

Are There Common Innate Characteristics in Fraud Firms? Evidence from Japan

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〈Abstract〉

In this study we investigate the types of fraud at firms that disclosed inappropriate accounting on prior financial statements or that the inappropriate accounting would have an impact on the future annual reports (fraud firms). Next, we examine whether the fraud firms have common innate characteristics. Finally, we clarify whether there are significant associations between fraud occurrences and corporate governance mechanisms. Our evidence suggests that the number of accounting fraud has increased since 2012 although there have been new regulations intended to improve governance and reduce fraud. Our results also suggest that the fraud occurred at firms that are larger and considered to be leaders listed on the First Section of the Tokyo Stock Exchange. Accounting fraud seems more prevalent in the wholesale, retail, construction, and communication industries. In addition, the accounting fraud seems to have occurred at both the top management level and the subsidiary level. We find that the firms that disclosed fraudulent financial statements tend to be less profitable, engaged in more complex business activities, have a longer history, and are larger. Our evidence suggests an association between fraud and the governance mechanisms employed.

〈Key Words〉

fraudulent accounting; innate characteristics; board of directors; outside directors; independence.

1 INTRODUCTION

Internal control reporting regulation (the Financial Instruments and Exchange Act of 2006, J-SOX)¹(Financial Service Agency 2006) was enacted in Japan to improve a firm's internal control system. Although the objective of the internal controls system is not to detect fraud, if an effective

¹ The Financial Instruments and Exchange Act of 2006 in Japan is not the Japanese version of the U.S. Sarbanes-Oxley Act of 2002. However, following the U.S. implementation of the Sarbanes-Oxley Act of 2002 as SOX, the Financial Instruments and Exchange Act of 2006 was implemented in Japan. We refer to the Financial Instruments and Exchange Act of 2006 as J-SOX in this study.

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internal control system exists, it is likely that unintentional errors and intentional errors are decreased. In practice, the number of the firms that disclosed material weaknesses has decreased in Japan.

Nakashima and Ziebart (2015) examine whether the Japanese internal control regulation impacted both earnings management and earnings quality in Japan. Nakashima and Ziebart (2015) document that effective internal control systems help earnings quality improve in the post-J-SOX period and that the Japanese results are consistent with the results for the U.S. and SEC-standard Japanese firms. However, Nakashima and Ziebart (2015) also find that while accruals management and real management remain unchanged for control firms during the period of expected improvement, accruals management actually increases for material weakness disclosing firms. The results are inconsistent with the results in the U.S. and SEC-standard Japanese firms where governance improvements led to less accruals management.

Nakashima and Ziebart (2015) suggest that the inconsistent results are due to differences in enforcement mechanisms and corporate governance as well as differences between US- SOX² and J-SOX. They conclude that they are skeptical regarding the extent to which J-SOX improved corporate governance and that more effective enforcement may be needed in Japan to achieve similar improvements to those observed in the U.S.

In July 2015, a very significant accounting fraud³ was found at Toshiba, a Japanese public firm deemed to be excellent. The Toshiba accounting fraud provides a case study of the accounting fraud triangle.⁴ It is said that fraud occurs when pressure, rationalization, and opportunities coexist (Cressey 1953, 30). If these three factors coexist, regardless of the perceived excellence of a firm, fraud can occur. According to the Investigation Report of Toshiba (Independent Investigation Committee 2015), all three factors of the fraud triangle seemed to exist at Toshiba.⁵ Following Cressey's (1953) theory, if the opportunity for committed fraud had been constrained at Toshiba, the accounting fraud should not have occurred. It is likely that an insufficient monitoring system under the governance structure was composed of a powerless or weak internal auditor combined with a mere façade of outside board directors that failed to constrain the fraudulent behavior. Our study is motivated to learn more about what happened

² We refer to the Sarbanes-Oxley Act of 2002 as US-SOX.

³ Statement of Auditing Standard No. 99 (SAS 99) (AICPA 2002, para.5) defines fraud as an intentional act that results in a material misstatement in financial statements and states that there are two kinds of fraud (1) misstatements arising from fraudulent financial reporting, that is an intentional misstatements or omissions of amounts or disclosures in financial statements and (2) misstatements arising from misappropriation of assets.

⁴ Recently, fraud theory has expanded to be called the fraud diamond - incentive, opportunity, rationalization, and capability. See Wolfe and Hermanson (2004).

⁵ The three factors at Toshiba include the following: pressure: employees are supposed to increase profits and losses required by each budget and to meet improvements in the profits and losses mandated during each relevant period (Independent Investigation Committee 2015, 44-45), rationalization: employees deemed the inappropriate accounting would be permitted by the company management, and opportunity: internal controls did not work well. These three factors resulted in the fraud being committed (Independent Investigation Committee 2015, 48).

and why expected improvements did not occur.

This study discusses the types of fraud at fraud firms. Second, we explore whether there are differences in innate characteristics between fraud firms and non-fraud firms. Third, we investigate whether there is a positive association between governance mechanisms and fraud following changes that were expected to lessen fraud. This study contributes to literature in the following ways. First, the evidence regarding the types of the fraud in Japan and the common innate characteristics at the fraud firms can help auditors and regulators to better detect and prevent fraud. Second, our findings suggest that corporate reform may be difficult to achieve even when regulators are trying to improve financial reporting.

The remainder of this study proceeds as follows: Section 2 describes the corporate governance reform in Japan. Section 3 presents our sample selection and describes the type of frauds engaged in by the fraud firms. Section 4 reviews prior research and develops the hypotheses. Section 5 discusses the research design while Section 6 presents the results. The final section includes a summary and our conclusions.

2 Corporate Governance Reform

The Prime Minister of Japan and his cabinet formulated the Basic Concept of Japan Revitalization Strategy 2016 (Prime Minister and His Cabinet 2016). They proposed further enhancement of corporate governance as a regulatory reform for future investment as follows:

The Government will support efforts by listed companies for improvement of the effectiveness of corporate governance through learnings and publicizing the state of listed companies' efforts concerning the CEO selection and dismissal process and composition, operation, and evaluation of the board of directors (Prime Minister and His Cabinet 2016, 22)

The Council of Experts Concerning the Corporate Governance Code (CECCG)⁶ issued the Corporate Governance Code in June, 2015. Principle 4.8 of the Code states that companies should appoint at least two independent directors. Moreover, if a company, in its own judgment, believes that it needs to appoint at independent directors to fill at least one-third of the director membership (based on the board's consideration of factors such as the industry, company size, business characteristics,

⁶ Moreover, based on the Corporate Governance Code, the Tokyo Stock Exchange required all public firms in Japan to prepare a report on corporate governance which is called as corporate governance report. This is supposed to provide stakeholders with information regarding the public firms' corporate governance situation, approach, and attitude.

organizational structure, and circumstances surrounding the company), it should disclose a strategy for doing so (CECCG 2015, Principle 4.8.27). Drucker (1974, 635) asserts that an effective board should both review and guide top management and could create access to major publics such as the scientific community. Also, Drucker (1974, 636) accentuates the need for independence of the board by stating that board members should be independent of management.

Since the Revised Company Law of 2014, there have been three different board systems for the public firms in Japan.⁷ One system, Company with Auditors' System requires the company to have three or more company auditors, and that half or more of the company auditors shall be selected from outside (Ministry of Justice 2005, Article 373, Paragraph 1, Para.2). Another system, Company with a Committee System, requires that the nominating committee, compensation committee and audit committee should have a majority of the members of each committee selected externally. In addition, these companies should have at least half of the directors be external directors (Ministry of Justice 2005, Article 400, Para 3). Ten years later, in June 2014, the Company Law of 2005 was replaced with Revised Company Law of 2014 (Ministry of Justice 2014). This approach created a new system, "a Company with an Audit and Supervisory Board" to enhance corporate governance and control by the board of directors in May 2015. This new approach required companies to appoint three more directors and that half of directors should be outsiders. If they do not appoint outside directors, they must explain the reason why the appointment of outside directors is not appropriate (Ministry of Justice 2014, Article 327, Para 2). As prescribed by the TSE Listing Code Article 436-1, public firms should appoint more than one

TABLE 1
Independence Standards of Corporate Governance Code
Characteristics of Directors of Board

Time Period	No Independence				Independence			
	Executives at Public Parent firm/Subsidiary	Executives at Parent firm/Subsidiary	Relatives	Executives at Main Clients or Suppliers	Executives at Main Investors	Executives at Not Main Clients or Suppliers	Executives at Related Firms or Supporters	Person Other than the Left
Current	X	X	X					
Previous years	X	NO INDEPENDENCE			Disclosure is required.			
Past: within ten years	X							
Past: ten years before					No disclosure is required.			

Notes: This table is adapted from the Corporate Governance Code (CECCG 2015). As shown in this diagram, independence criteria must be evaluated along two dimensions to determine whether the director is independent or not. Those two dimension are the relationship between the directors appointed and the insiders/clients and suppliers and the time period of appointment of directors. If there is a relationship between the director and the related party or person of the firms within ten years, then it is considered 'no independence.' If there is a relationship between the directors and the investors/not main stakeholders within ten years, which must be disclosed.

	The independence criteria set by securities exchanges (Principle 4.9.) p.28.
X	The criteria which the independent is denied by Companies Act.
	The criteria in which disclosure on the relationship between independent directors and the firm is required in their corporate governance reports.

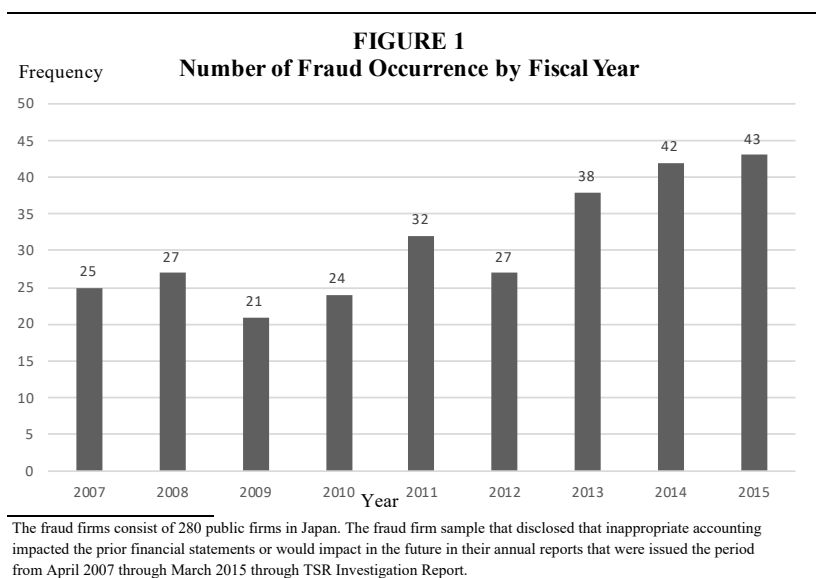
⁷ According to TSE Report (TSE 2019), 73.3% of all TSE firms are Companies with Board of Auditors and 24.7% are introduced Companies with An Audit and Supervisory Board and 2.0% are Companies with Committee (TSE 2019, 66-67).

independent outside director (TSE 2015, 1). Table 1 presents how the assessment of independence of the board (CECCG 2015) is made.⁸

3 SAMPLE SELECTION AND DESCRIPTION

3.1. Fraud Firms

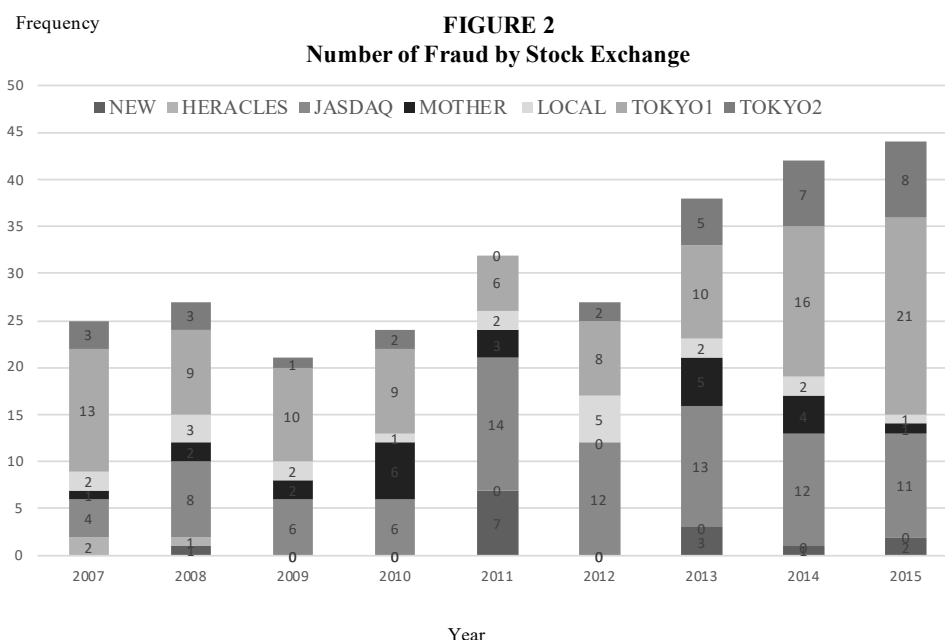
Our fraud firms sample consists of 280 Japanese public firms during the period April 2007 to March 2015 period. These fraud firms disclosed an inappropriate accounting that had already impacted prior financial statements or were expected to impact future annual reports. The sample is taken from the Tokyo Shoko Research (TSR) Investigation Report (Tokyo Shoko Research 2016). Figure 1 shows the trend of the number of fraud occurrences during our sample period. Of particular note is the increase in fraud from 2012 through 2015. A plausible explanation for the increase may be that many of the firms established a “Public Interest Whistle-Blowing System” in accordance with the Whistleblower Protection Act that was enacted in 2006 (Consumer Affairs Agency 2004) and this resulted in more fraud being reported.⁹



⁸ Principle 4-8 of the Corporate Governance Code requires that public firms should appoint more than two independent outside directors. However, these firms are allowed not to appoint them if they have justification for not appointing independent outside directors. Two dimensions are displayed, the time horizon and the relationship with the firm when evaluating the independence of outside executives. These two dimensions are the relationship between the directors appointed and the insiders and or clients and suppliers, and the time period of the appointment to be a director. If a relationship is found between the director and the related party or person within the firm within ten years, it is then considered as “no independence.” If there is a relationship between the directors and the investors or no main stakeholders within ten years, these relationships must be disclosed.

⁹ The Act prescribes that its purpose is to protect whistleblowers and to promote compliance with the laws and regulations concerning the protection of life, body, property, and other interests of citizen, and thereby to contribute to the stabilization of the general welfare of the life of the citizens and to the sound development of the Japanese socioeconomy (Consumer Affairs Agency 2004, Article 1).

Figure 2 presents fraud firms by their listed stock markets. Figure 3 shows that while the number of the fraud firms listed on JASDAQ and MOTHERS increased through 2011, the number of fraud firms listed on the First Section and the Second Section of the Tokyo Stock Exchange¹⁰ seems to have increased since 2012. Table 2 portrays the fraud firms by industry. The industrial distribution is based on *TSE Industrial Classification* for public firms in Japan. The frauds seem to be concentrated primarily in wholesale trade (46 firms - 16.4 percent), followed by communication/media (39 firms - 13.9 percent), service (33 firms - 11.8 percent), retail trade (31 firms - 11.1 percent), and construction (20 firms - 7.1 percent).



Local indicates local stock exchanges such as Nagoya and Kyushu. New indicates the emerging stock exchange other than HERACLES, JASDAQ, and MOTHERS. The fraud firm sample which disclosed that inappropriate accounting impacted the prior financial statements or would impact in the future in their annual reports that were issued the period from April 2007 through March 2015 through TSR Investigation Report.

¹⁰ According to Japan Exchange Group (JPX)'s website (2019), Tokyo Stock Exchange (TSE) and Osaka Stock Exchange (OSE) integrated their businesses in order to strengthen the competitive power and gain their synergy effect each other in November 2011 and Japan Exchange Group was established in January 1, 2013. <https://www.jpx.co.jp/english/corporate/about-jpx/business/index.html> There are five markets of the First Section, Second Section, Mothers, JASDAQ and TOKYO PRO Market at TSE. While Mothers and JASDAQ are emerging markets, the First and Second Sections are the main markets of TSE where leading large and second tier Japanese and foreign companies are listed. The First Section of TSE is especially regarded as one of the top rank markets in terms of the size and liquidity. <http://www.jpx.co.jp/english/equities/listing-on-tse/new/basic/index.html> For details regarding the business integration of TSE and OSE, see the website: http://www.jpx.co.jp/corporate/about-jpx/establishment/tvdivq000006wc7-att/news20873_01.pdf

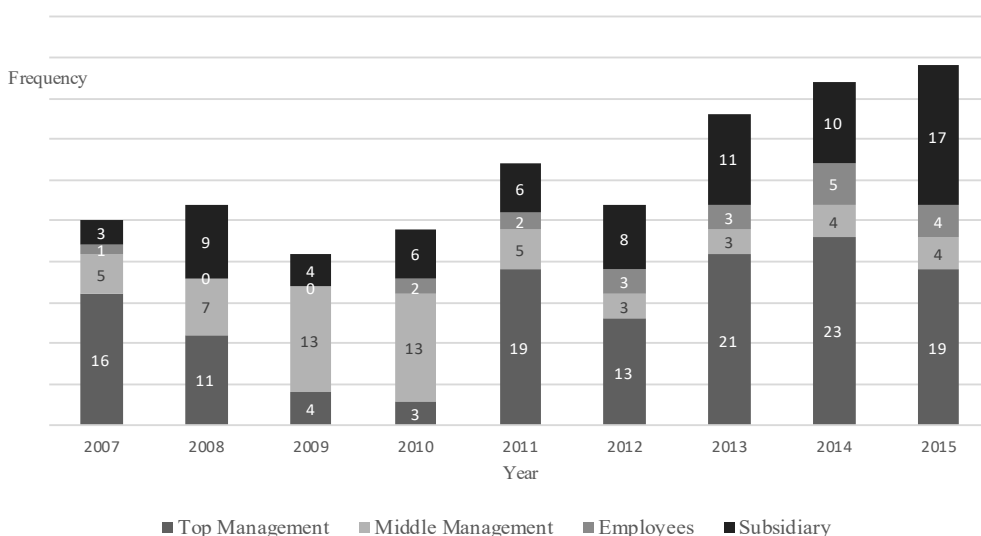
TABLE 2
Number of Firm with Fraud by Industry

	2007		2008		2009		2010		2011		2012		2013		2014		2015		Percentage of Fraud		
	Number of Fraud	% of Firms	Number of Fraud	% of Firms	Number of Fraud	% of Firms	Number of Fraud	% of Firms	Number of Fraud	% of Firms	Number of Fraud	% of Firms	Number of Fraud	% of Firms	Number of Fraud	% of Firms	Number of Fraud	% of Firms			
Agriculture																					
Glass	1	4.0							1	3.1								1	2.3	3	1.1%
Rubber	6	24.0	5	18.5	5	23.8	4	16.7	3	9.4	7	25.9	6	15.8	3	7.1	7	15.9	46	16.4%	
Wholesale Trade					1	4.8			1	3.1			1	2.6	1	2.4			4	1.4%	
Chemicals									1	3.1								1	2.3	2	0.7%
Pharmaceutical Products									1	3.1								1	2.3	15	5.4%
Machinery	3	12.0	3	11.1	1	4.8	2	8.3	1	3.1	3	11.1			1	2.4			1	0.4%	
Pulp Paper									1	3.1											
Financial Institution	1	4.0					1	4.2	1	3.1			1	2.6	2	4.8	4	9.1	10	3.6%	
Construction	3	12.0	2	7.4			3	12.5	4	12.5	1	3.7	2	5.3	2	4.8	3	6.8	20	7.1%	
Retail Trade	3	12.0	4	14.8	1	4.8	2	8.3	5	15.6	1	3.7	5	13.2	3	7.1	7	15.9	31	11.1%	
Communication/Media	3	12.0	4	14.8			6	25.0	3	9.4	4	14.8	9	23.7	8	19.0	2	4.5	39	13.9%	
Metal									1	3.1			1	2.6	2	4.8			4	1.4%	
Non-Ferrous Metal									1	3.1									2	0.7%	
Precision Instruments									1	3.1									2	0.7%	
Other Products									1	3.1									5	1.8%	
Foods	1	4.0			1	4.8	1	4.2	2	6.3	4	14.8	1	2.6	2	4.8	3	6.8	8	2.9%	
Textile	1	4.0																1	2.3	2	0.7%
Steel	1	4.0																			
Electric Appliance	2	8.0	2	7.4	2	9.5	1	4.2	1	3.1	1	3.7	2	5.3	2	4.8	3	6.8	16	5.7%	
Land Transportation	1	4.0	1	3.7	2	9.5			1	3.1			1	2.6			3	6.8	8	2.9%	
Warehousing	2	8.0	2	7.4			1	4.2											4	1.4%	
Services	3	12.0	3	11.1	5	23.8	2	8.3	5	15.6	2	7.4	7	18.4	4	9.5	5	11.4	33	11.8%	
Utilities	1	4.0	1	3.7															1	0.4%	
Real Estate					1	4.8													3	1.1%	
Air Transportation					1	4.8													2	0.7%	
Transportation Equipment					1	4.8													1	0.4%	
Total	25	100.0	27	100.0	21	100.0	24	100.0	32	100.0	27	100.0	38	100.0	42	100.0	44	100.0	280	100.0%	

The fraud firms consist of 280 public firms in Japan. The fraud firm sample that disclosed that inappropriate accounting impacted the prior financial statements or would impact in the future in their annual reports that were issued the period from April 2007 through March 2015 through Tokyo Shoko Research (TSR) Investigation Report. Industry Classification follows TOPIX Section indexes.

As part of this study we analyze the management level where a fraud occurred. As Figure 3 shows that top management has the greatest number of fraud. This result is consistent with Doyle et al. (2007) that company-level material weaknesses are related with accrual management by managers. Figure 3 suggests that fraud initiated by a subsidiary is the second largest group. General speaking, a manager at public firms is evaluated on his or her performance through the firm’s financial performance. When the manager faces negative earnings, the manager has incentives to commit a fraud. However, this fraud committing is to protect the firm as “a house” with selfless spirit, not to get private gains for himself or herself, following the theory of Japanese Management System (Mito 1991, 55-59). The amount of a manager’s compensation remains unchanged following committing a fraud.

FIGURE 3
The Level of Fraud Occurrence by Fiscal Year



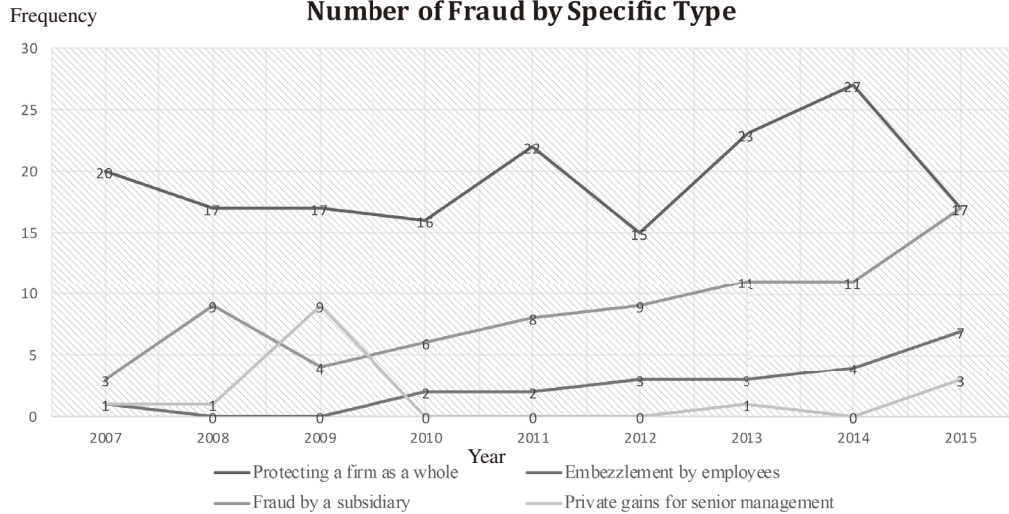
The fraud firms consist of 280 public firms in Japan. The fraud firm sample that disclosed that inappropriate accounting impacted the prior financial statements or would impact in the future in their annual reports that were issued the period from April 2007 through March 2015 through TSR Investigation Report. The fraud occurrence at top management level is the greatest number among the fraud occurrence level and the fraud occurrence at top management has increased since 2011.

Figure 4 presents a breakdown of the specific type of fraud: embezzlement by employees, fraud by a subsidiary, private gains for senior management, and protecting a firm as a whole. Of these four types of fraud, protecting a firm as a whole may be due to an incentive for a manager to be valued more greatly by the company if she or he is viewed as being a protector.

Why does a manager try to protect the firm? Since a manager is evaluated by his or her firm’s financial performance, the manager may try to sustain his or her own authority, social status and reputation. He or she can maintain the authority, status and reputation as long as the firm continues to have good performance. Also, to sacrifice oneself to protect the firm will likely bring that person more

power and enhanced reputation among the directors and employees in his or her company. To protect the firm, the manager can keep power among employees and society, and this results in indirectly sustaining his or her own status (Mito 1991, 55-59).

FIGURE 4
Number of Fraud by Specific Type



The fraud firms consist of 280 public firms in Japan. The fraud firm sample that disclosed that inappropriate accounting impacted the prior financial statements or would impact in the future in their annual reports that were issued the period from April 2007 through March 2015 through TSR Investigation Report. The fraud for protecting a firm as a whole is the greatest number among all the types of fraud.

3.2. Comparisons between Fraud and Non-Fraud Firms

We provide a comparison between fraud and non-fraud firms using a matched control (non-fraud) sample based upon industry and size. Table 3 outlines the sample selection process. We use the following process to select our sample of fraud companies. We start with the two hundred eighty firms that disclosed fraud through the TSR survey. We drop twenty duplicate firms and there are several firms that have multiple fraud during the period. We also drop one financial institution. Finally, we should remove firms that do not have corporate governance data available. This resulted in a final sample of 61 firms that have complete data from 2001 through 2015 in the Nikkei Economic Electronic Databank System (NEEDS). To form a paired sample control group, non-fraud firms are matched with fraud firms on the basis of stock exchange, industry, and size (total assets), time period (2001-2015), and accounting standards (Japanese GAAP).

TABLE 3
Sample Selection

Selection Criteria	Number of Observation
The firms which disclosed inappropriate accounting	280
Less: Duplicate firms	(20)
	260
Less Financial institutions	(1)
Less: The firms that the corporate governance reports are not available	(198)
Total observation	61

4 PRIOR RESEARCH AND HYPOTHESES DEVELOPMENT

Ge and McVay (2005) provide evidence that firms disclosing material weaknesses tend to have innate characteristics such as complexity of operations, small firm size, and poor profitability. We use these characteristics in our analyses and predict that fraud firms tend to have innate firm characteristics, such as financial performance, business complexity, firm size, and firm age. Thus, we posit the following main hypothesis (H1) with four working hypotheses:

H1: There are common innate characteristics of the fraud firms.

Firms manage reported earnings to avoid earnings decreases and losses (Burgstahler and Dichev 1997; Suda and Shuto 2007). Burgstahler and Dichev (1997) find that cash flow from operations and changes in working capital have been used to manage earnings. Therefore, since positive operating cash flows is the result of whether the firm has good sales, managers tend to focus on operating cash flows. Consequently, they try to manage earnings by utilizing operating cash flows. Suda and Shuto (2007) state that Japanese managers have an incentive to manage earnings by focusing on a simple earnings benchmark, nonzero earnings, because firms have no explicit contracts of earnings-based compensation for managers and the compensation is highly sensitive to negative earnings. Thus, we set up the following hypothesis:

Working H1a: Poor financial performance of the firm is associated with a greater propensity to commit fraud.

Firms with business complexity (Ge and McVay 2005, 148) lead to non-intentional errors but

also to intentional errors. We use the number of segments as our measure of business complexity. Thus, we develop the following working hypothesis:

Working H1b: Greater business complexity of the firm is associated with a greater propensity to commit fraud.

While large firms have more assets and resources and may tend to organize their internal controls system better (Ge and McVay 2005, 150), we suggest that larger firms may have more bureaucracy and/or a rigid hierarchy. Such firms may have a culture that makes the reporting of questionable activities much more difficult. Thus, we predict the following working hypothesis:

Working H1c: Larger firm size is associated with a greater propensity to commit fraud.

We also contend that while older, more established firms may have better controls systems (Ge and McVay 2005, 149), they may also have more reputation to protect. In times of financial difficulty, the maintenance of reputation may be very important for survival. Thus, the following hypothesis is appropriate:

Working H1d: Older firms have a greater propensity to commit fraud.

Fama and Jensen (1983) suggest that a higher percentage of outside directors increases the board effectiveness as a monitor of management. To enhance corporate governance, the Amended Companies Act of 2014 enacted and asked public firms to appoint outside directors to the board (Ministry of Justice 2014). Also, firms are to establish “a company with audit and supervisory committee(s)” as a new structure of firm governance in order to improve and better enforce corporate governance (Ministry of Justice 2014, Article 2, 11-2; Article 331, para 3, para. 6). It was expected to strengthen the monitoring of the executives’ management by the internal and external board directors.

Beasley (1996) finds that fraud firms have boards of directors with significantly lower percentages of outside directors than non-fraud firms using the U.S. data in 1980-1991 and that a larger proportions of outside directors significantly reduces the likelihood of fraud occurrences. Moreover, Uzun et al. (2004) document that board composition was significantly related to fraud occurrence by employing U.S. data from the 1978-2001 period. Chen et al. (2006, 424) document that the proportion of outside directors, the number of board meetings, and the tenure of the chair-person are related to the fraud occurrences. Thus, we predict that fraud firms may have tried to reform their governance as well as changing their audit system and mechanisms. However, the expected improvement results failed to occur.

Accordingly, the following hypothesis is posited:

H2: There are positive associations between the governance mechanism and fraud.

5 RESEARCH DESIGN

5.1. Data

We use seven-year data before the fraud detected year for financial data for the analysis. As for governance data, since the Revised Company Law of 2014 enacted in 2014, only one-year data is employed in this study.

5.2. Test Hypothesis

To test working H1a, H1b, H1c and H1d, we implement the t-test of differences in means for our fraud and non-fraud samples. Specifically, we investigate the following four dimensions: financial performance, business complexity, firm size, and firm age. To test H2, we provide a correlation analysis in order to examine whether governance mechanisms such as the composition of board of directors and percentage of outside directors are associated with fraud.

6 RESULTS

6.1. Results 1-H1: The Innate Firm Characteristics

Table 4 provides descriptive statistics of the variables chosen in this study. The descriptive statistics indicates that the mean (standard deviation) of *OCF* and *NI* of fraud and non-fraud firms are 0.038 (0.095) and 0.053 (0.060), and 0.023 (1.034) and 0.034 (0.071) respectively. This indicates that fraud firms' performance is less than that of non-fraud firms.

The mean (standard deviation) of *SEGMENT* of fraud and non-fraud firms are 1.397(0.815) and 1.249 (0.846) respectively. This indicates that fraud firms' business complexity is greater than that of non-fraud firms. The mean (standard deviation) of *AGE* is 4.040 (0.572), and 3.971 (0.560) and the mean (standard deviation) of *SIZE* is 11.217 (2.337), and 10.246 (3.484), respectively. Surprisingly, fraud firms' *AGE* and *SIZE* are greater than non-fraud firms' *AGE* and *SIZE*. The descriptive statistics indicate that the mean (standard deviation) of *GOVERNANCE* of fraud and non-fraud firms are 1.232 (0.626) and 1.129 (0.474) respectively. The mean (standard deviation) of *BOARDSIZE* of fraud and non-fraud firms are 8.983 (3.295) and 8.236 (2.669) respectively and the mean (standard deviation) of *OUTSIDEDIRECTOR* percentage of fraud and non-fraud firms are 23.457 (13.938) and 17.842 (12.422)

respectively. The results of the differences in a firm's performance such as operating cash flows, business complexity, and firm age and size are associated with a higher propensity to observe fraud.

Table 5 shows the correlation coefficients between fraud and firm characteristics. With regard to the correlation coefficient of *FRAUD* and firm characteristics, the Pearson correlation (Spearman correlation) of *FRAUD* and performance *OCF* and *NI* are -0.083 (-0.075) and -0.060 (-0.083) respectively. The Pearson correlation (Spearman correlation) of *FRAUD* and business complexity, *SEGMENT* are 0.089 (0.106). The Pearson coefficient (Spearman coefficient) of *FRAUD*, and *SIZE* and *AGE* are 0.160 (0.118) and 0.060 (0.088) respectively. This suggests that poor firm performance, greater business complexity, longer age, and larger firm size are associated with accounting fraud occurrences. This result supports H1.

TABLE 4
Descriptive Statistic of Firm Characteristics and Board Composition for Fraud Firms and Non-Fraud Firms

Category	Fraud Firms		Non-Fraud Firms		t-value	significance
	Mean	S.D.	Mean	S.D.		
<i>OCF</i>	0.038	0.095	0.053	0.060	-3.224	0.001 ***
<i>OC</i>	3.613	0.117	3.402	1.416	3.429	0.001 ***
<i>NI</i>	0.023	1.034	0.034	0.071	-2.338	0.020 **
<i>FOREIGN</i>	0.835	1.108	0.796	1.060	0.725	0.469
<i>SEGMENT</i>	1.397	0.815	1.249	0.846	3.562	0.000 ***
<i>SIZE</i>	11.217	2.337	10.246	3.484	6.602	0.000 ***
<i>GROWTH</i>	2.990	21.948	2.742	15.071	0.256	0.798
<i>AGE</i>	4.040	0.572	3.971	0.560	2.417	0.016 **
<i>GOVERNANCE</i>	1.232	0.626	1.129	0.474	3.678	0.000 ***
<i>BOARDSIZE</i>	8.983	3.295	8.236	2.669	4.938	0.000 ***
<i>OUTSIDEDIRECTOR_percentage</i>	23.457	13.938	17.842	12.422	8.454	0.000 ***
<i>OUTSIDEDIRECTOR_Independence</i>	69.425	41.104	71.204	43.919	-0.836	0.403
<i>OUTSIDEAUDITOR_percentage</i>	56.725	30.596	56.380	30.024	0.227	0.820
<i>OUTSIDEAUDITOR_Independence</i>	52.930	39.529	47.823	42.176	2.496	0.013 **

Variable Definitions ; *, **, and *** indicate significance at p< 10 %, p< 5%, p<1%;. t-value is based on White's (1980) standard error.
All variables are deflated by total assets in the beginning of the year.

OCF OCF (cash flows from operations) minus mean of OCF

OC Operating Cycle: The log of the average of [(sales/360)/(Average Accounts Receivable)+(Cost of Goods Sold/360)/Average Inventory]

NI Net income/Average assets

FOREIGN Rate of foreign investors sharing

SEGMENT Number of reported business segments

SIZE Log of SALES

GROWTH Sales in the beginning of the year / Sales in the end of the year

AGE The years when the firm passed since the firm was established

GOVERNANCE 1 if the firm is a company with company auditors, 2 if the firm is a company with nominating committee, and 3 if the firm is a company with audit and supervisory committee.

BOARDSIZE Number of Board of Directors

OUTSIDEDIRECTOR_percentage Number of Outside Directors / Number of Board of Directors

OUTSIDEDIRECTOR_Independence Number of Independent Outside Directors / Number of Outside Directors

OUTSIDEAUDITOR_percentage Number of Outside Auditors / Number of Company Auditors

OUTSIDEAUDITOR_Independence Number of Independent Outside Auditors / Number of Outside Auditors

6.2. Results 2–H2: Association between Fraud and Governance

Table 5 shows the correlation coefficient between fraud and corporate governance attributes. With regard to the correlation coefficient of *FRAUD* and corporate governance, the Pearson correlation (Spearman correlation) of Fraud and *GOVERNANCE* and *BOARDSIZE* are significantly 0.093 (0.089) and 0.124 (0.101) respectively. The Pearson correlation (Spearman correlation) of *FRAUD* and *OUTSIDEDIRECTOR* is significant at 0.208 (0.179). However, the Pearson coefficient (Spearman coefficient) of *FRAUD* and *OUTSIDEAUDITOR* are 0.006 (0.011) respectively and are insignificant. This result suggests that there is a positive relationship between fraud and governance variables. Thus, H2 is supported by this result.

7 CONCLUSIONS AND FUTURE RESEARCH

First, we document that the number of accounting fraud increased since 2012 and the accounting fraud occurred at the First Section of the Tokyo Stock Exchange. Accounting fraud is more prevalent in the wholesale, retail, construction, and communication industries. Moreover, accounting fraud occurred at the level of top management and subsidiaries. Since the type of fraudulent financial reporting is related to sales and losses, it is likely that the pressure for performance causes accounting fraud. We find that accounting fraud in Japan occurred at top management level and the manager's incentive to be fraudulent may be related to their need to sustain their authority.

We find that the firms that disclosed a fraudulent financial statement tends to be less profitable, have more complex business activities, have a longer history, and be larger. Also, there is a significant positive association between accounting fraud and governance, board size, and the percentage of outside directors. Our findings suggest that fraud firms may try to work on governance reform through changes in the governance system and mechanisms. Since the Japanese managers, as well as the US managers, do not want to report a negative performance for their company, they are trying to improve financial performance following implementing an improvement in their governance mechanisms. However, it is difficult to understand how expected improvements in governance mechanisms was not followed by improved financial reporting. Possibly the Japanese companies focus on trying to maintain their reputations and fail to realize the importance of improved governance and financial reporting is to their existing and prospective shareholders. Accordingly, further in-depth research is needed.

TABLE 5
Correlations Diagonal

	FRALD	OCF	NI	SIZE	OC	GROWTH	AGE	SEGMENT	GOVERNANCE	BOARDSIZE	OUTSIDE DIRECTOR percentage	OUTSIDE DIRECTOR Independence	OUTSIDE AUDITOR R_percentage	OUTSIDE AUDITOR Independence
FRALD	1.000													
OCF	-0.01	1.000												
NI	0.01	-0.01	1.000											
SIZE	0.01	-0.01	0.01	1.000										
OC	0.01	0.01	0.01	0.01	1.000									
GROWTH	0.01	0.01	0.01	0.01	0.01	1.000								
AGE	0.01	0.01	0.01	0.01	0.01	0.01	1.000							
SEGMENT	0.01	0.01	0.01	0.01	0.01	0.01	0.01	1.000						
GOVERNANCE	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	1.000					
BOARDSIZE	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	1.000				
OUTSIDE DIRECTOR percentage	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	1.000			
OUTSIDE DIRECTOR Independence	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	1.000		
OUTSIDE AUDITOR percentage	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	1.000	
OUTSIDE AUDITOR Independence	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	1.000

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 4 for definition of each variable.

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