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## The Complexity of Governance and Internal Audit Independence

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The Complexity of Governance and Internal Audit Independence

by

Lily Bi

A dissertation submitted in partial fulfillment  
of the requirements for the degree of  
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## **ABSTRACT**

Independence is a critical foundation of all internal audit functions and internal audit services. The Institute of Internal Auditors (IIA) sets The International Standards for Professional Practice of Internal Auditing, which requires that internal audit functions maintain independence, and chief audit executives functionally report to the “board.” The term “board” is interpreted differently in different countries due to the country’s governance models. The diverse corporate governance models create different board structures and the CAE’s reporting relationship with the board. Additionally, the lack of regulatory mandate about internal audit created a reality that internal audit functions are positioned differently depending on organizations. Through this research, I plan to compare the three typical corporate governance models and investigate how each model impacts internal audit independence, and how internal audit independence is reflected in the actual audit practices.

I utilized the data from the recent global internal audit survey and selected the five representative countries - Austria, China, Germany, Japan, and the U.S. The criteria to evaluate internal audit independence are drawn from the IIA’s Standards. This study reveals that internal audit functions do not conform to the IIA's independence requirements. We conclude that the governance factors, specifically the board structure, has a significant effect on both internal audit independence and related audit practices. This is the first research that extends the understanding of the impact of corporate governance on internal auditing.

## **CHAPTER ONE: INTRODUCTION**

### **1.1 Background of the Study**

The credibility and value derived from assurance services by auditors are grounded in the foundation of auditors' independence, both mind and in appearance. Researchers have examined the auditors' independence in the context of external auditors. (Jenny et al. 2010) In recent years, the issues associated with the internal auditors' independence and objectivity began to become of the interest of researchers. (Jenny et al. 2010, and Dordevic, et al. 2017).

Internal auditors assure an organization's governance, risk management, and internal controls. Unlike external auditors, who are ostensibly independent of the organizations they audit, internal auditors typically are employees of the organizations that they audit, and therefore face internal pressures from management to change their audit findings (Chambers, 2015). For example, the 2015 survey data from the Institute of Internal Auditors (IIA) Research Foundation, suggests that this kind of pressure is pervasive with more than half of chief audit executives (CAEs, heads of internal audit functions) surveyed by the IIA reporting being directed by management to change findings at some point in their careers. The best antidote for such pressure is unwavering support for internal audit independence—from the board and the audit committee. (Rittenberg and Miller, 2015)

The International Standards for Professional Practice of Internal Auditing (the Standards) set by the IIA, require that internal auditors maintain independence and be free from conditions that threaten their ability to fulfill their responsibilities in an unbiased manner. Internal audit

independence ensures they have direct and unrestricted access to the board and senior management and can conduct any audit engagements with no limitation.

With the focal point of internal audit independence being the chief audit executive's reporting relationship with the board, the IIA defines the board as "the highest-level governing body charged with the responsibility to direct and/or oversee the organization's activities and hold senior management accountable" (The IIA, 2017, p. 21). However, the term "board" is interpreted differently in different countries because of the variations in corporate governance. Hence the CAE reporting relationship with the board is vastly different.

The term "corporate governance" was not used until the mid-1970s (Cheffins, 2011). The Organization for Economic Cooperation and Development (OECD) is one of the leading professional bodies focused on the development of corporate governance principles. The main idea in developing these principles was that there would not necessarily be a single model of corporate governance that is generally accepted in all countries and organizations (Boța-Avram and Răchișan, 2013). Further, the authors analyzed the similarities between OECD principles and European corporate governance codes from an internal audit perspective and could not find any similarity in the internal audit recommendations in the context of corporate governance.

Tradition, history, culture, and legal systems have created the world's diverse corporate governance models. The three typical representations of governance models are the Anglo-American, the Germanic, and the Japanese (Clarke, 2016). The board structure or board tiers are described below:

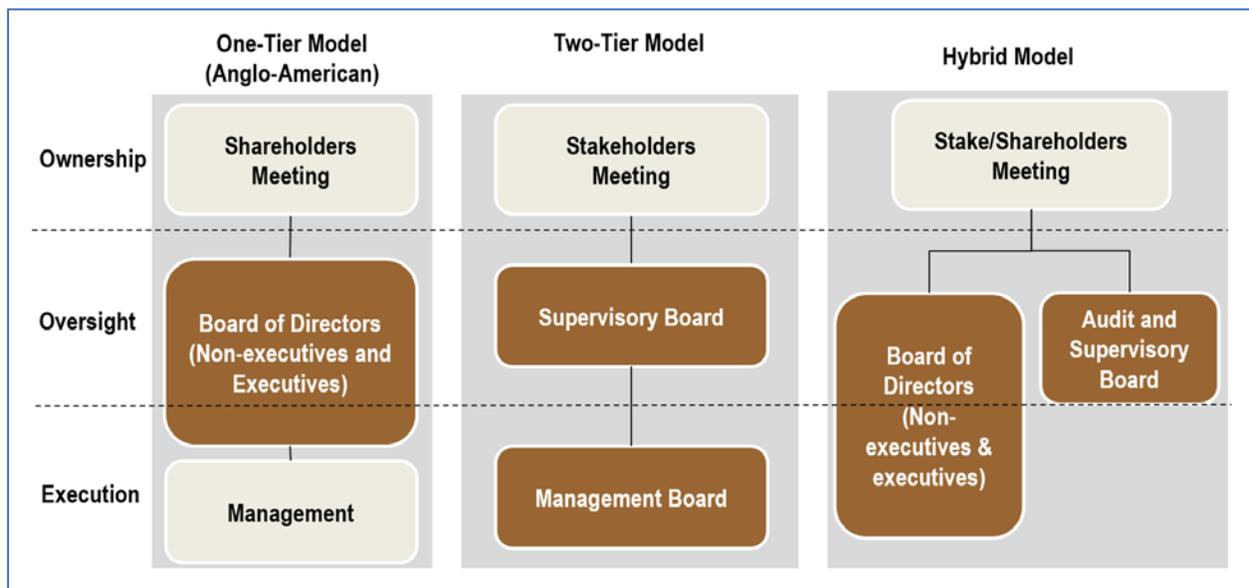
- The one-tier board model, also known as the Anglo-American model, is widely adopted in the publicly traded companies in the United States (US), United Kingdom (UK), Canada, Australia, and New Zealand. This board model is characterized by only one board of

directors. The shareholders elect the board of directors. The primary duty of the board is to oversee management performance on behalf of shareholders. The board is responsible for selecting a well-qualified chief executive officer (CEO) and monitoring how the CEO works with other management and runs the corporation on a daily basis. The board can be divided into several committees, for example, nominating committee, compensation committee, and audit committee. In this model, the audit committee typically oversees the organization's internal audit function (The US Business Roundtable, 2016).

- The two-tier board model is widely adopted in the publicly traded companies in Germany, Switzerland, Sweden, Austria, Denmark, Norway, and Finland, and is characterized by a two-tier board structure, the supervisory board, and the management board. The supervisory board is appointed by the shareholders at the general meeting. It is directly involved in decisions of fundamental importance to the enterprise and appoints. The supervisory board elects, supervises and advises the management board, who is responsible for managing the enterprise. In the ordinary course of business, the responsibilities of the management board in a German company are similar to those of the senior executives of a U.S. company (Regierungskommission Deutscher Corporate Governance Kodex, 2017 and Austrian Working Group for Corporate Governance, 2015)
- Japanese (hybrid) model is adopted in the publicly traded companies in Japan and China. This hybrid model has the board of directors and the audit and supervisory board, both of which are elected by the general shareholders meeting. The board of directors sets the direction of the company. The shareholders assign the fiduciary responsibilities to the audit and supervisory board, whose roles and responsibilities include auditing the performance of directors' duties and makes independent and objective decisions. The audit and supervisory

board in Japan is also tasked by shareholders to appoint and dismiss external auditors, and determine the remuneration of external auditor (Japan Tokyo Exchange, 2015)

Essentially, every corporate governance theory is at the core of power theory. (Licht, A. 2004) The American corporate governance scheme adheres to the interest and primacy of shareholders. Its German and Japanese counterparts usually put more focuses and have stronger protection for other constituencies such as staff, creditors, and non-shareholders. With the board structure being the focal point of the corporate governance, I depict the board structures under the three distinct governance models in the figure below (See Figure 1).



**Figure 1.** Board structure under the three distinct governance models

Given the significant differences in the governance models, it is plausible that these differences may affect the functioning of the internal audit function. For example, are there differences in how the internal audit function (IAF) is positioned in the organization, whom the chief audit executive reports to, and whether IAFs are more or less independent.

## 1.2 Research Purpose and Questions

The purpose of the research is to investigate the relationship between the three governance models and internal audit independence, factors impacting internal audit independence, and whether and how internal audit independence is reflected in the actual practices of internal auditing. As governance has many elements and dimensions, the focus of this research is three governance factors: 1) the board structure – whether the organization adopts a one-tier, two-tiers or hybrid board; 2) whether an audit committee exists in the organization; and 3) whether internal audit function is mandated by law.

The following research questions guide the study and literature review:

- **RQ1: What are the factors that impact internal audit independence?**
- **RQ2: How is the internal audit independence reflected in the actual internal audit practice, specifically the CAE's interactions with the board, the sufficiency of internal audit budget, unrestricted access to company resources, the communication of risks?**

As independence is at the internal audit department or function level, the unit of analysis of this research is the internal audit function of an organization.

## 1.3 Expected Contribution

The internal audit role is the critical interest point for management and the board of directors because of its strategic position. The internal audit function is to assist the organization in achieving its goals by assessing and improving risk management efficiency and internal control procedures. Although the IIA defines the requirement of the CAE reporting line and internal audit independence, none of these requirements are included in laws and governance

codes for publicly listed companies. Additionally, none of these governance codes mention the role that boards play in internal audit independence.

There have been some academic articles on corporate governance and internal audit independence, but the relationship between internal audit functional independence and board structure is relatively unexplored. Understanding the factors impacting internal audit would help organizations to better position the internal audit function to improve its independence, which subsequently provides better services and add more value to its organization.

The diverse corporate governance models create different board structures, internal audit positioning in an organization, and the CAE's reporting relationship with the board. The IIA has not found a one-size-fits-all definition of "board." With each update of the Standards, the term "board" is redefined. This research is potentially helpful to the IIA to have a better understanding of complex governance structures and create a better definition of the term "board" and clarify the CAE's relationship with the board in the standards. These changes would ultimately enhance internal audit function's independence, and support IIA's efforts in advocating better governance to global regulators.

## CHAPTER TWO: LITERATURE REVIEW

### 2.1 Literature Review and Hypothesis

The research aims to investigate the complexity of governance and internal audit independence. Over the last two decades, there has been a flood of initiatives around the world to update and improve corporate governance. These efforts have multiplied since the global financial crisis, reflecting a strong desire for corporate transparency, economic efficiency, and protection of shareholders and the public interest. Countries and professional associations tend to give their own definitions of corporate governance. Here are a few examples of corporate governance definitions.

- OECD (2015) put corporate governance focus on the organization's shareholders and stakeholders, their relationships, and the organization's structure. It indicates that corporate governance provides the framework and structure through which the organization sets its objectives and determines how the objectives are accomplished and how performance is monitored.
- Aguilera & Jackson (2003) describes the corporate governance as the interactions among stakeholders in the decision-making process and the control of corporate assets.
- The IIA focuses on the board and the organization's internal structure and process. It defines "The combination of processes and structures implemented by the board to inform, direct, manage, and monitor the activities of the organization toward the achievement of its objectives" (The IIA, 2017, p. 25).

Unlike the IIA, other organizations and researchers focus on the external mechanism of

corporate governance. They review corporate governance at a macro level with a focus on its ownership and oversight aspects and examine its external mechanism—the relationship between shareholders or stakeholders, the board, and the corporation. The IIA’s definition of governance is at the micro-level, with a focus on the oversight and execution aspects of governance. It defines the internal governance mechanism—the process and structure of an organization, involving players from the board of directors, management, and internal auditors.

Though many different definitions and focuses on corporate governance, many scholars like Jensen and Meckling (1976) articulate that governance’s vital issue at the core is the agency problem, which is the separation of ownership and control in contemporary public corporations. According to the agency theory, the control obligation rests with the board, who serve as the agents of the shareholders. In turn, as the board meets only a few times a year, it then appoints management (as its agents), led by the CEO, to manage the daily operation of the organization. While the external auditors provide an independent and unbiased opinion about the fairness of the company’s financial statement, the independent internal audit function provides the board with broader assurance. Internal audit services go beyond the review of the company’s finance and accounting; they assess the risks and controls associated with the operations. Adams (1994) claims that in this context, the agency theory offers the foundation for explaining the autonomous role and duties of the internal audit function.

The following is a list of concepts and definitions from the IIA’s Standards about internal audit independence.

“1100 – Independence and Objectivity: The internal audit activity must be independent, and internal auditors must be objective in performing their work. Independence is the freedom from conditions that threaten the ability of the internal audit activity to carry out internal audit

responsibilities in an unbiased manner. To achieve the degree of independence necessary to effectively carry out the responsibilities of the internal audit activity, the chief audit executive has direct and unrestricted access to senior management and the board. This can be achieved through a dual reporting relationship. Threats to independence must be managed at the individual auditor, engagement, functional, and organizational levels.

1110 – Organizational Independence: The chief audit executive must report to a level within the organization that allows the internal audit activity to fulfill its responsibilities. The chief audit executive must confirm to the board, at least annually, the organizational independence of the internal audit activity. Organizational independence is effectively achieved when the chief audit executive reports functionally to the board. Examples of functional reporting to the board involve the board:

- Approving the internal audit charter.
- Approving the risk-based internal audit plan.
- Approving the internal audit budget and resource plan.
- Receiving communications from the chief audit executive on the internal audit activity's performance relative to its plan and other matters.
- Approving decisions regarding the appointment and removal of the chief audit executive.
- Approving the remuneration of the chief audit executive.
- Making appropriate inquiries of management and the chief audit executive to determine whether there are inappropriate scope or resource limitations.

1110.A1 – The internal audit activity must be free from interference in determining the scope of internal auditing, performing work, and communicating results. The chief audit executive must disclose such interference to the board and discuss the implications.

1111 – Direct Interaction with the Board: The chief audit executive must communicate and interact directly with the board.” (The IIA, 2017, p. 3 to 4)

I began by reviewing the various Company Acts or Governance Codes to determine how these IIA Standards are incorporated. As the research focus is on the three representative governance models, we examined the US, German and Japanese corporate governance codes and found that internal audit is rarely mentioned in these codes, and the majority of the internal audit independence requirements promulgated by the IIA Standards are largely ignored.

In the United States, there is no corporate governance code. The state corporate laws and federal securities laws, such as the Securities Exchange Act of 1934, serve as the primary regulatory sources relating to corporate governance. The US Business Roundtable has been the leader in setting the principles of corporate governance for the US public companies. It suggested that the audit committee plays oversight roles of the internal audit function, including the hiring and firing the senior internal audit executive and annual evaluation of the internal audit function’s efficiency and efficiency. The audit committee ensures appropriate funds and support for the internal audit staff to fulfill their responsibilities, review the scope of the internal audit plan, significant findings from the internal audit function and responses to these findings from the management. (The US Business Roundtable, 2016).

In Germany, the Supervisory Board shall establish an audit committee, whose responsibilities include oversight of the effectiveness of the risk management system and internal

control processes, the internal audit and compliance function (Regierungskommission Deutscher Corporate Governance Kodex, 2017).

In Japan, the board and Audit & Supervisory Board needs to ensure adequate coordination with internal audit function, external auditors, and outside directors. (Japan Tokyo Stock Exchange, 2015)

As these governance codes are silent on the CAE's reporting relationship with the board or audit committee, organizations have the freedom to decide the position of the CAEs and internal audit functions. In the exam of European countries, too few nations (only 9 out of 27) provide explicitly adequate information in their regulations about the internal audit independence (Boța-Avram and Răchișan 2013).

It is unrealistic, unfounded, and unimaginative to believe that all nations will embrace the same corporate governance framework (Clarke, 2016). The fundamental features of different corporate governance are likely to be continued. The OECD, International Monetary Fund (IMF), World Bank, Asian Development Bank, and other international agencies acknowledged the presence of distinct governance systems and proposed that they would not want to embrace a one-size-fits-all strategy because various systems are better at serving different things. As the research focus is on the three representative governance models, I examined the US, German, and Japanese corporate governance codes. Internal audit is rarely mentioned in these codes, seven times in the US governance code, only once in the German governance code and twice in the Japan governance code. The table below shows that the majority of the internal audit independence requirements promulgated by the IIA Standards are ignored in these governance codes (See Table 1).

**Table 1.** Three countries' governance codes about internal audit independence

Independence requirements per the IIA Standards	Governance Code		
	US	Germany	Japan
Organizational independence is effectively achieved when the CAE reports functionally to the board.			
The CAE has direct and unrestricted access to senior management and the board.			
The board approves the internal audit charter.			
The board approves the risk-based internal audit plan.	Yes		
Examples of functional reporting to the board involve the board:			
<ul style="list-style-type: none"> <li>• Approving the internal audit budget and resource plan.</li> </ul>	Partial		
<ul style="list-style-type: none"> <li>• Receiving communications from the chief audit executive on the internal audit activity's performance relative to its plan and other matters.</li> </ul>	Yes		
<ul style="list-style-type: none"> <li>• Approving decisions regarding the appointment and removal of the chief audit executive.</li> </ul>	Yes		
<ul style="list-style-type: none"> <li>• Approving the remuneration of the chief audit executive.</li> </ul>			
<ul style="list-style-type: none"> <li>• Making appropriate inquiries of management and the chief audit executive to determine whether there are inappropriate scope or resource limitations.</li> </ul>	Yes		

\* Blank means the respective independence required is missing in the governance code.

As there is no regulatory requirement about internal audit independence, one should not be surprised that internal audit functions are positioned differently depending on organizations. Bariff (2003) argues that internal audit independence is at risk when the CAEs are appointed or dismissed by their audit clients. McHugh and Raghunandan (1994) found that vesting the CAE appointment authority with the audit committee would enhance internal audit independence. Gwilliam and Kilcommins (1998) suggested that the vast majority of internal audit functions (IAF) in organizations with an audit committee presence would be perceived enhanced.

Gramling Coram 2004) conducted a series of in-depth interviews of internal auditors and audit committee (AC) members and concluded that ACs might elevate internal auditors' status in the organizations and enhance their objectivity and independence. He argued that a quality relationship between the audit committee and the IAF provides the IAF with a better support system in fulfilling its activities. Turley and Zaman (2007) did similar interviews with a large UK financial services company and suggested that an AC can set a tone at the top that allows the internal audit to have appropriate authority and influence in the organization. Christopher et al. (2009) sampled 34 Australian companies to examine internal audit independence. With the focus of the IAFs' relationships with AC and management, the researchers identified several threats to the audit independence, such as CAEs not reporting functionally to the AC, the AC not responsible for appointing and evaluating the CAE.

Arena and Azzone (2007) and Lenz and Sarens(2012) argue that effective IAFs might have helped Enron's scancel and Lehman Brothers' failure. Ronkko, Paananen, and Vakkuri (2018) argue that less than half of companies voluntarily choose to establish an internal audit function, even though the internal audit function provides significant value to improve the organization's governance processes (Coram et al, 2008), and detect fraud (Ege, 2015).

Whether an internal audit function is required in an organization depends on the respective regulatory requirements governing the organization. Stock exchanges around the world created their own governing rules regarding internal audit mandate. Not all regulations require their publicly traded companies to have internal audit functions. German and Japanese governance codes require publicly listed companies to establish an internal audit function. The New York Stock Exchange (NYSE) in the US have the same mandate for its publicly-traded companies. Its mandate also includes an internal audit function providing assurance services

through ongoing assessments of the company's risk management systems and internal control processes. However, publicly-traded companies on the NASDAQ Stock Market LLC are not required to establish and maintain an internal audit function.

Braiotta (1999) research concluded that the CAE meetings with the audit committee in an executive session would protect and enhance the independence of the internal audit function.

Drent (2002) indicates that in the minds of many executives and managers, internal auditors work for them, management does not always appreciate the need for internal audit independence, and the CAE's reporting to the audit committee is merely a formality to comply with corporate governance requirements.

In this paper, I test the following hypotheses:

- H1: The board structures impact internal audit independence.
- H2: Internal audit functions in organizations with an audit committee have higher levels of independence than internal audit functions in organizations without an audit committee.
- H3: Internal audit functions that are mandated by law have higher levels of independence than internal audit functions that are not mandated by law.
- H4a: Internal audit functions that have higher levels of independence are more likely to have support from the board.
- H4b: Internal audit functions that have higher levels of independence are more likely to have a sufficient budget.
- H4c: Internal audit functions that have higher levels of independence are more likely to have complete and unrestricted access to the organization's property and records.
- H4d: CAEs from internal audit functions that have higher levels of independence are more likely to meet with the audit committee in executive sessions.

- H4e: Internal audit functions that have higher levels of independence are more likely to conform with the standard 2600 (communicating unacceptable risks to the board).
- H5a: The board structures have an impact on the board's support to IAFs.
- H5b: The board structures have an impact on the sufficiency of IAFs' budget.
- H5c: The board structures have an impact on the IAFs' complete and unrestricted access to the organization's property and records.
- H5d: The board structures have an impact on whether CAEs meeting with the audit committee in executive sessions
- H5e: The board structures have an impact on the IAFs' conformance with the standard 2600 (communicating unacceptable risks to the board).

## **CHAPTER THREE: RESEARCH METHOD AND DATA**

### **3.1 Research Method**

Quantitative research objectively tests theories by investigating the relationships among variables that are statistically analyzed to conclude (Creswell, 2009 and 2017). Following Creswell's methodology, the study investigates the factors impacting internal audit independence and how the internal audit independence is reflected in the actual practice.

### **3.2 Data Collection and Sampling**

Once every five years, the IIA commissions a survey of the internal audit professionals. The Common Body of Knowledge (CBOK) study is by far the world's largest study of the internal audit profession. This comprehensive survey contains detailed questions about various issues ranging from the characteristics of participating organizations, their internal audit function, and individual internal auditors and their practices. The most recent 2015 CBOK study was offered in 23 languages with participation from 14,500 practitioners from 166 countries/territories. The survey results provide a comprehensive overview of how the internal audit profession is practiced and potential changes in the future.

I identify several CBOK survey questions and responses about the variables related to the investigation of the governance, internal audit independence, and internal audit practices. Only responses from CAEs are selected for the analysis of the study to ensure that each participating company has only one representative response from its head of internal audit function. To identify whether the three different types of board structure is a factor impacting internal audit

independence, I selected five countries representing these models, the US representing one-tier board country, Germany and Austria for two-tier board countries, Japan and China for the hybrid model countries. Though a number of countries, such as France, Spain, and the Netherlands, adopt a two-tier board structure, they also allow one-tier board.

Because the governance structure can be different among publicly traded companies, private companies, and government and public sector entities even within the same country, I focus only on publicly traded companies. As publicly traded companies in the five sample countries are required to follow their countries' security exchange laws or governance codes, it is reasonable to assume that the listed organizations in the US adopt one-tier board structure, the listed organizations in Austria and Germany have two-tiers boards, and the listed organizations in China and Japan have the hybrid board model.

However, due to the small number of responses from CAEs of German and Austrian publicly traded companies, I added privately traded companies from these two countries to increase the sample size. Though publicly-traded companies and private limited companies in Germany follow different acts, there is a mandatory requirement in the German corporate law that requires the separation of a supervisory board, a management board for stock corporations, and large limited liability companies (Baums, 1999). Additionally, the results of a sequence of Mann–Whitney U test revealed that there is no significant difference in internal audit independence distribution between privately held and publicly traded organizations in Germany ( $p = 0.237$ ) and Austria ( $p = 0.999$ ).

After going through the above filtering process, I selected a total of 393 CAEs responses from 5 countries for this research. Table 2 below shows the sample from the five countries.

**Table 2.** Summary of selected sample responses

Board	Country	Publicly traded	Privately traded
One-tier board	US	178	
Two-tiers board	Germany	17	55
	Austria	3	12
Hybrid board	Japan	81	
	China	47	
Total		393 responses	

Note for Japan – While this research focuses on the traditional Japanese governance model, the Japanese Governance Code revised in 2015 allows two other types of governance structures. However, at the time of the CBOK survey, (early 2015), 98.3% of the listed companies in Japan adopted the traditional board model in Japan<sup>1</sup>. It is, therefore, reasonable to assume the responses from the CAEs of the Japanese listed companies adopted the hybrid (traditional Japanese) model.

### 3.3 Research Variables

To investigate the factors that impact internal audit independence, whether and how the internal audit independence is reflected in actual internal audit practice, I selected three sets of test variables 1) internal audit independence, 2) factors that potentially impact internal audit independence, and 3) internal audit practices related to its independence.

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<sup>1</sup> Tokyo Stock Exchange Listed Companies White Paper on Corporate Governance 2015)

### 3.3.1 Internal audit independence (IAI)

In order to measure the independence of the internal audit function (IAI), I created a proxy for the independence of the IAF based on the independence requirements set by the IIA’s Standard 1110.

- A. CAEReport – Whether the CAE functionally reports to the board, including approval of the internal audit charter and the audit plan.
- B. CAEAppointment – Whether the board approves the appointment and removal of the CAE.
- C. CAEPerformace – Whether the board is responsible for the performance evaluation of the CAE.

I selected three CBOK survey questions related to internal audit independence measures. The following table shows these questions and how the CAE’s responses are computed into the above three measures that comprise the internal audit independence variable – IAI (See Table3).

**Table 3.** Survey questions and responses pertaining to internal audit independence

Variable	CBOK Question	Variable Measure
CAEReport	Q74: What is the primary FUNCTIONAL reporting line for the chief audit executive (CAE) or equivalent in your organization?	1- Audit committee, or Board of directors 0 – others
CAEAppointment	Q75: Who makes the final decision for the appointment of the chief audit executive (CAE) or equivalent?	1 - Board, or supervisory committee; Chair of the board or supervisory committee; Audit committee; Chair of the audit committee 0 - others
CAEPerformace	Q76. Who is ultimately responsible for the performance evaluation of the chief audit executive (CAE), or head of internal audit, at your organization?	1 - Board, or supervisory committee; Chair of the board or supervisory committee; Audit committee; Chair of the audit committee 0 - others

The IAI is then measured as the composite score of A, B, and C.  $IAI = CAEReport + CARAppointment + CAEPerformance$ . The value of IAI ranges from 0 to 3. An IAF with the maximum IAI score of three (3) would be considered the most independent, while an IAF with the minimum IAI score of zero (0) would be considered the least independence.

### **3.3.2 Factors potentially impacting internal audit independence**

The first research question aims to investigate the factors that impact internal audit independence. I identify the following explanatory variables that are potentially associated with the independence of an IAF. Though the primary research interest is whether the three governance factors impact IAF independence, I include a number of other factors to ensure an objective and broader investigation.

1) OrgBoard – Whether the organization adopts a one-tier, two-tier, or hybrid board structure.

The variable is calculated based on the country where the organization resides. I then classify the five representative countries into one-tier board countries (coded as 1), two-tiers board countries (coded as 2), and hybrid model countries (coded as 3) for the analysis.

2) OrgAC – Whether the organization has an Audit Committee.

3) IAMandate – Whether the internal audit function is mandated by law.

4) OrgIndustry – Industry which the organization belongs to.

5) OrgFTE – Total number of full-time equivalent staff (FTE) in the organization.

6) IAAge – Number of years that the internal audit function has been in place.

7) IAFTE - Number of full-time equivalent employees in the internal audit function.

The following table shows the seven survey questions and how the responses to these questions are computed into the seven independent variables that potentially impact the internal audit independence (See Table 4).

**Table 4.** Potential factors impacting IAI and related survey questions and responses

Variable	CBOK Question	Variable Measure
OrgBoard	Q6: In which region are you based or primarily work? Q6a: Select a country from the list of Africa countries Q6b: Select a country from the list of Asia countries Q6c: Select a country from the list of Pacific countries Q6d: Select a country from the list of European countries	1 – US (one-tier board) 2 – Germany and Austria (two-tiers board) 3 – Japan and China (hybrid board)
OrgAC	Q78: Is there an audit committee or equivalent in your organization?	1 – Yes 0 – No
IAMandate	Q68: Is the existence of an internal audit department mandated by law for your organization?	1 – Yes 0 – No
OrgIndustry	Q18: What is the primary industry classification(s) of the organization for which you work?	Six categorical industries 1 - Financial & insurance 2 - Manufacturing 3 - Construction, utilities, mining, oil, and gas 4 - Trade and transportation 5 - Information, professional and technical service 6 - Others
OrgFTE	Q19. For the entire organization in which you work, what was the approximate total number of full-time equivalent employees as of the end of the last fiscal year?	Actual number
IAAge	Q23: Approximately how many years has the internal audit department been in place at your organization?	Actual number
IAFTE	Q24: Approximately how many full-time equivalent employees make up your internal audit department?	Actual number

### 3.3.3 Measures of internal audit practices

The second research question in this study is whether internal audit independence is reflected in actual internal audit practices. The measures of actual internal audit practices pertaining to audit independence are:

- 1) BoardSupport - The board of directors supports IAF to review the organization's governance policies and procedures
- 2) IABudget – Whether the internal audit function’s annual budget is sufficient in carrying the responsibilities
- 3) IAAccess - Whether internal audit function has complete and unrestricted access to employees' property and records
- 4) CAEMeetAC - Whether the CAE meets with the audit committee in executive sessions with no member of management present
- 5) IACommRisk - Whether internal audit function is in conformance with the Standard 2600 - “Communicating the Acceptance of Risks - When the CAE concludes that management has accepted a level of risk that may be unacceptable to the organization, the CAE must discuss the matter with senior management. If the CAE determines that the matter has not been resolved, the CAE must communicate the matter to the board” (The IIA, 2017, p. 20)

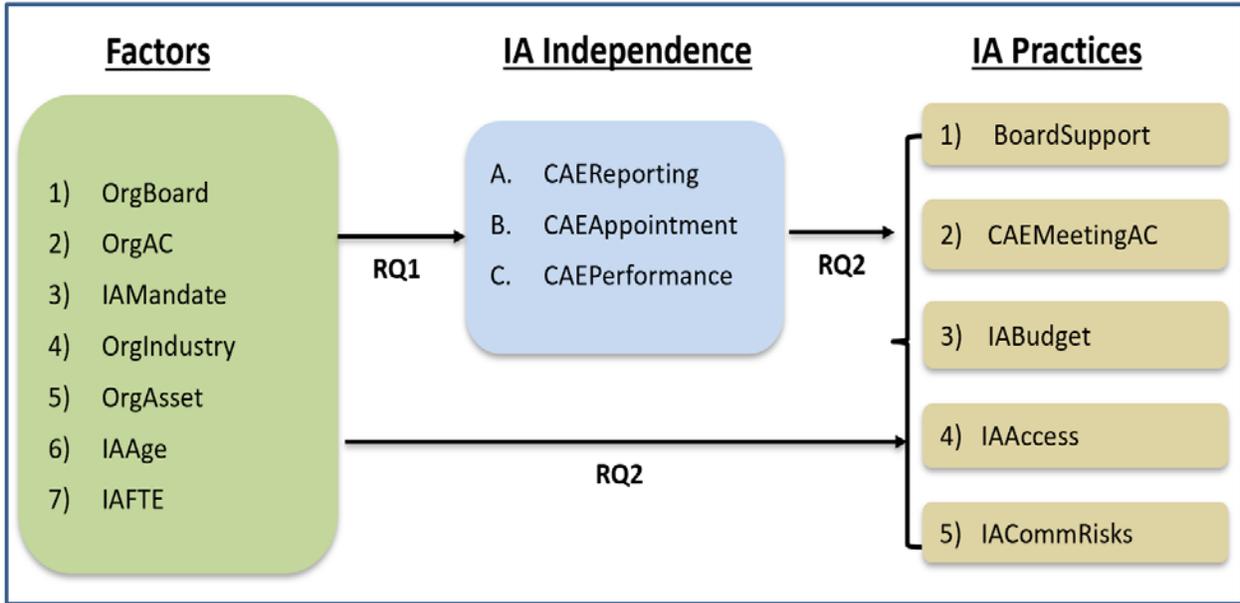
The following table shows the survey questions and how the responses to these questions are computed into the five dependent variables representing internal audit practices pertaining to its independence (See Table 5, page 23).

**Table 5.** Internal audit practices variables and related survey questions and responses

Variable	CBOK Question	Variable Measure
BoardSupport	Q67: In your opinion, how much support does internal audit have from the board of directors (or equivalent) to review the organization's governance policies and procedures?	3- Complete support 2 - Some support 1 - No support
IABudget	Q28: In your opinion, how sufficient is the funding for your internal audit department relative to the extent of its audit responsibilities?	3 - Completely sufficient 2 - Somewhat sufficient 1 - Not at all sufficient
IAAccess	Q53: In your opinion, to what extent does the internal audit department at your organization has complete and unrestricted access to employees' property and records as appropriate for the performance of audit activities? (CAEs only)	4 - All of the time 3 - Most of the time 2 - Some of the time 1 - None of the time
CAEMeetingAC	Q78c: Does the chief audit executive (CAE), or director, meet at least once per year with the audit committee in executive sessions with no member of management present?	1 - Yes 0 - No
IACommRisks	Q99: Is your organization in conformance with the Standard 2600 – Communicating the Acceptance of Risks?	3 - Full conformance 2 - Partial conformance 1 - Not in conformance

### 3.4 Research Concept Map

The following chart depicts a concept map that connects two research questions and all variables in the two questions (See Figure 2, page 24). The diagram illustrates the potential relationships of factors impacting internal audit independence and internal audit practice.



**Figure 2.** Concept map of the research questions and variables

## **CHAPTER FOUR: STATISTICAL ANALYSES AND FINDINGS**

The responses to the CBOK survey questions are filtered into the data set of the research. All independent and dependent variables described in section 3.3 are then computed from the raw data, stored and analyzed using SPSS Version 24.

### **4.1 Data Description**

To answer the first research question, I selected the seven factors that may have a potential impact on internal audit independence. These factors are organizational board structure (OrgBoard), an audit committee existence in the organization (OrgAC), whether the internal audit function is mandated by law (IAMandate), the industry to which the organization belongs (OrgIndustry), the total number of employees of the organization (OrgFTE), the number of years of the internal audit function (IAAge), as well as the number of full-time equivalent employees in the internal audit function (IAFTE).

Among the seven factors, IAAge, IAFTE, and OrgFTE are continuous numbers. Due to the high positive skew of the survey responses, the natural log transformation is utilized to convert them into IAAge\_LOG, IAFTE\_LOG, and OrgFTE\_LOG. As zero is not defined for the natural logarithmic function, one response from IAAge and one response from IAFTE are deleted during transformation. The individual deleted during IAFTE transformation is not the same individual deleted during the IAAge transformation. Therefore, two separate individuals were deleted due to transformations throughout the study.

While reviewing the survey responses, I noticed several missing values. Reporting the amount of data missing from among participants is important in considering potential generalizability (Schlomer et al., 2010). The missing data related to the variables in the RQ1 is listed in the table below (See Table 6). The total sample size is 393. I adopted the listwise deletion model, where missing data are dropped from the analysis. After removing the missing data, the total number of valid observations left to study the first research question is 255.

**Table 6.** Missing data related to RQ1 Variables

	Missing	Valid Number	Percent
IAI	74	319	18.8%
OrgBoard	0	393	0
OrgAC	54	339	13.7%
IAMandate	59	334	15.0%
OrgIndustry	0	393	0
OrgFTE	1	392	0
IAFTE	21	372	5.3%
IAAge	64	329	16.3%

#### 4.2 Factors Impacting IAI (RQ1)

The internal audit independence (IAI) variable is valued at 0, 1, 2, and 3. The distribution of IAI is provided in Table 7, page 27. Approximately 19% of the sample corresponded to the lowest IAI score - zero, while 37% corresponded to the highest IAI score. 62% of the internal audit functions in the sample organizations did not meet the independence requirement set by IIA Standards.

**Table 7.** Distribution of Internal Audit Independence

IAI	Count	Percent	Cumulative Percent
0	48	18.8	18.8%
1	54	21.2	40.0%
2	56	22.0	62.0%
3	97	38.0	100.0%
Total	255	100.0	100.0%

In analyzing the distribution of the internal audit independence by country, it is obvious that the IAI is not consistent across all countries(See Table 8). Among the 5 sample countries, a higher proportion more IAFs in Austria and Germany (two-tier boards) have a higher level of internal audit independence compared to the US, China, and Japan. The IAI in 54% of Japanese internal audit functions and 32% of Chinese internal audit functions is 0, which means they did not meet any of the internal audit independence requirements set by the IIA Standards.

**Table 8.** Distribution of Internal Audit Independence by Country

IAI		OrgCountry					Total
		US	Germany	Austria	Japan	China	
0	Count	7	7	0	26	8	48
	% within Country	5.8%	13.7%	0.0%	54.2%	32.0%	18.8%
1	Count	24	8	0	18	4	54
	% within Country	20.0%	15.7%	0.0%	37.5%	16.0%	21.2%
2	Count	36	12	2	3	3	56
	% within Country	30.0%	23.5%	18.2%	6.3%	12.0%	22.0%
3	Count	53	24	9	1	10	97
	% within Country	44.2%	47.1%	81.8%	2.1%	40.0%	38.0%
<b>Total Count</b>		<b>120</b>	<b>51</b>	<b>11</b>	<b>48</b>	<b>25</b>	<b>255</b>

Two other important elements of corporate governance are whether organizations have an audit committee (OrgAC) and whether IAF is mandated by law (IAMandate). Table 9 shows the distribution of OrgAC and board type. 20% of the sample organizations do not have an audit committee. 100% of the sample organizations in the US with the one-tier board have an audit committee. The percentage of OrgAC dropped significantly; only 68.5% of the hybrid board organizations and 53% of the two-tier board organizations have an Audit Committee.

**Table 9.** Sample distribution by Audit Committee presence and board type

OrgAC		OrgBoard			Total
		One-tier	Two-tiers	Hybrid	
No	Count	0	29	23	52
	% within OrgBoard	0.0%	46.8%	31.5%	20.4%
Yes	Count	120	33	50	203
	% within OrgBoard	100.0%	53.2%	68.5%	79.6%
<b>Total</b>	<b>Count</b>	<b>120</b>	<b>62</b>	<b>73</b>	<b>255</b>

Table 10 shows the distribution of IAMandate and board type. 57% of the sample internal audit functions are mandated by law.

**Table 10.** Sample distribution by internal audit mandate and board type

IAMandate		OrgBoard			Total
		One-tier	Two-tiers	Hybrid	
No	Count	34	37	38	109
	% within OrgBoard	28.3%	59.7%	52.1%	42.7%
Yes	Count	86	25	35	146
	% within OrgBoard	71.7%	40.3%	47.9%	57.3%
<b>Total</b>	<b>Count</b>	<b>120</b>	<b>62</b>	<b>73</b>	<b>255</b>

Internal audit mandate is not a consistent requirement in the three types of board structure, but more organizations with one-tier board require internal audit functions than other types of organizations.

The study groups the 255 sample organizations into six industries, shown in the descriptive statistics table below (See Table 11). Overall, 35% of the sample organizations are from the manufacturing industry, and 22% from the financial and insurance industry. The CAEs from the financial and insurance industry provided the most responses in the US, while IAFs in the manufacturing industry provided the most responses in the other four sample countries. These numbers correspond with the overall IIA membership.

**Table 11.** Sample distribution by industry and board type

Industry	OrgBoard			Total	% of Total
	One-Tier	Two-Tiers	Hybrid		
1 - Financial & insurance	37	16	3	56	22.0%
2 - Manufacturing	26	25	39	90	35.3%
3 - Construction, utilities, mining, oil, and gas	22	4	8	34	13.3%
4 - Trade and transportation	15	3	12	30	11.8%
5 - Information, professional & technical service	3	7	4	14	5.5%
6 - Others	17	7	7	31	12.1%
<b>Total</b>	<b>120</b>	<b>62</b>	<b>73</b>	<b>255</b>	<b>100%</b>

Table 12, on page 30, presents summary statistics on key characteristics of our sample organizations. All continuous variables are winsorized at the 1% and 99% level.

**Table 12.** Sample distribution by industry and board type

Variable	N	Mean	Median	Std Dev	Min	Max
IAI	255	1.792	2.000	1.143	0.000	3.000
OrgAC	255	0.800	1.000	0.404	0.000	1.000
IAMandate	255	0.570	1.000	0.496	0.000	1.000
OrgFTE_LOG	255	7.657	8.006	2.213	0.690	12.61
IAAge_LOG	255	2.514	2.485	0.904	0.000	4.380
IAFTE_LOG	255	1.873	1.791	1.117	0.000	5.520

- The mean and median of internal audit independence in the sample organizations are close, being 1.8 and 2, respectively. The standard deviation reveals that the IAI values are widely spread as more than 50% of the IAI values fall outside one standard deviation from the mean.
- The mean and median of the OrgAC are close, being 0.8 and 1, respectively. The standard deviation reveals that the OrgAC values are closely grouped as about 80% of the OrgAC values fall inside one standard deviation of the mean.
- The mean and median of the IAMandate are far; they are 0.57 and 1, respectively. The standard deviation reveals that the IAMandate values are spread out as about 43% of the IAMandate values fall outside one standard deviation of the mean.

The board structure is a significant element of corporate governance. To further analyze whether and how OrgBoard impacts IAI, OrgAC, IAMandate, OrgFEE, IAAge, and IAFTE, I conducted a number of T-tests. Being a type of inferential statistics, the T-test is a univariate hypothesis test and an appropriate way in determining whether there is a significant difference

between the means of two groups. The following table shows a summary of the comparison based on board types (See Table 13).

**Table 13.** Comparison of Sample Organizations' Mean based on the type of Board Structure

	OrgBoard								
	1 N=120	2 N=62	T-Test	1 N=120	3 N=73	T-Test	2 N=62	3 N=73	T-Test
IAI	2.125 (0.000)	2.177 (0.000)	-0.33	2.125 (0.000)	0.918 (0.000)	7.748***	2.177 (0.000)	0.918 (0.000)	6.87***
OrgAC	1.000 (0.000)	0.532 (0.000)	7.32**	1.000 (0.000)	0.685 (0.000)	5.75***	0.532 (0.000)	0.685 (0.000)	1.81*
IAMandate	0.72 (0.000)	0.40 (0.043)	4.17**	0.72 (0.000)	0.48 (0.000)	3.30**	0.40 (0.043)	0.48 (0.000)	-0.89
OrgFTE_LOG	7.733 (0.000)	7.656 (0.000)	0.21	7.733 (0.000)	7.531 (0.000)	0.65	7.656 (0.000)	7.531 (0.000)	0.32
IAAge_LOG	2.605 (0.000)	2.525 (0.000)	0.50	2.605 (0.000)	2.348 (0.000)	2.21**	2.525 (0.000)	2.348 (0.000)	1.11
IAFTE_LOG	2.182 (0.000)	1.394 (0.000)	5.13**	2.182 (0.000)	1.743 (0.000)	2.73**	1.394 (0.000)	1.743 (0.000)	1.95**

Variables are defined in Chapter 3.3

P-values are based on two-tailed tests.

\* The T-test with significant effects ( $p < .01$ ).

\*\* The T-test with significant effects ( $p < .05$ ).

\*\*\* The T-test with significant effects ( $p < .001$ ).

- IAI – there is a significant difference in internal audit independence between one-tier board organizations and hybrid board organizations ( $p < .001$ ); also, there is a significant difference in internal audit independence between two-tier board organizations and hybrid board organizations ( $p < .001$ ). The means of internal audit independence in organizations with the one-tier board and two-tier board are much higher than those with the hybrid board.

However, there is no significant difference in the audit independence between organizations with a one-tier board and two-tier board.

- OrgAC – there is a statically significant difference among the three board types in terms of whether organizations have an audit committee, with one-tier organizations having the highest mean, followed by hybrid organizations, then two-tier organizations.
- IAMandate – in terms of IAF mandates, there is a statically significant difference between one-tier and two-tier, one-tier, and hybrid organizations, with IAFs in one-tier board organization having the highest mean of internal audit mandate. However, there are no differences between the two-tier and hybrid board organizations.
- IAFTE – there is a statically significant difference in terms of the number of employees in IAFs, with one-tier organizations having the highest mean, followed by hybrid, then two-tier organizations.
- IAAGE - in terms of the number of years since IAFs established, there is a statically significant difference between one-tier and hybrid organizations, with IAFs in one-tier board organization having higher mean than those in the hybrid board organization. There is no significant difference between one-tier and two-tiers, two-tiers, and hybrid organizations.
- OrgFTE – there is no significant difference between the three board types in terms of the number of employees in the organizations.

I adopted the linear regression to investigate the first research question - which of the seven independent variables (OrgBoard, OrgAC, IAMandate, OrgIndustry, OrgFTE, IAAGE, and IAFTE) have a statistically significant effect on the dependent variable (IAI). Prior to estimating the regression analysis. I conducted a multi-collinearity test to ensure that I do not have two or

more independent variables that are highly correlated with each other. This is an important test as multi-collinearity may lead to problems with understanding which independent variable contributes to the dependent variable, as well as technical issues in calculating a multiple regression model. I conducted the collinearity analysis, and all Variance Inflation Factor (VIF) values are between 1 and 3. It is reasonable to assume that this data set has no multicollinearity problem.

The following table shows the output of the regression model of internal audit independence (IAI) as the dependent variable (See Table 14, page 34). The IAI is a continuous variable that ranges from 0 to 3, with increasing scores indicating higher IAF independence. As only one industry (financial and insurance) has a potential impact on IA, the model controls for industries with industry fixed effects. Also, I suppressed the intercept in the regression model in order to explicitly estimate the coefficient of all three board types.

The high  $R^2$  and adjusted  $R^2$  indicate that it is a strong regression model, and the independent variables in the model have a large size of the effect on IAI. The results show that the effects of OrgBoard and IAMandate on IAI are significant ( $p < 0.05$ ). I have sufficient support to the H1 - The board structures impact internal audit independence, and H3 - Internal audit functions that are mandated by law have higher levels of independence than internal audit functions that are not mandated by law. The one-tier board and two tiers-board structures have statistically highly significant effects on internal audit independence ( $P < 0.001$ ). Hybrid board has an effect on IAI, but its evidence is not as strong as one-tier and two-tiers organizations ( $p < 0.01$ ).

As the p value for OrgAC is 0.745, I reject the H2 - Internal audit functions in organizations with an audit committee have higher levels of independence than internal audit functions in organizations without an audit committee.

**Table 14.** Variables impacting internal audit independence

IAI – Internal Audit Independence			
	Coefficient	t.	P> t
OrgBoard_DUM1	1.593	4.32	<.0001***
OrgBoard_DUM2	1.868	5.09	<.0001***
OrgBoard_DUM3	0.689	1.95	0.052**
OrgAC	0.058	0.33	0.745
IAMandate	0.362	-2.65	0.009**
OrgFTE_LOG	0.039	1.18	0.241
IAAge_LOG	0.061	0.78	0.439
IAFTE_LOG	-0.002	-0.02	0.980
OrgIndustry_DUM1	0.416	1.72	0.086*
Industry Fixed Effects	Y		
N	255		
R <sup>2</sup>	0.8009		
Adjusted R <sup>2</sup>	0.7902		
F test: OrgBoard 1= OrgBoard 2	F=2.15	P> F =0.144	
F test: OrgBoard 1= OrgBoard 3	F=30.14	P> F =<.0001***	
F test: OrgBoard 2= OrgBoard 3	F=41.80	P> F =<.0001***	

*Variables are defined in Section 3.3*

\* *Independent variable with significant effects on IAI. (p<.01).*

\*\* *Independent variable with significant effects on IAI. (p<.05).*

\*\*\* *Independent variable with significant effects on IAI. (p<.001).*

Additionally, one of the OrgIndustry (Finance & Insurance industry) has significant effects on the IAI. All other predictors (the age of the IAF, and the number of employees in the organization and the internal audit function) do not have significant effects on internal audit independence.

I ran three F-tests to compare the equality of three different board types. As the p-value is less than 0.001, I concluded that there is a significant difference in internal audit independence between organizations with a one-tier board and hybrid board, also between organizations with a two-tier board and hybrid board. As the p-value is 0.144, internal audit independence in organizations with the one-tier board is indifferent as a two-tier board.

In terms of IAMandate, the coefficient value is 0.362, and the p-value is less than 0.05. This means that the internal audit mandate has significant effects on IAI. All other things being equal, when the internal audit is mandated by law, IAFs have 0.362 higher levels of independence than those IAFs without the mandate.

In terms of OrgIndustry, the coefficient is 0.416, and the p-value is less than 0.01. This means that the financial and insurance industry has significant effects on IAI. All other things being equal, IAFs in the financial and insurance industry have 0.416 higher levels of independence than other industries.

In summary, two out of the three governance factors - OrgBoard and IAMandate, have an impact on internal audit independence. Internal audit independence is highly related to board types. One-tier and two-tier board organizations have higher level internal audit independence than a hybrid board. There is no significant difference between a one-tier and two-tier board. The

internal audit functions mandated by law have a higher level of independence than those without such a mandate.

### **4.3 Actual Internal Audit Practices (RQ2)**

The aim of the second research question is to review whether the IAI measure is reflected in the actual internal audit practices. The 5 dependent variables selected pertaining internal audit practices are 1) whether the board supports internal audit function (BoardSupport), 2) whether internal audit function has sufficient budget and 3) unrestricted access to conduct its work (IABudget and IAAccess), 4) whether CAE meets with AC in an executive session (CAEMeetingAC), and 5) whether CAE communicates unacceptable risks (IACommRisks).

Using each of the above five measurements as the dependent variable, and IAI, OrgBoard, OrgAC IAMandate, OrgIndustry, OrgFTE, IAAGE, and IAFTE as the independent variables, I ran the regression analysis in SPSS. All of the five regression models are statistically significant, with p-value is less than 0.001. The following table shows the results summary of the coefficients between each of the dependent variables and independent variables and their significance (See Table 15, page 37). Since OrgBoard is a polytomous variable with three values (1, 2, and 3), the following results used OrgBoard=3 (hybrid board) as the reference.

I have sufficient evidence to support the five hypotheses - H4a, H4b, H4c, H4d, and H4e. Origination board types have a statistically significant effect on all internal audit practices - board support, IA budget, IA free access to organization records, CAE meeting AC in private session, and IA communicating unacceptable risks.

**Table 15.** Summary of Coefficients of IVs on DVs

	<b>BoardSupport (N=248)</b>		<b>IABudget (N=254)</b>		<b>IAAccess (N=248)</b>		<b>CAEMeetingAC (N=195)</b>		<b>IACommRisks (N=200)</b>	
	Coefficient	Sig. (p)	Coefficient	Sig. (p)	Coefficient	Sig. (p)	Coefficient	Sig. (p)	Coefficient	Sig. (p)
IAI	0.16***	0.000	0.12**	0.002	0.10*	0.031	0.017	0.520	-0.02	0.545
OrgBoard_DUM1	0.35***	0.001	0.21*	0.039	0.74***	0.000	0.253***	0.000	0.47***	0.000
OrgBoard_DUM2	0.36**	0.002	0.36**	0.003	0.60***	0.000	-0.365***	0.000	0.48***	0.000
OrgAC	0.23*	0.027	-0.06	0.552	0.09	0.497	+++	+++	0.06	0.577
IAMandate	0.07	0.371	0.11	0.195	0.12	0.245	-0.041	0.443	0.10	0.234
OrgFTE_LOG	0.00	0.878	-0.03	0.117	0.03	0.264	0.009	0.469	0.01	0.474
IAAge_LOG	-0.06	0.161	0.05	0.273	0.00	0.994	-0.024	0.452	0.00	0.949
IAFTE_LOG	0.07	0.089	0.11**	0.014	0.00	0.958	0.009	0.755	0.09*	0.042
OrgIndustry_DUM1	-0.04	0.771	0.01	0.955	0.06	0.750	0.101	0.272	0.10	0.480
OrgIndustry_DUM2	0.03	0.781	0.16	0.183	0.17	0.246	0.101	0.203	-0.03	0.797
OrgIndustry_DUM3	0.12	0.370	0.07	0.651	0.18	0.316	-0.024	0.800	0.14	0.349
OrgIndustry_DUM4	-0.03	0.829	0.14	0.355	0.04	0.846	0.171	0.087	0.12	0.446
OrgIndustry_DUM5	0.40*	0.026	0.42*	0.027	0.00	0.995	-0.065	0.639	0.32	0.091

Variables are defined in Chapter 3.3

\* Statistically significant ( $p < .01$ ).

\*\* Statistically significant ( $p < .05$ )

\*\*\* Statistically significant ( $p < .001$ ).

+++ For model with dependent variable CAEMeetingAC, the OrgAC variable is constant or has missing correlations. It was deleted from the analysis.

Internal audit functions in organizations with one-tier board enjoy higher levels of board support, budget, free access to the company's records, and communicating risks than those in organizations with the hybrid board. Internal audit functions in organizations with a two-tier board enjoy higher levels of board support, budget, free access to the company's records, and communicating risks than those in organizations with the hybrid board.

In order to compare one-tier with two-tiers, I re-ran the regression models with dummy variable OrgBoard\_DUM1 (one-tier board) as the reference. There is no statistically significant difference between the effect of the one-tier board and two-tier board on four out of the five dependent variables - board support, IA budget, IA free access to organization records, and IA communicating unacceptable risks (p-value > 0.05). However, CAEs in organizations with the one-tier board have more private meetings of the AC than those in two-tier board and hybrid board organizations. This could explain why 100% of sample organizations with the one-tier board have AC, while only 53% in two-tier organizations have AC.

Internal audit independence index has a positive and statistically significant effect on three out of five internal audit practices selected for the research - board support, IA budget, and IA free access to records. I have sufficient evidence to support the five hypotheses – H5a, H4b, H5c, but not H5d or H5e. Additionally, as the coefficients of OrgBoard on the five dependent variables are much higher than IAI, the effects of OrgBoard on IA practices are much higher than IAI.

OrgAC has a positive and statistically significant effect on board support. IAFTE has a positive and statistically significant effect on internal audit budget and IA communicating unacceptable risks. Information, professional, and technical service industries have a positive and

statistically significant effect on BoardSupport and IABudget than other industries. IAMandate, OrgFTE, and IAAGE have no effect on any of the five dependent variables.

## **CHAPTER FIVE: CONCLUSIONS**

Internal audit functions provide assurance of the effectiveness of all business functions in the company and proactively focuses on creating added value for the company. However, the realization of their strategic role depends on the internal audit function's independence and internal auditors' objectivity. (Dordevic, 2017).

Though the IIA Standards require that internal audit functions be independent in performing its duties, CAEs report to the board and internal auditors have direct and unrestricted access to senior management and the board, and etc., the research shows that these minimum requirements are not conformed by internal audit functions around the world.

The complexity of corporate governance creates variances in board structures. The study reveals that the organization's board structure is a significant factor impacting internal audit independence and internal audit practices. Internal audit practices are positively associated with internal audit independence.

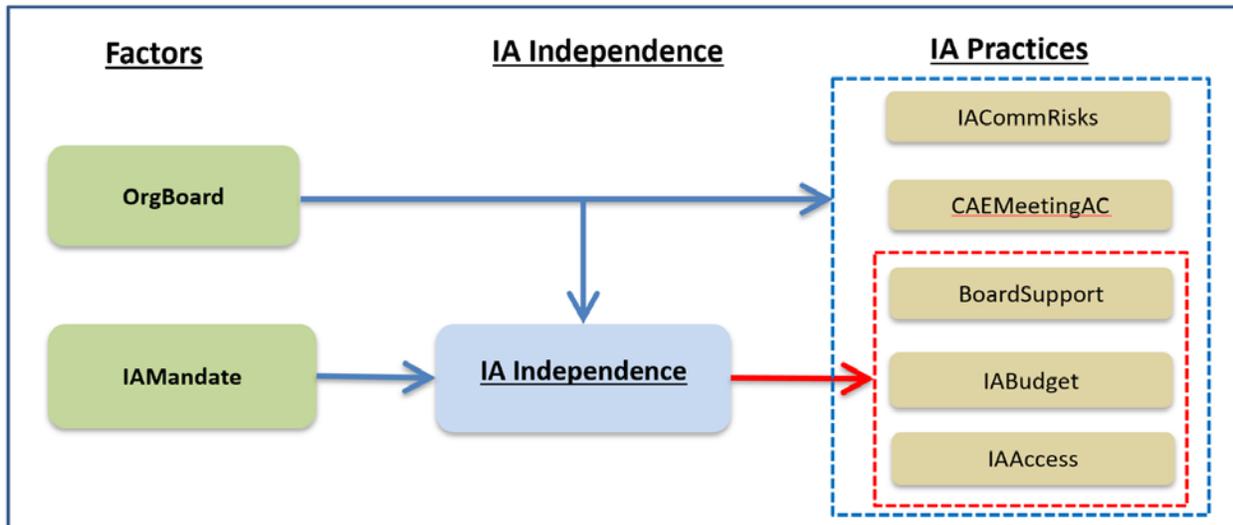
Creswell (2009) defines a theory as a collection of interrelated variables made up of proposals or hypotheses, indicating the connection among these variables in terms of direction and magnitude. Through this research, I am able to test the following theories:

- The type of board structure does have an impact on the actual internal audit practices.
- The type of board structure does have an impact on the actual internal audit practices, e.g., board support of internal audit functions, internal audit function's budget and access to organization's records, internal audit communicating unacceptable risks to the audit committee or board, and CAE meeting with audit committee in executive session.

- Internal audit functions that are mandated by law are more likely to be independent than those opposite.
- Internal audit functions that have higher levels of independence are more likely to be supported by the board, have sufficient budget, and unrestricted access to the organization's records.

However, contrary to most research thus far, I find no support for the hypothesis that the internal audit functions in organizations with an audit committee have a higher level of independence than those without the committee. This could be because the researchers' focus has been within one country where governance models are similar.

The chart below depicts the theoretical perspective concluded from the research.



**Figure 3.** Theoretical map pertaining to internal audit independence

From a practice perspective, an internal audit function serves as the agent of the board. Internal audit independence from management is a pre-requisite to provide assurance on the organization's risk management and internal control processes. To some extent, the CAE's

relationship with the board determines the positioning of the internal audit function, reinforces the authority of the function, and can have a significant impact on its effectiveness. The results of this research provide the IIA, regulators, management, boards, and investors with three representative governance models and their board structures, CAE reporting relationship with the board, and how board structures impact internal audit independence and practices. In order to have effective corporate governance, at minimum, the Governance Codes need to be updated to clearly specify internal audit function's authorities and responsibilities in an organization and ensure CAE reports to an independent board. The conclusion of this study also makes a suggestion that all market regulators need to consider making internal audit mandatory.

## **CHAPTER SIX: LIMITATIONS AND FUTURE STUDIES**

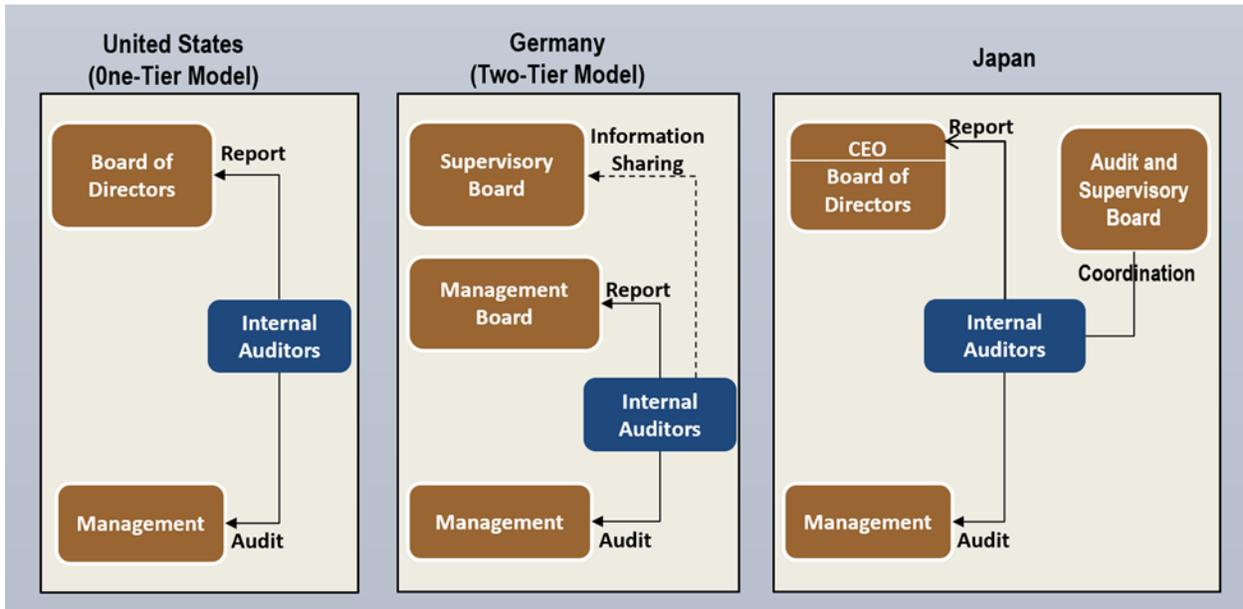
I base the research on the CBOK 2015 data, which also becomes a limitation of the research. The 2015 CBOK study did not give much consideration to the different governance structures around the world, such as separating the management board and the supervisory board, the existence of an audit committee in some countries. The survey was designed based on a pure Anglo-American corporate governance model. I could not find any evidence that the two-tier or a different board structure was considered or included in the survey design.

The data from the sample organizations in the US demonstrates that 100% of CAEs report to the audit committee, a subset of the board of directors. However, one should not automatically assume that CAEs from countries with the two-tier board, such as Germany, responded that they report to an independent board – the supervisory board. In fact, scholars like Eulerich (2013) state that in Germany, internal auditors functionally report to the management board, while sharing information with the supervisory board. In the two-tier system, the IAF is considered as an agent of the management board. The management board is responsible for the establishment and maintenance of IA. Considering the management board in Germany is equivalent to senior management in US companies, the CAE functionally reporting to the management board does not enhance internal audit independence.

On the other hand, besides the functional reporting relationship between CAEs and the board, the IIA Standards also require that CAEs administratively report to senior management within the organizations. The responses to the CBOK survey reveal that the majority of CAEs in Japan report to CEOs both functionally and administratively. At the time of the CBOK survey,

84% of presidents/CEOs of the listed companies in Japan also served as the chairman of the board. CAEs functionally and administratively reporting to CEOs in Japan may not necessarily impair IAF independence.

The various internal audit positions within organizations and CAE’s reporting relationship with the board are illustrated in the chart below (See Figure 4).



**Figure 4.** Internal audit’s position in organizations

Corporate governance sets the tone, directions, and strategy of the organizations; it could impact every decision making and execution process of the organizations. To truly understand how internal audit independence is impacted by corporate governance, future research is needed within the real-world context. I plan to adopt a case study methodology by Yin & Davis (2007), assuming that such an understanding is likely to involve important contextual conditions pertinent to the case. The plan is to select a number of publicly listed companies in the representative countries, and interview the CAEs, board members and senior management to

gain an understanding of the company's governance model, board structure, the actual CAE's reporting relationship with the board, and how internal audit interacts with other governance players and internal audit independence. Due to the prevalent impacts of governance to the organizations, the study may potentially uncover other factors impacting internal audit independence and internal audit practices.

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