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The effects of internal audit outsourcing on financial statement users' confidence in their protection from fraudulent financial reporting

Kevin Lamont James

To the Graduate Council:

I am submitting herewith a dissertation written by Kevin Lamont James entitled "The effects of internal audit outsourcing on financial statement users' confidence in their protection from fraudulent financial reporting." I have examined the final electronic copy of this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy, with a major in Business Administration.

Keith G. Stanga, Major Professor

We have read this dissertation and recommend its acceptance:

Susan Ayers, Joseph V. Carcello, Michael G. Johnson, David L. Sylwester

Accepted for the Council:

Carolyn R. Hodges

Vice Provost and Dean of the Graduate School

(Original signatures are on file with official student records.)

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The Effects of Internal Audit Outsourcing on Financial Statement Users' Confidence in Their Protection from Fraudulent Financial Reporting

A Dissertation

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Kevin Lamont James

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DEDICATION

To my wife, Marilyn

and our family

Jasmine, Christopher, Faith, and Jordan

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ABSTRACT

The purpose of this study is to examine whether outsourcing the internal audit function enhances users' confidence in their protection from fraudulent financial reporting. Using source credibility theory, this study proposes that Big Five audit firms will be perceived as more competent and more objective than in-house internal audit departments and thus more likely to deter or detect and report fraudulent financial reporting.

A between-subjects field experiment is performed in which the internal audit arrangement is the only independent variable. This arrangement is manipulated at four levels: (1) insourcing with the internal audit department reporting to senior management (2) insourcing with the internal audit department reporting to the audit committee (3) outsourcing to the same Big Five firm that performs the external financial statement audit and (4) outsourcing to a Big Five firm different from the firm that performs the external financial statement audit. Dependent variables measure lenders' perceptions of the likelihood that fraud will be deterred, the likelihood that a committed fraud will be detected, and the likelihood that a detected fraud will be reported.

This study finds that bank lenders perceive a greater likelihood that fraud will be deterred when the internal audit function is outsourced to a Big Five firm than when it is performed by an internal audit department that reports to senior management. Lenders also perceive a greater likelihood that a detected fraud will be reported by a Big Five firm than by an internal audit department that reports to senior management. These findings hold whether the company outsources the internal audit to the same firm that performs the external audit or to a different Big Five firm. Findings from this study suggest that to maximize user confidence in their financial reports, companies should either outsource their internal audit functions or structure insourced internal audit departments to report to the audit committee.

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Chapter 1:

Introduction

For U.S. capital markets to function effectively, investors and creditors must have confidence in the financial reporting systems that support those markets. Financial statement users must trust that financial statements provide a reliable basis for their decision-making. The importance of user confidence is reflected in the words and actions of financial regulators and the accounting profession. For example, the goal of protecting and promoting investors' confidence is embedded in the mission statement of the newly formed Independence Standards Board. The AICPA has also recognized the need for action to "bolster public confidence in financial reporting" (Miller 1993). Finally, SEC chairman Levitt frequently emphasizes the importance of user confidence as in his speech to the AICPA, "A Partnership for the Public Trust" (Levitt 1998). The confidence users have in financial reporting is not identical across firms. Therefore, confidence is also of key importance to individual companies to ensure access to capital. This study will examine how user confidence is affected by outsourcing of the internal audit function. Specifically, this study will examine whether outsourcing the internal audit function enhances users' confidence in their protection from fraudulent financial reporting.

Fraudulent financial reporting is a serious threat to confidence in financial statements because reports of it are highly visible to financial statement users. The frequency of such reports in the financial press threatens to undermine the user confidence that is essential to the effective functioning of U.S. financial markets. For this reason, lawmakers and accounting professionals have performed extensive studies and promulgated laws and standards to make financial reporting systems more effective in abating fraudulent reporting (U.S. House of Representatives 1993; National Commission on Fraudulent Financial Reporting (NCFFR, the Treadway Commission) 1987, 1992;

American Institute of Certified Public Accountants (AICPA) 1997). Because financial statement fraud poses such a threat to user confidence, it is important to study how changes in the business environment affect user confidence in financial reporting. Knowledge of changes that enhance user confidence in financial reporting should be of interest to lawmakers, accounting standard setters and company managers. Internal audit outsourcing may be one such change.

Authoritative accounting literature places primary responsibility for preventing and detecting fraud with the company's management (AICPA 1997). Management is expected to accomplish this goal by its system of internal control. Statement on Auditing Standards No. 82 (SAS 82) states that fraud generally involves two conditions: (a) the pressure or incentive to commit a fraud and (b) the perceived opportunity to commit a fraud. Perceived opportunity occurs when an individual feels he can circumvent the system of internal control (AICPA 1997). Thus, the stronger the system of internal control is, the more likely the fraud will be deterred. Moreover, internal control mechanisms should be in place which, along with the external audit, enhance the probability of detecting fraud if it occurs. The proposed study focuses on one element of the internal control system, the internal audit function. This function is noted by SAS 82 as important in preventing fraud. Also, the NCFFR (1987, 1992) notes the importance of a strong internal audit function in helping to identify and act in instances where top management overrides internal controls or otherwise seeks to misrepresent reported financial results.

As noted above, the internal audit function is deemed by the accounting profession to play an important role in constraining fraud. Outsourcing of the internal audit function is prevalent as evidenced in a survey by Kusel, Schull and Oxner (1997) which estimates that 21.5% of U.S. companies outsource some internal audit work and another 32.4% expect to outsource internal audit work in the future. Thus, it is important to understand the effects that outsourcing has on user confidence in financial reporting. For users to feel the internal audit function protects them from fraudulent financial reporting, internal auditors must be perceived as effective in three areas: (1) *deterring* fraudulent financial reporting, (2) *detecting* fraudulent financial reporting if it occurs and (3) *reporting* fraudulent financial reporting if it is detected. The perceived effect of internal audit outsourcing on each of these responsibilities will be addressed by the hypotheses in this study.

Source credibility theory will be used as a framework for this examination. Source credibility theory states that the level of confidence the recipient places in a message will vary according to the perceived credibility of its source. Source credibility is evaluated along two dimensions: competence and objectivity. Thus, more competent and objective sources of information lead to greater confidence in and reliance on that information. This study proposes that a Big Five audit firm[1] will be perceived as more competent and more objective than an in-house internal audit department and thus better able to deter fraudulent financial reporting. This study also proposes that the greater perceived competence of Big Five firms will cause users to perceive them as better able to detect financial statement fraud than an in-house internal audit department. Finally, this study proposes that the greater perceived objectivity of Big Five firms will cause users to perceive them as more likely to report financial statement fraud once it is discovered. Therefore, financial statement users are expected to prefer the outsourcing of internal audit to a Big Five firm because Big Five auditors are perceived as more reliable sources of information.

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[1] The effects of outsourcing to regional and local firms will not be examined in this study as these arrangements only account for about 10% of total outsourcing engagements (Kusel, Scull and Oxner 1997). The effects of these arrangements are a potential topic for future research.

Chapter 2:

Literature Review

The Development of Source Credibility Theory

Aristotle is credited with first recognizing the importance of a speaker's credibility to the acceptance of his message (Bostrom 1983). Aristotle posited that it was not enough to pose an argument that is worthy of belief, but that a speaker must also appear to possess a certain character, which he termed the speaker's "ethos". He listed three things that induce belief in a message apart from proof of it: good sense, good moral character, and good will (Aristotle 1356).

Over time, the concept of "ethos" has been largely replaced by the theory of source credibility which has two components: expertise and trustworthiness. [2] However, McCroskey and Young (1981) acknowledge that Aristotle's view of "ethos" has been central to the study of source credibility throughout its history. "Expertise" in source credibility literature parallels Aristotle's "good sense" which he described as the ability to possess true opinions. Aristotle's ideas of "good moral character" and "good will" entail communicating the truth one possesses without bias, which parallels the "trustworthiness" component of source credibility. McCroskey and Young note that while the fundamental elements of source credibility were developed without the aid of sophisticated psychometric techniques, those applying such techniques have never seriously challenged the basic construct as originally stated. This truth is evidenced in the following review of the literature.

[2] "Trustworthiness" is generally referred to as "objectivity" in accounting research for consistency with authoritative accounting pronouncements. Note that "trustworthiness" in the source credibility literature and "objectivity" in the accounting literature both indicate the extent to which the communicator can be trusted to deliver information without bias. Similarly, the term "competence" has generally been substituted for "expertise" in the accounting literature for consistency with authoritative accounting pronouncements.

Most of the current research applying source credibility theory is rooted in a research stream emerging from social psychology research. This research stream deals primarily with the study of persuasion and began in the 1950s. One of the earliest of such studies was Hovland and Weiss (1951) who examined how the trustworthiness of a source of information affects the information recipient's response to a persuasive communication. Specifically, Hovland and Weiss presented a newspaper article on a current, controversial topic to two groups. The trustworthiness of the communicator was manipulated. The "trustworthy" communicator was an objective authority on the issue while the "untrustworthy" communicator was likely to be biased by personal interest in the topic. Subjects changed their opinions in the direction of the communication in a significantly greater number of cases when the source was perceived as trustworthy than when the source was perceived as untrustworthy, even though the message was identical for both groups. Hovland and Mandell (1952) replicated these results.

Hovland, Janis and Kelley (1953) expanded research on source credibility to include expertise. The authors cite prior findings by Bowden, Caldwell and West (1934) and Kulp (1934) to evidence a person's tendency to accept the validity of a communication more readily if the source is believed to be well informed and intelligent.

Bowden, Caldwell and West (1934) questioned subjects on their level of agreement with communications concerning the appropriate monetary standard for the United States. Identical statements were attributed to men in different professions (e.g., lawyers, engineers, educators, etc.). Subjects agreed most often with educators and businessmen and least often with ministers. This result is attributed to the superior perceived expertise of educators and businessmen.

Kulp (1934) examined the influence of communications on the opinions of graduate students in education. He found that the social and political opinions of professional educators and social scientists were more influential to those students than the opinions of lay citizens. This finding provides additional support for expertise as a component of source credibility.

This early research in source credibility led to decades of factor analytic research. This research arose from a concern that the preconceived notions of early researchers may have led them to overlook some source credibility factors (Bostrom 1983). The general approach of this research stream was to have respondents rate a number of communication sources on a large number of scales. Researchers used factor analysis to group measurements together to produce a few factors which they deemed to be components of source credibility.

Unfortunately, this research stream was characterized by wide variations in the sets of initial scales used, the sets of sources rated, the instructions given to raters and the particular factor-analytic procedures followed. As a result, many different factor structures were found (e.g., Baudhuin and Davis 1972; Falcione 1974; Schweitzer and Ginsburg 1966; Markham 1968). Many individual factors of source credibility noted in these studies have not been substantiated by further research. However, a number of factor analytic studies did confirm the expertise and trustworthiness dimensions of source credibility making them the most generally accepted factors today[3] (e.g., Berlo, Lemmert and Mertz 1969; Whitehead 1971; McCroskey 1966). Furthermore, many other researchers conducted experiments manipulating expertise and/or trustworthiness (Hewgill and Miller 1965; Kelman 1961; Aronson and Golden 1962; Pastore and

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[3] There is some level of consensus on a third factor, dynamism, identified through factor analysis by Berlo, Lemmert and Mertz (1969) and confirmed by Whitehead (1971). Dynamism references the extent to which a speaker is emphatic, energetic and frank. This possible dimension of source credibility is not relevant to the current study because it is specific to situations in which the speaker is observed in the communication process (e.g., public speaking). This is typically not the case in the communication of financial information.

Horowitz 1955; Allyn and Festinger 1961; Walster and Festinger 1962). Their findings add further support for these factors as components of source credibility.

Source Credibility Theory in Accounting Research

A number of accounting studies have applied source credibility theory directly while others have applied the factors of source credibility without specific reference to the theory. For example, studies of the external auditor's evaluation of internal audit personnel have often examined the factors delineated in SAS 9 (AICPA 1975): competence, objectivity and work performed. As the first two of these factors comprise source credibility, these studies are considered indirect tests of the theory's application to accounting for purposes of this research.

Source credibility studies in accounting can be divided into two categories. One group of accounting researchers has used source credibility to examine the external auditor's evaluation of internal audit personnel. A second group of researchers has examined whether source credibility affects external auditors' evaluation of audit evidence. Each of these categories is discussed below.

External auditors' evaluation of internal audit personnel. The first study to examine the external auditor's evaluation of internal audit personnel was Abdel-khalik, Snowball and Wragge (1983). These researchers conducted an experiment with auditors as subjects. They manipulated the level to which the internal audit department head reports (i.e., the controller or the audit committee) as a surrogate for objectivity. Competence was not examined. Findings indicate that the level to which the internal audit department head reports significantly impacts external auditors' willingness to rely on the work of internal audit staff.

Brown (1983) and Schneider (1984) both conducted experiments in which they manipulated all three SAS 9 factors. In each, auditors made judgments based on multiple cases. Schneider examined perceived internal audit strength. Brown examined the degree of reliance to be placed on internal audit, which is a more direct measure of subjects' intentions. Results from both of these studies indicate that all three factors are important to auditors' evaluations of internal audit departments with work performed being the most important factor. In a later study, Schneider (1985) measured external auditors' reliance on internal audit judgments similar to Brown (1983). His findings also indicate that all three factors are important to auditors' judgments. Here, however, relative importance weights for competence and work performed were approximately the same while objectivity was less important.

Margheim (1986) combined competence and work performed to create the competence factor of source credibility. He manipulated two factors, competence/work performed and objectivity, in a 2 x 2 between-subjects design. Auditor subjects reviewed the resulting cases and budgeted a number of hours to perform the audit, indicating the extent of their reliance on internal audit work. The competence/work performed factor showed a significant effect on auditor judgments. Unlike Brown (1983) and Schneider (1984,1985), Margheim's manipulation of objectivity had no significant impact on auditors' judgments. The author suggests the difference may be his use of a between-subjects design while both Brown and Schneider used within-subjects designs. Thus, Margheim concludes that external auditors may not react to internal auditors' objectivity levels unless they explicitly consider other possible objectivity levels.

Based on prior research and discussions with Big 8 audit managers, Messier and Schneider (1988) developed a hierarchy of attributes involved in the evaluation process. SAS 9 decomposes the strength of an internal audit department into three components:

competence, objectivity and work performed. Messier and Schneider further decomposed these three components, creating two additional hierarchical levels of attributes. They required auditor subjects to make pairwise comparisons for all possible pairs of individual attributes. The results were analyzed using analytic hierarchy process measurement theory to weight attributes. In contrast to previous studies, results of this study indicated that competence was the most important factor in auditors' judgments, followed by objectivity and then work performed.

Taken as a whole, studies examining external auditors' evaluation of internal audit personnel indicate that both competence and objectivity are important factors in auditors' decision processes. Thus, the source credibility of the internal audit department is considered by the external auditor in determining whether to rely on internal audit work.

External auditors' evaluation of audit evidence. Of the source credibility studies examining external auditors' evaluation of audit evidence, only one (Hirst 1994) has examined both competence and objectivity. Prior to discussing this study, four studies that examine competence and two that examine objectivity will be discussed.

The first study in this research stream to examine competence was Bamber (1983). Bamber examined whether audit managers were sensitive to the competence of audit seniors in deciding the extent to which they could rely on the seniors' work in formulating their own judgments. He conducted an experiment in which he manipulated the firm's consensus performance evaluation of the senior conducting the audit procedures. The dependent variable was the extent to which managers were willing to rely on one component of the client's internal control system given the senior's recommendation to do so. He found that manipulation of the senior's competence did impact managers' judgments.

Rebele, Heintz and Briden (1988) confirmed the importance of competence of the evidence source to auditor judgments. These authors conducted an experiment in which they asked auditors to estimate the proper allowance for uncollectible accounts based on a statistical estimate and an estimate provided by an employee of the company. The competence of the employee was manipulated by manipulating his experience and current responsibilities. The authors found that estimates by auditors in the high competence condition were closer to the employee's estimate than estimates by auditors in the low competence condition.

Anderson, Koonce and Marchant (1994) conducted an experiment in which auditors examined the client explanation for an unexpected fluctuation in gross profit. Again, competence of the company employee was manipulated. The manipulation had a significant effect on auditors' assessments of the likelihood that the explanation accounted for substantially all of the gross profit fluctuation.

Another study on the effect of competence on auditor judgment examined the upward revaluation of non-current assets to reflect their market value.[4] Goodwin and Trotman (1996) manipulated the competence of the external valuer to determine its effect on the auditor's reliance on the valuer's work. Results indicated that auditors planned to spend more time on the audit of revalued assets and were less likely to accept the revaluation as reasonable when the competence of the valuer was low.

The above studies taken as a whole provide strong evidence that the competence of evidence sources affects auditors' judgments in a variety of contexts. Studies on

[4] While the practice of revaluing assets to market value is not permissible in the United States, it is a heavily discussed topic internationally and is currently permitted in the United Kingdom, Australia and New Zealand.

auditors' evaluation of audit evidence have generally supported the effects of source objectivity on auditors' judgments, but the evidence has been less clear. Joyce and Biddle (1981, experiment 3a and 3b) performed two experiments in which they asked auditors to make judgments about the adequacy of a client's allowance for a particular customer account receivable. They manipulated the objectivity of the source of credit information as either the client's credit manager (low objectivity) or an independent credit agency (high objectivity). In the first experiment, conducted as a between-subjects design, Joyce and Biddle found no significant difference in responses. Significant differences were found in the second experiment, which was conducted as a within-subjects design. Caster and Pincus (1996) replicated the results from Joyce and Biddle's second experiment, showing an effect of objectivity using a within-subjects design.

Hirst (1994) conducted an experiment in which auditors were given preliminary analytical review results from the audit of a hypothetical client. The results were consistent with a material overstatement in inventory. Subjects were asked to provide an estimate of the probability that inventory was materially misstated. Following this initial estimate, subjects were presented with a report explaining the inventory difference. The source of the report was manipulated in a 2 x 2 between-subjects design. Competence was manipulated by describing the source as either a specialist in the client's industry with excellent technical ability (high competence) or a specialist in another industry with below average technical ability (low competence). Objectivity was manipulated by describing the source as either another member of the audit firm (high objectivity) or the client CFO (low objectivity). Hirst analyzed the change in subjects' estimates as a result of reviewing the additional information. Results indicated that auditors were sensitive to the competence and objectivity of the information source.

Hirst proposes that the difference between his results and the results of Joyce and Biddle (1981, experiment 3a) may be due to changes in the audit environment that have increased the significance of source credibility judgments. For example, SAS 39 (AICPA 1981) and SAS 47 (AICPA 1983) codified the relationship between management integrity and the risk of material misstatement. Hirst states that these and other expectation gap standards have likely increased auditors' sensitivity to source credibility factors.

In summary, psychology and accounting research have consistently found that source credibility influences confidence in a message and subsequent decision-making. The studies reviewed above provide strong evidence that auditors are sensitive to the competence of their information sources. Results on whether auditors are sensitive to the objectivity of information sources are somewhat mixed. While two studies have failed to show an effect of source objectivity on auditor judgments (Joyce and Biddle, 1981 experiment 3a; Margheim 1986), several others have shown such an effect (e.g., Abdel-khalik, Snowball, and Wragge 1983; Brown 1983; Hirst 1994; Schneider 1984, 1985). Thus, results from this literature taken as a whole suggest that auditors are sensitive to both the competence and objectivity of information sources. The study proposed in this paper will be the first to use source credibility as a framework to examine financial statement users' confidence in financial reporting.

Relation of Past Source Credibility Findings to the Current Study

Past findings from psychology and accounting research provide strong evidence that decision-makers are sensitive to the competence of their information sources. The current study proposes that a Big Five audit firm will be perceived as more competent (i.e., to have greater expertise) than an in-house internal audit department and thus better able to deter and detect fraudulent financial reporting. Audit literature indicates that Big Five audit firms share a reputation for prestige and expertise (e.g., DeAngelo 1981). The perceived expertise shared by these firms is greater than that enjoyed by internal auditors. The studies cited above indicate that financial statement users will likely attend to this difference in the perceived expertise of their information sources.

Higgins (1999) explains that the effects of expertise are expected to be even stronger when one's peers or society at large recognizes the expertise because such recognition grants additional validity to an otherwise subjective perception. In fact, she explains that it is difficult to ignore such expertise. The business community and society at large perceive Big Five audit firms as experts which validates the perceptions of individual users. This fact strengthens the argument that financial statement users' will perceive Big Five auditors as more able to deter and detect fraudulent financial reporting than internal auditors.

Psychology and accounting research generally support the sensitivity of decision-makers to the objectivity of their information sources. This study proposes that a Big Five firm will be perceived as more objective than an in-house internal audit department and thus more likely to report financial statement fraud once it is discovered. Big Five audit firms have a strong reputation for independence much like their reputation for expertise. Thus, financial statement users are expected to respond to Big Five auditors' perceived objectivity much the same as they are expected to respond to their expertise.

A common determinant of objectivity in prior studies has been whether the information source is internal or external to the communicating entity. External sources of information have generally been construed by researchers as more objective than internal sources. Their results have generally confirmed that subjects held this perception as well (e.g., Joyce and Biddle 1981; Caster and Pincus 1996). By examining the effects of insourcing versus outsourcing, the current study effectively manipulates objectivity in the same manner. Big Five auditors who are external to the organization are expected to be perceived as more objective than internal auditors who are internal to the organization.

Finally, past studies indicate that other factors can impair the perceived objectivity of an information source. Hovland, Janis and Kelley (1953) state that any characteristic that causes a recipient of information to suspect a communicator is motivated to make nonvalid assertions will impair his perceived objectivity. Factors that may impair the perceived objectivity of internal auditors include dependence on the organization's management for pay and resources and, at times, job retention. These factors are discussed in more detail in chapter 3.

Academic Literature on User Perceptions of Internal Audit Outsourcing

One academic study has examined user perceptions of internal audit outsourcing. Using bank loan officers as subjects, Lowe, Geiger and Pany (forthcoming) performed an exploratory study in which they examined the perceived effects of outsourcing on external auditor independence and financial statement reliability. They also examined whether outsourcing affects the lenders' decisions to grant or deny a loan. The authors examined five conditions:

(1) no outsourcing,
(2) outsourcing to an external auditor other than the auditor performing the financial statement audit,
(3) outsourcing to the auditor performing the financial statement audit where the auditor performs some management functions,
(4) outsourcing to the auditor performing the financial statement audit and using the same personnel on the internal and external audits, and
(5) outsourcing to the auditor performing the financial statement audit but using different personnel on each audit.

Lowe, Geiger and Pany (LGP) describe the framework for their research questions as follows:

> "...financial statement users form various perceptions when a CPA firm is engaged to perform extended audit services (internal audit activities) for its client. Since the extent to which individuals rely upon financial statements depends in part on their perceptions of the quality of the audit, perceptions of auditor independence (or lack thereof) may affect perceptions of audit quality. These perceptions of audit quality may subsequently affect perceived financial statement reliability, which in turn may affect investment and credit decisions. (LGP forthcoming, p.7)"

Thus, LGP propose that the outsourcing of internal audit activities may affect financial statement users' perceptions of external auditor independence which in turn may affect perceived audit quality. Any effect on perceived audit quality may affect perceived financial statement reliability which in turn may influence user decisions. A visual presentation of this framework may be drawn as shown in Figure 1.[5]

The authors find that perceived independence is only impaired when the auditor performs management functions.[6] However, their results indicate that auditors performing both the internal and external audits and using different personnel on each audit leads to greater perceived financial statement reliability when compared to all other conditions reported. This result was found specifically with respect to perceptions that the financial statements were free from intentional (i.e., fraudulent) misstatement. The "outsourcing-same firm/different personnel" condition also led to a higher percentage of loans granted.

Although perceived financial statement reliability and percentage of loans granted were both significantly greater in the "outsourcing-same firm/different personnel" condition than in the "no outsourcing" condition, there was no difference in perceived

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[5] All tables and figures are included in Appendix 1.

[6] Note that an external auditor assuming any management function while performing an internal audit outsourcing engagement is a violation of AICPA Ethics Interpretation 101-13 (AICPA 1996). Therefore, this is not an acceptable or practical outsourcing arrangement.

external auditor independence between these conditions. Because the LGP framework anticipates any effect on perceived financial statement reliability and percentage of loans granted will occur by way of an effect on perceived external auditor independence, this framework is unable to explain why these variables increased as a result of outsourcing the internal audit.

The current study also examines how internal audit outsourcing may affect financial statement users' confidence in the reliability of financial reports. Building on the work performed by LGP, the current study proposes that internal audit outsourcing may affect user perceptions of *internal audit* quality and that this effect may account for the increase in users' perceptions that the financial statements are free from fraudulent misstatement. Specifically, the current study proposes that internal audit outsourcing will enhance the perceived competence and objectivity of the internal audit function. This enhanced competence and objectivity will in turn increase the perceived likelihood that any intentional misstatement will either be deterred or detected and reported. Finally, the increased likelihood of fraud deterrence, detection and reporting will enhance users' confidence in their protection from financial statement fraud. This framework is shown in Figure 2 and will be the basis for the hypotheses in this study.

Chapter 3:

Hypothesis Development

The Effect of Outsourcing on the Internal Audit Function – Deterrence and Detection of Financial Statement Fraud

The internal audit function plays an important role in the deterrence and detection of fraud. Statement of Internal Auditing Standards No. 3 (SIAS 3) describes the internal auditor's responsibility for fraud deterrence as "examining and evaluating the adequacy and effectiveness of the system of internal control, commensurate with the extent of the potential exposure/risk in the various segments of the organization's operations" (Institute of Internal Auditors (IIA) 1985). SIAS 3 separately defines the internal auditor's responsibility for fraud detection as identifying indicators of fraud and, when deemed necessary, conducting an investigation to determine whether a fraud has actually been committed (IIA 1985).

Today, as many companies are outsourcing their internal audit departments, it is important to consider how this trend will influence the ability of the internal audit function to deter and detect fraud. The focus of this study is financial statement users' confidence in their protection from financial statement fraud. Thus, this study will focus on how internal audit outsourcing impacts the perceived effectiveness of the internal audit function in fraud deterrence and detection.

Accounting researchers have long acknowledged the difficulty parties external to an organization have in assessing the quality of functions performed within the organization. This difficulty leads external parties, such as investors and creditors, to develop surrogate measures of quality. Past literature has shown one surrogate measure of the quality of a firm's audit process to be audit firm size (e.g., DeAngelo 1981; Knapp 1991). This fact reflects the prestigious reputation for high quality auditing shared by the largest audit firms. The current study proposes that Big Five audit firms performing internal audit services will be perceived as higher quality auditors than in-house internal auditors due to their prestigious reputations.

Psychology researchers have found that when an evaluator of a person has a positive overall impression of that person based on his performance on one or more dimensions, a halo effect is created whereby the person is evaluated highly on new criteria. In other words, evaluators apply a simplifying heuristic whereby they rate new attributes according to a global effect rather than discriminating carefully between each attribute and evaluating each attribute independently (e.g., Jacobs and Kozlowski 1985; Nathan and Tippins 1990). This halo effect has also been applied to entities (Leuthesser, Kohli and Harich 1995). Thus, it is reasonable to expect that financial statement users, who have been shown to have a positive overall impression of Big Five firms as external auditors, will also evaluate them highly as internal auditors. A number of studies on internal audit outsourcing have noted feelings consistent with this argument among firms that choose to outsource. Many companies feel having a Big Five firm perform their internal audit functions will enhance both the quality and the image of the internal audit function (Kusel, Schull and Oxner 1997; Petravick 1997).

As stated above, the internal audit function of a company serves both to deter fraudulent acts by enhancing internal controls and to detect any fraudulent acts that do occur. The following hypotheses propose that internal audit outsourcing will enhance perceptions related to both of these tasks because external auditors will be perceived as more competent and, thus, a more credible source of information.

H1: The internal audit function of a company will be perceived as more effective at *deterring* financial statement fraud when the internal audit function is outsourced to a Big Five firm than when the internal audit function is retained in-house.

H2: The internal audit function will be perceived as more effective at *detecting* financial statement fraud when the internal audit function is outsourced to a Big Five firm than when it is retained in-house.

The Effect of Outsourcing on the Internal Audit Function – Reporting Financial Statement Fraud

A number of published articles have addressed concerns about whether the external auditor is more reluctant to report negative information arising from the external audit when he or she also performs internal audit work. However, the effect of internal audit outsourcing on the reporting of negative information arising from the internal audit has largely been neglected.

There are several reasons to believe that many in-house internal audit departments may be reluctant to report negative information such as financial statement fraud. Most of these reasons relate to organizational structure and chain of command. For example, senior management often makes hiring and firing decisions which means that an internal auditor must risk his/her job and career to report offenses by senior managers. The Treadway Commission recognized this hazard when it recommended that the selection and dismissal of the director of internal audit occur only with the board of directors' or audit committee's concurrence (Treadway Commission 1992). Yet McHugh and Raghunandan (1994) report the results of a survey in which 62% of companies allowed senior management to fire the chief internal auditor without any involvement from the audit committee. Of the remaining 38% of companies, only 13% placed sole responsibility for firing decisions with the audit committee.

The negative effects of manager's firing authority on willingness to report negative information are apparent in the concerns internal auditors have repeatedly expressed. Chadwick (1995) reports an interview in which 12 chief internal auditors of major publicly-held companies were asked whether they would report any of several offenses by senior management (e.g., restricting evidence from exposure to an audit, restricting information flow to the audit committee, etc.). All respondents said they would not report the incidents because they would probably be fired and never find another job as a senior internal audit official. Kalbers (1992) reported similar concerns from a survey of chief internal auditors in which many respondents indicated a reluctance to report problems to the audit committee due to career concerns.

The problem of internal auditor reluctance to report problems to the audit committee appears to be exacerbated by the fact that access to the audit committee is often restricted. In Kalbers' (1992) study, 31% of respondents reported that they had not met privately with the audit committee in the previous year. McHugh and Raghunandan (1994) report that where hiring/firing authority resides with someone other than the audit committee, the person responsible for these decisions was always present at internal auditor meetings with the audit committee in 65% of the companies surveyed. Such restricted access is likely to hinder open reporting of problems by the internal auditor.

Other organizational problems that provide disincentives to internal auditor reporting include lines of reporting and access to organizational resources. Internal audit departments often report the results of their audit work to senior management instead of (or in addition to) the audit committee. Such departments also rely on senior management for resources, as does any other department. Furthermore, senior management often determines the size of the internal audit staff and budget. These factors can combine to make the internal auditor feel little incentive to report problems to the audit committee (Chadwick 1995; Kalbers 1992).

User perceptions are the subject of this study. Thus, it is important to consider whether users actually perceive the disincentives to reporting detailed above. Considering the level of business sophistication of primary user groups, it is plausible that many are aware of the organizational structure of a typical company (e.g., that internal auditors often report to senior management). Note that this is quite a different matter from discerning the quality or value of a particular structure, the difficulties of which were noted earlier. If users are aware of structures typical of those described above, they are likely to recognize the potential for disincentives to reporting. For example, if a loan officer is aware that senior management often may fire internal auditors, he or she is likely to perceive this structure as hindering reporting against senior management.

Furthermore, to the extent that users are not aware of organizational structures, they are likely to view the internal audit department as being similar to other departments, relying on senior management for pay and resources. Sophisticated users are likely to recognize the disincentives to reporting negative information such circumstances create. Thus, external auditors performing the internal audit function are expected to be perceived as more likely to report negative information than in-house internal auditors are.

Some regulators and academic researchers argue that internal audit outsourcing will impair the independence of the external auditor (e.g., Collins and Schultz 1995). These arguments should be noted because inherent in such arguments is the notion that external auditors will be less likely to report negative information as a result of this extended audit relationship. However, empirical research provides evidence that the external auditor's perceived independence is not impaired as a result of internal audit outsourcing. As noted earlier, Lowe, Geiger and Pany (forthcoming) examined perceived effects of outsourcing among bank loan officers and found no impairment of independence in appearance when the external auditor does not take on management functions. This finding indicates that internal audit outsourcing does not reduce the perceived independence of external auditors.

Additional research has been performed on the results of other non-attest services provided by the external auditor. Past research has examined whether auditor independence is impaired when management advisory services are provided *for* a client and when the auditor provides consulting services *with* a client (McKinley, Pany and Reckers 1985; Lowe and Pany 1995; Lowe and Pany 1996). These studies have found no effect of these relationships on users' perceptions of independence, providing further evidence that perceived independence is not impaired by extended auditor-client relationships.

To summarize, the external auditor is expected to be perceived as more objective and, therefore, a more credible source of information than the in-house internal auditor. Accounting literature cites several disincentives to the reporting of negative information by internal auditors. Such disincentives are especially present when the internal auditor reports to management, and persist to a lesser degree when the internal auditor reports to the audit committee. Sophisticated users are expected to perceive these disincentives. Finally, while many have expressed concerns that the independence of the external auditor (and, hence, his/her willingness to report negative information) is impaired when the internal audit function is outsourced, empirical research does not support such impairment. Therefore, outsourcing the internal audit function to an external auditor is expected to enhance the perceived likelihood that financial statement fraud will be reported when detected during the internal audit. This expectation is expressed in the following hypothesis:

H3: A Big Five external audit firm performing the internal audit function will be perceived as more likely to *report* fraudulent financial reporting than an in-house internal auditor performing the internal audit function.

Specification of Sub-hypotheses

The design of the current study includes two insourcing conditions and two outsourcing conditions. The use of multiple insourcing and outsourcing conditions allows more precise specification of the conditions under which the three main hypotheses are supported. The four conditions used in this study are specified below and described in chapter 4.

(1) Insourcing – Report to senior management (I-SM)
(2) Insourcing – Report to the audit committee (I-AC)
(3) Outsourcing – Same firm (O-SF)
(4) Outsourcing – Different firm (O-DF)

Because two insourcing conditions and two outsourcing conditions are used, support for each of the above hypotheses is provided by testing four sub-hypotheses. These sub-hypotheses test the conditions specified in the original hypotheses for each possible pairing of insourcing and outsourcing conditions. These sub-hypotheses are specified below, but the wording of the original hypotheses is not repeated for the purpose of brevity. Instead, sub-hypotheses are specified in terms of the above-stated experimental conditions and the direction of the hypothesized effect. For example, sub-hypothesis H1a proposes that outsourcing to a Big Five audit firm in the "same firm" condition will be perceived as more effective at deterring financial statement fraud than insourcing to an internal audit department in the "report to senior management" condition.

H1a, H2a & H3a: O-SF > I-SM
H1b, H2b & H3b: O-DF > I-SM
H1c, H2c & H3c: O-SF > I-AC
H1d, H2d & H3d: O-DF > I-AC

The comparisons stipulated by these sub-hypotheses are depicted in Figure 3.

Chapter 4:

Research Design

Introduction

The current study is a field experiment that applies a between-subjects design. The internal audit arrangement is the only independent variable and is manipulated at four levels. Dependent variables measure lenders' perceptions of the likelihood that fraud will be deterred, the likelihood that a committed fraud will be detected, and the likelihood that a detected fraud will be reported. These variables and other aspects of the research design are discussed in detail below.

Subjects

Subjects for the current study are bank lending officers. Danos, Holt and Imhoff (1989) conducted structured interviews with chief lending officers of eight large banks and reported that these lenders have access to extensive private information and often conduct on-site visits during which they familiarize themselves with the potential borrower. Thus, lending officers have opportunities to become aware of the company's internal control structure, including the internal audit arrangement, during such a visit or during their review of other background information (e.g., organizational charts). Furthermore, lending officers are sophisticated users who are familiar with typical business arrangements and structures.

Most accounting studies using bank loan officers have used a broad class of commercial lenders as subjects. However, many commercial lenders work solely with small companies of about $50 million in revenues or less. These companies are typically non-public companies and have no internal audit function. Based on discussions with IIA officials, a company would generally earn a minimum of $100 million in revenue before developing a small to moderate sized internal audit department. The company in the research case instrument for the current study is a public company that generates over $150 million in revenues. Thus, to provide valid results, the study required a subject pool comprised of lenders familiar with public companies that operate at a similar revenue level. These lenders are most likely to be familiar with companies that have internal audit functions and are most likely to be knowledgeable about the critical elements of this experiment. Thus, bankers who lend to public companies with over $100 million in revenues were targeted in developing the subject pool for the current study.

Procedures

To target the subject pool selected above, I contacted an official at Robert Morris Associates who provided contact names and phone numbers for eight presidents and vice presidents at local offices of large banks in the southeastern U.S. I obtained eight additional contacts from an official at the KPMG Foundation and from finance professors at The University of Tennessee and Middle Tennessee State University.

To reach the targeted subject pool, bankers in charge of groups that lend to companies with over $100 million in revenues were needed to act as coordinators of the study at their local offices. Initial contacts who were in this position agreed to act as coordinators. Other contacts provided names and phone numbers of the appropriate people in their local offices to act as coordinators. Each coordinator agreed to ask corporate lenders under his/her authority to participate in the study and requested a specified number of research cases based on the number of lenders in his/her group. In this way, a total subject pool of 98 lending officers was developed. These subjects were from seven banks in seven cities, mostly in the southeastern U.S. Banks and cities utilized in the study are detailed in Table 1.

To encourage participation among coordinators after the initial commitment, each coordinator was called prior to mailing the research cases and asked to confirm his/her commitment to participate. Acceptable procedures for distributing and collecting the cases were discussed at that time. Cases were mailed by priority mail or e-mail with a personalized letter thanking the coordinator for participating and restating acceptable procedures for distributing and collecting the cases. Coordinators were asked to obtain verbal consent to participate before distributing cases to participants. Cases distributed by coordinators were organized in packets and enclosed in separate envelopes by the researcher. Each case packet contained one version of the case, a letter of introduction including all necessary information regarding subjects' consent to participate, and all instructions necessary for completion of the case. Coordinators were given the option of collecting all cases and returning them to the researcher. However, subjects were also able to respond directly to the researcher by business reply mail or e-mail at the request of the coordinator. Approximately two weeks after the initial mailing, each coordinator was called and asked to remind subjects of the importance of their participation. Additional follow-up calls were made to coordinators over the next six weeks based on response rates at their respective banks.

The primary motivation used to encourage individual subjects to participate was the fact that their participation was solicited by their direct supervisors. To further encourage participation, subjects were given the opportunity to obtain a summary of the study's results.

Of the 98 research instruments mailed, 71 completed instruments were received for an initial response rate of 72%. Eight returned instruments contained incorrect responses to manipulation check questions and were excluded from analysis, leaving 63 usable responses. This represents a usable response rate of 64%. Table 2 summarizes the demographic information for usable responses.

Subjects were randomly assigned to the four experimental conditions. To test for the possibility of significant differences between groups assigned to different conditions, demographic data was analyzed using ANOVA to test continuous data and the Kruskal-Wallis test to examine categorical data. Only one significant difference was noted at the .10 alpha level. Respondents to the I-SM condition assessed themselves as being less knowledgeable of the purpose of the external financial statement audit than did respondents to the O-SF condition (p = .047). The mean responses for the I-SM and O-SF groups were 5.6 and 6.4 respectively on a 7-point scale anchored on "not knowledgeable at all" and "extremely knowledgeable". Both groups report having knowledge of the purpose of external auditing and, thus, should understand the facts of the case. There is no reason to believe the noted difference in responses would bias the results of this study. Thus, this difference is not deemed likely to have a significant impact.

Variables

Internal audit outsourcing is manipulated at four levels. The first level involves insourcing with the internal audit director reporting to senior management ("I-SM"). Senior management also has authority to hire and fire the internal audit director. Finally, the internal audit director has no private meetings with the audit committee. The absence of private meetings portrayed here is consistent with evidence from McHugh and Raghunandan (1994) which indicates that the internal audit director has no private meetings with the audit committee in 65% of companies where hiring and firing authority resides with someone other than the audit committee.

The second level also involves insourcing. Here, however, the internal audit director reports to the audit committee, and the audit committee has sole responsibility for hiring and firing the internal audit director ("I-AC"). Also, the internal audit director has private meetings with the audit committee. The I-AC condition provides the strictest test of whether outsourcing is preferred because it increases internal audit effectiveness and minimizes hindrances to reporting negative information. Factors related to the internal auditor's position inside the organization are expected to be the cause of differences when comparing this condition to outsourcing conditions. Such factors include the internal auditor's dependence on the organization for pay and resources and the internal auditor's psychological attachment as part of the organization. The use of two insourcing conditions will indicate whether any increase in perceived financial statement reliability as a result of outsourcing is consistent across typical insourcing conditions.

The next two conditions represent typical outsourcing arrangements in today's business environment (James 1994; Kusel, Schull and Oxner 1997). In the third condition, the internal audit is outsourced to a Big Five external auditor who also performs the financial statement audit ("O-SF"). In the fourth condition, the internal audit is outsourced to a Big Five external auditor other than the auditor performing the financial statement audit ("O-DF"). For both outsourcing conditions, hiring and firing authority remains with the audit committee, similar to the I-AC condition. Also, the partner and manager on the internal audit outsourcing engagement have private meetings with the audit committee.

Three dependent variables are used to measure users' confidence in their protection from fraudulent financial reporting. These variables include the perceived likelihood of fraud deterrence, the perceived likelihood of fraud detection, and the perceived likelihood of fraud reporting by the internal audit function. These variables correspond to the three main hypotheses formulated above and reflect the three ways an internal audit function can ensure financial reports are free from fraud.

Each dependent variable is measured on two scales, one quantitative and one qualitative. Past research in psychology and accounting has examined inconclusively whether quantitative or qualitative scales should be used in communicating probabilities. Accounting research has provided evidence that changes in response scale between quantitative and qualitative measures can affect judgment, judgmental consistency and consensus in judgment. Evidence from Reimers, Wheeler and Dusenberry (1993) suggests that auditors who evaluate risk using words make consistently higher risk assessments than those who use numerical probabilities. Stone and Dilla (1994) provide evidence that auditors have higher judgmental consistency and higher consensus in judgment when they assess risk using numbers as opposed to words.

Considering the differences in measurement that can be caused by the use of different scales, it is important to consider which scale will provide a more accurate measure. In other words, it is important to consider whether people are more able to state their assessments of the likelihood of an event occurring using numbers rather than words or vice versa. Some researchers suggest the use of numerical probabilities to avoid the ambiguity of communicating uncertainty using words (e.g., Chesley 1986). Others suggest that uncertainty conditions have an inherent vagueness that is better communicated by words, and that numerical probability assessments often yield a false impression of precision (e.g., Wallsten 1990).

No research has been performed examining whether bank loan officers exhibit scale effects in the present decision context. Therefore, both quantitative and qualitative scales were applied in this study to minimize the probability of measurement error due to scale effects. As discussed in chapter 5, results show that measurements from the two scales provide consistent results which provides evidence that probability assessments were measured accurately on both scales.

Research Instrument

Subjects were asked to read and respond to a single case instrument containing selected financial data and a narrative description of the history and current standing of a company. A sample of this case is shown in Appendix 2. The case is adapted from a case previously used by Knapp (1991). In the case, changes in the engineering specifications for certain products manufactured by Rogers Corporation render a portion of the firm's inventory obsolete. Management determines that the inventory write-down would materially reduce the firm's current year profit. Such a write-down concerns management because it would prevent the company from continuing to show a positive earnings trend. Also, management is concerned that the write-down could negatively impact a pending sale of subordinated debentures.

The case shows third quarter projections for the most recent financial statement data. Because such data are only subjected to an external review, not an external audit, subjects must depend more on the reliability provided by the internal control system and the internal audit function as opposed to any additional assurance provided by the external audit. Therefore, use of quarterly amounts aids in isolating the perceived effect of the internal audit function on financial statement reliability.

As stated previously, SAS 82 states that fraud generally involves the pressure or incentive to commit a fraud and the perceived opportunity to commit the fraud (AICPA 1997). In the case, the client has an incentive to conceal the obsolete inventory and, hence, commit fraud. Thus, subjects were left to respond to the perceived opportunity to commit the fraud (i.e., the deterrence value of the internal control system) and their confidence that the fraud would be detected and reported if it was committed. Questions eliciting these responses are detailed in the sample case in Appendix 2.

The research instrument was pre-tested using five loan officers from Bank of America in Nashville, Tennessee. The banking experience of these lenders ranged from 3 to 25 years with an average of 17 years. Each lender was asked to read and complete the case. Each lender was subsequently interviewed about the realism and clarity of the case as well as the sufficiency of the information provided relative to the judgments that were required. Finally, lenders were asked to discuss the reasons for their responses to case questions. As a result of the pre-test, minor changes were made to the case. These changes were for purposes of clarification so that any measurement error due to differences in interpretation were minimized.

Chapter 5:

Results

Because the dependent variables applied in this study are related, MANOVA was used to analyze the data gathered on quantitative scales. Overall MANOVA results were significant ($p = .047$), indicating statistically significant differences are present in the quantitative data. ANOVA and Duncan's multiple range test were used to identify where those differences are and how they relate to the study's hypotheses.[7]

Data gathered on qualitative scales were analyzed using the Wilcoxon-Mann-Whitney rank sum test. For qualitative data, no omnibus test is available. Therefore, pairwise comparison tests were performed for each dependent variable to test the comparisons stipulated in each sub-hypothesis as depicted in Figure 3.

Results for Hypothesis 1

The first hypothesis proposed that the internal audit function of a company will be perceived as more effective at deterring financial statement fraud when the internal audit function is outsourced to a Big Five firm than when it is retained in-house. The ANOVA testing differences between groups on perceived likelihood of deterrence is significant ($p = .004$). Duncan's multiple range test indicates that this difference is due to significantly lower perceived likelihood of deterrence for an internal audit department that reports to senior management when compared to all other groups in the study. These results are summarized in Table 3.

[7] I inspected the data for the existence of influential observations. I noted no indication of internal inconsistency or other indications that any respondent failed to understand the requirements of the case. I identified seven observations where scores tended toward the extreme ends of the scale (i.e., potentially influential observations). Excluding these observations from the analysis resulted in greater statistical significance. Therefore, reporting results on the full data set is considered conservative. The results reported in this dissertation are for the full data set.

Analysis of categorical data reveals consistent results. These results are summarized in Table 4 and Table 5. For hypothesis 1, significant differences occur for the comparison of the I-SM group to the O-SF group (p = .006) and for the comparison of the I-SM group to the O-DF group (p = .017). However, no significant differences occur when comparing the I-AC group to either outsourcing group.

Thus, loan officers perceive an outsourced internal audit department as more likely to deter fraud than an in-house internal audit department that reports to senior management. However, they do not perceive an outsourced internal audit department as more likely to deter fraud than an in-house internal audit department that reports to the audit committee. Support for the sub-hypotheses for hypothesis 1 can be summarized as follows:

H1a: O-SF > I-SM - *supported*
H1b: O-DF > I-SM - *supported*
H1c: O-SF > I-AC - *not supported*
H1d: O-DF > I-AC - *not supported*

Results for Hypothesis 2

Hypothesis 2 proposes that the internal audit function will be perceived as more likely to detect financial statement fraud when the internal audit function is outsourced to a Big Five firm than when it is retained in-house. The ANOVA testing this hypothesis is not significant (p = .556). Moreover, Duncan's multiple range test shows no significant differences between groups. Consistent with these results, the Wilcoxon-Mann-Whitney test performed on categorical data revealed no significant differences with regard to likelihood of fraud detection, as shown in Table 5. Thus, the current study finds no support for hypothesis 2.

Interviews with pre-test subjects provide insight that may explain why no support was found for this hypothesis. These subjects presented conflicting ideas about whether an outsourced internal audit function should be more able to detect instances of fraud than an insourced internal audit department. Consistent with the argument behind hypothesis 2, pre-test subjects believed that an outsourced Big Five internal audit team would be more competent than an insourced internal audit department. They also agreed that this should lead to a greater ability to detect fraud. However, they also noted that an outsourced internal audit team does not work inside the company on a daily basis, which limits the extent to which they have in-depth knowledge of the company. While pre-test subjects did not perceive this fact as significantly impairing the Big Five internal audit team's ability to deter fraud or their incentive to report it, they believed it would hinder the team's ability to detect fraud. This perception likely caused somewhat lower responses by subjects responding to the outsourcing conditions in the actual study, which resulted in no significant differences between these conditions and insourcing conditions.

Results for Hypothesis 3

Hypothesis 3 proposes that a Big Five firm performing the internal audit will be perceived as more likely to report fraudulent financial reporting than an in-house internal auditor performing the internal audit function. The ANOVA testing this hypothesis is significant ($p = .017$). Similar to hypothesis 1, Duncan's multiple range test indicates that this difference is due to significantly lower perceived likelihood of reporting for an internal audit department that reports to senior management when compared to all other groups in the study.

Wilcoxon-Mann-Whitney tests for hypothesis 3 also reveal significant differences when the I-SM group is compared to the O-SF group ($p = .004$) and when the I-SM group is compared to the O-DF group ($p = .003$). No significant differences are noted when comparing the I-AC group to outsourcing conditions. These results are summarized in Table 5.

Thus, loan officers perceive an outsourced internal audit department as more likely to report fraud than an in-house internal audit department that reports to senior management. However, they do not perceive an outsourced internal audit department as more likely to report fraud than an in-house internal audit department that reports to the audit committee. Support for the sub-hypotheses for hypothesis 3 can be summarized as follows:

H1a: O-SF > I-SM - *supported*
H1b: O-DF > I-SM - *supported*
H1c: O-SF > I-AC - *not supported*
H1d: O-DF > I-AC - *not supported*

Additional Test Results

As noted earlier, statistical tests were performed to ensure that subjects in different experimental conditions did not differ significantly on demographic variables. To provide further assurance that any differences in demographic variables did not influence study results, regression tests were performed to examine whether any relationships were present between demographic variables and dependent variables. Two significant relationships were noted. A significant, direct relationship exists between self-perceived knowledge of internal auditing and the likelihood of fraud detection. However, this study finds no significant effect of internal audit outsourcing on likelihood of fraud detection. Therefore, this relationship does not impact the statistically significant results of this study.

A significant, direct relationship was also found between self-perceived knowledge of internal auditing and likelihood of fraud deterrence. This finding indicates that subjects who perceive themselves as having greater knowledge of the purpose of internal auditing also perceive a greater likelihood of deterrence by the internal audit function. This relationship is consistent across all experimental conditions. In other words, there is no significant, interactive effect between self-perceived knowledge of internal auditing and experimental condition on the likelihood of deterrence. Thus, the significant results reported above for likelihood of fraud deterrence are not affected by the relationship between self-perceived knowledge of internal auditing and likelihood of deterrence.

For each demographic variable, the interaction of experimental condition and the demographic variable was also included as an independent variable in regression tests to determine whether the relationship between experimental condition and the dependent variables changed at different levels of the demographic variable. No significant relationships were noted. Thus, the stated relationships between experimental condition and the dependent variables do not change as levels of the demographic variables change.

Posttest Results

The hypotheses in this study are based on the premise that, consistent with source credibility theory, lenders will regard Big Five firms performing the internal audit function as more competent and objective than insourced internal audit departments. To provide evidence on this premise, subjects were asked as part of a posttest to indicate the extent to which they felt that a Big Five firm performing the internal audit is more (or less) competent than a typical in-house internal audit department. Likewise, subjects were asked the extent to which they felt that a Big Five firm performing the internal audit is more (or less) objective than a typical in-house internal audit department. Subjects responded on a five-point scale anchored on "much less competent (objective)" and "much more competent (objective)" with the midpoint of 3 indicating equal competence/ objectivity. Results are summarized in Table 6 and suggest that lenders perceive Big Five firms performing internal audits as more competent and more objective than in-house internal audit departments. T-tests show both means to be significantly greater than the midpoint ($p<.0001$). Therefore, we can conclude that, consistent with source credibility theory, lenders do perceive greater competence and objectivity among Big Five firms relative to internal audit departments.

Subjects were also asked in the posttest to indicate how important the internal audit function is to the reliability of a company's financial statements. Subjects responded on a five-point scale anchored on "of no importance" and "of maximum importance". Ninety-two percent of respondents indicated the internal audit function was at least "of moderate importance", with 69% indicating it was "of great importance" or "of maximum importance". Subjects were also asked whether information regarding whether a company's internal audit department is performed by a Big Five firm or an in-house internal audit department would be important if it were provided for all companies they evaluate. Ninety percent of respondents said this information would be of at least "moderate" importance. The results of these two questions taken together indicate that lenders perceive the internal audit function as important to financial statement reliability and perceive information about who performs this function as important to their decision-making. These results are summarized in Table 7.

Chapter 6:
Summary, Implications and Limitations

Summary of Results and Contributions to Extant Literature

Lowe, Geiger and Pany (LGP) performed an exploratory study designed to provide initial results to certain research questions about user perceptions of internal audit outsourcing. The current study seeks to extend these results.

LGP made comparisons between one experimental condition where the internal audit was not outsourced and four outsourced conditions, as described in chapter 2. The framework applied by LGP anticipates the possibility that the perceived independence of outsourcing firms may be impaired with respect to the *external* financial statement audit. LGP proposed that this impairment may cause differences in lenders' perceived likelihood of misstatement in audited financial statements when the internal audit was outsourced versus when it was not outsourced. They also proposed that outsourcing may cause differences in lenders' willingness to grant loans.

LGP found that the audited financial statements were perceived as more likely to be free from intentional misstatement when the internal audit was outsourced to the external audit firm using different personnel on each audit as compared to an insourced internal audit department. They also found that lenders were more likely to grant a loan under this outsourced condition. However, they found no impairment (or enhancement) of the perceived independence of the external auditor in the outsourced condition. Thus, the reason for increases in perceived financial statement reliability and percentage of loans granted is unclear. The current study applies source credibility theory to develop and test certain hypotheses to extend the initial findings of LGP.

The current study proposes that internal audit outsourcing may enhance users' perceptions of *internal audit* quality which, in turn, may increase their perceptions that the financial statements are free from fraudulent misstatement. The current study also attempts to provide evidence on *why* users may feel a greater level of fraud protection under outsourcing conditions. Findings of this study indicate that internal audit outsourcing can lead users to feel more confident that the financial statements are free from financial statement fraud. Findings further indicate that this enhanced confidence is caused by greater perceived ability of an outsourced internal audit function to deter fraud and greater perceived likelihood that an outsourced internal audit function will report any detected fraud to the audit committee. Finally, the theory applied and results of the posttest suggest that the enhanced confidence that results from outsourcing is due to greater perceived competence and objectivity of outsourced Big Five internal audit teams relative to insourced internal audit departments.

Specifically, this study finds that bank lenders perceive a greater likelihood that fraud will be deterred when the internal audit function is outsourced to a Big Five firm than when it is performed by an internal audit department that reports to senior management. Lenders also perceive a greater likelihood that a detected fraud will be reported by a Big Five firm than by an internal audit department that reports to senior management. These findings hold whether the company outsources the internal audit to the same firm that performs the external audit or to a different Big Five firm.

This study finds no evidence that lenders perceive a greater likelihood that fraud will be detected when the internal audit function is outsourced than when it is retained in-house. Also, this study finds no evidence that outsourcing enhances perceptions of fraud deterrence, detection or reporting over insourcing when the internal audit department reports to the audit committee.

Similar to LGP, the current study provides evidence that users may perceive a greater level of protection from fraudulent financial reporting when the internal audit is outsourced than when it is retained in-house. By studying outsourcing in the context of source credibility theory, this study also presents a theoretical framework that helps us to understand why this result may be true. However, by examining two insourced conditions, the current study provides evidence that this result may only be true when users perceive an organization to be structured such that management can exercise influence over the internal audit department. When users are aware or perceive the heightened level of independence present when the internal audit department reports to the audit committee, they perceive little difference between insourced and outsourced internal audit functions in their ability to provide fraud protection.

Source credibility theory suggests two dimensions that may enhance perceived protection from fraud: competence and objectivity. Results of the posttest suggest that users perceive Big Five firms performing the internal audit as more competent and objective than a typical internal audit department. However, the fact that increasing the independence level of the internal audit department removes any significant effect between insourcing and outsourcing conditions suggests that objectivity may be the dominant factor in enhancing perceived protection from fraud. Dominance of the objectivity dimension would be consistent with pretest interviews in which lenders stated a preference for outsourced internal audits primarily due to enhanced objectivity. Dominance of the objectivity dimension is also consistent with the fact that, while users perceived a Big Five internal audit team as more competent than an in-house internal audit department, this enhanced competence did not result in greater user confidence that an attempted fraud would be detected. Thus, while users perceive a statistically significant difference in the competence *and* objectivity of insourced internal audit functions and those outsourced to Big Five firms, objectivity appears to be the primary cause of differences in perceived financial statement fraud protection.

Implications

The findings of this study have many implications. First, these findings indicate that how corporations structure their internal audit functions can significantly impact users' perceptions of their protection from financial statement fraud. Second, findings of this study have implications for how internal auditors may enhance users' perceptions of their ability to provide protection against financial statement fraud. Finally, this study has implications for decision-making by regulators and accounting professionals.

Implications for company managers. The finding that users perceive greater fraud protection with an outsourced internal audit team than with an insourced internal audit department that reports to senior management is very important. Prior studies indicate that a large percentage of companies have a corporate structure that allows senior management significant influence over the internal audit department. In a survey by McHugh and Raghunandan (1994), 62% of companies allowed a member of senior management to fire the chief internal auditor without any involvement from the audit committee. Only 13% of the remaining 38% of companies placed sole responsibility for firing decisions with the audit committee. Similarly, in a survey of Canadian companies by Scarbrough, Rama and Raghunandan (1998) only 6% of companies placed firing authority solely with the audit committee. In that survey, 42% of companies allowed a member of senior management to fire the chief internal auditor.

Evidence that senior management often has influence over the internal audit department is also provided by the percentage of companies in which the audit committee does not review the results of internal audit work. Scarbrough, Rama and Raghunandan report that in 21% of companies surveyed, the audit committee never reviews the results of internal auditing as they relate to financial reporting. Likewise, audit committees in 17% of companies surveyed never review the results of internal auditing as they relate to internal controls.

Finally, evidence that senior management often has influence over the internal audit department is apparent in the fact that the chief internal auditor often has no private access to the audit committee. In a study by Kalbers (1992), 31% of chief internal auditors surveyed reported that they had not met privately with the audit committee in the last year. Similarly, Scarbrough, Rama and Raghunandan report that 24% of companies surveyed had no private access to the audit committee. Finally, McHugh and Raghunandan report that where firing authority resides with a member of senior management, the person with firing authority is always present at internal auditor meetings with the audit committee in 65% of companies surveyed.

For a company to have access to capital markets and minimize the cost of capital, users must have confidence that the company's financial reporting is reliable. Findings of this study suggest that having an internal audit department that reports to senior management can lower users' confidence in that departments' ability to prevent fraudulent financial reporting. Thus, companies should avoid this internal audit structure. Avoiding this structure may be especially important to companies that have a heightened need to signal the reliability of their financial reporting, such as companies with high levels of agency conflict or with previous occurrences of fraud.

The results of this study indicate that outsourced internal audit teams and insourced internal audit departments that report solely to the audit committee are viewed similarly in their ability to protect users from fraudulent financial reporting. Each arrangement affords a greater level of perceived fraud protection than an internal audit department that reports to senior management. Thus, companies should either outsource their internal audit functions or structure insourced internal audit departments to report to the audit committee. These structures should maximize user confidence in their financial reports. Furthermore, companies that adopt such an arrangement may consider voluntarily disclosing the arrangement to ensure users perceive it so that their confidence may be enhanced.

Findings from this study may be especially useful to companies that are considering adding an internal audit function or restructuring their current internal audit functions. For example, managers considering outsourcing their current internal audit functions may choose simply to restructure their reporting lines so that the internal auditor reports to the audit committee since this structure is perceived similar to outsourced internal audits. Findings from this study can also provide insight to companies that have chosen to outsource their internal audit but are deciding between outsourcing to their external auditor or hiring a different audit firm for the outsourced engagement. The current study shows no significant difference in perceived fraud protection when the internal audit is outsourced to the Big Five firm performing the financial statement audit versus when it is outsourced to a different Big Five firm. Thus, there is no apparent need to hire a different Big Five firm for the purpose of enhancing user perceptions of their protection from financial statement fraud.

Implications for internal auditors. Findings from this study should be of particular interest to the internal audit profession. As internal audit departments have become threatened by outsourcing, the IIA and the internal audit profession have made efforts to strengthen their positions against the current outsourcing trend. These findings suggest that one way to effectively do this is by strongly encouraging all organizations to adopt a structure that allows the internal audit department to report to the audit committee and places sole hiring and firing authority with this committee. The current study suggests that if the profession can effectively encourage organizations to adopt such a structure and they can make users perceive a growing prevalence of this structure, users will grow more confident in the competence and objectivity of internal audit departments.

Internal auditors should also take interest in this study because of what the findings indicate about how users perceive internal audit departments in general. Subjects in this study responded that they perceive a Big Five firm performing the internal audit as more competent and more objective than the typical internal audit department. Thus, internal auditors may want to take measures that will enhance their own perceived competence and objectivity. They may begin doing this by encouraging the corporate structure noted above. In addition, internal auditors may enhance user perceptions by promoting the Certified Internal Auditor (CIA) designation, and enhancing and publicizing formal and continuing education requirements.

Implications for regulators and accounting professionals. Regulators and accounting professionals who are concerned about user confidence in financial reporting should also take interest in this study. Regulators and academic accountants have often discouraged internal audit outsourcing, calling it a threat to independence and a detriment to the perceived reliability of financial reporting. Many of these arguments focus on independence in appearance rather than independence in fact. Evidence from this study suggests that perhaps accountants should not be quick to discourage outsourcing because it appears to positively affect certain perceptions of the internal audit function. Bank lenders indicate that they perceive Big Five audit firms as more competent and more objective than typical internal audit departments. Moreover, results indicate that internal audit outsourcing may enhance user confidence in the ability of the internal audit function to deter financial statement fraud. Also, internal audit outsourcing may enhance the perceived likelihood that any fraud that is detected will be reported. Thus, contrary to statements by many regulators and accounting professionals, internal audit outsourcing may actually enhance user perceptions that financial statement fraud will be prevented.

Limitations

As with any experimental case instrument, the realism of the case presented in the current study is limited. In a real bank lending decision, loan officers would be presented with much more information and would form opinions and make decisions over a longer period of time. However, the procedures followed in the current study are considered appropriate for measuring the general perceptions of loan officers toward outsourcing.

Also, most lenders participating in the current study were from banks in the southeast U.S. However, there is no reason to believe the perceptions of these lenders would differ significantly from lenders in other regions of the U.S.

Finally, the current study examines one user group and one fraud scenario. It is possible results may differ with other user groups and/or scenarios. Also, there are additional insourcing, outsourcing and cosourcing arrangements that were not examined in this study. Future research may extend the results of this research stream by examining the perceptions of users toward these additional arrangements. Future research may also examine different user groups or apply different case scenarios to test whether results are consistent.

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Appendices

APPENDIX 1: TABLES AND FIGURES

TABLE 1:
Subject Counts for Sampled Banks and Cities

Total Sample:

	Knoxville	Nashville	Atlanta	Memphis	Greensboro	Birmingham	New York	Totals
Bank of America	-	-	10	-	10	-	-	20
SunTrust	10	5	5	-	-	-	-	20
First American	5	10	-	-	-	-	-	15
First Tennessee	7	5	-	2	-	-	-	14
SouthTrust	-	5	-	-	-	5	-	10
Union Planters	1	4	-	4	-	-	-	9
Citicorp	-	-	-	-	-	-	10	10
Totals	23	29	15	6	10	5	10	98

TABLE 1: (continued)

Usable Responses:

	Knoxville	Nashville	Atlanta	Memphis	Greensboro	Birmingham	New York	Totals
Bank of America	-	-	8	-	8	-	-	16
SunTrust	3	2	4	-	-	-	-	9
First American	4	3	-	-	-	-	-	7
First Tennessee	4	4	-	1	-	-	-	9
SouthTrust	-	2	-	-	-	5	-	7
Union Planters	1	4	-	4	-	-	-	9
Citicorp	-	-	-	-	-	-	6	6
Totals	12	15	12	5	8	5	6	63

TABLE 2:
Demographic Information on Study Participants

	Group 1 (I-SM)[8]	Group 2 (I-AC)	Group 3 (O-SF)	Group 4 (O-DF)	Total Sample
Number of Subjects	14	16	14	19	63
Age (in years)	46.5	43.1	41.1	40.0	42.4
Lending Experience (in years)	18.4	16.5	14.1	13.4	15.5
Banking Experience (in years)	20.6	19.8	16.6	15.0	17.8
Percentage of Job Devoted to Loans	86.1%	80.9%	81.4%	84.5%	83.3%
Self-Perceived Knowledge of Internal Auditing[9]	4.8	5.1	5.6	5.0	5.1
Self- Perceived Knowledge of External Auditing[9]	5.6	5.7	6.4	5.9	5.9
Highest Educational Degree:					
Bachelors	57%	56%	43%	58%	53%
Masters	43%	44%	57%	42%	47%
	100%	100%	100%	100%	100%
Job Title:					
Vice President	72%	87%	65%	66%	72%
Managing Director	-	13%	14%	11%	10%
Loan Officer	21%	0%	14%	17%	13%
Credit Analyst	7%	0%	7%	6%	5%
	100%	100%	100%	100%	100%

[8] See groups defined in chapter 4.
[9] Measured on a scale anchored on 0 for "Not Knowledgeable at All" and 7 for "Extremely Knowledgeable".

TABLE 3:
Summary of Means and Statistical Results for MANOVA Analysis

	Likelihood of Deterrence	Likelihood of Detection	Likelihood of Reporting
Group 1: (I-SM)	37.0%	38.9%	62.1%
Group 2: (I-AC)	59.7%	50.9%	82.8%
Group 3: (O-SF)	67.1%	50.7%	83.2%
Group 4: (O-DF)	61.8%	52.1%	84.9%
Significance Level	.004	.556	.017
Significant Differences	I-AC, O-SF, O-DF > I-SM	No Significant Differences	I-AC, O-SF, O-DF > I-SM

TABLE 4:
Summary of Categorical Data Responses by Group

Deterrence:

	Group 1 (I-SM)	Group 2 (I-AC)	Group 3 (O-SF)	Group 4 (O-DF)	Total Sample
Not Likely (1)	7%	6%	-	11%	
Slightly Likely (2)	43%	13%	14%	5%	
Moderately Likely (3)	36%	25%	29%	37%	
Very Likely (4)	14%	43%	50%	42%	
Extremely Likely (5)	-	13%	7%	5%	
Totals	100%	100%	100%	100%	
Mean	2.57	3.44	3.5	3.26	3.21
Standard Deviation	.85	1.09	.85	1.05	1.02

Detection:

	Group 1 (I-SM)	Group 2 (I-AC)	Group 3 (O-SF)	Group 4 (O-DF)	Total Sample
Not Likely (1)	29%	6%	-	5%	
Slightly Likely (2)	29%	31%	50%	37%	
Moderately Likely (3)	14%	25%	14%	21%	
Very Likely (4)	21%	25%	29%	37%	
Extremely Likely (5)	7%	13%	7%	-	
Totals	100%	100%	100%	100%	
Mean	2.50	3.06	2.93	2.89	2.86
Standard Deviation	1.34	1.18	1.07	.99	1.13

TABLE 4: (continued)

Reporting:

	Group 1 (I-SM)	Group 2 (I-AC)	Group 3 (O-SF)	Group 4 (O-DF)	Total Sample
Not Likely (1)	7%	6%	-	-	
Slightly Likely (2)	22%	-	-	5%	
Moderately Likely (3)	14%	-	7%	5%	
Very Likely (4)	50%	56%	50%	42%	
Extremely Likely (5)	7%	38%	43%	48%	
Totals	100%	100%	100%	100%	
Mean	3.29	4.19	4.36	4.32	4.06
Standard Deviation	1.14	.98	.63	.82	.98

TABLE 5:
Summary of p-values for Wilcoxon-Mann-Whitney Rank Sum Test on Categorical Dependent Variables (Values significant at α=.05 in bold typeface)

Sub-Hypothesis (Groups Compared)	Hypothesis 1: Deterrence	Hypothesis 2: Detection	Hypothesis 3: Reporting
(a) I-SM to O-SF	**.006**	.157	**.004**
(b) I-SM to O-DF	**.017**	.153	**.003**
(c) I-AC to O- SF	.500	.364	.407
(d) I-AC to O-DF	.305	.358	.349

TABLE 6:
Relative Perceived Competence and Objectivity of Outsourced versus Insourced Internal Audit Departments

The following data were collected in response to the following question measured on a 5- point scale ranging from "much less competent (objective)" to "much more competent (objective)". Response are scored from 1 to 5:

Compared to a typical in-house internal audit department, a Big 5 public accounting firm that performs the internal audit function is usually...

	Percentage Responding in Each Category						
	(1) Much less...	(2) Less...	(3) Equally...	(4) More...	(5) Much more...	Mean[10]	Standard Deviation
Competent	-	4%	36%	53%	7%	3.64	.70
Objective	-	-	11%	69%	20%	4.09	.64

[10] Both means are significant different from the midpoint of 3 (p<.0001).

TABLE 7:
Perceived Importance of the Internal Audit Function

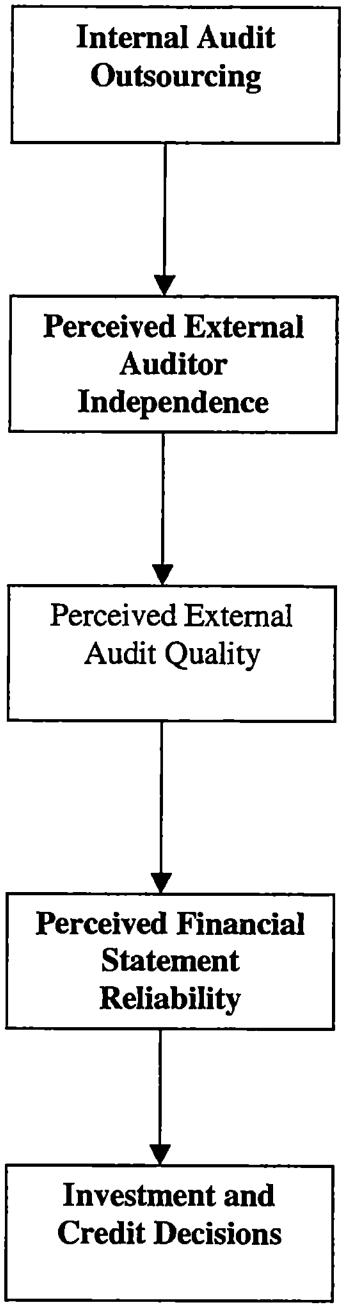
The following data were collected in response to the following questions measured on a 5 point scale ranging from "of no importance" to "of maximum importance". Response are scored from 1 to 5:

Question (1): In your opinion, how important is the internal audit function to the reliability of a company's financial statements?

Question (2): Would information regarding whether a company's internal audit function is performed by a Big 5 public accounting firm or an in-house internal audit department be important to you if this information were provided for companies you evaluate?

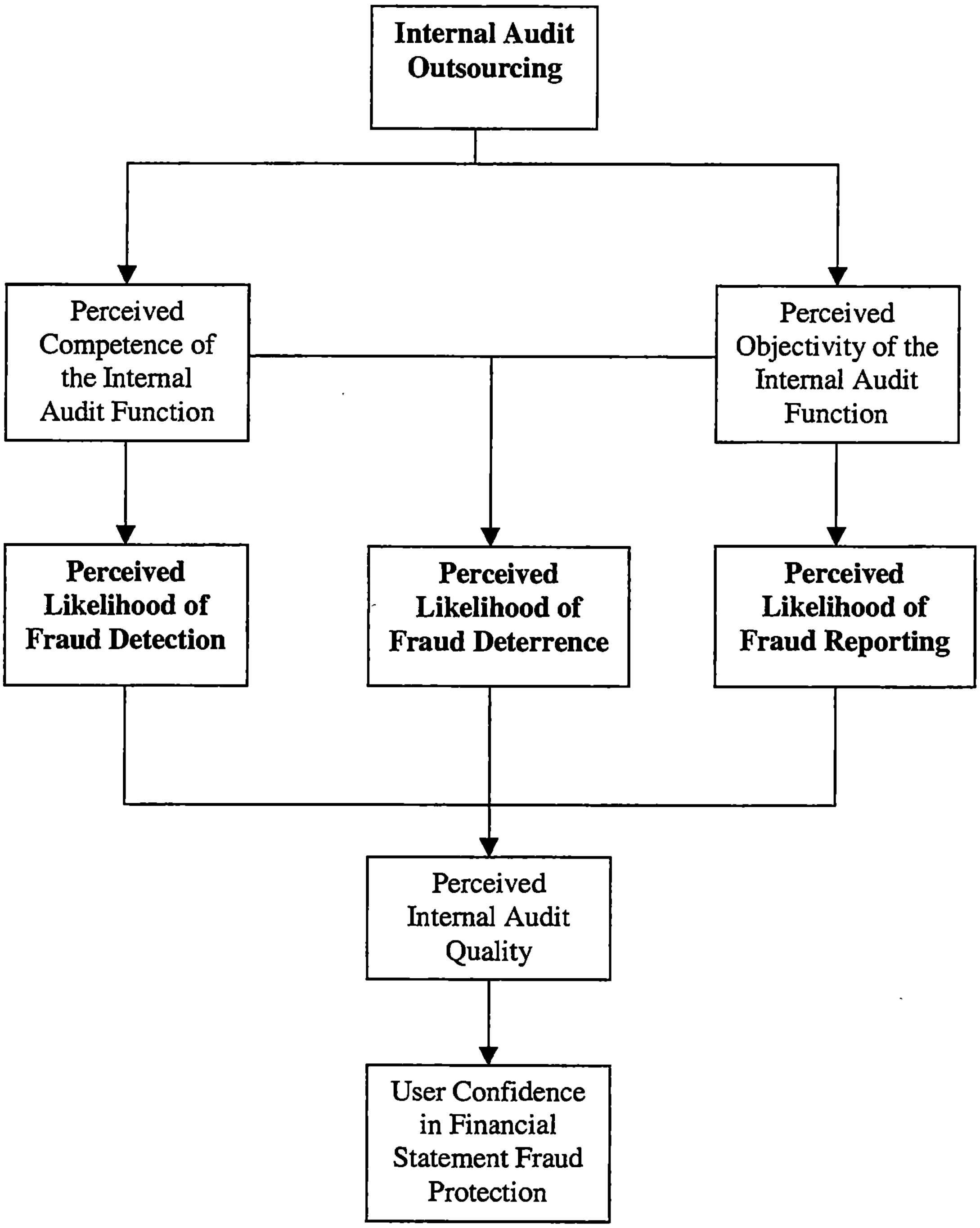
	Percentage Responding in Each Category						
	(1)	(2)	(3)	(4)	(5)		
Question	Of No Importance	Of Slight Importance	Of Moderate Importance	Of Great Importance	Of Maximum Importance	Mean	Standard Deviation
(1)	2%	3%	27%	52%	16%	3.77	.87
(2)	2%	7%	39%	46%	6%	3:46	.78

Figure 1: The Lowe, Geiger and Pany Framework for the Effect of Internal Audit Outsourcing on Financial Statement User Perceptions and Decision-Making[11]



[11] Bold typeface denotes variables measured by Lowe, Geiger and Pany. Additional links are part of a logical framework useful for understanding study results.

Figure 2: Current Study Framework for the Effect of Internal Audit Outsourcing on Financial Statement User Confidence[12]



[12] Bold typeface denotes variables measured or manipulated in this study. Additional links are part of a logical/theoretical framework useful for understanding hypothesized effects and study implications.

Figure 3: Statistical Comparisons Used to Analyze Response Data

	O-SF	O-DF
I-SM	1	2
I-AC	3	4

I-SM = Insourcing – report to senior management
I-AC = Insourcing – report to audit committee
O-SF = Outsourcing – same firm
O-DF = Outsourcing – different firm

APPENDIX 2: SAMPLE CASE INSTRUMENT
ROGERS CORPORATION CASE

COMPANY BACKGROUND

Rogers Corporation wholesales household goods, principally small kitchen appliances, to retail-chain outlets. Rogers is publicly traded over the counter and was incorporated in your state in 1983. The company is also headquartered in your state. Currently, it manufactures 60 percent of the goods it sells and purchases the remainder from outside firms. The company is now negotiating to acquire a large supplier, a move that would increase its production capacity by 15 percent.

In September 1998, Rogers borrowed $16 million from a syndicate of banks, one of them being yours, at an interest rate of prime plus one point. The debt matures in five equal, annual installments beginning in September 2000. **You are performing a follow-up review of this outstanding loan on September 1, 1999**. Your bank receives annual and quarterly financial statements from Rogers. The selected annual data from 1995-1998 shown below are taken from annual statements audited by a Big Five public accounting firm. **The most recent amounts (thru 9/30/99) are third quarter projections** submitted by management to assist you in your review pending release of actual third quarter amounts. Third quarter data will **not** be subjected to an external financial statement audit.

Rogers Corporation has retained an investment banker to develop plans to issue $40 million in subordinated debentures in early 2000 to finance further acquisitions as well as to repay the outstanding bank notes. Rogers' management is pleased with the firm's 1999 financial performance, projecting a continuing increase in sales and net income. The firm's backlog of orders has risen 30 percent over the past twelve months and management expects the company to be able to sustain strong sales growth in the coming years.

ROGERS CORPORATION
SELECTED FINANCIAL DATA
For Fiscal Year ended December 31
(In thousands, except per-share data)

		Year Ended December 31,			
	Thru 9/30/99*	1998	1997	1996	1995
Net sales	$ 137,576	$ 146,135	$ 86,382	$ 81,450	$ 66,976
Gross profit	63,161	69,999	37,827	38,466	25,704
Gross margin %	45.9%	47.9%	43.8%	47.2%	38.4%
Operating income	4,044	4,296	4,010	5,027	4,156
Net income	1,702	2,116	1,452	1,363	960
Earnings per share	.19	.24	.16	.15	.20
Common shares (#)	9,058	9,004	8,932	8,810	4,804

		As of December 31,			
	9/30/99*	1998	1997	1996	1995
Working capital	$ 58,680	$ 51,557	$ 32,940	$ 31,293	$ 20,196
Total assets	131,503	122,629	96,107	90,396	55,169
Long-term debt	36,254	36,837	18,714	20,267	11,776
Stockholders' equity	67,995	67,135	64,476	61,475	33,485
Debt to equity ratio	.93	.83	.49	.47	.65

*Unaudited projections by management.

THE INTERNAL CONTROL ENVIRONMENT

The Board of Directors

Rogers Corporation maintains a ten-member board of directors with the Chief Executive Officer serving as chairman of the board. Rogers' board of directors also includes its Chief Operating Officer and the company's chief attorney. The remaining board members are men and women with extensive business experience (an average of 20 years) who have no other relation to the company.

Rogers Corporation maintains an audit committee that meets quarterly and is responsible for assuring that management fulfills its responsibilities in the preparation of financial statements. In discharging its duties, the audit committee reviews the activities of both the internal audit function and the external financial statement audit. All members of the audit committee are independent, outside directors who have no other relation to the company. The audit committee has four members including one certified public accountant.

The Internal Audit Function

Rogers Corporation maintains an internal audit department that performs all of its internal audit work. Responsibilities of the internal audit department include examining the adequacy of the company's systems, processes and procedures and recommending improvements. Management decides which recommendations will be implemented. The following features detail the internal audit department's position in the organization:

- The internal audit director reports the results of all internal audit work directly to Rogers' senior management, which includes the CEO, the CFO and other company officers.
- Rogers' senior management has sole responsibility for the hiring and firing of the internal audit director and his staff.
- The internal audit director meets with the audit committee quarterly. The CEO and CFO of Rogers Corporation are present at all of these meetings.

The internal audit department has performed various reviews and audits on the company's systems throughout the year. The department is scheduled to continue its work by performing audit procedures on the purchasing and inventory systems beginning September 15. Over the past several years, the internal audit has revealed no major deficiencies in basic internal control procedures (i.e., segregation of duties, authorization and verification procedures, etc.). Only minor adjustments to account balances have been made as a result of past internal audits.

ADDITIONAL INFORMATION

In the second quarter, Rogers hastily changed the engineering specifications for three related products in response to an unexpected change in consumer preferences. Due to drastic declines in shipments of these products in the third quarter, management has determined that the inventory manufactured prior to these changes cannot be sold above cost. Management has determined that the value of this obsolete inventory has been permanently impaired, and that the inventory write-down required by generally accepted accounting principles would materially reduce the firm's profit. (As of today, management estimates an after-tax effect of $441,000, which is 25.9 % of projected 3rd quarter net income and 18.4% of estimated annual net income.) The inventory adjustment concerns senior management because they want to continue to show a positive earnings trend. The required adjustment to inventory would threaten the company's fifth consecutive year of earnings growth. (Management estimates fiscal year 1999 net income will be $1,962,000 after the write-down, compared to net income of $2,116,000 in 1998.) Management especially wants to show growth in earnings to encourage greater demand for the upcoming sale of debentures. Although management has a responsibility to report the obsolete inventory in the third quarter 1999 financial statements, management would prefer delaying the adjustment until fiscal year 2000 when earnings growth is expected to be great enough to absorb its impact.

The affected inventory components and related records are scattered randomly throughout the firm's warehouses and computerized inventory records. The affected items involve approximately 5 percent of the recorded value of the inventory and 4 percent of the 400 inventory components used in the manufacturing processes of the company.

QUESTIONNAIRE
Part I: About the Rogers Corporation Case

Given the above information, please answer the following three questions. First, please respond using whole numbers (not fractions) that range from 0% to 100%. Then, please respond using the word categories provided:

1. (a.) In your view, what is the probability that the presence of the existing internal audit function will **deter** senior management from attempting to delay reporting of the obsolete inventory by not reporting the required write-down in the 3rd quarter, 1999 financial statements?
   __________%

   (b.) Please circle the category that best indicates the likelihood that the presence of the existing internal audit function will **deter** senior management from attempting to delay reporting of the obsolete inventory by not reporting the required write-down in the 3rd quarter, 1999 financial statements.

Not Likely	Slightly Likely	Moderately Likely	Very Likely	Extremely Likely

2. **Assume senior management does not record the write-down for the obsolete inventory and does not report the existence of the obsolete inventory to the internal audit department.**
   (a.) In your view, what is the probability that the internal audit department will **detect** the obsolete inventory when performing internal audit procedures?
   __________%

   (b.) Please circle the category that best indicates the likelihood that the internal audit department will **detect** the obsolete inventory when performing internal audit procedures.

Not Likely	Slightly Likely	Moderately Likely	Very Likely	Extremely Likely

3. **Assume that senior management attempts to conceal the obsolete inventory, but that it is detected during the internal audit process. Also, assume that senior management refuses to record the write-down of the obsolete inventory in fiscal year 1999 (the current year) financial statements.**

   (a.) In your view, what is the probability that the internal audit director will **report** to the audit committee that a material obsolete inventory write-down is required in the 1999 (current year) financial statements?
   __________%

   (b.) Please circle the category that best indicates the likelihood that the internal audit director will **report** to the audit committee that a material obsolete inventory write-down is required in the 1999 (current year) financial statements.

Not Likely	Slightly Likely	Moderately Likely	Very Likely	Extremely Likely

QUESTIONNAIRE

Part II: About your Professional Experience

Please provide the following information about yourself:

1. Highest educational degree attained (circle one):

   a. High school
   b. Associates degree
   c. Bachelor's degree
   d. Master's degree
   e. Other (please specify) ________________

2. Professional experience granting loans: _______ years

3. Number of years of professional experience in banking: _______ years

4. Percentage of current job devoted to providing loans or loan-oriented support: ____________

5. Title of the position you currently hold (circle one):

   a.President/CEO
   b. Vice President
   c.Loan Officer
   d. Credit Analyst
   e.Other (please specify)___________________

6. Age: _________

7. Maximum dollar amount of loans you are authorized to issue ______________

8. Estimated **average** dollar amount of loans you have issued over the last 12 months _________

9. Please rate your knowledge of the purpose of the internal auditing function.

1	2	3	4	5	6	7
Not Knowledgeable At All		Somewhat Knowledgeable			Extremely Knowledgeable	

10. Please rate your knowledge of the purpose of the external financial statement audit.

1	2	3	4	5	6	7
Not Knowledgeable At All		Somewhat Knowledgeable			Extremely Knowledgeable	

11. Professional experience as an internal auditor (if any)? _______ years

12. Professional experience as an external auditor (if any)? _______ years

13. Please list any job-related certifications you have obtained.

____

QUESTIONNAIRE

Part III: Concluding Questions about the Rogers Corporation Case

For the following questions, please circle the correct response:

1. Who performed the internal audit for Rogers Corporation?

   a. An in-house internal audit department
   b. A Big 5 public accounting firm

If your answer to question #1 was a. (an in-house internal audit department), please respond to questions #2 and #3 below. Do not answer question #4.

If your answer to question #1 was b. (a Big 5 public accounting firm), please go directly to question # 4. Do not answer questions # 2 and #3.

2. You have indicated that an in-house internal audit department performed the internal audit for Rogers Corporation. To whom did the internal audit department report?

   a. The senior management of Rogers Corporation
   b. The audit committee of Rogers Corporation

3. You have indicated that an in-house internal audit department performed the internal audit for Rogers Corporation. Who held hiring and firing authority over the internal audit director and staff?

   a. The senior management of Rogers Corporation
   b. The audit committee of Rogers Corporation

4. You have indicated that a Big 5 public accounting firm performed the internal audit for Rogers Corporation. Were the internal audit and the external financial statement audit performed by the same firm or different firms?

   a. Same firm
   b. Different firms

QUESTIONNAIRE

Part III: Concluding Questions about the Rogers Corporation Case (continued)

For the following questions, please circle the correct response:

1. In your opinion, how important is the internal audit function to the reliability of a company's financial statements?

Of No Importance	Of Slight Importance	Of Moderate Importance	Of Great Importance	Of Maximum Importance

2. Would information regarding whether a company's internal audit function is performed by a Big 5 public accounting firm or an in-house internal audit department be important to you if this information were provided for companies you evaluate?

Of No Importance	Of Slight Importance	Of Moderate Importance	Of Great Importance	Of Maximum Importance

3. Compared to a typical in-house internal audit department, a Big 5 public accounting firm that performs the internal audit function is usually

Much Less Competent	Less Competent	Equally Competent	More Competent	Much More Competent

4. Compared to a typical in-house internal audit department, a Big 5 public accounting firm that performs the internal audit function is usually

Much Less Objective	Less Objective	Equally Objective	More Objective	Much More Objective

APPENDIX 3: CASE MODIFICATIONS

The sample case instrument detailed in Appendix 1 was administered to subjects assigned to the Insourcing – Report to Senior Management (I-SM) condition. The section titled "The Internal Audit Function" under "The Internal Control Environment" was modified to create the three additional experimental conditions. These modifications are detailed below. In addition to these modifications, the term "internal audit department" used for insourcing conditions was changed to "Big Five internal audit team" for outsourcing conditions. Also, the term "internal audit director" was replaced with the term "Big Five partner on the internal audit engagement".

For the Insourcing –Report to Audit Committee Condition:

The Internal Audit Function. Rogers Corporation maintains an internal audit department that performs all of its internal audit work. Responsibilities of the internal audit department include examining the adequacy of the company's systems, processes and procedures and recommending improvements. Management decides which recommendations will be implemented. The following features detail the internal audit department's position in the organization:

- The internal audit director reports the results of all audit work directly to the audit committee of Rogers' Corporation.
- Rogers' audit committee has sole responsibility for the hiring and firing of the internal audit director and his staff.
- The internal audit director meets privately with the audit committee each quarter. Meetings of the audit committee, the internal audit director and the CEO and CFO of Rogers Corporation are also conducted quarterly.

The internal audit department has performed various reviews and audits on the company's systems throughout the year. The department is scheduled to continue its work by performing audit procedures on the purchasing and inventory systems beginning September 15. Over the past several years, the internal audit has revealed no major deficiencies in basic internal control procedures (i.e., segregation of duties, authorization and verification procedures, etc.). Only minor adjustments to account balances have been made as a result of past internal audits.

For the Same Firm Outsourcing Condition:

The Internal Audit Function. The internal audit function of Rogers Corporation is performed by the local office of a Big Five public accounting firm. Responsibilities of the internal audit team include examining the adequacy of the company's systems, processes and procedures and recommending improvements. Management decides which recommendations will be implemented. Details of the internal audit outsourcing arrangement are listed below:

- The Big Five public accounting firm that performs Rogers Corporation's internal audit work also performs Rogers' external financial statement audit.
- Rogers' audit committee has sole responsibility for the hiring and firing of the Big Five public accounting firm for the internal audit engagement.
- The partner and manager on the internal audit engagement meet privately with the audit committee each quarter. Meetings of the internal audit partner and manager, the audit committee and the CEO and CFO of Rogers Corporation are also conducted quarterly.

The Big Five internal audit team has performed various reviews and audits on the company's systems throughout the year. The team is scheduled to continue its work by performing audit procedures on the purchasing and inventory systems beginning September 15. Over the past several years, the internal audit has revealed no major deficiencies in basic internal control procedures (i.e., segregation of duties, authorization and verification procedures, etc.). Only minor adjustments to account balances have been made as a result of past internal audits.

For the Different Firm Outsourcing Condition:

The Internal Audit Function. The internal audit function of Rogers Corporation is performed by the local office of a Big Five public accounting firm. Responsibilities of the internal audit team include examining the adequacy of the company's systems, processes and procedures and recommending improvements. Management decides which recommendations will be implemented. Details of the internal audit engagement are listed below:

- The Big Five public accounting firm that performs Rogers Corporation's internal audit work does not perform Rogers' external financial statement audit. The external financial statement audit is conducted by another Big Five public accounting firm.
- Rogers' audit committee has sole responsibility for the hiring and firing of the Big Five accounting firm for the internal audit engagement.
- The partner and manager on the internal audit engagement meet privately with the audit committee each quarter. Meetings of the internal audit partner and manager, the audit committee and the CEO and CFO of Rogers Corporation are also conducted quarterly.

The Big Five internal audit team has performed various reviews and audits on the company's systems throughout the year. The team is scheduled to continue its work by performing audit procedures on the purchasing and inventory systems beginning September 15. Over the past several years, the internal audit has revealed no major deficiencies in basic internal control procedures (i.e., segregation of duties, authorization and verification procedures, etc.). Only minor adjustments to account balances have been made as a result of past internal audits.

VITA

Kevin Lamont James was born on February 9, 1969 in Murfreesboro, Tennessee. He graduated from Riverdale High School (Murfreesboro, Tennessee) in 1987. He immediately entered Middle Tennessee State University and graduated with a degree in accounting in May 1991. After four years working in public accounting, he obtained a Master of Business Administration degree from Middle Tennessee State University, after which he entered the doctoral program at the University of Tennessee at Knoxville. After graduation in August 2000, he and his family returned to Murfreesboro, Tennessee where he has a position as an assistant professor of accounting at Middle Tennessee State University.