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## The Interaction of Power, Tenure, and Financial Fraud in Indonesia

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### ABSTRACT

Previous studies have underlined that non-compliance with regulations/laws and unethical behaviors from corporate governance actors contribute to the poor corporate governance. However, majority of these studies only highlighting on the effectiveness of board of directors and managers, and very few evidence provided from the developing country(s). This study investigates the relationship between the distributions of power within two major internal corporate governance mechanisms: Chief Executive Officer (CEO) and Board of Directors (BOD) and the likelihood of financial statement fraud in Indonesian Public Listed Companies (PLCs) following allegation from the Indonesian Capital Market and Financial Institution Supervisory Board (ICFISMB) during 2001 to 2012. Our main contribution is visualized by incorporating and typifying the characteristic of power between these two corporate governance mechanisms in one of developing countries. An additional analysis on the individual demographic variables as the moderating effect in this relationship also provides a significant insight to this area. We employ principal component analysis on number of characteristic of power related to CEO and BOD to acquire each of three factors that characterize types of power between these key corporate governance actors. Furthermore, we extend the study by analyzing the dyadic pairing of low and high CEO and BOD power relationships and how they influence the likelihood of financial statement fraud in an emerging market country setting. The overall findings suggest when the BOD expert power increases (and to some extent when the BOD ownership power decreases), the likelihood of financial statement fraud decreases through a consistent monitoring and supervising mechanism. In particular, the individual demographic variable of BOD tenure moderates the influence of the dyadic relationship when CEO and BOD have both high level of power on the likelihood of financial statement fraud in Indonesian PLCs. The findings of this study underline the need of the proactive/participatory boards in a company setting to mitigate the likelihood of financial statement fraud. This study supports the calls for maximizing the role of BOD in Indonesian companies comprehensively.

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## INTRODUCTION

Large corporate failures, financial scandals and economic crises in several countries have increased the awareness on the importance of good corporate governance. The wave of accounting scandals occurred in some multinational companies such as Enron, WorldCom, Xerox, etc. during 2001-2002 has re-emphasized on the importance of strong corporate governance system (Rezaee and Davani, 2013; Rezaee and Kedia, 2012; Heninger *et al.*, 2009). According to them, incidences of financial statements fraud more likely damage the public trust on the financial market as they reduce the quality of financial information for the further investors' decision making. They also indicate that opportunities to commit financial statements fraud are more likely occurred in companies with lack of investment in corporate governance and internal controls. In addition, Zahra *et al.* (2005) also suggest that the effective function of internal corporate mechanisms is considered as the most influential factor in the corporate governance system to mitigate the occurrence of financial statements fraud. Internal mechanisms of corporate governance involve the management represented by the Chief Executive Officer (CEO) and Board of Directors (BOD). Their interactions within the corporate governance system provide companies with the ability to improve financial performance through the reduction of the likelihood of financial statements fraud. Likewise, the ineffectiveness of internal mechanisms of corporate governance provides the space for the likelihood of financial statements fraud become greater. Thus, the sound to re-

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establish a stronger internal mechanism of corporate governance is encouraged to mitigate this condition (Rezaee and Kezia, 2012); Heninger *et al.* 2009).

Shleifer and Vishny (1993) and Jensen and Ruback (1983) also highlight that corporate governance plays an important role in distributing a fair right of power and control. It involves the authority to decide the relevant use of company resources to meet the best interest of shareholders. Relevant empirical studies that predominantly refer to the agency theory have focused on the effective function of BOD to ensure management's acts in the best of shareholder's interests through minimizing the incidences of financial statements fraud. The findings also suggest that BOD characteristics like CEO duality, size of independent director, and boards' shareholdings are more likely influence incidences of financial statements fraud in the U.S (Beasley *et al.*, 2010, 2000; Farber, 2005). The study by Sharma (2004) also indicates the positive relationship between CEO duality (and independent directors) and fraud in Australian listed companies. From the management perspective, the research by Dunn (2004) provides evidence on the relationship between the structural power of CEO reflected by his/her duality function in the other managerial post as well as in the boards, and the incidences of financial statements fraud in the U. S listed companies. Dunn (2004) classifies these CEO dualities as the insiders. In addition, he also underlines that the insiders had greater ownership power in alleged fraud companies suggesting when company has the insiders' CEO, the likelihood of financial statements fraud increases.

Extant literature suggests that effective function of two internal mechanisms of corporate governance, CEO and BOD, would reduce the likelihood of financial statements fraud (see for example Carcello *et al.*, 2011; Zahra *et al.*, 2005). It is argued by Hambrick *et al.* (2008) that existing studies narrowing the scope solely on the effectiveness of BOD under agency perspective have resulted relatively limited insights to understand the effective function of internal corporate mechanism towards preventing the likelihood of financial fraud. More specifically, Cohen *et al.* (2008) recommend to expanding the perspective incorporating the various interactions between these two foremost corporate governance actors. According to them, this attempt would contribute more fruitful insights to the practical and theoretical contexts by analysing CEO and BOD and their interactions in the corporate governance system.

Although likelihood of financial statements fraud are relatively frequent, there has been little research concerning the power interactions between both internal mechanisms earlier mentioned and the likelihood of financial statements fraud in Indonesia. Relevant studies from Kusumawati and LS Riyanto, (2006), Siregar and Utama (2006), and Utama and Leonardo (2006) indicate the minor performance of independent directors and audit committee to reduce opportunistic earnings management in state-owned enterprises and PLCs in Indonesia. In addition, the recent study by Jaswadi *et al.* (2012) reports the similar weakness of directors and audit committees, even though they could be effective in mitigating incidences of accounting misstatements by showing high-quality collaboration in the Indonesian PLCs.

Previous studies have been conducted mostly in developed countries adopting one-tier board system. The issue on generalizability raises concern as it may not be representing the corporate governance practice in developed countries or two-tier board system setting. The objective of this thesis is to examine the impact of corporate governance, specifically internal mechanisms of corporate governance as one of significant components of corporate mechanisms to prevent the likelihood of financial statements fraud in an emerging market country. In particular, the study investigates the impact of two foremost internal mechanisms of corporate governance, CEO and BOD, on the likelihood of financial statements fraud in public listed companies (PLCs) in Indonesia. Specifically, the study focuses on the impact of different forms of CEO-BOD interactions on the likelihood of financial statements fraud in Indonesia as one of developing country adopting the two-tier board system.

This remainder of this paper is structured as follows. The next section provides the literature review highlighting related theoretical perspectives and empirical studies to this area of study. The discussion is continued with the research methods and data analysis. The final section provides the conclusion and possible concerns for future studies.

### **1. Literature review and Hypotheses Development:**

It is argued that the effectiveness role of BOD can explain the whole situation of corporate governance practices (Cohen *et al.*, 2008). As previously stated, corporate governance consists of different mechanisms. Hambrick *et al.* (2008) and Zahra *et al.* (2005) emphasize that the role of CEO (and the top management team) as the representation of management is considered as another key actor that influences the good corporate governance practices. Their relationship with BOD also indicates different insights resulted from different types of CEO-BOD power interaction. Pearce and Zahra (1991) develop four matrices of CEO-BOD interactions that influence the performance of company. It consists of: (1) High CEO and BOD powers; (2) High CEO power and Low BOD power; (3) Low CEO power and High BOD power; (4) Low CEO and BOD powers. Furthermore, Cohen *et al.* (2008) provide alternative theoretical foundations that can be rationalized Pearce and Zahra (1991) model of CEO-BOD power interactions on the likelihood of financial statements fraud. They are: resource

dependency theory, managerial hegemony theory and institutional theory. According to Eisenhardt (1989) quoted in Cohen *et al.* (2008), these alternative theories can be used as complementary theories for the agency theory to rationalize the benchmark of good corporate governance resulted from effectiveness of boards' functions.

### **1.1. CEO power and the likelihood of financial statement fraud:**

Past corporate governance research analyzing the relationship between CEO power and the likelihood of financial statement fraud has been considered limited to date in comparison to the study on the relationship among CEO power, strategic decision making, and company performance. CEO plays a key role in the company and it influences the company's ethical atmosphere. Zahra *et al.* (2005) highlight that the CEO's ethical leadership shapes norms and values within the company as there is a significant concern for employees following their leader's attitudes. When he/she acts with integrity and honesty, the potential wrongdoing tends to be limited or at least can be restricted, and likewise. As sum, they conclude that the CEO's lack of willingness and engagement to the ethical behavior could encourage and facilitate fraud as the major sign of poor corporate governance.

As discussed in the previous chapter, Finklestein (1992) develops four types of power attached to Top Management Team (TMT) including CEO. They are structural power, ownership power, expert power and, prestige power. Each of these constructs is developed pertinent to the complex-role of TMT and CEO managing uncertainties using company's internal and external resources. Structural power, ownership power, and expert power are considered as major types of power in TMT and CEO that have greater influence on the strategic decision making whereby the prestige power provides a moderate support to this power measurement in TMT and CEO. With regard to the financial fraud, a subsequent research from Dunn (2004) narrowing to excessive structural and ownership powers of CEO also support the sound of wrongdoing in the strategic choice facilitating the release of false financial information on the convicted fraud listed companies in the U.S. Therefore, it is proposed that:

Hypothesis 1. Companies experiencing financial statements fraud have greater CEO power than companies without such fraud.

### **2.2. BOD power and the likelihood of financial statement fraud:**

The discussion about power of BOD is nothing new in the history of academic discourse. Back to the last four decades, Zald (1969) hypothesizes the power of board relates to their services and control in-between the board member and the executive(s). Their effective power is performed by their prudent actions including the effectiveness in appointing and overseeing the work conducted by the management. Two bases of power are considered affecting their motivation in conducting the given tasks. They are: the external bases of power, covering the stockownership and community legitimation, and the internal base of power provided by their knowledge. The more establish their bases of power, the legitimacy of their prudent actions will be stronger, and yet affecting their position in the relationship with the executive in particular.

The discourse on the concept of BOD as the governing boards has emerged since then. To date, the most notable point is rooted in the perspective of the agency theory focusing the main role of BOD in mitigating managers/principals acting inappropriately to the best interest of shareholders/principals (Jensen and Meckling, 1976). The authority of BOD to monitor and supervise the executive and the top management team enables them to prevent the principals' interests from the potential agency costs (Jensen and Meckling, 1976; Fama and Jensen, 1983).

As summarized by Carcello *et al.* (2011), relevant recent empirical research based on the agency perspective in the relationship between characteristics of BOD power and fraudulent financial reporting support the premise that financial fraud are negatively associated in companies having more independent boards and audit committees, more financial expertise on the boards. In particular to the set of power by Finkelstein (1992), the findings from Dunn (2004) also consistent with this principal-agent perspective noting that the excessive structural and ownership power in insiders' member in BOD is positively associated with the financial fraud.

In accordance to the corporate governance study under a resource dependency theory, the findings from Cohen *et al.* (2007) study's emphasizes the preposition that a resource-dependent focus can add value to the governance structure. With the focus on the resources attached to the external auditors, their result also provide an important insight on the outcome of auditor's judgments. They indicate that when agency and resource dependence factors are stronger, they manage the work by decreasing the planed audit effort and consequently shifting the priority to other critical conditions. It can be posited that when companies having more dynamic resources in their board members, it will contributes to the decrease of the incidences of financial statements fraud. Therefore, it is proposed that:

Hypothesis 2. Companies experiencing financial statements fraud have lower BOD power than companies without such fraud.

### **2.3. The influence of the dyadic relationship within CEO and BOD power interaction on the likelihood of financial statements fraud:**

Previous sections discussed about power of each internal corporate governance mechanism namely CEO and BOD. In accordance with the basic premise given in the beginning of this paper, power reflects the capacity of CEO and/or BOD to employ both formal and informal controls in achieving the desired result or objective (Pfeffer, 1980).

A study by Pearce and Zahra (1991) characterize the interaction between CEO and BOD into four categories narrowing the contributions of board types to the company's performance. They are: (1) *Caretaker Boards*: CEO and BOD both have low powers, visualized by the ceremonial role of BOD (and in some cases also applied to the CEO's); (2) *Statutory Boards*: high CEO power and low BOD power, characterized by ineffective functions of boards in the company; (3) *Proactive Boards*: low CEO and high BOD power; reflected by the dominance role of boards in the company and; (4) *Participative Boards*: both CEO and BOD have high power, signified by the dynamic business climate through active debate, discussion and, disagreement in the company's decision making between CEO and BOD. The findings from Pearce and Zahra (1991) study shows that there are significant differences among the four board types to the company performance highlighting an important insight that powerful boards were associated with superior corporate financial performance.

Another relevant term to describe about this interaction is the dyadic relationship. According to Macionis and Gerber (2011), the dyadic relationship is defined as inter-relationships or interactions between two people or groups within similar organization, in this case is the interaction between CEO and BOD in a company setting. This dyadic relationship reflects both vertical and horizontal associations between CEO and BOD. These types of affiliation are also noted as a principal-agent perspective (agency theory); a strategic perspective (resource dependency theory); an entrenchment perspective (managerial hegemony theory) or a legitimate perspective (institutional theory) as discussed in Cohen *et al.* (2008).

Research in this area specifically associating these interactions with the likelihood of financial statement fraud is very limited. Referring to the alternative theories as discussed above, this study expand the CEO-BOD interactions model developed by Pearce and Zahra (1991) to complement the agency perspective in the model of corporate governance system. More detailed explanations are given in the following sub sections.

#### **2.3.1. High CEO power and High BOD power:**

Pearce and Zahra (1991) classify this situation as participative boards. It is reflected by the intensity of discussion and negotiation between BOD and CEO as well his/her executive team. Unlike the proactive boards where the supremacy of board is considered clearer than the CEO, the participative boards manage the equal level of power with the CEO's in the company. Pearce and Zahra (1991) views two different consequences may result from this condition. When the disagreement arises, it may build different rival factions engaged to these two corporate mechanisms within the company. In the other hand, these 'rivalry' could be adjusted to the extent of negotiations and compromises contributing more effective corporate governance performance eventually.

This situation is also reflected in the resource dependency theory to the extent that the interaction between CEO and BOD powers is essential to complement their individual role and function in a mutual partnership rather than a superior-inferior structure (Cohen *et al.*, 2008; Boyd, 1980; Pfeffer and Salancik, 1978).

Thus, it is presumed that:

Hypothesis 3.a. Companies experiencing financial statements fraud have lower participative boards than companies without such fraud.

#### **2.3.2. High CEO power and Low BOD power:**

Pearce and Zahra (1991) categorize this condition as the statutory boards pointing out the superiority of CEO power as the central figure in the company setting. Under the influence of powerful CEO, the board performs the ritualistic role as "a rubber stamp" of managerial decisions due to lack of interest and expertise, thus promoting a poorer corporate governance practice. In the other word, board powers are only effective on paper legitimizing all management actions without further monitoring and supervision.

This statutory board is also reflected in the managerial hegemony theory and the institutional theory for similar reasons as explained for the caretaker boards. The only different is that the symbolic role of boards as a passive party is more obvious in the statutory boards due to the predominant role of CEO.

Thus, it is suffice to indicate that:

Hypothesis 3.b. Companies experiencing financial statements fraud have statutory boards than companies without such fraud.

#### **2.3.3. Low CEO Power and High BOD Power:**

This condition is considered clarifying the actual function of boards as the governing body in the corporate governance system. Pearce and Zahra (1991) label this situation as proactive boards where the existing power of

BOD surpasses the CEO's likewise in both caretaker and statutory boards. It represents the agency theory as well as the resource dependency perspective where in order proactive boards to exist, they must have relevant attributes such as greater number of independent directors, more financial expert in directors and AC, more meeting frequencies etc. As supported in findings from majority empirical studies in the auditing and accounting field relevant to corporate governance area, the proactive boards will contribute positively to minimize the likelihood of financial fraud due to their effective performance in monitoring and supervising management activities.

Therefore, it is proposed that:

Hypothesis 3.c. Companies experiencing financial statements fraud have lower proactive boards than companies without such fraud.

#### **2.3.4. Low CEO power and Low BOD power:**

Under this situation, the CEO and BOD are viewed as a set of ceremonial functions in a company. Pearce and Zahra (1991) posit both of them perform a stamp activity where the existence of board is only dedicated to validate the executive's decision. It is signed by the lack of qualified directors and outsiders' representation hence limiting the corporate governance credibility. The CEO is also lacking in leadership affected by the coalition of other top executives and their associates to restrict the CEO's authority. Hence caretaker boards (and CEO) do not contribute significantly for overall company performances as well as for minimizing and mitigating the incidence of financial fraud.

This condition is also represented in the institutional theory highlighting the ceremonial and symbolic role of audit committee and independent directors to fulfill the need for legitimacy, instead of to perform an effective role in monitoring and supervising management's behaviors (Cohen et, 2008; DiMaggio and Powell, 1983). Tuttle and Dillard (2007) also provide another implication from this theory suggesting the tendency of board members to be more tolerant in various forms with each other and management as they may come from similar backgrounds.

However, as summarized by Carcello *et al.* (2011) and Cohen *et al.* (2008) relevant studies concerning the caretaker boards from the BOD point of view provide mix results. Some findings indicate that outside and independent directors/AC contributes positively to the company performance and minimizing the audit risk. Some others provide likewise results suggesting a higher occurrence on the likelihood of financial fraud in companies having less financial expertise and independent directors/AC. Nonetheless, they argue that this discrepancy may result from the different time-frame of studies containing pre and post SOX 2002 data.

Several studies in Indonesia context conducted by Kusumawati and LS Riyanto, (2006), Siregar and Utama (2006), and Utama and Leonardo (2006) also indicate the symbolic role of audit committee influencing the minor performance of corporate governance system. Hence, it is proposed that:

Hypothesis 3.d. Companies experiencing financial statements fraud have greater caretaker boards than companies without such fraud.

#### **2.4 The moderating effect of tenures in the relationship between the interaction of CEO and BOD, and the likelihood of financial statement fraud :**

The incidence of fraud involves individual consideration to take a part within. A person is no longer considered as an individual when they are included within an institution. They become a part of a society where they are engaged with various conditions affecting their decision to continue their existence within. Zahra *et al.* (2005) in particular highlight individuals sit on the high-level mechanism are more likely to engage with the fraudulent activity as more pressures from society, industry and organization influence their decision to retain their status quo. They also indicate that the extent of the influence coming from these pressures depends on their personal characteristics such as tenure, age, and gender. The contribution of individuals committing fraud at the highest level in organizations can be either greater or lesser concerning these characteristics.

The baseline of this proposition is reflected in the upper-echelon theory (Hambrick and Mason, 1984). This upper echelon perspective highlights top level management's characteristics, or the upper echelon of an institution, influence the decisions that they make and yet affecting relevant actions accommodated in the company they lead. Finkelstein *et al.* (2009) and Zahra *et al.* (2005) point the demographic characteristics as they are associated with cognitive bases, values, and perceptions that influence the decision making of managers.

Among these demographic characteristics, tenure or length of service has been sought as the most notable variable employed in strategic management and corporate governance studies (Finkelstein *et al.*, 2009). It is regard as the key refinement to the upper-echelon logic as due to its proximity to other demographic profiles. Individuals with longer tenure in top-level of organization are those who are having greater knowledge, experience as well as mature noted in their age. Thus, responding the call from Zahra *et al.* (2005) in concerning the tenure as the moderating effect in study on the interaction of CEO and BOD toward the likelihood of

financial statements fraud we provide empirical evidence whether tenures of CEO and BOD are significantly moderate the main research model.

In particular, Finkelstein *et al.* (2009) also underline the premise that the upper-echelon perspective can be extended to be used in the dyadic relationship between CEO and BOD. Subject to this particular study, the proposition that the advance of tenure increases the power of individuals can be reflected in four different distributions of power between CEO and BOD. The power differentials resulted from the interaction between CEO and BOD powers illustrates various consequences as described in the previous section which also indicate more motivations for them committing to the status quo or likewise.

In addition, Zahra *et al.* (2005) also provide justifications to refine the concern of tenure as the moderating effect based on relevant studies. They posit that short-tenured executives are more likely to commit with the financial fraud whereby long-tenured executives may less likely to engage in fraud actively due to their resistance to change. However, they tend to be more likely the passive acquaintances to fraud.

Another important insight is provided from Beasley (1996) study. He found that the as the length of tenure of outside directors decreases, the likelihood of financial statement increases, and likewise. This suggests the duration of service by the outside directors influences their capability monitor management activities in mitigating the potential incidence of fraud. The finding from Dunn (2004) study also uncovers a related implication. He found that fraud firms are more likely to have short tenures in TMT and BOD than no-fraud firms. It may be due to the excessive power of the insider (CEO who also sit in the board or hold significant shareholdings) facilitating him/her to control the decision making process.

Therefore, hypotheses for the moderating effect of tenure in the interaction between CEO and BOD powers and the likelihood of financial statement fraud are as follow:

Hypothesis 4.a. The shorter CEO and BOD tenures, the lower participative boards in companies experiencing financial statements fraud than companies without such fraud.

Hypothesis 4.b. The shorter CEO and BOD tenures, the greater statutory boards in companies experiencing financial statements fraud than companies without such fraud.

Hypothesis 4.c. The shorter CEO and BOD tenures, the lower proactive boards in companies experiencing financial statements fraud than companies without such fraud.

Hypothesis 4.d. The shorter CEO and BOD tenures, the greater caretaker boards in companies experiencing financial statements fraud than companies without such fraud.

### **3. Research Design and Methodology:**

#### **3.1. Sample Selection:**

The category of matched-pair sample companies (modified for Indonesian condition from Beasley *et al.*; 2010, Sharma, 2004) are determined as follow: (1) The no-fraud companies have to be similarly categorized within the Indonesia Capital Market and Financial Institution Supervisory Agency (ICMFISA) two-digit industry code; (2) None of the matched-sample companies are part of the sample-companies or involve in any kind of reported fraud criteria.

Firstly, we identified listed-companies from ICMFISA annual reports and year end press releases publications supported by the relevant news provided in the leading local business newspapers. Here, both of the ICMFISA annual reports and year end releases publications describe the allegation of fraud into three grouped-perpetrators: issuers and public listed companies; securities transactions and institutions; and investment management. Only those involving public listed companies which specifically related to the violations against provisions of affiliated and conflict of interest transactions, material transactions, particular shareholder disclosures material information which must be disclosed to public and others which are considered involved in falsifying the financial statements are taken for further analysis. This also reflects the term of likelihood of financial fraud as the research topic, instead of financial fraud or financial reporting fraud. It is due to the fact that Indonesia has not established yet the specific criteria/regulation about financial fraud that administered by the specific body just like in the U.S., Australia and some other western countries. The ICMFISA has set up several regulations as the basis for charging public listed companies with allegation of fraud for committing: improper related party transaction disclosure and materially misstated items in the financial statement. According to Kalbers (2009) and Hogan *et al.* (2008), these two criteria are considered as two major indicators of financial statement fraud. Thus the term the likelihood of financial statement fraud is more relevant for this study.

To obtain the sample size for further analysis, three steps of data screening are applied in order to obtain the final sample of fraud companies.

(1) Identify the total number of sanctioned companies during 2001-2012.

(2) Exclude sanctioned companies with: a) duplicated sanctions and, b) sanctions irrelevant with these two criteria mentioned above.

(3) Omit sanctioned companies with: a) incomplete information relevant to the study of financial statement fraud; (b) inaccessible financial reporting and, (c) companies no longer exist or registered in ISX.

The first two sample-selection procedures gain an initial sample of 226 companies experiencing financial statements fraud during 2001-2012. Due to incomplete information relevant to the study (49 companies), inaccessible financial reporting (59 companies) and inactive PLCs (12 companies), the final fraud samples comprised 106 companies.

The ICMFISA applies two-digit industry classification code, grouping nine types of industry. Top three industries were indicated in the financial statements fraud activity: (1) Financial Services, (2) Property, and (3) Chemical. The high occurrence of fraud in financial service industry is similar to findings demonstrated in Sharma (2004) and Beasley *et al.* (2000).

### 3.2. Variables Measurement:

This study relies on prior studies on characteristics attached to key players of corporate governance: CEO and BOD, that fit with the integration of number of theories as described earlier in determining dyadic relationships of power exist between CEO and BOD and to what extent these number of dyadic relationships influence the likelihood of financial statement fraud in Indonesia PLCs. The summary of variables and their measurement is presented as follow:

**Table 1. Summary of Variables and Measurements**

VARIABLES	DIMENSIONS AND INDICATORS
<u>Independent Variables (X):</u> CEO POWER (X1)  BOD POWER (X2)	<ul style="list-style-type: none"> <li>• CEO Dominance: Valued +1 on company with CEO holds other senior management titles held and 0 otherwise.</li> <li>• CEO Duality: Valued +1 on company with CEO who also sits as chairman or member in BOD, and 0 otherwise.               <ul style="list-style-type: none"> <li>• CEO Stock Owned: Percentage of shareholdings held by CEO.</li> </ul> </li> <li>• CEO Related to Founder/Founder of the Firm: Valued +1 on company with CEO is the founder of the company, or is related to the founder and 0 otherwise.</li> <li>• CEO's Family Shares: Percentage of shares owned by the CEO's extended family.</li> <li>• CEO Relatives as Sitting Members on the BOD: Number of sitting BOD members that are related to the CEO.</li> <li>• CEO Functional Background: Valued +1 on company having CEO with accounting or finance expertise, and 0 otherwise.</li> <li>• Outside/Independent Directors: Percentage of outside directors on the BOD.               <ul style="list-style-type: none"> <li>• Size of the BOD: Number of BOD members.</li> <li>• Directors Stock Ownership: Percentage of directors' shareholdings.</li> </ul> </li> <li>• BOD Member(s) as Founders or Relatives of the Founder of Company: Number of BOD members that are either company founders or relatives of the company's founder.               <ul style="list-style-type: none"> <li>• Frequency of Board Meetings: Number of BOD meetings during the year.</li> </ul> </li> <li>• Existence of Audit Committee (AC): Valued +1 on companies with AC and 0 otherwise               <ul style="list-style-type: none"> <li>• AC Size: Number of AC members.</li> <li>• AC Independent Member: Number of independent members of AC.</li> </ul> </li> <li>• AC Expertise: Valued +1 on company having at least one audit committee member with accounting or finance expertise, and 0 otherwise.</li> <li>• AC Meeting Frequency: number of meetings held by AC during the year.</li> </ul>
<u>Dependent Variable (Y):</u> THE LIKELIHOOD OF FINANCIAL STATEMENT FRAUD	Valued +1 on companies with sanctions given by the ICMFISB Valued 0 on companies with sanctions-free by the ICMFISB
<u>Moderating Variable (Z):</u> TENURES	<ul style="list-style-type: none"> <li>• Length of service by CEO</li> <li>• Length of service by Chairman of the board</li> </ul>

Several control variables are included in the research model. They are: Existence of Internal Audit Function; Auditor Size; Age of CEO and Chairman of the board.

Cohen *et al.* (2008) and Beasley *et al.* (2000) highlight that the existence internal auditor provides an important contribution in good corporate governance practice. An earlier finding from Beasley *et al.* (2000) indicate that internal audit existence was less common among fraud companies within technology, health care, and financial services industries in the U.S. The Empirical findings from Carcello *et al.* (2011) and Abbot *et al.* (2010) suggest that the effective collaboration between internal auditor and audit committee in a company provide a better oversight in the company's interna; control system. This measurement of internal audit function in this study is adopted from Beasley *et al.* (2000) highlighting the existence of internal audit function in sample-companies. It is anticipated that internal audit function will be negatively related to financial statements fraud.

Prior relevant studies have indicated that companies with stronger corporate governance are more likely to select and retain high-quality external auditors (Carcello *et al.*, 2011; Cohen *et al.*, 2008). Chen and Zhou (2007) suggest that companies with larger audit committees, more audit committee meetings, and more independent boards are more likely to hire a professional service from reputable Big 4 audit firms. Additionally, Azim (2013) posits that large audit firms employ greater level of competencies than small audit firms which subsequently produce higher audit quality. Thus, it underlines the positive relationship between auditor size and the likelihood of financial statements fraud.

Age influences individuals' decisions concerning both common "street" crimes and white collar one (Zahra *et al.*, 2005; Daboub *et al.*, 1995). More specifically in the decision making process, according to them, the increasing age of senior executives' is associated with deliberateness in decision making, seeking more information for the decision, more accurate diagnosis of the information gathered; less confidence in being right, and greater willingness to reconsider. Thus, they also indicate that the commission of fraud is less likely occurred in a company having older senior executives.

Some researchers have been relating *Gender* to the study on financial reporting quality attributes, particularly earnings management proxies. According to Gul *et al.* (2007), a person's gender might influence the strength of the relationships among industry or organizational pressures and managerial fraud. Sun *et al.* (2010) also suggest that women exhibit greater risk aversion and ethical behavior in the corporate setting. Specifically, they also better at obtaining voluntary information which may reduce the information asymmetry between female directors and managers.

### 3.3. Data Analysis Techniques:

Several methods are employed in different phases of this study inspired from Adams (2004) and Dunn (2004). In the first phase of these examinations, the factor analysis was run on CEO and BOD power dimensions conducted in four phases of factor analyses (see Section 3.3.1) The objective of factor analysis is to ascertain the underlying dimensionality of the CEO and BOD power constructs for further data analysis.

The second phase involves the univariate and multivariate analyses. The univariate analysis employed to summarize the demographic statistic from individual research variables and correlation matrix among variables extracted from the earlier factor analysis. Accordingly for the multivariate analysis, these extracted CEO and BOD power constructs resulted from above procedures is further tested using cross-sectional logit regression to determine the influence of CEO – BOD power interactions on the likelihood of financial statement fraud. The use of this logit regression technique is to predict a binary response from a binary predictor, used for predicting the outcome of a categorical dependent variable (Hosmer and Lemeshow, 2000). In this case, the dependent variable is the match-paired fraud and no-fraud companies generated from the cross section data over 2001-2012 period.

#### 3.3.1. Factor Analyses on Characteristics of CEO and BOD Powers:

For CEO and BOD powers, a series of factor analyses are run to test the factor structure of the power measures as follows:

1. The first phase in this analysis divides the data into yearly panels from 2001 – 2012, and separate factor analyses are run on the set of CEO and BOD power measures included in the study. The aim of this early procedure are: (1) to determine whether there are consistent factor results over time, (2) to determine if the measures separated into factor consistent with the conceptual design and, (3) to determine the extent of variance between the annual panel data results and the comprehensive results.
2. In the second phase of analysis, factor analysis is used on the complete data set over the 2001 – 2012 timeframe. The data are analysed controlling for time-related auto-correlation across the years of data. The resulting factor structure is then compared to the yearly panel results for consistency and stability in the results over time.
3. The final phase is run based on the results of the earlier factor analyses results. The earlier results is used to divide the factors into CEO and BOD power constructs, and then subsequent factor analyses are used to ascertain the underlying dimensionality of the CEO and BOD power constructs.

The results show from all stages of factor analyses show that there are a consistent factor loadings which producing an each of three-factor outputs for both CEO and BOD power. For CEO power, factor 1 consists of CEO stock, CEO related to the founder, CEO family stock and CEO family member in the BOD; and is labeled as "CEO Ownership Power". Factor 2 is comprised of the measures of CEO dominance and CEO functional background; and is labeled as "CEO Structural Power". Factor 3 contains measures of CEO duality and is labeled as "CEO Duality Power". The only exception was found in the cross-section data of no-fraud companies where the measure of CEO duality is loaded with CEO functional background in factor 2, and the measure of CEO dominance is loaded into factor 3 stands alone.

For BOD power, factor 1 consists of the combination of AC existence, AC size, AC independent, AC expertise, and AC meeting frequency measures; and is labeled as "BOD Expert Power". Factor 2 contains

measures of director(s) stock, BOD members as the founders or relatives to the founder of the company, and BOD meeting frequency; and is labeled as “BOD Ownership Power”. Factor 3 is comprised measures of independent directors and BOD size; and is labeled as “BOD Structural Power”.

These factor analyses results also highlight two important insights. Firstly, the use of principal component analysis in different types of data to determine the conceptualized dimensions of both CEO and BOD powers resulting three consistent factors on each CEO and BOD nature of powers. Secondly, each of seventeen indicators in characteristic of power in both CEO and BOD were loaded cleanly into one factor with no significant loading into subsequent factors. However, only the measure of CEO dominance in the factor analysis from the cross-section data of fraud companies and directors stock measure in each cross-section data of fraud and no-fraud companies have a primary factor loading below the 0.60 standard threshold (Hatcher, 1998; Stevens, 1986).

### 3.4. Univariate and Multivariate Analyses:

#### 3.4.1. Correlation Analysis :

The correlation analysis was performed using Pearson product-moment correlation coefficient on constructs resulted from factor analysis as above. Table 3.1 shows the Pearson correlation coefficient for the relationship between each of CEO and BOD powers constructs. All correlations are below 0.50 and majority of them are below 0.30. These generally modest correlations suggest that multicollinearity is not likely to be a problem in the next regression analysis (Persons, 2005).

**Table 7.10:** Correlation test on Powers between CEO and BOD.

	CEO – OWNERSHIP POWER	CEO – EXPERT POWER	CEO – STRUCTURAL POWER	BOD – EXPERT POWER	BOD – OWNERSHIP POWER	BOD – STRUCTURAL POWER
CEO – OWNERSHIP POWER	1.000					
CEO – EXPERT POWER	.000	1.000				
CEO – STRUCTURAL POWER	.000	.000	1.000			
BOD – EXPERT POWER	-.141*	-.227**	-.170*	1.000		
BOD – OWNERSHIP POWER	.286**	.160*	-.044	.000	1.000	
BOD – STRUCTURAL POWER	-.194**	-.102	-.097	.000	.000	1.000
	.006	.147	.170	1.000	1.000	

\*. Correlation is significant at the 0.05 level (2-tailed); \*\*. Correlation is significant at the 0.01 level (2-tailed).

The correlation occurred significantly on the relationship between CEO ownership power and BOD expert power; CEO ownership power and BOD ownership power; CEO Ownership power and BOD structural power; CEO Expert power and BOD expert power; and CEO structural power and BOD expert power. The correlations matrix also indicates that none of correlation between these proxies is considered robust to justify the collinearity concerns. Stone and Rasp (1991) highlight an  $r$  of 0.50 and Gujarati (2002) suggests an  $r$  of 0.80 as the threshold for collinearity concerns in logit. The highest correlation was 0.286 between CEO ownership power and BOD ownership power. It indicates that a company which has the equal high level in the ownership power on both CEO and BOD, tend to gain more experiences on the likelihood of financial statement fraud, vice versa. This circumstance tends to reflect the managerial hegemony perspective. As underlined by Cohen *et al.* (2008) and Patton and Baker (1987) the CEO (altogether with the other senior management teams) is more likely to select cronies and colleagues who are willing to be his or her supporters in the company, and likewise.

#### 3.4.2. Logit Regression Analysis:

The summary of multivariate result as follow presents a comparison logit models to test hypotheses as mentioned earlier.

Table 3.1 presents the result of the logistic regression test examining the influence of the CEO power on the likelihood of financial statement fraud. The model test result is consistent with the expectation indicating fraud companies tend to have greater CEO power than no-fraud companies, and likewise. The Wald statistic result uncovers that CEO structural power influences the likelihood of financial statement fraud significantly and individually. This result is also consistent with Dunn (2004) study suggesting the financial statements fraud is more likely to occur in the company where CEO is also sitting on the Boards and/or hold other senior management post, and likewise.

**Table 3.1:** Logistic Regression Results CEO power and Fraud.

Variables	Hypotheses	Predicted Sign	Beta	Wald
Constant	None	None	2.187	0.016
CEO Ownership Power	H1	+	0.042	0.001
CEO Structural Power	H1	+	-0.445	1.767**
CEO Expert Power	H1	+/-	0.082	0.011
Auditor Size	Control	+/-	0.802	0.345
Internal Audit Existence	Control	-	1.021	0.096
CEO Age	Control	+/-	-0.345	0.639
BOD Age	Control	+/-	0.654	0.875
CEO Gender	Control	-	-0.337	1.002
BOD Gender	Control	-	0.282	0.958
<b>Model Statistics:</b>				
Omnibus test of model coefficients $\chi^2= 36.394$ , $p = 0.031$				
Hosmer and Lemeshow $\chi^2 = 5.211$ , $p = 0.706$				
Cox & Snell $R^2 = 0.413$				
Nagelkerke $R^2 = 0.520$				
Classification Accuracy: Overall = 75.53 %, Fraud = 74.28%, No-Fraud = 77.09%				
*, **, *** $p < 0.05$ and $p < 0.01$ , respectively				

Table 3.2 reveals the logistic regression test on the influence of the BOD power on the likelihood of financial statement fraud. It is also in line with the hypothesis 2 highlighting companies experiencing the financial statements fraud tend to have a lower BOD power than the companies without such fraud. The result also indicates that low BOD expert power and low BOD ownership power influence the likelihood of financial statement fraud significantly and individually, and likewise. The result is also consistent with the finding from Persons (2005) to the extent that likelihood of financial statement fraud is lower in companies having solely independent members in audit committee. In term of ownership, the finding is also consistent with Dunn (2004) to the extent of positive relationship between board shareholdings and the likelihood of financial statement fraud.

**Table 3.2:** Logistic Regression Results for BOD power and Fraud.

Variables	Hypotheses	Predicted Sign	Beta	Wald
Constant	None	None	-7.673	0.562
BOD Expert Power	H2	-	-0.104	17.744*
BOD Ownership Power	H2	+	6.546	6.233**
BOD Structural Power	H2	-	0.216	1.673
Auditor Size	Control	+/-	0.505	0.159
Internal Audit Existence	Control	-	0.200	0.256
CEO Age	Control	+/-	0.012	0.389
BOD Age	Control	+/-	0.024	0.028
CEO Gender	Control	-	0.143	0.389
BOD Gender	Control	-	0.223	0.028
<b>Model Statistics:</b>				
Omnibus test of model coefficients $\chi^2= 63.428$ , $p = 0.000$				
Hosmer and Lemeshow $\chi^2 = 10.228$ , $p = 0.710$				
Cox & Snell $R^2 = 0.526$ ; Nagelkerke $R^2 = 0.601$				
Classification Accuracy: Overall = 80.54 %, Fraud = 82.08%, No-Fraud = 78.46%				
*, **, *** $p < 0.05$ and $p < 0.01$ , respectively				

Appendix 1 details the result of logistic regression test for each of sub-hypotheses 3. The test of hypotheses 3 examines the dyadic power relation between CEO and BOD following the model developed by Pearce and Zahra (1991). The BOD is deemed as the central tenet within the relationship highlighting the effectiveness of BOD function under four different scenarios of power interaction with CEO and categorizing them into relevant terms as discussed in the previous section. The result suggests a significant tendency that supports the insights from agent-principal and resource dependency perspectives for the participative and participatory boards that provide significant contributions to mitigate the potential incidence and risk of financial statements fraud. Consequently, this concept is also relevant with Pearce and Zahra model's (1991) to the extent that these two types of boards were beneficial to maintain the effectiveness of company's performance.

Appendix 2 features the results of logistic regression test for each of sub-hypotheses 4. The results indicate that the individual demographic of CEO and BOD tenures also provides significant contribution in all models of dyadic relationship of power within CEO and BOD that influence the likelihood of financial statements fraud. The employment of CEO and BOD tenures modified the changes in the earlier logistic regression models without the tenures employed within the tests. Finkelstein *et al.* (2009), Hambrick *et al.* (2008), Zahra *et al.* (2005), and Daboub *et al.* (1995) posit that length of services in the job can affect the individual's decisions to commit fraud concerning challenging environments and business uncertainty. The evidences provided in the hypotheses 4 tests are in line with this context suggesting that the shorter tenure of boards categorized in

statutory and caretaker boards relatively strengthens the likelihood of financial statements fraud. In other words, shorter tenure of boards reflects their lack of commitment in mitigating and preventing the incidence of fraud in their company. Therefore, the existence of BOD with low level of power symbolizing their ritualistic roles in the company can provide direct or indirect contribution to the misleading ethical business.

#### 4. Conclusion:

In general, there are two main conclusions that can be drawn from the results of this study. First, the nature of CEO and BOD power that influence the likelihood of financial statements fraud in Indonesian PLCs. The structure of CEO power supports the models from Dunn (2004) and Finkelstein (1992). In comparison to previous studies related to the link between corporate governance mechanisms and the likelihood of financial statements fraud, it is noted that the output of BOD power can be considered as a particular contribution in this study.

Secondly, CEO structural power partially influences the likelihood of financial statements fraud and it also provides an important insight concerning Indonesia has adopted the two-tier board system separating the boards and manager with the restriction on CEO serving as chairman of the board or member of the boards. These empirical results also suggested that the increase of independent and qualified members of BOD, the likelihood of financial statement fraud decreases. In contrary, the tendency of likelihood of financial statements fraud is more likely to occur on companies with boards having a large ownership, and likewise.

In the case of the dyadic CEO-BOD power relations, the results highlighted the important findings on presence of proactive and participatory boards to maintain the effectiveness of company's performance yet reducing the likelihood of financial statements fraud. In the other hand, shorter tenure of statutory and caretaker boards reflects their lack of commitment in mitigating and preventing the incidence of fraud in their company, consistent with Finkelstein *et al.* (2009), Hambrick *et al.* (2008), Zahra *et al.* (2005), and Daboub *et al.* (1995).

As illustrated above, these findings have several interesting implications on future corporate governance and auditing research. First, it takes a step towards fulfilling in the gap between power and the likelihood of financial statements fraud indicating the particular association between existing models of interaction and the likelihood of financial statements fraud. It has preserved a parameter for the development of a more robust model to explore the influence of CEO-BOD power relations on the likelihood of financial statements fraud. Consequently, future studies are encouraged to explore the exact nature of potential proxies relevant to the characteristics of power within CEO and BOD that help to provide the linkage to the best practice of corporate governance.

The issue of the related party transactions (RPTs) remains specific challenge for Asian countries including Indonesia where the extent of vested interests among shareholders, management, and boards has still raised concerns. It is due to the characteristic of local business where family-business or controlled group and large business conglomeration influence the appropriateness of RPTs. Hence, it will also provide queries on the reliability of financial statements and the integrity of capital market and local regulators as a whole (OECD, 2009). Further studies can cope with this issue exploring the extent of RPTs in the relationship between the effectiveness of corporate governance mechanisms and the likelihood of financial statement fraud as has been initiated by Utama and Utama (2014).

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## Appendix 2. The Logistic Regression Results for CEO-BOD power interactions and fraud

### Logistic Regression Results for Test of Hypothesis 3a:

#### Participatory Board and Fraud

Variables	Hypotheses	Predicted Sign	Beta	Wald
Constant	None	None	-0.147	0.014
CEO Ownership Power	H3a	+	-0.704	0.693
CEO Structural Power	H3a	+	0.343	0.035
CEO Expert Power	H3a	+/-	0.826	0.561**
BOD Expert Power	H3a	-	-4.091	7.455*

BOD Ownership Power	H3a	+	-0.936	1.304
BOD Structural Power	H3a	-	0.885	5.219*
Auditor Size	Control	+/-	-0.626	0.019
Internal Audit Existence	Control	-	-3.022	2.078
CEO Age	Control	+/-	0.144	0.301
BOD Age	Control	+/-	0.886	0.659
CEO Gender	Control	-	0.476	0.561
BOD Gender	Control	-	0.450	0.398
Model Statistics:				
Omnibus test of model coefficients $\chi^2= 27.844$ , $p = 0.001$				
Hosmer and Lemeshow $\chi^2 = 9.484$ , $p = 0.782$				
Cox & Snell $R^2 = 0.570$ ; Nagelkerke $R^2 = 0.672$				
Classification Accuracy: Overall = 84.88 %, Fraud = 88.90%, No-Fraud = 80.00%				
*, **, *** $p < 0.05$ and $p < 0.01$ , respectively				

### Logistic Regression Results for Test of Hypothesis 3b: Statutory Board and Fraud

Variables	Hypotheses	Predicted Sign	Beta	Wald
Constant	None	None	-22.469	2.036
CEO Ownership Power	H3b	+	- 0.217	0.045
CEO Structural Power	H3b	+	- 0.039	0.001
CEO Expert Power	H3b	+/-	1.799	1.195
BOD Expert Power	H3b	-	0.388	1.526
BOD Ownership Power	H3b	+	9.460	1.939
BOD Structural Power	H3b	-	- 0.113	0.104
Auditor Size	Control	+/-	0.451	0.141
Internal Audit Existence	Control	-	0.000	2.078
CEO Age	Control	+/-	0.765	1.214
BOD Age	Control	+/-	0.760	1.222
CEO Gender	Control	-	0.581	0.920
BOD Gender	Control	-	0.239	0.847
Model Statistics:				
Omnibus test of model coefficients $\chi^2 = 5.405$ , $p = 0.714$				
Hosmer and Lemeshow $\chi^2 = 4.687$ , $p = 0.608$				
Cox & Snell $R^2 = 0.176$ ; Nagelkerke $R^2 = 0.234$				
Classification Accuracy: Overall = 67.90 %, Fraud = 53.80%, No-Fraud = 80.00%				
*, **, *** $p < 0.05$ and $p < 0.01$ , respectively				

### Logistic Regression Results for Test of Hypothesis 3c: Proactive Board and Fraud

Variables	Hypotheses	Predicted Sign	Beta	Wald
Constant	None	None	-2.899	0.000
CEO Ownership Power	H3c	+	-0.645	0.088
CEO Structural Power	H3c	+	-0.230	0.052
CEO Expert Power	H3c	+/-	-0.133	0.130
BOD Expert Power	H3c	-	-2.836	2.766*
BOD Ownership Power	H3c	+	7.652	8.590*
BOD Structural Power	H3c	-	-0.201	0.031
Auditor Size	Control	+/-	2.597	1.485
Internal Audit Existence	Control	-	0.348	5.896
CEO Age	Control	+/-	-0.247	3.596
BOD Age	Control	+/-	-3.467	1.896
CEO Gender	Control	-	4.674	1.344
BOD Gender	Control	-	-2.205	0.202
Model Statistics:				
Omnibus test of model coefficients $\chi^2 = 55.119$ , $p = 0.000$				
Hosmer and Lemeshow $\chi^2 = 5.870$ , $p = 0.802$				
Cox & Snell $R^2 = 0.625$ ; Nagelkerke $R^2 = 0.809$				
Classification Accuracy: Overall = 87.80%, Fraud = 90.20%, No-Fraud = 87.00%				
*, **, *** $p < 0.05$ and $p < 0.01$ , respectively				

### Logistic Regression Results for Test of Hypothesis 3d: Caretaker Board and Fraud

Variables	Hypotheses	Predicted Sign	Beta	Wald
Constant	None	None	9.727	2.180
CEO Ownership Power	H3d	+	-0.893	0.040
CEO Structural Power	H3d	+	-0.225	0.035
CEO Expert Power	H3d	+/-	1.710	2.058
BOD Expert Power	H3d	-	-4.519	7.488*

BOD Ownership Power	H3d	+	6.784	5.468*
BOD Structural Power	H3d	-	-0.501	0.009
Auditor Size	Control	+/-	0.772	0.054
Internal Audit Existence	Control	-	1.396	1.469
CEO Age	Control	+/-	-1.053	2.032
BOD Age	Control	+/-	0.059	0.301
CEO Gender	Control	-	1.956	0.000
BOD Gender	Control	-	-1.752	0.311
Model Statistics:				
Omnibus test of model coefficients $\chi^2 = 34.872$ , $p = 0.040$				
Hosmer and Lemeshow $\chi^2 = 5.760$ , $p = 0.762$				
Cox & Snell $R^2 = 0.506$ ; Nagelkerke $R^2 = 0.651$				
Classification Accuracy: Overall = 79.10%, Fraud = 73.10%, No-Fraud = 82.90%				
*, **, *** $p < 0.05$ and $p < 0.01$ , respectively				

## Appendix 2. The Logistic Regression Results for CEO-BOD power interactions and fraud with the moderating effects of CEO and BOD Tenures

### Logistic Regression Results for Test of Hypothesis 4a:

#### Participatory BOD and Fraud with Moderating Effect of Tenure

Variables	Hypotheses	Predicted Sign	Beta	Wald
Constant	None	None	4.007	1.385
CEO Ownership Power	H4a	+	5.428	0.967*
CEO Structural Power	H4a	+	1.225	1.639
CEO Expert Power	H4a	+/-	5.973	0.000
BOD Expert Power	H4a	-	-5.226	9.591*
BOD Ownership Power	H4a	+	2.279	4.866*
BOD Structural Power	H4a	-	-0.279	0.591
CEO Tenure	Moderating	+/-	5.180	2.804
BOD Tenure	Moderating	+/-	3.792	1.548
Auditor Size	Control	+/-	-0.493	0.035
Internal Audit Existence	Control	-	-0.158	0.028
CEO Age	Control	+/-	-0.296	1.879
BOD Age	Control	+/-	0.213	0.392
CEO Gender	Control	-	-0.783	0.734
BOD Gender	Control	-	-0.638	0.127
Model Statistics:				
Omnibus test of model coefficients $\chi^2 = 42.960$ , $p = 0.000$				
Hosmer and Lemeshow $\chi^2 = 12.054$ , $p = 0.721$				
Cox & Snell $R^2 = 0.540$ ; Nagelkerke $R^2 = 0.694$				
Classification Accuracy: Overall = 87.60%, Fraud = 89.30%, No-Fraud = 86.90%				
*, **, *** $p < 0.05$ and $p < 0.01$ , respectively				

### Logistic Regression Results for Test of Hypothesis 4b

#### Statutory Board and Fraud with Moderating Effect of Tenure

Variables	Hypotheses	Predicted Sign	Beta	Wald
Constant	None	None	23.142	0.788
CEO Ownership Power	H4b	+	1.037	0.134
CEO Structural Power	H4b	+	-5.649	0.008
CEO Expert Power	H4b	+/-	1.705	0.142
BOD Expert Power	H4b	-	-0.415	0.019
BOD Ownership Power	H4b	+	3.630	0.351
BOD Structural Power	H4b	-	-2.254	0.098
CEO Tenure	Moderating	+/-	-0.370	0.161
BOD Tenure	Moderating	+/-	41.082	0.830*
Auditor Size	Control	+/-	-1.999	-0.436
Internal Audit Existence	Control	-	-0.150	1.004
CEO Age	Control	+/-	-0.648	0.053
BOD Age	Control	+/-	0.383	0.478
CEO Gender	Control	-	0.795	0.083
BOD Gender	Control	-	-1.082	0.481
Model Statistics:				
Omnibus test of model coefficients $\chi^2 = 33.139$ , $p = 0.030$				
Hosmer and Lemeshow $\chi^2 = 2.855$ , $p = 0.819$				
Cox & Snell $R^2 = 0.579$				
Nagelkerke $R^2 = 0.774$				
Classification Accuracy: Overall = 85.00%, Fraud = 80.50%, No-Fraud = 89.10%				
*, **, *** $p < 0.05$ and $p < 0.01$ , respectively				

**Logistic Regression Results for Test of Hypothesis 4c:  
Proactive Board and Fraud with Moderating Effect of Tenure**

Variables	Hypotheses	Predicted Sign	Beta	Wald
Constant	None	None	-2.899	1.373
CEO Ownership Power	H4c	+	2.597	3.059
CEO Structural Power	H4c	+	0.645	0.088
CEO Expert Power	H4c	+/-	10.350	4.163*
BOD Expert Power	H4c	-	2.836	2.766*
BOD Ownership Power	H4c	+	3.630	0.351**
BOD Structural Power	H4c	-	-0.133	0.130
CEO Tenure	Moderating	+/-	-0.348	5.896**
BOD Tenure	Moderating	+/-	-2.205	3.202*
Auditor Size	Control	+/-	-0.201	0.031
Internal Audit Existence	Control	-	-3.467	1.896
CEO Age	Control	+/-	4.674	1.344
BOD Age	Control	+/-	0.247	3.596
CEO Gender	Control	-	4.031	1.767
BOD Gender	Control	-	1.485	3.059
<b>Model Statistics:</b> Omnibus test of model coefficients $\chi^2 = 55.119$ , $p = 0.000$ Hosmer and Lemeshow $\chi^2 = 5.870$ , $p = 0.836$ Cox & Snell $R^2 = 0.564$ Nagelkerke $R^2 = 0.755$ Classification Accuracy: Overall = 87.80%, Fraud = 93.20%, No-Fraud = 80.00% *, **, *** $p < 0.05$ and $p < 0.01$ , respectively				

**Logistic Regression Results for Test of Hypothesis 4d:  
Caretaker Board and Fraud with Moderating Effect of Tenure**

Variables	Hypotheses	Predicted Sign	Beta	Wald
Constant	None	None	10.738	8.886
CEO Ownership Power	H4d	+	-0.085	0.415
CEO Structural Power	H4d	+	-0.244	0.611
CEO Expert Power	H4d	+/-	-1.088	13.589*
BOD Expert Power	H4d	-	-0.184	0.120*
BOD Ownership Power	H4d	+	-0.202	1.891
BOD Structural Power	H4d	-	-0.475	0.066
CEO Tenure	Moderating	+/-	4.506	7.499
BOD Tenure	Moderating	+/-	6.926	5.548*
Auditor Size	Control	+/-	-0.570	0.006
Internal Audit Existence	Control	-	-0.021	0.028
CEO Age	Control	+/-	0.172	2.246
BOD Age	Control	+/-	0.066	0.361
CEO Gender	Control	-	1.406	1.443
BOD Gender	Control	-	-2.213	0.417
<b>Model Statistics:</b> Omnibus test of model coefficients $\chi^2 = 35.388$ , $p = 0.018$ Hosmer and Lemeshow $\chi^2 = 6.068$ ; $p = 0.764$ Cox & Snell $R^2 = 0.510$ Nagelkerke $R^2 = 0.757$ Classification Accuracy: Overall = 76.60%, Fraud = 65.40%, No-Fraud = 83.40% *, **, *** $p < 0.05$ and $p < 0.01$ , respectively				