

Internal Audit's Involvement in Enterprise-wide Risk Management

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BCom (Hons)

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the requirements for the degree of Doctor of Philosophy in
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Declaration

I certify that:

- The work presented in this thesis is original and has not been submitted for a higher degree to any other university or institution.
- The sources of information used, and the extent to which the work of others has been utilised, are acknowledged in the thesis.
- Ethics Committee approval has been obtained for the research presented in this thesis (Reference number: 5201401050; 5201500996).

The following summarises my particular contribution to each of the joint-authored papers in this thesis:

Paper 1

Ba X. Q. S. , Martinov-Bennie N. and Soh D. S. B. “An Investigation into Internal Audit’s Roles in Enterprise-Wide Risk Management” conferenced in 2018. Conception: 85%, Writing: 85%

Paper 2

Ba X. Q. S. , Martinov-Bennie N. and Soh D. S. B. “Factors Influencing Internal Audit’s Involvement in Enterprise-wide Risk Management” as at Jan 2020 in 1st round revisions at *International Journal of Auditing*. Conception: 85%, Writing: 85%

Paper 3

Ba X. Q. S. , Martinov-Bennie N. and Soh D. S. B. “Internal audit’s role in the three lines of defence model in risk management”, Conception: 80%, Writing: 80%

The specific contribution of the joint authors of each paper, Professor Nonna Martinov-Bennie and Dr Dominic Soh, includes discussion of the conceptual ideas underpinning the paper, and reviewing and editing paper drafts.

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Dedication

To both of my parents,

For always loving me, supporting me and believing in me!

Your faith in me makes me believe I can accomplish anything.

Summary of thesis

This thesis by publication examines the involvement of the internal audit function (IAF) in enterprise-wide risk management (ERM). The thesis consists of three papers based on a sequential mixed methods design comprising a survey in Stage 1 and semi-structured interviews in Stage 2, both conducted with the chief audit executives (CAE). The thesis aims to further our understanding of internal audit's involvement in ERM by investigating the following three central research questions:

- 1) What is the current extent and effectiveness of internal audit's involvement in ERM-related roles and how are they expected to change in future? (**Paper One**)
- 2) What is the impact of various governance, risk management, and IAF factors on the level of IAF's involvement in ERM-related roles? (**Paper Two**)
- 3) How relevant and appropriate is the three lines of defence model in relation to internal audit's involvement in ERM? (**Paper Three**)

Paper 1 undertakes a comprehensive investigation into the IAF's involvement in various ERM-related roles, including core assurance roles, legitimate consulting roles, and inappropriate management roles. By conducting an online survey with Australian CAEs representing a cross section of organisational types, size, sectors, and industries, this paper presents important empirical evidence on the IAF's post-global financial crisis practices in ERM regarding: 1) the IAF's current extent of involvement in ERM; 2) expected future changes; and 3) the effectiveness of the IAF's ERM-related roles. The results of this study indicate that, despite consensus as to the value of internal audit's involvement in ERM, internal auditors spend only a limited to moderate amount of time on most of the ERM-related assurance and consulting roles. Internal audit's efforts and effectiveness tend to be skewed towards assurance relative to consulting roles, with the focus being on assessing the management of key risks, a trend that is expected to continue over the coming years. Participants are found to assume some extent of management responsibilities in ERM, raising potential concern as to the appropriateness of such roles in current internal audit practice and impact of such involvement on the IAF's independence and objectivity.

Paper 2 investigates how the IAF's extent of involvement in ERM is associated with various organisational factors. By adopting a contingency theory perspective, three categories of organisational and IAF factors (i.e., governance, risk management, and IAF attributes) are investigated in terms of their correlation with the extent of IAF involvement in ERM-related assurance, consulting, and management roles using a multi-regression model. Data was collected

utilising an online survey questionnaire with Australian CAEs representing a cross section of organisational types, size, sectors, and industries. The results indicate that senior management support for the IAF's involvement in ERM is a significant driver for the IAF's involvement in ERM. In-house IAFs have significantly higher involvement in ERM relative to outsourced IAFs. Other risk management factors (e.g., risk maturity, existence of risk function) and IAF characteristics (e.g., IAF age, budget) examined were found to be significantly associated with the IAF's ERM-related roles, although the influence of these factors do not apply uniformly across different types of roles.

Paper 3 investigates internal audit's involvement in risk management, specifically within the context of the three lines of defence (TLOD) model. A stakeholder theory perspective was adopted to analyse the qualitative data collected using semi-structured interviews with 12 internal audit practitioners at the CAE or partner level (for external providers of internal auditing services). The results suggest that the TLOD model is generally perceived as a robust and appropriate model for assigning roles and responsibilities in relation to risk management across the key stakeholders, including the IAF. However, several challenges were reported regarding the application of this model, especially in relation to the IAF's involvement in ERM, relating to the lack of: 1) clarity and understanding of the roles across the three lines; 2) risk maturity in the organisation; and 3) communication, coordination, and collaboration across key governance parties. The findings of this study confirm the practice of 'blurring of lines', with the IAF performing advisory and management ERM roles in practice. However, participants suggested that 'blurring of lines' should not be the norm but rather a temporary solution in the organisation's transition phase towards higher levels of risk maturity. The results also indicate that internal auditors' independence was greatly valued by participants, with several safeguards being adopted by the IAF to protect its independence when there was danger of 'blurring of lines' in ERM.

List of abbreviations and acronyms

AIRMIC	Association of Insurance and Risk Managers in Industry and Commerce
APRA	Australian Prudential Regulatory Authority
ASX	Australian Securities Exchange
CA	Chartered Accountants
CAE	Chief Audit Executive
CEO	Chief Executive Officer
CFO	Chief Financial Officer
CIA	Certified Internal Auditors
COSO	Committee of Sponsoring Organizations of the Treadway Commission
CPA	Certified Practicing Accountants
ECIIA	European Confederation of Institutes of Internal Auditing
ERM	Enterprise-Wide Risk Management
FERMA	Federation of European Risk Management Associations
FSA	Financial Services Authority
IAF	Internal Audit Function
IIA	Chartered Institute of Internal Auditors
IPPF	International Professional Practices Framework
IRM	Institute of Risk Management
PMIIA	Professional Members of the Chartered Institute of Internal Auditors Australia
RCSA	Risk And Control Self-Assessment
RIMS	Risk and Insurance Management Society
TLOD	Three Lines of Defence

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Chapter 1 : **Introduction**

1.1 Background and Context

In an increasingly complex and dynamic business environment, stakeholders expect boards and senior management to take greater accountability for their roles and responsibilities in relation to corporate governance (Kirkpatrick, 2009; Schneider, 2009; Abdullah et al., 2012; Banham, 2004; Beasley et al., 2005; Carey, 2001; Mikes and Kaplan, 2014; Power, 2004). They also expect structured and integrated enterprise-wide risk management¹ (ERM) practices to be established that are responsive to the various risks that may hinder the achievement of the organisation's goals (Abdullah et al., 2012; Paape and Speklè, 2012; Baxter et al., 2013; Mikes and Kaplan, 2014; Spira and Page, 2003; Page and Spira, 2004). The internal audit function (IAF), as a key governance mechanism uniquely positioned to have wide access while maintaining relative independence within the organisation performs a critical role in enhancing ERM governance and oversight by providing assurance to the audit committee and senior management on how effectively risks are being managed across the organisation (Dessalegn Getie et al., 2010; Alič et al., 2011; de Zwaan et al., 2011; Soh and Martinov-Bennie, 2011; Spira and Page, 2003; D'Onza et al., 2015). Internal audit's sound knowledge of risk management and corporate governance also allows the function to fulfil an advisory role in contributing to continuous improvement and monitoring of ERM (Sarens and De Beelde, 2006; Selim et al., 2009; Bou-Raad, 2000; Roussy and Brivot, 2016).

In addition to growing regulatory attention on internal audit's ERM-related involvement, increasing recognition of the value of the IAF's involvement in ERM has been reported (Dessalegn Getie et al., 2010; Alič et al., 2011; de Zwaan et al., 2011; Soh and Martinov-Bennie, 2011; Spira and Page, 2003; D'Onza et al., 2015; Sarens and De Beelde, 2006; Sarens and De Beelde, 2009). This increasing focus on ERM and internal audit is exemplified within the Australian context by the Australian Securities Exchange's (ASX) amendment of the Australian corporate governance principles and recommendations in 2014 to require all listed companies to disclose information on their IAF, including the presence (or absence) of an IAF, how the IAF is structured, and what role the IAF performs in risk management. This disclosure requirement continues to be mandated under the most recent ASX requirements, under the 'Risk Management Principle' (i.e., Principle 7), with

¹ Enterprise-wide Risk Management (ERM) refers to a holistic approach to managing risks at an organisational level. By adopting ERM, organisations integrate various types of risk management activities across the organisation, to achieve structured, consistent, and continuous processes for identifying, assessing, deciding on responses to, and reporting on opportunities and threats that affect the achievement of its objectives (IIA, 2009). In this paper, ERM and risk management are used interchangeably.

the roles of the IAF being articulated as follows (ASX Corporate Governance Council, 2019, p. 27):

An internal audit function can assist a listed entity to accomplish its objectives by bringing a systematic, disciplined approach to evaluating and continually improving the effectiveness of its risk management and internal control processes.

Within the broader international context, the Chartered Institute of Internal Auditors (IIA) in the UK and Ireland recently updated their *Internal Audit Code of Practice* (2020) to reflect a number of recommendations designed to enhance internal audit's value-adding role in improving risk management and strengthening corporate governance. A major change was the recommendation for unrestricted access to be provided to internal audit in relation to key risk management information across the organisation.

In light of the increasing attention on ERM and the IAF's involvement in ERM, this thesis undertakes a comprehensive investigation of the involvement of the IAF in ERM, specifically examining the nature and effectiveness of the IAF's involvement in ERM, factors associated with the extent of the IAF's involvement in ERM-related roles, and the role of the IAF within the organisation's risk management framework, with a particular focus on the three lines of defence model.

This is a thesis by publication, consisting of three distinct but interrelated papers that incrementally build on each other by undertaking a sequential investigation into the above issues. This chapter provides the overall introduction to the thesis as follows. Section 1.1 outlines the background, context, and motivation for this research. Section 1.2 discusses the aims and contributions, while Section 1.3 undertakes a literature review. Section 1.4 explains the research design for this research study while Sections 1.5 and 1.6 provide an overview of the three papers and the overall structure of this thesis respectively.

1.2 Research Motivation, Aim, and Contribution

As discussed in Section 1.1 above, there is increasing global recognition of the value of internal audit's involvement in ERM. However, unlike external financial auditing where there are well-developed standards and regulations guiding the practice, there are no mandated standards that explicitly define the scope and roles of the IAF in relation to its involvement in ERM. As a result, studies to date report significant variance in the extent and nature of internal audit's involvement

in relation to ERM, with some IAFs even undertaking direct management responsibilities (IIA, 2009; Sarens and De Beelde, 2006a; Gramling et al., 2004; de Zwaan et al., 2011; Roussy and Rodrigue, 2018).

Prior research has raised concerns regarding the appropriateness of the IAF's involvement in certain ERM roles, given they pose a potential threat to the IAF's objectivity if it engages in these roles (Brody and Lowe, 2000; de Zwaan et al., 2011; IIA, 2009; Stewart and Subramaniam, 2010). The IIA's guidelines on risk management likewise note that the IAF may perform various assurance and consulting roles to add value to corporate governance and risk management, but that it should not undertake any management responsibilities. This is because the benefits of the IAF's involvement in ERM are contingent on ensuring conditions that foster internal audit's independence and professionalism are maintained (IIA, 2009).

While the professional literature and guidance has pointed to the value of internal audit's involvement in ERM (IIA, 2009; D'Onza et al., 2015; Paape, 2007; Spira and Page, 2003; Hass et al., 2006), research investigating the IAF's involvement in ERM, including the extent and effectiveness of the IAF's ERM-related roles, the impact of various organisational and IAF factors on such roles, and the IAF's ERM-related involvement in the context of the organisation's risk management governance framework, is relatively nascent (Goodwin-Stewart and Kent, 2006; Page and Spira, 2004; Sarens, 2009).

In response to the increasing focus on internal audit's involvement in ERM and the relative paucity of research on the topic, this thesis undertakes a comprehensive investigation of CAEs' perceptions in relation to the following **three key overall research questions**:

- 1) What is the current extent and effectiveness of internal audit's involvement in ERM-related roles and how are they expected to change in future? (**Chapter 2 / Paper One**)
- 2) What is the impact of various governance, risk management, and IAF factors on the level of the IAF's involvement in ERM-related roles? (**Chapter 3 / Paper Two**)
- 3) How relevant and appropriate is the three lines of defence model in relation to internal audit's involvement in ERM? (**Chapter 4 / Paper Three**)

The findings of this thesis make important contributions to the academic and professional literature by bringing depth and nuance to current understanding of the IAF's involvement in ERM. This research also benefits regulatory bodies, as it provides timely insights into the appropriateness and

adequacy of the IAF's involvement in ERM relative to current stakeholders' expectation and informs areas that require further regulatory attention and guidance. This research also provides empirical evidence that allows internal audit practitioners to benchmark their IAFs' ERM-related roles (Paper One), thus facilitating identification of gaps and areas for improvement. By employing a multi-theoretical approach using contingency theory (Paper Two) and stakeholder theory (Paper Three), this thesis recognises the evolving nature of the IAF's ERM-related roles and challenges for the IAF in adapting to specific organisational contexts and collaborating with different stakeholders within the organisation's corporate governance structure.

1.3 Literature Review

This section provides a broad overview of the relevant literature on which the thesis draws. Subsequent chapters provide a more focused discussion of the literature and theoretical framework relevant to the specific research topic of the three papers that comprise this thesis.

1.3.1 Evolution of risk management and internal audit

This section provides an overview of the historical development of risk management and internal auditing and demonstrates how both have grown in importance in terms of their roles and responsibilities within the corporate governance context.

1.3.1.1 Historical development of risk management

The initial development of risk management can be traced back to the late 1940s and 1950s. At the time, risk transferring (i.e., insurance coverage) was the main way in which businesses dealt with risks (Dickinson, 2001; Verbano and Venturini, 2011). Traditional risk management was thus primarily used to reduce insurance costs (Gallagher et al., 1956; Walsh and Cummins, 1976).

Transferred risks were originally limited to pure risks (i.e., natural catastrophes and accidents) but as the scope of insurance markets expanded during the 1950s to 1970s, some types of commercial risks (such as financial risks and credit risks) could also be transferred. Thereafter, by the 1960s, although insurance-oriented risk management still dominated in business, a broader concept of risk management had been adopted by many institutions. During this period (1950s–1960s), an increasing number of researchers began to explore the idea of management of various types of risk (Gallagher et al., 1956; Markowitz, 1952; Nader, 1965). These studies

moved risk management thinking away from insurance, but still did not cover all forms of organisational risks.

A major crisis in the insurance market in the 1980s and the famous ‘Black Monday’ in the US stock market reminded all investors of the market’s inherent risks and volatility (Fraser and Simkins, 2009). From the late 1980s to the early 1990s, researchers began to suggest that organisations’ internal control systems could serve to prevent or reduce the impact of some insurable risks, thus functioning as an alternative to the purchase of insurance (Dickinson, 2001; Verbano and Venturini, 2011). Some professional bodies and committees also published reports and guidelines suggesting that governing boards should understand organisations’ risks and maintain responsibility for setting risk policies and overseeing the risk process (e.g., Cadbury Committee, 1992). During this period, a growing number of organisations (e.g., BP) reduced their insurance expenses and redirected their resources to improving operational-level controls (Fraser and Simkins, 2009).

By the mid-1990s, risk management had been recognised as an important component of business management. Being a ‘good’ organisation became synonymous with being equipped with a broad and formal risk management program. There was a movement in organisations to have an integrated enterprise-level risk function that managed different types of organisational risks. The proliferation of risk management concepts within the policy and business literatures provided a useful knowledge base for developing corporate governance practices (Power, 2004).

With the concept of risk perceived within a new focus on outcomes and performance, considerable effort was expended on making risk management into a value proposition (Power, 2004). This progressive change led to the contemporary definition of risk management, according to which the contribution of risk management to improving the organisation’s performance and creating organisational value is emphasised (AIRMIC, ALARM, & IRM, 2002; Fraser and Simkins, 2009; Verbano and Venturini, 2011). The focus on outcomes also allowed an organisation to adopt different risk response strategies (e.g., reducing, eliminating, or retaining risks), so long as these responses aligned with the organisation’s objectives.

As a natural evolution of organisational-level risk management, ERM emerged as a new concept within the risk management discipline in the mid-1990s (Beasley et al., 2005; Dickinson, 2001). The rise of ERM can be seen as a response to the dynamism of the environment in which firms operate and the growing complexity of risks in all areas of management and business activities (Verbano and Venturini, 2011). There are various definitions of ERM in the literature. A

commonly referenced definition, from the Committee of Sponsoring Organisations' (COSO) ERM framework (COSO, 2004a, 2004b, p. 15), defines ERM as:

A process, effected by an entity's board of directors, management and other personnel, applied in strategy setting and across the enterprise, designed to identify potential events that may affect the entity, and manage risk to be within its risk appetite, to provide reasonable assurance regarding the achievement of entity objectives.

Distinct from traditional risk management, ERM adopts a holistic and structured risk management approach with the aim of increasing and protecting organisational value in both the short and long term for all stakeholders (Golshan and Rasid, 2012; Liebenberg and Hoyt, 2003). Compared to traditional risk management, ERM goes one step further in establishing an integrated organisational framework of risk management by breaking down traditional barriers of function, division, department, and culture. It takes into consideration all aspects of organisational management, such as strategy, marketing, operations, IT, finance, and human resources, in order to better understand, assess, and manage risks (O'Donnell, 2005). ERM thus provides organisations with a strategic approach to managing risks (including strategic, operational, and financial risks) from a much broader scope, depth, and response perspective. It also enables organisations to become more proactive in facing new risks arising from dynamic external environments (Golshan and Rasid, 2012; Liebenberg and Hoyt, 2003; O'Donnell, 2005).

Given that the principles, guidelines, and standards were developed over a decade ago, some scholars believe that ERM has become a mature discipline with proven unambiguous concepts and tools that require only regulation and compliance to be put into widespread practice (Beasley et al., 2006). However, others argue that approaches to ERM remain largely unproven and are still emerging, with some evidence of its adoption being met with only limited success, and of dissatisfaction with existing ERM practices (Golshan and Rasid, 2012; Liebenberg and Hoyt, 2003; Mikes and Kaplan, 2013). For instance, Pagach and Warr (2011) examined all companies in a LexisNexis database but only found 138 firms in the US that had adopted an ERM framework. The survey results of the Economist Intelligence unit also found that only 41 percent of companies in Europe, North America, and Asia had adopted certain levels of ERM (Kleffner et al., 2003). A recent study of more than 400 organisations revealed that almost 20 percent of the respondents from financial services reported dissatisfaction with their risk oversight processes and 42 percent described their risk oversight as "immature" or "minimally mature", while only three percent described their ERM as "very mature" (Beasley et al., 2010).

One of the lessons from the global financial crisis in 2009 is that a successful ERM system can be difficult to establish without ongoing oversight, support, and facilitation from key governance parties (COSO, 2017; Ivashina and Scharfstein, 2010; Taylor, 2009). A risk management model that has gained prominence in both practice and professional guidelines in the last two decades is the ‘three lines of defence’ (TLOD) model, which outlines delegation and assignment of risk management responsibilities (Luburic et al., 2015; Davies and Zhivitskaya, 2018; Lim et al., 2017). This model advocates for clear assignment of three aspects of risk management responsibilities – risk ownership (first line of defence), risk monitoring (second line of defence), and risk assurance (third line of defence) (Luburic et al., 2015, Burch, 2017, Davies and Zhivitskaya, 2018). Since the late 1990s, the TLOD model has been widely adopted in practice across different industries (Luburic et al., 2015; Burch, 2017; Davies and Zhivitskaya, 2018) and promoted by regulators and professional bodies (e.g., IIA-global, COSO, the Australian Prudential Regulatory Authority (APRA)²). The IAF, given its unique access across the organization, together with its risk knowledge and relative independence, is well positioned to act as a key managerial control mechanism within the organisation’s governance structure to assess and monitor the effectiveness of ERM in facilitating ERM oversight (Beasley et al., 2006; D’Onza et al., 2015; Gramling and Myers, 2006; Page and Spira, 2004). Within the TLOD model, the IAF is seen as the third line of defence which “*provide(s) the governing body and senior management with comprehensive assurance based on the highest level of independence and objectivity within the organization.... (regarding) the effectiveness of governance, risk management, and internal controls, including the manner in which the first and second lines of defense achieve risk management and control objectives*” (IIA, 2013. p. 5).

The following section outlines different phases of the development of internal auditing since the 1940s and its increased roles within the risk management context.

1.3.1.2 Historical development of internal auditing

The IAF has been established in institutions as a formal organisational function since the turn of the 20th century (Ramamoorti, 2003). Growing transaction volume and complexity meant there was an emerging need for a separate internal assurance function that could verify accounting information used for management decision making. The rise of internal auditing was seen to be a logical response to this need.

² The Australian Prudential Regulation Authority (APRA) is an independent statutory authority that supervises institutions across banking, insurance and superannuation and promotes financial system stability in Australia

The 1940s saw growing awareness of the importance and relevance of internal auditing to businesses (Flesher, 1996; Ramamoorti, 2003). Although the IAF primarily dealt with accounting and financial information, a suggestion emerged that operational matters should also be included within the scope of the IAF. The increased involvement of the IAF in operations gradually replaced its earlier financial-based focus. As indicated by Brink and Cashin (1958, p. 11), as an internal organisational function, the IAF has a significant interest in all aspects of the company's operations and a great capacity to make those operations as profitable as possible. In contrast to external auditors, who are concerned with investigating the validity of financial representations, the IAF's role began to encompass the assessment of a much wider range of business activities.

Given the growing size of businesses and the resulting widening gap between management and operations, an array of controls was developed by management to administer operations more efficiently (Walsh Jr, 1963). A controls-based approach to internal auditing was consequently commonly adopted in assessing operational controls. In taking this approach, internal auditors review all material aspects of the internal control system and provide assessments and appraisals of each form (i.e., accounting, financial, operational) of control in terms of their soundness, adequacy, and application.³

Major crises in the insurance industry and stock markets in the late 1980s and early 1990s led to significantly increased investments by organisations in their operational control systems, with the expectation that their internal control system could provide effective risk mitigation. As a result of organisations' increasing focus on risk management, some organisations started to add effectiveness in managing risks as a new criterion when evaluating controls.

The late 1990s saw growing complexity and uncertainty in the business environment, giving rise to the need for more comprehensive risk management, resulting in ERM gaining traction in managing risks at both operational and strategic levels. Correspondingly, the IAF began to expand its scope to include a holistic review of the organisation's governance system (IIA, 2009). With risk management and management accountability becoming prominent in corporate governance (Spira and Page, 2003; Carey, 2001; Dickinson, 2001), the board and senior management increasingly turned to the IAF to compensate for the loss of control experienced as a result of increased organisational complexity (Sarens and De Beelde, 2006b). As a key governance mechanism, the IAF has been observed to embrace this opportunity to contribute to

³ See the IIA's Statement of Responsibilities of Internal Auditing (1957).

the achievement of corporate objectives through its increasing involvement in risk management (Spira and Page, 2003; de Zwaan et al., 2011; Beasley et al., 2006; Liu, 2012).

In order to accommodate the IAF's expanding role and responsibilities, the IIA revised the definition of internal auditing in the International Professional Practices Framework (IPPF) as follows (IIA-Global, 2017, p. 23):

A department, division, team of consultants, or other practitioner(s) that provides independent, objective assurance and consulting services designed to add value and improve an organization's operations. The internal audit activity helps an organization accomplish its objectives by bringing a systematic, disciplined approach to evaluate and improve the effectiveness of governance, risk management and control processes.

According to Chapman and Anderson (2002), this definition of internal auditing presented a new image for the IAF. First, it extends the role of internal auditing to encompass both assurance and consulting activities. Second, it states that the IAF is designed to be value-adding. Lastly and most importantly, for the first time it defines the ultimate goal of the IAF as facilitating the organisation's accomplishment of its overall objectives. By considering the organisation as a whole, the horizons of the IAF were considerably broadened with explicit focus on effectiveness of risk management, control, and governance.

In response to these new roles and objectives, a modern risk-based approach to internal auditing has been increasingly adopted by organisations. As defined by the IIA (2014), risk-based internal auditing is a methodology that links internal auditing to an organisation's overall risk management framework and allows internal audit to provide assurance to the board that risk management processes are managing risks effectively, in relation to the organisation's risk appetite.

Distinct from control-based internal auditing, which comprises sequential assessment of each form of control, the risk-based audit approach is associated with an interest in the management of key risks at both an operational and strategic level. It emphasises the abilities of control in facilitating the achievement of organisational goals and management accountability for risk management. The contemporary IAF thus has broad responsibility for supporting and promoting effective organisational corporate governance and risk management. Organisational governance is concerned with effective monitoring and oversight of risk management, hence the IAF is expected to play an increasingly significant and high-profile role within an organisation's governance system, by contributing to the governance and ongoing improvement of ERM. As suggested by Spira and Page (2003, p. 656), "the growth of concern for corporate governance has

been of great benefit to the standing of internal auditors and has boosted their claims to professional status by emphasizing the benefits of independence of judgement and objectivity in their reports”.

1.3.2 The IAF’s ERM-related roles

Given the increased business complexity outlined above and growing expectations from stakeholders in relation to risk management and management accountability (Spira and Page, 2003; Carey, 2001; Dickinson, 2001), the board and senior management expect the IAF to compensate for the loss of control they experience resulting from increased organisational complexity (Sarens and De Beelde, 2006b). The IAF, as a key governance mechanism, has embraced this opportunity to contribute to the achievement of corporate objectives through its increasing involvement in risk management (Spira and Page, 2003; de Zwaan et al., 2011; Beasley et al., 2006; Liu, 2012).

In spite of the IAF’s growing involvement in relation to ERM (Mikes and Kaplan, 2014; Beasley et al., 2006; Walker et al., 2003; Liu, 2012; Stačiokas and Rupšys, 2005; Sarens and De Beelde, 2006), the IIA’s (2009) position paper, *The Role of Internal Auditing in Enterprise-Wide Risk Management*, is the sole source of authoritative guidance on the IAF’s potential roles in ERM and the appropriateness of these roles. As a result, internal audit’s involvement in risk-related areas varies significantly in practice and is subject to management discretion based on the organisation’s needs and resources (de Zwaan et al., 2011; Sarens and de Beelde, 2006).

The IIA’s position paper articulates three key categories of IAF involvement in ERM and outlines possible roles within each category as follows (IIA-UK, 2009, p 4).

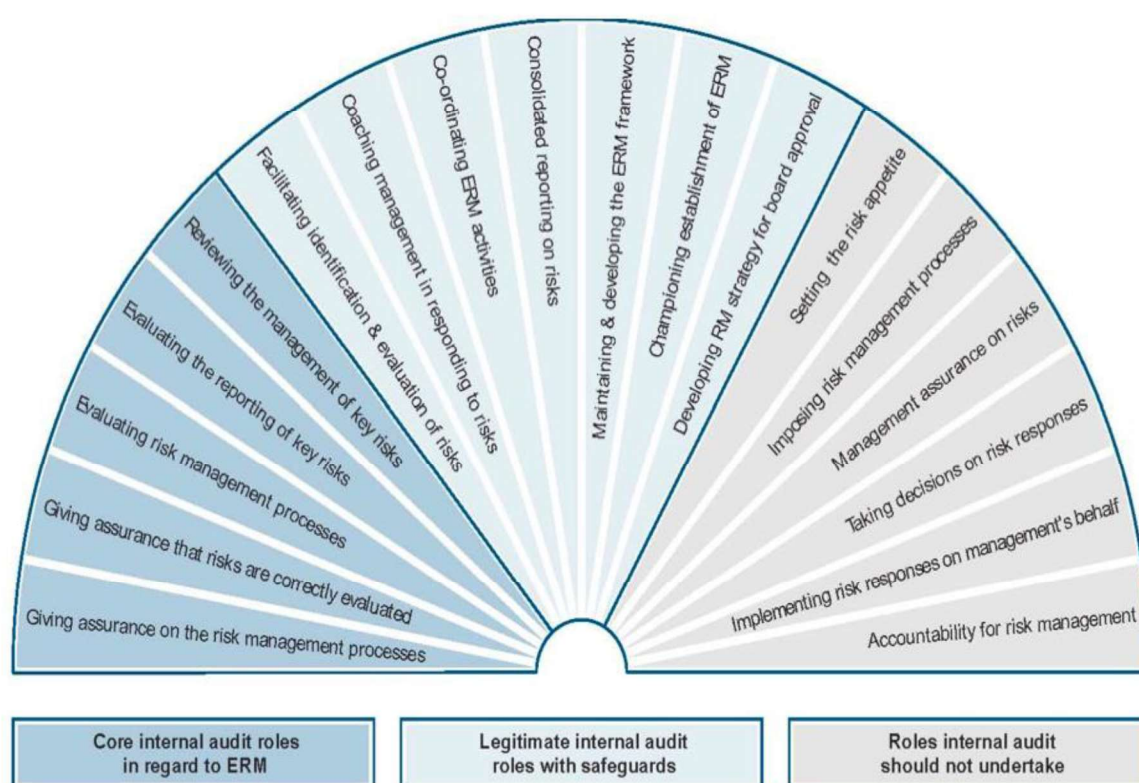
- 1) Assurance: core roles of IAF in regard to ERM.
- 2) Consulting: roles that IAF can legitimately undertake with safeguards.
- 3) Management: roles that IAF should not undertake.

Figure 1.1 outlines specific roles that fall into each of the three categories.

According to guidance within the IIA’s position paper, assurance activities should be the IAF’s core role in ERM while the IAF may also perform legitimate consulting roles with safeguards to facilitate and improve the design and implementation of ERM. The IIA explicitly states that the IAF should not perform any management roles as it affects the IAF’s objectivity and independence. However, there is evidence to suggest that, both in Australia and internationally,

IAFs have been involved in direct management of risks despite the guidance to the contrary in the IIA's position paper (Gramling et al., 2004, de Zwaan et al., 2011).

Figure 1.1: The IAF's Roles in ERM



(IIA, 2009, p.4)

Although the IIA's (2009) position paper provides general guidance on internal audit's roles in ERM, this guidance is not mandatory, and organisations can determine their IAFs' ERM-related role(s) based on their specific organisational context and needs. Prior studies have observed significant variance in the nature and extent of internal audit's involvement in ERM and suggest that internal audit's ERM-related roles are evolving rapidly over time (de Zwaan et al., 2011; Gramling and Myers, 2006; Page and Spira, 2004; Sarens and De Beelde, 2006). For example, Sarens and de Beelde's (2006) study compared internal audit practices in Belgium and the US and concluded that the IAF's role in ERM is time specific and strongly linked with the stage of development of the entity's risk management system. They found that IAFs in entities with relatively immature risk management systems tend to perform extensive consulting roles to pioneer risk awareness and develop formalised ERM systems, whereas entities with relatively highly regulated internal control environments tend to place stronger emphasis on the IAF's

independence and appreciate the main value-adding capacity of the IAF to be in providing objective evaluations and opinions on the effectiveness of risk management and internal control. A number of other studies provide evidence of IAFs performing management roles in ERM, such as creating and maintaining risk registers (Page and Spira, 2004; Gramling and Myers, 2006). A global survey conducted by the IIA similarly found 36 percent of the respondent organisations' IAFs to be primarily responsible for ERM and performing inappropriate roles, such as setting the risk appetite and making decisions on the design and implementation of risk processes. A more recent study undertaken by de Zwaan et al. (2011) in the Australian context also reports internal audit involvement in ERM-related management roles albeit with slightly involvement in such roles relative to earlier findings (Gramling and Myers, 2006).

While there is emerging research on the IAF's involvement in ERM (Brody and Lowe, 2000; Campbell et al., 2006; Elena et al., 2014; Page and Spira, 2004; Spira and Page, 2003), there is limited systematic examination of the nature and effectiveness of the IAF's involvement in ERM, factors associated with the extent of the IAF's involvement in specific types of ERM-related roles, and the corporate governance structure within which the IAF undertakes ERM-related roles. As Goodwin-Stewart and Kent (2006, p. 96) note, "the role of IAF in risk management is relatively unexplored and is a fruitful avenue for future research".

1.4 Research Design

This thesis adopts a sequential exploratory design consisting of a combination of quantitative and qualitative research methods (Ivankova et al., 2006) to investigate the following three central research questions (discussed in Section 1.2).

- 1) What is the current extent and effectiveness of internal audit's involvement in ERM-related roles and how are they expected to change in future? **(Paper One)**
- 2) What is the impact of various governance, risk management, and IAF factors on the level of the IAF's involvement in ERM-related roles? **(Paper Two)**
- 3) How relevant and appropriate is the three lines of defence model in relation to internal audit's involvement in ERM? **(Paper Three)**

This research was undertaken in two stages. Stage 1 established the general context by collecting survey data from a large sample of chief audit executives (CAEs). In Stage 2, in-depth semi-structured interviews were undertaken to collect qualitative data to provide more in-depth insights in relation to a number of the key findings observed in Stage 1 and to investigate the relevance and appropriateness of the risk management framework (i.e., the TLOD model) in which the IAF undertakes ERM-related roles. The following provides an overview of the design and conduct of each stage.

1.4.1 Stage 1: Survey (Paper 1/Chapter 2 and Paper 2/Chapter 3)

Stage 1 of the study collected data using a tailored online survey questionnaire distributed to CAEs and service providers of internal audit services at the partner (or equivalent level) to address the first two research aims outlined above. The questionnaire was developed and implemented using SurveyMonkey following the instrument design method tailored for online surveys (Dillman et al., 2001; Frazer and Lawley, 2001). The survey consisted of three parts as follows:

1. internal audit's involvement in ERM (nature, effectiveness, expected change of the IAF's roles in the ERM context, and the IAF's competencies, etc.) in participants' organisations;
2. demographic information of participant IAFs (e.g., the IAF's size, age, out-sourced or in-house, etc.) and organisations (e.g., organisation size, industry, sector, ERM structure and maturity, etc.); and
3. demographic information of individual participants (e.g., age, gender, IAF experience, etc.).

The survey questions were developed with reference to the IIA's 2014 and 2016 corporate governance and risk surveys in the UK and prior internal audit studies on similar topics (de Zwaan et al., 2011; Gramling and Myers 2006). To ensure reliability and validity of the survey questionnaire, two stages of pilot testing were undertaken. In the first stage, four audit academics with survey design experience reviewed the draft instrument. Feedback received was used to refine the survey instrument. The second stage of pilot testing was conducted with eight academics and experienced practitioners, including one nominated by the IIA-Australia. Based on comments received in the second stage of pilot testing, minor refinements were made prior to finalising and distributing the questionnaire.

Targeted participants of this study were limited to CAEs (or equivalent) as they possess the most comprehensive knowledge of the IAF's roles and responsibilities in addition to sound knowledge of the organisation and its ERM practices (Abdolmohammadi and Boss 2010; Leung et al., 2011; Soh and Martinov-Bennie, 2011). Participant recruitment for this study was supported by the IIA-Australia with invitation emails sent to approximately 300 CAEs in the institute's membership database. Of the 119 responses received, 95 were complete. The response rate and the sample size of this study is consistent with that of prior research in similar areas (Gramling and Myers, 2006; Castanheira et al., 2009; de Zwaan et al., 2011; Leung et al., 2011; Soh and Martinov-Bennie, 2011). The 95 completed responses are distributed across different organisational types, size, sectors, and industries.

Quantitative data research software (i.e., SPSS) was employed to code the survey data and perform statistical analysis (i.e., descriptive analysis and regression models) to inform the investigation of the first two central research questions.

1.4.2 Stage 2: Semi-structured interviews (Paper 3/Chapter 4)

Stage 2 of this thesis collected data utilising semi-structured interviews. Given the exploratory nature of this study, semi-structured interviews are appropriate in obtaining an understanding of the subject matter and to gain more in-depth understanding of the 'why' and 'how' (Cooper and Schindler, 2003), as this method encourages participants to share as much information as possible in an unconstrained environment where the interviewer employs a minimum of prompts and guidance (Castillo-Montoya, 2016; Drever, 1995; Fetters, Curry, & Creswell, 2013; Rabionet, 2011).

Target participants for the interviews were CAEs who responded positively to an interview invitation contained in the online survey in Stage 1. In total, 12 participants (nine in-house senior internal auditors at the CAE or equivalent level and three outsourced internal audit service providers at the partner level or equivalent) were recruited for Stage 2. The sample size (i.e., 12 CAEs or equivalent) is comparable to recent studies on internal auditing conducted using interviews (Lim et al., 2017; Roussy and Rodrigue, 2018; Sarens, 2009; Soh and Martinov-Bennie, 2011; Vinnari and Skærbæk, 2014). Participant representation across a range of organisation (size, industry, sector) and auditor (in-house CAE versus outsourced provider of internal audit services) types allowed for an appropriate level of diversity of perspectives and facilitated investigation of the consistency of findings across contexts.

To assist systematic gathering and analysis of relevant information, the interviews were guided by target issues developed through the literature review, discussions with experienced internal audit academics, IIA-Australia, and leading internal audit practitioners, as well as the survey findings in Stage 1. Target issues examined in the interviews were the following:

- (1) How does the IAF fit in the corporate governance structure in the ERM context?
- (2) The relevance and appropriateness of the TLOD model.
- (3) Is there ‘blurring of lines’ in the ERM context.
- (4) Impact of the IAF’s ERM-related roles on the IAF’s independence and safeguards.
- (5) Key stakeholders of the IAF and the IAF’s interaction with its key stakeholders.
- (6) IAF’s skillsets and capability.

Interviews lasted between 45 to 90 minutes and were conducted either face to face or by phone (or Skype conference call). Due to the sensitivity of the information, assurance of anonymity, with regard to both the participants (and their organisations), was given prior to the interviews. In order to reduce the potential for researcher bias, a non-directional style of questioning was employed in interviews and the research participants were allowed to express themselves freely, without any boundaries and restrictions (Castillo-Montoya, 2016; Drever, 1995; Fetters, Curry, & Creswell, 2013). All interviews were digitally recorded with consent obtained from the participants before each interview (Al-Yateem, 2012; Castillo-Montoya, 2016). The digital recordings were subsequently transcribed by a professional transcription service provider. Qualitative data research software (i.e., NVivo) was employed to code and analyse the interview data based on themes that emerged from the researchers’ analysis and discussion of the transcripts. (Richards, 1999; Soh and Martinov-Bennie, 2011).

1.5 Overview of the Three Papers

This section provides an overview of the three research papers in the subsequent chapters. Each paper incrementally builds on the previous paper(s) by investigating different aspects of internal audit’s involvement in ERM.

1.5.1 Paper One - An investigation into internal audit's roles in enterprise-wide risk management

This study aims to undertake a comprehensive investigation into the IAF's involvement in various ERM-related roles, including core assurance roles, legitimate consulting roles, and inappropriate management roles. By conducting an online survey with 95 Australian CAEs representing a cross section of organisational types, size, sectors, and industries, this paper presents important empirical evidence on the IAF's post-global financial crisis practices in ERM regarding: 1) the IAF's current extent of involvement in ERM; 2) expected future changes; and 3) the effectiveness of the IAF's ERM-related roles. The results of this study indicate that, despite consensus as to the value of internal audit's involvement in ERM, internal auditors spend only a limited to moderate amount of time on most of the ERM-related assurance and consulting roles. Internal audit's efforts and effectiveness tend to be skewed towards assurance relative to consulting roles, with the focus being on assessing the management of key risks, a trend that is expected to continue over the coming years. Participants are found to assume some extent of management responsibilities in ERM, raising potential concern as to the appropriateness of such roles in current internal audit practice and impact of such involvement on the IAF's independence and objectivity.

1.5.2 Paper Two: Factors influencing internal audit's involvement in enterprise-wide risk management

This study aims to investigate how the IAF's extent of involvement in ERM is associated with various organisational factors. By adopting a contingency theory perspective, three categories of organisational and IAF factors (i.e., governance, risk management, and IAF attributes) are investigated in terms of their correlation with the extent of IAF involvement in ERM-related assurance, consulting, and management roles using a multi-regression model (Gordon et al., 2009; Jokipii, 2010; Mikes and Kaplan, 2014). Data was collected utilising an online survey questionnaire with 95 Australian CAEs representing a cross section of organisational types, size, sectors, and industries. The results indicate that senior management support for the IAF's involvement in ERM is a significant driver for the IAF's involvement in ERM. In-house IAFs have significantly higher involvement in ERM relative to outsourced IAFs. Other risk management factors (e.g., risk maturity, existence of risk function) and IAF characteristics (e.g., IAF age, budget) examined were found to be significantly associated with the IAF's ERM-related roles, although the influence of these factors does not apply uniformly across different types of roles.

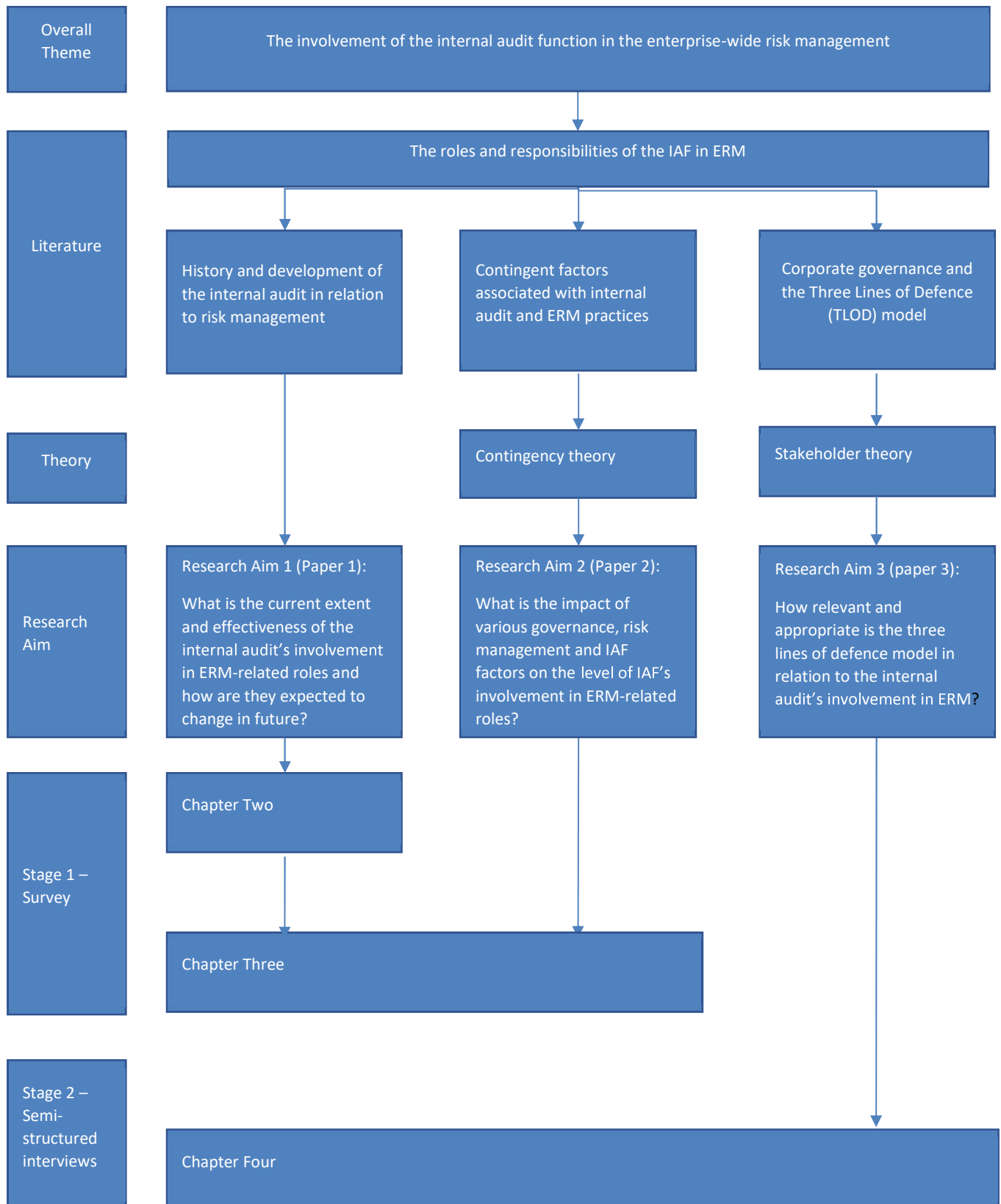
1.5.3 Paper Three: The internal audit's role in the three lines of defence model in risk management

This paper aims to investigate internal audit's involvement in the organisation's risk management, specifically within the context of the three lines of defence (TLOD) model. A stakeholder theory perspective was adopted to understand and analyse the qualitative data collected using semi-structured interviews with 12 internal audit practitioners at the CAE or partner level (for external providers of internal auditing services). The results suggest that the TLOD model is generally perceived as a robust and appropriate model for assigning roles and responsibilities in relation to risk management across the key stakeholders, including the IAF. However, several challenges were reported regarding the application of this model, especially in relation to the IAF's involvement in ERM, including lack of: 1) clarity and understanding of the roles across the three lines; 2) risk maturity of the organisation; and 3) communication, coordination, and collaboration across the key governance parties. The findings of this study confirm a 'blurring of lines', with the IAF performing advisory and management ERM roles in practice. However, the participants believe that the 'blurring of lines' should not be a rule but more of a temporary solution in the organisation's transition phase towards a higher level of risk maturity. The results also indicate that the internal auditors' independence was greatly valued by the participants, with several safeguards being adopted by the IAF to protect its independence when there was danger of 'blurring of lines' in the ERM context.

1.6 Overall Thesis Structure

This thesis consists of five chapters. This chapter provides the background and motivation for the thesis, an overview of the relevant literature, and outlines the overarching research aims and research design. The subsequent chapters consist of the three papers, represented by the three pillars that form the overall research aim of this thesis (see Figure 1.2). Finally, Chapter 5 concludes the thesis by providing a summary of the key findings across the three papers, outlining the contributions and limitations of this research, as well as avenues for future research.

Figure 1.2: Summary of Papers 1, 2 and 3 (Chapters 2, 3 and 4)



Chapter 2 : Paper 1 - An Investigation into Internal Audit's Roles in Enterprise-Wide Risk Management

An earlier version of this paper have been presented at the 16th European Academic Conference on Internal Audit and Corporate Governance, Naples, Italy, 18-20 April 2018

An Investigation into Internal Audit's Roles in Enterprise-Wide Risk Management

Abstract

While the involvement of internal audit in enterprise-wide risk management (ERM) has become increasingly prominent in regulatory and practitioner guidelines, there are no mandated requirements in relation to internal audit's risk-related roles. This has given rise to a diversity of practices in relation to the involvement of internal audit in risk-related areas. This paper investigates the current and expected future involvement of internal audit in ERM as well as perceptions of the effectiveness of the involvement of the internal audit function (IAF) in ERM. Data was collected using an online survey specifically developed for this study. The respondents are 95 Australian chief audit executives representing a cross section of organizational types, size, sectors, and industries. The study finds that, despite consensus as to the value of internal audit's involvement in ERM, internal auditors spend only a limited to moderate amount of time on ERM-related assurance and consulting roles. Internal audit efforts tend to be skewed towards assurance relative to consulting roles, a trend that is expected to continue over coming years. The IAF is also generally perceived to be more effective in its assurance role in ERM relative to its consulting role. The IAF in Australia contributes to ERM primarily by assessing key risks and providing independent reviews of ERM processes. The results also indicate that a significant number of participants assume at least some management responsibilities in ERM, raising potential concern as to the appropriateness of such roles in current internal audit practice. The study provide important empirical evidence of the ERM-related roles of internal audit and an indication of expected future trends in relation to these roles. These serve as a useful benchmark for future research, and are of benefit to regulators, internal audit professionals, and organizations in understanding and assessing the appropriateness and effectiveness of internal audit's involvement in ERM.

2.1 Introduction

The increasingly complex and dynamic nature of risk within a globalized environment has seen the establishment of a comprehensive and integrated enterprise-wide risk management (ERM)⁴ system become a key to business success (Beasley, Clune, & Hermanson, 2005; COSO, 2017; Dickinson, 2001; Liu, 2012; Moeller, 2007). One of the lessons from the global financial crisis in 2009 is that a successful ERM system can be difficult to establish without ongoing oversight, support and facilitation from key governance parties (COSO, 2017; Ivashina & Scharfstein 2010; Taylor 2009). The internal audit function (IAF), given its unique access across the organization, together with its risk knowledge and relative independence, is well positioned to act as a key managerial control mechanism within the organization's governance structure and to assess and monitor the effectiveness of ERM in facilitating ERM oversight (Beasley, Clune, & Hermanson, 2006; D'Onza, Selim, Melville, & Allegrini, 2015; Gramling & Myers, 2006; Page & Spira, 2004).

The IAF has been recognized by the Institute of Internal Auditors (IIA) as the third (i.e., last) line of defence⁵ in effective risk management (IIA, 2013), which provides the governing body and senior management with comprehensive assurance on the effectiveness of governance, risk management and internal controls. The IAF's assurance opinions are expected to provide key inputs for the governance parties to assess how well the first and second lines of defence achieve risk management and control objectives (IIA, 2013). Besides its assurance role, the IAF may be tasked by management to undertake consulting roles in supporting the first two lines of defence in various aspects of ERM, including coaching management in responding to risks, championing establishment of ERM, facilitating risk identification and evaluation, and so on (de Zwaan, Stewart, & Subramaniam 2011; Spira & Page 2003), especially when the organization is relatively immature in its risk management practices (IIA, 2013).

Despite the significant value that internal audit can add to ERM, prior research has raised concerns that having the IAF closely involved in ERM may lead to potential threats to internal auditors' objectivity (Brody & Lowe, 2000; de Zwaan et al., 2011; IIA, 2009; Stewart &

⁴ The COSO enterprise risk management integrated framework's (COSO, 2004, p. 2) defines ERM as: 'a process, effected by an entity's board of directors, management and other personnel, applied in strategy setting and across the enterprise, designed to identify potential events that may affect the entity, and manage risk to be within its risk appetite, to provide reasonable assurance regarding the achievement of entity objectives.'

⁵ In the three lines of defence model, management control is the first line of defence in risk management, the various risk control and compliance oversight functions established by management are the second line of defence, and independent assurance is the third (IIA, 2013, p. 2).

Subramaniam, 2010). The IIA's guidelines on risk management likewise note that internal audit's expertise can facilitate its involvement in various aspects of ERM, but the benefits can only be obtained by ensuring conditions that foster internal audit's independence and professionalism (IIA, 2013). However, unlike well-developed standards and regulations within the context of external auditing, there are no mandated standards that explicitly define the scope and roles that the IAF should undertake in relation to ERM. As a result, internal audit's involvement in risk-related areas varies significantly in practice and is often subject to management discretion based on the organization's needs and resources (de Zwaan et al., 2011; Sarens & de Beelde, 2006).

Despite the emerging research focus on the involvement of the IAF in ERM (Brody & Lowe, 2000; Campbell, Adams, Campbell, & Rose, 2006; Elena, Susmanschi, & Dăneș-pătrău, 2014; Page & Spira, 2004; Spira & Page, 2003), there is limited empirical evidence, including the extent of involvement in current and potential future ERM roles and the level of IAF effectiveness in engaging in such roles. As Goodwin-Stewart and Kent (2006, p. 96) note, 'the role of IAF in risk management is relatively unexplored and is a fruitful avenue for future research'.

This study aims to address this research gap by undertaking a comprehensive investigation into the extent of internal audit's involvement in various ERM-related roles, including core assurance, legitimate consulting roles, and direct management roles in ERM, as well as expected changes in the future role of internal audit. In addition, the study also investigates the effectiveness of internal audit's current involvement in ERM. The findings indicate that the IAF contributes to ERM predominantly through undertaking core assurance roles, with consulting roles generally undertaken to facilitate and supplement the assurance activities. The results also indicate that the IAF is often involved in ERM-related management roles to some degree. This finding raises concerns that the contribution of the IAF to ERM may be adversely affected by any potential impact on IAF level of independence from assuming management roles. The findings of this study provide important evidence for researchers and practitioners in understanding and evaluating the involvement of internal audit in ERM and have implications for regulators in developing future internal audit guidance and regulations.

2.2 Literature Review And Research Question Development

2.2.1 Evolution of internal auditing

The role of internal auditors has significantly evolved in line with the changing regulatory environment and business needs over the past half century (Groff, Pietra, & Sitar, 2016; Karagiorgos, Drogalas, Eleftheriadis, & Christodoulou, 2009; Spira & Page, 2003; Stačiokas & Rupšys, 2005). The extant literature identifies four major changes in terms of internal audit's primary roles within organizations.

The history of the formally established IAF can be traced to the mid-20th century, where the function was primarily responsible for the review of accounting and financial information used for management decisions.

Two decades later, the definition of internal audit was expanded with the establishment of the IIA. The roles of the IAF were broadened to include the evaluation of internal controls and fraud investigation. Although internal audit started to conduct control appraisals, the primary focus at the time was on financial reporting and was generally limited to validity of representation (Brink & Cashin, 1958; Stačiokas & Rupšys, 2005).

Subsequently in 1978, the IIA approved Standards for the Professional Practice of Internal Auditing, which suggests that internal audit should perform examination and evaluation of the adequacy and effectiveness of controls in a wider range of operational areas, not limited to financials. Step by step, internal audit has been transforming to become a valued and respected governance mechanism that provides top management with independent opinions across all operational areas (Brink & Witt, 1982; Spira & Page, 2003).

The most recent phase of this transformation took place at the end of the 20th century as the IAF began to take part in risk management processes. The increased expansion and globalization of organizations was accompanied by contemporary challenges closely related to risk and associated corporate governance issues, which gave rise to the need for the organization to establish a consistent and comprehensive risk management framework. As a key governance mechanism, the IAF is viewed as a uniquely qualified group of professionals to provide objective opinions to top management regarding the effectiveness of risk management initiatives (Groff et al., 2016; Ramamoorti, 2003). The definition of an IAF provided by the IIA (2017, p. 23) highlights its role in evaluating and improving the effectiveness of governance, risk management and control processes:

A department, division, team of consultants, or other practitioner(s) that provides independent, objective assurance and consulting services designed to add value and improve an organization's operations. The internal audit activity helps an organization accomplish its objectives by bringing a systematic, disciplined approach to evaluate and improve the effectiveness of governance, risk management and control processes.

2.2.2 Internal auditing and ERM

As a natural evolution of organisational-level risk management, ERM emerged as a new concept within the risk management discipline in the mid-1990s (Beasley et al., 2005; Dickinson, 2001). The rise of ERM can be seen as a response to the dynamism of the environment in which firms operate and the growing complexity of risks in all areas of management and business activities (Verbano and Venturini, 2011). There are various definitions of ERM in the literature. A commonly referenced definition, from the Committee of Sponsoring Organisations' (COSO) ERM framework (COSO, 2004a, 2004b, p. 15), defines ERM as:

A process, effected by an entity's board of directors, management and other personnel, applied in strategy setting and across the enterprise, designed to identify potential events that may affect the entity, and manage risk to be within its risk appetite, to provide reasonable assurance regarding the achievement of entity objectives.

Distinct from traditional risk management, ERM adopts a holistic and structured risk management approach with the aim of increasing and protecting organisational value in both the short and long term for all stakeholders (Golshan and Rasid, 2012; Liebenberg and Hoyt, 2003). Compared to traditional risk management, ERM goes one step further in establishing an integrated organisational framework of risk management by breaking down traditional barriers of function, division, department, and culture. It takes into consideration all aspects of organisational management, such as strategy, marketing, operations, IT, finance, and human resources, in order to better understand, assess, and manage risks (O'Donnell, 2005). ERM thus provides organisations with a strategic approach to managing risks (including strategic, operational, and financial risks) from a much broader scope, depth, and response perspective. It also enables organisations to become more proactive in facing new risks arising from dynamic external environments (Golshan and Rasid, 2012; Liebenberg and Hoyt, 2003; O'Donnell, 2005). Given that the principles, guidelines, and standards were developed over a decade ago, some scholars believe that ERM has become a mature discipline with proven unambiguous concepts and tools that require only regulation and compliance to be put into widespread practice (Beasley et al., 2006). However, others argue that approaches to ERM remain largely unproven and are

still emerging, with some evidence of its adoption being met with only limited success, and of dissatisfaction with existing ERM practices (Golshan and Rasid, 2012; Liebenberg and Hoyt, 2003; Mikes and Kaplan, 2013). For instance, Pagach and Warr (2011) examined all companies in a LexisNexis database but only found 138 firms in the US that had adopted an ERM framework. The survey results of the Economist Intelligence unit also found that only 41 percent of companies in Europe, North America, and Asia had adopted certain levels of ERM (Kleffner et al., 2003). A recent study of more than 400 organisations revealed that almost 20 percent of the respondents from financial services reported dissatisfaction with their risk oversight processes and 42 percent described their risk oversight as “immature” or “minimally mature”, while only three percent described their ERM as “very mature” (Beasley et al., 2010).

One of the lessons from the global financial crisis in 2009 is that a successful ERM system can be difficult to establish without ongoing oversight, support, and facilitation from key governance parties (COSO, 2017; Ivashina and Scharfstein, 2010; Taylor, 2009). The IAF, given its unique access across the organization, together with its risk knowledge and relative independence, is well positioned to act as a key governance mechanism within the organisation to assess and monitor the effectiveness of ERM in facilitating ERM oversight (Beasley et al., 2006; D'Onza et al., 2015; Gramling and Myers, 2006; Page and Spira, 2004).

As discussed in the section 2.2.1 above, internal audit's role has a broad scope and has been constantly evolving over the last half century. As part of this evolution, risk management has recently become one of the key foci for the IAF. Evidence suggests that the introduction of Turnbull Report (1999) in the UK and Sarbanes-Oxley Act (2002) in the US, which both require enhanced reporting requirements on corporate governance, risk management, and internal controls has led to increasing demand for the IAF to assess the effectiveness of the organization's ERM (Abbot, Parker, Peters, & Rama, 2007; Carey, 2001; Page & Spira, 2004; Schneider, 2009). The 2009 global financial crisis and the subsequent increased regulation of risk management internationally (e.g., Basel III, Australian Prudential Regulation Authority (APRA) prudential and reporting standards, etc.) has further increased public and regulatory pressures on organisations to improve their ERM practices, including the governance and oversight of these practices (Davis, 2009). This has, in turn, provided the IAF with both opportunities and pressures to undertake a greater level of involvement in organizational governance and risk management by virtue of its risk expertise and relative independence within organizations.

In Australia, in line with similar developments globally, there has been an introduction of increasing disclosure requirements regarding the role of the IAF in ERM. The Australian Securities Exchange (ASX) amended the Australian corporate governance principles and recommendations in 2014 to require all listed companies to make IAF-related disclosures, including on the presence (or absence) of an IAF, how the IAF is structured, and what role the IAF performs in risk management. This disclosure requirement continues to be mandated under the current ASX requirements, under the 'Risk Management Principle' (i.e., Principle 7), with the importance of IAF in ERM being recognized as follows (ASX Corporate Governance Council 2019, p.27).:

An internal audit function can assist a listed entity to accomplish its objectives by bringing a systematic, disciplined approach to evaluating and continually improving the effectiveness of its risk management and internal control processes.

In addition to the increasing recognition of the role of the IAF in ERM (Spira & Page, 2003; Karagiorgos et al., 2009), prior studies have observed significant variation in the nature and extent of internal audit's involvement in ERM, suggesting that internal audit's ERM-related roles are rapidly evolving (de Zwaan et al., 2011; Gramling & Myers, 2006; Page & Spira, 2004; Sarens & De Beelde, 2006). Sarens and de Beelde's (2006) study compared the IAF practices in Belgium and the U.S. and concluded that the IAF's role in ERM is time specific and strongly linked with the development stage of the risk management system. The IAF in a relatively immature risk management system tends to perform extensive consulting roles to pioneer risk awareness and develop formalized ERM systems, whereas organizations in the relatively highly regulated internal control environment tend to place stronger emphasis on the independence of the IAF and recognize that the main value added by the IAF is in providing objective evaluations and opinions on the effectiveness of risk management and internal control (Sarens & de Beelde, 2006). In addition, a number of studies have found that the IAF at times takes a management role in ERM, such as in creating and maintaining risk registers (de Zwaan et al., 2011; Gramling & Myers, 2006; Page & Spira, 2004). A global online survey conducted by the IIA In 2005 investigated the IAF's level of responsibility on various ERM-related roles, finding that the IAF is primarily responsible for ERM in 36% of the respondent organizations and performs ERM-related roles that the IIA had recommended as being unsuitable for the IAF, such as setting the risk appetite and making decisions about risk procedure. A more recent study performed by de Zwaan et al. (2011) in the Australian context also reports the involvement of the IAF in ERM-

related management roles, but suggests a slight decrease in such roles compared to Gramling and Myers's study (2006).

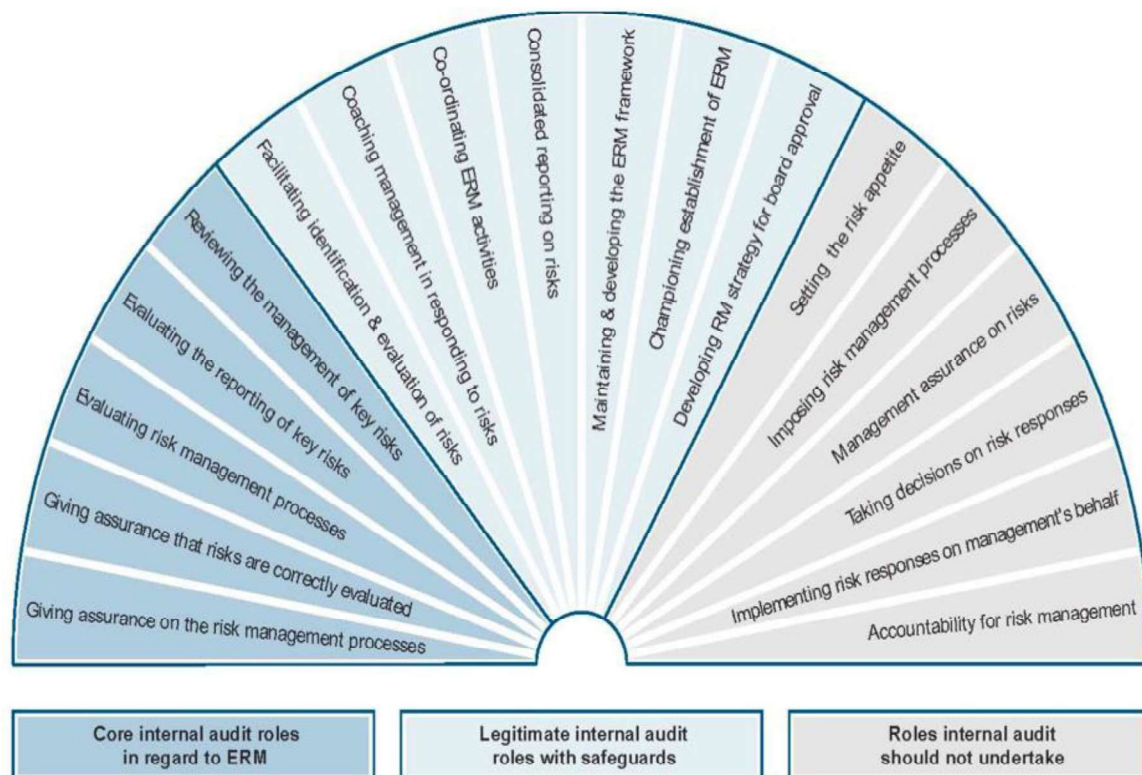
Given the lack of mandated standards that define the role of the IAF in relation to ERM, the IIA's (2009) position paper is the sole source of authoritative guidance. The position paper articulates three key categories of IAF involvement in ERM and outlines possible roles within each category as follows (IIA-UK, 2009, p 4).

- 1) Assurance: core roles of IAF in regard to ERM.
- 2) Consulting: roles that IAF can legitimately undertake with safeguards.
- 3) Management: roles that IAF should not undertake.

Figure 2.1 outlines the specific roles that fall into each of the three categories.

Assurance roles are generally considered to be the key traditional roles of the IAF in ERM (de Zwaan et al., 2011; Gramling & Myers, 2006). The *Three Line Defence Model* published by the IIA suggests that the IAF is the last line of defence for effective risk management, as it provides 'the governing body and senior management with comprehensive assurance based on the highest level of independence and objectivity within the organization' (IIA, 2013, p. 5). By acting as a critical governance mechanism, the IAF performs assurance and evaluation of the effectiveness of the first (operational management) and second lines of defence (organizational risk function), and reports findings and recommendations to senior management and the audit committee.

Figure 2.1: IAF's Role in ERM



(IIA-UK, 2009, p.4)

Internal audit's expertise in risk and governance also makes it well qualified to undertake proactive consulting roles that supplement its traditional assurance activities. These consulting roles range from championing and education activities during the initial establishment of ERM to the maintenance and ongoing development of the overall ERM framework (Page & Spira, 2004). It is suggested that consulting roles undertaken by the IAF have to be performed with appropriate safeguards to protect its independence and are only appropriate when internal audit does not assume any responsibility directly related to managing risks (IIA, 2009; Stewart & Subramaniam, 2010). Given that independence and objectivity are critical pre-requisites for internal audit's core assurance roles in relation to ERM, the IIA's position paper explicitly recommends that the IAF should not undertake management roles in relation to the design and implementation of ERM (activities on the right of Figure 2.1).

Although the IIA's (2009) position paper provides general guidance on internal audit's roles in ERM, this guidance is not mandatory, and organizations can vary their IAF's ERM-related role(s) based on their specific organizational context. Given the increasing recent regulatory and standard development of the role of the IAF in ERM, it is timely to undertake a detailed

investigation into the involvement of the IAF in ERM. This study thus examines the following research questions.

RQ1 What is the current level of internal audit's involvement in ERM-related assurance, consulting, and management roles?

RQ2 How is internal audit's involvement in ERM-related assurance, consulting, and management roles expected to change in future?

Despite acknowledgement that the IAF performs a critical role in ERM, there is evidence that the involvement of the IAF in ERM is perceived to be somewhat deficient. A global survey on the evolving role of internal audit found that although 96% of respondents recognize the important role of IAF in the overall risk management, 74% believe that there is 'room for improvement' and only 44% believe that the IAF is helping the organization achieve its business objective (Ernst & Young, 2010, p. 1). To further understand the effectiveness of the IAF's involvement in ERM and whether IAFs are equipped with necessary competencies in performing various ERM-related roles, the following research questions are examined.

RQ3 How effective is the IAF perceived to be in undertaking ERM-related assurance, consulting and management roles?

RQ4 a) What are the key competencies that internal auditors required in undertaking their ERM-related roles?

b) What is the perceived adequacy of internal auditors' current competencies?

2.3 Research Method

2.3.1 Survey instrument

An online questionnaire was developed and implemented using SurveyMonkey following the instrument design method tailored for online surveys (Dillman, Smyth, & Christian, 2000; Frazer & Lawley, 2001). The questionnaire was developed with reference to the IIA's corporate governance and risk survey in the UK (2014) and prior internal audit studies on similar topics (de Zwaan et al., 2011; Gramling & Myers, 2006). To ensure consistent interpretation of survey questions among participants, the survey questionnaire included definitions and clarifications of key terminologies and measurement scales.

The questionnaire consisted of three parts:

- 1) IAF involvement in ERM (amount of time, effectiveness, future change, and IAF competences, etc);
- 2) the participant's organizational information (e.g., organization size, industry, sector, ERM structure and maturity, etc.); and
- 3) the participant's individual demographic information (age, gender, IAF experience, etc.).

The level of involvement of the IAF in ERM was measured as the amount of time that the IAF currently spends on ERM-related roles, using the five-point Likert scale (1 = 'none', 5 = 'significant') (Abdolmohammadi & Boss, 2010). Furthermore, participants were asked to indicate any expected change over the next five years in relation to the amount of IAF spent on these roles (i.e., from 1 = 'significantly decrease' to 5 = 'significantly increase'). Consistent with the extant literature (de Zwaan et al., 2011; Gramling & Myers, 2006), this study adopts the list of potential ERM-related roles that the IAF potentially undertakes, including core (assurance), legitimate (consulting), and prohibited (management) roles, as outlined in the IIA's position paper (2009).

In addition to the extent of IAF involvement in ERM, this study also investigates the perceived effectiveness of the IAF's ERM-related roles. Participants were asked to rate how well their IAFs currently perform risk-related activities on a five-point Likert scale (i.e., from 1 = 'very ineffective' to 5 = 'very effective').

Finally, the perceived importance and adequacy of the internal auditors' competencies in relation to their ERM-related roles are also investigated. The questionnaire included a comprehensive list of internal auditors' key competencies (IIA, 2014). The participant was asked to rate each of the competencies as to: (1) the competency's importance within the context of the IAF's involvement in ERM (1 = 'none', to 5 = 'very important'); and (2) the participant's satisfaction with the competency adequacy (1 = 'very dissatisfied', 5 = 'very satisfied').

To ensure reliability and validity of the survey questionnaire, the researchers conducted two-stage pilot testing. In the first stage, four audit academics with survey instrument design experience reviewed the draft instrument, and their feedback was adopted in refining the survey. The second stage of pilot testing was conducted with eight academics and experienced practitioners, including one nominated by the IIA-Australia. Based on comments received in the second stage of pilot testing, minor refinements were made prior to finalizing and distributing the questionnaire.

2.3.2 Data collection and participants

Participant recruitment for this study was supported by the IIA-Australia. Participant invitation emails were distributed by the IIA-Australia directly to all chief audit executive (CAE) (or equivalent) members in its membership database. The invitation email contained a brief introduction to the study and a web link to the survey questionnaire⁶. Targeted participants of this study were limited to CAEs (or equivalent) as they possess the most comprehensive knowledge of their IAF's roles and responsibilities in addition to a sound knowledge of the organization and its ERM (Abdolmohammadi & Boss, 2010; Leung, Cooper, & Perera, 2011; Soh & Martinov-Bennie, 2011).

With the assistance of the IIA-Australia, invitation emails were sent to approximately 300 CAEs. There were 119 responses received, of which 95 responses were complete. This represents a response rate of approximately 32%. The response rate and the sample size of this study is consistent with that of prior research in similar areas (Castanheira, Rodrigues, & Craig, 2009; de Zwaan et al., 2011b; Gramling & Myers, 2006; Leung et al., 2011; Soh & Martinov-Bennie, 2011). Feedback from participants of this study indicated that the survey questionnaire was clear and easy to follow.

2.3.3 Participant demographic information

The majority of the participants (> 75%) have over 10 years' experience in internal audit, with 41% being in their current organization for more than five years. More than half of the participants (56%) are Professional Members of IIA-Australia (PMIIA), and the others have other accounting/audit certificates, for example, Chartered Accountants (CA), Certified Practicing Accountants (CPA), and Certified Internal Auditors (CIA). Approximately 75% of the respondents are male. Almost all participants (92%) are over 40 years old, with the majority (80%) between 40 to 60 years of age. Panel A in Table 2.1 presents a summary of respondents' characteristics. Panel B in Table 2.1 presents demographic information for participant organizations. The majority are large organizations (80%) and the mean employee number is 9,326. Public sector entities comprise 65% of the sample. Social & Personal Services (43%) and Financial and Insurance Services (23%) are the most prominent industries of the respondents' organizations.

⁶ To improve the response rate of the survey, the following were undertaken: 1) logic functions were utilized in the online questionnaire to automatically direct participants to the next question based on their answers, saving respondents' time and making the survey more user friendly; 2) personalized greeting in invitation email; and 3) reminder email when the response rate levelled off after the first two weeks of data collection.

Table 2.1: Demographic Information of Survey Participants & Organizations

Panel A Participants' Characteristics			
Gender	Percent	Age group	Percent
Male	72.5%	30 and under	1.1%
Female	27.5%	31– 40	6.5%
		41– 50	44.1%
		51– 60	35.5%
		61 and over	12.9%
Years of internal audit experience	Percent	Years working in the organization	Percent
Under 1 year	1.1%	Under 1 year	14.0%
1–5 years	9.7%	1–5 years	45.2%
6–10 years	11.8%	6–10 years	22.6%
11–15 years	12.9%	11–15 years	6.5%
16–20 years	22.6%	16–20 years	1.1%
21 years and over	41.9%	21 years and over	10.8%
Certificate	Percent		
Professional Member of IIA-Australia (PMIIA)	55.9%		
Chartered Accountant (CA)	37.6%		
Certified Practicing Accountant (CPA)	33.3%		
Certified Internal Auditor (CIA)	32.3%		
Member of Australian Institute of Company Directors (AICD)	17.2%		
Certified Government Audit Professional (CGAP)	5.4%		
Certified Financial Services Auditor (CFSA)	4.3%		
Panel B Organization Characteristics			
Firm Size (No. of Employees)	Percent	Sector	Percent
0–250	21.1%	Publicly traded (listed) company	20.0%
251–1000	16.8%	Privately traded (non-listed) company	14.7%
1001–5000	32.6%	Government	53.7%
5001–10000	12%	Not-for-profit	11.6%
>10000	18%		
Industry	Percent		
Agriculture, Forestry, and Fishing	3.2%		
Mining	3.2%		
Electricity, Gas, Water and Waste Services	3.2%		
Social & Personal Services	43.2%		
Manufacturing & Construction	3.2%		
Financial and Insurance Services	0.232		
Professional Business Services	4.2%		
Distribution Services	11.6%		
Others	5.3%		
Total	100.0%		
Note: Social & Personal Services (i.e., Public Administration & Safety, Health Care & Social Assistance; Education & Training, Arts & Recreation Service; Accommodation & food service); Professional Business Services (i.e., Professional, Scientific & Technical Services; Rental, Hiring & Real Estate Services; Administrative & Support Services); Distribution Services (i.e., Wholesale Trade; Retail Trade; Transport, Postal & Warehousing; Information Media & Telecommunications).			

2.4 Results And Discussion

This section outlines the key survey findings and their potential implications. Section 2.4.1 analyzes the extent of involvement of the IAF in different ERM-related roles, including core (assurance), legitimate (consulting), and prohibited (management) roles (RQ1). Section 2.4.2 discusses expected future changes in relation to internal audit's involvement in these ERM-related roles (RQ2). Section 2.4.3 examines the perceived effectiveness of these ERM-related roles (RQ3), and Section 2.4.4 analyzes the competencies of the IAF in relation to its involvement in ERM (RQ4).

2.4.1 Internal audit's involvement in ERM-related roles

RQ1 investigates the level of IAF involvement in various ERM-related roles (i.e., assurance, consulting, and management). The detailed results are presented in Table 2.2.

The results indicate that the IAF currently spends only a limited to moderate amount of time on most ERM-related roles. Among the three categories of roles identified by the IIA (2009), internal audit is currently most involved in assurance roles in relation to ERM (mean across assurance roles = 3), relative to consulting activities (mean across consulting roles = 2.28). The results also indicate some involvement with management roles in ERM (mean across management roles = 1.84).

Among the assurance roles examined, internal audit currently spends the most amount of time on 'reviewing management of key risks', with almost half of the participant CAEs indicating that their IAF spends a moderate to substantial amount of time on this role (mean = 3.45). Internal audit also spends a moderate amount of time on 'giving assurance on ERM processes' (mean = 3), and limited to moderate amount of time on the other three assurance roles, 'evaluating ERM processes' (mean = 2.88), 'giving assurance that risks are correctly evaluated' (mean = 2.87) and 'evaluating the reporting of risks' (mean = 2.80).

This finding is not entirely consistent with that of de Zwaan et al. (2011), who reported that the most important role of the IAF in ERM is 'assurance on risk management processes' followed by 'evaluating ERM processes', and 'reviewing the management of key risks'. This difference could potentially be an indication that the IAF's ERM-related roles have evolved in the past decade, shifting the focus from general ERM processes to key business risks. By providing targeted assurance on material risks, the IAF is expected to provide value-adding inputs to the achievement of business goals and ongoing improvement of ERM (Spira & Page, 2003). The

strong focus on key risks aligns the IAF's roles with the ultimate goal of ERM, which is to manage the key risks that affect the achievement of business goals (COSO, 2017). In spite of the IAF's relatively high focus on 'reviewing the management of key risks', it is worth noting that the involvement of the IAF in ERM-related assurance activities related to specific ERM processes is found to be slightly lower relative to the findings of de Zwaan et al. (2011), for which data was collected in 2007. The lower level of involvement of the IAF in evaluation of specific ERM processes may comprise the IAF's attention to detailed assessments, including how significant risks are identified and assessed, whether appropriate risk responses are selected, and how relevant risk information is captured and communicated, potentially resulting in ERM deficiencies remaining undetected.

In relation to legitimate ERM-related consulting roles, the findings indicate that the IAF is more inclined to engage in those consulting roles that pose relatively low threat to internal audit independence. The consulting roles on which the IAF spends most of its time are advisory or supportive in nature, including 'facilitating identification & evaluation of risks' (mean = 2.73), 'championing establishment of ERM' (mean = 2.72) and 'coaching management in responding to risks' (mean = 2.58). In contrast, the two consulting roles on which the IAF spends the least time are roles with relatively higher influence on risk management design and implementation decisions, which include 'developing ERM strategy for board approval' (mean = 1.99) and 'maintaining and developing ERM framework' (mean = 1.89). Compared to de Zwaan et al. (2011), the results indicate a decrease in IAF involvement in consulting roles, particularly for consulting roles with relatively higher threats to internal audit's independence. This potentially points to internal audit becoming more cautious when performing ERM-related consulting roles so as not to compromise its independence. This could be due to increased risk management maturity of organizations, allowing the IAF to focus on assurance roles while only performing consulting roles that serve to enhance its assurance roles such as facilitating risk identification and promoting risk culture (Sarens & de Beelde, 2006)

Although the extant IIA guidance prohibits management roles to be undertaken by the IAF (IIA, 2009), the results indicate that around 40% of respondent IAFs are still participating in ERM-related management roles to some extent, with approximately 10% to 15% reporting 'substantial' or 'significant' involvement in relation to a number of these roles. Respondents reported the highest levels of current involvement in 'imposing ERM processes' (mean = 2.03), 'taking decisions on risk responses' (mean=1.87) and 'setting the risk appetite' (mean = 1.87). The level of overall involvement of internal audit in management roles is generally consistent with prior

research (de Zwaan et al., 2011), although a number of roles (‘setting the risk appetite’ , ‘imposing risk management processes’, and ‘implementing risk responses on management’s behalf’) are found to have increased relative to the findings of de Zwaan et al. (2011).

Follow-up one-way ANOVA tests were conducted to obtain a better understanding of differences in the involvement of the IAF in ERM across different organizational contexts and IAF structures. The results suggest a significant difference in time spent on ERM-related consulting and management roles between in-house and outsourced IAFs. In general, outsourced IAFs appear to be more cautious in becoming involved in ERM-related consulting or management roles. Outsourced IAFs are found to be significantly less involved in management roles, such as ‘developing ERM strategies’ (sig.=0.032) and ‘setting risk appetite’ (sig.=0.048). This may be explained by the fact that compared to outsourced IAFs, in-house IAFs are generally more embedded into the organizational structure and hence are more likely to be involved in the ongoing maintenance, improvement, and even management of ERM. This is reinforced by the results that in-house IAFs spend more time on consulting roles related to ongoing support and maintenance of ERM, such as ‘providing consolidated reporting on risks’ (sig.0.013), ‘championing ERM establishment’ (sig.=0.018), and ‘coordinating ERM activities’ (sig.=0.037). The results of this study indicate an emerging need for the in-house IAF to be more cautious when it is involved in ERM-related roles and not to perform any roles that directly manage risk (IIA, 2009).

Table 2.2: Internal Audit's Current and Expected Future Involvement in ERM

IAF's Roles in ERM	RQ1: Current time IAFs spend on ERM-related roles						RQ2: Expected changes in IAFs' role in the next 5 years					
	None (1)	Limited (2)	Moderate (3)	Substantial (4)	Significant (5)	Mean	Significantl y decrease (1)	Decrease (2)	No change (3)	Increase (4)	Significantl y increase(5)	Mean
Assurance Roles												
Giving assurance on ERM processes	11%	18%	44%	16%	12%	3.00	0.0%	4.2%	41.1%	45.3%	9.5%	3.60
Giving assurance that risks are correctly evaluated	13%	18%	44%	20%	5%	2.87	1.1%	3.2%	43.2%	45.3%	7.4%	3.55
Evaluating ERM processes	11%	24%	40%	17%	8%	2.88	0.0%	3.2%	43.2%	42.1%	11.6%	3.62
Evaluating the reporting of risks	13%	26%	36%	19%	6%	2.80	1.1%	2.1%	45.3%	42.1%	9.5%	3.57
Reviewing the management of key risks	5%	17%	28%	26%	23%	3.45	0.0%	1.1%	42.1%	38.9%	17.9%	3.74
Consulting Roles												
Facilitating identification & evaluation of risks	16%	26%	34%	18%	6%	2.73	1.1%	9.5%	64.2%	18.9%	6.3%	3.20
Coaching management in responding to risks	17%	35%	28%	14%	6%	2.58	1.1%	8.4%	58.9%	26.3%	5.3%	3.26
Co-ordinating ERM activities	42%	29%	17%	9%	2%	2.00	6.3%	5.3%	66.3%	16.8%	5.3%	3.09
Providing consolidated reporting on risk	47%	22%	16%	11%	4%	2.02	4.2%	4.2%	65.3%	21.1%	5.3%	3.19
Maintaining and developing the ERM framework	58%	14%	15%	8%	5%	1.89	6.3%	9.5%	67.4%	13.7%	3.2%	2.98
Championing establishment of ERM	25%	20%	24%	19%	12%	2.72	4.2%	6.3%	62.1%	21.1%	6.3%	3.19
Developing ERM strategy for board approval	57%	14%	8%	16%	5%	1.99	7.4%	3.2%	70.5%	16.8%	2.1%	3.03
Management Roles												
Setting the risk appetite	58%	17%	11%	9%	5%	1.87	7.4%	5.3%	73.7%	8.4%	5.3%	2.99
Imposing ERM processes	51%	16%	17%	14%	3%	2.03	6.3%	7.4%	70.5%	11.6%	4.2%	3.00
Taking decisions on risk responses	52%	24%	13%	8%	3%	1.87	8.4%	5.3%	77.9%	5.3%	3.2%	2.89
Implementing risk responses on management's behalf	69%	14%	5%	9%	2%	1.61	9.5%	6.3%	73.7%	7.4%	3.2%	2.88
Taking accountability for ERM	63%	11%	14%	8%	4%	1.80	8.4%	2.1%	74.7%	12.6%	2.1%	2.98

2.4.2 Expected changes of the IAF's ERM-related roles

RQ2 examined the expected changes in the involvement of the IAF in ERM. The detailed results are presented in Table 2.2. The results indicate that all of the IAF's assurance roles and consulting roles are expected to slightly increase in the next five years, with assurance roles expected to increase more on average relative to consulting roles. In contrast, the IAF's inappropriate management roles in ERM are expected to slightly decrease in the next five years.

The IAF's relative time allocation across various assurance roles is expected to remain unchanged in the next five years. 'Reviewing the management of key risks' is the primary ERM-related role on which the IAF currently spends most time (as discussed in Section 2.4.1), and is expected to experience the highest increase in the next five years (mean expected change = 3.74)⁷ among all the IAF's ERM-related roles.

In contrast, the results suggest a relatively lower increase in the assurance roles related to risk evaluation and reporting, which are 'giving assurance that risks are correctly evaluated' (mean expected change = 3.55) and 'evaluating the reporting of risks' (mean of change = 3.57). The results in Section 2.4.1 suggest that the IAF currently spends only a limited to moderate amount of time on these two roles. Combined with the limited expected increase, the results indicate that the relative lack of attention on risk evaluation and reporting by the IAF is expected to remain a continuing phenomenon into the future, despite COSO (2017) considering identification and evaluation of risk a key step in ERM. The absence of review and assessment of risk identification and evaluation on the part of the IAF may result in key risks not being identified and communicated appropriately, which could further lead to inappropriate control design and implementation.

A holistic understanding of an organization's risk portfolio is also an important enabler for the IAF performing risk-oriented assurance activities (Sirens & De Beelde, 2006). Previous studies suggest that having internal audit proactively involved in risk assessment provides the risk function with value-adding opinions on understanding the organization's key risks. In addition, the IAF's holistic perspective of the organization's governance assists in improving the efficiency of the risk framework by identifying any gaps in risk coverage and eliminating duplication of efforts (Allegrini & D'Onza, 2003; Ernst & Young, 2011; Spira & Page, 2003). However, despite potential for the IAF to add value in terms of risk evaluation and reporting, it is

⁷ Participants were asked to rate the extent of expected change of the involvement of the IAF over the next five years (1 = 'significantly decrease', 5 = 'significantly increase').

important to note that the IAF should not perform risk identification and evaluation for the risk function or make any decision on risk response. The findings suggest that the IAF should be more active in its assurance of risk evaluation and risk reporting roles, provided that appropriate safeguards are in place to prevent ‘self-review’ and minimize any threat to internal audit’ actual or perceived objectivity. As Ernst & Young (2011) suggests, internal audit should start and lead conversations, but not own the risk.

The IAF’s involvement in consulting roles in relation to ERM is expected to remain relatively unchanged in the next five years, with only slight increase in those roles that are defined by IIA (2019) as having relatively lower influence on risk management decisions, including ‘coaching management in responding to risks’ (mean expected change = 3.26), ‘facilitating identification and evaluation of risks’ (mean of change = 3.20), and ‘championing establishment of ERM’ (mean expected change = 3.19). In contrast, IAF involvement in the consulting roles that have relatively higher influence on ERM decisions, such as ‘developing ERM strategy for board approval’ (mean expected change = 3.03) and ‘maintaining and developing ERM framework’ (mean expected change = 2.98) is expected to remain unchanged or even decrease slightly. Overall, the IAF’s involvement in ERM-related consulting roles is expected to continue to focus more on undertaking supportive roles that improve the risk culture and management’s capability in risk identification, evaluation, and response, with less involvement in roles that relate to developing ERM strategies and frameworks.

An interesting finding is that ‘providing consolidated reporting on risk’ is the only reported role with limited IAF involvement (see Section 2.4.1), but is expected to have a relatively higher increase (mean expected change = 3.19) relative to other consulting roles. This suggests that the IAF is likely to perform a more active role across the organization to consolidate risk information and provide integrated and consistent risk reporting to the board and management. This change is potentially driven by an increase in the organization’s risk maturity. As suggested by previous research, the IAF in organizations with formalized and standardized risk management system is more likely to focus on adding value by providing assessment and reporting on the overall effectiveness and efficiency of the internal control and risk management systems (Sarens & De Beelde, 2006).

The results also suggest that internal audit’s inappropriate involvement in ERM-related management roles is expected to slightly decrease in the next five years. However, it is worth noting that approximately 10% to 15% of the respondent CAEs are expecting an increase or

significant increase in the involvement of their IAF in some ERM management roles. Compared to private sector organizations, the results suggest that public sector organizations, especially not-for-profit organizations, are more likely to have their IAF involved in ERM-related consulting and management roles in the next five years. The results of one-way ANOVA tests further suggests that, respondent IAFs in not-for-profit organizations expect a significantly higher increase in the consulting roles of ‘maintaining and developing the ERM framework’ (sig. = 0.022, mean of expected change not-for-profit = 3.45) and ‘taking decisions on risk responses’ (sig. = 0.038, mean of expected change not-for-profit = 3.36), requiring greater safeguards to ensure the independence and objectivity of the IAF. Previous research has found that internal auditors are less willing to report a breakdown in risk procedures to the audit committee when they have a high level of involvement in ERM (de Zwaan et al., 2011). The finding of this study suggests emerging needs for the not-for-profit organization to review the ERM-related roles of its IAF and to reduce the IAF’s inappropriate involvement in ERM-related management roles.

Table 2.3: The Effectiveness of Internal Audit's Involvement in ERM

IAF's Roles in ERM	RQ3: Effectiveness of IAF ERM-related roles					
	Significantly Ineffective (1)	Ineffective (2)	Neutral (3)	Effective (4)	Significantly effective (5)	Mean
Assurance Roles						
Giving assurance on ERM processes	0.0%	1.2%	21.7%	51.8%	25.3%	4.01
Giving assurance that risks are correctly evaluated	0.0%	6.3%	31.6%	40.5%	21.5%	3.77
Evaluating ERM processes	0.0%	1.2%	27.4%	46.4%	25.0%	3.95
Evaluating the reporting of risks	1.2%	3.7%	29.6%	44.4%	21.0%	3.80
Reviewing the management of key risks	0.0%	4.7%	12.9%	43.5%	38.8%	4.16
Consulting Roles						
Facilitating identification & evaluation of risks	0.0%	6.8%	34.2%	35.6%	23.3%	3.75
Coaching management in responding to risks	0.0%	11.3%	45.1%	28.2%	15.5%	3.48
Co-ordinating ERM activities	0.0%	13.3%	44.4%	35.6%	6.7%	3.36
Providing consolidated reporting on risk	2.2%	8.9%	40.0%	28.9%	20.0%	3.56
Maintaining and developing the ERM framework	2.3%	6.8%	40.9%	27.3%	22.7%	3.61
Championing establishment of ERM	0.0%	6.5%	30.6%	32.3%	30.6%	3.87
Developing ERM strategy for board approval	0.0%	7.7%	30.8%	38.5%	23.1%	3.77
Management Roles						
Setting the risk appetite	2.4%	9.8%	51.2%	12.2%	24.4%	3.46
Imposing ERM processes	0.0%	9.1%	47.7%	29.5%	13.6%	3.48
Taking decisions on risk responses	2.4%	9.5%	52.4%	21.4%	14.3%	3.36
Implementing risk responses on management's behalf	2.6%	10.5%	55.3%	18.4%	13.2%	3.29
Taking accountability for ERM	2.4%	7.3%	36.6%	36.6%	17.1%	3.59
(Notes: Data for RQ1 and RQ2 are collected and analyzed for all 95 responses. Data of RQ3 - the effectiveness of the IAF ERM related roles is only analyzed for respondents reported participating in the corresponding roles (i.e., respondents who rated 'none' in RQ1 for a particular role are not applicable to RQ2 for this role)						

2.4.3 Perceived effectiveness of internal audit's involvement in ERM

RQ3 investigated the perceived level of internal audit's effectiveness in undertaking its current ERM-related roles. The detailed results are presented in Table 2.3. Overall, the results indicate that the perceived effectiveness of the ERM-related roles of the IAF range from 'moderate' to 'effective', with performance in none of the specific roles perceived to be 'significantly effective'. In general, the IAF is perceived to be more effective in relation to its assurance roles in ERM (mean effectiveness = 3.94)⁸ than its consulting roles (mean effectiveness = 3.63) and management roles (mean effectiveness = 3.43).

In general, ERM-related assurance roles with higher levels of IAF involvement are perceived as more effective. Among the various assurance roles, 'reviewing management of key risks' is perceived as the most effective IAF role in ERM (mean effectiveness = 4.16), followed by 'giving assurance on ERM processes' (mean effectiveness = 4.01). 'Giving assurance that risks are correctly evaluated' is rated as the least effective assurance role (mean effectiveness = 3.77). This result is consistent with the finding in Sections 2.4.1 and 2.4.2 that reveals the need to further enhance the role of the IAF in reviewing risk identification and evaluation.

The results suggest that CAEs generally perceive the consulting roles of their IAF as less effective than their assurance roles. The top three most effective consulting roles are 'championing establishment of ERM' (mean effectiveness = 3.87), 'developing ERM strategy for board approval' (mean effectiveness = 3.77) and 'facilitating identification & evaluation of risks' (mean effectiveness = 3.75). Interestingly, 'developing ERM strategy for board approval' is the consulting role on which the IAF currently spends the least amount of time but is reported to be one of the most effective, whereas 'coaching management in responding to risks' is one of the key current consulting roles of the IAF, with the highest expected changes, but is found to be one of the least effective consulting roles. The results also suggest a lack of perceived effectiveness of the supportive consulting roles of the IAF related to coaching and coordination. These roles generally require high risk expertise and capability as well as sound understanding of business processes. The correlation between the effectiveness of the IAF and the perceived adequacy of the competencies of the IAF are discussed in Section 2.4.4.

The result in Section 2.4.1 suggests that in-house IAFs, on average, spend more time on inappropriate ERM-related management roles relative to outsourced IAFs. To further understand

⁸ The participants were asked to rate the extent of effectiveness of the involvement of the IAF (1 = 'significantly ineffective' and 5 = 'significantly effective').

the impact of the IAF structure on the effectiveness of the IAF in ERM, a one-way ANOVA test was performed between the IAF structure (in-house/outsource) and the effectiveness of the IAF's assurance, consulting, and management roles, but no significant result is found. The result indicates no significant difference between outsourced IAFs and in-house IAFs regarding the effectiveness of their involvement in ERM.

Table 2.4: Perceived Importance and Adequacy of Internal Audit Competencies in Undertaking ERM-Related Roles

IAF Competencies	Importance of IAF Competence in ERM-related roles						Adequacy of IAF Competence in ERM-related roles					
	Unimportant	Of little importance	Moderately important	Important	Very important	Mean	Very dissatisfied	dissatisfied	Neutral	satisfied	Very Satisfied	Mean
Communication skills	1.1%	0.0%	3.2%	15.8%	80.0%	4.74	0.0%	3.2%	17.3%	49.5%	29.5%	4.05
Problem identification and solution skills	1.1%	1.1%	2.1%	29.5%	66.3%	4.59	0.0%	3.2%	13.7%	51.6%	31.6%	4.12
Knowledge of industry, regulatory, and standard change	1.1%	0.0%	9.5%	37.9%	51.6%	4.39	0.0%	3.2%	11.6%	53.7%	31.6%	4.14
Risk assessment & control analysis skills	1.1%	0.0%	4.2%	38.9%	55.8%	4.48	1.1%	4.2%	11.6%	54.7%	28.4%	4.05
Business/commercial acumen	1.1%	2.1%	13.7%	33.7%	49.5%	4.28	0.0%	6.3%	24.2%	47.4%	22.1%	3.85
Conflict resolution/negotiation skills	1.1%	2.1%	22.1%	30.5%	44.2%	4.15	1.1%	2.1%	26.3%	44.2%	26.3%	3.93
IT/ICT frameworks, tools, and techniques	2.1%	5.3%	34.7%	33.7%	24.2%	3.73	3.2%	10.5%	32.6%	40.0%	13.7%	3.51
Change management skills	1.1%	7.4%	27.4%	35.8%	28.4%	3.83	0.0%	6.3%	32.6%	47.4%	13.7%	3.68

2.4.4 Internal audit's competencies in ERM

Internal auditors need to be equipped with sound competencies to effectively perform various ERM-related roles. Results in section 2.4.3 indicate there is variation in the perceived effectiveness in relation to the IAF's ERM-related roles. To examine a potential reason for the IAF's perceived lack of effectiveness in certain ERM-related roles, CAEs' perception of the key IAF competencies for its involvement in ERM⁹ and the perceived adequacy¹⁰ of these competencies were also investigated (see Table 2.4). In addition, a Pearson Correlation test between CAEs' perceived adequacy of IAF competencies and the effectiveness of the IAF in relation to ERM-related roles was performed to examine whether the perceived lack of effectiveness of the IAF in relation to ERM-related roles is related to inadequacies in the IAF's competencies.

The results suggest that 'communication skills' (mean importance = 4.74), 'problem identification and solution skills' (mean importance = 4.59), and 'risk assessment and control analysis skills' (mean importance = 4.48) are perceived to be the three most critical competencies for the involvement of the IAF in ERM. This result suggests increased recognition of the need for risk-specific competencies relative to the IIA's prior corporate governance and risk surveys (IIA, 2014). This change is potentially driven by increased IAF focus on providing assurance on the management of key risks, as discussed in Sections 2.4.1 and 2.4.2. In addition to the risk-specific competencies, a wide range of general competencies, including 'knowledge of industry, regulatory, and standards change' (mean importance = 4.39), 'business/commercial acumen' (mean importance = 4.28), and 'conflict resolution/negotiation skills' (mean importance = 4.15), are also perceived by the respondent CAEs to be important for internal audit's involvement in ERM.

The findings in relation to perceived satisfaction with IAF competencies suggest that respondent CAEs are generally highly satisfied (i.e., mean score ≥ 4) with the majority of IAF competencies examined, with only two exceptions – 'IT/ICT frameworks, tools, and techniques' (mean satisfaction = 3.51) and 'change management skills' (mean satisfaction = 3.68), which are both slightly below 'satisfied'.

⁹ The participants were asked to rate the relative importance of the IAF's competencies regarding the IAF's involvement in ERM, on a 5-point scale (1 = 'unimportant' to 5 = 'very important'). The list of competencies is identified from the IIA's corporate governance and risk management survey (2014).

¹⁰ The participants were asked to rate the level of satisfaction with the adequacy of IAF current competency level on a 5-point scale (1 = 'very dissatisfied' to 5 = 'very satisfied').

The results also indicate a gap between the importance score and the adequacy score of the key competencies. This gap was most pronounced for the top two key competences – ‘communication skills’ (mean importance = 4.74; mean adequacy = 4.05; gap = 0.69) and ‘problem identification and solution skills’ (mean importance = 4.59; mean adequacy = 4.12; gap = 0.47), which suggests potential room for improvement.

In order to identify the impact of IAF competencies on the effectiveness of the ERM-related roles of the IAF, a follow-up Pearson Correlation test was performed between the effectiveness of the ERM-related roles of the IAF and the CAEs’ perceived adequacy of IAF key competencies. The result shows a general positive correlation between the two. Specifically, IAF skills of ‘risk assessment & control analysis skills’ and ‘business commercial acumen’ have significant positive correlation ($\text{sig} < 0.05$) with the effectiveness of all ERM-related assurance and consulting roles. The competencies with lower satisfaction score such as ‘IT/ICT frameworks, tools, and techniques’ and ‘change management skills’ are significantly positively correlated ($\text{sig} < 0.05$) with the ERM-related consulting roles of the IAF, which potentially explains the relatively lower perceived effectiveness of the consulting roles of the IAF relative to assurance roles discussed in Section .

2.5 Conclusion

The important role of the IAF in ERM has been increasingly recognized by regulators, professional bodies, and academics (de Zwaan et al., 2011; Gramling & Myers, 2006; Page & Spira, 2004; Sarens & De Beelde, 2006). Despite widespread acknowledgement of the value of internal audit’s involvement in ERM, the results of this study suggest that the IAF currently only spends a limited to moderate amount of time on most ERM-related roles. Almost a third of the respondents rated the ERM-related assurance roles of their IAF as below effective and around 50% of the respondents rated the performance of their IAF in ERM-related consulting roles as below effective. This suggests that there is considerable room for improvement in relation to the ERM-related roles of the IAF, including both the extent of involvement and the effectiveness of such roles.

Consistent with prior research (de Zwaan et al., 2011; Gramling & Myers, 2006) and the IIA’s position paper (2009), the IAF is predominantly involved in core assurance roles in ERM. However, the nature of the involvement in specific assurance roles is changing with ‘providing assurance on the management of key risks’ being the main current assurance role, compared to

‘giving assurance on ERM process’ as per the 2007 survey undertaken by de Zwaan et al. (2011). The IAF focus on key risk is expected to continue in the future. This is consistent with prior studies suggesting that the IAF focus on value-adding activities is increasing (Bou-Raad, 2000; D’Onza et al., 2015; Poksinska, Dahlgaard, & Eklund, 2006; Soh and Martinov-Bennie, 2011; Spira & Page, 2003). It also suggests that internal audit is responding to increasing demand from management to undertake risk-oriented assurance rather than traditional compliance-oriented assurance (Hirth Jr, 2008).

The limited attention on risk evaluation and reporting in internal audit’s assurance roles is an area worthy of further attention. The results in this study indicate that the IAF spends only limited time on providing assurance on risk evaluation and evaluating reporting of risks, with these roles perceived by respondent CAEs to be the least effective amongst all ERM-related assurance roles. Given that the effectiveness of risk evaluation and reporting have a fundamental impact on how the key risks are identified, communicated, and consequently managed, this relative lack of involvement by the IAF and the reasons for it would be an important area worthy of future research.

The results indicate that the IAF spends, on average, a limited to moderate amount of time on various ERM-related consulting roles, particularly consulting roles that pose relatively lower threat to auditors’ independence, such as ‘enhancing risk awareness’ and ‘coaching management in response to risk’. Almost half of the respondent CAEs perceived the effectiveness of their IAF in consulting roles as lacking. The results also suggest that adequacy of IAF competencies is positively associated with the effectiveness of the IAF in its ERM-related roles. This indicates a need for the IAF to improve its key competencies to enhance its contribution to ERM.

Although the IIA has explicitly recommended that the IAF should not perform any direct management roles in ERM, our results suggest that almost 40% of the respondents report some level of involvement in direct ERM-related management roles. Public sector organizations, especially not-for-profit organizations, are found to be more likely to have the IAF involved in ERM-related management roles. This suggests a potential lack of awareness of appropriate IAF roles in ERM. Having the IAF involved in direct management of ERM may cause self-review and self-advocacy issues, which impairs IAF independence (de Zwaan et al., 2011). There is thus an emerging need to re-examine the role of the IAF in ERM and to clearly delineate ERM management roles from the assurance and consulting roles of the IAF, with appropriate safeguards in relation to consulting roles implemented to ensure that the IAF acts effectively and

objectively. This finding warrants future research as to the reasons and implications regarding the significantly high level of IAF ERM-related management involvement in not-for-profit organizations and whether the IIA (2009) guideline is implemented in practice. Given that the results suggest that the outsourced IAF has significantly less involvement in many ERM-related management roles relative to the in-house IAF, further research can be performed to investigate whether leveraging external consultants reduces the number of inappropriate ERM-related management roles of the IAF.

Overall, the results of this study further understanding of the IAF's involvement in ERM, and are particularly useful to regulators, internal audit professionals, and organizations in assessing the appropriateness and effectiveness of internal audit's current and future involvement in ERM. By performing a comprehensive analysis of the IAF's extent of involvement in different types of ERM-roles, this study extends prior literature that analyses the IAFs' level of responsibility in ERM (Gramling and Myers, 2006; de Zwaan et al., 2011) by investigating various different aspects of the IAF's ERM-related involvement, including the extent of time that the IAF spent on different types of ERM-related roles, perceived level of effectiveness of such roles and the IAF's skills and competencies related to its ERM-related roles. The study also establishes a useful benchmark for the ERM-related roles of the IAF for future research and provides direction for future in-depth analysis of the factors influencing these roles. However, given the Australian data context, the results of this study need to be interpreted with caution, especially in relation to other institutional and regulatory contexts. Another limitation of this study is non-response bias, which is an inherent limitation of survey research (DiGabriele, 2016; Iyer, Bamber, & Griffin, 2013). To minimise the extent of non-response bias of this study, the researchers implemented a number of strategies in the survey design and data collection processes to reduce the number of non-responses (Colombo, 2000). These strategies include enhancing the efficiency and user experience of online questionnaire, giving assurance of confidentiality and anonymity of this study to potential participants, sending reminder emails to the non-respondent participants when the response rate levelled off (Colombo, 2000).

In addition, this study only investigates the CAEs' perceptions of internal audit's involvement in ERM assurance, consulting, and management roles. Future research could explore other key stakeholders' perceptions, including those of management, audit committee members, and external auditors, and extend this study by examining factors that determine the nature and extent of internal audit's involvement in ERM. The impact of inappropriate IAF ERM-related roles on its independence is also an important avenue for future research.

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Chapter 3 : Paper 2 - Factors Influencing Internal Audit's Involvement in Enterprise-wide Risk Management

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Factors Influencing Internal Audit's Involvement in Enterprise-wide Risk Management

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Factors Influencing Internal Audit's Involvement in Enterprise-wide Risk Management

Abstract

This study aims to investigate the impact of various governance, risk management, and internal audit function (IAF) factors on the level of involvement of the IAF in enterprise-wide risk management (ERM). Data from a sample of 95 Australian chief audit executives (or equivalent) was collected using an online survey questionnaire, representing a cross section of organizational types, size, sectors, and industries. A multi-regression model was adopted for this study. The results indicate that senior management support for the involvement of the IAF in ERM is a significant driver for its involvement. In-house IAFs have significantly higher involvement in ERM across all roles relative to outsourced IAFs. Other risk management factors (e.g., risk maturity, existence of risk function) and IAF characteristics (e.g., IAF age, budget) examined were found to be significantly associated with the ERM-related roles of the IAF, although the influence of these factors does not apply uniformly across different types of roles.

3.1 Introduction

As a key governance mechanism, the internal audit function (IAF) has been increasingly recognized as critical to the ongoing success of the organization's enterprise-wide risk management (ERM)¹¹ (Allegrini & D'Onza, 2003; Beasley, Clune, & Hermanson, 2006; Castanheira, Lima Rodrigues, & Craig, 2009; Coram, Ferguson, & Moroney, 2008; de Zwaan, Stewart, & Subramaniam, 2011; Elena, Susmansch, & Daneci-Patrau, 2014; Fernández-Laviada, 2007; Goodwin-Stewart & Kent, 2006; Sarens, Abdolmohammadi, & Lenz, 2012). However, the absence of authoritative standards for the ERM-related involvement of the IAF has led to significant variance in the nature (i.e., assurance, consulting and/or management roles) and extent of roles undertaken by the IAF in ERM (de Zwaan et al., 2011; Goodwin-Stewart & Kent, 2006; Sarens & De Beelde, 2006a; Walker, Shenkir, & Barton, 2003).

According to contingency theory, organizations are open systems designed to satisfy internal needs and adapt to environmental circumstances (Baird & Thomas, 1985; Barki, Rivard, & Talbot, 2001). Given that the involvement of the IAF in ERM is voluntary, without explicitly mandated scope and processes, investigation of key contingent factors associated with the IAF's ERM-related roles is critical to understanding the extent and varied nature of the involvement of the IAF in ERM.

To further the analysis of IAFs' ERM-related practices, the overall research question of this study is to investigate key factors associated with the IAF's nature and extent of involvement in ERM. Consistent with prior studies that have adopted contingency theory in analysing factors affecting organizations' internal control practices and ERM adoption (Gordon, Loeb, & Tseng, 2009; Jokipii, 2010; Mikes & Kaplan, 2014), a number of hypotheses were developed and examined in this study regarding the association between various factors and the extent of the IAF's involvement in different types of ERM-related roles (i.e., assurance, consulting, and management). The results indicate that various governance, risk management, and IAF factors are associated with the extent of the IAF's involvement in ERM, although the influence of these factors does not apply uniformly across different types of IAF roles. The findings of this study

¹¹ Enterprise-wide risk management (ERM) is a structured, consistent, and continuous process across the whole organization for identifying, assessing, deciding on responses to, and reporting on opportunities and threats that affect the achievement of its objectives (IIA, 2009). The extent of ERM adoption may vary among organizations, from no formal plans for risk management to fully established and effective risk culture at all levels. This paper uses ERM as a broad term to represent all different extents of ERMs adopted by organizations.

extend the current literature and provide further understanding of the IAF's involvement in ERM. Moreover, the results also provide important insights for regulators, management, and internal audit professionals relating to overseeing, managing, and improving the IAF's appropriate ERM-related involvement, with consideration of the specific organizational factors.

The structure of this paper is as follows. Section 3.2 summarizes the prior literature related to various contingency factors and develops the hypotheses in relation to the factors examined. Section 3.3 explains the research method adopted by this study, including the survey instrument design, data collection, and specifications of regression models. The study's results are outlined in Section 3.4, followed by a discussion of the implications of these results in Section 3.5. Section 3.6 concludes with key findings, limitations, and future research directions.

3.2 Literature Review

As an important organizational mechanism with a range of stakeholders, both internal and external to the organization, the roles of internal audit in ERM need to be carefully defined to ensure that they are responsive and adaptive to internal needs as well as the external environment (Beasley et al., 2006; Castanheira et al., 2009; Feizizadeh, 2012; Goodwin, 2004). This section outlines prior literature regarding various key governance, risk management, and IAF factors relevant to internal audit and/or ERM practices. To ensure the desired predictive power of the regression model given the sample size, a limited number of specific organisational factors selected on the basis of prior internal audit and risk management literature were used. In the remainder of this section, hypotheses, based on relevant extant literature, are developed to predict the influence of each key factor examined on internal audit's involvement in ERM-related roles.

3.2.1 Governance factors

Contingency theory suggests that organizational governance factors have significant impact on audit practices (Abbott, Parker, Peters, & Rama, 2007; Cohen, Krishnamoorthy, & Wright, 2002; Paape, Scheffe, & Snoep, 2003; Sarens, Abdolmohammadi, & Lenz, 2012; Turley & Zaman, 2004), including decisions on the scope and roles of internal audit (Goodwin-Stewart & Kent, 2006; Soh & Martinov-Bennie, 2018). The two governance factors analyzed in this study are: (1) the level of senior management's support for the involvement of the IAF in ERM; and (2) the frequency of external IAF assessment.

3.2.1.1 Senior management support

Prior literature suggests that, as one of the key stakeholders in the IAF, the support of senior management is an important factor in determining the IAF's roles and effectiveness (Cohen & Sayag, 2010; Paape et al., 2003; Sarens & De Beelde, 2006b; Soh & Martinov-Bennie, 2018). A recent study by Soh and Martinov-Bennie (2018) reports a significant positive association between senior management's support and internal audit's involvement in sustainability assurance and consulting activities. Within the context of ERM, prior research reports that management has expressed an emerging need to involve the IAF in supporting the improvement and ongoing success of ERM (Beasley et al., 2006; Sarens & De Beelde, 2006a). Similarly, Beasley, Clune, and Hermanson (2005) suggest that the success of ERM initiatives is largely attributed to senior management's motivation and support. Therefore, the following hypothesis is proposed:

H1: Senior management's (lack of) support of the IAF's involvement in ERM is positively (negatively) associated with the extent of IAF involvement in ERM-related roles.

3.2.1.2 External IAF quality assessment

Prior research suggests that external review and oversight is a key factor affecting organizations' audit and ERM practices (Jegers & Houtman, 1993; Zaleha Abdul Rasid, Ruhana Isa, & Khairuzzaman Wan Ismail, 2014). In the context of internal audit, IIA Standard 1312 – External Quality Assessments (2007) requires that an external assessment of an internal audit activity be conducted at least once every five years by a qualified, independent assessor or assessment team from outside the organization. According to the IIA's quality assessment manual (2017), the objective of the external assessment is to evaluate an internal audit activity's conformance with the Standards and identify opportunities to enhance internal audit processes. The IIA suggests that the external assessment approach should emphasise governance, risk management, and control processes as important areas for internal auditors' attention. Therefore, undertaking an external review of the IAF's ERM-related roles is expected to have a positive impact on the IAF's compliance with existing ERM and/or IIA guidelines.

In terms of IAFs' involvement in ERM, although there is a lack of mandated standards that specify the scope and process of IAF's involvement in ERM, both risk management and internal audit professional bodies (e.g. COSO, IIA-global) have issued guidance on appropriate roles for the IAF to undertake, which could be adopted in the IAF's external assessment.

In general, these guidelines recognise and promote the IAF's assurance roles in facilitating the governance and oversight of organizations' ERM systems. For instance, both the COSO Risk Management Framework (2018) and the IIA's International Professional Practices Framework (IPPF, 2017) highlight the value of the involvement of the IAF in ERM by providing independent audit and review of the adequacy and effectiveness of the organization's ERM. In contrast to the generally high acceptance of the involvement of the IAF in assurance roles, professional bodies are relatively more cautious in relation to the IAF's involvement in ERM-related consulting and management roles. Considering the potential negative impact of these roles on internal auditors' actual and/or perceived independence, the IIA explicitly states in its position paper that the IAF should not undertake any ERM-related management roles and its ERM-related consulting roles can only be performed with appropriate safeguards in place protect the IAF's objectivity (IIA, 2009).

Given that the current IIA's guidelines generally consider assurance to be the IAF's core role in ERM and recommend that the IAF should not undertake any management roles in ERM (IIA, 2009; 2013), it is expected that IAFs, which are subject to external quality assessment of their ERM-related roles, have higher extent of involvement in the core ERM-related assurance roles and lower extent of involvement in other ERM-related roles which pose potential threats to IAFs' independence. The following hypothesis is therefore proposed:

H2: The frequency of external assessment of the IAF is positively (negatively) associated with the extent of IAF involvement in ERM-related assurance (consulting and management) roles.

3.2.2 Risk management factors

Prior research suggests that the firm-specific costs and benefits associated with ERM adoption often result in risk management being formulated in different ways within the organization's structure (Abdullah, Zakuan, Khayon, Ariff, Bazin, & Saman., 2012; Beasley et al., 2005). As the purpose of the IAF's involvement in ERM is to improve risk management effectiveness and create organizational value, organizations' specific risk structure and associated opportunities and challenges are expected to be an important consideration for the IAF to tailor its ERM-related roles to suit specific organizational needs. The risk management factors investigated in this study are an organization's risk maturity and the existence of separate risk function.

3.2.2.1 Risk maturity

The term ‘risk maturity’ is widely used in both the corporate governance and project risk management contexts to indicate how well risk management is embedded within the organization (Bourne, 2016; Hillson, 1997; Hopkinson, 2000; Hopkinson, 2011; Yeo & Ren, 2009; RIMS, 2014). Prior literature suggests that organizations may implement different levels of ERM, from no formal plans for risk management to fully established and effective risk culture at all levels (Beasley et al., 2005; Desender, 2011; Mikes & Kaplan, 2014). As the purpose of the IAF’s involvement in ERM is to improve risk management effectiveness and create organizational value, the organisation’s different risk maturity and the associated opportunities and needs for IAFs are expected to associate with IAFs’ engagement in different ERM-related roles.

Hillson’s (1997) risk maturity model, which is widely adopted in the risk discipline to benchmark and measure organizations’ risk maturity, suggests that each level of ERM is associated with different challenges and barriers to reach the next level, which presents different expectations and opportunities for IAFs. Evidence suggests that organizations in the early introduction stage of ERM are normally at lower risk maturity level and often suffer from lack of risk understanding within the organization (Hillson 1997). In these organisations, an IAF with risk expertise and convinced of the usefulness of such a formalised ERM system adds value to ERM mainly by acting as risk champion to create more risk and control awareness or work collaboratively with risk function to formalise the ERM processes (Sarens & De Beelde, 2006; IIA, 2009). Notably, the IAF’s assurance roles could be limited at this stage given the lack of formalised risk processes and data (IIA, 2009). In contrast, for organisations at higher risk maturity level with integrated and complex risk framework and procedures, the IAF is expected to add more value to ERM through performing periodic independent audit of ERM to ensure the adequacy and effectiveness of the overall risk framework as well as key risk procedures (Hillson, 1997). Evidence also suggests that organisations with a more complete ERM framework in place generally provides more opportunities for internal audit involvement (Beasley et al. 2006). Based on the varying features of organizations at different levels of risk maturity, the following hypothesis is proposed:

H3: The organization’s level of risk maturity is positively (negatively) associated with the IAF’s involvement in ERM-related assurance (consulting and management) roles.

3.2.2.2 Existence of separate risk function

As suggested by prior literature and a range of guidelines, the establishment of a designated risk function is critical to achieving effective ERM, as a risk function performs key roles in ERM, including defining risk appetite, performing risk reporting, and supporting operational management on risk matters (IIA, 2013; Meidell & Kaarbøe, 2017; Moore, 2010). However, a separate risk function is not mandatory in most industries. Evidence suggests that the CAE and the IAF typically play a leadership role in ERM, including spearheading the ERM efforts, being the ERM process owner and acting as risk champion, where there is lack of dedicated personnel in ERM (Walker et al. 2002). Sarens and De Beelde (2006)'s suggests that IAFs in U.S. context where risk management system is formalised, with separated risk management functions independent from the IAF, tend to focus on their core assurance roles, from which the IAF's objective evaluations and opinions are a valuable input for the internal control review and regulatory disclosure requirements. In contrast, IAFs in Belgain context with lack formalised ERM and risk function are more likely to demonstrate their value in ERM by playing a pioneering role in the enhancement of risk and control awareness and establishment of a more formalized risk management system (Sarens and De Beelde 2006). Consistently, the IIA's ERM position paper (2009) suggests that the IAF is more likely to perform greater roles in terms of ERM reviews, reporting, and management where a separate risk function does not exist. The following hypothesis is therefore developed:

H4: The IAF in organizations with (without) a separate risk function has more involvement in ERM-related assurance (consulting and management) roles.

3.2.2.3 Financial industry

The financial industry operates in a complex and dynamic environment of high uncertainty (Beasley et al., 2005) and is often subject to extensive mandatory risk management regulations both in Australia and internationally (e.g., Basel Accord I, II & III, Prudential Regulations). The extensive regulatory requirements faced by financial organizations generally impose strong coercive pressure on them to have their IAF perform periodic audits and reviews on their ERM to ensure regulatory compliance (Soh & Martinov-Bennie, 2018).

Financial organizations also generally have higher levels of ERM implementation with relatively more sophisticated risk frameworks and processes compared to non-financial organizations (Manab, Kassim, & Hussin, 2010; Paape & Speklè, 2012). This means that the IAF in financial

organizations needs to perform more comprehensive assessment and monitoring of the organizations' overall risk framework and key risk procedures to ensure ERM effectiveness.

Prior literature indicates that organizations with an IAF are more likely than those without to detect and self-report fraud through the involvement of the IAF in independent review of risk management procedures (Coram et al., 2008). However, prior research also suggests that the IAF's independence is a necessary antecedent to achieving effective IAF financial reporting monitoring (Abbott, Daugherty, Parker, & Peters, 2016).

Given the important value of the IAF's assurance activities in financial organizations, it is expected that financial organizations are more likely to have their IAF focus on key assurance roles. Organizations are more likely to be cautious when the IAF is involved in consulting and management roles as these roles may impair the perceived and/or actual independence of the IAF.

The following hypothesis is therefore proposed:

H5: The IAF in financial organizations has more (less) involvement in ERM-related assurance (consulting and management) roles.

3.2.3 IAF Characteristics

3.2.3.1 Chief audit executive's experience

Prior studies suggest that internal auditors' experience and education, particularly the characteristics of the CAE, have a positive impact on internal audit quality (Abbott et al., 2016; Van Staden & Steyn, 2009). In the ERM context, CAEs are found to play a significant role in providing assurance opinions to the senior management and audit committees regarding the ERM effectiveness and adequacy, and sometimes even take a leadership role of ERM by spearheading the ERM effort and acting as risk champion (Beasley et al., 2005; Sarens and De Beelde 2006). The engagement in ERM-related roles require CAEs to demonstrate adequate knowledge of risk management and appropriate skills of risk assessment and control review (IIA, 2009). Prior studies suggest that internal auditors' capabilities and knowledge of risk management are often a key constrain that limits the IAF's involvement in ERM-related roles (Luburic et al., 2015). Given the importance of the CAE in directing internal audit's activities (Walker et al., 2002), it is expected that CAEs with greater internal audit experience are more likely to lead their IAFs to have more involvement in ERM.

H6: CAEs' level of internal audit experience is positively associated with the IAF's involvement in ERM-related roles.

3.2.3.2 IAF budget

Prior research indicates that the IAF's desire to maximize its audit coverage is subject to budget constraints (Newman, Park, & Smith, 1998). Although the value of the IAF's involvement in ERM has been increasingly recognized (Beasley et al., 2006; Goodwin, 2003; Liu, 2012; Sarens & De Beelde, 2006a; Spira & Page, 2003), there are currently no mandatory requirements for such involvement. It is thus hypothesized that as the IAF has more resources at its disposal it is more likely to go beyond its traditional internal audit scope in relation to level of involvement in ERM.

H7: The IAF's budget is positively associated with its involvement in ERM-related roles.

3.2.3.3 IAF age

Prior research indicates that longer established IAFs are more likely to be better embedded within the organizational structure with stronger overall acceptance and support for the function, which put them in a relatively better position than those that are less established to act as the bridge between governance parties and risk management (Sarens & De Beelde, 2006b). Besides, longer standing IAFs often have relatively more diversified agendas (Sarens and Abdolmohammadi 2011) and are more likely to extend their work scope to non-traditional internal audit work, such as involvement in social assurance issues (Soh & Martinov-Bennie, 2018). It is therefore expected that IAFs with longer tenure (i.e., more formal or informal status and influence) are more likely to lead the IAF into greater involvement in ERM-related roles. The following hypothesis is therefore developed:

H8: The IAF's age is positively associated with its involvement in ERM-related roles.

3.2.3.4 IAF sourcing

The existing literature suggests that IAF sourcing is a key factor associated with internal audit effectiveness and external auditors' reliance on internal audit work. However, evidence regarding impact of IAF sourcing on IAF's roles is mixed. Some studies suggest that in-house IAFs are (perceived to be) more effective in assisting with detecting ineffective risk processes

and self-reporting fraud given that they are generally more embedded into organizations structure with a deeper understanding of the organization's systems, relative to an outsourced IAFs (Coram et al., 2008; Soh & Martinov-Bennie, 2011). In contrast, other studies suggest that outsourced IAFs are likely to be more independent and have access to more skilled and knowledgeable staff (Mubako 2019; Barr-Pulliam 2016; Rittenberg and Covaleski 2001) and thus be potentially well equipped to be involved in ERM. On balance, based on prior Australian studies' findings (Coram et al., 2008; Soh & Martinov-Bennie, 2011) this study, conducted in Australian context, predicts that :

H9: outsourced IAFs are less involved in ERM-related roles relative to in-house IAFs.

3.3 Research Method

3.3.1 Survey instrument

An online survey was developed to examine the hypotheses proposed in the preceding section. To ensure the reliability and validity of data collected, the questionnaire was designed and administrated with reference to well-established guidelines tailored for web surveys (Couper, Traugott, & Lamias, 2001; Dillman & Bowker, 2001; Frazer & Lawley, 2001; Manfreda, Batagelj, & Vehovar, 2002; Peytchev, Couper, McCabe, & Crawford, 2006), as well as prior surveys on similar topics (de Zwaan et al., 2011; IIA, 2016).

A pre-test and pilot test were conducted to further enhance the validity of the questionnaire. The pre-test was conducted with four academics with a balance of expertise regarding survey design and administration and audit and risk management concepts. The pre-test feedback was utilized to revise, format, and improve the survey instrument. A pilot test was subsequently undertaken by six experienced auditing academics and internal audit practitioners and two senior members of IIA-Australia. Based on the comments received from the pilot testing, minor refinements were made in finalizing the survey instrument.

3.3.2 Sample

The target participants for this study are CAEs, or equivalent, who are generally considered to have comprehensive knowledge of their organizations' IAF and ERM (Abdolmohammadi & Boss, 2010; Guthrie, Norman, & Rose, 2012; Leung, Cooper, & Perera, 2011; Soh & Martinov-Bennie, 2011). IIA-Australia supported the recruitment of participants by distributing the survey invitation email to its CAE membership (population of approximately 300). The invitation contained a brief introduction to the research and a web link to the online questionnaire.

To encourage participation in the survey (i) a logic function that automatically directed participants to applicable questions was built into the online questionnaire to enhance efficiency and user experience, (ii) personalized greetings were included in the invitation letter to attract participants' attention, and (iii) a reminder email was sent to further boost the response rate when it levelled off after the first two weeks of data collection. Anonymous feedback collected from survey participants suggested that they found the survey easy to navigate and that they were genuinely interested in the topic of internal audit's roles in ERM. Of the 119 responses collected, 95 were complete, yielding a response rate of approximate 32 percent. The sample size of this study is considered as adequate, with a similar or better response rate achieved compared to prior research of a similar nature (Castanheira et al., 2009; de Zwaan et al., 2011; Gramling, Maletta, Schneider, & Church, 2004; Leung et al., 2011).

A summary of the characteristics of respondents is presented in Panel A in Table 3.1. Approximately 75 percent of the respondents were male. Almost all participants (92 percent) were over 40 years of age, with the majority (80 percent) between 40 to 60 years old. More than 75 percent have over 10 years of experience in internal auditing and 41 percent have worked for more than 5 years in the organization on which they based their responses. All participants were members of professional bodies with more than half of the participants (56 percent) being professional members of IIA-Australia (PMIIA).

Panel B in Table 3.1 presents a summary of the characteristics of participants' organizations that formed the basis for their responses. The majority of organizations (79 percent) were large, with 9,326 employees on average. Private sector entities comprise 35 percent of the sample, while 65 percent of respondents were from public sector organizations¹². Social & Personal Services (43 percent) and Financial and Insurance Services (23 percent) were the most common industries for the sample.

¹² Similar requirements apply to the IAF in the public sector and private sector in Australia

Table 3.1: Sample Descriptive Statistics

Panel A Participants' Descriptive Statistics			
<i>Gender</i>	<i>Percent</i>	<i>Age (years)</i>	<i>Percent</i>
Male	72.5%	30 and under	1.1%
Female	27.5%	31– 40	6.5%
		41– 50	44.1%
		51– 60	35.5%
		61 and over	12.9%
<i>Years of internal audit experience</i>	<i>Percent</i>	<i>Years working in the organization</i>	<i>Percent</i>
Under 1 year	1.1%	Under 1 year	14.0%
1–5 years	9.7%	1–5 years	45.2%
6–10 years	11.8%	6–10 years	22.6%
11–15 years	12.9%	11–15 years	6.5%
16–20 years	22.6%	16–20 years	1.1%
21 years and over	41.9%	21 years and over	10.8%
<i>Certificate</i>			<i>Percent</i>
Professional Member of IIA-Australia (PMIA)			55.9%
Chartered Accountant (CA)			37.6%
Certified Practising Accountant (CPA)			33.3%
Certified Internal Auditor (CIA)			32.3%
Member of Australian Institute of Company Directors (AICD)			17.2%
Certified Government Audit Professional (CGAP)			5.4%
Certified Financial Services Auditor (CFSA)			4.3%

Table 3.1 Cont.: Sample Descriptive Statistics

Panel B Organizations' Descriptive Statistics			
<i>Firm Size (No. of Employees)</i>	<i>Percent</i>	<i>Sector</i>	<i>Percent</i>
0–250	21.1%	Publicly traded (listed) company	20.0%
251–1000	16.8%	Privately traded (non-listed) company	14.7%
1001 – 5000	32.6%	Government	53.7%
5001 –10000	12%	Not-for-profit	11.6%
>10000	18%		
<i>Employee: Mean=9326, Medium = 1700</i>			
<i>Industry</i>			<i>Percent</i>
Agriculture, Forestry, and Fishing			3.2%
Mining			3.2%
Electricity, Gas, Water and Waste Services			3.2%
Social and Personal Services			43.2%
Manufacturing and Construction			3.2%
Financial and Insurance Services			23.2%
Professional Business Services			4.2%
Distribution Services			11.6%
Others			5.3%
Total			100.0%
Note: 'Social and Personal Services' (i.e., Public Administration & Safety, Health Care & Social Assistance; Education & Training, Arts & Recreation Service; Accommodation & Food Service); 'Professional Business Services' (i.e., Professional, Scientific & Technical Services; Rental, Hiring & Real Estate Services; Administrative & Support Services); 'Distribution Services' (i.e., Wholesale Trade; Retail Trade; Transport, Postal & Warehousing; Information Media & Telecommunications).			

3.3.3 Model specification

This study adopted a multi-linear regression model to test the impact of various governance, risk management, and IAF factors on the level of IAF involvement in ERM-related assurance, consulting, and management roles respectively. The base model is specified as follows:

$$\begin{aligned} &ASSURE/CONSULT/MANAGE/ASSvsCON_MGT \\ &= \beta_0 + \beta_1 MGT SUPT + \beta_2 FQEXTAS + \beta_3 RISKMRT + \beta_4 RISKFUNC \\ &+ \beta_5 FININDUS + \beta_6 CAEEXP + \beta_7 IABUDGT + \beta_8 IAFAGE \\ &+ \beta_9 OUTSRCE \end{aligned}$$

Definitions of variables included in the model are provided in Table 3.2.

3.3.3.1 Dependent variables

The dependent variables (DVs) are the level of IAF involvement in ERM-related roles (i.e., assurance, consulting, and management), measured by the extent of time that the IAF spends on each type of role (Abdolmohammadi & Boss, 2010; Munro & Stewart, 2010). Consistent with prior studies investigating internal audit's involvement in ERM (de Zwaan et al., 2011; Goodwin-Stewart & Kent, 2006), the IIA's position paper (2009) is adopted to identify the list of specific activities that the IAF may potentially undertake when performing each type of ERM-related role (i.e., assurance, consulting, and management). Participants were asked to indicate the extent of time the IAF spends on each specific activity using a 5-point Likert scale (1 = 'none', 5 = 'significant'). An average score of specific activities was calculated for each role type (i.e., assurance, consulting, and management) to represent the IAF's level of involvement in that role (i.e., model 1 for assurance-DV: ASSURE; model 2 for consulting-DV: CONSULT; and model 3 for management-DV: MANAGE)

Table 3.2: Definition of Variables

<i>Variable</i>	<i>Definition</i>
<i>ASSURE</i>	Extent of time that IAF spends, on average, across 5 ERM-related assurance roles, scale from 1 (none) to 5 (significant)
<i>CONSULT</i>	Extent of time that IAF spends, on average, across 7 ERM-related consulting roles, scale from 1 (none) to 5 (significant)
<i>MANAGE</i>	Extent of time that IAF spends, on average, across 5 ERM-related management roles, scale from 1 (none) to 5 (significant)
<i>ASSvsCON_MGT</i>	Average extent of time that IAF devotes to ERM-related assurance roles relative to consulting and management roles
<i>MGTSUPT</i>	Extent of senior management support for IAF's involvement in ERM, scale from 1 (none) to 5 (significant)
<i>FQEXTAS</i>	Frequency of external assessment of internal audit, scale from 1 (monthly), 2 (quarterly), 3 (semi-annually), 4 (annually), 5 (biennially), 6 (every 3 years), 7 (every 4 years), 8 (every 5 years), 9 (more than 5 years)
<i>RISKMRT</i>	Organization's risk maturity, scale from 1 (naïve), 2 (risk aware), 3 (risk defined), 4 (risk managed), 5 (mature)
<i>RISKFUNC</i>	1 if the organization has a separate risk function, otherwise 0
<i>FININDUS</i>	1 if the organization in financial industry, otherwise 0
<i>CAEEXP</i>	CAE's (or equivalent) number of year(s) internal audit experience, scale from 1 (under 1 year), 2 (1–5 years), 3 (6–10 years), 4 (11–15 years), 5 (16–20 year), 6 (21 years or over)
<i>IABUDGT</i>	Log of annual IAF Budget (\$m)
<i>IAFAGE</i>	Number of years that IAF established in the organization 1 (5 years or less), 2 (6–15 years), 3 (more than 15 years)
<i>OUTSRCE</i>	1 if the organization's IAF in outsourced, otherwise 0

3.3.3.2 Independent variables

Governance factors

Senior management support (*MGTSUPT*) was measured as the CAE's perception of the level of support its IAF received regarding the IAF's involvement in ERM (rated on a Likert scale from 1 ('none') to 5 ('significant')) from a list of key internal senior stakeholders. This variable was measured as the average score of the extent of support received from CEO, CFO, Board, Chairs of Audit and/or Risk Committee.. This measurement of senior management support is consistent with prior studies (Beasley et al., 2005). The other governance factor, external IAF quality assessment (*FQEXTAS*), was measured as the frequency of external IAF assessment, ranging from 0 ('never') to 9 ('every 5 years or more').

Risk management factors

Consistent with prior surveys conducted by the IIA on risk management and governance (IIA, 2014), the organization's risk maturity (*RISKMRT*) was measured by participants rating how well ERM has been adopted and embedded within their organizations on a scale of 1 ('risk naïve') to 5 ('risk mature'). This measure of risk maturity is consistent with the commonly referenced risk maturity model developed by the Risk and Insurance Management Society (RIMS, 2014). A short description of each risk maturity rating¹³ was included to ensure consistency in responses and assist survey respondents with identifying the most appropriate risk maturity level for their organizations. The existence of a separate risk function was measured using a binary variable (*RISKFUNC*) of '1' if a separate risk function existed within the organization, and '0' otherwise. Similarly, *FINIDUS* was measured as '1' if the respondent's organization was in the financial industry, and otherwise '0'.

IAF characteristics

CAEs' experience in internal auditing (*CAEEXP*) was measured on a 5-point Likert scale from 1 ('under 1 year') to 6 ('more than 20 years') with 5-year interval between each Likert point. The total annual IAF budget (*IABUDGT*) was measured by the log of the reported annual IAF budget (Soh & Martinov-Bennie, 2018). *IAFAGE* represents IAF maturity, measured by the number of years that the IAF had been established in the organization (Sarens & Abdolmohammadi, 2011;

¹³ The following descriptions of each risk maturity level were included in the questionnaire for the participants' reference:

'Risk Naïve' – no formal plans for risk management; 'Risk Aware' – consulting and planning to implement risk management; 'Risk Defined' – early stages of implementation; 'Risk Managed' – established risk management with planned extension/development; 'Risk Enabled' – fully established and effective risk culture at all levels.

Soh & Martinov-Bennie, 2018) and aggregated into three levels from 1 ('5 years or less') to 3 ('more than 15 years'). *OUTSRCE* is a binary variable with '1' indicating that the organization's IAF was outsourced, otherwise '0'.

The descriptive statistics of the dependent and independent variables of this study are reported in Table 3.3.

Table 3.3: Descriptive Statistics

<i>Variable</i>	<i>Mean</i>	<i>SD</i>	<i>Min</i>	<i>Max</i>
<i>Dependent Variable</i>				
<i>ASSURE</i>	3.00	0.86	1.00	5.00
<i>CONSULT</i>	2.28	0.99	1.00	5.00
<i>MANAGE</i>	1.84	1.05	1.00	5.00
<i>ASSvsCON_MGT</i>	1.61	0.64	0.66	3.94
<i>Governance Factors</i>				
<i>MGTSUPT</i>	3.48	1.17	0.00	5.00
<i>FQEXTAS</i>	3.93	3.77	0.00	8.00
<i>Risk Factors</i>				
<i>RISKMRT</i>	3.57	0.82	1.00	5.00
<i>RISKFUNC</i>	0.78	0.42	0.00	1.00
<i>FININDUS</i>	0.25	0.43	0.00	1.00
<i>IAF Characteristics</i>				
<i>CAEEXP</i>	4.72	1.42	1.00	6.00
<i>IABUDGT (\$)</i>	1,556,063.83	5,424,365.38	10,000.00	50,000,000.00
<i>IAFAGE</i>	2.10	0.80	1.00	3.00
<i>OUTSRCE</i>	0.16	0.37	0.00	1.00

3.4 Results

3.4.1 Regression results

This section outlines the results for the hypotheses regarding the potential impact of governance, risk, and IAF factors on internal audit's involvement in ERM (models 1, 2, and 3) outlined in Section 3.2. The results of the regression models are presented in Table 3.4.

3.4.1.1 Governance factors

The coefficients on *MGTSUPT* are significant and positive across all models (*MGTSUPT* coefficient = 0.213, $p = 0.013$ in model 1; coefficient = 0.327, $p = 0.001$ in model 2; coefficient = 0.223, $p = 0.023$ in model 3). This supports H1 that predicted a positive association between senior management support and the level of IAF involvement in ERM-related assurance, consulting, and management roles. This association is more significant for the IAF's ERM-related consulting roles ($p < 1\%$) relative to assurance roles and management roles ($p < 5\%$).

The coefficients for *FQEXTAS* are significant and negative in models 2 and 3 (coefficient = -0.056 , $p = 0.049$ in model 2; coefficient = -0.056 , $p = 0.049$ in model 3), but no significant result was found in model 1. This result provides partial support for H2 in that the frequency of the IAF's external assessment was found to be significantly negatively associated with the IAF's ERM-related consulting and management roles, while no significant association is found for the IAF's assurance roles.

3.4.1.2 Risk management factors

The coefficient on the organization's risk maturity level is significant and positive in model 1 (*RISKMRT* coefficient = 0.202, $p = 0.092$ in model 1), but is not significant for models 2 and 3. The positive association between risk maturity and the IAF's ERM-related assurance roles provides partial support for H3.

The coefficients on *RISKFUNC* are significant and negative in both models 2 and 3 (*RISKFUNC* coefficient = -0.741 , $p = 0.006$ in model 2; coefficient = -0.661 , $p = 0.018$ in model 3), but not significant in model 1. H4 is thus partially supported by the significant negative association between the existence of a separate risk function and the IAF's ERM-related consulting and management roles.

The coefficient on *FININDUS* is not significant across all models 1, 2, and 3. H5 is thus rejected.

Table 3.4: Regression Model Results

IAF's ERM related assurance, consulting, management models											
Independent Variable	Model 1: ASSURE*			Model 2: CONSULT*			Model 3: MANAGE*			Model 4: ASSvsCON_MGT*	
	Coefficient estimate	z-Statistic		Coefficient estimate	z-Statistic		Coefficient estimate	z-Statistic		Coefficient estimate	z-Statistic
MGTSUPT	0.213	0.279	**	0.327	0.366	***	0.223	0.240	**	−0.051	−0.090
FQEXTAS	0.011	0.048		−0.056	−0.210	**	−0.054	−0.194	*	0.037	0.217 **
RISKMRT	0.202	0.190	*	0.069	0.056		0.211	0.164		0.080	0.103
RISKFUNC	−0.144	−0.062		−0.741	−0.274	**	−0.661	−0.235	**	0.415	0.244 **
FININDUS	0.208	0.103		−0.334	−0.143		−0.336	−0.138		0.392	0.265 **
CAEEXP	0.023	0.038		0.094	0.132		0.157	0.213	**	−0.061	−0.137
IABUDGT	−0.340	−0.257	**	0.073	0.047		−0.105	−0.066		−0.289	−0.297 **
IAFAGE	0.184	0.168		−0.155	−0.121		−0.284	−0.214	*	0.314	0.389 ***
OUTSRCE	−0.546	−0.207	**	−0.864	−0.281	**	−0.821	−0.257	**	0.250	0.129
(Constant)	3.039		***	1.369			1.696		*	2.150	***
Observations	95			95			95			95	

* $p < .10$, ** $p < .05$, *** $p < .01$.

* R^2 (Model 1) = 0.290; R^2 (Model 2) = 0.373; R^2 (Model 3) = 0.368; R^2 (Model 4) = 0.472

3.4.1.3 IAF characteristics

In terms of *IAEXP*, the only significant result is in model 3, which indicates a significant positive association between CAEs' internal audit experience and the level of IAF involvement in ERM-related management roles (*IAEXP* coefficient = 0.157, $p = 0.026$ in model 3). This provides some support for H6, specifically within the context of internal audit's involvement in ERM-related management roles.

The coefficient on *IABUDGT* is significant but negative in model 1 (*IABUDGT* coefficient = -0.340 , $p = 0.022$ in model 1), whereas it is not significant in models 2 and 3. H7 is thus rejected. Similarly, H8 is rejected given that only a marginal significant negative association between the IAF's age and the level of IAF involvement in ERM-related management roles is present in model 3 (*IAFAGE* coefficient = -0.284 , $p = 0.052$ in model 3).

The coefficient on *OUTSRCE* is significant and negative across all three models (*OUTSRCE* coefficient = -0.546 , $p = 0.034$ in model 1; coefficient = -0.864 , $p = 0.003$ in model 2; coefficient = -0.821 , $p = 0.006$ in model 3). This result supports H9 that predicts a negative association between IAF outsourcing and its ERM-related roles. This association is more significant for the IAF's ERM-related consulting and management roles (i.e., $1\% < p < 0.1\%$) relative to assurance roles (i.e., $1\% < p < 5\%$).

3.4.2 Supplementary analysis

In addition to testing the hypotheses regarding the impact of different factors (i.e., governance, risk, and IAF characteristics) on the IAF's level of involvement in ERM, a number of control variables, including sector (private/public) and organisational size (small/medium/large based on employees number), have been subjected to additional sensitivity testing. The results were not significant.

Supplementary analysis was also conducted in an additional model (model 4) designed to investigate factors affecting the IAF's relative time allocation between ERM-related core assurance roles and other roles (i.e. consulting and management roles). The dependent variable in this model (i.e., *ASSvsCON_MGT*) represents the ratio of the IAF's time spent on ERM-related assurance roles over other ERM-related roles. The results for model 4 are presented in Table 3.4.

The results for the governance factors investigated are mixed. The extent of management support (*MGTSUPT*) is not significant but the frequency of the IAF's external assessment (*FQEXTAS*) is

significantly positively associated with the ratio of time spent on its ERM-related assurance roles relative to other roles (*FQEXTAS* coefficient = 0.037, $p = 0.027$ in model 4)

While risk maturity (i.e., *RISKMRT*) is not found to be significant in model 4, both the existence of a risk function (*RISKFUNC* coefficient = 0.415, $p = 0.008$ in model 4) and financial industry (*FININDUS* coefficient = 0.392, $p = 0.002$ in model 4) are found to be significantly positively associated with the ratio of the involvement of the IAF in ERM-assurance roles relative to other ERM-related roles.

The results of IAF characteristics indicate that internal audit's involvement in ERM-assurance roles relative to other ERM-related roles is significantly positively associated with the age of IAF (coefficient = 0.314, $p = 0.000$ in model 4), and negatively associated with IAF budget (*IABUDGT* coefficient = -0.289, $p = 0.002$ in model 4).

3.5 Discussion

The findings of this study suggest that senior management support is a key factor associated with internal audit's involvement across all types of ERM-related roles. This is consistent with prior studies that indicate that senior management support facilitates the IAF's involvement in risk initiatives (Beasley et al., 2005) as well as in non-traditional assurance areas (Sarens & De Beelde, 2006b) such as in social and environmental issues (Soh & Martinov-Bennie, 2018). The positive association between senior management support and the IAF's involvement in ERM thus reinforces the findings of prior studies on the importance of senior management support. Given that internal audit's involvement in ERM is not mandated, senior management support is important in providing the IAF with necessary authority to become involved in ERM-related issues and facilitates access to direct input and support from management in performing ERM-related assurance and consulting (Soh & Martinov-Bennie, 2018).

However, the finding that senior management support tends to increase not only IAF involvement in the core ERM-related assurance roles but also in the ERM-related consulting and management roles has potential implications for the perceived and/or actual independence of the IAF. From an agency theory perspective, this finding suggests that internal auditors may view their consulting and management roles as being in the best interest of their company rather than providing objective feedback to management, and potentially adversely impacts on their willingness to report a break-down in risk procedures (Brody & Lowe, 2000; de Zwaan et al., 2011). To address this concern, the IIA explicitly notes that internal audit should not perform any

ERM-related management roles, while consulting roles are only considered to be legitimate if they are conducted with appropriate safeguards and are compatible with the IAF's core assurance roles (IIA, 2009). Considering the importance of internal auditors' independence in their assurance roles, future research could investigate how the IAF can reduce its involvement in direct ERM decisions when working closely with the management team.

The results also suggest that the initiation of frequent IAF external assessments is an effective tool in reducing the involvement of the IAF in ERM-related management roles. Supplementary analysis of the IAF's time allocation in ERM also confirms that an IAF with more frequent external assessments tends to allocate significantly more time to core assurance roles relative to consulting/management roles. Future research may investigate other potential legitimate tools that can be utilized by the IAF to maintain independence when involved in ERM.

The findings also indicate a significant association between the organization's risk management factors and the involvement of the IAF in ERM. Prior studies adopting contingency theory suggest that there is substantial variation in organizations' ERM adoption, which often result in different organizational opportunities and challenges (Farrell & Gallagher, 2015; Hillson, 1997; Mikes & Kaplan, 2014). Risk management characteristics is thus a critical consideration in determining appropriate IAF roles to maximize the IAF's value-add (Coetzee & Lubbe, 2013; IIA, 2009; Soh & Martinov-Bennie, 2018). The results indicate that all of the three risk factors investigated (i.e., organization's risk maturity, existence of separate risk function, and operation in financial industry) have some impact on the IAF's ERM-related roles, although the impact varies with the different factors and type of ERM-related roles.

In terms of risk maturity, the IAF is found to have significantly more involvement in ERM-related assurance roles in a relatively more mature ERM environment, whereas the IAF's ERM-related consulting and management roles are not significantly affected by the organization's risk maturity level. This can possibly be explained by the fact that the relatively more mature ERM environment presents greater need for the IAF to perform ERM-related assurance roles, as the formalized and mature ERM is often accompanied by a comprehensive risk management framework and control procedures, which require complex review and/or audit performed by an independent party with extensive knowledge of risk (Farrell & Gallagher, 2015; Hillson, 1997). In addition, having mature risk strategies in place also facilitates the IAF's ERM-related assurance roles, as prior literature indicates that internal audit quality is largely dependent on the completeness of risk data and documentation (Coetzee & Lubbe, 2013).

However, it is worth noting that the IAF's overall involvement in ERM-related consulting and management is not affected by the organization's risk maturity. This finding is in contrast to the IIA's position paper, which suggests that the IAF's ERM-related consulting roles are likely to decline as the organization's risk maturity increases (IIA, 2009). A possible explanation is that types of ERM-related consulting roles at different stages of the organization's ERM may change but the IAF's overall involvement in consulting roles remains unchanged. Prior literature has suggested that organizations at the early stages of implementing ERM require the IAF to perform more championing and project managing roles, whereas organizations with relatively mature ERM require more support in training and maintenance roles to mitigate outdated or irrelevant risk processes and to prevent staff from losing interest in risk processes (Hillson, 1997). Future research could potentially investigate the impact of organizations' risk maturity on the IAF's involvement in specific types of ERM-related consulting and management roles and whether they evolve over time.

The existence of a separate risk function was found to be significantly and negatively associated with the IAF's ERM-related consulting and management roles but has no significant association with ERM-related assurance roles. The finding that the IAF has higher involvement in ERM-related advisory or even direct management roles in the absence of a risk function supports prior findings that CAEs are often assigned the primary responsibility for ERM where there is no established risk function existing in their organizations (Sarens & De Beelde, 2006a). In contrast, the result suggests that the IAF's ERM-related assurance roles are not significantly affected by the presence of a separate risk function, potentially because performance of assurance activities requires a certain level of independence and specific audit knowledge. Hence, unlike ERM-related consulting and management roles, the IAF's assurance roles cannot be reduced or shared by the risk function.

The results also indicate that, compared to organizations in other industries, organizations in the financial sector are more likely to have the IAF focus on the core ERM-related assurance roles relative to consulting or management roles. This can possibly be explained by the comprehensive mandated risk management regulations in the financial industry (Manab, Kassim, & Hussin, 2010; Paape & Speklè, 2012). This is supported by research evidence from the US, which suggests that the IAF's involvement in ERM in mature regulatory settings tends to focus on assurance roles, with consulting roles only conducted to support the assurance roles by facilitating risk documentation and reporting (Sarens & De Beelde, 2006a).

The results of this study indicate a significant association between IAF characteristics and internal audit's involvement in certain categories of ERM-related roles. For instance, large-sized and long-established IAFs tend to focus more on the core ERM-related assurance roles relative to consulting or management roles. CAEs with extensive internal audit experience are expected to be more likely to take on more ERM-related management roles, which can be potentially explained by their extensive knowledge of risk and governance.

An additional interesting finding is that the level of involvement of the IAF in consulting roles is significantly positively associated with the amount of the IAF's budget. Prior research in the Australian context suggests that senior management (CEO/CFO) is often responsible for approving the IAF's budget (Christopher, Sarens, & Leung, 2009). Given that senior management has expressed a growing need for the IAF to perform more proactive consulting roles in ERM (Sarens & De Beelde, 2006a, 2006b; Selim, Woodward, & Allegrini, 2009), the increase in the IAF's ERM-related consulting roles to meet management's needs may be reflective of the IAF seeking to use this as leverage to obtain more resources, including increased budgets. Although there are certain benefits for the IAF in being proactively involved in ERM-related consulting roles (Brody & Lowe, 2000; IIA, 2009; Selim et al., 2009), it has to be noted that this may also lead to potential self-advocacy and self-review risks and threaten internal auditors' independence.

Moreover, the outsourced IAF was found to have significantly less involvement in all types of ERM-related roles relative to the in-house IAF. The supplementary analysis further indicates that compared to an in-house IAF, an outsourced IAF tends to focus more on core ERM-related assurance roles relative to consulting and management roles. Given that the IAF's involvement in ERM, especially in ERM-related consulting and management roles, may adversely affect the IAF's independence (IIA, 2009), the outsourced IAF appears to be more cautious in performing ERM-related roles that may potentially compromise its independence. However, prior literature also suggests that keeping the IAF within organizations is more effective than outsourcing the entire IAF, as the in-house internal audit is generally better embedded in the organization and hence is better placed to add value through improving the control and monitoring environment (Coram et al., 2008; Soh & Martinov-Bennie, 2011). Future research may investigate the impact of IAF sourcing on the effectiveness of the IAF's ERM-related roles and extend the analysis to other regulatory/cultural settings.

3.6 Conclusions, Limitations & Implications

This study investigates factors associated with the extent of internal audit's involvement in ERM-related roles. It specifically examines the influence of governance factors, risk management, and IAF characteristics on the IAF's ERM-related assurance, consulting, and management roles.

Senior management support for internal audit's involvement in ERM-related roles was found to be a key factor positively associated with the extent of IAF involvement in all types of ERM-related roles, including core assurance roles and legitimate consulting roles, as well as inappropriate management roles. This finding supports the extant literature indicating that internal audit's relationship with management is a key consideration in embedding non-traditional IAF roles into the function's scope, and extends the prior findings to internal audit's ERM-related roles (Cohen & Sayag, 2010; Sarens & De Beelde, 2006b; Soh & Martinov-Bennie, 2018). However, it is worth noting that increased IAF involvement in ERM-related consulting and management roles may have a negative impact on the IAF's perceived and/or actual independence.

This study suggests that performing regular external IAF assessment is an effective governance tool in maintaining the IAF's independence by reducing internal audit's involvement in consulting and management roles. In addition, the longer-established IAF, and that of financial organizations and/or organizations with a separate risk function also tend to have significantly higher focus on ERM-related assurance roles relative to consulting and management roles. Future research may investigate other potential safeguard/s that the IAF can adopt to maintain independence in situations of a close relationship with management and/or when involved in ERM-related management roles.

The finding that the in-house IAF has significantly higher involvement in ERM-related roles relative to the outsourced IAF is most likely attributable to the in-house IAF being more embedded in, and having in-depth knowledge of, the organization's system, which provides the IAF with better accessibility and visibility in its involvement in ERM-related assurance and consulting. However, it might also indicate that outsourced auditors are generally more cautious with non-traditional internal audit roles and their potential impact on their independence. The impact of different sourcing on the IAF's non-traditional roles, such as ERM, is an area that would benefit from future research.

A further key finding of this study that the organization's risk maturity is only positively associated with the IAF's level of involvement in ERM-related assurance roles does not support

the IIA's prediction that the IAF's consulting roles will decrease when the organization's risk maturity increases. An implication of this finding is that organizations need to be mindful of the need to put in place appropriate safeguards to protect the IAF's independence, regardless of their risk maturity levels.

The analysis of other risk management factors indicates that the IAF's ERM-related consulting and management roles can be reduced or even substituted by a separate risk management function. In addition, the IAF in financial organizations is found to have a significantly higher focus on core ERM-related assurance roles relative to those in other industries. This finding might indicate the potential coercive pressure faced by financial organizations as a result of mandated risk management disclosure requirements in the financial industry (DiMaggio & Powell, 1983; Soh & Martinov-Bennie, 2018).

To further investigate the appropriateness of IAF involvement in ERM, future research could analyze the impact of the IAF's ERM-related roles, particularly in relation to ERM consulting and management, on perceived/actual independence. Alternative research methods, such as interviews, could be utilized to investigate potential effective safeguards to protect the independence of the IAF when involved in these ERM roles.

The findings of this study are subject to several limitations. First, this study investigates the level of IAF involvement in ERM, which does not necessarily indicate the effectiveness of involvement in ERM-related roles. Future studies could investigate the effectiveness of the IAF's ERM-related roles and from the perspectives of other key stakeholders, including management, audit committee members, and external auditors. Second, this study is limited to the Australian context. Prior research suggests that there are variations in the IAF's ERM-related practices across different countries (Sarens & De Beelde, 2006a). Caution should therefore be exercised in generalizing the findings of this study to other institutional and regulatory contexts. Third, to ensure the desired predictive power of the statistical model, given the sample size, this thesis only examined a relatively limited number of specific organisational factors in Paper 2, which were selected on the basis of prior literature of internal audit and risk management. There are potentially numerous other important factors associated with the IAF's ERM-related roles that are not examined in this thesis. Last, non-response bias, as an inherent limitation of survey research, needs to be considered in the interpretation of the results of this study (DiGabriele, 2016; Iyer, Bamber, & Griffin, 2013). Section 3.3.2 of this thesis outlines a number of strategies

that were implemented by the researchers of this study to boost response rate hence reduce the extent of non-response bias of this study (Colombo, 2000).

The results of this study support the need for further research on IAF involvement in ERM. The empirical evidence provided by this study narrows the gap in the current literature regarding contingency factors determining the IAF's involvement in different types of ERM-related roles and enhances overall understanding of the IAF's ERM-related roles in both risk management and internal audit disciplines. The findings of this study also provide important insights for organizations and internal audit practitioners on the IAF's involvement in ERM-related activities. Finally, the findings have implications for policymakers and professional bodies. Specifically, the findings on the extent of IAF involvement in different types of ERM-related roles provide initial evidence for developing specific standards and guidelines to regulate and promote appropriate IAF involvement in ERM.

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Chapter 4 Paper 3 - Internal Audit's Role in the Three Lines of Defence Model in Risk Management

Internal audit's role in the three lines of defence model in risk management

Abstract

This study investigates internal audit's involvement in risk management, specifically within the context of the three lines of defence (TLOD) model. A stakeholder theory perspective was adopted to analyse the qualitative data collected using semi-structured interviews with 12 internal audit practitioners at the CAE or partner level (for external providers of internal auditing services). The results suggest that the TLOD model is generally perceived as a robust and appropriate model for assigning roles and responsibilities in relation to risk management across the key stakeholders, including the IAF. However, several challenges were reported regarding the application of this model, especially in relation to the IAF's involvement in ERM, relating to the lack of: 1) clarity and understanding of the roles across the three lines; 2) risk maturity in the organisation; and 3) communication, coordination, and collaboration across key governance parties. The findings of this study confirm the practice of 'blurring of lines', with the IAF performing advisory and management ERM roles in practice. However, participants suggested that 'blurring of lines' should not be the norm but rather a temporary solution in the organisation's transition phase towards higher levels of risk maturity. The results also indicate that internal auditors' independence was greatly valued by participants, with several safeguards being adopted by the IAF to protect its independence when there was danger of 'blurring of lines' in ERM.

4.1 Introduction

Stakeholders' expectations of effective risk governance and oversight have grown in recent years (Spira and Page, 2003; Banham, 2004; Power, 2004; Beasley et al., 2005; Moore, 2010; Bromiley et al., 2015) as evidenced by the increasing number of regulations and guidelines (e.g., the *Sarbanes Oxley Act (2002)*, *Australian Corporate Governance Principles and Recommendations (2019)*) issued to enhance the board and senior management's accountability for corporate governance and risk management (Kirkpatrick, 2009; Schneider, 2009; Abdullah et al., 2012; Moore, 2010; Mikes and Kaplan, 2014; Viscelli et al., 2016). As a key governance mechanism (Hirth Jr, 2008; Moore, 2010; Groff et al., 2016; Abdullah, 2014), the internal audit function (IAF) is increasingly expected to play a greater role in enterprise-wide risk management (ERM) through providing overall assurance to the board and senior management regarding the effectiveness and appropriateness of the organisation's risk management practices (de Zwaan et al., 2011; Sarens and De Beelde, 2006a, 2006b; Spira and Page, 2003; Beasley et al., 2006; Elena et al., 2014b).

Despite growing stakeholder expectations of risk governance and internal audit involvement in ERM, a recent Royal Commission investigation into Australian banking scandals¹⁴ revealed a lack of accountability and credibility in organisations' risk management practices (Royal Commission, 2019). Furthermore, prior literature suggests that IAFs in some organisations perform inappropriate ERM-related roles that threaten IAF independence and objectivity (de Zwaan et al., 2011). Some IAFs even act as 'protector' (protective shield and keeper of secrets) and 'helper' (support of organisational performance and guide) to assist top management (Roussy, 2013, p. 567). This raises questions about the appropriateness and effectiveness of organisations' risk management models and the IAF's performance of ERM-related roles within these models.

One of the risk management models that has gained prominence in the last two decades is the 'Three Lines of Defence' (TLOD) model, which outlines delegation and assignment of risk management responsibilities (Luburic et al., 2015; Davies and Zhivitskaya, 2018; Lim et al., 2017). This model advocates for clear assignment of three aspects of risk management

¹⁴ The Royal Commission was established on 14 December 2017 by the Governor-General of the Commonwealth of Australia to investigate misconduct in the banking, superannuation, and financial services industry. A number of banking scandals have been revealed by this investigation, including the AMP's misconduct of charging fees for no service and CBA's violation of anti-money laundering laws. The detailed report of this investigation can be found at <https://financialservices.royalcommission.gov.au/Pages/default.aspx>

responsibilities – risk ownership (first line of defence), risk monitoring (second line of defence), and risk assurance (third line of defence) (Luburic et al., 2015; Burch, 2017; Davies and Zhivitskaya, 2018). Since the late 1990s, the TLOD model has been widely adopted in practice across different industries (Luburic et al., 2015; Burch, 2017; Davies and Zhivitskaya, 2018) and promoted by regulators and professional bodies (e.g., IIA-global, Committee of Sponsoring Organizations of the Treadway Commission (COSO), the Australian Prudential Regulatory Authority (APRA)¹⁵, etc.). Within the TLOD model, the IAF is seen as the third line of defence, which “provide(s) the governing body and senior management with comprehensive assurance based on the highest level of independence and objectivity within the organization.... (regarding) the effectiveness of governance, risk management, and internal controls, including the manner in which the first and second lines of defense achieve risk management and control objectives” (IIA, 2013, p. 5).

Despite the widespread adoption of, and regulatory preference for, the TLOD model, research into the appropriateness and effectiveness of the model in practice is limited. Extant studies of the TLOD model primarily focus on the roles and accountabilities of the first and second lines of defence, with minimal analysis of the model from the perspective of the third line of defence (i.e., internal audit) (Lim et al., 2017; Burch, 2017; Davies and Zhivitskaya, 2018; House of Lords and House of Commons, 2013). As Lim et al. (2017, p. 78) note, “Whilst the TLOD model is widely used by financial institutions, we still know relatively little about how it is operationalized in practice and how conflicts, tensions and basic communication between the different levels of defence are managed”.

Following recent issues plaguing the banking sector (e.g., global financial crisis 2009–2010 and the Australian banking royal commission) and the widespread adoption of the TLOD model within the finance sector, there has been increasing criticism of the effectiveness and appropriateness of the TLOD model (Lim et al., 2017; Davies and Zhivitskaya, 2018; House of Lords and House of Commons, 2013). In response to changing stakeholder expectations and the increasing complexity of the business environment, the Institute of Internal Auditors (IIA), in early 2019, initiated a proposal to update the TLOD model, inviting comments and analysis of the existing model (IIA, 2019).

¹⁵ The Australian Prudential Regulation Authority (APRA) is an independent statutory authority that supervises institutions across banking, insurance, and superannuation and promotes financial system stability in Australia

Considering the IAF's emerging role in ERM, as well as growing discussion of organisational risk governance practices, especially in relation to the TLOD model, this study investigates the relevance and appropriateness of the TLOD model, with particular regard for the IAF's involvement in ERM under this model. Interviews were undertaken with 12 CAEs and external service providers across different industries and sectors.

Contrary to criticism of the TLOD model in extant studies, our findings indicate that the TLOD model is generally perceived as a robust model for ERM, although a number of challenges were acknowledged in terms of the application of the model in practice. Specifically, three key issues were observed in relation to the IAF's ERM-related involvement under the TLOD model, relating to lack of 1) clarity and understanding of roles and responsibilities of each line of defence, 2) risk maturity and capability within organisations, and 3) communication, coordination, and collaboration across the different lines of defence.

Overall, this study provides empirical evidence on the relevance and appropriateness of the TLOD model in the current business context, especially in relation to the IAF's involvement in ERM. The results provide greater insight into the IAF's ERM-related involvement in the corporate governance context and the adoption and formalisation of the TLOD model in practice. The findings of this study are particularly relevant in light of the IIA's recent updates of the TLOD model and are useful to regulators and professional bodies in developing future guidance and regulations in relation to the IAF's involvement in ERM.

The remainder of this paper is organised as follows. Section 4.2 reviews the extant literature regarding the IAF's roles in corporate governance and risk management. Section 4.3 discusses stakeholder theory and its relevance to this study. Section 4.4 explains the research methodology for this study. The study's results and findings are discussed in Section 4.5, while Section 4.6 concludes and outlines the limitations of the study and provides suggestions for future research.

4.2 Literature Review and Research Question Development

This section reviews the relevant literature on the IAF's involvement in corporate governance, with a particular focus on its involvement in ERM. Section 4.2.1 discusses the background and context of the IAF's evolving roles in relation to ERM. Section 4.2.2 introduces the TLOD model and examines the relevant literature. The overall research question is developed on the basis of the literature review and articulated at the end of this section.

4.2.1 Internal audit, risk management, and corporate governance

From the early 21st century, there has been a fundamental change in the nature of corporate governance from ‘regulation from above’ to ‘regulation from the inside’, with a key feature of this proactive self-regulation approach being risk-based future orientation (Power, 2000). An increasingly complex and dynamic business environment has contributed to the move away from rigid documented control to a shift of responsibility for control down the organisational hierarchy. In this situation, oversight by management can no longer be achieved through traditional compliance based internal audit (Spira and Page, 2003). With risk management and management accountability becoming prominent in corporate governance (Spira and Page, 2003; Carey, 2001; Dickinson, 2001), senior management expects the IAF to compensate for the loss of control experienced as a result of increased organisational complexity (Sarens and De Beelde, 2006b). As a key governance mechanism, the IAF has embraced this opportunity to contribute to the achievement of corporate objectives through its increasing involvement in risk management (Spira and Page, 2003; de Zwaan et al., 2011; Beasley et al., 2006; Liu, 2012). In 1999, the IIA revised the definition of internal audit to include both assurance and consulting activities to evaluate and improve the effectiveness of governance and risk management. This definition was designed to embrace the expanding role of internal audit to include both assurance and consulting aspects, as well as to incorporate a broader risk management and corporate governance focus (Goodwin-Stewart and Kent, 2006; Walker et al., 2003; Brody and Lowe, 2000). Five years later in 2004, the Committee of Sponsoring Organisations (COSO) of the Treadway Commission published the integrated framework for enterprise risk management (ERM) (COSO, 2004a, 2004b). Since then, there has been a global move towards an enterprise-wide approach to risk management, with internal auditors playing a key role in providing both assurance and consulting services in relation to ERM (Mikes and Kaplan, 2014; Beasley et al., 2006; Walker et al., 2003; Liu, 2012; Stačiokas and Rupšys, 2005; Sarens and De Beelde, 2006a, 2006b).

By incorporating risk management as an important internal audit objective (Leung et al., 2003), the IAF performs a critical role in strengthening corporate governance and complements the risk management function, as well as other risk management mechanisms through providing assurance to management that risk assessment is realistic, thoroughly vetted, and enhances senior management and the board’s risk awareness (Goodwin-Stewart and Kent, 2006; Walker et al., 2003). Given the IAF’s expertise in risk and control and its relative objectivity, the IIA in the UK suggests that the two most important ways in which the IAF provides value to an organisation

are: (1) by providing objective assurance that major business risks are being managed appropriately; and (2) by providing assurance that the risk management framework is operating effectively (IIA UK & Ireland, 2004). In terms of consulting, it has been suggested that internal audit can also provide services that aim to improve the adequacy and effectiveness of the organisation's risk management system (Selim et al., 2009).

Unlike external financial auditing, where the scope of work and audit processes are clearly articulated in the audit standards, the scope of internal audit in ERM is not explicitly prescribed and mandated. Prior studies report that the IAF may perform assurance and consulting activities in relation to ERM to a varying extent in order to facilitate and improve the effectiveness of ERM (IIA, 2009; Sarens and De Beelde, 2006a; Gramling et al., 2004). On the positive side, this provides the IAF with flexibility to adapt its ERM-related role to the specific organisational context, but on the downside, the lack of standardisation risks varying quality for the IAF's ERM practices and the potential for the IAF to undertake roles in ERM that are inappropriate (de Zwaan et al., 2011; Sarens and De Beelde, 2006a).

The only authoritative guidance on the IAF's role in ERM is in the form of an IIA position paper that outlines possible roles the IAF may undertake in ERM (IIA, 2009). According to this guidance paper, the core role of the IAF in ERM should be in providing assurance. It suggests that internal audit may also perform legitimate consulting roles provided there are safeguards to facilitate and improve the design and implementation of ERM. The paper explicitly states that the IAF should not perform any management roles in relation to ERM as it affects the IAF's objectiveness. Notwithstanding this guidance, evidence suggests that, as internal auditors often consider their primary role as to serve top management and the organisation, some IAFs have been acting as 'protector' (protective shield and keeper of secrets) and 'helper' (support of organisational performance and guide) by performing consulting or even management roles, which sometimes compromises the IAF's key role as governance watchdog (Roussy, 2013, p. 567; de Zwaan et al., 2011)

There are mixed views in the extant literature on the value of the IAF undertaking ERM-related consulting roles. Evidence in favor of internal audit's involvement in ERM-related consulting roles suggests that the consulting and advisory roles of the IAF in ERM can enhance the internal audit's value, adding to the organisation's corporate governance, risk management, and internal control, especially in organisations with less mature risk management practices (Sarens and De Beelde, 2006a; IIA, 2009). Meeting management/board expectations and raising the status and

visibilities of internal audit are also reasons for the IAF to perform consulting and advisory roles in relation to ERM, given the support of the audit committee in providing tailor-made strategic consulting services to senior management that facilitate decision making relevant to corporate governance and risk management (Roussy, 2016). It has also been suggested that senior management expects internal audit to fulfil a supporting role in improvement of risk management, and considers the IAF as a training ground for future managers (Sarens and De Beelde, 2006b). Similar evidence suggests that internal auditors perceive consulting roles as more attractive as they lead to internal auditors having greater involvement in senior management decision making and facilitate moving internal audit into a management position (Burton et al., 2015).

On the other hand, it has been recognised that undertaking consulting roles in ERM can also present significant threats to the IAF's objectivity in the form of self-review, social pressure, and familiarity (Brody and Lowe, 2000; Ahlawat and Lowe, 2004; Plumlee, 1985). A commonly applied perspective used to predict the impact of undertaking consulting roles on internal audit's behavior is that of escalation of commitment theory. The theory suggests that when individuals face increasingly negative outcomes related to a prior decision or action (e.g., consulting work in terms of the design and operation of risk management systems), escalation tends to occur to maintain behaviors that are irrational (e.g., fail to report failure of risk management as part of the assurance role). Mixed evidence is observed in relation to the impact of the IAF's consulting roles on its independence. Plumlee (1985) outlines the IAF's escalation behavior in the review of the internal control system where the IAF has prior involvement in the design of the internal control system. Similarly, Brody and Kaplan (1996) find that the IAF's objectivity is impaired when it makes both initial and final budget decisions in relation to a single task. However, Church and Schneider (1992) suggest that prior involvement in the design of an internal control system does not have a significant impact on subsequent work in that area.

4.2.2 The three lines of defence model

The success of the ERM is reliant on collaborative efforts across the entire organisation with the duties of risk management being split across multiple departments and divisions (COSO, 2017). To become a value-adding integral part of ERM, it is critical for the IAF to appropriately embed its ERM-related roles into the organisation's corporate governance structure and work collaboratively with other key governance parties. A commonly adopted corporate governance

and risk management model is the ‘Three Lines of Defence’ (TLOD) model, which is designed to delegate and coordinate essential responsibilities of risk management among key governance parties, including the IAF, and to clarify how their positions fit into the organisation’s overall risk management and governance structure (IIA, 2013).

The historical origins of this model, possibly deriving from sports or the military (Davies, 2018) or the quality control process (Luburic et al., 2015) remain unclear (Lim et al., 2017). The first reference to the term ‘three lines of defence’ is contained within a publicly available document of the UK's Financial Services Authority (FSA) from 2003. This document recommends the TLOD model to banks as a useful framework for risk management (Davies, 2018). Evidence suggests that since the introduction of the TLOD, it has become a widely used concept designating essential roles and duties in risk management and control, especially in financial services (Luburic et al., 2015) and has received widespread support and commitment from regulators and professional bodies. For instance, the TLOD model has been adopted by the Basel Committee on Banking Supervision for internal control management since 1998, and is recommended as best practice by the European Confederation of Institutes of Internal Auditing (ECIIA) and Federation of European Risk Management Associations (FERMA) in the Guidance on the 8th EU Company Law Directive – Article 41 (2013). The IIA also strongly promotes the model on the global stage and issued a position paper about the TLOD (IIA, 2013) to extend its application beyond the banking industry to all types of organisations. Beside the IIA, the TLOD also has widespread commitment from risk management regulators and professional bodies. For instance, the Committee of Sponsoring Organizations of the Treadway Commission (COSO) published a white paper in 2015 to promote the application of the TLOD model in assigning the responsibilities relating to risk management as outlined in its widely adopted COSO Internal Control Integrated Framework. In Australia, APRA has adopted the TLOD in its recent Prudential Practice Guide – CPG 220 Risk Management (2018) as a recommended risk governance framework that ‘*provides defined risk ownership responsibilities with functionally independent oversight and assurance*’ (APRA, 2018, p. 6). The structure of the TLOD model is illustrated in Figure 4.1

Figure 4.1: The Three Lines of Defence Model



(IIA, 2013, p.2)

To ensure the effectiveness of the risk management framework, the board and senior management need to be able to rely on specific line functions, which are articulated in the TLOD model as below:

1. ***the first line of defence*** – functions that own and manage risk (i.e., operational management that has ownership, responsibility, and accountability for directly assessing, controlling, and mitigating risks)
2. ***the second line of defence*** – functions that oversee or specialise in risk management and compliance (e.g., compliance, risk management, quality, IT and other controls)
3. ***the third line of defence*** – functions that provide independent assurance (i.e., IAF)

The IAF represents the organisation's third line of defence and provides independent assurance to the board, audit committee, and senior management on the effectiveness of the ERM and how effectively the first and second lines of defence manage risks. The IIA suggests that the scope of the IAF should be unrestricted and encompass all elements of an institution's risk management framework (from risk identification, risk assessment and response, to communication of risk-related information) and all categories of organisational objectives: strategic, ethical, operational, reporting, and compliance (IIA, 2013).

The current model has the benefit of being simple, easy to communicate, and easy to understand (IIA, 2019). Despite widespread adoption of the TLOD, it has also been the subject of criticism from practitioners and academic researchers. Some perceive the rigid structure of TLOD as too restrictive and argue that it reinforces ineffective and inefficient organisational silos (IIA, 2019). The TLOD is also criticised for its inability to recognise potential additional lines of defence, such as external auditors and regulators (Power et al., 2013), and for the emphasis on defence implied by its name, rather than on a proactive approach to addressing upside and downside of risks (IIA, 2019). Furthermore, the UK Parliamentary Commission's report on banking standards suggests that the TLOD model adopted by many banks with the active encouragement of the regulators appears to have promoted a wholly misplaced sense of security. This report found that the responsibilities across the different lines are often blurred, causing accountability to be diluted. Further, the report found that the second and third lines of defence lack the status to challenge the first line of defence effectively (House of Lords and House of Commons, 2013). A recent study similarly challenges the appropriateness of the TLOD in practice, indicating that the splitting of functional responsibilities between the front office or operational office (i.e., the first line of defence) and the back office or risk and compliance office (i.e., the second line of defence) leads to the first line completely shifting its risk management responsibilities to the second line of defence, despite the TLOD being clear that risk ownership should lie with the first line of defence (Lim et al., 2017). The study also highlights the weakness of the TLOD in dealing with fundamental organisational issues, including the conflict between risk responsibility and profit generation in the first line of defence, a lack of organisational independence and expertise in the second line of defence, and inadequate business knowledge and lack of status of the third line of defence (Lim et al., 2017). Other studies note that there is limited evidence to support the universal acceptance of this model (Boughey, 2017) and its effectiveness remains untested (Davies and Zhivitskaya, 2018). As an alternative to the TLOD, professional literature has made reference to a five lines of defense model, in which the 'tone of the organisation' and 'board risk oversight and executive management' function have been included as two additional lines of defence to the TLOD (Leech and Hanlon, 2016). However, this model does not appear to have gained widespread traction, with no evidence of it having been implemented by IAFs internationally or adopted by the IIA in its latest guidance.

Acknowledging changing stakeholder expectations and increasing complexities in the organizational environment, the IIA launched an extensive review of the TLOD model in, 2019 in collaboration with specialists in governance and risk management. The IIA (2019) proposed

updates to the TLOD model in its publication, *Exposure Document – Three Lines of Defence* (referred to hereafter as the exposure document). In this exposure document, the IIA discussed the role of each line of defence, recognising the importance of horizontal coordination and communication across lines of defence to avoid silos, with focus placed on the alignment and integration of stakeholders' needs and their approach to risks and opportunities. The exposure document also embraces the concept of value creation and acknowledges the necessity of flexibility and choice within the basic model. Finally, the exposure document suggests that organisations should have the freedom to assign, separate, and combine roles, by fully taking into account stakeholders' desires and direction, as well as regulatory expectations and legal requirements. However, the IIA emphasises that special attention is required when there is 'blurring of lines' relevant to the the IAF (i.e., the IAF performing the roles specific to the first line or second line), given the importance of structural independence if the IAF is to deliver credible objective assurance on all aspects of the organisation. Notably, this exposure document recognises that the current TLOD model is unable to explain the 'blurring of lines', nor offer any guidance.

The mixed views on the IAF taking dual roles of assurance and consulting roles are discussed above in section 4.2.1. The summary of practitioners' responses to the IIA's exposure document relating to the TLOD model further confirms the reality of the 'blurring of lines' in practice and highlights the need for explanations and guidance in updating the TLOD model. Further, practitioners have called for improvement of the TLOD model, including communication and collaboration across the different lines of defence, enhancing the IAF's role in assessing the effectiveness of the first and second lines, and the implementation of safeguards when the IAF undertakes non-assurance roles (IIA, 2019).

In spite of the widespread application and increasing discussion of the TLOD model, limited empirical evidence of the TLOD model's effectiveness can be found in the extant academic literature. Both practitioners and academics have called for analysis of the TLOD model as well as the IAF's involvement in the corporate governance and risk management context (IIA, 2019; Luburic et al., 2015; Burch, 2017; Davies and Zhivitskaya, 2018; Sarens et al., 2012; Gramling et al., 2004). In responding to these calls, this study undertakes an in-depth investigation into the relevance of the TLOD model in the current business environment and issues regarding its application. Specifically, this study investigates the IAF's involvement in ERM within the TLOD model.

The central research question investigated in this study is thus:

How relevant and appropriate is the three lines of defence model in relation to internal audit's involvement in ERM?

4.3 Theoretical Framework – Stakeholder Theory

Consistent with prior studies on governance and internal audit (Donaldson and Preston, 1995; Jensen, 2001; Heath and Norman, 2004; Alpaslan et al., 2009; Erasmus and Coetzee, 2018), this research utilises stakeholder theory as the analytical lens to investigate the relevance and appropriateness of the TLOD model in relation to the IAF's involvement in ERM.

Stakeholder theory acknowledges that the organisation operates in a changing environment requiring recognition and management of a wider range of stakeholders than just shareholders (Jones and Wicks, 1999; Friedman and Miles, 2002; Freeman, 1999; Donaldson and Preston, 1995). Donaldson and Preston (1995, p. 67) define 'stakeholder' as "persons or groups with legitimate interest in procedure and/or substantive aspects of corporate activity". Mitchell et al. (1997, p. 869) suggest that the salience of stakeholders, which is defined as "the degree to which managers give priority to competing stakeholder claims" is determined by at least three attributes: power, legitimacy, and urgency. *Power* refers to a stakeholder's ability to force the organisation to do something that the organisation would not have done otherwise. *Legitimacy* refers to the desirability and acceptance that the organisation gains within the socially constructed business environment, while *urgency* is measured by two criteria, that is, time sensitivity and criticality.

Stakeholder theory is commonly adopted in investigations into corporate governance phenomena (Alpaslan et al., 2009; Heath and Norman, 2004; Jensen, 2001; Freeman et al., 2004), which suggests that organisations' governance decisions are the result of balancing different, at times conflicting, interests and pressure from the wide range of organisational stakeholders, not limited to shareholders (Donaldson and Preston, 1995). Evidence suggests that adopting the principles of a stakeholder model of corporate governance can lead companies to engage more frequently in proactive and/or accommodating risk management and crisis management behaviour (Alpaslan et al., 2009). The contemporary corporate governance is focused on providing accountability to stakeholders by focusing on risk management (Page and Spira, 2004). The IAF, as a key governance mechanism commonly utilised by the board to discharge its responsibility to its stakeholders (Soh and Martinov-Bennie, 2011), should always be aware of its stakeholders and respond to their expectations (Güner, 2008). These stakeholders include, but are not limited to,

the audit committee, senior management, the risk function, operational management, regulators, and external auditors (Abbott et al., 2010; Davies, 2009; Archambeault et al., 2008; Page and Spira, 2004; Schneider, 2009; Pudhukottai et al., 2009).

Extant literature has adopted stakeholder theory in the internal auditing context (IIA-Australia, 2016; Erasmus and Coetzee, 2018). Specifically, the instrumental approach of stakeholder theory is applied in investigating internal audit stakeholder relationship management (IIA-Australia, 2016). Prior literature has investigated stakeholder relationship management from an internal audit perspective, including the relationship between internal auditors and senior management and the audit committee (Abbott et al., 2017; Erasmus and Coetzee, 2018), as well as with auditees (D'Onza and Sarens, 2018). Evidence suggests that the IAF, as an integral part of corporate governance, has an interactive relationship with other key governance stakeholders, which impacts on internal audit processes (Cohen et al., 2002). Given that for internal audit to succeed in its ERM roles it is reliant on the collaborative efforts of different stakeholders across the organisation (COSO, 2017), it is critical that the IAF is aware of, and appropriately manages, key stakeholders relevant to its ERM roles (IIA-Australia, 2016; Güner, 2008).

The TLOD model, as a governance risk management model, was designed to assign and articulate roles and responsibilities in the ERM context across key stakeholders, including the board/governing body, senior and operational management, risk and compliance functions, and internal auditing (IIA, 2019). This model highlights the importance for the organisation to recognise, manage, and coordinate different stakeholders in the ERM context (IIA, 2019). Therefore, this study adopts stakeholder theory to make sense of the data related to the relevance and appropriateness of the TLOD model in regards to the IAF's involvement in ERM.

4.4 Research Method

Data for this study was collected through semi-structured interviews with CAEs and providers of internal audit services at the partner (or equivalent) level. Interviews are a flexible and powerful technique to capture the ways people make meaning of their experience (Rabionet, 2011). Given the exploratory nature of this study, semi-structured interviews are an appropriate method as they encourage participants to share as much information as possible in an unconstrained environment where the interviewer employs a minimum of prompts and guidance (Castillo-Montoya, 2016; Drever, 1995; Rabionet, 2011). Interviews also allow the researcher to gain understanding of the

subject matter, as well as to go beyond the obvious to ask why and how (Fetters, Curry, & Creswell, 2013).

The target participants for this study were CAEs in IIA-Australia's membership database who responded positively to an interview invitation contained in a survey on the IAF's level of involvement in ERM. CAEs are appropriate participants for this study given their comprehensive knowledge of the IAF's roles and capabilities and their understanding of the IAF's key stakeholders (Sarens and De Beelde, 2006b). In total, 12 participants were recruited, consisting of eight in-house CAEs, of which five were from public sector organisations and three from private sector organisations, and four service providers at the partner level or equivalent, of which three were from Big Four accounting firms with both Australian and overseas working experience and one from a medium tier consulting firm with extensive working experience in IIA-Australia. The size of the sample is consistent with that of prior qualitative internal audit research utilising similar participants (Sarens, 2009; Soh and Martinov-Bennie, 2011; Vinnari and Skærbæk, 2014; Lim et al., 2017; Roussy and Rodrigue, 2018). Table 4.1 provides a summary of the participants' details. The selection of participants across auditor types (in-house CAE versus outsourced provider of internal audit services) and a range of organisation types (size, industry, sector) allowed for a diversity of perspectives in the interviews and enabled investigation of the consistency of findings across contexts. Furthermore, the four service provider participants were asked to draw on their experience across organisations or engagements in which they have been involved to enhance the generalisability of the results of this study.

Table 4.1: Participant Details

Interviewee	Position	Organisation Type
IA1	Chief Internal Auditor	Public sector (education)
IA2	Chief Internal Auditor	Private section (insurance)
IA3	Service provider	Service provider (key clients in mining, education, etc.)
IA4	Chief Internal Auditor	Public sector (government council)
IA5	Chief Internal Auditor	Public sector (education)
IA6	Service provider	Service provider (key clients in banking, insurance and superannuation etc.)
IA7	Chief Internal Auditor	Private sector (banking)
IA8	Chief Internal Auditor	Private sector (insurance)
IA9	Service provider	Service provider (key clients in government sector)
IA10	Service provider	Service provider (key clients in banking, insurance, etc.)
IA11	Chief Internal Auditor	Public sector (social & personal services)
IA12	Chief Internal Auditor	Public sector (social & personal services)

To facilitate systematic gathering and analysis of relevant information, a series of target issues was developed based on in-depth review of the extant professional and academic literature on the TLOD and internal audit's roles in risk management and corporate governance. In addition, the IIA's TLOD exposure document and survey results on the TLOD (IIA, 2019) were examined to identify relevant issues for discussion in interviews. The target issues were validated through discussions with audit and risk professionals in Australia. Semi-structured interviews were conducted around the following broad target issues:

- (1) How does the IAF fit in the corporate governance structure in the ERM context?*
- (2) What is the relevance and appropriateness of the TLOD model?*
- (3) Is there 'blurring of lines' in the ERM context?*
- (4) What is the impact of the IAF's ERM-related roles on the IAF's independence and safeguards?*

(5) Who are the key stakeholders of the IAF and the IAF's interaction with its key stakeholders?

(6) What are the IAF's skillsets and capability?

These target issues were utilised in informing and structuring semi-structured interviews, but were adaptive to allow participants a fair degree of freedom in what to talk about, how much to say, and how to express it (Drever, 1995).

To obtain context and pursue an informed line of questioning in the interviews, prior to each interview the researchers performed initial research into the participants' backgrounds and the organisations they represent. In addition, efforts were also made to review the publicly available reports of respondents' organisations on their corporate websites. Each interview lasted approximately 45 minutes to 1.5 hours in length and was conducted either face to face or by teleconference in the presence of at least two researchers. Due to the potential sensitivity of the information collected, assurance of anonymity was provided to participants in relation to their identity and that of the organisations that they represented prior to commencing the interviews.

To mitigate the potential for researcher bias, a non-directional style of questioning was employed and participants were allowed to express themselves freely, without any boundaries and restrictions (Rabionet, 2011). At the end of the interview, participants were asked if they had any further relevant issues that they would like to discuss besides the broad target issues covered in the interviews. Identified issues emerging from the interviewers' comments following each interview were subsequently included and investigated in the subsequent interviews to ensure depth and breadth of perspectives. Following these processes, and at the end of 12 interviews, we were confident that no further themes were emerging and that we had obtained sufficient data from different perspectives to provide in-depth and comprehensive insights into the study's research questions (O'Reilly and Parker, 2013; Power and Gendron, 2015).

All interviews were digitally recorded with consent obtained from the participants before each interview (Al-Yateem, 2012; Castillo-Montoya, 2016). The digital recordings were subsequently transcribed by a professional transcription service. Qualitative data research software (i.e., NVivo) was employed to code and analyse the interview data based on themes that emerged from the researchers' analysis and discussion of the transcripts (Richards, 1999; Soh and Martinov-Bennie, 2011).

4.5 Results and Discussion

This section presents and discusses participants' perceptions of the relevance and appropriateness of the TLOD model in practice, with particular focus on the IAF's involvement in ERM within this model. The results and discussion in this section are structured around themes identified from the interview data through the researchers' systematic analyses of the interview transcripts rather than the target issues utilized to conduct the interviews

4.5.1 Relevance and appropriateness of the TLOD model in ERM

4.5.1.1 General relevance and acceptance of the TLOD model

Most participants expressed that the TLOD model is a robust model, appropriate for assigning roles and responsibilities in relation to risk management across key stakeholders, including the IAF. However, they also acknowledged a number of challenges around the application of this model in practice, as illustrated by the following:

Even though I think it's a fairly simple concept, actually implementing it in practice seems to be a challenge for all organisations. But I don't necessarily think there's a better model out there ... I think it [TLOD] is a good model if it's understood and implemented across the organisation. (IA06)

The level of adoption of the TLOD model varied among participant organisations. Most participants reported increasingly formalised adoption of the TLOD model as the level of risk maturity and risk awareness in the organisations grew. Participant organisations in the private sector, particularly in the financial sector, generally reported higher levels of adoption of the TLOD model compared to those from the public and non-financial sectors.

Relatively higher inherent risk and the complex business environment were identified as the initial reasons for adoption of the TLOD model in participant financial institutions. The increased regulatory pressures around risk management as well as regulators' preference for the TLOD model (e.g., in APRA guidelines *Prudential Practice Guide CPG 220 Risk Management (2018)* and *Prudential Standard CPS 220 Risk Management (2017)*)¹⁶ further drove the adoption

¹⁶ APRA's *Prudential Standard CPS 220 Risk Management* sets out requirements in relation to the risk management framework of an APRA-regulated institution, including the need for an institution and group to have a risk management framework that is consistent and integrated with the risk profile and capital strength of the organisation, supported by a risk management function and subject to comprehensive review. The *Prudential Practice Guides – CPG 220 Risk Management* provide guidance on APRA's view of sound practice in particular areas, aiming to assist APRA-regulated institutions in complying with the CPS 220 and, more generally, to outline prudent practices in relation to risk management.

of the TLOD model in the financial institutions. This was illustrated by one participant from an insurance company as follows:

We have three lines of defence as a formal adopted methodology, only because APRA requires it. But we started doing this long before standards came in ... mainly attributed to the increasing complex business risks. (IA02)

Another participant defended the TLOD model in response to increased criticism directed at it in the wake of recent banking sector scandals in Australia (e.g., Banking Royal Commission investigations, breaching of anti-money laundering laws, etc.):

it's a model that emerged in the banking sector and people said, well, the banks have failed therefore the three lines mustn't be successful. ... Well, no, they deliberately circumvented the three lines. They publicly espoused it and then deliberately went around and subverted it and ignored it ... frameworks and controls can only go so far to doing things but if the corruption goes all the way to the top of an organisation then no framework is going to be effective. That's what the issue was with the banks. But the model itself with the three lines of defence is a very useful way of thinking about risk management, about devolved and distributed responsibility and about highlighting the scale of your coordination challenges for risk management and your information sharing challenges, that sort of information sharing layer of COSO. (IA12)

Public sector organisation participants also perceived the TLOD model as relevant and appropriate. However, the application of the model was, to a certain extent, limited by relatively weaker management risk awareness and lack of maturity of the risk management framework in public sector organisations compared to those in the financial sector. The following comment illustrates the support for the TLOD model in a public sector organisation.

on the three lines of defence, I think especially in the large organisations, it's not just financial services, even for the large public sector areas, I think it's actually a very good model. The problem is the application of this model. (IA11)

Recent public and regulatory attention on risk management and management accountabilities in the financial sector in Australia was also perceived by participants in the non-financial and public sectors to have had a significant influence on their risk management practices. This contributed to increased risk awareness and knowledge of risk management, consequently facilitating acceptance and support of the TLOD model in organisations. For example, one participant commented on the impact of the increased regulation and investigation following the recent banking scandals on the application of the TLOD model in his organisation as follows:

A lot of them [senior management] have been through that governance training ... they'd keep up to date with ASX developments.¹⁷ They would be aware of the [banking] Royal

¹⁷ The Australian Securities Exchange (ASX) amended the Australian corporate governance principles and recommendations in 2014 to require all listed companies to make IAF-related disclosures, including the presence (or absence) of an IAF, how the IAF is structured, and what role the IAF performs in risk management. This disclosure requirement continues to be

Commission ... It's a combination of all of that knowledge that has been brought in by these external members, who are in the industry and have a finger on the pulse in terms of those developments, that would also drive the expectations of what they [board and senior management] – how they expect the risk function to be, what they expect audit to deliver. It [the increased formalisation of the TLOD in the organisation] is a combination of [senior management] asking the right questions, and [increased] professional capability within the organisation in these functions who are basically driving it from the bottom upwards, to say this is how audit should look, this is how risk should look, and then management becoming more aware of what their obligations are and what good looks like, I guess. (IA05)

Another participant from a public sector organisation provided the following example of support for the TLOD model by senior management with a strong focus on accountability as follows:

We were lucky that we had a secretary who had a military background and had a very strong focus on single points of accountability. She wanted to know who she could point to in the organisation to know that this particular thing is going well so she latched on to the three lines of defence very quickly. (IA12)

4.5.1.2 Relevance and appropriateness of the TLOD model as a framework for the IAF's involvement in ERM

Participants generally perceived the TLOD model as robust in the current business context and also in terms of the IAF's involvement in ERM, as it 1) allows the IAF to focus on its key value adding to ERM, and 2) articulates the IAF's key stakeholders in relation to its ERM roles.

4.5.1.2.1 The IAF's perceived key value within the ERM context

Consistent with prior literature, the results of this study suggest that although the IAF involvement in ERM comprises both assurance and consulting aspects, the former is generally perceived to be more prominent (Sarens and De Beelde, 2006a; de Zwaan et al., 2011; Gramling et al., 2004). Providing assurance on the management of key risks was perceived to be the IAF's primary value adding ERM-related activity, as illustrated below:

Essentially, the idea [of having the internal audit function] was to create a one-stop-shop for [assessing the management of] all the material risks. At an enterprise level, the IAF effectively challenges management, including the executive management, formally as part of the charter ... That's the goal for us – is really trying to make sure that the IAF focuses on significant things that are really, really material, or could become material for the [organisation]. That drives our planning, that drives our thinking, that drives enterprise risk-based thinking. (IA02)

Several participants also reported that their IAFs perform an increasingly active role in assessing the risk culture of the organisation, with a specific focus on management's capabilities to manage risks. The importance of having a good risk culture in achieving effective ERM was consistently

mandated under current ASX requirements, specifically under the 'Risk Management Principle' (i.e., Principle 7).

acknowledged across participants. The increased emphasis on risk culture in the IAF's ERM-related involvement was illustrated by a participant as follows:

... lately there is also a key focus on internal audit to give a view on the risk culture within the organisation. It's not just about policies, procedures and all the technical mechanical stuff but it's also about the individuals because that's the key component here. It's all about people and the risk management structures are only as effective as the maturity that the individuals within that in terms of risk. (IA08)

According to the IIA's guidelines on the TLOD model, the IAF is the third line of defence, tasked with the primary role of providing assurance to the board and senior management on the effectiveness of the management of key risks that affect the achievement of business goals (IIA, 2013). For internal audit to function effectively as the third line, the TLOD model explicitly assumes that the IAF is able to assess the performance of the first and second lines in managing the key risks (IIA, 2013). The finding that assurance on the management of key risks and risk culture is perceived to be the IAF's key role in ERM is therefore aligned with the TLOD model framework. This provides further support of the relevance and appropriateness of the TLOD model within ERM.

4.5.1.2.2 The IAF's key stakeholders in the ERM context

As discussed in Section 4.3, the academic and professional literature suggests that it is critical for the IAF to be aware of its key stakeholders within the ERM context in developing positive relationships with them, managing their expectations, and responding appropriately (IIA-Australia, 2016; Güner, 2008). Evidence from this study suggests that the IAF's key stakeholders in the ERM context are primarily internal, namely senior and operational management, the audit committee, and the risk and compliance function/s. The TLOD model thus appears to appropriately reflect current practice as it reflects these parties as key internal stakeholders of the IAF within the ERM context.

According to stakeholder theory, the salience of stakeholders is shaped by at least three attributes: power (the ability to force the focal entity to do something that the organisation would not have done otherwise), legitimacy (the desirability and acceptance that the focal entity obtains within the socially constructed business environment), and urgency (time sensitivity and criticality) (Mitchell et al., 1997). Participants indicated that the CEO and the chair of the audit committee are the two dominant stakeholders with 'power' over the IAF's involvement in the ERM. This finding is consistent with the prior literature (Erasmus and Coetzee, 2018; Sarens and De Beelde, 2006b) and the TLOD model (IIA, 2013). One participant stated this as follows:

In my head, there's two masters. One is the CEO of the group, and one is the chair of the audit committee. These are the two masters that I've got to really take instructions from. (IA02)

Several participants also highlighted the importance of the IAF considering the first and the second lines as key stakeholders in the ERM context as they are critical in providing 'legitimacy' for the IAF's assurance role in ERM through their establishment of the risk management framework and processes. As suggested by one participant:

We are limited to some extent by what we can do based on what the other functions are pulling together, I guess. (IA05)

The impact of the maturity of the first and second lines on the IAF's ERM-related roles is further discussed in Section 4.5.2.2.

Most participants argued that there is no need to include additional lines of defence in the TLOD model, particularly in the form of external stakeholders, as the model is primarily designed to assist organisations in assigning roles and responsibilities to internal parties (who are also key stakeholders for the IAF). This was explained by one participant as follows:

The question should there be more lines of defence, I don't believe so, no. My view is you've got external auditors, you've got regulators, but I don't see them as being a line of defence for an organisation ... My view is there's three lines of defence and these are internal roles. The regulators have a role to play but they're not a line of defence. (IA06)

It is worth noting that two participants were of the view that an additional line of defence should be added to the TLOD model. They both recommended that regulators should be considered as a formal fourth line, given regulatory interventions in the ERM context position them as stakeholders. This was explained as follows:

I wouldn't mind seeing a fourth line of defence introduced, I haven't heard anyone talk about it. But this won't be internal though, this is the regulatory oversight and challenge. So, the fourth line would be the various regulators that have a direct responsibility for our banking industry in Australia. So, you would have AUSTRAC, ASIC, APRA, ACCC, Royal Commission and so on in a clear fourth line because they do have - in some of the big banks now they have people in house on a permanent basis providing input and oversight.

If there was going to be a change of significance to that model, I would suggest a fourth line of defence being the regulators, and clearly specifying what they need to do. (IA07)

4.5.2 Issues with the TLOD model within the context of the IAF's ERM-related roles

As outlined above in Section 4.5.1, the results of this study suggest that the TLOD model is generally considered as robust and appropriate in the current business context, as well as in relation to the IAF's involvement in the ERM. However, participants noted a number of issues in

the application of the model that pose challenges for the IAF. Recurrent issues noted by participants related to the lack of:

- (1) clarity and understanding of the roles of each line of defence;
- (2) risk maturity of the organisation; and
- (3) communication, coordination, and collaboration across different lines of defence.

Each of these issues is discussed in further detail in Sections 4.5.2.1 to 4.5.2.3 below.

4.5.2.1 Clarity and understanding of the roles of each line of defence

The lack of clarity and understanding of the roles of the different lines of defence was consistently reported by all participants as a major challenge in the application of the TLOD model. This was illustrated by one of the participants as follows:

People conceptually understand [the TLOD model] but when it comes to practice, it doesn't seem to operate effectively ... A large part of that issue is clearly defined roles and responsibilities for risk management. It seems to be lacking in a lot of these organisations. (IA06)

In some cases, the misinterpretation of the concepts of ‘partnership with the business’ and ‘being value adding’ were seen as causes for the third line of defence (i.e., IAF) sometimes assuming the first and second lines’ responsibilities. A clear distinction thus needs to be made in practice between “helping them [the business] to meet their objectives” and “doing activities on behalf of the management” (IA05). This is further illustrated by another participant as follows:

Having said that, you do sometimes get internal audit functions that want to partner more with the business, because they feel like - rightly so, that if they’re seen as being totally independent, that sort of sets up a point where they are essentially antagonistic with that business. They don’t want to be seen as people telling them that they’re wrong all the time. They want to be helping them to meet their objectives, which, I think, is a different thing from partnering with people and essentially compromising your independence. I do think that sometimes internal auditors – because risk has sort of come to the forefront – want to do what the second line of defence does. (IA10)

There was an even mix of participants reporting ‘blurring of lines’ in their organisations. Some suggested that while this does not occur in their current organisations, they have observed it in other organisations where the second and the third lines have merged into one, particularly in the public sector and in small organisations, for cost-saving purposes. However, participants did not support the merging of the second and the third lines of defence in the interest of economic considerations, arguing this would defeat the purpose of having the IAF as the objective third line of defence. The following comment illustrates this:

The TLOD model is not very consistently adopted. There's a lot of roles, particularly in the non-government organisations, where the third and the second is pretty much merged. Even large organisations follow that model, where the risk and assurance are side by side. So, there's some who actually see those two work together, collaborative, cheaper, efficient. (IA02)

In the smaller organisation [it's worse because] risk and audit are the same person, which I'm not a big fan of, but you see it quite frequently. (IA10)

The TLOD model is explicit in assigning ownership of risks to the first line of defence (i.e., management). However, participants reported that, in practice, first line management often lacks risk awareness and generally does not consider risk management as part of its responsibility in the belief that this is the remit of the second line of defence. In practice this means that the second line often performs the first line's responsibilities and struggles to clearly identify the boundary of its roles and responsibilities within its limited budget and resources. This 'blurring of lines' between the first and the second lines of defence was reported to be relatively common in practice. This is consistent with the suggestion that the TLOD model appears to have been adopted in principle, but not in spirit (Lim et al., 2017). This lack of risk ownership in the first line of defence, resulting in 'blurred' responsibilities in relation to risk management, causes confusion and gaps in accountabilities in relation to ERM. This raises issues in terms of the IAF's ability to undertake overall assurance on the risk management processes. This is illustrated by the following:

There's a bit of a blurring and then within those organisations you see people sitting in line two that actually probably should be sitting in line one and vice versa ...

In practice the first line doesn't always get it that they are the ones who are responsible for identifying the risks and designing controls to mitigate those risks and ensuring that those controls are operating effectively. So, all too often that falls to sometimes the second line ... Then the other issue is in the second line itself. The role of the second line I think is not clear to many people, and that's probably because the role of the second line can be quite a broad spectrum. Should they be testing controls, or should that only be done by first line, or should they just be monitoring the effectiveness of controls and reporting and aggregating reports and things like that. (IA06)

Unfortunately, I think what we are seeing in a lot of organisations, both international services as well as private sector and public sector is problems in relation to what exactly is first line and what exactly is second line. First line is management itself. So, it's not having a team or somebody else who does it for them, first line is management. The [TLOD] model is very clear about that. Unfortunately, what we're seeing is a lot of organisations appoint a first line risk team and then management says, no, I don't do that ... which is actually wrong. They may hire some people to assist them and facilitate some information, but management is still the first line ... (IA12)

A number of potential solutions to enhance the clarity and understanding of the roles and responsibilities across the TLOD model were suggested by the

participants. One participant provided an example of using risk champions to enhance risk awareness and ownership in the first line, as follows:

What we have had lacking until probably the last 18 months here is a strong first line of defence. So, we're now putting quality control, to use that phrase, quality control people in the first line and we are actually calling them risk champions ... at the moment this is in addition to their current roles, the roles they were employed to do, but they've been identified as risk champions. So, they're responsible for quality control within the first line, being an advocate for risk management. But we're driving through all three lines that everybody is responsible for risk management. It doesn't sit solely with the CRO or the risk champions. (IA07)

Engaging all three lines of defence in the development of an overall organisational assurance map was also perceived to be an effective way to clarify the roles and responsibilities in relation to the ERM. Engaging in a combined assurance mapping exercise was considered to enhance risk coverage, break down silos, and minimise gaps and duplication, as one participant outlined:

I'm finding that what we call assurance mapping has added a lot of value here. So, we would sit down and look at credit operations, for example, everything from a member applying for finance to having the loan funded, and we look at what the first, second and third lines do in that space. So, we literally sit in a room, we have whiteboards and butcher's paper, and we find out what assurance the first line is doing and the frequency of it and who they report it to. Same as the second line and third line. Doing that and documented and having us all in the one room builds a bit of a spirit across the three lines. Whereas in the past there may have been a little bit of antagonism around whose territory we were encroaching. But getting them in the room, brainstorming for a couple of hours, identifying gaps, helps that relationship. So, brainstorming, combined assurance mapping, it all helps. (IA07)

However, it appears that assurance mapping is not widely adopted in practice as explained in the following:

some [IAFs and risk functions] are operating in silos and don't really collaborate. Others will try and do what might be known as integrated assurance where their plans are developed, and their execution of those plans is done closely ... they might try and combine efforts and do some sort of a combined assurance around that, but there's not a lot of that happening. (IA10)

4.5.2.2 Risk maturity of the organisation

As suggested by Sarens (2009), the capacity of the IAF to monitor and improve risk management and control processes depends upon the risk maturity and control culture in the organisation. The evidence in this study supports the findings of prior literature, with general consensus among participants that the IAF should, ideally, add value to ERM primarily by providing objective assurance on the management of key risks and the overall effectiveness of the risk management framework. However, in some cases, the IAF's assurance roles are constrained by the lack of risk maturity in the first and second lines, as illustrated by the following,

We're fairly mature in terms of the audit function, but you can only be as mature as the risk function and the other governance functions are ... the ideal future state for us would be to act as a true third line, and to really audit the second line of defence and first line of defence activities, and to audit the top risks where there are good controls clearly in place to audit. We're not there yet. We are more mature than the risk function, but we are reliant on the risk function and the compliance functions on maturing. (IA05)

Most people I think are clear on what the role of the third line should be, but they're not necessarily doing that role because of deficiencies in the first and second line or [lack of] maturity of the first and the second line. (IA06)

There was a recurrent view across participants that the risk management function (i.e., second line of defence) within their organisations was under-staffed or under-developed. In some cases, risk activities were devolved across the organisation with separate risk registers maintained by different managers (IA04) and lack of an enterprise-wide approach in the risk processes (IA05). In such circumstances, senior management and the board often considered provision of IAF assurance on controls that were still maturing to be of limited value and instead requested the IAF to spend significant time on advisory or even management roles in relation to design and implementation of controls. This was discussed by one participant as follows:

The challenge with that obviously is that I would say ... the control side of the risks are maturing still. We've identified our risks but [the second line] haven't really matured our controls yet to address those risks. There's only so much we can do, and so much value we can add in terms of auditing things which we all know are still maturing ... So, there's no value in us going and telling [risk and audit committee] what they already know.

We've changed our audits process slightly to – from that ideal process of looking at top risk, to doing some advisory work around top risks, because that's really helping the business to try and mature their controls. We're also looking at some cyclical assurance work, where we know that over time there's some key and important processes that we would want to audit and focusing on some of those at the moment until some of those top risk controls mature. (IA05)

A number of participants also reported IAF involvement in direct management roles as a result of the lack of relevant capabilities or expertise in the first line. An example of the IAF performing the first line's reporting roles despite lacking the tools and techniques to do so was provided as follows:

One example [of the IAF getting involved in operational] is threshold reporting under AUSTRAC. We do a check here with our audit software on all cash transactions greater than \$10,000 and we provide that to our AML officer to check. So, we do that because the internal systems aren't quite there yet, but the audit software can accurately detect those transactions. So, to me that's first line responsibility, but we're conducting it for the first time. (IA07)

Several participants also reported that, due to management's lack of proactivity in relation to emerging risks, their IAFs at times act as change agents, pushing management to take action.

One participant provided the following example of the IAF driving management to implement controls around big data and digital solutions in response to the emerging technology and cyber risks faced by the organisation:

as an insurance company, we are now a technology solutions company trying to develop products for the health ... That's playing with data, and you're talking about massive reputation risks in this sort of strategy ... are we managing our risks properly?

Where we [internal auditors] have come to is kind of pushed this harder, when it almost goes to the edge... That's what my role is. To wait for the right time, and then push. Last year the third line basically called out that, look, your capability is not good enough, and this is the time now, you need to really start pumping up. Here's the data, here's the evidence to demonstrate to you that your risk management capability is way further than what you should be. (IA02)

The above findings provide evidence of the 'blurring of lines' in the IAF's involvement in ERM with the IAF performing advisory and even management ERM-related roles (White et al., 2020; de Zwaan et al., 2011). It is worth noting that most participants suggested that this 'blurring of lines' is not a rule but more of a temporary solution in the organisation's transition phase towards a higher level of risk maturity. The aim is to reduce this temporary solution as the organisation's risk maturity increases, as illustrated below:

So, ideal future stage, we've got a strong first line, a strong second line that are providing assurance about what the first line are doing, and that we [internal auditors] would come in and look at what the second line are doing. If you've got a mature first and second line of defence, well then by default the role of the third line has to change and maybe it moves away from doing re-performance of controls and things like that. It's actually more opining on the quality and effectiveness of the second line, the quality and effectiveness of the first line, contributing to focusing on the major risks and initiatives of the organisation. (IA06)

There was general consensus among participants that, despite 'blurring of lines', internal audit's independence and objectivity is of distinctive and critical value to its roles in ERM. Participants acknowledged the value of the IAF's non-assurance roles in ERM but highlighted that these roles should not compromise the IAF's objectivity:

sometimes internal audit functions, they say, we want to help the business succeed. Well, of course you do. But that doesn't mean you shouldn't maintain your independence in pointing out what needs to be done to help them succeed ... yes, you can consult, you can give advice, but if that means that essentially your independence is being compromised, and you're helping them (a) sort of manage their risks, and (b) doing things that essentially aren't the right thing to do, because you want to not to be seen to be confrontational. (IA06)

Participants suggested a number of potential safeguards to protect the IAF's independence when involved in ERM-related consulting and management roles (i.e., 'blurring of lines'). Having transparent disclosure of the IAF's non-assurance roles to the audit committee was commonly

suggested as a key safeguard in maintaining the IAF's independence. One participant explained that he utilised the escalation channel to the audit committee as a safeguard to protect the IAF's objectivity when he experienced conflicting views with management in undertaking ERM-related advisory roles:

My responsibility comes down to the fact that I have informed both boards of the position, of the regulatory requirement and what's required and what's expected, and it is now up to the directors to have that discussion and come to a resolution ... Sometimes I cannot resolve it and that's when my escalation would be to escalate it to the audit committee and, if required, to the board. (IA08)

Another participant provided an example that illustrates how to balance the 'blurring of lines' between the IAF's assurance and consulting roles, without compromising the IAF's independence, through transparent disclosure to the audit and risk committee and clear identification of the work scope between the two roles as follows:

I've had a bit of a tricky experience over the last couple of years where I actually moved out of the audit function for about 16 months to go and do a project in the business ... So, I had to be very careful around independence ... I made it very clear around my reporting to the [Audit and Risk Committee], that quite clearly, I'm not going to be able to go and audit the thing that I've put in place, in the short term. They're well aware of that ... I think it's about transparency. I've had those clear conversations with the [Audit and Risk Committee], in fact I just tabled it at the last meeting ... I wanted them to approve the fact that I continue doing this work on an advisory basis, and that quite clearly – and I think for them this is bordering management decision making, so it's quite clear that I won't be able to audit in that space for a period of time. (IA05)

Participants recommended that the IAF, as part of its normal audit, should make management aware of best practice to facilitate continuous improvement of the second line of defence. Participants also suggested that the IAF should assist the second line of defence in lifting its capabilities and skills so that the second line of defence can be more effective in assessing and supporting the first line of defence, thus freeing the IAF from involvement in the direct management of risk and allowing the function to focus on the assurance of the management of key risks.

[the internal audit's roles] is not just to go and say, do you comply with it ... it's not just to go and say, you've ticked the box, you've got a risk appetite statement, well done – it's essentially, what does 'good' look like? Telling them [the second line] what 'good' looks like, and saying, this is how you compare to it, where do you want to be on that maturity model? ... So, it's helping them understand what the best looks like, and what they should be aiming for. Which doesn't necessarily need to be the best, but it needs to make them aware ... The third line should be spending more time with the second line, and not bypassing the second line ... Because if the second line of defence is mature in the frameworks, and they've ensured that all the risks have been properly identified, they've got controls to manage those risks, they've tested – they're helping the business in the first line, test those risks... Third line should be able to place reliance on that. IA10)

A useful thing for internal audit to do was to focus its attention on assessing the effectiveness and promoting the development of an effective second line because that – the organisation was so large internal audit couldn't possibly get across all of it. (IA12)

It was reported that those IAFs with relatively higher risk knowledge and maturity can also assist with risk-related training and education to raise risk awareness across the organisation and enhance management's capability in proactively responding to risks. This was illustrated as follows:

things like stakeholder engagement and education. On that side of things, I then do proactive training and things, like I used to issue ... a fact sheet called 'Control Yourself', and it was related to emerging things that came out of audit, but hit the target around things to look out for, red flags, here's good controls ...

I'll have a proactive program of engagement, so that it's not just doing an audit, here's a report and off I go. It's actually also encouraging people to think about risk and to think about controls on their own - and to effectively help themselves in some ways as well, rather than just waiting for audit to come along and tell them how to fix stuff. (IA04)

Leveraging external consultants was also commonly used across participant IAFs in their ERM-related involvement to enhance the IAF's level of independence and capability in terms of subject matter knowledge, and to benchmark the organisation's risk management practices across the industry. Compared to completely outsourced IAFs, co-sourcing was identified as the most effective way to lift the expertise of in-house IAFs through increasing awareness of best practice, without losing the in-depth business knowledge and relationship between the IAF and other key governance parties. This was illustrated by one participant as follows:

... co-source – is the best way because ... if you're completely in-house yes, you might know the business better and you're there the whole time, but you won't know what's happening out there ... If you're completely outsourced well you might know what's happening in other organisations and you can provide good insights to that and good benchmarking, but you're not there all the time. So, you don't have your ear to the ground and know what's really happening. (IA06)

4.5.2.3 Communication, coordination, and collaboration

There was universal acknowledgement by all participants that effective communication across the three lines of defence is an important enabler of the IAF's involvement in ERM. This is consistent with the suggestion from prior literature that the understanding of risk management practices needs to go beyond the structure of the TLOD to focus more on interactions between each of the three lines of defence (Lim et al., 2017). However, the results suggest that the lack of communication, coordination, and collaboration in the application of the TLOD model was perceived to be a key challenge in practice, as illustrated below:

They saw [the TLOD model] as three separate boxes and people had to be in a box and you weren't allowed to move outside the box and if you saw people doing some sort of first line things and some sort of second line things, well, then that was blurring the lines and therefore that meant that the whole model was defunct. They didn't get it – the best way to use the three lines of defence is to have a conversation. (IA12)

Participants specifically highlighted the need for effective communication and collaboration between the IAF and the risk function. In some cases, participants' IAFs and risk functions were operating in silos with different risk taxonomies and risk rating scales (IA10) and maintaining separate risk registers (IA04). Prior literature has highlighted the challenge of managing relationships between personnel across the different lines of defences (Lim et al., 2017) and identified a potential for conflict arising out of a lack of communication between the respective parties (Ashby et al., 2003). Similarly, the results of this study suggest that a lack of communication and coordination can potentially result in the IAF and the risk function providing conflicting opinions to the first line, which causes confusion and inefficiency in the business. This was illustrated as follows:

... a lot of times they [internal audit and risk function] come in and do similar things. They talk about risk, they talk about controls, how well they're working, etc. So, it's not going to help the maturity ... if it's not coordinated, then it's going to confuse the business, and it might be conflicting ... you've got potentially two different entities talking at odds, and giving mixed messages, then that's going to confuse the business, and the business probably doesn't understand what a risk is in the first place. And – so, there needs to be – they need to speak the same language. That has often not been the case ... They're not using the same taxonomies. They don't use the same rating scales. (IA10)

Planning and reporting were generally considered to be the two specific phases requiring better communication, coordination, and collaboration between the IAF and the risk function. The collaboration of the IAF and the risk function in developing the audit plan was seen as critical to minimising audit fatigue (Burch, 2017) and maximising efficiency through establishment of a more informed risk-based audit plan, as illustrated below:

We try to maximise coverage and minimise duplication, for example. So we share our plans, each of the three lines has an annual plan, we share those and we look for duplication and try to agree on well, there's no point three of us looking at the one thing, maybe two need to look at it, or even one. So, there is increased collaboration. (IA07)

The coordination of reporting not only serves to further enhance knowledge sharing between the two functions (i.e., IAF and risk function), but also facilitates the integration and consolidation of reporting provided to the senior management and the board. This was illustrated as follows:

What I think we [internal audit and risk function] need to do better is in terms of our reporting coordinate our reporting to the various committees, to the board, to the executive. They're getting bombarded with information at the moment, my audit

committee packs now are about 250 pages every quarter, the risk papers are even larger, and both of us report to the board on a monthly basis. So, I think if we can get together and look at our reporting that would help the directors and the executive in their roles, there's too much information going forward at this stage. (IA07)

Recently updated IIA guidance recommends that internal audit should have unrestricted access to all key risk management information across the organisation (IIA, 2020). Maintaining ongoing communication channels, either formal or informal, between the IAF and the risk function on a day-to-day basis to share risk data and ensure consistent risk metrics and taxonomy to achieve a truly symbiotic relationship was recommended by the participants. Ideally, a joint code of practice should be developed and agreed upon between the risk management and internal audit functions so that the two can fully and effectively operationalise the “critical friend” function of the latter while preventing it transgressing the remit of the former” (White et al., 2020, p.106). This was illustrated as follows:

The risk function and the internal audit function, they need to go and have frequent catchups to go on, and plan what they're going to do ... This is just the day-to-day activity should be shared and more transparent, and actually reporting up... that should [be] coordinated as well, to some extent, i.e., the COO should be looking at audit reports and the head of audit should be looking at risk reports. Because what's the point if they disagree with each other? Then what message is that going to send? sometimes they should disagree, but they need to know that they're disagreeing and report it ... you've got an audit finding, then that should go into an update on the risk and control self-assessment (RCSA) document that they've been auditing, your residual risk should go up, your finding should go up, and that should be in the issues blog, all issues from incidents, control weaknesses, et cetera, all go into the same issues log. (IA10)

A few participants suggested even closer collaboration between the two functions, with internal auditors circulated periodically through the second line to enhance the IAF's risk knowledge and understanding of the operation in the second line, as illustrated below:

If you want internal audit to understand risk management, and risk management frameworks, and what good looks like, it's – I don't think any amount of training is going to help ... they need to work in risk management ... just spend six months working in there ... to circle through the second line. (IA10)

The participants also highlighted the importance of communication and collaboration between the IAF and management (i.e., first line of defence). Evidence suggests that broad consultation with management across all phases of the internal audit process can enhance management's overall acceptance of the IAF and of audit opinions. Examples of the IAF's consultation with management regarding remediation action following the audit were provided as follows:

... during the audit process when it comes to agreeing remediation action for issues or control efficiencies ... It has to be a balance between cost versus benefit and what is practical in terms of implementing for the business or for the process modification ... I have to have a very open discussion with management, team leaders and sometimes even

the individuals involved in the process to get an understanding of what they can and can't do as part of their BAU (business-as-usual) processes. (IA08)

... if we're taking a collaborative audit approach, and we're consulting widely and we're giving everyone their say. Then when it comes to actually addressing any control weaknesses that are identified, people will be more inclined to address them, because they'll understand what's what, they've all understood what the audit process was, and they've understood what the issues were. (IA04)

In some cases, the IAF holds formal meetings with management to discuss audit finding as a strategy to enhance management's accountability for remediation actions. One participant provided an example of a two-tier audit committee, where the first tier is the executive audit committee consisting of executives and senior management. The internal audit report first goes to the executive audit committee to get the executive team to participate in the discussion and agree on the remediation actions before the reports goes up to the board audit committee.

it comes down to the concept of accountability. We're – the reason why we decided to have an executive audit committee is so that management, as an executive, takes accountability of the results and the outcomes. My reports essentially go up there with a view to getting them to look at the responses and then show they're actually comfortable as executive team – as executive audit committee, before it goes up to the board audit committee. (IA02)

Evidence also suggests that IAFs conduct post-implementation reviews with relevant stakeholders to ensure they are aware of any drawbacks and obstacles, and to enhance understanding and collaboration from management.

I do [post-implementation] reviews with the stakeholders, really try to understand what they think, what were the drawbacks, what do they think of the team, and the suppliers. That happens on a regular basis. It's not quite a formal process now, but we will make it a formal process as – from a reporting perspective. (IA02)

4.6 Conclusion

This study aims to examine the relevance and appropriateness of the TLOD model and the IAF's involvement in ERM within the context of this model. Overall the findings suggest that the participants generally perceived the TLOD model to be a robust and appropriate model. However, several challenges were acknowledged regarding the application of the TLOD model in the ERM context.

The results confirm that lines are blurred in practice. This appears to happen in circumstances where there is lack of 1) clarity of roles and responsibilities of each line of defence, and 2) risk maturity and capability within organisations. However, the results suggest that 'blurring of lines' is not a rule but more of a temporary solution in the organisation's (desired) transition towards

higher levels of risk maturity and with the intention to reduce this practice as the organisation's risk maturity increases.

The results also indicate that internal auditors' independence is perceived to be critical. Participants suggested that the ideal role for the IAF in an organisation with a mature ERM framework is to act as a true independent third line without the need to perform overlapping roles and activities on behalf of the first and second lines. The second line should be well-established and competent so that the IAF can rely on it to assess and advise on the risk management practices of the first line. Several examples of safeguards adopted by IAFs to protect their independence in case of 'blurring of lines' in the ERM context were provided. These independence safeguards included transparent disclosure of the IAF's non-assurance activities to the audit committee, clear definition of the work scope between consulting and assurance roles to avoid self-review of non-assurance work, and engaging external consultants to complement the in-house internal auditors, and so on.

The results of this study also highlight the importance of communication, collaboration, and coordination between the IAF and the first and second lines, especially between the risk function and the IAF in terms of planning and reporting. Maintaining ongoing formal and informal communication channels, adopting consistent risk metrics and taxonomy, and sharing of risk data between the IAF and the risk function were considered to be important. As suggested by White et al. (2020), achieving a truly symbiotic relationship between the IAF and the risk function requires a joint code of practice to be developed and agreed upon.

Overall, the findings of this study provide evidence confirming the relevance of the TLOD model in the current business context as well as in relation to the IAF's involvement in ERM. It also provides timely insights on why 'blurring of lines' between the TLOD occurs in practice, as well as guidance on appropriate safeguards to protect the IAF's independence in such circumstances. The findings also highlight the importance of the IAF managing the first and second lines as important stakeholders and the critical role of communication, collaboration, and coordination across the three lines.

Professional bodies, such as the IIA, may benefit from the study's empirical evidence regarding issues raised on the application of the TLOD model, especially in view of the IIA's call for public comments on the need to update the model. Insights into these key issues regarding the application of the TLOD model in practice also provide important insights for practitioners

seeking to enhance their adoption and formalisation of the TLOD model within their organisations.

This study is subject to a number of limitations that need to be considered when interpreting its results. Firstly, the potential for researcher bias in the data collection process is an inherent limitation of semi-structured interviews (Chenail, 2011; Turner III, 2010). In order to maintain the objectivity of the interpretation of data, each interview was attended by at least two researchers, simultaneously taking notes. The data collected (i.e., transcript) from each interview was analysed and summarised based on the key issues by one of the researchers and then the summarised issues were checked and discussed with the other two researchers against the transcript to minimise interpretation bias. Secondly, the interviews for this study were conducted only with internal auditors and may not represent the perspective of other key internal stakeholders.

Future studies may undertake investigation of the perspectives of other key internal stakeholders (such as the chief risk officer, the chair/members of the audit committee, members of senior management). The results of this study indicate that the board and the senior management are the dominant stakeholders of the IAF in the ERM context. Future research may investigate how the board's risk oversight responsibilities affect the attitude and tone at the top regarding ERM. This study provides qualitative data on the relevance and appropriateness of the TLOD model regarding the IAF's ERM-related involvement. Future research may investigate the adoption of the TLOD model and the effectiveness of the IAF's involvement in other contexts (e.g., environmental and social assurance) or in specific emerging risk areas (e.g., technology and cyber risks). The findings of this study suggest emerging roles for the IAF in assessing and promoting the organisation's risk culture. Future research may examine the association of different types of organisational cultures with ERM effectiveness, as well as the typical cultural barriers that limit the embrace and development of ERM (Viscelli et al., 2016).

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Chapter 5 **Conclusion**

5.1 Introduction

This thesis is motivated by the IAF's increasing involvement in ERM (de Zwaan et al., 2011; Goodwin-Stewart and Kent, 2006; Gramling et al., 2004; Groff et al., 2016; Karagiorgos et al., 2009; Leung et al., 2003; Liu, 2012; Sarens, 2009; Sarens and De Beelde, 2006; Spira and Page, 2003) and the relative paucity of research in this area (Goodwin-Stewart and Kent, 2006; Sarens, 2009; Spira and Page, 2003; Viscelli et al., 2016). By adopting a sequential exploratory design (Ivankova et al., 2006), this thesis undertakes an in-depth and systemic investigation of IAFs' involvement in ERM guided by the following three central research questions:

- 1) What is the current extent and effectiveness of the internal audit's involvement in ERM-related roles and how are they expected to change in future? (**Paper 1**)
- 2) What is the impact of various governance, risk management, and IAF factors on the level of the IAF's involvement in ERM-related roles? (**Paper 2**)
- 3) How relevant and appropriate is the three lines of defence model in relation to internal audit's involvement in ERM? (**Paper 3**)

The data was collected utilising both quantitative and qualitative research methods in two stages. Stage 1 established the context of the thesis by collecting survey data from 95 CAEs, across different industries, sectors, and organisation sizes, to inform the investigation of research questions 1 (**Paper 1**) and 2 (**Paper 2**) as outlined above. Drawing on insights from Stage 1 findings, as well as the recent developments in internal audit and ERM regulations and practices, Stage 2 was undertaken utilising semi-structured interviews. Qualitative data was collected to provide more in-depth insights into internal audit's current ERM-related roles within the context of the risk management governance framework (i.e., the TLOD model) and its relevance and appropriateness to these roles (**Paper 3**).

This chapter presents the overall conclusion of this thesis and is structured as follows. Section 5.2 summarises the key findings across the three papers (i.e., Chapters 2, 3, and 4). Section 5.3 outlines the overall contributions and implications of this thesis, followed by limitations and avenues for future research in Sections 5.4 and 5.5 respectively.

5.2 Key findings

5.2.1 Paper One

This study investigated the extent and effectiveness of the IAF's ERM core assurance, consulting, and management roles as well as expected future changes in these roles.

The results suggest that, despite widespread acknowledgement of the value of internal audit's involvement in ERM, the participants' IAFs currently only spend a limited to moderate amount of time on most ERM-related roles. Almost a third of the respondents rated their IAFs' ERM-related assurance roles as below effective and around half of the respondents rated their ERM-related consulting roles as below effective. This finding suggests potential for considerable improvement in relation to the IAF's ERM-related roles, both in terms of extent of involvement and effectiveness.

Consistent with prior research (de Zwaan et al., 2011; Gramling and Myers, 2006) and the IIA's (2009) position paper, the results indicate that IAFs in Australia are predominantly involved in core assurance roles in ERM relative to consulting roles. However, the focus of the IAF's involvement in specific assurance roles is changing with "providing assurance on the management of key risks" being the main current assurance role, compared to "giving assurance on ERM process" as per the 2007 survey undertaken by de Zwaan et al. (2011). The IAF's focus on key risks in its ERM-related assurance roles is expected to continue into the future. This is most likely a response to increasing stakeholder expectations of the IAF's value adding to the management of key risks (Castanheira et al., 2009; D' Onza et al., 2015; Elena et al., 2014; Roussy and Brivot, 2016; Spira and Page, 2003).

The results indicate that the IAF spends, on average, a limited to moderate amount of time on various ERM-related consulting roles, particularly those that pose relatively lower threat to auditors' independence, such as "enhancing risk awareness" and "coaching management in response to risk". Almost half of the respondent CAEs perceived the effectiveness of their IAF in consulting roles as lacking. Given that the results show significant positive association between the adequacy of IAFs' competencies and their effectiveness in consulting roles, this finding suggests a potential need for improvement in IAFs' key competencies when undertaking ERM consulting roles.

Although the IIA (2009) explicitly recommends that the IAF should not perform any direct management roles in ERM, our results suggest that almost 40 percent of the respondents have

some level of involvement in such roles. Public sector organisations, especially not-for-profit organisations, are found to be more likely to have their IAFs involved in ERM-related management roles. This suggests a potential lack of awareness of appropriate IAF roles in ERM, especially in the public sector. Having the IAF involved in direct management of ERM may lead to self-review and self-advocacy, thus impairing the IAF's independence (de Zwaan et al., 2011). This finding points to the emerging need for organisations to re-examine the role of their IAFs in ERM and to clearly delineate ERM management roles from their other ERM-related roles to ensure their IAFs' independence and objectivity.

5.2.2 Paper Two

This study investigates factors associated with the extent of internal audit's involvement in ERM-related roles. It specifically examines the influence of a number of governance, risk management, and IAF factors on the extent and nature of internal audit's ERM-related roles.

The results suggest that senior management support is a significant factor positively associated with the IAF's overall involvement in ERM. However, this result also highlights a potential risk in terms of the IAF's relatively higher involvement in inappropriate management roles in the ERM context where strong management support exists. The results also suggest that in-house IAFs tend to have significantly higher involvement in ERM relative to outsourced IAFs. The organisation's risk maturity was also found to have a significant positive association with the extent of the IAF's ERM-related assurance roles, but was not significant for the consulting roles. This finding challenges the IIA's prediction that the IAF's consulting roles will decrease when the organisation's risk maturity increases (IIA, 2019).

Longer-established IAFs and those in financial organisations were found to have a significantly higher focus on core assurance roles relative to consulting and management roles within ERM. Performing regular external performance assessments of the IAF and establishing a separate risk function appear to be effective safeguards in reducing the IAF's involvement in inappropriate management roles and thus protecting the IAF's objectivity and independence.

5.2.3 Paper Three

This study aims to examine the relevance and appropriateness of a commonly adopted risk management and corporate governance model – the TLOD model – within the context of internal

audit's ERM-related roles. In contrast to a number of recent studies challenging the appropriateness of the TLOD model (Davies and Zhivitskaya, 2018; Lim et al., 2017; Roussy and Rodrigue, 2018), our results indicate that participants generally perceived the TLOD model to be a robust and appropriate model. The findings further suggest that the TLOD model reflects current practice and aligns well with the IAF's current roles, responsibilities, and key stakeholders in ERM.

However, participants also reported three key challenges in applying the TLOD model in relation to the IAF's involvement in ERM. These include the lack of 1) clarity of roles and responsibilities of each line of defence, 2) risk maturity and capability within organisations, and 3) communication, coordination, and collaboration across different lines of defence. Given the above challenges, our results highlight the importance for organisations that adopt the TLOD model to enhance risk awareness and accountability of their first line management, improve the risk maturity of the second line risk function, and ensure formal and informal channels of ongoing communication and collaboration between the IAF and the risk function.

The results of this study confirm lines are often blurred, with internal audit at times performing the first and/or second lines' responsibilities. However, the results suggest that the 'blurring of lines' is not a rule but more of a temporary solution in the organisation's (desired) transition towards higher levels of risk maturity, with the intention that this practice is reduced as the organisation's risk maturity increases.

The results also indicate that internal auditors' independence is perceived as critical to performing their key roles and adding value to their organisations. Participants suggested that the ideal role for the IAF in an organisation with a mature ERM framework is to act as a true independent third line without the need to perform overlapping roles and activities on behalf of the first and second lines. Several examples of safeguards adopted by IAFs to protect their independence against the 'blurring of lines' in the ERM context were provided. These included transparent disclosure of the IAF's non-assurance activities to the audit committee, clear definition of the IAF's work scope between consulting and assurance roles to avoid self-review of non-assurance work, and engaging external consultants to complement in-house internal auditors.

5.3 Contributions and implications

This thesis (Paper 1/Chapter 2) provides comprehensive evidence of the current nature and extent of the various IAFs' ERM-related roles (i.e., core assurance, legitimate consulting, and inappropriate management roles), as well as the CAEs' perceptions of the effectiveness of these roles and the adequacy of their IAFs' skills and competencies. These results provide a platform for future research in this area and a useful benchmark to enable practitioners to evaluate their IAFs' ERM-related involvement. The results of this study also highlight potential for improvement regarding the IAF's ERM-related roles, including both the extent of involvement and effectiveness of such roles. The results also provide useful insights for regulatory and professional bodies to reflect upon in developing standards and guidelines to further enhance the IAF's appropriate and effective involvement in ERM.

The thesis (Paper 2 /Chapter 3) also quantifies the influence of different organisational factors, including governance, risk management, and IAF characteristics, on the extent and nature of IAFs' ERM-related roles. This contributes to the literature by providing evidence of the contingent nature of the IAF's involvement in ERM depending on specific organisational context. The study also complements previous qualitative studies adopting case study approach (Sarens and De Beelde, 2006; Walker et al., 2003). The findings regarding factors associated with higher level of involvement in appropriate IAFs' ERM-related roles provide valuable information for practitioners interested in improving or establishing their IAFs' involvement in ERM. The results will also be useful to future research in further investigating the same and/or other individual factors.

This thesis (Paper 3/Chapter 4) makes an important contribution to the analysis of the IAF's involvement within the context of an organisation's risk management and corporate governance framework. The results confirm the relevance and appropriateness of the TLOD model, but also acknowledge challenges in its application. The results highlight potential obstacles that constrain the IAF's ERM-related roles in the TLOD model context and provide insights into potential solutions to these issues. A number of potential improvements in the application of the TLOD model were highlighted by participants. These include enhancing role clarity and accountability of first line management, improving the maturity and capability of the second line risk function, and maintaining ongoing communication and collaboration between the risk function and the IAF. These findings provide important insights for practitioners into the adoption and formalisation of the TLOD model in practice. Empirical evidence from the study is of benefit to

professional bodies, such as the IIA, especially in view of the IIA's call for public comments on the need to update the TLOD model.

Given the existing TLOD model does not explain or provide guidance relating to the 'blurring of lines' (IIA, 2019), this thesis provides timely evidence of the phenomenon, including insights on why it occurs in practice as well as guidance on appropriate safeguards to protect the IAF's independence in such circumstances. The results also highlight that internal auditors' independence is perceived by CAEs as critical to their ERM-related roles. This challenges the previous literature suggesting the IAF's lack of objectivity as a key governance mechanism (Roussy, 2013).

Overall, the results of this thesis facilitate a more comprehensive and systematic understanding of the IAF's involvement in ERM and highlight potential future improvements relating to the IAF's involvement in ERM. The findings are of value to a wide range of potential audiences, including academics, practitioners, regulators, and professional bodies.

5.4 Limitations

The findings of this study are subject to a number of limitations.

The survey sample in Papers 1 (i.e., Chapter Two) and 2 (i.e., Chapter Three) comprises members of the IIA-Australia, which could cause potential self-selection bias. However, given that the target participants of this study are CAEs, the IIA-Australia membership database was considered a reliable source to identify potential participants through matching the member profile and job title. In order to minimise sample selection bias, a descriptive analysis was conducted on individual participants and their organisations to ensure the sample of this study represents a fair distribution across different organisation sizes, industries, and sectors.

To ensure the desired predictive power of the statistical model, given the sample size, this thesis only examined a relatively limited number of specific organisational factors in Paper 2, which were selected on the basis of prior literature. There are potentially numerous other important factors associated with the IAF's ERM-related roles that are not examined in this thesis.

There are also inherent limitations associated with using a survey method. To minimise question interpretation issues (Alwin, 1989), the survey questionnaire specifically defined the key terms in the survey and included clarifications of measurement scales as necessary. The question wording

was tailored to the context of either in-house CAEs or external service providers to facilitate easy and accurate understanding of the questions. To further enhance the reliability and validity of data collected, the questionnaire was pilot tested in two stages by both leading academics and internal audit practitioners to ensure there was no confusion or ambiguity in the questions.

Data collected represents the CAE's perspective for both the survey and interviews. The perspectives of other key internal stakeholders, including the board, audit committee, risk and compliance function, and senior and operational management are not represented, although a number of participants were able to draw on their board and audit committee roles or previous risk management function experience in the interviews. It is expected that other stakeholders may have different perspectives on the perceived effectiveness of the IAF's ERM-related roles and/or the relevance and appropriateness of the TLOD model.

Paper 3 adopts a semi-structured interview method, which is subject to inherent interpretation bias (Castillo-Montoya, 2016; Drever, 1995; Rabionet, 2011). In order to maintain objectivity in interpreting the data, each interview was attended by at least two researchers, simultaneously taking notes. The data collected (i.e., transcript) from each interview was analysed and summarised based on the key issues by one of the researchers and then the summarised issues were checked and discussed with the other two researchers against the transcript to minimise any interpretation bias.

Finally, the data of this study was only collected within the Australian context. Caution should therefore be exercised in generalising the findings of this study to other institutional and regulatory contexts.

5.5 Future research

In spite of the systematic investigation of the IAF's involvement in ERM in this thesis, there remains significant potential for future research on this topic. Some of the key findings of this thesis also provides potential opportunities for further investigation and analysis.

The results of Paper 1 (i.e., Chapter Two) suggest considerable room for improvement in the IAF's involvement in ERM regarding both the extent of involvement and effectiveness of such roles. Future research could further investigate the root causes for the IAF's relative lack of involvement and effectiveness in ERM, and investigate appropriate solutions to overcome these perceived shortcomings. For example, research could examine the extent to which IAFs are

adjusting their team compositions in terms of experience and knowledge to undertake ERM and other non-traditional engagements.

Paper 2 (i.e., Chapter Three) identified a number of corporate governance, risk management, and IAF factors that are associated with the IAF's extent of involvement in ERM-related roles.

Future research could build on the findings of this thesis to investigate the influence of other internal and external organisational factors on the extent of the IAF's ERM-related roles as well as the effectiveness of such roles.

Future studies may also examine the perspectives of other key governance stakeholders, including both internal (e.g., chief risk officer, chair of the audit committee, senior executives and operational management) and external (e.g., regulators and external auditors) stakeholders, regarding the IAF's involvement in ERM. The findings of this thesis provide a benchmark for future research to identify the (mis)alignment between the perspectives of the CAEs and other governance stakeholders.

Both Stage 1 and Stage 2 of this study confirm the IAF's involvement in various direct management roles in the ERM context despite independence being greatly valued by the participating CAEs. Future research could examine specific impacts of such involvement on the IAF's independence and objectivity, as well as the appropriate governance tools to reduce such occurrences. Paper 3 of this thesis provides some exploratory evidence of the safeguards that IAFs adopt to protect their objectivity and independence when involved in ERM-related management roles. Future research could leverage these findings and perform in-depth analysis of the effectiveness of these safeguards.

The results of Paper 2 (i.e., Chapter Three) highlight the importance of senior management support in enhancing the IAF's involvement in ERM, but also the risk of increased IAF inappropriate involvement in management roles in the environment with stronger management support. Paper 3 results further confirm the importance of senior management as a key IAF stakeholder. Future research could be undertaken to analyse the appropriate relationship between the IAF and senior management to facilitate the IAF's ERM-related roles without compromising the IAF's independence and objectivity. Future research may investigate how the board's risk oversight responsibilities affect the attitude and tone at the top in relation to ERM, including the IAF's role in ERM and how the board and the audit committee monitor the IAF's objectivity so that it is not compromised by its involvement in ERM.

Paper 3 investigates the relevance and appropriateness of the TLOD model with particular focus on the IAF's involvement in ERM. Future research may investigate the appropriateness and effectiveness of the TLOD model from other governance stakeholders' perspectives or in other contexts (e.g., environmental and social assurance, technology and cyber risks). Future studies can also explore potential alternatives to the TLOD model.

The findings of Paper 3 suggest emerging roles for the IAF in assessing and promoting an organisation's risk culture, especially regarding the capabilities and risk awareness of the first and second line management. Future research may look into the association of different types of organisational cultures with ERM effectiveness, as well as the typical cultural barriers that limit the embrace and development of ERM (Viscelli et al., 2016).

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Appendix A: Stage 1 Macquarie University ethics approval



MACQUARIE
University

XIAOQIAN BA <xiaoqian.ba@students.mq.edu.au>

Approved - 5201500996

5 messages

Mrs Yanru Ouyang <yanru.ouyang@mq.edu.au>

Mon, Dec 7, 2015 at 11:30 AM

To: Professor Nonna Martinov-Bennie <nonna.martinov-bennie@mq.edu.au>

Cc: Dr Sharon O'Neill <sharon.oneill@mq.edu.au>, Miss Xiaoqian Ba <xiaoqian.ba@students.mq.edu.au>

Dear Professor Martinov-Bennie,

Re: 'Internal Audit's involvement in Risk Management.'

Reference No.: 5201500996

Thank you for your recent correspondence. Your response has addressed the issues raised by the Faculty of Business & Economics Human Research Ethics Sub Committee. Approval of the above application is granted, effective "7/12/2015". This email constitutes ethical approval only.

This research meets the requirements of the National Statement on Ethical Conduct in Human Research (2007). The National Statement is available at the following web site:

http://www.nhmrc.gov.au/_files_nhmrc/publications/attachments/e72.pdf.

The following personnel are authorised to conduct this research:

Dr Sharon O'Neill
Miss Xiaoqian Ba
Professor Nonna Martinov-Bennie

NB. STUDENTS: IT IS YOUR RESPONSIBILITY TO KEEP A COPY OF THIS APPROVAL EMAIL TO SUBMIT WITH YOUR THESIS.

Please note the following standard requirements of approval:

1. The approval of this project is conditional upon your continuing compliance with the National Statement on Ethical Conduct in Human Research (2007).
2. Approval will be for a period of five (5) years subject to the provision of annual reports.

Progress Report 1 Due: 7th Dec 2016
Progress Report 2 Due: 7th Dec 2017
Progress Report 3 Due: 7th Dec 2018
Progress Report 4 Due: 7th Dec 2019
Final Report Due: 7th Dec 2020

NB. If you complete the work earlier than you had planned you must submit a Final Report as soon as the work is completed. If the project has been discontinued or not commenced for any reason, you are also required to submit a Final Report for the project.

Progress reports and Final Reports are available at the following website:

http://www.research.mq.edu.au/for/researchers/how_to_obtain_ethics_approval/human_research_ethics/forms

3. If the project has run for more than five (5) years you cannot renew approval for the project. You will need to complete and submit a Final Report and submit a new application for the project. (The five year limit on renewal of approvals allows the Committee to fully re-review research in an environment where legislation, guidelines and requirements are

continually changing, for example, new child protection and privacy laws).

4. All amendments to the project must be reviewed and approved by the Committee before implementation. Please complete and submit a Request for Amendment Form available at the following website:

http://www.research.mq.edu.au/for/researchers/how_to_obtain_ethics_approval/human_research_ethics/forms

5. Please notify the Committee immediately in the event of any adverse effects on participants or of any unforeseen events that affect the continued ethical acceptability of the project.

6. At all times you are responsible for the ethical conduct of your research in accordance with the guidelines established by the University. This information is available at the following websites:

<http://www.mq.edu.au/policy/>

http://www.research.mq.edu.au/for/researchers/how_to_obtain_ethics_approval/human_research_ethics/policy

If you will be applying for or have applied for internal or external funding for the above project it is your responsibility to provide the Macquarie University's Research Grants Management Assistant with a copy of this email as soon as possible. Internal and External funding agencies will not be informed that you have approval for your project and funds will not be released until the Research Grants Management Assistant has received a copy of this email.

If you need to provide a hard copy letter of approval to an external organisation as evidence that you have approval, please do not hesitate to contact the FBE Ethics Committee Secretariat, via fbe-ethics@mq.edu.au or 9850 4826.

Please retain a copy of this email as this is your official notification of ethics approval.

Yours sincerely,

Dr. Nikola Balhave
Chair, Faculty of Business and Economics Ethics Sub-Committee
Faculty of Business and Economics
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NSW 2109 Australia
T: +61 2 9850 4826

www.businessand economics.mq.edu.au/

Appendix B: Stage 1 Survey participant information and consent

Involvement of the Internal Audit Function in Risk Management

1. Welcome to Our Research

Project Title: Roles of the Internal Audit Function in Risk Management

As a leading internal audit professional, in the role of Chief Audit Executive (CAE) or outsourced internal audit service provider Partner (or equivalent), you are invited to participate in this research project. **The purpose of this research is to investigate Internal Audit Function (IAF)'s current involvement in Risk Management (RM), including:**

- IAFs' current roles and responsibilities in RM;
- Adequacy of the IAFs' roles and responsibilities in evaluating and improving RM effectiveness;
- Adequacy of the IAFs' skills and expertise in meeting these roles and responsibilities.

The study is conducted by Miss Sunnie Xiaoqian Ba (xiaoqian.ba@students.mq.edu.au) to meet the requirements of the Doctorate Degree under the supervision of Professor Nonna Martinov-Bennie (nonna.martinov-bennie@mq.edu.au, (02) 9850 1926) and Dr. Sharron O'Neill (sharron.oneill@mq.edu.au, (02) 9850 8497) of the International Governance and Performance (IGAP) Research Office at Macquarie University.

If you decide to participate, you will be asked to complete an online questionnaire about your experiences of providing assurance and consulting services on risk-related issues in your organisation (or your current or the most recent client's organisation if you are outsourced internal audit provider). You will not need to access any records or documents. It should take approximately **20 to 25 minutes** to complete the questionnaire. Upon completion, you will be asked whether you would be willing to be contacted at a future date to participate in an interview to add depth to some of the issues covered in the questionnaire, and whether you would like to receive a summary of the results of this study.

Participation in this study is entirely voluntary. **Information about your organisation and personal details gathered in the course of the study will be kept confidential, except as required by law.** Data will be analysed in aggregated form, and only the researchers identified above will have access to the raw data. **No individual, or his or her organisation, will be identified in any publication of the results.**

Please do not hesitate to contact us should you have any questions in relation to the questionnaire. **If you have read and understand the information above and agree to participate in this study, please click the 'Next' button.**

Thank you very much in advance for your participation.

The ethical aspect of this study has been approved by the Macquarie University Human Research Ethics Committee [Reference: 5201500996]. If you have any complaints or reservations about any ethical aspect of your participation in this research, you may contact the Committee through the Director, Research Ethics & Integrity (telephone (02) 9850 7854, email ethics@mq.edu.au). Any complaint you make will be treated in confidence and investigated, and you will be informed of the outcome.

Appendix C: Stage 1 - Survey instruments¹⁸

Involvement of the Internal Audit Function in Risk Management
<p>2.</p> <p>Please indicate whether you are currently in-house or out-sourced internal auditor.</p> <p><input type="radio"/> In-house. I'm the chief audit executive (or equivalent) in an organisation.</p> <p><input type="radio"/> Out-sourced. I'm a public practitioner partner (or equivalent) who provide internal audit service to my client.</p>

2

¹⁸ The survey instrument is web-based and designed utilizing SurveyMonkey.

Please note that there are limitations in displaying certain functions of the web-based questionnaire (e.g. dropdown boxes, auto-navigation to next question based on previous answer, etc.) in hard copy.

The web-based survey questionnaire may be accessed from: <https://www.surveymonkey.com/r/2J2YM6H>

Survey instrument: CAE version

Involvement of the Internal Audit Function in Risk Management	
3.	
<p>Please Note:</p> <p>The term 'your organisation' used in this survey refers to the organisation that you currently work for. If you don't currently work for any organisation, please refer to the one you worked for most recently.</p> <p>What type of organisation do you currently work for (if you don't currently work for any organisations, please refer to the one you worked for most recently)?</p> <div></div>	
<p>In which country is your organisation headquartered?</p> <p><input type="radio"/> Australia</p> <p><input type="radio"/> Other (please specify)</p> <div></div>	
<p>Which of the following categories best describes the industry your organisation primarily operates in ?</p> <div></div> <div></div>	

3

Involvement of the Internal Audit Function in Risk Management

4.

Please provide an indication of your organisation's **approximate annual revenue (in AUD)** during the current financial year.

Please provide an indication of your organisation's **total number of full-time employees**.

In Australia

Globally

Involvement of the Internal Audit Function in Risk Management

5.

Please provide an indication of your organisation's **approximate total budgeted expenditure (in AUD)** for the current financial year.

Please provide an indication of your organisation's **total number of full-time employees**.

In Australia

Globally

Involvement of the Internal Audit Function in Risk Management

6.

Is your organization **externally** audited?

☐ Yes

☐ No

Involvement of the Internal Audit Function in Risk Management

7.

Please indicate the **size** of your **external audit firm**?

- ☐ Big-4
- ☐ Medium-large (other than the Big 4 with more than 600 employees.)
- ☐ Medium-small (100-600 employees)
- ☐ Small (less than 100 employees)

Involvement of the Internal Audit Function in Risk Management

8.

Please note the acronym used below:

IAF – Internal Audit Function

How long has the internal audit function (IAF) been in place in your organisation?

- ☐ Up to 5 years
- ☐ 6-10 years
- ☐ 11-15 years
- ☐ More than 15 years

How many in-house full-time equivalent personnel are currently working in the IAF?

- ☐ 0
- ☐ 1-5
- ☐ 6-10
- ☐ 11-15
- ☐ 16-20
- ☐ 21-25
- ☐ More than 25

How many out-sourced full-time equivalent personnel are currently working in the IAF?

- ☐ 0
- ☐ 1-5
- ☐ 6-10
- ☐ 11-15
- ☐ 16-20
- ☐ 21-25
- ☐ More than 25

Please provide an indication of the **estimated total budget (in AUD) for the IAF** in the current financial year.

Involvement of the Internal Audit Function in Risk Management

9.

Please note the acronyms used below:

IAF – Internal Audit Function

CAE – Chief Audit Executive / Chief Internal Auditor or equivalent

In your organisation, who has the **ultimate responsibility** for approving the following IAF-related issues?

	CEO	CFO	Board	CAE	Audit Committee	Risk Committee	Others*
IAF audit charter	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
IAF audit plan	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
IAF budget	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Appointment of CAE	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Appointment of other IAF staff, excluding CAE	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Remuneration of CAE	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Remuneration of other IAF staff, excluding CAE	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Appraisal of CAE	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Appraisal of other IAF staff, excluding CAE	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

* If you tick 'others', please specify the corresponding party who has the ultimate responsibility.

Involvement of the Internal Audit Function in Risk Management

10.

Please note the acronyms we use below:

RM – Risk Management, which includes activities to identify, assess, manage, and control all kinds of events or situations. These can range from single projects or narrowly defined types of risk to the threats and opportunities facing the organisation as a whole.

Does your organisation have a separate RM function?

- ☐ Yes
☐ No

Who is **responsible** for the **enterprise RM** for your organisation?

In your view, what is the level of your organisation's **risk maturity**?

- ☐ Risk Naive – no formal plans for RM.
☐ Risk Aware – consulting and planning to implement RM
☐ Risk Defined – early stages of implementation of RM
☐ Risk Managed – established RM with planned extension/development
☐ Risk Enabled – fully established and effective RM culture at all levels

Involvement of the Internal Audit Function in Risk Management

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Please note the two acronyms used below:

IAF – Internal Audit Function

RM – Risk Management

From your organisation's perspective, please indicate the **amount of time** that your IAF currently spends on each of the following RM-related responsibilities .

	None		Moderate		Significant
Giving assurance on RM processes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Giving assurance that risks are correctly evaluated	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Evaluating RM processes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Evaluating the reporting of risks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reviewing the management of key risks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Facilitating identification & evaluation of risks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Coaching management in responding to risks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Co-ordinating RM activities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Providing consolidated reporting on risk	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Maintaining and developing the RM framework	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Championing establishment of RM	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Developing RM strategy for board approval	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Setting the risk appetite	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Imposing RM processes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Taking decisions on risk responses	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Implementing risk responses on management's behalf	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Taking accountability for RM	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

If your IAF has other risk-related responsibility/ies, please specify the responsibility/ies as well as the amount of time that the IAF spends using a scale 1-5 from 'none' to 'significant' in the space below.

From your organisation's perspective, to what extent do you expect the **amount of time** that your IAF spends on the following RM-related responsibilities to **change in the next five years**?

	Significantly Decrease		No Change		Significantly Increase	
Giving assurance on RM processes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Giving assurance that risks are correctly evaluated	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Evaluating RM processes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Evaluating the reporting of risks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reviewing the management of key risks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Facilitating identification & evaluation of risks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Coaching management in responding to risks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Co-ordinating RM activities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Providing consolidated reporting on risk	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Maintaining and developing the RM framework	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Championing establishment of RM	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Developing RM strategy for board approval	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Setting the risk appetite	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Imposing RM processes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Taking decisions on risk responses	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Implementing risk responses on management's behalf	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Taking accountability for RM	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

If the IAF has (/will has) other risk-related responsibility/ies, please specify the responsibility/ies as well as the expected change using a scale 1-5 from 'significantly decrease' to 'significantly increase' in the space below.

Involvement of the Internal Audit Function in Risk Management

13.

From your organisation's perspective, how well does the IAF **perform the following RM-related responsibilities**.

***Please tick 'N/A' (not applicable) if the IAF does not have a particular responsibility.**

	Very Ineffective		Neutral		Very Effective	N/A*
Giving assurance on RM processes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Giving assurance that risks are correctly evaluated	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Evaluating RM processes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Evaluating the reporting of risks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reviewing the management of key risks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Facilitating identification & evaluation of risks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Coaching management in responding to risks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Co-ordinating RM activities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Providing consolidated reporting on risk	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Maintaining and developing the RM framework	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Championing establishment of RM	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Developing RM strategy for board approval	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Setting the risk appetite	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Imposing RM processes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Taking decisions on risk responses	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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	Very Ineffective		Neutral		Very Effective	N/A*
Implementing risk responses on management's behalf	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Taking accountability for RM	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

If the IAF has other risk-related responsibility/ies, please specify the responsibility/ies as well as the IAF's corresponding performance using a scale 1-5 from 'very ineffective' to 'very effective' in the space below.

Involvement of the Internal Audit Function in Risk Management

14.

The question below contains a list of competencies that may be needed by the IAF in undertaking RM-related activities. Please indicate **level of importance** of the following competencies for **IAF's performance of RM-related responsibilities**.

	None		Moderate Importance		Very Important
Communication skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Problem identification and solution skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Knowledge of industry, regulatory, and standard change	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Risk assessment & control analysis skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Business/commercial acumen	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Conflict resolution/negotiation skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
IT/CT frameworks, tools, and techniques	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Change management skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

If there is/are any other competence(s) needed by IAF, please specify the competence/competences as well as the corresponding level of importance using a scale 1-5 from 'none' to 'very important'.

Involvement of the Internal Audit Function in Risk Management

15.

The question below contains a list of competencies that may be needed by IAF in undertaking RM-related activities. Please indicate **level of satisfaction with your IAF's current level of competency**, concerning the adequacy of IAF's performance in RM-related responsibilities.

	Very Dissatisfied		Neutral		Very Satisfied
Communication skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Problem identification and solution skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Knowledge of industry, regulatory, and standard change	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Risk assessment & control analysis skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Business/commercial acumen	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Conflict resolution/negotiation skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
IT/ICT frameworks, tools, and techniques	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Change management skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

If there is/are any other competence/s needed by IAF, please specify the competence/s as well as the level of satisfaction using a scale '1-5' from 'very dissatisfied' to 'very satisfied'.

Involvement of the Internal Audit Function in Risk Management

16.

Please indicate to what extent the following **senior management roles support your IAF's involvement in RM.**

Please tick 'N/A' (not applicable) if your organisation does not have a particular senior management role.

	None		Moderate		Significant	N/A*
CEO	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
CFO	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Board	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Chair of Audit Committee	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Chair of Risk Committee	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Involvement of the Internal Audit Function in Risk Management

17.

Does your organisation perform **formal internal assessment** (e.g. by the management board and/or supervisory board) regarding your **IAF's performance**?

☐ Yes

☐ No

20

Involvement of the Internal Audit Function in Risk Management

18.

How frequently is the formal internal assessment of the IAF's performance conducted?

By whom is the internal assessment of the IAF's performance conducted?

what **criteria** does the internal assessor use?

Involvement of the Internal Audit Function in Risk Management

19.

Does your organisation perform **formal external assessment** regarding the IAF's performance?

☐ Yes

☐ No

Involvement of the Internal Audit Function in Risk Management

20.

How frequently is the formal external assessment of the IAF's performance conducted?

By whom is the **most recent** external assessment of the IAF's performance conducted?

What **criteria** does the external assessor use?

Involvement of the Internal Audit Function in Risk Management

21.

The following demographic information will help us to analyse the responses collected. Any organisational information or personal details gathered in this study will be kept confidential, and only be accessible to the researchers and reported in aggregated form.

Please indicate your **gender**.

- ☐ Female
☐ Male

Please indicate your **age group**.

- ☐ 30 and under
☐ 31- 40
☐ 41- 50
☐ 51- 60
☐ 61 and over

What is your **current job title**?

How many years of **internal audit experience** do you have?

How many years have you been **working in the current organisation**?

Please indicate your **area(s) of expertise**?

Please indicate your **professional qualifications/certifications/affiliations**?

Involvement of the Internal Audit Function in Risk Management

42.

Would you like to receive the **summary report** of this study?

☐ No

☐ Yes.

*If you answer 'yes' for this question, please provide your email address.

Would you be willing to be contacted about participating in a **follow-up interview** to provide greater depth to this study?

(N.B. Initial contact will be made via email. An interview, as agreed upon, may be conducted in person or over the telephone or email at your convenience.)

☐ No

☐ Yes. If you answer 'yes' for this question, please provide your email address. Please write 'AS ABOVE' if you would like to be contacted using the same email address you provided in the above question.

We appreciate your time in assisting us with our research. If you have any **feedback or questions** relating to this questionnaire, please specify using the space below.

Survey instrument: Service provider version

Involvement of the Internal Audit Function in Risk Management

22.

Please indicate the **size** of your **firm**?

- ☐ Big-4
- ☐ Medium-large (other than the Big 4 with more than 600 employees.)
- ☐ Medium-small (100-600 employees)
- ☐ Small (less than 100 employees)

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Involvement of the Internal Audit Function in Risk Management

23.

Please Note:

The term **'the client'** used in this survey refers to **the client that you currently provide internal audit service for**.
If you don't currently work for any client, please refer to **the one you worked for most recently**.
If you currently have more than one clients, please refer to **the one you worked for the longest period**.

What **type of client** do you currently/most recently provide internal audit service for?

In which country is the client's organisation **headquartered**?

☐ Australia

☐ Other (please specify)

Which of the following categories best describes the **industry** the client's organisation primarily operates in ?

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Involvement of the Internal Audit Function in Risk Management

24.

Please provide an indication of the client's **approximate annual revenue (in AUD)** during the current financial year.

Please provide an indication of the client's **total number of full-time employees**.

In Australia

Globally

Involvement of the Internal Audit Function in Risk Management

25.

Please provide an indication of the client's **approximate total budgeted expenditure (in AUD)** for the current financial year.

Please provide an indication of the client's **total number of full-time employees**.

In Australia

Globally

Involvement of the Internal Audit Function in Risk Management

26.

Is the client **externally audited**?

☐ Yes

☐ No

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Involvement of the Internal Audit Function in Risk Management

27.

Please indicate the **size** of the clients' **external audit firm**?

- ☐ Big-4
- ☐ Medium-large (other than the Big 4 with more than 600 employees.)
- ☐ Medium-small (100-600 employees)
- ☐ Small (less than 100 employees)

Does **your firm** also provide **external audit service to the client**?

- ☐ Yes
- ☐ No

Involvement of the Internal Audit Function in Risk Management

28.

How long has **the client's organisation performed internal audit**, including both in-house and out-sourced engagements?

- ☐ Up to 5 years
- ☐ 6-10 years
- ☐ 11-15 years
- ☐ More than 15 years

How many **full-time equivalent personnel** are currently **providing internal audit service for the client**?

- ☐ 0
- ☐ 1-5
- ☐ 6-10
- ☐ 11-15
- ☐ 16-20
- ☐ 21-25
- ☐ More than 25

Please provide an indication of the **estimated total budget (in AUD) for the client's internal audit engagement** in the current financial year.

Involvement of the Internal Audit Function in Risk Management

29.

Please note the acronym used below:

IA – Internal Audit

Please indicate who has the **ultimate responsibility** for approving the following **IA-related issues for the client?**

	the Client's CEO	the Client's CFO	the Client's Board	the Client's Audit Committee	the Client's Risk Committee	the Firm's Partner	Others*
IA charter	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
IA plan	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
IA engagement budget	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Appointment of IA firm	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
IA Fees	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Appraisal of IA Service	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

* If you tick 'others' , please specify the corresponding party who has the ultimate responsibility.

Involvement of the Internal Audit Function in Risk Management

30.

Please note the acronyms we use below:

RM – Risk Management, which includes activities to identify, assess, manage, and control all kinds of events or situations. These can range from single projects or narrowly defined types of risk to the threats and opportunities facing the organisation as a whole.

Does the client have a **separate RM function**?

- ☐ Yes
- ☐ No

Who is **responsible** for the client's **enterprise RM**?

In your view, what is the level of the client's organisation's **risk maturity**?

- ☐ Risk Naive – no formal plans for RM.
- ☐ Risk Aware – consulting and planning to implement RM
- ☐ Risk Defined – early stages of implementation of RM
- ☐ Risk Managed – established RM with planned extension/development
- ☐ Risk Enabled – fully established and effective RM culture at all levels

Involvement of the Internal Audit Function in Risk Management

31.

Please note the two acronyms we use below:

IA – Internal Audit

RM – Risk Management

In terms of the client's IA engagement, please indicate the **amount of time** that **your IA team currently spends on each of the following RM-related responsibilities**.

	None		Moderate		Significant
Giving assurance on RM processes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Giving assurance that risks are correctly evaluated	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Evaluating RM processes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Evaluating the reporting of risks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reviewing the management of key risks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Facilitating identification & evaluation of risks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Coaching management in responding to risks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Co-ordinating RM activities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Providing consolidated reporting on risk	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Maintaining and developing the RM framework	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Championing establishment of RM	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Developing RM strategy for board approval	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Setting the risk appetite	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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	None		Moderate		Significant
Imposing RM processes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Taking decisions on risk responses	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Implementing risk responses on management's behalf	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Taking accountability for RM	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

If your IA team has other risk-related responsibility/ies for the client, please specify the responsibility/ies as well as the amount of time that the IA team spends using a scale 1-5 from 'none' to 'significant' in the space below.

In terms of the client's IA engagement, to what extent do you expect the **amount of time** that your IA team spends on the following RM-related responsibilities to **change in the next five years**?

	Significantly Decrease		No Change		Significantly Increase	
Giving assurance on RM processes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Giving assurance that risks are correctly evaluated	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Evaluating RM processes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Evaluating the reporting of risks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reviewing the management of key risks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Facilitating identification & evaluation of risks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Coaching management in responding to risks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Co-ordinating RM activities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Providing consolidated reporting on risk	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Maintaining and developing the RM framework	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Championing establishment of RM	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Developing RM strategy for board approval	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Setting the risk appetite	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Imposing RM processes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Taking decisions on risk responses	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Implementing risk responses on management's behalf	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Taking accountability for RM	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

If the IA team has (/will has) other risk-related responsibility/ies for the client, please specify the responsibility/ies as well as the expected change using a scale 1-5 from 'significantly decrease' to 'significantly increase' in the space below.

Involvement of the Internal Audit Function in Risk Management

33.

In terms of the client's IA engagement, how well does your **IA team** perform the following **RM-related responsibilities**.

***Please tick 'N/A' (not applicable) if your IA team does not have a particular responsibility.**

	Very Ineffective		Neutral		Very Effective	N/A*
Giving assurance on RM processes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Giving assurance that risks are correctly evaluated	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Evaluating RM processes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Evaluating the reporting of risks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reviewing the management of key risks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Facilitating identification & evaluation of risks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Coaching management in responding to risks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Co-ordinating RM activities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Providing consolidated reporting on risk	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Maintaining and developing the RM framework	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Championing establishment of RM	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Developing RM strategy for board approval	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Setting the risk appetite	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Imposing RM processes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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	Very Ineffective		Neutral		Very Effective	N/A*
Taking decisions on risk responses	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Implementing risk responses on management's behalf	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Taking accountability for RM	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<p>If the IA team has other risk-related responsibility/ies for the client, please specify the responsibility/ies as well as the IA team's corresponding performance using a scale 1-5 from 'very ineffective' to 'very effective' in the space below.</p> <div></div>						

Involvement of the Internal Audit Function in Risk Management

34.

The question below contains a list of competencies that may be needed by internal auditors in undertaking RM-related activities. Please indicate **level of importance** of the following competencies for **internal auditors' performance of RM-related responsibilities**.

	None		Moderate Importance		Very Important
Communication skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Problem identification and solution skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Knowledge of industry, regulatory, and standard change	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Risk assessment & control analysis skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Business/commercial acumen	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Conflict resolution/negotiation skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
IT/CT frameworks, tools, and techniques	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Change management skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

If there is/are any other competence/s needed by internal auditors, please specify the competence/s as well as the corresponding level of importance using a scale 1-5 from 'none' to 'very important'.

Involvement of the Internal Audit Function in Risk Management

35.

The question below contains a list of competencies that may be needed by internal auditors in undertaking RM-related activities. Please indicate **level of satisfaction with your IA team's current level of competency**, concerning the adequacy of the internal audit performance in RM-related responsibilities.

	Very Dissatisfied		Neutral		Very Satisfied
Communication skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Problem identification and solution skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Knowledge of industry, regulatory, and standard change	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Risk assessment & control analysis skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Business/commercial acumen	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Conflict resolution/negotiation skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
IT/ICT frameworks, tools, and techniques	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Change management skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

If there is/are any other competence/s needed by internal auditors, please specify the competence/s as well as the level of satisfaction using a scale 1-5 from 'very dissatisfied' to 'very satisfied'.

Involvement of the Internal Audit Function in Risk Management

36.

Please indicate to what extent the the client's **senior management support internal auditors' involvement in RM.**

Please tick 'N/A' (not applicable) if the client's organisation does not have a particular senior management role.

	None		Moderate		Significant	N/A*
CEO	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
CFO	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Board	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Chair of Audit Committee	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Chair of Risk Committee	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Involvement of the Internal Audit Function in Risk Management

37.

Does the client perform **formal internal assessment** (e.g. by the client's management board and/or supervisory board) regarding **internal audit performance**?

- ☐ Yes
☐ No

Involvement of the Internal Audit Function in Risk Management

38.

How frequently is the formal internal assessment of the internal audit performance conducted?

By whom is the internal assessment of the internal audit performance conducted?

what **criteria** does the internal assessor use?

Involvement of the Internal Audit Function in Risk Management

39.

Does the client perform **formal** **third-party** **assessment** regarding internal audit performance?

☐ Yes

☐ No

Involvement of the Internal Audit Function in Risk Management

40.

How frequently is the formal third-party assessment of the internal audit performance conducted?

By whom is the **most recent** third-party assessment of the internal audit performance conducted?

What **criteria** does the third-party assessor use?

Involvement of the Internal Audit Function in Risk Management

41.

The following demographic information will help us to analyse the responses collected. Any organisational information or personal details gathered in this study will be kept confidential, and only be accessible to the researchers and reported in aggregated form.

Please indicate your **gender**.

- ☐ Female
☐ Male

Please indicate your **age group**.

- ☐ 30 and under
☐ 31- 40
☐ 41- 50
☐ 51 - 60
☐ 61 and over

What is your **current job title**?

How many years of **internal audit experience** do you have?

How many years have you been **working for the client**?

Please indicate your **area(s) of expertise**?

Please indicate your **professional qualifications/certifications/affiliations**?

Involvement of the Internal Audit Function in Risk Management

42.

Would you like to receive the **summary report** of this study?

☐ No

☐ Yes.

*If you answer 'yes' for this question, please provide your email address.

Would you be willing to be contacted about participating in a **follow-up interview** to provide greater depth to this study?

(N.B. Initial contact will be made via email. An interview, as agreed upon, may be conducted in person or over the telephone or email at your convenience.)

☐ No

☐ Yes. If you answer 'yes' for this question, please provide your email address. Please write 'AS ABOVE' if you would like to be contacted using the same email address you provided in the above question.

We appreciate your time in assisting us with our research. If you have any **feedback or questions** relating to this questionnaire, please specify using the space below.

Appendix D: Stage 2 Interview Macquarie University ethics approval



XIAOQIAN BA <xiaoqian.ba@students.mq.edu.au>

-----Original Message-----

From: Mrs Yanru Ouyang [mailto:fbe-ethics@mq.edu.au]
Sent: Monday, 24 November 2014 11:16 AM
To: Professor Nonna Martinov-Bennie
Cc: Dr Sharron O'Neill; Miss Xiaoqian Ba
Subject: Approved - 5201401050

Dear Professor Martinov-Bennie,

Re: 'The Roles of Internal Audit Function in Risk Management.'

Reference No.: 5201401050

Thank you for your recent correspondence. Your response has addressed the issues raised by the Faculty of Business & Economics Human Research Ethics Sub Committee. Approval of the above application is granted, effective "24/11/2014". This email constitutes ethical approval only.

This research meets the requirements of the National Statement on Ethical Conduct in Human Research (2007). The National Statement is available at the following web site:

http://www.nhmrc.gov.au/_files_nhmrc/publications/attachments/e72.pdf.

The following personnel are authorised to conduct this research:

Dr Sharron O'Neill
Miss Xiaoqian Ba
Professor Nonna Martinov-Bennie

NB. STUDENTS: IT IS YOUR RESPONSIBILITY TO KEEP A COPY OF THIS APPROVAL EMAIL TO SUBMIT WITH YOUR THESIS.

Please note the following standard requirements of approval:

1. The approval of this project is conditional upon your continuing compliance with the National Statement on Ethical Conduct in Human Research (2007).
2. Approval will be for a period of five (5) years subject to the provision of annual reports.

Progress Report 1 Due: 24th Nov 2015
Progress Report 2 Due: 24th Nov 2016
Progress Report 3 Due: 24th Nov 2017
Progress Report 4 Due: 24th Nov 2018
Final Report Due: 24th Nov 2019

NB. If you complete the work earlier than you had planned you must submit a Final Report as soon as the work is completed. If the project has been discontinued or not commenced for any reason, you are also required to submit a Final Report for the project.

Progress reports and Final Reports are available at the following website:

http://www.research.mq.edu.au/for/researchers/how_to_obtain_ethics_approval/

human_research_ethics/forms

3. If the project has run for more than five (5) years you cannot renew approval for the project. You will need to complete and submit a Final Report and submit a new application for the project. (The five year limit on renewal of approvals allows the Committee to fully re-review research in an environment where legislation, guidelines and requirements are continually changing, for example, new child protection and privacy laws).

4. All amendments to the project must be reviewed and approved by the Committee before implementation. Please complete and submit a Request for Amendment Form available at the following website:

http://www.research.mq.edu.au/for/researchers/how_to_obtain_ethics_approval/
human_research_ethics/forms

5. Please notify the Committee immediately in the event of any adverse effects on participants or of any unforeseen events that affect the continued ethical acceptability of the project.

6. At all times you are responsible for the ethical conduct of your research in accordance with the guidelines established by the University. This information is available at the following websites:

<http://www.mq.edu.au/policy/>
http://www.research.mq.edu.au/for/researchers/how_to_obtain_ethics_approval/
human_research_ethics/policy

If you will be applying for or have applied for internal or external funding for the above project it is your responsibility to provide the Macquarie University's Research Grants Management Assistant with a copy of this email as soon as possible. Internal and External funding agencies will not be informed that you have approval for your project and funds will not be released until the Research Grants Management Assistant has received a copy of this email.

If you need to provide a hard copy letter of approval to an external organisation as evidence that you have approval, please do not hesitate to contact the FBE Ethics Committee Secretariat, via fbe-ethics@mq.edu.au or 9850 4826.

Please retain a copy of this email as this is your official notification of ethics approval.

Yours sincerely,

Parmod Chand
Chair, Faculty of Business and Economics Ethics Sub-Committee Faculty of
Business and Economics Level 7, E4A Building Macquarie University NSW 2109
Australia
T: +61 2 9850 4826
F: +61 2 9850 6140
www.businessand economics.mq.edu.au/

Appendix E: Stage 2 Interview Participant information, consent and target issues



MACQUARIE BUSINESS SCHOOL
MACQUARIE UNIVERSITY NSW 2109

Phone: +61 (0) 2 9850 1926

Fax: +61 (0) 2 9850 8497

Email: nonna.martinov-bennie@mq.edu.au

Chief Investigator's / Supervisor's Name:
Professor Nonna Martinov-Bennie

Chief Investigator's / Supervisor's Title
Convener, International Governance and Performance (IGAP) Research Network

Participant Information and Consent Form

Name of Project: Roles of Internal Audit Function in Governance and Risk Management

You are invited to participate in a study investigating the roles of the internal audit function (IAF) in governance and risk management in Australian organisations.

The study is being conducted by Miss Sunnie Xiaoqian Ba (xiaoqian.ba@students.mq.edu.au, +61 (0) 412 398 191) to meet the requirements of Doctorate Degree under the supervision of Professor Nonna Martinov-Bennie (nonna.martinov-bennie@mq.edu.au; (02) 9850 1926) and Dr. Dominic Soh (dominic.soh@mq.edu.au, (02) 9850 8572) of the Department of Accounting and Corporate Governance.

If you agree to participate, you will be asked to participate in a semi-structured interview, which will take approximately 30-50 minutes. Interviews are based upon a set of target issues designed to elicit information about the current involvement of internal audit in governance and more specifically in risk management. The interview will be audio digitally recorded only if you provide your consent.

Any information or personal details gathered in the course of the study are confidential, except as required by law. No individual will be identified in any publication of the results. A summary of the results of this study can be made available to you on request.

Participation in this study is entirely voluntary: you are not obliged to participate and if you decide to participate, you are free to withdraw at any time without having to give a reason and without consequence.

I, *(participant's name)* have read and understand the information above and any questions I have asked have been answered to my satisfaction. I agree to participate in this research, knowing that I can withdraw from further participation in the research at any time without consequence. I have been given a copy of this form to keep.

Participant's Name: _____
(Block letters)

Participant's Signature: _____ Date: _____

Investigator's Name: _____
(Block letters)

Investigator's Signature: _____ Date: _____

The ethical aspects of this study have been approved by the Macquarie University Human Research Ethics Committee. If you have any complaints or reservations about any ethical aspect of your participation in this research, you may contact the Committee through the Director, Research Ethics (telephone (02) 9850 7854; email ethics@mq.edu.au). Any complaint you make will be treated in confidence and investigated, and you will be informed of the outcome.

(INVESTIGATOR'S [OR PARTICIPANT'S] COPY)



MACQUARIE BUSINESS SCHOOL
MACQUARIE UNIVERSITY NSW 2109

Phone: +61 (0) 2 9850 1926

Fax: +61 (0) 2 9850 8497

Email: nonna.martinov-bennie@mq.edu.au

Interview Issues

Part One: Internal audit function (IAF)'s roles and responsibilities in risk management (RM) in your organisation

- The objective(s) of IAF
- The value of IAF in RM
- The major role(s) and responsibilities of IAF in RM
- Any other role(s) and responsibilities of IAF in RM
- Policies relating to IAF's role and responsibilities in RM

Part Two: Adequacy of IAF's current roles and responsibilities

- Evaluate/Comment on adequacy of the scope and level of involvement of your IAF in RM
- Potential for increased scope and level of involvement of your IAF in RM

Part Three: Adequacy of IAF's current skills and expertise

- Important skill(s) and expertise for your IAF in relation to meeting its current and potential RM activities/responsibilities
- Any additional or increased skills and competencies required for your IAF in relation to RM

Part Four: Corporate governance (CG) and risk management (RM)

- Your organisation's CG structure and relevant key stakeholders in relation to RM
- Importance of RM
- Current and changing roles of IAF in relation to CG and RM specifically
- IAF's independence and the CG structure, specifically in relation to RM
- CG structure's impact on opportunities and challenges for IAF's involvement in RM