2008. Management Turnover Following Auditor Resignations. *Contemporary Accounting Research* 25:567-604.
- Morck, R., A. Shleifer, and R. Vishny. 1988. Management Ownership and Market Valuation: An Empirical Analysis. *Journal of Financial Economics* 20:293-315.
- Munsif, V., K. Raghunandan, D. Rama, and M. Singhvi. 2011. Audit Fees after Remediation of Internal control Weaknesses. *Accounting Horizons* 25: 87-105.
- Public Company Accounting Oversight Board (PCAOB). 2004. *Auditing Standard No.2. An Audit of Internal Control over Financial Reporting Performed in Conjunction with an Audit of Financial Statements*. Washington D. C., PCAOB.
- _____. 2007. *Auditing Standard No.5. An Audit of Internal Control over Financial Reporting that is Integrated with an Audit of Financial Statements*. Washington D.C., PCAOB.
- Ranghunanandan, K., D. Rama. 2006. SOX Section 404 Material Weakness Disclosures and Audit Fees. *Auditing: A Journal of Practice and Theory* 25:99-114.
- Shleifer, A., R. Vishny. 1989. Managerial Entrenchment: The Case of Manager Specific Investments. *Journal of Financial Economics* 25:123-139.
- Shen, W., and A. A. Cannella, Jr. 2002. Revisiting the Performance Consequences of CEO Succession: The Impacts of Successor Type, Post succession Senior Executive Turnover, and Departing CEO Tenure. *Academy of Management Journal* 45:717-733.
- Simunic, D. 1980. The Pricing of Audit Services: Theory and Evidence. *Journal of Accounting Research* 18:161-190.
- _____, and M. Stein. 1996. Impact of Litigation Risk on Audit Pricing: A review of the Economic and the Evidence. *Auditing: A Journal of Practice and Theory* 15:119-134.
- Wang, Y.F., L.T.L.Chou. 2009. Effects of Post-SOX Restatement Characteristics and Management Behavior on CEO/CFO Turnover. *Working Paper*, Department of Accounting College of Management Providence University.
- Weisbach, M.S. 1988. Outside Directors and CEO Turnover. *Journal of Financial Economics* 20:431-460

TABLE 1
Variable Definitions for Executive Turnover Model (1)

<u>Variable Name</u>	<u>Definition</u>
<i>TO</i>	1 if the top executive leaves the company within 12 month around (6 months before and 6months after) the disclosing management report of the internal control, 0 otherwise;
<i>SIZE</i>	the natural log of total assets;
<i>ROA</i>	net income divided by total assets;
<i>CFO/A</i>	cash flows from operating activities divided by total assets;
<i>GC</i>	1 if the company receives a going concern opinion, and 0 otherwise;
<i>BOARD</i>	number of directors;
<i>BOARDYEAR</i>	average of the tenure of directors;
<i>OUTSIDE</i>	number of independent directors divided by total directors;
<i>BOARDOWN</i>	shareholding ratio of directors;
<i>BIGSHARE</i>	shareholding ratio of ten high ranks of big shareholders;
<i>FORIGNOWN</i>	shareholding ratio of foreign investors;
<i>BANKING</i>	shareholding ratio of financial institutes; and
<i>TRUST</i>	shareholding ratio of trust funds.

TABLE 2
Variable Definitions for Executive Turnover Model (2)

<u>Variable Name</u>	<u>Definition</u>
<i>CONTIMW</i>	1 if the company disclosed a material weakness in 2009 and also disclosed a material weakness in 2010, and 0 if the company disclosed a material weakness in 2009 but not disclosed a material weakness in 2010;
<i>TO</i>	1 if the top executive leaves the company within 6 month after the disclosing management report of the internal control in 2009, 0 otherwise;
<i>ENVIRONMW</i>	1 if the disclosing material weaknesses concerned control environment, and 0 otherwise;
<i>LNFSIZE</i>	the natural log of total assets;
<i>LNSEGMENTS</i>	the natural log of (1+number of business segments);
<i>FOREIGNSALE</i>	foreign sales divided by total sales;
<i>M&A</i>	1 if the company is involved in a merger or acquisition in 2009, and 0 otherwise;
<i>GROWTH</i>	sales growth for 2010 through 2009;
<i>ROA</i>	net income divided by total assets;
<i>CFO/A</i>	cash flows from operating activities divided by total assets;
<i>BIG4</i>	1 if the company is audited by a Big4 auditor in 2010;
<i>EXPERT</i>	the sum of certified public accountants, tax accountants, lawyers, and directors in charge of internal control divided by total directors;
<i>OUTSIDE</i>	number of independent directors divided by total directors;
<i>BIGSHARE</i>	shareholding ratio of ten high ranks of big shareholders;
<i>FORIGNOWN</i>	shareholding ratio of foreign investors; and
<i>TRUST</i>	shareholding ratio of trust funds.

TABLE 3
Sample Selection for the Sample of management turnover

Number of Observations lost due to date requirements	n
Listed Companies in Japan observations from Nikkei-NEEDS	
Financial QUEST Date	3,676
Less:	
Companies that belong to finance, securities, insurance, and finance, n.e.c.	(188)
Companies with missing financial date	(97)
Final Sample	3,391

TABLE 4
Descriptive Statistics of Variables for the Sample of Material Weakness

Variable ^a	MW Group (N=108)			Control Group (N=3,283)			Differences ^b	
	Mean	Median	Std.Dev.	Mean	Median	Std.Dev.	t or χ^2 value	
TO	0.500	0.500	0.502	0.240	0.000	0.428	37.361	***
SIZE	9.524	9.421	1.764	10.351	10.195	1.681	-5.024	***
ROA	-18.910	-0.621	54.057	1.639	2.612	10.872	-14.608	***
CFO/A	-3.870	2.292	25.022	4.943	5.311	8.795	-9.265	***
GC	0.300	0.000	0.459	0.004	0.000	0.195	151.398	***
BOARD	9.190	8.002	2.921	11.282	11.012	3.768	-5.710	***
BOARDYEAR	6.068	4.953	6.527	7.357	6.541	5.802	-2.263	**
OUTSIDE	38.172	36.038	14.867	29.944	27.272	12.402	6.738	***
BOARDOWN	9.611	2.850	13.788	9.837	2.603	15.630	-0.149	
BIGSHARE	33.608	33.854	21.783	26.710	23.223	26.710	3.056	***
FOREIGNOWN	4.829	1.002	8.244	8.038	2.924	8.038	-2.027	**
BANKING	9.131	4.322	11.921	16.148	13.422	13.419	-5.364	***
TRUST	1.053	0.000	2.913	2.520	1.000	4.996	-3.024	***

TABLE 5
Spearman \ Pearson Correlation Matrix for Independent Variables in Model (1)^a n=3,391

Variables ^b	1	2	3	4	5	6	7	8	9	10	11	12
1 TO		0.06 ***	-0.09 ***	-0.1 ***	0.07 ***	-0.1 ***	0.04 ***	-0.14 ***	0.06 ***	0.02	0.01	0.00
2 LNSIZE	0.06 ***		0.17 ***	0.10 ***	0.63 ***	-0.1 ***	-0.3 ***	-0.39 ***	-0.4 ***	0.38 ***	0.63 ***	0.30 ***
3 ROA	-0.1 ***	0.05 ***		0.54 ***	0.11 ***	0.07 ***	-0.1 ***	0.05 ***	-0.1 ***	0.06 ***	0.01 ***	0.01 ***
4 CFOA	-0	0.06 ***	0.53 ***		0.11 ***	0.04 **	-0.1 ***	0.03 *	-0.1 ***	0.08 ***	0.11 ***	0.10 ***
5 BORAD	0.05 ***	0.62 ***	0.07 ***	0.10 ***		-0.1 ***	-0.4 ***	-0.27 ***	-0.3 ***	0.20 ***	0.45 ***	0.19 ***
6 BOARDYEAR	-0.20 ***	-0.1 ***	0.06 ***	0.03 *	-0.1 ***		-0.1 ***	0.16 ***	-0.1 ***	-0 **	-0.02	0.01
7 OUTSIDE	0.04 ***	-0.30 ***	-0	-0	-0.4 ***	-0.1 ***		0.09 ***	0.24 ***	0.03 *	-0.30 ***	-0.07 ***
8 BORDOWN	-0.2 ***	-0.5 ***	0.05 ***	0.00	-0.4 ***	0.52 ***	0.06 ***		-0.10 ***	-0 ***	-0.33 ***	-0.07 ***
9 BIGSHARE	0.04 *	-0.5 ***	-0.1 ***	-0.1 ***	-0.3 ***	-0.1 ***	0.22 ***	0.04		-0.2 ***	-0.65 ***	-0.34 ***
10 FOREIGN	0.05 ***	0.60 ***	0.25 ***	0.16 ***	0.35 ***	-0.1 ***	-0.1 ***	-0.31 ***	-0.5 ***		0.22 ***	0.23 ***
11 BANKING	0.01	0.68 ***	0.10 ***	0.11 ***	0.51 ***	0.00	-0.3 ***	-0.40 ***	-0.70 ***	0.45 ***		0.32 ***
12 TRUST	0.01	0.56 ***	0.32 ***	0.23 ***	0.36 ***	-0	-0.2 ***	-0.23 ***	-0.54 ***	0.62 ***	0.58 ***	

^a Asterisks *, **, *** indicate two-tailed significance at the 0.10, 0.05, and 0.01 levels, respectively.

^b Variables are defined in Table 1.

TABLE 6

Logistics Regression Results for Multivariate Test of Model (1)

The dependent variable is the executive turnover(TO).

Variable^a	Expected Sign	Standardized Beta (wald-statistic)	
Constant		-1.91	(18.77)
MW	+	0.93 ***	(19.19)
LNSIZE	?	0.04	(1.53)
ROA	-	-0.09 **	(4.90)
CFO/A	-	0.01	(0.09)
GC	+	0.33 *	(2.84)
BOARD	+	0.03 ***	(7.52)
BOARDYEAR	-	-0.04 ***	(13.58)
OUTSIDE	+	0.03 **	(4.72)
BOARDOWN	-	0.02 ***	(22.94)
BIGSHARE	+	0.02	(2.21)
FOREIGNOWN	+	-0.01	(0.17)
BANKING	+	-0.04	(0.46)
TRUST	+	0.02	(0.86)
<i>Hosmer and Lemeshow χ^2</i>		11.80	
<i>Cox-Snell R^2, (Nagelkerke R^2)</i>		0.05	(0.08)
N=3,391			

^a Variables are defined in Table 1.

Asterisks *, **, *** indicate two-tailed significance at the 0.10, 0.05, 0.01 levels, respectively.

TABLE 7

Logistics Regression results for Multivariate Test for Model (2)

The dependent variable is whether material weaknesses were disclosed in two consecutive years.

Variable^a	Expected Sign	Standardized Beta (wald-statistic)	
Constant		-12.84 *	(3.61)
TO	-	-0.47	(0.11)
ENVIRONMW	+	6.53 **	(4.25)
LNSIZE	+	1.44 **	(3.93)
LNSEGMENTS	+	2.77	(1.52)
FOREIGNSALE	+	0.03	(0.04)
M&A	+	1.27	(0.08)
GROWTH	+	0.05	(0.03)
ROA	-	-0.09 **	(4.16)
CFO/A	-	0.02	(0.41)
BIG4	?	-0.85 **	(4.16)
EXPERT	-	-0.34 **	(4.67)
OUTSIDE	-	-0.19	(2.58)
BIGSHARE	+	-0.10	(1.74)
FOREIGNOWN	+	-0.54 *	(2.89)
TRUST	+	-1.83 *	(3.06)
<i>Hosmer and Lemeshow χ^2</i>		5.48	
<i>Cox-Snell R^2, (Nagelkerke R^2)</i>		0.34	(0.62)

^aVariables are defined in Table2.

^bOne hundred eight companies disclosed material weaknesses in 2009. Out of these companies, 89 companies that can use financial date in 2010 are used as the sample for model (2).

Asterisks *, **, *** indicate two-tailed significance at the 0.10, 0.05, 0.01 levels, respectively.

TABLE 8
Variable Definitions for Executive Turnover Model (3)

Variable Name	Definition
<i>CHANGEFEE</i>	difference between the natural log of sum of audit and non-audit fees in 2010 and 2009
<i>TO</i>	1 if the top executive leaves the company within 6 month after the disclosing management report of the internal control in 2009, 0 otherwise;
<i>CONTIMW</i>	1 if the company disclosed a material weakness in 2009 and also disclosed a material weakness in 2010, and 0 if the company disclosed a material weakness in 2009 but not disclosed a material weakness in 2010;
<i>delta LNSIZE</i>	difference between the natural log of total assets in 2010 and 2009;
<i>delta SEGMENTS</i>	deference between the number of business segments in 2010 and 2009;
<i>delta SUBSIDIARIES</i>	deference between the square root of the number of subsidiaries in 2010 and 2009;
<i>M&A</i>	1 if the company is involved in a merger or acquisition in 2010, and 0 otherwise;
<i>AUDITORCHANGE</i> <i>AUDITORS</i>	1 if there is an auditor change, and 0 otherwise; and difference between the number of auditors in 2010 and 2009.

TABLE 9
OLS Regression Results for Multivariate Test of Model (3)

The dependent variable is the change in audit fees.

Variable ^a	Expected Sign	Standaedized Beta (t-statistic)
Constant		0.10 * (1.78)
<i>TO</i>	-	-0.22 ** (-2.24)
<i>CONTIMW</i>	+	0.26 ** (2.36)
<i>deita LNSIZE</i>	+	0.02 (0.25)
<i>delta SEGMENTS</i>	+	0.21 ** (2.14)
<i>delta SUBSIDIARIES</i>	+	0.22 ** (2.05)
<i>M&A</i>	+	0.18 * (1.73)
<i>AUDITCHANGE</i>	+	-0.16 (-1.59)
<i>AUDITORS</i>	-	-0.08 (-0.84)
<i>F-Statistic</i>		3.02 ***
<i>Adjusted R²</i>		15.7 % n ^b =89

^aVariables are defined in Table8.

^bOne hundred eight companies disclosed material weaknesses in 2009.Out of these companies, 89 companies that can use financial date in 2010 are used as the sample for model (3).

Asterisks *, **, *** indicate two-tailed significance at the 0.10, 0.05, 0.01 levels, respectively.