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### **Internal audit involvement in Enterprise Risk Management**

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# **Internal audit involvement in Enterprise Risk Management**

by

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# Internal audit involvement in Enterprise Risk Management

## Abstract

**Purpose** – The paper examines the impact of involvement in Enterprise Risk Management (ERM) on internal auditors' willingness to report a breakdown in risk procedures and whether a strong relationship with the audit committee affects willingness to report. The study also investigates the use of ERM and the role of internal audit in ERM.

**Design/methodology/approach** – The study uses an experimental design, manipulating (i) the internal auditor's involvement in ERM and (ii) the strength of the relationship between internal audit and the audit committee. Participants are 117 certified internal auditors. The study also gathers descriptive data on the use of ERM.

**Findings** – The study indicates that a high involvement in ERM impacts internal auditors' willingness to report a breakdown in risk procedures to the audit committee. However, a strong relationship with the audit committee does not appear to affect willingness to report. The study also finds that the majority of organisations have recently adopted ERM. Internal auditors are involved in ERM assurance activities but some also engage in activities that could compromise objectivity.

**Research limitations** – There are internal and external validity threats associated with the experimental design.

**Practical implications** – The findings reinforce the need for organisations to adhere to the recommendations of the IIA and to ensure that internal auditors do not play an inappropriate role in ERM.

**Originality/value** – The study contributes to our understanding of the impact of involvement in ERM on internal audit objectivity and of the current role of internal audit in ERM in Australia.

*Keywords:* Internal auditing; enterprise risk management; audit committees.

*Paper type:* Research paper

## Introduction

A decade ago, the Institute of Internal Auditors (IIA) revised the definition of internal auditing to include both assurance and consulting activities across the three related areas of risk management, control and governance (IIA, 1999). Five years later, the Committee of Sponsoring Organizations of the Treadway Commission (COSO) released its integrated framework for Enterprise Risk Management (ERM) (COSO, 2004). 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 with respect to the management of risk within their organisations (Sarens and De Beelde, 2006).

While internal audit engagement in ERM can add value to the organisation, there is also a risk that it could lead to a compromise of independence and objectivity. Recognising this possibility, the IIA issued a position paper delineating the core roles of internal audit in regard to ERM, the roles that internal audit can legitimately undertake providing safeguards are in place, and roles that internal audit should not undertake (IIA, 2004a).

The increased involvement of internal audit in ERM and the concerns that this involvement could pose a threat to internal audit objectivity provide the key motivations for this study. The objectives of the study are twofold. First, we examine internal auditors' perceptions of the impact of involvement in ERM on internal auditors' willingness to report a breakdown in risk procedures to the audit committee and whether a strong relationship between internal audit and the audit committee affects such willingness to report. Second, we provide descriptive evidence of the extent to which organisations in Australia have implemented ERM, together with the ERM activities in which internal audit participates. In this respect, the study provides a comparison with the findings of an IIA Research Foundation study reported in Gramling and Myers (2006) (hereafter GM). To achieve these objectives, we survey Certified Internal Auditors in Australia, using a questionnaire containing a research experiment supplemented by additional questions.

Our study indicates that internal auditors perceive that a high involvement in ERM impacts on internal auditors' willingness to report a breakdown in risk procedures to the audit committee. However, a strong relationship with the audit committee does not appear to affect the likelihood of reporting, regardless of the level of ERM involvement. We also find that the majority of organisations are using ERM, with most having adopted it recently. The majority of internal auditors are involved in core activities such as giving assurance on risk management while a small number indicated that they engage in activities that the IIA recommends should not be undertaken.

The remainder of this paper is organised as follows. The next section provides the background to the study and develops hypotheses and research questions. The research method and results are presented in the subsequent sections. In the final section, some conclusions are drawn, the limitations of the study are acknowledged and suggestions for further research are provided.

## **Background, Hypotheses and Research Questions**

ERM is defined by COSO (2004, 2) 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 risks to be within its risk appetite, to provide reasonable assurance regarding the achievement of entity objectives.”*

When announcing the release of the COSO framework, the IIA issued a statement commenting on the internal auditor’s role in risk management (IIA, 2004b). The following extract from that statement confirms that the IIA supports an active role for internal auditors in ERM, including making recommendations to improve the organisation’s risk processes.

*“Internal auditors should assist both management and the audit committee in their risk management responsibilities and oversight roles by examining, evaluating, reporting, and recommending improvements on the adequacy and effectiveness of management’s risk processes.”*

While advocating both an assurance and consultancy role for internal audit with respect to ERM, the IIA is also very conscious of the potential threat to objectivity and independence. As noted, the position paper on the role of internal audit in ERM (IIA, 2004a) outlined three categories of ERM roles: (i) the recommended or core roles of internal audit in ERM, (ii) the roles that are perceived as legitimate provided they are undertaken with safeguards, and (iii) the roles that should not be undertaken. The specific roles under each category are listed in Table I. In the present study, high involvement is defined as a situation in which an internal auditor is extensively involved in all three categories of ERM activities as identified by the IIA, while low involvement is regarded as minimal involvement in only those activities that are regarded as core to internal auditors.

<b>Table I.</b> <b>Roles of internal audit in enterprise risk management (ERM)</b>
<i>Core Internal Auditing Roles in ERM</i>
• Giving assurance on risk management processes
• Giving assurance that risks are correctly evaluated
• Evaluating risk management processes
• Evaluating the reporting of risks
• Reviewing the management of key risks
<i>Legitimate internal auditing roles with safeguards</i>
• Facilitating identification and evaluation of risks
• Coaching management in responding to risks
• Coordinating ERM activities
• Consolidating the reporting on risks
• Maintaining and developing the ERM framework
• Championing establishment of ERM
• Developing risk management strategy for board approval
<i>Roles internal auditing should not undertake</i>
• Setting the risk appetite
• Imposing risk management processes
• Management assurance on risks
• Taking decisions on risk responses
• Implementing risk responses on management's behalf
• Accountability for risk management

Source: IIA (2004a)

In 2005, the IIA Research Foundation conducted a global online survey[1] with internal auditors regarding their involvement in ERM (GM). The survey found that internal audit was primarily responsible for ERM in 36% of the organisations surveyed. Further, the study also found that some internal auditors were engaged in roles that the IIA had recommended as being unsuitable. A recent study conducted by Fraser and Henry (2007) in the United Kingdom found that internal audit can be heavily involved in ERM. This study consisted of interviews with financial directors, audit committee chairs, internal auditors and risk directors of five listed companies as well as four audit partners from the “Big Four” audit firms. The authors also found evidence of internal auditors having responsibility for ERM practices, despite both COSO and the IIA position paper stating such responsibility must rest with management. In general, these studies show that internal auditors, in some cases, are involved in ERM activities that have been deemed unsuitable by the IIA, thus signalling a high risk for loss of internal auditor objectivity.

Engaging in consulting activities associated with ERM raises significant threats to objectivity in the forms of self-review, social pressure and familiarity (Brody and Lowe, 2000; Ahlawat and Lowe, 2004; Plumlee, 1985). ERM activities that involve decision making by an internal auditor

such as setting the risk appetite and taking decisions on risk procedure set-ups, are likely to entail considerable risk of self-review. For example, in Fraser and Henry's (2007) study an internal auditor was quoted as saying, "I came in and implemented a business risk management system, a sort of toolkit that people could actually use, and installed reporting and understanding throughout the group" (Fraser and Henry, 2007, p. 403). Fraser and Henry (2007) warn that such approaches may in fact raise independence issues. In addition, high involvement in ERM activities and particularly in decision making can lead to auditors becoming very familiar with ERM staff. For example, Fern (1985, p. 32), in an earlier study on internal auditor familiarity with auditees, points out that "an unconscious erosion of objectivity could occur as the auditor's questioning attitude is placated through over familiarity with activity and/or with the person involved." Working closely with management can also give rise to social pressure threats, as internal auditors are cognisant of management's desire for their work to add value to the organisation.

Based on the above discussion, we thus argue that a high level of internal audit involvement in ERM activities, including those roles that the IIA states should not be undertaken, poses a threat to internal auditor objectivity. In the context of the present study, this means that internal auditors would be less willing to report a breakdown in risk procedures to the audit committee when they have been heavily involved in ERM compared to when their involvement is lower. Thus, the first hypothesis tested in the experimental part of this study is as follows:

*H1: Internal auditors will be less willing to report a breakdown in risk procedures to the audit committee when they have a high level of involvement in ERM compared to when they have a low level of involvement in ERM.*

An interesting issue is whether internal auditors' relationship with the audit committee has any bearing on their willingness to report to the committee. In the context of the present study, there are two situations that must be considered. First, when internal auditors have not been directly involved in implementing risk procedures, advising the audit committee of a breakdown in procedures involves reporting adversely on one's peers (i.e. the risk management staff). Second, when internal auditors have been heavily involved in implementing risk procedures, reporting any breakdown to the audit committee involves an admission of weaknesses in their own performance. We argue that these two scenarios have the potential to drive somewhat different behaviours.

In the first scenario, we expect that internal auditors will be more willing to report adversely on their peers when they have a strong relationship with an effective audit committee. This is

because the role of audit committees is to support the internal audit function, ensuring that internal auditors have the necessary status and resources to remain objective (Bailey, 2007). For instance, Principle 4 of the ASX's Corporate Governance Principles and Recommendations (2007) states that the audit committee should assess the performance and objectivity of the internal audit function, while Principle 7 states that the audit committee and internal audit should have direct access to each other.

Gul and Subramaniam (1994) provide some empirical support for internal auditors' ability to resist management pressure in situations when an audit committee is present. A direct reporting line with the audit committee is considered to improve the status of internal audit (Adamec *et al.*, 2005) and to remove the possibility of a social pressure threat when internal audit is required to report to management (Blue Ribbon Committee, 1999; Cohen *et al.*, 2004). Furthermore, Adamec *et al.* (1999, p. 45) argue that it is not sufficient to merely have a direct reporting line between internal audit and the audit committee. Rather, the relationship between the two parties must have 'substance'. The authors list four indicators that would signify whether the relationship has substance: the audit committee has the authority to hire, fire and compensate the chief internal auditor; the committee approves internal audit's budget and scope; the committee has frequent and private meetings with internal audit; and the committee approves any internal audit support work (Adamec *et al.*, 1999). Bailey (2007) likewise argues that, in situations where the audit committee has authority to hire, fire and compensate the chief internal auditor, internal auditors will have less fear of retaliation when reporting on negative management behaviour.

Based on the above discussion, we argue that internal auditors will be more likely to withstand pressure from other managers to compromise their objectivity when they have a strong and close relationship with an effective audit committee. Hence, in the situation where internal auditors have low involvement in ERM, we expect that they will be more willing to report a breakdown in risk procedures involving their peers when their relationship with the audit committee is strong.

The second scenario involves an admission of weakness in one's own performance. We would expect that internal auditors will be reluctant to report a breakdown in risk procedures for which they are personally responsible because this could damage their reputation and negatively impact the evaluation of their performance (Stefaniak, 2009; Donnelly *et al.*, 2003; Larrick, 1993; Messier and Quilliam, 1992; McNair, 1991). However, a close relationship with the audit committee may give the internal auditor greater confidence that he/she would be treated fairly by the audit committee because of the trust that has been built up over time. Hence, we argue that internal auditors will be more willing to report a breakdown in risk procedures for which they are responsible when they have a close relationship with the audit committee but that this willingness to report will not be as strong as for the situation where they are not responsible for the

breakdown. Hence we predict an interaction effect between the internal auditor's involvement in ERM and his/her relationship with the audit committee.

The above discussion leads to the second and third hypotheses for this study:

*H2: Internal auditors will be more willing to report a breakdown in risk procedures to the audit committee when there is a strong internal audit-audit committee relationship compared to when the relationship is weaker.*

*H3: Internal auditors' willingness to report a breakdown in risk procedures when there is a strong internal audit-audit committee relationship will be greater when internal auditors have a low level of involvement in ERM compared to when they have a high level of involvement in ERM.*

To replicate in an Australian setting the IIA Research Foundation study reported in GM, we also pose the following three research questions:

RQ1: To what extent is ERM used in respondents' organisations?

RQ2: What is the current responsibility of internal audit for (i) the recommended or core roles of internal audit in ERM, (ii) the roles that are perceived as legitimate provided they are undertaken with safeguards, and (iii) the roles that should not be undertaken?

RQ3: What is the perceived ideal responsibility of internal audit for (i) the recommended or core roles of internal audit in ERM, (ii) the roles that are perceived as legitimate provided they are undertaken with safeguards, and (iii) the roles that should not be undertaken?

## **Research Method**

### ***Participants***

The participants for the study were sourced from the Institute of Internal Auditors Australia (IIAA). The target group was the population of members who were registered as Certified Internal Auditors within Australia. A total of three hundred members matched these criteria and the instruments were distributed to them through the IIAA. Of the 300 questionnaires distributed, a total of 117 were received, yielding a response rate of 39%. Descriptive statistics for the participants are presented in Table II. Over half of the participants (64%) are over 46 years of age. The mean number of years as an internal auditor is 12.59 (SD = 7.59), with approximately 68% of participants having between five and 20 years internal audit experience. The mean number of years as a member of the IIAA is also high at 9.33 years (SD = 6.70). This indicates that the participants are generally experienced internal auditors. Further, over 88% of the

participants have prior managerial experience. There is also a somewhat larger representation from the public sector (58%) than the private sector (42%).

<b>Table II.</b>					
<b>Background of participants</b>					
Age (n = 116)					
Age groups:	18-25	26-35	36-45	46-55	56+
Count	0	8	34	58	16
Percentage	0.00%	6.90%	29.31%	50.00%	13.79%
	Mean	St. Dev	Median	Min.	Max.
Length of time in current organisation (years)	6.78	5.76	5	0	26
Length of time as an internal auditor (years)	12.59	7.59	13	0	33
Length of time as a member of the IIA (years)	9.33	6.70	7.5	0.5	27
Percentage prior management experience	Prior Experience 88.03%		No Experience 11.97%		
Sector employed	Public Sector 58.12%		Private Sector 41.88%		

### *Questionnaire design and administration*

The questionnaire comprised four sections. The first section contained the research experiment used to test Hypotheses 1 to 3. The second section contained questions designed to answer Research Questions 1 to 3. The third section contained biographical questions about the respondents' background. The fourth section contained some questions about respondents' audit committees.[2]

The questionnaire was distributed with a covering letter, a reply paid envelope and a letter from the IIAA endorsing the study and requesting participation. After two weeks from the first mail-out, the IIAA sent a reminder email. Independent-samples t-tests were conducted between early and late respondents for both the dependent variables and these tests indicated that there was no significant difference between the two groups. Late respondents were classified as those responses that were received after the return-by date included in the covering letter.

## ***Experimental Design***

To test the hypotheses, we use a 2 x 2 between-subjects experimental design, resulting in four cases. The two independent variables are the extent of the internal auditor's involvement in ERM (manipulated as high or low) and the strength of the relationship between the audit committee and internal audit (manipulated as stronger or weaker).

### ***Task***

The case scenarios involved a hypothetical company, Alpha Ltd, which was portrayed as a large publicly listed construction firm with moderate profitability and medium risk. The aim was to create a company that was stable and unlikely to influence the respondents' decisions regarding the manipulated variables.

Further, information was also provided about Alpha Ltd's board of directors and its external auditor. The board was designed to be strong in terms of composition, independence, diligence, and experience (Sharma *et al.*, 2006). The external auditor was described as being from a top-tier firm to denote quality (Francis, 2004). It was also specified that the auditor had held the position for seven years to indicate experience with the company (Meyers *et al.*, 2003). Finally, although there is little evidence to suggest that non-audit services (NAS) impair independence, it was specified that the audit firm did not provide NAS in order to maintain the appearance of independence (Francis, 2004).

In addition, information was supplied about the internal audit department of Alpha Ltd. The department was designed to be reasonably strong with an experienced chief internal auditor and qualified staff. It was specified that internal audit's involvement in ERM is to regularly review and provide assurance on the management of key risks. However, it was also stated that the oversight of ERM was the responsibility of the audit committee.

The scenario then depicted the chief internal auditor's involvement in the company's ERM implementation and the subsequent discovery by one of the internal audit staff of a breakdown in the ERM procedures. The breakdown was listed as being in the contract specification area and of a non-financial nature, as this would be less likely to be discovered by the external auditors. Despite its non-financial nature, the breakdown was specified as serious, with long-term ramifications. This was designed to show the importance of reporting the breakdown, whilst still allowing for a time delay in its discovery that could provide the opportunity to avoid reporting it. The scenario indicated that it was the chief internal auditor's responsibility to report the

breakdown to the audit committee. It was also revealed that the breakdown could affect the performance assessment of those involved.

### *Independent variables*

The first independent variable, the level of internal auditor involvement in ERM, was manipulated at either a high or low level. The low involvement treatment included only those activities that the IIA considers core for internal auditors working in ERM (IIA, 2004a), while the high involvement treatment included activities and roles that the IIA deems as core as well as those deemed as a threat to objectivity (IIA, 2004a). For example, the internal auditor was specified as being the champion of the establishment of ERM, a legitimate role, but was also portrayed as taking decisions on risk responses and imposing risk management procedures, both of which are roles that should not be undertaken. The wording for the two treatments is provided in the Appendix.

The second independent variable, pertaining to audit committee characteristics and relationship with internal audit, was manipulated at stronger and weaker levels. We define the internal audit-audit committee relationship as strong when (i) audit committee composition and diligence suggest that the committee is effective (DeZoort *et al.*, 2002) and (ii) the committee is actively engaged with internal audit activities including oversight of internal audit plans and reports. A weaker relationship is deemed to exist when (i) the audit committee meets minimum regulatory requirements with respect to composition and diligence, and (ii) its engagement with the internal audit function including oversight of internal audit plans and reports is limited or negligible. Again, the wording of the two treatments is given in the Appendix.

### *Dependent variable*

Participants were asked to rate their perceptions of whether Alpha's chief internal auditor, Tim, would prepare a special report of the breakdown to be presented to the audit committee as required by company policy. The alternative course of action was that Tim would not prepare a special report but would quietly rectify the risk procedures. A nine-point scale was provided with 1 = 'Highly Unlikely' that Tim would report to the audit committee and 9 = 'Highly Likely' that he would do so. Hence, the higher the score, the greater is the perception that the internal auditor would remain objective.

It should be noted that participants were asked to indicate what the company's internal auditor would do rather than what they themselves would do in the situation. When questions are of a sensitive nature, framing the question in this manner provides a more reliable measure of what the respondent actually believes (O'Leary and Stewart, 2007; Ponemon and Gabhart, 1993).

### *Additional questions*

To answer the first research question, participants were asked to indicate the status of ERM in their organisation. To address the second research question, respondents were asked about the current responsibility of internal audit in their organisation for each of the ERM activities listed in Table I. For the third research question, respondents were asked to indicate what they perceive to be the ideal responsibility of internal audit with respect to these ERM activities. A five-point scale ranging from No Responsibility to Total Responsibility was used for both current and ideal responsibility.

## **Results of Experiment**

### *Manipulation checks and tests for confounding variables*

Manipulation checks were carried out for both the independent variables. For involvement in ERM, two questions were asked. The first required participants to rate the internal auditor's influence on the risk officer's decisions while the second required participants to rate their perception of the extent of internal audit involvement in ERM. For both questions, a nine-point scale was adopted with 1 = very low influence/involvement and 9 = very high influence/involvement. Hence, participants who received the high ERM involvement version were expected to score higher than those receiving the low ERM involvement version. The results of t-tests are presented in Panel A of Table III. For both questions, the mean responses for the high and low treatments are significantly different ( $p = .001$ ) in the expected direction, thus indicating that the manipulation was successful.

<b>Table III.</b>				
<b>Manipulation checks</b>				
<b>Panel A – Involvement in ERM</b>				
	High	Low		
	Mean (s.d.)	Mean (s.d.)	t	Sig.
Chief internal auditor's influence on risk officer's decisions	7.85 (1.035)	5.65 (1.536)	-9.194	.001
Chief internal auditor's involvement in ERM	7.74 (1.262)	5.14 (1.712)	-9.423	.001
<b>Panel B – Audit committee</b>				
	Stronger	Weaker		
	Mean (s.d.)	Mean (s.d.)	t	Sig.

Strength of the audit committee	7.72 (1.056)	4.33 (1.839)	-12.197	.001
Oversight ability of the audit committee	7.21 (1.519)	3.56 (1.452)	-13.153	.001
Likelihood the Audit Committee would detect the breakdown	3.83 (2.257)	3.32 (2.374)	-1.180	.240

Two questions were also asked to check the audit committee manipulation. Participants were asked to rate the strength of the audit committee and its oversight ability, again using a nine-point scale. For the manipulations to be deemed effective, the mean responses for both questions are expected to be higher for the group receiving the strong audit committee scenario than for that receiving the weaker audit committee scenario. The results of the t-tests are shown in Panel B of Table III. The test results reveal that the manipulations were successful, with respondents in the strong audit committee group indicating significantly higher mean scores on both their perceptions of audit committee strength and the level of oversight ability of the audit committee ( $p = .001$ ).

An additional question was asked to establish if there were differences in the perceived likelihood that the audit committee would detect the breakdown in risk procedures between the stronger and weaker audit committee groups. Once again, a nine-point scale was used with 1 = Very low likelihood, and 9 = Very high likelihood. Interestingly, there was no significant difference in the mean responses to this question, with the means for the two groups both being quite low (3.83 and 3.32 for the stronger and weaker audit committee groups respectively). This result suggests that participants perceived that the audit committee would be unlikely to detect the breakdown in risk procedures, presumably because of the non-financial nature of the breakdown. This strengthens the need for the chief internal auditor to behave in an objective manner and be willing to report the breakdown to the committee.

Analyses of variance (ANOVA) and covariance (ANCOVA) were also conducted to test for the possibility of confounding effects arising from participants' background and experience. None of these variables were found to have a confounding effect on the experimental results.

### ***Hypotheses testing***

Hypothesis 1 proposes that internal auditors will be less willing to report a breakdown in risk procedures to the audit committee when they are heavily involved in ERM compared to when they have low involvement in ERM. Hypothesis 2 predicts that internal auditors will be more willing to report a breakdown to the audit committee when the internal audit-audit committee

relationship is strong compared to when the relationship is weaker. Further, hypothesis 3 tests whether there is a significant interaction between the two variables so that the willingness to report when there is a strong relationship with the audit committee is greater when the internal auditor has a low level of involvement in ERM compared to a high level of involvement.[3]

The dependent variable examines the perceived likelihood of the chief internal auditor reporting the breakdown in ERM procedures to the audit committee. The descriptive statistics for this variable are presented in Panel A of Table IV which shows that the overall mean responses are in the direction predicted by the hypotheses. The mean score for the high ERM involvement group (7.19) is greater than that for the low involvement group (5.17). Similarly, the mean score for the strong internal audit-audit committee relationship group (6.43) is greater than that for the weaker relationship treatment (6.08). However, results are mixed for the four experimental manipulations. As expected, the lowest mean occurs when ERM involvement is high and the internal audit-audit committee relationship is weaker. However, the highest mean occurs in the low ERM involvement/weaker internal audit-audit committee relationship condition. This is contrary to expectations with respect to the audit committee.

<b>Table IV.</b>					
<b>The likelihood of disclosure to the audit committee</b>					
<b>Panel A: Means (Std. Deviations) and Cell Sizes</b>					
	<b>High Involvement in ERM</b>	<b>Low Involvement in ERM</b>	<b>Overall</b>		
<b>Stronger Audit Committee Relationship</b>	5.32 (2.57) n = 22	7.11 (1.82) n = 36	6.43 (2.29) n = 58		
<b>Weaker Audit Committee Relationship</b>	5.06 (2.56) n = 32	7.30 (1.51) n = 27	6.08 (2.41) n = 59		
<b>Overall</b>	5.17 (2.55) n = 54	7.19 (1.68) n = 63			
<b>Panel B: Analysis of Variance</b>					
<b>Source of variation</b>	<b>Sum of squares</b>	<b>df</b>	<b>Mean square</b>	<b>F</b>	<b>Sig.</b>
Corrected model	120.475	3	40.158	8.763	.000
Intercept	4341.804	1	4341.804	947.456	.000
ERM involvement (IV <sub>1</sub> )	114.575	1	114.575	25.002	.000
Audit committee relationship (IV <sub>2</sub> )	0.035	1	0.035	.008	.930
Interaction	1.373	1	1.373	.300	.585
Error	517.833	113	4.583		
Total	5218.000	117			
Corrected total	638.308	116			

A univariate analysis of variance (ANOVA) was conducted to test the hypotheses. Prior to interpreting the results of the ANOVA, homogeneity of variance was tested using Levene's test of equality of error variances. The statistic was significant, indicating that the assumption was violated. Consequently, data transformation was adopted to correct for the heterogeneity of the data (Berenson *et al.*, 2006). All original responses for the dependent variable were squared, resulting in a new variable. A re-run of the ANOVA using this variable upheld the homogeneity of variance assumption and provided qualitatively similar results to the non-transformed model. Hence, only the ANOVA results for the transformed model are reported in Panel B of Table IV.

The analysis shows a significant main effect for the level of ERM involvement at  $p = .001$ . This result indicates that internal auditors perceive high involvement in ERM to impair professional objectivity. Thus, there is strong support for Hypothesis 1. In contrast, no significant effect is found for the internal audit-audit committee relationship and hence Hypothesis 2 is not supported. Further, the interaction effect between the two independent variables is not significant, providing no support for Hypothesis 3. Contrary to our expectations, therefore, the relationship between internal audit and the audit committee does not impact on perceptions of the internal auditor's willingness to report to the committee. In providing an explanation for this lack of a finding, we acknowledge that our audit committee variable is a complex one. Prior studies have found that audit committees comprising independent members and members with financial expertise tend to have a greater level of interaction with internal audit (Scarborough *et al.*, 1998; Raghunandan *et al.*, 2001; Goodwin, 2003; Goodwin and Yeo, 2001). Hence, to be realistic, we manipulated both audit committee composition and the committee's relationship with internal audit. It is possible that the audit committee composition manipulation had a confounding effect on our results, as it could be that participants were concerned that a strong audit committee would be less tolerant of the internal auditor's lack of performance than a weaker audit committee, thereby cancelling out the benefit of a closer relationship between the two parties. We believe that this outcome is unlikely given that a weaker audit committee would defer to management so the internal auditor would not avoid being held accountable. However, we acknowledge the possibility of a confounding effect and hence additional research is needed to further explore this lack of a significant finding.

### *Sensitivity analysis*

The ANOVA results were checked for robustness under three specific conditions. Firstly, respondents with little or no involvement in ERM were excluded from the analysis as they could have difficulty assessing the manipulation. This resulted in a sample size of 86. For the second analysis, respondents with low internal audit experience (i.e. those who had been an internal auditor for less than three years) were deleted. The third and final analysis entailed deletion of

respondents who had never held a prior management position. For each of these tests, the main effect for ERM involvement was significant while the audit committee variable and the interaction effect were not significant. Hence, the sensitivity analysis indicates that our reported results are robust.

## **Descriptive Results**

### **Organisational ERM Status**

To address the three research questions, Part B of the questionnaire required respondents to provide details on ERM practices within their organisation, and also on what they believe their responsibility in ERM should be. This section of the study was designed to be comparable with that of GM and the results are presented in comparison to the results of their study. The GM study is based on data collected in late 2005 while the present study is based on data that was collected two years later in 2007.

The first question required respondents to indicate the status of ERM within their organisation. The responses to this question are presented in Table V. The results show that only 10% of organisations have not yet considered adopting ERM, compared to 13% in the GM study. Approximately 13% of organisations are still considering the adoption of ERM, compared to almost 32% in the GM study. More than 75% of organisations have adopted ERM, although in most of these cases adoption is relatively recent and full implementation is incomplete. This compares to 48% adoption in the GM study. Interestingly, none of the respondents in the present study indicated that ERM had been rejected by their organisation, compared to five organisations in the GM study. Overall, we can conclude in response to Research Question 1 that most organisations in our sample have either adopted ERM or are making progress towards adopting ERM. The increased use of ERM compared to the GM study suggests a greater acceptance of ERM between 2005 and 2007.

<b>Table V. ERM status in respondents' organisations (%)</b>		
<b>ERM Status</b>	<b>This Study n = 117</b>	<b>GM n = 361</b>
The organisation has not considered ERM	10.3%	13.0%
The organisation is currently considering the relevance of ERM for its enterprise	12.8%	31.8%
The organisation has recently adopted ERM, but implementation is not fully complete	44.4%	36.6%
The organisation has recently adopted ERM, and implementation is relatively mature	17.1%	5.5%
The organisation adopted ERM several years ago, and infrastructure is mature	13.7%	6.1%
The organisation has rejected ERM	0.0%	1.4%
Other	0.9%	5.0%
Response not provided	0.9%	0.6%

## Current and Ideal Responsibility for ERM Roles

To answer Research Questions 2 and 3, respondents were asked to indicate on a five-point scale the extent of their current responsibility and what they perceive to be the ideal responsibility with respect to the various roles of internal audit in ERM listed in Table I. As noted, the IIA (2004a) classifies the roles as core, legitimate with safeguards, and those that internal audit should not perform. To facilitate comparison between the findings of the present study and those of GM, we present both sets of results in Table VI.

<b>Table VI. Roles of internal audit in ERM *</b>				
	Current Responsibility		Ideal Responsibility	
	This study n = 108 Mean (sd)	GM** n = 361	This study n = 108 Mean (sd)	GM** n = 361
<b>Panel A: Core Internal Auditing Roles in ERM</b>				
Giving assurance on risk management processes	3.71 (0.99)	3.10	4.05 (0.72)	3.80
Giving assurance that risks are correctly evaluated	3.18 (1.10)	3.00	3.63 (0.95)	3.60
Evaluating risk management processes	3.44 (1.05)	3.17	3.98 (0.89)	3.82
Evaluating the reporting of risks	3.05 (1.13)	3.09	3.77 (0.90)	3.70
Reviewing the management of key risks	3.39 (1.13)	3.19	3.95 (0.82)	3.76

<b>Panel B: Legitimate Internal Auditing Roles with Safeguards</b>				
Facilitating identification and evaluation of risks	2.84 (1.14)	3.38	2.96 (1.12)	3.50
Coaching management in responding to risks	2.66 (1.14)	2.84	2.81 (1.10)	3.11
Coordinating ERM activities	2.30 (1.43)	2.47	2.19 (1.22)	2.75
Consolidating the reporting on risks	2.39 (1.47)	2.87	2.32 (1.29)	3.10
Maintaining and developing the ERM framework	2.30 (1.50)	2.49	2.17 (1.20)	2.73
Championing establishment of ERM	2.94 (1.41)	2.88	2.96 (1.21)	3.27
<b>Panel C: Roles Internal Auditing Should Not Undertake</b>				
Setting the risk appetite	1.62 (0.94)	1.81	1.63 (0.94)	1.89
Imposing risk management processes	1.97 (1.13)	2.19	1.83 (0.97)	2.30
Management assurance on risks	3.04 (1.33)	2.41	3.17 (1.38)	2.64
Taking decisions on risk responses	1.89 (1.05)	2.07	1.86 (0.99)	2.14
Implementing risk responses on management's behalf	1.39 (0.73)	1.88	1.30 (0.60)	1.90
Accountability for risk management	1.81 (1.08)	2.17	1.68 (1.00)	2.26

\*The scales ranged from 1 to 5 where: 1 = No responsibility, 2 = Limited responsibility, 3 = Moderate responsibility, 4 = Substantial responsibility, and 5 = Total responsibility.

\*\* The GM study did not give standard deviations.

## Core Internal Auditing Roles in ERM

In relation to the core roles for internal audit in ERM, they appear to have increased slightly in terms of current responsibility, with the exception of 'evaluating the reporting of risks'. The ideal responsibility for each of these roles has also increased. The differences between the two studies could be due to a number of factors: greater awareness of internal audit's role in ERM, greater responsibility due to the time difference between the two samples, or just differences in the populations.[4]

These roles are considered core as they are the traditional internal audit roles of assurance. However, the current responsibility of the respondents falls between moderate and substantial. In these core roles it is acceptable for internal audit to have higher responsibility (IIA, 2004a) and hence there is room to further utilise internal audit in relation to these roles.

## **Legitimate Internal Auditing Roles**

Legitimate roles are those the IIA has deemed internal audit can undertake, as long as there are safeguards in place to prevent any compromise of independence. These roles extend beyond the regular assurance activities into the consulting role of internal audit (IIA, 2004a). In both the present study and the GM study, the current and ideal responsibilities range from limited to just over moderate, which is consistent with IIA guidance (IIA, 2004a). With the exception of two roles, the current responsibility of internal auditors in these areas has decreased compared to the GM study. There has also been a reduction in the perceived ideal responsibility for all legitimate roles. Thus, practice in this area would appear to be in line with IIA guidance.

## **ERM Roles Internal Auditing Should Not Undertake**

The IIA sets out six roles that internal auditors should not undertake in ERM as they raise significant threats to objectivity (IIA, 2004a). In both studies, internal auditors indicate that they have some responsibility for these roles. In the GM study, the responsibility was generally around point 2 on the scale, indicating limited responsibility. In the present study, all areas of responsibility have decreased with the exception of 'providing management assurance on risks'. This particular role increased to over moderate for both current and ideal responsibility. This result is most probably due to confusion over the wording of the role. The provision of assurance is a traditional audit role and it is likely the respondents misinterpreted this role as just providing assurance. The other responsibilities all decreased compared to the GM study, which could again indicate a greater awareness of internal audit's role in ERM. However, the fact that there is any responsibility in these areas is cause for some concern.

## **Conclusion**

In this study, we explore the impact of internal audit involvement in ERM on internal auditors' willingness to report a breakdown in risk procedures to the audit committee. We also explore whether the strength of the relationship with the audit committee affects the willingness to report. The study manipulated these two independent variables at two levels, resulting in a 2 x 2 between subjects factorial design. Participants in the experiment were members of the IIA who were Certified Internal Auditors. Hypothesis 1 predicted that internal auditors would be less willing to report when their involvement in ERM is high. This hypothesis was strongly supported and was also robust to sensitivity analyses. This result suggests that internal auditors perceive that extensive involvement in ERM has a negative impact on objectivity.

Hypothesis 2 predicted that internal auditors would be more willing to report to the audit committee when their relationship with the audit committee is strong compared to when the relationship is weaker. We found no support for the predicted relationship. Further, no significant interaction effect was found between the two independent variables, suggesting that willingness to report to the audit committee when the relationship is strong is not dependent on the level of ERM involvement.

There are a number of limitations that should be borne in mind when interpreting the experimental results reported in the study. First, we did not undertake a controlled experiment as it was not practical to get internal auditors together in a single location. Hence, the loss of control resulting from the use of a mail questionnaire may threaten the internal validity of the study. Second, there are external validity threats associated with the sampling procedure, which limit the generalisability of results. All participants were members of the IIA, holding a Certified Internal Auditor qualification. Previous research has indicated that IIA membership itself can promote objectivity (Harrell et al., 1989). Hence, it is possible that the participants in this study have higher standards of objectivity than the general internal audit population. The sample was also drawn only from Australian internal auditors and hence the results may not hold in other jurisdictions. Third, our failure to obtain a result for the audit committee variable could be because we manipulated both strength of the audit committee and strength of the internal audit-audit committee relationship as a single construct. Fourth, the experiment measured the perceptions of internal auditors with respect to objectivity. As such, we have not tested whether actual objectivity is impaired when internal auditors are involved in ERM. Finally, ERM involvement was manipulated dichotomously in our study. However, the IIA has identified three levels of ERM roles for internal auditors (see Table I). Hence, it may have been more realistic to include the three levels within the scenario. Overcoming each of these limitations provides opportunities for further research.

The study also provides descriptive evidence of the current status of ERM in organisations and the current and perceived ideal roles of internal audit in ERM. We make direct comparisons with the results of GM. Our findings indicate that ERM is more widely used than in the GM study and that internal auditors appear to be somewhat more aware of the appropriate roles that they can play in ERM. While we acknowledge the generalisability limitations associated with these results, they do provide an indication of current practice in Australia.

The study makes an important contribution to our understanding of the impact of involvement in ERM on internal audit objectivity and of the current role of internal audit in ERM in Australia. Our findings reinforce the need for organisations to adhere to the recommendations of the IIA and to ensure that internal auditors do not play an inappropriate role in ERM. They also highlight the

dangers of internal auditors undertaking consulting roles that may compromise their objectivity. Finding the right balance between consultancy and assurance services with respect to ERM remains a challenge both for the internal audit profession and for managements and boards that rely on internal audit services.

In addition to the research opportunities arising from the limitations of the present study, there are several suggestions for future research. Research could explore the perceptions of other governance parties such as audit committee members, management and external auditors with respect to internal audit's involvement in ERM. In particular, the impact of internal audit's involvement in ERM on external auditors' reliance on the work of internal audit is an important avenue for further research. Finally, the study showed that internal auditors believed that, regardless of its composition and diligence, the audit committee would be unlikely to detect a breakdown in non-financial risk procedures. Identifying factors that would strengthen the audit committee's ability to identify weaknesses in risk management is also an important avenue for future research.

## **Appendix: Experimental Manipulations – Extracts from Research Instruments**

### **1. High Involvement in ERM**

“Tim has been a champion of the establishment of ERM and was instrumental in developing the overall risk management strategy for board approval. While Sam Dunn was hired 18 months ago as the Risk Officer to oversee the implementation of the ERM system, Tim continues to direct many of the ERM related activities. Sam has a direct reporting line to the General Manager, but tends to work closely with Tim. Most of the workshops on risk identification and assessment are still run by Tim, and he is a popular coach for helping managers identify and respond to risks. Further, Sam often seeks Tim’s help in setting up risk identification mechanisms, risk prioritisation guidelines and evaluation processes. For instance, Tim not only evaluated a newly acquired computerised risk assessment toolkit for use in the contract specifications area but also directed Sam on the types of risk procedures to be adopted. In particular, he was insistent that Sam adopt several less costly risk procedures.”

### **2. Low Involvement in ERM**

“Presently there is a separate risk management function within the organisation. Sam Dunn has been hired as the Chief Risk Manager to oversee the implementation of the ERM system and has three other staff supporting him. He reports directly to the General Manager and often liaises with Tim who, as the Chief Internal Auditor, undertakes regular evaluations and reports on the risks identified and the management of such risks. Where appropriate, Sam will refer to the internal audit’s evaluation report on risk management. For example, Tim’s evaluation report on a newly acquired computerised risk assessment toolkit for use in the contract specification area has helped Sam identify the types of risk procedures to be adopted in the area. However, the General Manager and Sam make the final decisions on the selection of all risk procedures and the implementation of all ERM processes.”

### **3. Stronger Audit Committee Characteristics and Relationship with Internal Audit**

“Alpha has an audit committee entirely comprised of independent members. Of the 4 committee members, 3 have considerable financial expertise and 2 have extensive industry expertise. The committee meets at least 6 times throughout the year with management, and with the external and internal auditors. After the meetings the committee sets aside time to meet privately with the Chief Internal Auditor and the external auditor. The audit committee has oversight responsibility

for the internal audit function, and is actively involved with any appointment, dismissal and compensation for internal auditors. They also diligently follow up on all matters that are raised in the internal audit reports.”

#### **4. Weaker Audit Committee Characteristics and Relationship with Internal Audit**

“Alpha has an audit committee comprised of a majority of independent members. Of the four committee members, one has some financial and industry expertise. The committee meets twice a year with management, and the external and internal auditors. However, the audit committee has not held any private meetings with the auditors to date. Further, although the audit committee reviews the internal audit reports, the committee generally leaves it to the Chief Internal Auditor to follow-up on recommendations. While the audit committee has responsibility over internal audit staffing and budgetary issues, the committee tends to let the General Manager handle such matters.”

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## **Endnotes**

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<sup>1</sup> Although global, approximately 90 per cent of the 361 responses were from North America.

<sup>2</sup> The findings from this section are not reported in this paper.

<sup>3</sup> Tests were undertaken for normality of distribution of the dependent variables by examining normality assumption histograms, normal Q-Q plots and detrended Q-Q. These tests indicated that both variables are normally distributed.

<sup>4</sup> As we do not have access to the raw data for the GM study, we are unable to test for statistically significant differences.