

AN EXPERIMENTAL EXAMINATION OF THE EFFECTS OF FRAUD SPECIALIST
AND AUDIT MINDSETS ON FRAUD RISK ASSESSMENTS AND ON THE
DEVELOPMENT OF FRAUD-RELATED PROBLEM REPRESENTATIONS

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Fraud risk assessment is an important audit process that has a direct impact on the effectiveness of auditors' fraud detection in an audit. However, prior literature has shown that auditors are generally poor at assessing fraud risk. The Public Company Accounting Oversight Board (PCAOB) suggests that auditors may improve their fraud risk assessment performance by adopting a fraud specialist mindset. A fraud specialist mindset is a special way of thinking about accounting records. While auditors think about the company's recorded transactions in terms of the availability of supporting documentations and the authenticity of the audit trail, fraud specialists think instead of accounting records in terms of the authenticity of the events and activities that are behind the reported transactions.

Currently there is no study that has examined the effects of the fraud specialist mindset on auditors' fraud risk assessment performance. In addition, although recent studies have found that fraud specialists are more sensitive than auditors in discerning fraud risk factors in situation where a high level of fraud risk is present, it remains unclear whether the same can be said for situation where the risk of fraud is low. Thus, the purpose of my dissertation is to examine the effects of fraud specialist and audit mindsets on fraud risk assessment performance. In addition, I examined such effects on fraud risk assessment performance in both high and low fraud risk conditions.

The contributions of my dissertation include being the first to experimentally examine how different mindsets impact fraud-related judgment. The results of my study have the potential

to help address the PCAOB's desire to improve auditors' fraud risk assessment performance through the adoption of the fraud specialist mindset. In addition, my study contributes to the literature by exploring fraud-related problem representation as a possible mediator of mindset on fraud risk assessment performance.

I executed my dissertation by conducting an experiment in which mindset (fraud specialist or audit) was induced prior to the completion of an audit case (high or low in fraud risk). A total of 85 senior-level accounting students enrolled in two separate auditing classes participated in my study. The results from my experimental provide empirical support that it is possible to improve auditors' fraud risk assessment through adapting the fraud specialist mindset. My study also provides preliminary evidence that individuals with the fraud specialist mindset developed different problem representations than those with the audit mindset.

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CHAPTER 1

INTRODUCTION, MOTIVATION AND ISSUE FOR RESEARCH

Auditing standards require auditors to determine whether a public company's reported financial statements are fairly presented in accordance to generally accepted accounting principles (GAAP). These financial statements are considered fairly presented if they are free of material misstatement, whether caused by error or fraud. As a component of this, auditors are required to assess their clients' risk of fraud exposure to fraudulent financial reporting, assets misappropriation (i.e., embezzlement), and corruption. Assessing the risk of fraud provides auditors the basis for fraud detection. Fraud risk assessment not only sets the tone for the audit, but also helps auditors determine the nature and extent of audit procedures designed to increase their likelihood of uncovering fraud. For example, auditors are likely to conduct additional audit tests if they believe that their clients are susceptible to high fraud risk. Thus, fraud risk assessment has a direct bearing on the effectiveness of auditors' fraud detection in an audit. Given the importance of fraud risk assessment, upon which the rest of the audit is based, accounting researchers have devoted much research attention to fraud-risk related issues (Cushing et al., 1995; Nieschwietz et al., 2000; Allen et al., 2006). Unfortunately, these studies have found that auditors are generally poor assessors of fraud risk and, consequently, they often fail at detecting fraud in the financial statements (Joyce and Biddle, 1981; Hackenbrack, 1992; Knapp and Knapp, 2001).

Auditors' inability to properly assess fraud risk and subsequently failing to detect fraud is costly to society and damaging to the auditing profession. As massive accounting scandals, corporate failures, and earnings restatements rocked the nation at the turn of the 21st century, the Association of Certified Fraud Examiners (ACFE) has estimated that U.S. corporations have

incurred a 2008 revenue loss of \$994 billion from fraud alone (ACFE, 2008). This staggering loss represents approximately 7 percent of the U.S. Gross Domestic Product in 2008. The prevalence of accounting fraud and audit failures has caused an erosion of public trust in the auditing profession (Nicolaisen, D. T., 2005; Silverstone and Davia, 2005; Hogan et al., 2008). In addition, it has also caused a higher expectation from the public for auditors to detect fraud. For example, Epstein and Geiger (1994) find that at least 97 percent of the investing public expects auditors to do whatever it takes to detect fraud. Additionally, over 71 percent of investors want auditors to provide absolute assurance that no fraudulent material misstatements are to be found in any reported financial statements (Epstein and Geiger, 1994).

Joseph T. Wells, founder of the Association of Certified Fraud Examiners (ACFE), has expressed his concerns about auditors' failure to detect fraud. He contends that "[a]s a group, CPAs are neither stupid nor crooked. But the majority are still ignorant about fraud...for the last 80 years, untrained accounting graduates have been drafted to wage war against sophisticated liars and thieves" (Wells, 2005). Jamal (2008) echoes Wells' concerns by arguing that fraud detection has become the auditing profession's Achilles heel. He suggests that if auditors continue to fail in detecting and preventing financial statements fraud, it may become necessary to replace auditors with fraud specialists (forensic accountants) to examine all public companies' reported financial statements as a means to better protect the public from fraud¹. Accounting

¹ Similar to fraud, accounting terminologies such as forensic accounting and fraud auditing have frequently been mentioned by the popular press, standard setters, and academic researchers. However, the meanings of these terminologies are neither clearly defined nor well understood by many (Singleton et al., 2006; Akers and Bellovary, 2006). Fraud auditing is a "unique auditing specialty that involves the use of auditing techniques developed for the sole purpose of detecting evidence of fraud" (Davia, 2000, p. 33). In other words, the objective of fraud auditing is to prove or disprove the existence of fraud. Forensic accounting, on the other hand, encompasses all aspects of fraud investigation. Forensic accounting is an application of investigative and analytical skills in the area of auditing of accounting records, gathering and evaluating financial statements evidence, interviewing all parties related to an alleged fraud situation, and serving as an expert witness in a fraud case (Rosen, 2006b; Singleton et al., 2006; Hopwood et al., 2008). In essence, fraud auditing is considered a subset of forensic accounting. Despite the differences, prior literature has not distinguished between fraud specialists and fraud auditors. Studies have used

standard setters, in an effort to restore public trust in the auditing profession, have increased the steps auditors are expected to take in order to detect fraud. Regulatory and oversight agencies have also commissioned various panels to examine ways to improve audit effectiveness in this regard. For example, the O'Malley Commission recommends that auditors incorporate fraud/forensic accounting procedures on every audit to enhance the likelihood of uncovering financial statements fraud (POB, 2000; Turner, 2000)². In addition, the Public Company Accounting Oversight Board (PCAOB) Standing Advisory Group (SAG) outlined a series of fraud-related issues and questions that warrant research attention from accounting researchers (PCAOB, 2004)³. One of the areas suggested by the SAG for further research is whether fraud specialists (forensic accountants) are better than auditors in detecting fraud. Specifically, the SAG is interested in the effects of a fraud specialist mindset on fraud risk assessment and fraud detection.

A fraud specialist mindset represents a special way of thinking about accounting records. Fundamental differences exist between fraud specialist and audit mindsets. Auditors think about the company's recorded transactions in terms of the availability and reliability of supporting documentations and the audit trail. However, they are not expected to authenticate accounting documentations. As stated in the auditing standard, "an audit rarely involves the authentication of documentation, nor is the auditor trained as or expected to be an expert in such authentication" (PCAOB, 2007, p. 447). Auditors are primarily concerned with providing reasonable assurance that the reported financial statements taken as a whole are stated fairly, in all material respects, in

"fraud specialists" or "fraud experts" to represent forensic accountants/auditors (Boritz et al., 2008; Rose et al., 2009). Thus, to be consistent with prior literature and for the purpose of this study, I refer to fraud specialists as individuals who are capable of performing both forensic accounting and fraud auditing.

² These forensic procedures entail substantive tests that are directed at the possibility of fraud. An example of such test includes conducting inventory and cash counts in a surprise or unpredictable manner.

³ The primary role of the SAG is to advise the PCAOB on the establishment of auditing and related professional practice standards (PCAOB, 2008).

accordance to GAAP, and are free of material misstatements. Fraud specialists, on the other hand, presume that a perfect audit trail does not mean that the recorded transactions are free from fraud. They believe that fraud perpetrators often try to deceive auditors by leaving behind a seemingly legitimate audit trail. Thus, fraud specialists think instead of accounting records in terms of the authenticity of the events and activities that are behind the reported transactions (Singleton et al., 2006; Singleton and Singleton, 2007). Although fraud specialists may rely on the audit trail, they are more concerned about whether the recorded transactions have actually taken place. In addition, their work often involves authenticating accounting documentations and interviewing corporate personnel. Finally and perhaps most importantly, unlike auditors, fraud specialists are charged with the objective to make an absolute determination about the existence of fraud (Davia, 2000; Silverstone and Davia, 2005; Singleton et al., 2006; Singleton and Singleton, 2007).

Based on the SAG's discussion on mindset, accounting researchers have advocated that financial statement auditors adopt a fraud specialist mindset as a means to improve their consideration of fraud in an audit (Rosen, 2006a; Rosen, 2006b; Smieliauskas, 2006). Hogan et al. (2008) suggest that the study of fraud specialist and audit mindsets would provide important insight into how different mindsets influence auditors' fraud-related decision making performances. Some accounting researchers have also argued that having a proper fraud specialist mindset is probably the most effective way to detect fraud. They contend that it is the fraud specialist mindset, rather than special fraud/forensic-related training and methodology, that helps fraud specialists in their detection of fraud (Bologna, 1984; Bologna and Lindquist, 1987; Singleton et al., 2006; Singleton and Singleton, 2007). Nevertheless, currently there is no study that has experimentally examined the direct effects of mindset on fraud risk assessment

performances. In addition, studies on fraud specialists' and auditors' fraud risk assessment performance are few and far between.

In a recent study, Boritz et al. (2008) experimentally examine whether fraud specialists are more sensitive than auditors in discerning fraud in an audit when fraud is present. Overall, the findings of Boritz et al. (2008) suggest that fraud specialists are better able than auditors to detect fraud when the risk of fraud is high. Nevertheless, it remains unknown whether fraud specialists can out-perform auditors in low fraud risk condition. Fraud specialists who take a high fraud risk approach to an audit may increase the likelihood of uncovering fraud. However, it may also result in over-auditing, increased audit cost, and consequently reducing audit efficiency when the risk of fraud is low⁴.

To fill the void in this research area, I focus my dissertation on contrasting the effects of fraud specialist and audit mindsets on fraud risk assessment effectiveness in both high and low fraud conditions⁵. Performance differences between fraud specialists and auditors may be attributed to factors such as differences in mindset, knowledge, experience, training, or other various personal traits and disposition. This study examines the effects of one of these factors – fraud specialist and audit mindsets – for two reasons, one theoretical and one practical. First, the psychology literature provides the theoretical justification for examining how different mindsets influence individuals' performances while keeping variables such as knowledge, experience, and training constant (Armor and Taylor, 2003; Gagné et al., 2003; Torelli and Kaikati, 2009). Second, inducing a fraud specialist mindset is a low cost alternative to training auditors in the acquisition of fraud/forensic-related knowledge and skill sets. If a fraud specialist mindset, as

⁴ Over-auditing occurs when auditors expend too much resources and time than necessary in performing a given audit task/procedure at a specific effectiveness level (Davis and Solomon, 1989; Salterio, 1994).

⁵ To be consistent with prior literature (e.g. Knapp and Knapp, 2001), I define fraud risk assessment effectiveness as being able to assess fraud risk higher when the risk of fraud is high and to assess fraud risk lower when the risk of fraud is low.

compared to an audit mindset, can yield a more effective fraud risk assessment, it would provide audit firms with a low cost strategy to improve auditors' consideration of fraud in an audit. In addition, based on the literature on mindset, I explored a possible mediator in the relationship between mindset and fraud risk assessment performance – problem representation⁶.

The contributions of my dissertation are as follows. First, my study is the first to directly examine how different mindsets impact fraud-related judgments. The results of this study have the potential to help address the PCAOB Standing Advisory Group's (SAG) desire to improve auditors' consideration of fraud. It also provides useful insights for researchers as to how different mindsets influence accounting-related judgment and decision making performance. Second, my study contrasted the effects of fraud specialist and audit mindsets on fraud risk assessment effectiveness in both high and low fraud conditions. As previously mentioned, it is unknown whether fraud specialists, who take a high fraud risk approach, are able to assess fraud risk low when the risk of fraud is low. While assessing fraud risk as high may increase the effectiveness in addressing fraud in an audit, it may result in expending unnecessary resources and reducing audit efficiency when the risk of fraud is low. Thus, this study allows me to determine whether the fraud specialist mindset is equally effective across the broad range of fraud conditions that auditors are likely to face. If a fraud specialist mindset can help auditors to effectively assess fraud risk in both high and low fraud conditions, it would be beneficial for auditors to adopt such mindset. Finally, my study contributes to the literature by exploring fraud-related problem representation as a possible mediator of mindset on fraud risk assessment performance.

I carried out my dissertation by conducting an experiment in which mindset (fraud

⁶ Problem representation is a cognitive function that helps individuals interpret a decision making task. It enables individuals to create a mental picture of how they should address and solve the task at hand (Chi et al., 1981; Christ, 1993; Koonce, 1993; Bonner, 2007).

specialist or audit) is induced prior to undertaking a fraud risk assessment task for a hypothetical company (high or low in fraud risk). I manipulated mindset by having participants read brief but detailed descriptions about the ways of thinking generally associated with either a fraud specialist (in the fraud specialist mindset treatment group) or an audit (in the audit mindset treatment group). Specifically, participants were exposed to a list of key descriptors representative of either a fraud specialist or an audit mindset. A panel of experts consisting of professionals in the fraud/forensic and auditing fields was consulted to ensure the validity of these key mindset descriptors. After the mindset manipulation, participants were asked to assess the fraud risk of a hypothetical company. I manipulated the level of fraud risk by embedding into the hypothetical company fraud risk factors which suggest high or low fraud risk. As part of my study, participants were asked to complete a recall task and a memory recognition test as a means to elicit their problem representations. The subjects for my study are senior-level accounting students enrolled in an auditing class. The experiment was conducted after students learned the concept of fraud risk assessment.

The remainder of this dissertation is organized as follows. Chapter 2 provides a detailed discussion on the concept of fraud, a literature review of fraud risk assessment, a discussion of the differences between fraud specialists and auditors, and a review of problem representations. This chapter also contains the research model and hypotheses development of my study. Chapter 3 presents the research methodology, the development and validation of the research instrument, the experimental procedures, and the discussion of hypotheses testing. Chapter 4 presents the experimental results of this study. The final chapter of this dissertation offers concluding remarks, contributions, limitations, and opportunities for future research.

CHAPTER 2

LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

This chapter provides an overview of the research framework and literature review that are relevant to my dissertation. I begin this chapter by describing the concept of fraud. Next, I review the relevant literature on fraud risk assessment followed by a detailed discussion on auditors' responsibility to detect fraud, as well as the fraud specialist and audit mindsets. I then review the relevant literature on problem representations followed by a discussion on my research framework and its underlying theory. I conclude this chapter by providing a summary of the hypotheses generated in this chapter.

Fraud

Fraud involves intentional deception, lying, deceitful pretenses, cunning, willing misrepresentation of material fact, and deliberate trickery intended to gain an unfair and dishonest advantage (Bologna and Lindquist, 1987; Hanlin, 2004; Akers and Bellovary, 2006; Singleton et al., 2006). In order for an action to constitute fraud, the following four general elements must exist: false representation of fact, scienter (intent to deceive), reliance, and damages (Wells, 2004b; Skalak et al., 2006). In other words, fraud occurs when a victim incurs damages by relying on the false representation supplied by the fraud perpetrator who possesses the intention to deceive the victim. Fraud is so varied that researchers have had to create a long list of terms to describe all the different fraud schemes.

In the context of auditing, occupational fraud is perhaps the most likely type of fraud faced by financial statement auditors. This type of fraud is difficult to detect because it is generally ongoing and can remain undiscovered for months or even years (ACFE, 2008).

According to the Association of Fraud Examiners (ACFE, 2008, p.6), occupational fraud involves “[t]he use of one’s occupation for personal enrichment through the deliberate misuse or misapplication of the employing organization’s resources or assets.” The three major categories of occupational fraud are fraudulent financial reporting, assets misappropriation, and corruption (AICPA, 2002; ACFE, 2008). Fraudulent financial reporting involves intentional or reckless conduct resulting in the misstatement or omission of material information in a company’s reported financial statements for the sole purpose of deceiving the financial statements users (Treadway, 1987; AICPA, 2002). Assets misappropriation involves the theft or misuse of an organization’s resources. Finally, corruption entails the use of bribery and other illegal acts by the fraud perpetrators as a means to obtain an unfair and dishonest advantage for themselves or someone else (AICPA, 2002; ACFE, 2008).

Companies typically implement controls to reduce their exposure to fraud. While these controls may serve to limit fraud, they can be compromised or broken by unscrupulous fraud perpetrators. In addition, it is difficult to discern the existence of fraud because, unlike errors, it is subject to concealment (Loebbecke et al., 1989; Albrecht et al., 2001; Wells, 2001; Davia, 2002; Webber et al., 2006). Thus, even in situations where accounting controls are strong, fraud may still occur and could require auditors to detect it (Singleton et al., 2006). Consequently, the more auditors understand the concept of fraud and the psyche of fraud perpetrators, the better prepared they are to consider and to identify fraud in an audit (Golden, 2006). In an effort to understand the psyche of fraud perpetrators, criminologist Donald Cressey (1953) conducted about 200 private interviews with penitentiary inmates convicted of fraud. Through his interviews, Cressey (1953) found that these fraud perpetrators, which he referred to as trust violators, were in a position of trust in their respective organizations. In fact, they were all in

positions that afforded them the knowledge and opportunity to defraud their organizations.

Based on his findings, Cressey (1953) developed a theory of fraud which predicts a heightened likelihood of fraud occurrence in the presence of opportunity, non-shareable financial problems, and rationalization. Ultimately, Cressey's theory served as the foundation of what is known today as the "fraud-triangle". Similar to the theory of fraud, the fraud-triangle represents the key elements that tend to be present when fraud occurs. These elements are "incentive/pressure to perpetrate fraud, opportunity to carry out the fraud, and attitude/rationalization to justify the fraudulent action" (AICPA, 2002, p.287).

Fraud Risk Assessments

In a traditional audit, auditors would examine a selected sample of their clients' transactions to support the opinion on the reported financial statements. While auditors may want to have the opportunity to examine every transaction, they cannot (Gerson et al., 2006). Auditors understand that they are allocated a fixed time budget for their work. If they spend too much time examining one account, they may have to spend less time somewhere else to stay within budget or they might run the risk of suffering a lower profitability on the audit. In order to optimize their success in detecting fraud in an audit, auditors employ a fraud risk assessment process to assess the likelihood that fraud may exist in the company's reported financial statements. Their assessments are largely based upon both their past experience with their clients and current evidence they have gathered during the audit. Thus, the level of assessed fraud risk has a direct impact on how much work they will do in response to the fraud risk factors they have identified. In essence, fraud risk assessment helps auditors determine "when and where to concentrate their [audit] procedures" (Gerson et al., 2006, p.23). As assessed fraud

risk goes up, auditors are often left with the tradeoff between audit effectiveness and audit efficiency⁷. While assessing fraud risk as high may increase the effectiveness in addressing fraud in a financial statement audit, these actions may result in over-auditing, increase audit cost, and consequently reduce the efficiency of the audit when fraud is not present. On the other hand, assessing fraud risk too low when fraud is present exposes the audit firm to significant penalty, including litigation, costly settlement, and reputation loss (Palmrose, 1987). Thus, it is critical for auditors to be able to assess fraud risk higher when the risk of fraud is high and vice versa.

Unfortunately, research in fraud risk assessment has found that auditors are generally poor assessors of fraud risk (Joyce and Biddle, 1981; Hackenbrack, 1992; Knapp and Knapp, 2001). Thus, accounting researchers have devoted much research attention to improving auditors' fraud risk assessment (Cushing et al., 1995; Nieschwietz et al., 2000; Patterson and Noel, 2003; Allen et al., 2006). For example, research studies have evaluated the use and effectiveness of red flag questionnaires (Albrecht and Romney, 1986; Pincus, 1989; Asare and Wright, 2004), the use of empirically derived fraud risk models (Hansen et al., 1996; Skousen and Wright, 2006; Tseng and Chang, 2006), and alternative methods to improve auditors' fraud risk assessment performance (Jiambalvo and Waller, 1984; Wilks and Zimbelman, 2004; Bamber et al., 2008). Accounting researchers have also begun to examine fraud risk assessment performance differences between fraud specialists and financial statements auditors (Boritz et al., 2008; Rose et al., 2009).

While the literature of fraud-related research is broad, this study concentrates on research in the area of fraud risk assessment for the following reasons. As previously discussed, fraud risk assessment has a direct impact on auditors' ability to detect fraud since it sets the tone of the

⁷ According to Davis and Solomon (1989), audit effectiveness is concerned with how well a given audit task/procedure is performed. Audit efficiency, on the other hand, addresses the question of how much resources have been expended to perform a given audit task/procedure at a specific effectiveness level.

audit by helping auditors determine the nature and extent of subsequent audit procedures. Thus, it is an important task that needs to be done effectively. In addition, Nieschwietz et al. (2000) suggest that fraud detection has created a significant challenge for the auditing profession. They encourage accounting researchers to continue in their search for ways to improve auditors' fraud risk assessment performance and fraud detection ability.

In the following subsections, I provide a review of major studies that have examined auditors' fraud risk assessment performance.

Auditors' Fraud Risk Assessment

Joyce and Biddle (1981) found auditors to be subject to heuristic bias when making fraud risk judgments. Based on the theory of anchoring and adjustment, Joyce and Biddle (1981) conducted a series of experiments to examine the effects of heuristics on auditors' fraud risk assessments. A total of 182 practicing auditors from two large accounting firms participated in a series of experiments where they were assigned to different experimental treatment groups. Auditors from each treatment group received a different irrelevant anchor concerning the incidence of significant executive-level management fraud faced by large public accounting firms. After reviewing the case materials, auditors were asked to provide an estimate of the frequency of occurrence of management fraud among firms audited by large public accounting firms. Joyce and Biddle (1981) argue that the irrelevant anchors should not impact auditors' fraud risk judgments. However, their experimental results show that the irrelevant anchors had a marked effect on auditors' responses. Thus, the findings from Joyce and Biddle (1981) suggest that auditors are susceptible to irrelevant anchors when making fraud risk assessments.

Not only do auditors fall prey to anchoring and adjustment bias, they also suffer from the

dilution effect. The dilution effect takes place when irrelevant information diminishes the influence of relevant information on individuals' judgment (Nisbett et al., 1981)⁸. Hackenbrack (1992) conducted a within-subjects experiment to examine the effect of non-diagnostic information on auditors' fraud risk judgment. Auditors often have to navigate through a mixture of diagnostic and non-diagnostic audit evidence in assessing the level of fraud exposure relevant to their clients. Hackenbrack (1992) argues that the presence of non-diagnostic evidence lessens the effects of diagnostic evidence related to the possibility of fraud, rendering auditors' fraud risk assessments less accurate and less effective. To test his hypotheses, 74 auditors were first given information related to a hypothetical company's prior year activities to establish a baseline assessment of the company's exposure to fraudulent financial reporting. They were then given various types of non-diagnostic and diagnostic information regarding the current year activities. The diagnostic information represented audit workpaper excerpts describing either an increase or a decrease of the company's exposure to fraudulent financial reporting. The non-diagnostic information included facts and documents such as a client's willingness to provide auditors with requested items or a copy of a client's organizational chart. After reviewing the case materials, participants were asked to assess the extent of change in the company's risk exposure to fraudulent financial reporting. Consistent with Hackenbrack's (1992) predictions, the non-diagnostic information weakened the effect of the diagnostic information and subsequently diluted the auditors' fraud risk assessments.

While Joyce and Biddle (1981) and Hackenbrack (1992) provide important insights into the influence of the anchoring and adjustment bias and of the dilution effect on auditors, they do not take into account the effect of audit experience on auditors' fraud risk assessment

⁸ Irrelevant (or nondiagnostic) information represents facts that have no value in helping individuals to predict the outcome of a decision task. Relevant (diagnostic) information, on the other hand, represents facts that are useful in aiding individuals in predicting the outcome of a decision task (Nisbett et al., 1981).

performance. Other studies such as Bernardi (1994 and Knapp and Knapp (2001) conducted an experiment to examine auditors' fraud risk assessments effectiveness. These studies shown that experience has the potential to reduce biases described above.

The preceding review shows that auditors often struggle to render accurate fraud risk assessments. In an effort to help improve auditors' assessments, audit firms often provide them with tools such as red flag questionnaires to assist auditors in their fraud risk assessment. Next, I provide a review of the use and effectiveness of red flags questionnaire in aiding auditors with their fraud risk assessment.

Use and Effectiveness of Red Flags

Fraud is often easy to conceal, making it difficult to detect by untrained observers (Albrecht et al., 2001; Wells, 2001b; Davia, 2002). Nevertheless, accounting researchers have argued that the indicators or symptoms of fraud, referred to as red flags, are often discernable if individuals are willing to examine evidence from seemingly dull sources with diligence and sensitivity (Albrecht et al., 2001; Brooks and Labelle, 2006). Examples of red flags include accounting and analytical anomalies, deficiencies or weaknesses in accounting controls, and unusual behaviors or extravagant lifestyles exhibited by member(s) of an organization (Albrecht and Albrecht, 2004). Fraud red flags are particularly important in fraud risk assessments, because they provide auditors with cues about the possible existence of fraud (Singleton et al., 2006). The use of red flag questionnaires, to a large extent, gives auditors a structured approach to their consideration of fraud in an audit. It should also increase their awareness and sensitivity to the possibility of fraud and thus, improve the likelihood of detecting fraud (Krambia-Kapardis,

2002). However, studies have shown that auditors often fail to effectively utilize these red flag questionnaires to render proper fraud risk assessment.

Albrecht and Romney (1986) were the first to empirically examine the usefulness of red flag questionnaires in detecting fraud. Audit partners who either have or have not experienced fraud at their most recent audit participated in a survey containing 87 red flags. Audit partners indicated whether they had knowledge of the existence of these 87 red flags during that audit. Audit partners who had experienced fraud in their last audit were also asked to rank the most salient red flags associated to their fraud cases. Albrecht and Romney (1986) found that only about one-third of the 87 red flags were effective in helping auditors predict the existence of fraud.

To further examine the effectiveness of red flags, Pincus (1989) studied the effects of red flag questionnaires on auditors' fraud risk assessments in both fraud and no fraud situations. One hundred thirty seven in-charge auditors participated in her 2x2 between-subjects experiment where red flag questionnaires (presence versus absence) and the type of experimental case (fraud versus no fraud) were crossed between subjects. Participants were also asked to review a set of background information about an audit client which included multiple prior years of audited financial statements and the current year's unaudited financial statements. Upon reviewing the case information, participants were asked to render a fraud risk assessment for the client. In the fraud condition, Pincus (1989) found no significant difference in the assessed fraud risk between red flag questionnaire users and non-red flag questionnaire users. In the no fraud condition, contrary to her expectation, Pincus (1989) found the non-red flag questionnaire users assessed fraud risk at a lower level than the red flag questionnaire users. In essence, auditors who used the red flag questionnaires made less reliable and ineffective fraud risk assessments than the

auditors who did not use the questionnaires. The findings from Pincus's (1989) study suggest that red flag questionnaires are ineffective in helping auditors to detect fraud in an audit.

Similarly, Asare and Wright (2004) experimentally examined the effect of fraud risk questionnaires (similar to the red flags questionnaire) and audit program development tools on auditors' fraud risk assessments and fraud planning effectiveness. Asare and Wright (2004) also examined auditors' propensity to consult with fraud specialists. A total of 69 auditors from three major public accounting firms participated in the experiment. Asare and Wright (2004) developed their experimental case from the Accounting and Auditing Enforcement Release (AAER) on Bausch and Lomb⁹. Participants were given different fraud risk assessment (fraud risk questionnaire versus no fraud risk questionnaire) and audit program development (standard audit program versus no audit program). Participants were asked to review a set of company information and then assess the company's inherent risk, control risk, and fraud risk. They were also asked to design subsequent audit procedures to mitigate the risks they had identified. Asare and Wright (2004) found that auditors using a fraud risk questionnaire to be less accurate (i.e. assessing fraud risk lower when fraud existed) than auditors who did not use the questionnaire. They also found that auditors with a standard audit program designed a less effective fraud program (when compared to the benchmark from a panel of expert fraud specialists) than auditors without the standard audit program. In addition, they found that auditors who assessed the risk of fraud at a higher level were more likely to consult fraud specialists. Overall, the findings from Asare and Wright (2004) appear to be consistent with those of Pincus (1989), suggesting the ineffectiveness of red flag questionnaires in helping auditors render reliable fraud risk assessments.

⁹ Asare and Wright (2004) develop their case based on AAER No. 987. This particular AAER deals with the fraudulent financial reporting of Bausch and Lomb in 1993. Bausch and Lomb committed revenue fraud involving schemes such as bill-and-hold and recording fictitious sales.

The red flags used in the previous experimental studies were developed prior to the issuance of Statement on Auditing Standards (SAS) No. 99. In order to assess the effectiveness of the current SAS No. 99 red flags in helping auditors to detect fraud, Moyes et al. (2006) conducted a survey to examine auditors' perceptions of these red flags. Approximately 1,800 members of the Institute of Internal Auditors (IIA) were asked to rate their perceptions of the usefulness of the SAS No. 99 red flags in helping them to detect fraud in an audit. Participants were asked to determine the effectiveness of each of the 42 red flags listed in SAS No. 99 from "not effective" to "extremely effective". SAS No. 99 categorizes red flags into three groups representing the fraud-triangle (opportunities, incentives/pressure, and attitudes/rationalizations). Moyes et al. (2006) found that auditors did not rate all of the SAS No. 99 red flags equally in terms of their effectiveness in detecting financial statements fraud. Red flags associated with attitudes/rationalizations were assessed as marginally more effective than red flags associated with opportunities or those associated with incentives/pressure. While Moyers et al. (2006) provided some preliminary results on the SAS No. 99 red flags, the usefulness of these red flags remains an empirical question.

Auditors' Responsibility to Fraud Detection

Although the above studies have shown that auditors often struggle with assessing fraud risk, they continue to bear a degree of responsibility to detect fraud in an audit¹⁰. As the profession is being bombarded with waves of accounting scandals and Congressional inquiries, it is beginning to reemphasize the need for auditors to be vigilant in their consideration of fraud in an audit. While no auditing standards can provide absolute assurance in detecting all fraud,

¹⁰ Over the years, the auditing profession has moved from viewing fraud detection as its chief audit objective, to disclaiming its obligation to uncover fraud in an audit, and is now moving back toward recognizing a responsibility for detecting fraud.

standard setters have demonstrated a commitment to improving auditors' fraud detection by issuing various fraud-related auditing standards (Wells, 2004a). For example, recent standards require auditors to exercise professional skepticism in their consideration of the elements of the fraud-triangle and of the warning signs (red flags) of fraud in an audit. In addition, auditors are to apply fraud/forensic procedures and to consult with fraud specialists during an audit to enhance their consideration of fraud. As standard setters are considering integrating fraud/forensic accounting techniques into the conduct of an audit, research in this area is needed to determine whether fraud specialists are more effective than auditors in assessing fraud risk across the broad range of fraud conditions.

Fraud Risk Assessment Performance Differences Between Fraud Specialists and Auditors

In an effort to determine whether fraud specialists are more able than auditors to assess fraud risk effectively, accounting researchers have begun to examine fraud risk assessment differences between fraud specialists and auditors. Boritz et al. (2008) were the first to experimentally study the differences between fraud specialists and financial statements auditors in terms of their fraud risk assessment performances. Building upon the experimental case of Asare and Wright (2004), Boritz et al. (2008) gave 31 fraud specialists and 17 financial statement auditors an audit case based on an Accounting and Auditing Enforcement Release (AAER) involving revenue fraud. Participants were asked to assess the company's inherent, control, and fraud risks. They were also asked to design subsequent audit programs by (1) choosing procedures from a standard audit program based on the previous year's audit, (2) modifying the budgeted audit hours, and (3) proposing any additional procedures to address the fraud risk factors they had identified. Boritz et al. (2008) found that fraud specialists identified

significantly more fraud risk factors and assessed control and fraud risks at higher levels than auditors. While auditors adjusted the audit time budget based on the number of fraud risk factors identified and modified the number of procedures they selected from the standard audit program accordingly, fraud specialists revised the standard program with more effective procedures without increasing the overall budget hours. In addition, when compared to the benchmark from a panel of experts, fraud specialists were better than auditors at identifying and proposing more effective procedures in response to the fraud risk seeded in the experimental case.

In another working paper, Rose et al. (2009) found preliminary evidence that fraud specialists organized red-flags in memory differently than auditors. While Rose et al. (2009) did not directly test for fraud risk assessment performance differences between fraud specialists and auditors, they did find that fraud specialists provided relatively more accurate fraud risk assessment than auditors. Rose et al. (2009) first presented fraud specialists with various fraud risk factors suggested by SAS No. 99. They found that fraud specialists organized and processed red flags differently than financial statements auditors. Auditors thought about fraud risk factors in terms of the fraud-triangle as presented in SAS No. 99. According to Rose et al. (2009), fraud specialists organized elements of the fraud-triangle into three groups: (1) management place strong pressure on auditors, (2) management has significant financial interests in the company, and (3) excessive pressure on management to meet financial targets. Based on this finding, Rose et al. (2009) then developed a comprehensive fraud risk checklist according to the fraud specialists' organization of the SAS No. 99's fraud risk factors. In an effort to test the effectiveness of the fraud specialists' way of organizing fraud risk factors on fraud risk assessment, Rose et al. (2009) randomly provided auditors with either a typical SAS No. 99 fraud risk checklist or their newly developed checklist. They found that auditors who had

adopted the fraud specialists' organization of red flags were able to provide fraud risk assessments similar to those of the fraud specialists.

The findings of Bortiz et al. (2008) and Rose et al. (2009) suggest that fraud specialists are more able than auditors in rendering accurate fraud risk assessment in high-risk contexts. In addition, Rose et al. (2009) provided accounting researchers with preliminary empirical evidence that it is possible for auditors to adopt a fraud specialist mindset to improve their fraud risk assessment performance. Both Bortiz et al. (2008) and Rose et al. (2009) focused on performance differences between fraud specialists and auditors. In addition, both studies used an audit case containing high fraud risk. Although high fraud risk is an important context, it remains unknown whether fraud specialists can out-perform auditors in low fraud risk condition as well. In other words, it is not clear whether fraud specialists may have the tendency to assess all fraud risk factors at a higher level than auditors.

Fraud Specialists versus Auditors

Research in the area of comparing fraud risk assessment performance differences between fraud specialists and auditors is still in its infancy. However, findings from both Bortiz et al. (2008) and Rose et al. (2009) studies have provided promising preliminary evidence of the superior ability of fraud specialists in detecting fraud. While auditors appear to exhibit a lack of sensitivity in discerning the telltale signs of fraud, they are in no way inferior to fraud specialists in terms of their education, training, experience, and professionalism. In actuality, there are many commonalities between fraud specialists and auditors. For example, they are both required to maintain a high degree of independence and objectivity. They are all encouraged to be innovative and to avoid having any preconceptions and biases when evaluating evidence

(Bologna, 1984). In addition, both fraud specialists and auditors have in-depth knowledge of GAAP as well as general business practices and processes.

Although fraud specialists and auditors share the above characteristics, the primary difference that separates them is their mission. In a financial statements audit, auditors' primary objective is to examine whether the company's reported financial statements, taken as a whole, are stated fairly, in all material respects, in conformity with Generally Accepted Accounting Principles (GAAP). They are to conduct such an audit in accordance with Generally Accepted Auditing Standards (GAAS) in order to provide reasonable assurance that the reported company's financial statements are free from material misstatements (Rittenberg et al., 2008). Financial statements auditors approach an audit by following "a set of fixed and orderly...predesigned tasks, procedures, and tests for the verification of business transactions and an evaluation of the adequacy of the accounting system to reflect fairly, accurately, and consistently the financial condition of a firm at a point time" (Bologna, 1984, p.26). Fraud auditing/forensic accounting, on the other hand, is the application of investigative and analytical skills to accounting and other types of records. Fraud specialists gather and evaluate evidence, interview all parties related to an alleged fraud situation, and serve as an expert witness in fraud cases (Rosen, 2006b; Singleton et al., 2006; Hopwood et al., 2008). The primary objective of the fraud specialist is to make an absolute determination about the existence and source of fraud (Davia, 2000; Silverstone and Davia, 2005; Singleton et al., 2006; Singleton and Singleton, 2007).

Gerson et al. (2006) offered a simple analogy to help illustrate the difference between fraud specialists' and auditors' missions. Gerson et al. (2006) liken fraud specialists to detectives and auditors to patrolmen. Similar to auditors, patrolmen circulate through their

assigned districts with the objective of keeping peace in the community. While they would like to continuously patrol through every location in their districts, they understand that it would be both time and cost prohibitive for them to do so. Thus, they have to rely on their risk assessment to determine which location they will need to patrol more frequently than others. To remain effective, patrolmen have to balance risk and expectations in order to determine whether to focus or expand their patrols. Thus, they are constantly thinking about how to allocate their fixed time budget to optimize their patrol effectiveness. On the other hand, much like fraud specialists, detectives are not on patrol. They are called in to investigate whether a crime has been committed. In order to successfully accomplish their mission, detectives will examine everything in the alleged crime scene to gather any clues that may help them solve the case. Unlike patrolling the community, crime investigation is a time consuming and costly endeavor. Detectives are expected to keep searching for clues until they are satisfied with their assessment of whether a crime has occurred. Thus, they are constantly thinking about how different clues may piece together events that have happened.

As a city has to balance the need for patrol and crime detection, standard setters must determine how to integrate fraud investigation in an audit (Gerson et al., 2006). In an effort to promote new approaches to fraud detection, the PCAOB Standing Advisory Group (SAG) has recommended that accounting researchers consider the effects of the fraud specialist mindset on auditors' fraud risk assessment performances. The SAG believes that the fraud specialist mindset may help auditors to increase the likelihood of discovering fraud in an audit.

Fraud Specialist Mindset versus Audit Mindset

A mindset is a general cognitive orientation with distinct features that guide individuals

in the collection and interpretation of information (Gollwitzer, 1996). It influences how individuals process information as well as shaping their thought productions and ways of thinking. Consequently, it has a direct impact on individuals' decision making performances. Psychology researchers have found that a simple difference in mindset can yield substantial differences in how individuals perceive and perform a decision making tasks (Gollwitzer and Kinney, 1989; Gollwitzer, 1990; Brandstatter and Frank, 2002; Armor and Taylor, 2003; Gagné et al., 2003)¹¹. These studies showed that mindset has a marked impact on individuals' decision making performance. For example, Armor and Taylor (2003) manipulated research participants into different mindset groups by varying the manner in which participants are to consider a particular performance task. Consistent with their expectations, Armor and Taylor (2003) found that a different mindset led to a different performance outcome.

Mindset impacts decision making performance through its effect on the way in which individuals process task related information (Beckmann and Gollwitzer, 1987). According to Gollwitzer (1990), priming individuals with a particular way of thinking would cognitively evoke them to focus on information consistent with that mindset. Gollwitzer (1990) theorized that such a mindset would help individuals search for information relevant to the achievement of their task by increasing their confidence, determination, and commitment to accomplish their decision making task. In addition, individuals are likely to behave in ways that conform to their assigned mindset. For example, Torelli and Kaikati (2009) induced two distinct mindsets via a thought exercise in research participants to assess their effects on individuals' judgments and performance in a series of six experiments. They found that participants' responses to a broad range of behavioral measures such as benevolence and individualism differed significantly

¹¹ Student subjects were used in these mindset-related studies and thus, allowing researchers to control for potential differences due to knowledge, experience, and training.

depending on their assigned mindset¹². Torelli and Kaikati (2009) contended that since mindset guided individuals in the interpretation and planning of their actions, it was no surprise to see them behave differently in accordance with their assigned mindset. Consistent with prior research, Torelli and Kaikati (2009) provided empirical evidence demonstrating the association between individuals' mindsets and their subsequent behaviors.

In the context of this study, the consideration of mindset is important because fundamental differences exist between auditors and fraud specialists in terms of their mission and the way they think about accounting transactions (Silverstone and Davia, 2005; Singleton et al., 2006). As discussed, auditors' mission is to determine whether their clients' reported financial statements, taken as a whole, are fairly presented in accordance to GAAP. According to auditing standards, the audit mindset contains an appropriate level of professional skepticism. In particular, auditors are supposed to maintain a questioning mind when they evaluate audit evidence (AICPA, 2002). Given that auditors' primary objective is not to detect fraud, they are less concerned, when compared to fraud specialists, with minor discrepancies or immaterial misstatements in any particular account. In other words, auditors are primarily focus on giving an audit opinion about all accounts combined. In addition, since auditors understand that they have to work with a fixed audit time budget, they often have to balance between audit effectiveness and audit efficiency. While auditors are not fraud examiners, they are still required to consider the possibility of fraud that may occur in an audit. Specifically, Statement on Auditing Standards (SAS) No. 99, *Consideration of Fraud in a Financial Statement Audit*, requires auditors to consider "the possibility that a material misstatement due to fraud could be present" (AICPA, 2002, p. 277). Auditors are to participate in brainstorming sessions to discuss

¹² Other behavioral measures include power, universalism, self-direction, and collectivism (Torelli and Kaikati, 2009). Discussion of these measures is beyond the scope of this paper.

possible red flags that are relevant to their clients. To further assist auditors in their consideration of fraud, SAS No. 99 requires auditors not to assume that management is honest and has integrity.

In contrast, fraud specialists' mission is to determine whether fraud exists, regardless of materiality. According to the literature, a fraud specialist mindset is composed of the following beliefs about fraud and its detection. First, fraud specialists believe that fraud is possible even in the presence of strong internal control (Rezaee, 2002; Singleton et al., 2006). They believe that anyone is susceptible to committing fraud given the means, motive, and the opportunity (Singleton et al., 2006). Second, they believe that it is possible to identify the telltale signs of fraud if they are willing to look deeply for them (Bologna, 1984; Singleton et al., 2006). Third, fraud specialists believe that things are not always as they appear. While a visible immaterial misstatement may appear to be inconsequential, the invisible portion of the misstatement could be substantial (Singleton et al., 2006). Consequently, they tend to look at "events, transactions, and environments in terms of their covert aspects" and focus on "the behavioral aspects of control" (Bologna and Lindquist, 1987, p. 40)¹³. Finally, in order to discover fraud, fraud specialists believe that it is often necessary to think like a thief by asking themselves how the fraud perpetrator would probe and exploit any weaknesses of a company (Bologna, 1984; Bologna and Lindquist, 1987).

The preceding discussion underlines the difference between the fraud specialist and the audit mindset. The next section presents a review of problem representation.

¹³ For example, they may consider by whom and under what circumstances the company's internal controls could be compromised.

Problem Representations

Individuals develop problem representations when they are faced with a decision making task (Gagné and White, 1978; Mani and Johnson-Laird, 1982; Pitz and Sachs, 1984). Problem representation is an internal cognitive framework that embodies an individual's understanding and interpretation about a problem situation (Greeno, 1977; Chi et al., 1981; Bedard and Chi, 1993; Christ, 1993). This internal structure is constructed by mapping available problem information into individuals' existing knowledge relevant to the type of decision task they encounter (Chi et al., 1981; Koonce, 1993). The mapping process facilitates the construction of mental slots used to help individuals store information about their decision task (Pichert and Anderson, 1977; Wyer and Srull, 1980). Ultimately, this process enables individuals to create a mental picture (or a road map) of the problem context, which in turn helps them to address and solve the decision task by retrieving relevant information from the previously constructed mental slots (Wyer and Srull, 1980; Glaser, 1984). For example, auditors who are asked to review the internal control of their clients will formulate a problem representation that helps them understand the context in which they should carry out the review.

The underlying function of a problem representation is to support individuals' understanding of the problem context and reasoning of the decision task encountered (Rouse and Morris, 1986; Markman and Gentner, 2001). In addition, such representation enables individuals to extrapolate the meaning of the task at hand beyond basic facts that are given to them. In other words, problem representation helps individual to "abstract from basic facts to more overriding concepts, which allows them to make inferences that go beyond the information given" (Pitz and Sachs, 1984; Christ, 1993, p. 309). Thus, problem representation is considered an indispensable component of individuals' judgment and decision making process because of its impact on

individuals' problem solving (Greeno, 1977; Pitz and Sachs, 1984; Christ, 1993; Bedard and Chi, 1993).

Once individuals formulate an appropriate problem representation, the problem solving process becomes a trivial matter (Newell and Simon, 1972; Voss and Post, 1988). However, when individuals encounter a decision task with which they are unfamiliar, they have the tendency to restructure and reinterpret the meanings and intent of the problem situation. This tendency may lead individuals to develop a problem representation that does not correspond with the task in question (Bonner, 2007). The use of an inappropriate problem representation when performing a decision making task generally results in suboptimal or even erroneous decisions. For example, auditors' poor performance in fraud risk assessment may be due to structuring and interpreting the fraud risk assessment task based on their traditional audit mindset. As auditors rely on sampling and would generally not examine every transaction with the express purpose of determining whether fraud existed, they would be less concerned with minor discrepancies or immaterial misstatements in any particular account. In addition, auditors understand that they have a fixed audit time budget for their work. Given this mindset, auditors may tend to focus exclusively on the overt aspect of their clients' operations/accounting records when assessing fraud risk. As mentioned, fraud is difficult to discern because it is subject to concealment. Thus, the traditional audit mindset may inhibit auditors from considering the covert aspect of the events and activities that are happening within the organization.

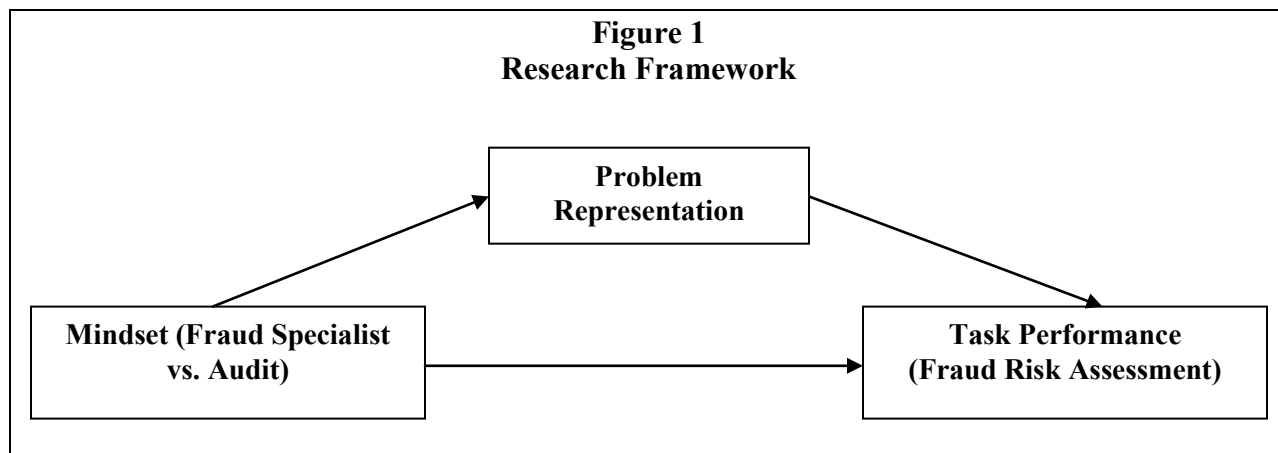
Fraud specialists, on the other hand, have an express interest in examining all transactions to determine whether fraud exists. They are concerned with any discrepancies regardless of their size or magnitude. They also understand that they do not have a fixed time budget for their work. Thus, the fraud specialist's way of thinking may lead them to focus on all aspects of their

client's operations/accounting records when assessing fraud risk. Consequently, fraud specialists may be more adept than auditors in rendering effective fraud risk assessment. Nevertheless, validating this argument would require examining whether different mindsets (fraud specialist or audit) lead to the development of different problem representations, which in turn influence the outcome of the fraud risk assessment task.

Hypothesis Development

In this section, several hypotheses are developed with respect to mindset, problem representation, and fraud risk assessment. First, I provide a detailed discussion of my overall research framework. Then I discuss the linkage between mindset and fraud-related decision making performance. This linkage is most important because it ties the effects of fraud specialist and audit mindsets to the fraud risk assessment literature. Finally, I discuss the linkages between mindset and problem representation as well as problem representation and fraud-related task performance. These linkages connect the effects of mindset to the problem representation literature. They also illustrate the linkage between problem representations and fraud risk assessment performances.

Based on the theory of mindset and the relationships among mindset, problem representation, and task performance, I developed my dissertation research framework as shown in Figure 1.



As depicted in the research framework, mindset has both a direct and indirect effect on individuals' task performance. Next, I provide a detailed discussion of the different theoretical linkages among mindset, problem representation, and task performance.

The Effect of Mindset on Task Performance

The first theoretical linkage in my research framework represents my prediction that mindset (fraud specialist or audit) has a direct influence on fraud-related task performance (fraud risk assessment). Based on prior literature, a simple difference in mindset can yield substantial performance differences as well as influence individuals' confidence, determination, and commitment to accomplish their decision making task (Gollwitzer, 1990; Brandstatter and Frank, 2002). In the context of this study, a fraud specialist mindset differs from an audit mindset in terms of its objective. Fraud specialists are to investigate everything in great detail and to decide whether fraud exists. Auditors, on the other hand, are to determine the fairness of reported financial statements taken as a whole. While auditors are required to exercise professional skepticism in their consideration of fraud, they have been criticized for being creatures of habit and are not good at thinking outside the box (Sickinger, 1995; PCAOB, 2007). Fraud specialists,

on the other hand, are commended for being able to “think differently, see things differently, and see them from a different perspective...[in order to] to see things that appear...out of pattern, priority, sequence; or out of order, too high, too low, too many, too few, too often, or not often enough” (Bologna, 1984, p. 24-25). Findings from Bortiz et al. (2008) and Rose et al. (2009) provide preliminary support that fraud specialists are more effective than auditors in assessing fraud risk. Thus, it appears that the adoption of a fraud specialist mindset by auditors may improve their overall fraud risk assessment performance. However, both Bortiz et al. (2008) and Rose et al. (2009) used an audit case containing high fraud risk. Thus, it remains an empirical question to determine whether fraud specialists are also able to assess fraud risk more effectively than auditors in low fraud condition. To address this question would require a comparison of fraud risk assessment performance between fraud specialists and auditors in both high and low fraud risk conditions.

Given the fraud specialist mindset, I assert that fraud specialists may have the tendency to assess all fraud risk factors at a higher level than auditors. Thus, while individuals who are primed with a fraud specialist mindset are more likely than individuals who are primed with an audit mindset to assess fraud risk effectively in the high fraud risk condition, they may be less effective in their assessment in the low fraud risk condition. Stated formally:

H1: Individuals who possess the fraud specialist mindset will assess the risk of financial statements fraud higher in both high and low fraud risk conditions than individuals who possess the audit mindset.

The Effect of Mindset on Problem Representation

The second theoretical linkage in my research framework represents the effect of mindset on the development on problem representation. Mindset has an indirect influence on decision

making performance via the development of a mental frame which is often referred to as problem representation (Allport, 1940; Gollwitzer, 1996; Bargh and Chartrand, 2000; Galinsky and Moskowitz, 2000; Gupta and Govindarajan, 2002; Kleinman and Palmon, 2007).

Individuals develop problem representations by constructing mental slots to store information about their decision task (Pichert and Anderson, 1977; Wyer and Srull, 1980). Information stored in these slots would later be retrieved and used by individuals in their decision making task (Wyer and Srull, 1980). The information that is being sought and stored by individuals in these mental slots is largely determined by their mindset (Koehler, 1991). In other words, individuals are likely to seek out and remember information that conforms to their mindset (Pichert and Anderson 1977). Thus, mindset plays a vital role in determining what type of information is being sought and stored in individuals' working memory (Koehler, 1991). Individuals who have a different perspective or way of thinking are likely to construct problem representations that include different information (Pichert and Anderson, 1977; Payne et al., 1993).

The relationship between mindset and problem representation has been documented and supported by both the psychology and accounting literature. These studies have provided empirical evidence to support the claim that mindset impacts the development of individuals' problem representations, which in turn influence their decision making performances (Armor and Taylor, 2003; Kadous and Sedor, 2004; Torelli and Kaikati, 2009). For example, Kadous and Sedor (2004) find that priming individuals with different mindsets impacts the development of their problem representations and subsequently influences their recommendations about whether to continue a project. In their study, participants assumed the role of an external consultant retained to provide advice to the company's board of directors. Using senior-level undergraduate

students as a proxy for consultants, Kadous and Sedor (2004) manipulated the student participants into three specific frames of mind by giving them different consulting purposes. After the manipulation, all participants were given identical information about the company, including description about an ongoing product-development project. Once the subjects finished reviewing the case materials, they were asked to recommend whether the project should be continued. Kadous and Sedor (2004) found that participants, depending upon their assigned mindset, developed different problem representations, which subsequently impacted their recommendations.

Based on the theory of mindset, individuals' task performance is directly influenced by their particular way of thinking. The objective of the fraud risk assessment task is to determine the likelihood or degree to which fraud may exist within a client. As part of the audit process, auditors are required to assess their clients' risk of fraud exposure along with other types of risk assessment. However, based on their traditional mindset, auditors are accustomed to thinking of their clients' recorded transactions as a whole with a clear objective of expressing an audit opinion about all accounts combined rather than to investigate whether fraud exists. Thus, their mindset may not guide them to consider information or risk factors that indicate the possibility of fraud. Fraud specialists, on the other hand, are less concerned with whether their clients' recorded transactions are presented fairly as a whole. Rather, they are primarily interested in determining whether fraud exists. Thus, their mindset is more likely to guide them to focus on information or risk factors that may lead to the discovery of fraud.

In essence, fraud specialist and audit mindsets represent two very different perspectives in viewing recorded accounting transactions. For example, according to prior study, fraud specialists were able to identify more fraud risk factors than auditors (Bortiz et al., 2008). Their

findings suggested that fraud specialists' problem representations may contain a higher number of fraud risk factors than those of the auditors'. Thus, I predict that individuals who are primed with one of these mindsets will develop different problem representations.

Fraud specialists and auditors tend to think about the following factors differently. First, while auditors are concerned with materiality, fraud specialists would normally not consider it. Second, fraud specialists, as compared to auditors, tend to be more concerned with minor discrepancies and immaterial misstatements. Fraud specialist would be more likely to investigate these discrepancies and misstatements to determine whether they may indicate larger hidden problem. Third, in terms of the authenticity of reported accounting transactions, fraud specialists would be more interested in determining whether such transactions had actually taken place. They would also be interested in authenticating the accounting documentations behind these transactions. Auditors, on the other hand, would focus primarily on the completeness of the audit trail to support these transactions. Auditors are neither expected nor trained to authenticate accounting documentations (PCAOB, 2007). Finally, fraud specialists and auditors have a different perspective in evaluating their clients' internal controls. Bologna and Lindquist (1987) stated that auditors tend to focus on the structural aspects of their clients' internal controls. Specifically, they want to know whether controls are being implemented, in appropriate places, and are being monitored. While fraud specialists would not dismiss the importance of these factors, they tend to focus their attention on how and by whom their clients' controls may be compromised (Bologna and Lindquist, 1987). Taken together, fraud specialists' problem representations may be qualitatively different than those of auditors'. Such difference will likely be centered on the specific types of information that are being considered. In other

words, individuals will tend to remember or ignore certain information depending on whether they have a fraud specialist or an audit mindset.

In the context of my dissertation, I define qualitative difference as the specific types of information recalled by individuals. I expect that participants with the fraud specialist mindset will develop a problem representation that contains different types of information than those with the audit mindset. Based on prior literature (Bologna and Lindquist, 1987; Silverstone and Davia, 2005; Singleton et al., 2006) and comments received from experts in both the fraud/forensic and auditing fields, these specific types of information include Materiality, Misstatements, Authenticity, Internal control evaluation, audit-related issues, and potential fraud-related issues. I use the number of times these specific types of information are being recalled by participants and the accuracy of their memory recognition task to serve as a proxy for problem presentations. Based on the above discussion, I assert that individuals who are primed with a fraud specialist mindset to construct a problem representation (as proxy by both the number of specific types of information recalled and the accuracy of memory recognition) that is different than those who are primed with an audit mindset. Stated formally:

H2: Individuals who possess the fraud specialist mindset will develop a problem representation that is qualitatively different than individuals who possess the audit mindset.

Specifically, I hypothesize that their problem representation will be different in the directions as predicted in the specific recall categories presented in Table 2 and in the types of memory recognition statements listed in Table 3¹⁴.

¹⁴ Both the recall categories and the types of memory recognition statements were subsequently revised after the pilot study. These revisions are listed in Table 5 and Table 6.

The Effect of Problem Representation on Task Performance

Studies have shown that problem representation has an influence on individuals' judgment and decision making (Kadous and Sedor, 2004). For example, Bierstaker et al. (1999) investigated auditors' problem representations and their performance on an analytical procedures task. Bierstaker et al. (1999) used a think-aloud verbal protocol to elicit auditors' problem representations about their clients' allocation of overhead costs. The authors found that auditors initially formulated unproductive problem representations related to the analytical task and thus had difficulty in identifying possible causes for financial statement discrepancies. Bierstaker et al. (1999) suggested that this phenomenon may be linked to auditors not thinking about possible underlying causes of discrepancies. Thus, the authors attempted to alter auditors' problem representations by asking them to think about their decision task from different perspectives. Keeping knowledge constant, Bierstaker et al. (1999) found that priming auditors with different ways of thinking changed their problem representations associated to an analytical procedures task.

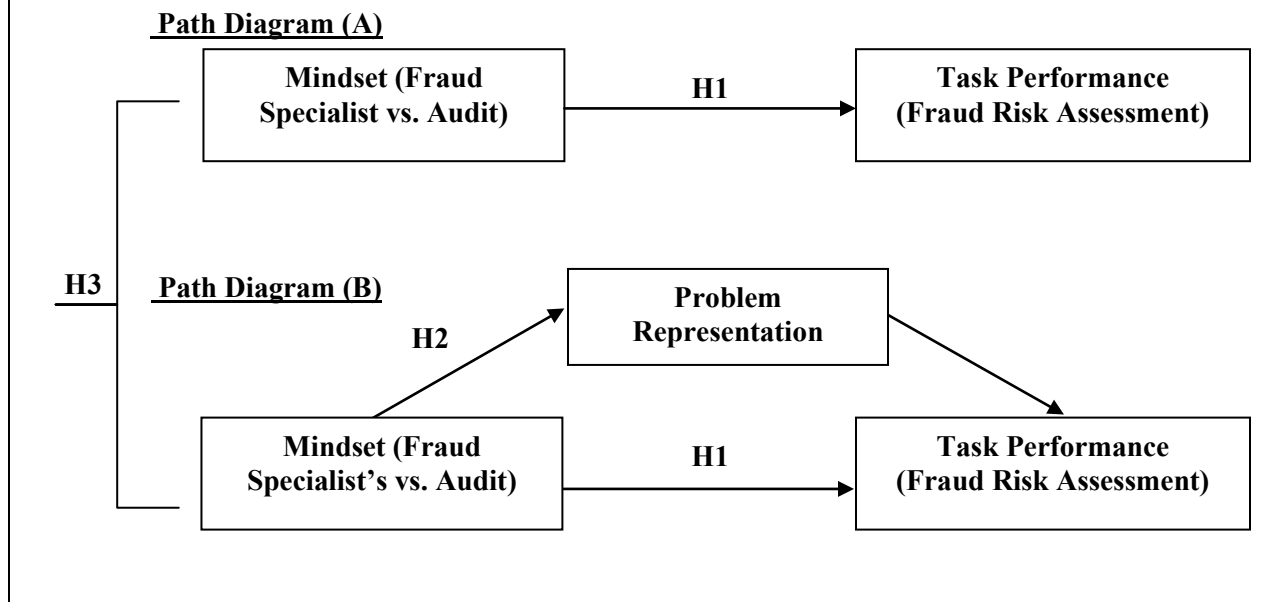
While problem representation impacts individuals' task performance, prior studies have shown that its impact is likely influenced by the presence of mindset (Allport, 1940; Gollwitzer, 1996; Bargh and Chartrand, 2000; Galinsky and Moskowitz, 2000; Gupta and Govindarajan, 2002; Kleinman and Palmon, 2007). In other words, problem representation functions as a mediator to facilitate the impacts of mindset on decision making performance. Thus, the third and last linkage in my research framework represents the theoretical assertion that mindset influences individuals' task performance through the effect of problem representation. Mindset has an indirect effect on decision making performance via its impact on the development of problem representation. Mindset influences the way in which individuals process task related

information and subsequently affects the construction of their problem representations. These problem representations would consequently influence individuals' decision making performances. As stated in Hypothesis 2, individuals who are primed with a fraud specialist mindset will develop a problem representation that is qualitatively different from individuals with an audit mindset. Thus, I assert that problem representation (as proxy by both the number of specific types of information recalled and the accuracy of memory recognition) mediate the relationship between mindset (either fraud specialist or audit) and fraud risk assessment. Stated formally:

H3: Problem representation mediates the relationship between mindset and their fraud risk assessment.

Figure 2 summarizes the research model and hypotheses of my dissertation. Path diagram (A) represents the total effect of mindset on fraud-related task performance. Path diagram (B) represents the indirect effect of mindset on fraud-related task performance through the mediator variable – problem representation. Hypothesis 1 (H1) in path diagram (A) represents the hypothesized relationship between mindset and task performance. In diagram (B), Hypothesis 2 (H2) represents the hypothesized association between mindset and problem representation. Hypothesis 3 (H3) are represented by both path diagrams (A) and (B) taken as a whole.

Figure 2
Research Model with Hypotheses¹⁵



In the next chapter, I present the research methodology and research instrument for my study.

¹⁵ Presentation of research model adapted from Fritz and MacKinnon (2008).

CHAPTER 3

METHODOLOGY

This chapter provides a detailed discussion of the methodology used in my dissertation. It also presents the development and the validation process of my experimental instrument. I posit that mindset has a direct impact on individuals' fraud risk assessment performance. I also posit that mindset will lead individuals to develop different fraud-related problem representations, which in turn influence their fraud risk assessment performance. Collectively, I hypothesize that there is both a direct and indirect effect between mindset and fraud-related judgment and decision performance.

Research Design

I tested the hypotheses experimentally with a 2x2 between-subjects factorial design. I varied both mindset (either fraud specialist or audit) and fraud risk (either high or low) at two levels on a between-subjects basis. Research participants were randomly assigned to a particular mindset: fraud specialist or audit mindset. I manipulated mindset by providing participants with brief but detailed description about the ways of thinking normally associated with either a fraud specialist (in the fraud specialist mindset group) or an auditor (in the audit mindset group). I manipulated fraud risk conditions by embedding into the experimental case fraud risk factors which suggest high or low fraud risk situations. The experimental design is depicted in Figure 3. The complete research instrument is presented in Appendix E, F, G, and H¹⁶.

¹⁶ The version of the instrument included in Appendix E represents the fraud specialist mindset/high fraud risk condition. Appendix F represents the fraud specialist mindset/low fraud risk condition. Appendix G represents the audit mindset/high fraud risk condition. Appendix H represents the audit mindset/low fraud risk condition.

**Figure 3
Experimental Design**

		Mindset	
		Fraud Specialist Mindset	Audit Mindset
Fraud Risk Condition	High Fraud Risk		
	Low Fraud Risk		

Research Participants

The subjects for my study are senior-level accounting students enrolled in their first auditing class. The experiment was conducted after students learned the concept of fraud risk assessment. I choose students to participate in my experiment for two reasons. First, prior mindset studies in the literature have used student participants because the theory related to mindset does not depend on special personal characteristics or professional expertise (Armor and Taylor, 2003; Gagné et al., 2003; Torelli and Kaikati, 2009). Thus, the selection of student subjects is consistent with prior literature and appropriate for my study. Second, according to Libby et al. (2002), an experiment is efficient if it achieves a given level of effectiveness as economically as possible. Peecher and Solomon (2001) and Libby et al. (2002) strongly advise researchers to match subjects to the goals of the experiment but to avoid using more sophisticated subjects than is necessary to achieve those goals. Specifically, Peecher and Solomon (2001) argue that unless a theory exists to justify the need of using audit practitioners, accounting researchers should consider using students as the default condition for experimental subjects. Given that the primary goal of my study is to examine how a particular mindset influences an individual’s fraud-related task performance and since the theory of mindset does not depend on professional expertise, the use of student subjects is consistent with the arguments

provided by Peecher and Solomon (2001) and Libby et al. (2002). Furthermore, the use of student subjects allows me to achieve my research objective by controlling for other external factors such as knowledge, experience, and training. If not controlled, these external factors could make it difficult if not impossible to discern the effects of a particular mindset on an individual's fraud-related judgment and decision performance.

Development of Research Instrument

Mindset Manipulation

In order to accomplish the objective of my experiment, it is necessary to manipulate research participants into adapting either a fraud specialist or an audit mindset. To achieve this goal, I modeled my mindset manipulation approach on Kadous and Sedor's (2004) research instrument where they manipulated participant mindset by explicitly instructing them about their respective task objective. Similar to Kadous and Sedor's (2004) method, the mindset manipulation materials were developed in the following way. First, participants were instructed to assume the role of either a fraud specialist or an auditor. Participants read description of their assigned role, including specific task objectives corresponding to their assigned role, and a list of 10 key descriptors representative of either a fraud specialist or an audit mindset. These descriptors were developed based on prior literature (Bologna and Lindquist, 1987; Silverstone and Davia, 2005; Singleton et al., 2006; Gerson et al., 2006) and experts' opinion. For example, participants in the fraud specialist mindset condition were told that their primary responsibility is to determine whether fraud exists, regardless of its size or magnitude. On the other hand, participants in the audit mindset condition were told that their primary responsibility is to gather documentation to determine whether the company's reported financial statements taken as a

whole are stated fairly in conformity with Generally Accepted Accounting Principles. Appendix A details the complete list of key factors presenting the fraud specialist and an audit mindset.

Finally, manipulation check questions were designed to ensure that the two mindset manipulations are equivalent. A total of six manipulation check questions were developed based on the 10 key mindset factors¹⁷. For example, participants are asked to rank the extent of their agreement on whether they would be concerned with any immaterial misstatements in their clients' accounts. The response scale for questions 1 through 5 is designed such that participants in the fraud specialist mindset group should provide higher values to these manipulation questions¹⁸. Results on these manipulation questions (1 through 5) were combined and used to formulate the mindset construct with lower value indicating an audit mindset and higher value representing a fraud specialist mindset. The mindset construct was treated as an independent variable for the subsequent testing of my hypotheses. In addition, I predict that participants in the fraud specialist mindset group would be more likely than those who are manipulated with the audit mindset to select answer choice (a) "Determining whether the reported accounting transactions actually took place" rather than answer choice (b) "Determining whether there are valid and proper documentations to support the recorded transactions" for question 6. While the result of question 6 was used in the formation of the mindset construct, it served as another measure to ensure that participants acquire their assigned mindset.

Fraud Risk Manipulation

Fraud risk is manipulated by varying the case context. The case used in my experiment is adapted from Lindberg (1999), similar to Carpenter et al. (2002) and Carpenter et al. (2008). In

¹⁷ In the instrument, these manipulation check questions are in Envelope A, questions 1 through 6, in phase 1 of the experiment.

¹⁸ Question 4 and 5 were reversely coded.

the original case, management of Lakeview Lumber Inc., a hypothetical company, had committed fraud in both the company's bad debt expense and product warranties expense accounts in order to receive bonuses based on net income. The original case also involved a non-fraud accounting issue about how Lakeview should account for tornado-related costs incurred by the company. I took the following steps to modify the Lindberg's (1999) case for my experiment.

First, to avoid the dilution effect found in the Hackenbrack (1992) study, I did not include the non-fraud issue related to the accounting treatment for the costs related to the tornado. Second, the Lindberg's (1999) original case did not contain a low fraud risk condition. In order to manipulate fraud risk, I seeded fraud risk factors in the Lakeview case which suggest high or low fraud risk conditions. Both bad debt expense and product warranties expense were intentionally understated to allow Lakeview's management to inflate reported net income in the high fraud risk condition. On the other hand, these accounts were not misstated in the low fraud risk condition. I also adapted the financial statements from Lindberg (1999). Both bad debt expense and product warranties expense were modified in the financial statements to reflect the different fraud risk conditions. Specifically, I understated both Lakeview's current year bad debt expense and product warranties expense as compared to the firm's prior two years audited numbers in the high fraud risk condition. On the other hand, I kept the firm's current year bad debt expense and product warranties expense comparable to its prior two years audited number in the low fraud risk condition.

Other fraud risk factors were included in the description of Lakeview Lumber Inc.'s management characteristics, managerial compensation, accounting environment, and unresolved audit issues so that the case would contain elements of the fraud-triangle as outlined by SAS No.

99. For example, participants in the high fraud risk condition receive information that Lakeview Lumber Inc.'s key personnel would earn a cash bonus based on the company's reported net income. Participants in the low fraud risk condition, on the other hand, receive information that key personnel in Lakeview would earn a fixed cash bonus on a yearly basis. According to SAS No. 99, bonuses contingent upon company's operating results is a fraud risk factor related to fraudulent financial reporting (AICPA, 2002). Thus, unlike the high fraud risk condition, Lakeview's management in the low fraud risk condition has little or no incentive to fraudulently report its financial data. Appendix B details the complete list of fraud risk factors.

The Experimental Task

The primary experimental task is fraud risk assessment. After the mindset and fraud risk manipulations, participants in all treatment conditions received instructions to evaluate the fairness of Lakeview's bad debt expense and product warranties expense accounts. Participants were also instructed to assess the likelihood that fraud exists in these accounts. The secondary experimental task is a recall and memory recognition test that I have adapted from Kadous and Sedor's (2004) research instrument. To be consistent with Kadous and Sedor (2004), I included the same distracter exercise they used prior to the recall and memory recognition task¹⁹. Per Kadous and Sedor (2004, p. 65), the purpose of the distracter task is to "clear participants' short-term memory" of the experimental case information. During the recall and memory test, participants in all treatment conditions received the following task instructions similar to those in Kadous and Sedor's (2004) instrument. First, participants were asked to perform a recall exercise by listing all the important information from the Lakeview case. Second, they were instructed to complete a memory recognition test that contains both factual and "false positive"

¹⁹ Kadous and Sedor (2004) used the self-monitoring scale as their distracter task.

statements (sentences indicating matters that do not exist in the experimental case). Participants were required to evaluate these statements and to indicate whether they remember reading such information related to the experimental case. They were instructed to respond by choosing either yes (indicating that they remember reading such information in the case) or no (indicating that they do not remember reading such information in the case).

The Post-Experimental Questionnaire

After participants finished the experimental task, they were asked to complete the post-experimental questionnaire. The questionnaire includes basic demographic questions. It also gives participants the opportunity to provide comments concerning the experiment.

Experimental Procedures

The experiment has five phases. At the beginning of the experiment, each participant received two envelopes marked as A and B. Envelope A contains Phases 1 and 2 and Envelope B contains Phases 3, 4, and 5 of the experiment. Participants were instructed not to proceed with Envelope B until they have completed all of the requirements specified in Envelope A. The experimental procedures are outlined in Table 1.

In Phase 1, research participants were randomly assigned to different mindset treatment groups. They received the mindset manipulation material, instructing them to assume the role of either a fraud specialist or an auditor who is currently working for a hypothetical public accounting firm, Becker & Phippen LLP. Participants in the fraud specialist mindset group were asked to assist Karen Rohan, the in-charge auditor for the FY2008 Lakeview audit, to determine whether fraud exists in the company's reported financial statements. Participants in the audit

mindset group were instructed to assist Karen to determine whether Lakeview’s current year financial statements are presented fairly in accordance to GAAP.

Table 1 Summary of Experimental Procedures	
Phase 1	Participants, randomly assigned to either a fraud specialist or an audit mindset treatment group, complete a series of mindset manipulation questions. (manipulated independent variable)
Phase 2	Participants, randomly assigned to either high or low fraud risk, review case information pertaining to a hypothetical company and complete case-related questions. (manipulated independent variable / dependent variable)
Phase 3	Participants perform recall task relating to the hypothetical company in phase 2. (mediator)
Phase 4	Participants complete memory recognition test relating to the hypothetical company in phase 2. (mediator)
Phase 5	Participants complete post-experimental questionnaire. (covariates)

Participants in both treatment groups were presented with 10 key characteristics relevant to their assigned mindset. Before proceeding to Phase 2, participants in all treatment groups answered six manipulation check questions to measure the extent to which they adopted their assigned mindset.

In Phase 2, participants were presented with an experimental case containing information about Lakeview Lumber Inc. The fraud risk level (either high or low) of the company was randomized across subjects. Information pertaining to Lakeview was presented in the following order: (1) Background information of the company, (2) key personnel and managerial compensation schedule, (3) accounting environment of the company, (4) currently unresolved audit issues involving bad debt expense and product warranties expense, and (5) the company’s

reported financial statements²⁰. After reviewing the case material, participants received a summary of the key characteristics corresponding to their assigned mindset to reinforce the mindset manipulation. Participants evaluated whether Lakeview's bad debt expense account and product warranties expense account are fairly presented. In addition, they indicated how likely they would take further action to investigate these accounts. Finally, participants assessed overall fraud risk level for Lakeview. Participants were instructed to return all materials to Envelope A and proceed with the requirements in Envelope B.

In Phase 3, participants performed a recall task by listing all of the important information they can remember about the Lakeview case. To prevent participants from looking back to the Lakeview's case information, they were instructed not to reopen Envelope A under any circumstances. In Phase 4, participants performed a memory recognition test consisting of true-false questions relevant to the Lakeview case. Phase 5 consists of demographic questions.

Measuring and Testing Hypotheses

In the following paragraphs, I describe the method used to test my proposed hypotheses. The primary dependent variables in this study are fraud risk assessment and fraud-related problem representation. First, fraud risk assessment is measured in Phase 2 of the experiment on a scale of 0 = very low risk to 10 = very high risk (Reimers et al., 1993).

The second dependent variable, problem representation, is measured in Phases 3 and 4 of the experiment. I elicited participants' problem representations by utilizing both a recall task and a memory recognition test similar to those used in the Kadous and Sedor's (2004) study. As problem representation is an internal mental state that cannot be observed directly, it is necessary to rely on indirect measures as proxy for this variable (Chi et al, 1982; Lesgold et al., 1988;

²⁰ The financial statements were adapted from Lindberg (1999).

Bedard and Chi, 1993). Chi et al. (1982) suggested that the use of qualitative analysis is an empirically validated method to capture individuals' problem representations. Commonly used qualitative analysis techniques include written/verbal protocol, sorting, recall, and memory recognition (Christ, 1993; Bierstaker et al., 1999; Kadous and Sedor, 2004; Hammersley, 2006). When using recall as an indirect measure to elicit problem representations, researchers often focus on individuals' recall of either the quantity or quality (i.e. the type or characteristic) of information pertaining to their decision making task (Frederick and Libby, 1986; Christ, 1993; Hammersley, 2006).

Consistent with Kadous and Sedor (2004), participants were instructed to list as much case-related information as possible in the recall task. Since participants were asked to recall case specific information, their responses should reflect their interpretation of the case materials and thus, provide evidence about their problem representations (Christ, 1993). In addition to the recall task, Kadous and Sedor (2004) used a memory recognition test to further elicit individual problem representation. The memory recognition test is constructed in true-false format and relates to case specific information. Similar to Kadous and Sedor (2004), results related to participants' performance on the memory recognition test are used to measure their problem representations.

Testing of Hypothesis 1

Hypothesis 1 states that individuals who possess the fraud specialist mindset will be more likely to assess risk of financial statements fraud higher in both high and low fraud risk conditions than individuals who possess the audit mindset. I assert that while a fraud specialist mindset may help individuals to assess fraud risk effectively in a high fraud condition, it may be

less effective in a low fraud condition. The dependent variable used to test this hypothesis is the combined measure of (1) the likelihood that fraud exists in Lakeview's Bad Debt Expense account, (2) the likelihood that fraud exists in Lakeview's Product Warranties Expense account, and (3) the overall fraud risk assessment for Lakeview. The specific questions that capture these variables are in Envelope A, Question 5a, 6a, and 7a, in Phase 2 of the experiment.

To test this hypothesis, I examine the fraud risk assessment differences between mindset treatment groups. I predict that participants in both fraud specialist groups (high and low fraud risk condition) will assess the likelihood of fraud exists in both Bad Debt Expense and Product Warranties Expense accounts as well as the overall fraud risk level for Lakeview higher than those in both auditor groups (high and low fraud risk condition).

Testing of Hypothesis 2

Hypothesis 2 posits that individuals who possess the fraud specialist mindset will develop a problem representation that is qualitatively different from individuals who possess the audit mindset. Qualitative difference is defined as the number of the specific types of information recalled by research participants in each mindset treatment group. A recall task is used to serve as a proxy for individuals' fraud-related problem representations since they are internal mental states that cannot be observed directly. The number of the specific types of information recalled by participants was used as a dependent measure to test Hypothesis 2.

As mentioned, a fraud specialist mindset will help individuals focus on information related to (1) whether a transaction has actually taken place, (2) whether there were any minor discrepancies and immaterial misstatements in the client's accounts, and (3) how the client's controls may be compromised. However, such a mindset may not lead individuals to consider

issues related to materiality. On the other hand, an audit mindset will likely help individuals focus on information related to (1) whether a transaction was supported by proper audit trail, (2) whether there were any material misstatements, and (3) whether the client's controls were in place and were being monitored. Conversely, such a mindset is not likely to guide individuals to focus on minor discrepancies and immaterial misstatements in the client's accounts.

Thus, I expect that participants with the fraud specialist mindset will recall fewer items related to materiality than those who have an audit mindset. I also anticipate that they, when compared to those in the audit mindset group, will recall more items related to (1) minor discrepancies and immaterial misstatements, (2) whether the recorded transaction has actually taken place, and (3) how their client's control may be compromised. In addition, I expect that participants with the audit mindset will recall more audit-related issues than those who have the fraud specialist mindset. On the contrary, the fraud specialist mindset as compared to the audit mindset will lead participants to recall a higher number of potential fraud-related issues. Table 2 provides my expectations of how participants in each mindset group (fraud specialist and audit) will perform in the recall task.

Next to the recall test, a memory recognition test was used as an additional proxy for individuals' fraud-related problem representations. The use of both a recall task and memory recognition test to assess an individual's problem representation is consistent with prior literature (Kadous and Sedor, 2004). The accuracy of the memory recognition test was used as an added dependent measure to test Hypothesis 2. I computed participants' accuracy on the memory recognition test by counting the number of statements that they have correctly identified as factual information related to the experimental case.

Table 2
Expectation of Recall Task Performance

Specific Types of Information Recalled	Number of Recall per Mindset Treatment Group	
	Fraud Specialist	Audit
(1) Materiality	Low	High
(2) Misstatements		
(a) minor discrepancies and immaterial misstatements	High	Low
(b) major discrepancies and material misstatements	Low	High
(3) Authenticity		
(a) whether the transaction has actually taken place	High	Low
(b) whether the transaction has proper audit trail	Low	High
(4) Internal control evaluation		
(a) how the control may be compromised	High	Low
(b) whether the control was in place and being monitored	Low	High
(5) Audit-related issues	Low	High
(6) Potential fraud-related issues	High	Low

There are 22 statements in the memory recognition test. Participants received one point for each correct response and a zero for each incorrect answer. Thus, the total score of the memory recognition test could range from 0 to 22. Among these statements, half of them are fraud-related and the others are audit-related. In addition, 7 questions are “false positive” statements. These statements are presented in Envelope B, the recall task and the memory recognition test listed in Phases 3 and 4 of the experiment. I expect that participants in the fraud specialist mindset group to score higher in the fraud-related statements than those in the audit mindset group. On the contrary, I predict that participants in the audit mindset group to score higher in the audit-related statements than those in the fraud specialist mindset group. Finally, I did not anticipate any performance difference between participants in both mindset groups in regard to

the “false positive” statements. Table 3 provides my expectations of how participants in each mindset group (fraud specialist and audit) will perform in memory recognition test.

Types of Memory Recognition Statements	Memory Test Score per Mindset Treatment Group	
	Fraud Specialist	Audit
Fraud-related	High	Low
Audit-related	Low	High
False Positive	No difference across mindset	

To test Hypothesis 2, I compared the number of the specific types of information recalled by participants in their recall task. I recruited two accounting doctoral students to independently classify the information recalled by participants into types of information as listed in Table 2. These specific types of information include Materiality, Misstatements, Authenticity, Internal control evaluation, Audit-related issues, and Potential fraud-related issues. I subsequently calculated the Cohen Kappa coefficient (Cohen, 1960) to assess inter-rater reliability of these categories. In addition, I compared the results of the memory recognition task (i.e. participants’ score on the recognition test) in Phase 4 of the experiment.

Testing of Hypothesis 3

Hypothesis 3 states that fraud-related problem representation (as proxy by the number of the specific types of information recalled and the accuracy of the memory recognition test) mediates the relationship between mindset and fraud risk assessment performance. As stated in Hypothesis 2, types of information recalled include Materiality, Misstatements, Authenticity, Internal control evaluation, Audit-related issues, and Potential fraud-related issues. The

dependent variables for Hypothesis 3 are the number of times these specific types of information are being recalled by participants and their score on the memory recognition test.

To test Hypothesis 3, I followed Holmback's (1997) strategy of using regression to examine the mediated effects as posited in this hypothesis. In addition, based on Baron and Kenny (1986), I examined the following four necessary conditions for mediation to occur. First, I examined whether the predictor (mindset – either a fraud specialist or an audit) is significantly associated to the hypothesized dependent variable (fraud risk assessment performance). Second, I examined whether the predictor (mindset – either a fraud specialist or an audit) is significantly related to the mediator (problem representation – as proxy by the number of the specific types of information recalled). Third, I tested whether the mediator (problem representation) is significantly related to the dependent variable (fraud risk assessment). Finally, I tested whether the effect of the independent variable (mindset – either a fraud specialist or an audit) on the dependent variable (fraud risk assessment performance) is lower when controlling for the mediator (problem representation). Hypothesis 3 will be supported if all the above conditions are satisfied. Since six different types of specific information were captured by the recall task, I tested the mediation effect of each of them separately. I also tested the mediation effect by using participants' accuracy score on the memory recognition test.

Validation and Pilot Testing

Validation of Research Instrument

I took the following steps in an effort to establish the validity of my research instrument. In regard to the mindset manipulation, I first developed the key mindset factors by synthesizing relevant literature in the area of fraud/forensic accounting and auditing (Bologna, 1984; Bologna

and Lindquist, 1987; Silverstone and Davia, 2005; Gerson et al., 2006; Singleton et al., 2006). I then constructed a panel of experts with the aim to validate whether these factors accurately portray the mindset differences between fraud specialists and auditors. I selected various professionals to serve on my expert panel based on Bologna and Lindquist's (1987) criteria, which include the expert's credentials, licensure, certification, as well as writings and publications from his or her field of expertise. Table 4 provides a detailed description of the background of these experts.

My panel of experts consists of professionals in either the fraud/forensic and auditing field. Nine experts were consulted during the development of my mindset manipulation. I initially explained the nature of my research to seven experts and then presented them with the initial key mindset factors I had identified from the literature²¹. I asked the experts to (1) comment on whether each mindset factor was an adequate representation of their respective professions and (2) to identify additional factors relevant to either a fraud specialist or an auditor. The initial key mindset factors were revised and reworded based on the comments received from these seven experts.

To further ensure the validity of these mindset characteristics, I contacted two additional experts (one fraud specialist and one auditor) not involved in the initial review. This second set of experts was asked to read through the revised mindset characteristics and to comment on whether they were an adequate representation of their respective professions. Their feedback suggested minor changes to the mindset factors. This validation process yielded a total of 10 unique characteristics contrasting the mindset of fraud specialists and auditors. Appendix A depicts these 10 key mindset factors. As stated previously, I have identified six different types of information on which fraud specialists and auditors would likely focus.

²¹ These seven experts were comprised of four fraud specialists and three auditors.

Table 4
Expert Panel

Fraud / Forensic Experts

Expert 1 – A partner from a Big 4 accounting firm with 10 years of professional experience and has a credential in Certified in Financial Forensic (CFF)²².

Expert 2 – A forensic services director from a Big 4 accounting firm with 10 years of professional experience and is a Certified Fraud Examiner (CFE).

Expert 3 – A forensic services manager from a second-tier accounting firm with 4 years of professional experience and has a CFE license.

Expert 4 – A risk advisory manager from a regional accounting firm with 8 years of fraud/forensic related professional experience and is a CFE.

Expert 5 – An auditing professor who has a credential in CFF and has 10 years of fraud/forensic related professional experience. The professor is currently serving as the Director of Forensic Accounting Program in a major university. In addition, the professor has authored several fraud-related scholarly articles as well as textbooks on fraud auditing and forensic accounting. One of the professor's publications has been featured by the Association of Certified Fraud Examiners (ACFE).

Audit Experts

Expert 6 – An audit partner from a Big 4 with 14.75 years of experience and is a Certified Public Accountant (CPA).

Expert 7 – An audit partner from a second-tier accounting firm with 40 years of experience and is a CPA.

Expert 8 – An audit manager from a second-tier accounting firm with 8 years of experience and is a CPA.

Expert 9 – An audit manager from a different second-tier accounting firm with 7 years of experience and is a CPA.

These types of information were related to Materiality, Misstatements, Authenticity, Internal control evaluation, Audit-related issues, and Potential fraud-related issues. These types of information were used to help classify participant's recall.

In addition to the development of the key mindset factors, I consulted with two professors (one has taught a fraud/forensic course and the other has taught an auditing course) to help with

²² The Certified in Financial Forensic (CFF) credential is established by the AICPA in May 2008. Individual who is qualified for the CFF credential must be knowledgeable in areas related to fraud investigation as well as computer forensics (AICPA, 2008).

the construction of the memory recognition test. As previously stated, the memory recognition test contains both factual and “false positive” statements (sentences indicating matters that do not exist in the experimental case). A total of 22 statements are included in the memory recognition test, half of them are fraud-related and the others are audit-related issues. There are about an equal amount of factual and false positives statements in both fraud and audit related issues.

Pilot Testing and Modification of Experimental Instrument

I pilot tested my research instrument using 41 accounting students enrolled in an undergraduate auditing course. The pilot test was administered after students learned the concept of fraud risk assessment. The purpose of the pilot test was to ensure that my experimental manipulations (mindset and fraud risk) were working as intended. Results from the pilot test confirmed my expectations of these experimental manipulations. The pilot test also provided me with preliminary findings related to my hypotheses. In addition, based on the results of the pilot test, modifications were made to the experimental instrument. Specifically, changes were made to both the classification of specific types of information recalled by participants in the recall task as well as the memory recognition test.

Based on the results from the pilot test, I revised the specific types of information recalled by participants into the following 12 categories: Materiality, Misstatement (material), Misstatement (immaterial), Misstatement (with no mention of materiality), Recorded transaction (substance), Recorded transaction (audit trail), Internal control evaluation (potential compromise), Internal control evaluation (monitored), Audit-related issues, Potential fraud-related issues, Business operation, and Changes in accounting estimate and trend. The definitions of these 12 categories are listed as follows.

Materiality includes the concept relating to the magnitude and significance of an accounting transaction or amount. Misstatement (material) encompasses any major discrepancies and material misstatements in client's account. Misstatement (immaterial) relates to any minor discrepancies and immaterial misstatements in the client's accounts. Misstatement (with no mention of materiality) represents participants' recall of the client's misstatements with no mention of the concept of materiality. Recorded transaction (substance) relates to whether a recorded transaction has actually taken place. Recorded transaction (audit trail) signifies whether the recorded transaction was supported by proper audit trail. Internal control evaluation (potential compromise) pertains to how a company's control may be circumvented or compromised. Internal control evaluation (monitored) includes whether the company's control was being put in place and monitored. Audit-related issues relate directly to audit events or activities about the auditing processes. Potential fraud-related issues include interpersonal behaviors or actions that may create opportunities for members of the management to commit fraud. Such issues also comprise of unusual items that existed within the company's accounts. Business operations include events or economics conditions that influence the company's operations as well as its managerial compensation policies. Changes in accounting estimates and trends relate directly to the changes in the company's financial information. Such changes include revisions of accounting estimates. Table 5 provides my expectations of how participants in each mindset group (fraud specialist and audit) will perform in the recall task based on these revised recall categories.

In addition, based on the pilot test results, 8 additional statements were added to the memory recognition test. Thus, the revised memory recognition test contained 30 statements. These statements were then reviewed by two experts (one fraud specialist and one auditor).

Table 5
Expectation of Recall Task Performance (Based on Revised Recall Categories)

Specific Types of Information Recalled	Number of Recall per Mindset Treatment Group	
	Fraud Specialist	Audit
(1) Materiality	Low	High
(2) Misstatement (material)	High	Low
(3) Misstatement (immaterial)	High	Low
(4) Misstatement (with no mention of materiality)	High	Low
(5) Recorded transaction (substance)	High	Low
(6) Recorded transaction (audit trail)	Low	High
(7) Internal control evaluation (potential compromise)	High	Low
(8) Internal control evaluation (monitored)	Low	High
(9) Audit-related issues	Low	High
(10) Potential fraud-related issues	High	Low
(11) Business operations	Same	Same
(12) Changes in accounting estimate and trends	Same	Same

I asked the experts to classify these statements by categorizing them as follows: Audit-related, Fraud-related, or Both audit and fraud related. The experts classified 9 statements as audit-related, 11 as fraud-related, and 10 as both audit and fraud related. Among these 30 statements, 8 of them were “false positive” statements, thus the resulting number of statements in each category was as follows: 9 audit-related, 9 fraud-related, 4 both audit and fraud related, and 8 “false positive”. All of these statements corresponded to questions 1 through 30 in phase 4 of the experiment, which are presented in Envelope B of the experimental instrument²³. As discussed previously, I anticipated that participants with the fraud specialist mindset to score higher in the fraud-related statements than those with the audit mindset. I also predict that participants with

²³ Questions 2, 7, 10, 13, 16, 17, 23, 29 and 30 are audit-related statements. Questions 1, 4, 5, 8, 9, 14, 15, 21, and 24 are fraud-related statements. Questions 6, 12, 27, and 28 are both audit and fraud related statements. Questions 3, 11, 18, 19, 20, 22, 25, and 26 are “false positive” statements.

the audit mindset to score higher in the audit-related statements than those with the fraud specialist mindset. In addition, I did not expect any performance difference between participants in both mindset groups in regard to the “false positive” statements. Table 6 provides my revised expectations of how participants in each mindset group (fraud specialist and audit) will perform in the memory recognition test.

Types of Memory Recognition Statements	Memory Test Score per Mindset Treatment Group	
	Fraud Specialist	Audit
Fraud-related	High	Low
Audit-related	Low	High
Both audit and fraud related	No difference across mindset	
False positive	No difference across mindset	

In the next chapter, I present the experimental results of my study.

CHAPTER 4

RESULTS

This chapter provides a detailed discussion of the results from administering my experimental instrument to senior-level accounting students enrolled in their first auditing class. My discussion in this chapter includes demographic information about the research participants, manipulation check results, as well as data analysis corresponding to the hypothesis of this study.

Participants

Demographics

A total of 85 senior-level accounting students from two large state universities participated in this study. The first group of participants consisted of 59 students enrolled in an auditing class at the University of North Texas. The second group of participants consisted of 26 students enrolled in an auditing class at Minnesota State University, Mankato. Participants in both groups were taught by audit instructors who were independent from this study. I administered the experiment at the University of North Texas. The audit instructor at the other university administered the same experiment in his audit class. All experiments were conducted after participants learned about the concept of fraud risk assessment. Participants in both universities were not compensated for their involvement in the experiment. In addition, participants from both universities completed the experiment during regular class time.

Demographic information pertaining to the participants is shown in Table 7. Male participants represented a slightly smaller portion of the sample (43%, $n = 35$) than female (57%, $n = 47$). The average age of the participants was 24.90 and their GPA was in the range of 2.70 to 4.00 (mean (M) = 3.375). On average, participants had 1.23 years of accounting related

experience and a small portion of them had interned in the accounting field (24%, n = 20). The majority of the participants were majoring in accounting (93%, n = 76) and most of them were born in the US (83%, n = 68). There are no significant differences in demographic characteristics of interest between participants from these two universities.

Number of male participants	35			
Age	24.90	mean	5.53	standard deviation
	20	minimum	51	maximum
Years of accounting experience	1.23	mean	2.24	standard deviation
	0.00	minimum	11.00	maximum
GPA	3.38	mean	0.38	standard deviation
	2.70	minimum	4.00	maximum
Number of participants with accounting internship experience	20			
Number of participants with an accounting major	76			
Number of participants born in the US	68			

Variables

Independent, Dependent, and Mediating Variables

This study employed two manipulated independent variables, one dependent variable, and two mediating variables. The manipulated independent variables in the experiment are mindset and fraud risk condition. Mindset is a between-subjects factor manipulated at two levels: fraud specialist and audit. The fraud risk condition is also a between-subjects factor and is manipulated at two levels: high and low fraud risk. The primary dependent variable in this study is total fraud risk assessment. This variable is the average measure of participants' evaluation of

(1) the likelihood that fraud exists in Lakeview's Bad Debt Expense account, (2) the likelihood that fraud exists in Lakeview's Product Warranties Expense, and (3) the overall fraud risk assessment for Lakeview²⁴. Each fraud risk item was measured on a scale of 0 = very low risk to 10 = very high risk.

The two potential mediating variables in this study are the number of items of experimental case information recalled by participants, classified by type, as well as their score on the memory recognition test. Based on results from the pilot test, I developed a categorization scheme to code participants' recall. I recruited two accounting doctoral students with prior audit experience, who are blind to both participant specialty and the hypotheses for this study, to independently classify the participant's recall. As listed in Table 5, recall was classified into the following 12 categories: Materiality, Misstatement (material), Misstatement (immaterial), Misstatement (with no mention of materiality), Recorded transaction (substance), Recorded transaction (audit trail), Internal control evaluation (potential compromise), Internal control evaluation (monitored), Audit-related issues, Potential fraud-related issues, Business operation, and Changes in accounting estimate and trend.

Each of the coders was given specific coding instructions as well as definitions for the 12 recall categories. Appendix C details the complete coding instructions. After the coders completed their independent coding, I instructed the coders to resolve any coding differences between them. Finally, participant's score on the memory recognition test was computed based on the number of factual statement participants were able to correctly identify.

Table 8 presents the correlation analysis of independent, dependent, potential mediating, and other covariate variables.

²⁴ The factor loading of these three measures yielded one single factor. In addition, the Cronbach's Alpha of these three measures is 0.882.

Note that both of the independent variables, mindset and fraud risk condition, is significantly correlated with the dependent variable, the combined fraud risk assessment. According to the correlation analysis, fraud risk level is significantly correlated to total memory score, fraud-related statements score, both fraud and audit related statements score, and false positive (both fraud and audit related) statements score. In addition, total fraud risk assessment is significantly correlated to total memory score, false positive statements score, and false positive (both fraud and audit related) statements score.

Data Validation and Manipulation Check

Prior to analyzing the hypotheses, I performed the following steps to validate the data. First, I analyzed participants' demographics as a means to identify potential outliers. Although no outliers were identified, three observations were excluded from data analysis due to participants' failure to complete part of the experimental task²⁵. Specifically, these participants failed to follow instructions to complete the recall task in phase 3 of the experiment. They did not write down any items for the recall task. One of the excluded observations came from a participant assigned to the audit mindset/high fraud risk treatment group and two were from the audit mindset/low fraud risk treatment group. Thus, a total of 82 usable observations were available to analyze the results of the experiment with 21 in the audit mindset/low fraud risk group, 18 in the audit mindset/high fraud risk group, 21 in the fraud specialist mindset/low fraud risk group, and 22 in the fraud specialist mindset/high fraud risk group.

Second, I validated the data by analyzing the effectiveness of the manipulations. The success of the mindset treatment was investigated by examining the results related to six mindset manipulation check questions. These questions corresponded to questions 1 through 6 in

²⁵ The exclusion of these observations did not change the experimental results of the study.

Envelope A of the experimental instrument (as presented in the Appendix) and were completed immediately after participants read a description containing the 10 key mindset factors of their assigned role (either a fraud specialist or an auditor). First, I averaged the results (on a scale ranging from 0 to 10) of questions 1 through 5 and formulated a mindset construct²⁶. Results from the independent samples t-tests between the two mindset treatment groups indicate the mindset construct has a significantly ($p = 0.000$) lower value mean in the audit mindset group ($M = 2.299$) than in the fraud specialist mindset group ($M = 7.228$), indicating that the mindset manipulation was effective. Table 9 presents the t-tests results.

Table 9
Fraud Specialist Mindset versus Audit Mindset
(Mindset Manipulation)

Continuous Variables	Range	Mindset Treatment Group		t-value	p-value#
		Fraud Specialist (N=43)	Audit (N=39)		
		Mean (SD)	Mean (SD)		
Mindset Construct	0-10	7.228 (2.433)	2.299 (1.202)	11.445	0.000**

#p-values are 1-tailed; * significance at 0.05; ** significance at 0.01

The last manipulation check question asked participants to indicate what they thought was more important in regard to accounting records. As predicted, participants with the fraud specialist mindset were significantly ($p = 0.000$) more likely than those with the audit mindset to select answer choice (a) “Determining whether the reported accounting transactions actually took place” rather than answer choice (b) “Determining whether there are valid and proper documentations to support the recorded transactions”, providing additional empirical evidence that the mindset manipulation was effective.

Next, I determined the success of the fraud risk manipulation by examining the results

²⁶ The questions were constructed such that a lower score is associated with an audit mindset and a higher score is associated with a fraud specialist mindset.

related to participants' overall fraud risk assessment for Lakeview Lumber. The fraud risk assessment question corresponded to question 7a in Envelope A of the experimental instrument. I predicted and found that participants in the high fraud risk condition ($M = 6.292$) assessed fraud risk significantly higher ($p = 0.000$) than those in the low fraud risk condition ($M = 4.429$), demonstrating that the fraud risk manipulation was effective.

In addition to the mindset and fraud risk condition manipulation checks, I also examined participants' interest, effort, perceived knowledge, confidence level, and time spent on the experimental task. The concern was that participants' performance on the experimental task could potentially be impacted by these factors. As presented in Table 10, independent samples *t*-tests were conducted for each of these factors. Two questions addressed the concern related to interest and effort. First, participants reported the extent to which they thought the experimental task was interesting on a scale of 0 = not interesting at all to 10 = very interesting. Second, participants expressed the amount of effort they exerted in completing the experiment on a scale of 0 = hardly any effort to 10 = a significant of effort. In addition to interest and effort, participants were asked to express their perceived knowledge with the experimental case material on a scale of 0 = very unknowledgeable to 10 = very knowledgeable. Finally, to address the issue related to time, I recorded the minutes each participant took to complete the experimental case.

As reported in Table 10 Panel A, there were no significant differences between mindset treatment groups in terms of participants' interest, effort, perceived knowledge, confidence level, and time spent on the experimental task. Similar results were found between fraud risk treatment groups as shown in Table A Panel B.

Table 10
Analysis of Participants' Interest, Effort, Confidence, and Time Spent on the Experiment
(Across Manipulated Levels)

Panel A	Range	Mindset Treatment Group		t -value	p-value#
		Fraud Specialist (N=43)	Audit (N=39)		
		Mean (SD)	Mean (SD)		
Interest in experiment	0-10	5.884 (2.280)	6.167 (1.995)	0.595	0.553
Effort exerted in experiment	0-10	7.070 (1.805)	7.354 (1.693)	0.733	0.466
Perceived knowledge	0-10	5.628 (2.279)	6.321 (1.734)	1.537	0.128
Confidence level	0-10	7.280 (1.632)	7.440 (1.322)	0.486	0.628
Time (minutes) spent on experiment	0-Max	35.419 (8.089)	37.9744 (7.768)	1.456	0.149

#p-values are 2-tailed; * significance at 0.05; ** significance at 0.01

Panel B	Range	Fraud Risk Treatment Group		t-value	p-value#
		High Fraud Risk Condition (N=40)	Low Fraud Risk Condition (N=42)		
		Mean (SD)	Mean (SD)		
Interest in experiment	0-10	6.013 (2.288)	6.024 (2.018)	0.024	0.981
Effort exerted in experiment	0-10	7.358 (1.771)	7.060 (1.733)	-0.770	0.444
Perceived knowledge	0-10	6.088 (2.236)	5.833 (1.886)	-0.557	0.579
Confidence level	0-10	7.300 (1.518)	7.410 (1.471)	0.856	0.740
Time (minutes) spent on experiment	0-Max	35.725 (8.638)	37.500 (7.326)	1.005	0.318

#p-values are 2-tailed; * significance at 0.05; ** significance at 0.01

Finally, consistent with Kadous and Sedor (2004), a distracter exercise (self-monitoring scale) was used to clear participants' short-term memory of the experimental case information before they completed both the recall and the memory recognition tasks. A total of 25 true-false

questions are included in the self-monitoring distracter exercise. I computed participants' scores on the distracter exercise and found no statistical differences between the treatment groups.

Hypothesis Testing

Hypothesis 1

Hypothesis 1 predicts a main effect for mindset, such that individuals who possess the fraud specialist mindset will assess risk of financial statement fraud higher in both high and low fraud risk conditions than those who possess the audit mindset. To test this hypothesis, the experimental instrument captured participants' assessments of the following items.

As discussed previously, I used the average of the dependent measures (likelihood of fraud in the Bad Debt Expense account, likelihood of fraud in the Product Warranties Expense account, and the overall fraud risk for Lakeview) to create a single dependent variable, total fraud risk assessment, for Hypothesis 1. Table 11 provides the descriptive statistics and the t-tests results for this variable among treatment groups.

Fraud Risk Treatment Group	Mindset Treatment Group				Total		t-value	p-value#
	Fraud Specialist		Audit		Mean (SD)	N		
	Mean (SD)	N	Mean (SD)	N	Mean (SD)	N		
High Fraud Risk Condition	7.371 (1.297)	22	6.389 (1.804)	18	6.929 (1.603)	40	-2.001	0.027*
Low Fraud Risk Condition	5.659 (2.243)	21	3.198 (2.092)	21	4.429 (2.478)	42	-3.676	0.001**
Total	6.535 (1.997)	43	4.671 (2.521)	39	5.648 (2.434)	82	-3.728	0.000**

#p-values are 1-tailed; * significance at 0.05; ** significance at 0.01

According to Table 11, in all fraud risk conditions, total fraud risk assessment was significantly higher ($p = 0.000$) for participants with the fraud specialist mindset ($M = 6.535$) than for those

with the audit mindset ($M = 4.671$). Participants with the fraud specialist mindset assessed total fraud risk ($M = 7.371$) significantly higher ($p = 0.027$) than those with the audit mindset ($M = 6.389$) in the high fraud risk condition. Results depicted in Table 5 also indicate that in the low fraud risk condition, participants in the fraud specialist mindset group assessed total fraud risk ($M = 5.659$) significantly higher ($p = 0.000$) than those in the audit mindset group ($M = 3.198$).

I used an ANOVA to further examine Hypothesis 1 by controlling for potential covariates of gender, age, GPA, years of accounting related professional experience, interest, effort, perceived knowledge, and confidence level²⁷. Table 12 presents the ANOVA results. Except for interest in the experiment ($p = 0.052$), none of the covariates significantly influenced participants' fraud risk assessment. While this variable was significant in the model, the inclusion of this covariate did not change the hypothesis test results. The manipulated variables of mindset ($p = 0.000$) and fraud risk condition ($p = 0.000$) were significant. Although not reported in Table 6, the mindset variable has a corresponding effect size of 0.203 and an observed power of 0.992. Similarly, the fraud risk condition variable has an effect size of 0.319 and an observed power of 1.000. According to Cohen (1988), these statistics represent a large association between these two variables and participants' fraud risk assessment. The interaction variable (mindset and fraud risk) is not statistically significant ($p = 0.409$). This indicates that there is no interaction between the mindset and fraud risk variables and thus, supporting Hypothesis 1 that individuals with the fraud specialist mindset assessed the risk of financial statements fraud higher in both high and low fraud risk conditions than those with the audit mindset. I also included a graphical presentation of the results related to Hypothesis 1 in Figure 4.

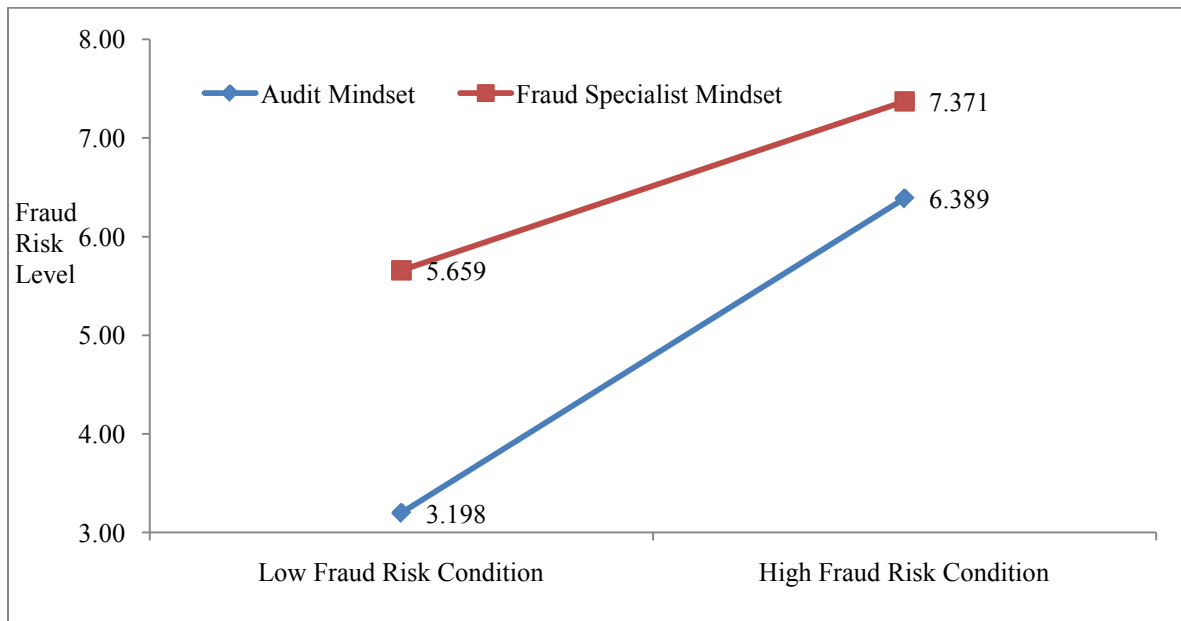
²⁷ Prior to the ANOVA test, I conducted the Levene test for homogeneity of variance. The Levene test was not significant ($p = 0.168$), indicating that the variance relating to the fraud risk assessment dependent variable was equal among treatment groups. Thus, no adjustment was needed to apply to the ANOVA test.

Table 12²⁸
ANOVA Test Results – Hypothesis 1
(Dependent Variable – Total Fraud Risk Assessment)

Source	Sum of Squares	Df	Mean Square	F	p-value#
Model	222.275	4	55.569	16.602	0.000**
Mindset treatment	65.698	1	65.698	19.628	0.000**
Fraud risk condition treatment	120.827	1	120.827	36.099	0.000**
Mindset x Fraud Risk (Interaction)	3.522	1	3.522	1.052	0.308
Interest in experiment	21.054	1	21.054	6.290	0.014*
Error	257.726	77	3.347		

Hypothesized variables in Table 12 are presented 1-tailed; all others are 2-tailed; * significance at 0.05; ** significance at 0.01

Figure 4
Graphical Presentation of Hypothesis 1
(Dependent Variable – Total Fraud Risk Assessment)



²⁸ In addition to the factors presented in Table 12, I also examined several variables as potential covariates. These variables include participants' gender, age, GPA, years of accounting experience, accounting internship experience, effort exerted in experiment, perceived knowledge, confidence level, college credit, ethnicity, birth place, major, and time (minutes) spent on experiment. Since none of these variables were statistically significant, I excluded them from further analysis.

Hypothesis 2

Hypothesis 2 predicts that individuals who possess the fraud specialist mindset will develop a problem representation that is qualitatively different from those who possess the audit mindset. In this study, qualitative difference is defined as differences in the specific types of information recalled by participants. I used the results from the recall task as well as the accuracy score of the memory recognition test as dependent measures for problem representation.

First, I analyzed the content of participants' responses on the recall test. As discussed previously, the 12 different categories for the coding scheme were: Materiality, Misstatement (material), Misstatement (immaterial), Misstatement (with no mention of materiality), Recorded transaction (substance), Recorded transaction (audit trail), Internal control evaluation (potential compromise), Internal control evaluation (monitored), Audit-related issues, Potential fraud-related issues, Business operation, and Changes in accounting estimate and trend. Two independent coders classified a total of 609 recall items. Participants in the fraud specialist mindset group generated 310 recall items and those in the audit mindset group provided 299 items. There is no significant difference between the total numbers of items recalled between these two groups. Based on comments by the independent coders, I added another recall category labeled "case facts". This category represents participants' recall related to facts from the experiment case such as "the name of our client is Lakeview Lumber" and "Karen is the in-charge auditor". I did not expect there to be any recall difference for "case facts" between the two mindset treatment groups. Appendix D details participants' recalls and their corresponding categories classified by the independent coders.

Consistent with prior studies (Christ, 1993; Hammersley et al., 1997; Hammersley,

2006), I used the Cohen Kappa coefficient to assess the inter-rater reliability of the independent coders' classification. The Kappa coefficient for the initial predetermined 13 categories was 0.72. Based on Landis and Koch (1977), a Kappa coefficient in the range of 0.61 to 0.80 represents a substantial strength of non-chance agreement between the two independent coders. Thus, the Kappa coefficient provided support that there was a sufficient level of reliability between the two independent coders. The independent coders subsequently resolved all coding differences. To test Hypothesis 2, I performed an independent samples t-tests for each of the 13 recall categories between both mindset treatment groups. Table 13 presents the t-tests results.

Table 13
Number of Specific Types of Recalled Information (t-tests) – Hypothesis 2

Specific Types of Information Recalled	Mindset Treatment Group		t-value	p-value#
	Fraud Specialist (N=43)	Audit Mindset (N=39)		
	Mean (SD)	Mean (SD)		
(1) Materiality	0.209 (0.412)	0.385 (0.544)	1.656	0.051*
(2) Misstatement (material)	0.023 (0.153)	0.077 (0.354)	0.906	0.184
(3) Misstatement (immaterial)	0.233 (0.527)	0.436 (0.598)	1.636	0.947
(4) Misstatement (with no mention of materiality)	0.628 (1.024)	0.436 (0.718)	-0.947	0.167
(5) Recorded transaction (substance)	0.698 (0.258)	0.256 (0.160)	-0.920	0.180
(6) Recorded transaction (audit trail)	0.5116 (0.703)	0.359 (0.707)	-0.980	0.165
(7) Internal control evaluation (potential compromise)	0.256 (0.539)	0.256 (0.498)	0.005	0.498
(8) Internal control evaluation (monitored)	0.186 (0.394)	0.103 (0.307)	-1.062	0.146
(9) Audit-related issues	0.488 (0.768)	0.744 (1.019)	1.289	0.101
(10) Potential fraud-related issues	0.767 (0.812)	0.667 (0.869)	-0.543	0.295
(11) Business operation	1.209 (1.552)	1.333 (1.475)	0.370	0.712
(12) Changes in accounting estimate and trend	1.700 (1.520)	1.790 (0.991)	0.317	0.752
(13) Case facts	0.930 (1.142)	1.132 (0.906)	0.871	0.386

* Except for category (11) Business operation, (12) Changes in accounting estimate and trend, and (13) Case facts, the p-values reported in Table 13 were 1-tailed; * significance at 0.05; ** significance at 0.01

Those with the audit mindset ($M = 0.385$) recalled significantly more ($p = 0.051$) items related to the concept of Materiality than those with the fraud specialist mindset ($M = 0.209$). There was no significant difference ($p = 0.184$) between participants in the mindset groups in regard to Misstatement (material). However, the mean results suggested that participants with the audit mindset ($M = 0.077$) tended to recall slightly more ($p = 0.184$) items related to Misstatement (material) than those with the fraud specialist mindset ($M = 0.023$). While I expected that the fraud specialist mindset to lead participants to recall more items related to Misstatement (immaterial) than those with the audit mindset, the statistical results did not support my prediction. On the other hand, although it was not statistically significant ($p = 0.167$), participants with fraud specialist mindset ($M = 0.628$) recalled more items regarding Misstatement (with no mention of materiality) than those with the audit mindset ($M = 0.436$).

Interestingly, participants in both mindset groups recalled relatively few items related to Recorded transaction (substance). While the difference is not statistically significant ($p = 0.180$), participants with the fraud specialist mindset ($M = 0.698$) recalled more items pertaining to the substance of accounting transactions than those in the audit mindset group ($M = 0.256$). Contrary to expectation, although not significant ($p = 0.165$), participants in the fraud specialist mindset group ($M = 0.5116$) recalled more items associating to Recorded transaction (audit trail) than those in the audit mindset group ($M = 0.359$). Furthermore, in contrast to my prediction, there are no differences between the two mindset treatment groups in terms of the number of items they recalled in regard to Internal control evaluation (potential compromise) ($p = 0.498$) and Internal control evaluation (monitored) ($p = 0.146$). While it was not significant ($p = 0.101$), participants with the audit mindset ($M = 0.744$) recalled more Audit-related issues than those with the fraud specialist mindset ($M = 0.488$). In addition, no significant differences ($p = 0.295$)

were found between participants in the fraud specialist mindset group ($M = 0.767$) as compared to those in the audit mindset group ($M = 0.667$) regarding the number of items recalled there was related to Potential fraud-related issues. Finally, in accordance to my expectation, there are no differences between participants in both fraud specialist and audit mindset groups in terms of Business operation ($p = 0.712$), Changes in accounting estimate and trend ($p = 0.752$), and Case facts ($p = 0.386$).

As mentioned, the primary objective for a fraud specialist is to investigate and determine whether fraud exists, regardless of materiality. Thus, fraud specialists are less likely to be concerned with the items associated with materiality as compared to auditors. Based on the results presented in Table 7, participants with the audit mindset recalled more items related materiality than those with the fraud specialist mindset. Specifically, they recalled more items related to Materiality, Misstatement (material), and Misstatement (immaterial). To further investigate whether there is a significant difference between mindset groups in regard to materiality, I totaled the number of items recalled of these three categories. My analysis is presented in Table 14.

Specific Types of Information Recalled	Mindset Treatment Group		t-value	p-value#
	Fraud Specialist (N=43)	Audit Mindset (N=39)		
	Mean (SD)	Mean (SD)		
Total Materiality ²⁹	0.465 (0.631)	0.897 (0.940)	2.466	0.008**

#p-value is 1-tailed; * significance at 0.05; ** significance at 0.01

According to the results in Table 14, participants in the audit mindset group ($M = 0.897$) recalled significantly ($p = 0.008$) more items related to materiality than those in the fraud

²⁹ Total materiality is the sum of Materiality, Misstatement (material), and Misstatement (immaterial).

specialist mindset group ($M = 0.465$), thus, providing support that auditors focus more heavily on materiality than fraud specialists. Overall, the results from the recall task provide some preliminary empirical evidence that participants who possess the fraud specialist mindset developed a problem representation that was qualitatively different than those who have the audit mindset. Specifically, these differences are most pronounced in items related to materiality.

In addition to the t-tests, I performed the Mann-Whitney test. This nonparametric test is used to determine whether two samples are coming from the same population. Siegel (1956, p.116) stated that the Mann-Whitney test is “one of the most powerful of the nonparametric tests, and it is a most useful alternative to the parametric t test.” Given that I am examining whether there are any differences in the number of items recalled between mindset groups, it would be appropriate to treat the recall items in an ordinal scale. Thus, it is suitable to use the Mann-Whitney test. Table 15 presents the results of this nonparametric test.

Specific Types of Information Recalled	Mindset Treatment Group		M-W	p-value#
	Fraud Specialist (N=43)	Audit Mindset (N=39)		
	Median	Median		
(1) Materiality	39.03	44.22	732.500	0.094
(2) Misstatement (material)	40.94	42.12	814.500	0.247
(3) Misstatement (immaterial)	41.45	41.55	836.500	0.473
(4) Misstatement (with no mention of materiality)	42.15	40.78	810.500	0.373
(5) Recorded transaction (substance)	41.50	41.50	838.500	0.500
(6) Recorded transaction (audit trail)	43.22	39.60	764.500	0.091
(7) Internal control evaluation (potential compromise)	41.63	41.63	833.000	0.470
(8) Internal control evaluation (monitored)	41.77	41.21	827.000	0.422
(9) Audit-related issues	38.26	45.08	699.000	0.059
(10) Potential fraud-related issues	44.43	38.27	712.500	0.098
(11) Business operation	38.49	44.82	709.000	0.195
(12) Changes in accounting estimate and trend	36.10	46.54	606.500	0.039*
(13) Case facts	38.02	44.37	689.000	0.195

Except for category (11) Business operation, (12) Changes in accounting estimate and trend, and (13) Case facts, the p-values reported in Table 15 were 1-tailed; * significance at 0.05; ** significance at 0.01

While results from the Mann-Whitney test are slightly different, the overall findings corroborate those from the initial t-tests. Participants with the audit mindset (Median (M) = 44.22) recalled slightly more ($p = 0.094$) items related to Materiality than those with the fraud specialist mindset ($M = 39.03$). No significant differences were found regarding items recalled by participants related to Misstatement (material) ($p = 0.247$), Misstatement (immaterial) ($p = 0.473$), and Misstatement (with no mention of materiality) ($p = 0.373$). In addition, there are no recall differences ($p = 0.500$) between mindset groups regarding Recorded transaction (substance). Although it is marginally significant ($p = 0.091$), participants with the fraud specialist mindset ($M = 43.22$) recalled more items related to Recorded transaction (audit trail) than those in the audit mindset group ($M = 39.60$). Similar to the t-tests results, there are no differences between the number of items recalled by both mindsets in regard to Internal control evaluation (potential compromise) ($p = 0.470$) and Internal control evaluation (monitored) ($p = 0.422$).

Unlike the t-tests, the Mann-Whitney tests indicate that participants with the audit mindset ($M = 45.08$) recalled significantly more ($p = 0.059$) Audit-related issues than those with the fraud specialist mindset ($M = 38.26$). In addition, participants in the fraud specialist mindset group ($M = 44.43$) recalled slightly more ($p = 0.098$) Potential fraud-related issues than those in the audit mindset group ($M = 38.27$). Interestingly, participants in the audit mindset group ($M = 46.54$) recalled significantly more ($p = 0.039$) items pertained to Changes in accounting estimate and trend than those in the fraud specialist mindset group ($M = 36.10$). Finally, there are no differences between participants in both fraud specialist and audit mindset groups in terms of Business operation ($p = 0.195$) and Case facts ($p = 0.195$).

I used the Mann-Whitney tests to examine whether there is a significant difference

between mindset groups regarding materiality. Findings from the Mann-Whitney tests are consistent with the t-tests results shown in Table 16.

Specific Types of Information Recalled	Mindset Treatment Group		M-W	p-value#
	Fraud Specialist (N=43)	Audit Mindset (N=39)		
	Median	Median		
Total Materiality	36.40	47.13	619.000	0.013*

*p-value is 1-tailed; * significance at 0.05; ** significance at 0.01

In addition to the recall task, participants completed a memory recognition task. A total of 30 statements, including 8 “false positive” statements, were listed in the memory recognition test. Experts classified the memory recognition test into 9 audit-related, 11 fraud-related, and 10 both audit and fraud related statements. The experts classified 2 of the 8 “false positive” statements as fraud-related and the other 6 as audit-related. The final breakdown of the 30 statements was as follows: 9 audit-related, 9 fraud-related, 4 both audit and fraud related, and 8 “false positive” statements.

I computed participants’ accuracy score on the memory recognition test as follows. Participants received one point for each statement they correctly identified as factual information related to the experimental case. For example, participants received points if they were able to indicate that the “false positive” statements (sentences that made reference to matter that did not exist in the experimental case) were false. Table 17 presents the descriptive statistics and the t-tests results of participants’ performance on these questions.

Consistent with my expectation, Table 17 shows that participants in the audit mindset group ($M = 6.718$) scored significantly higher ($p = 0.059$) than those in the fraud specialist mindset group ($M = 6.140$) in the audit-related statements.

Table 17
Memory Recognition Test – Hypothesis 2

Mediating Variables	Range	Mindset Treatment Group		t-value	p-value#
		Fraud Specialist (N=43)	Audit (N=39)		
		Mean (SD)	Mean (SD)		
Total memory test score	0-30	23.000 (2.944)	23.795 (3.028)	1.205	0.232
Audit-related statements score	0-9	6.140 (1.712)	6.718 (1.589)	1.581	0.059
Fraud-related statements score	0-9	7.070 (1.280)	7.000 (1.076)	-0.266	0.396
Both fraud and audit related statements score	0-4	3.163 (0.843)	3.154 (0.961)	-0.045	0.964
False positive statements score	0-8	6.628 (1.215)	6.923 (1.133)	1.134	0.260
False positive (fraud-related) statements Score	0-2	1.6047 (0.4947)	1.513 (0.556)	-0.792	0.431
False positive (both fraud and audit related) statements score	0-6	5.023 (1.012)	5.410 (0.880)	1.840	0.070

Except for the Audit-related statement score and the Fraud-related statements score, the p-values reported in Table 17 were 2-tailed; * significance at 0.05; ** significance at 0.01

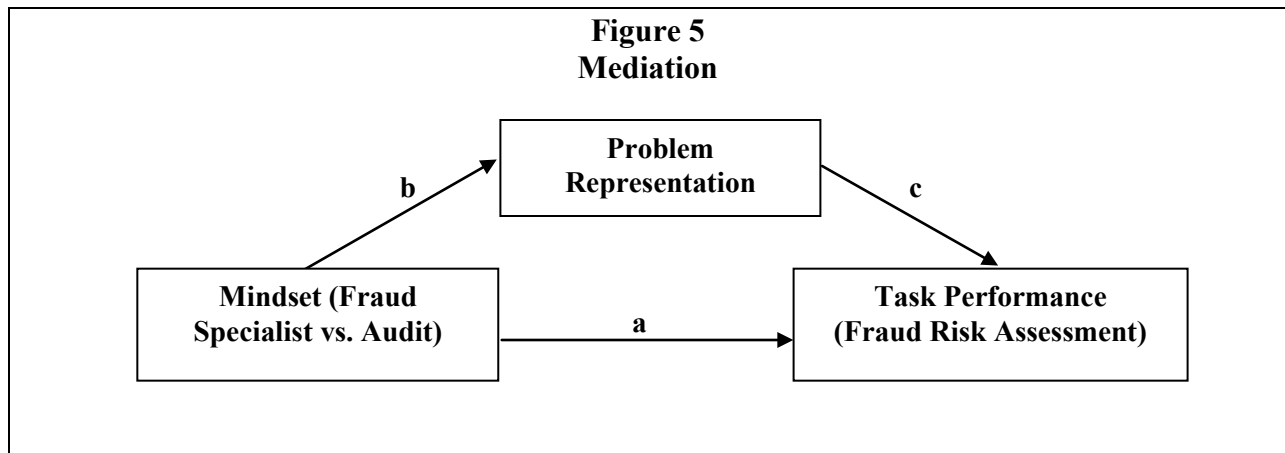
Although not statistically significant ($p = 0.396$), participants in the fraud specialist mindset group have a slightly higher score ($M = 7.070$) in the fraud-related statements than those in the audit mindset group ($M = 7.000$). Furthermore, consistent with my expectation, there is no difference ($p = 0.260$) between participants in both mindset groups in regard to the “false positive” statements. I further separated the “false positive” statements into “false positive” (fraud-related) and “false positive” (both fraud and audit related) statements. There is no difference ($p = 0.431$) between treatment groups regarding the “false positive” (fraud-related) statements score. Interestingly, participants in the audit mindset group ($M = 5.410$) scored slightly higher ($p = 0.070$) in the “false positive” (both fraud and audit related) statements than

those in the fraud specialist mindset group ($M = 5.023$). Finally, there is no difference ($p = 0.964$) in both audit and fraud related statements between participants in both mindset groups.

Taken together, the results from both the recall task and the memory recognition test provides some preliminary evidence that individuals who possess the fraud specialist mindset developed a problem representation that is qualitatively different than those with the audit mindset.

Hypothesis 3

Hypothesis 3 predicts that problem representation mediates the relationship between mindset and their fraud risk assessment. To test this hypothesis, I performed a mediation analysis as depicted in Figure 5.



According to Baron and Kenny (1986), there are four necessary conditions to establish mediation. First, the independent variable (mindset) must be significantly related to the dependent variable (fraud risk assessment). Path (a) represents this relationship. Second, as shown in path (b), the independent variable (mindset) must be significantly related to the mediator (problem representation). Third, the mediator (problem representation) must be

significantly related to the dependent variable (fraud risk assessment), as presented by path (c). Finally, the effect of the independent variable (mindset) on the dependent variable (fraud risk assessment) must be less after controlling for the mediator (problem representation).

The first condition, depicted by path (a), was supported. Based on the results from Hypothesis 1, mindset (either fraud specialist or audit) has a significant ($p\text{-value} = 0.000$) impact on individuals' risk fraud assessment performance. The second condition, represented by path (b), was also supported. Results from Hypothesis 2 showed that individuals developed different problem representations in accordance to respective mindset. Next, I examined the relationship between the mediator (problem representation) and the dependent variable (fraud risk assessment). I tested this relationship by using each of the 13 recall categories as well as results from the memory recognition test to predict fraud risk assessment. However, results from the statistical analysis showed that none of these factors significantly predicted fraud risk assessment. Thus, path (c) was not supported. Although the above findings did not satisfy the four necessary conditions as set forth by Baron and Kenny (1986) to establish mediation, I used the Goodman test to examine possible partial mediation. Table 18 presents the mediation test results.

In order to establish partial mediation, the path from the independent variable (mindset) to the dependent variable (fraud risk assessment) must be reduced in absolute size, but still significantly different from zero, when the mediator (problem representation) is controlled. Based on the results in Table 18, Potential fraud-related issues marginally ($p = 0.092$) reduced the path estimate from mindset to fraud risk assessment (from 0.354 reduced to 0.345). Thus, Potential fraud-related issues appears to have a weak mediation effect between mindset and fraud risk assessment.

Table 18
Mediation Test – Hypothesis 3

Potential Mediator	Path Estimates				Goodman	p-value
	Path (a)	Path (b)	Path (c)	Path (a/c)		
(1) Materiality	0.354	-0.019	-0.361	0.348	0.928	0.354
(2) Misstatement (material)	0.354	-0.001	0.544	0.355	-0.0493	0.961
(3) Misstatement (immaterial)	0.354	-0.037	0.102	0.358	-0.273	0.785
(4) Misstatement (with no mention of materiality)	0.354	0.056	0.004	0.354	0.017	0.986
(5) Recorded transaction (substance)	0.354	0.014	-0.819	0.366	-0.770	0.442
(6) Recorded transaction (audit trail)	0.354	0.033	0.273	0.345	0.884	0.376
(7) Internal control evaluation (potential compromise)	0.354	0.019	0.522	0.344	1.008	0.314
(8) Internal control evaluation (monitored)	0.354	0.007	-0.831	0.361	-0.804	0.421
(9) Audit-related issues	0.354	0.001	-0.270	0.355	-0.427	0.669
(10) Potential fraud-related issues	0.354	0.024	0.190	0.345	1.687	0.092
(11) Business operation	0.354	0.027	0.003	0.354	0.009	0.993
(12) Changes in accounting estimate and trend	0.354	-0.033	-0.082	0.359	0.239	0.811
(13) Case facts	0.354	-0.067	0.032	0.367	-0.174	0.862
Total memory test score	0.354	0.008	-0.184	0.356	-0.080	0.936
Audit-related statements score	0.354	-0.020	-0.278	0.349	0.380	0.704
Fraud-related statements score	0.354	0.038	-0.018	0.355	-0.057	0.954
Both fraud and audit related statements score	0.354	0.010	0.083	0.353	0.085	0.932
False positive statements score	0.354	-0.020	-0.660	0.341	0.496	0.620
False positive (fraud-related) statements score	0.354	0.020	-0.281	0.360	-0.892	0.372
False positive (both fraud and audit related) statements score	0.354	-0.04	-0.916	0.318	1.162	0.245

* Path (a) = Independent variable to dependent variable; Path (b) = Independent variable to mediator; Path (c) = Mediator to dependent variable; Path (a/c) = Independent variable to dependent variable in the presence of mediator; * significance at 0.05; ** significance at 0.01

Supplemental Analysis

Results from the correlation analysis (Table 8) indicate that fraud risk condition is significantly associated (column 2 row 22) with False positive (both fraud and audit related) statement scores (a proxy for problem representation) at the 0.01 level. I regressed this proxy for problem representation on fraud risk assessment and found that it is statistically significant ($p = 0.000$). Although it is not hypothesized in the study, these results suggest that problem representation mediates the relationship between fraud risk condition and fraud risk assessment. The Sobel test shows that problem representation significantly ($p = 0.036$) reduced the path estimate from fraud risk condition to fraud risk assessment (from 2.438 to 1.935).

Summary

Results from my study demonstrate that individuals who possess the fraud specialist mindset assess the risk of financial statements fraud higher in both high and low fraud risk conditions than individuals who possess the audit mindset. Thus, Hypothesis 1 is supported. In addition, results have shown that individuals who possess the fraud specialist mindset develop a problem representation that is qualitatively different than individuals who possess the audit mindset. Thus, Hypothesis 2 is supported. Finally, the mediation analysis provided some preliminary evidence for Hypothesis 3 to suggest that problem representation mediates the relationship between mindset and their fraud risk assessment.

In the next chapter, I present the discussion, limitations, and future research direction for this study.

CHAPTER 5

CONCLUSION

In this chapter, I conclude my dissertation by discussing the major findings of my study. I also discuss the limitations of my study as well as the direction for future research.

Discussion

High profile and widely publicized corporate fraud cases such as Enron, WorldCom, and HealthSouth have resulted in higher expectation for auditors to detect fraud. Fundamental to auditors' ability to detect fraud is the effectiveness of their fraud risk assessment. According to Knapp and Knapp (2001), fraud risk assessment effectiveness is defined as the ability for individuals to assess fraud risk higher when the risk of fraud is high and to assess it lower when the risk of fraud is low. While accounting standard setters and researchers have been trying to find ways to improve auditors' fraud risk assessment effectiveness, prior literature has shown that auditors are generally ineffective in assessing fraud risk (Joyce and Biddle, 1981; Hackenbrack, 1992; Cushing et al., 1995; Nieschwietz et al., 2000; Knapp and Knapp, 2001; Patterson and Noel, 2003; Allen et al., 2006). As a continuous effort to improve auditors' fraud risk assessment, the Public Company Accounting Oversight Board (PCAOB) Standing Advisory Group (SAG) suggested that accounting researchers consider how a fraud specialist mindset may impact auditors' fraud risk assessment performances. The SAG believes that the fraud specialist mindset may help auditors to increase the likelihood of discovering fraud in an audit.

Some accounting researchers advocate that auditors adopt the fraud specialist mindset as a means to improve their fraud risk assessment based on the SAG's recommendation (Rosen, 2006a; Rosen, 2006b; Smieliauskas, 2006). However, there is currently no study that has

experimentally examined the direct effects of mindset on fraud risk assessment performance. In addition, while a few studies have examined the comparative performance differences between auditors and fraud specialists (Bortiz et al., 2008; Rose et al., 2009), these studies only focused on high-risk contexts. Without examining fraud risk assessment performance between auditors and fraud specialists in the low-risk context, it would be impossible to ascertain whether the fraud specialist mindset carries the potential to improve auditors' overall fraud risk assessment. Thus, the purpose of my dissertation is to examine the effects of fraud specialist and audit mindsets on fraud risk assessment effectiveness in both high and low fraud risk conditions. Specifically, the primary goal of my study is to examine how a particular mindset influences an individual's fraud-related task performance. In addition, I intended to explore a possible mediator, problem representation, in the relationship between mindset and fraud risk assessment performance.

I tested the theoretical predictions of my study by administering an experiment to senior-level accounting students. The manipulations of my experiment consisted of varying mindset (either fraud specialist or audit) and fraud risk (either high or low) between participants. The first experimental manipulation was induced by exposing participants to a list of key descriptors representative of either an audit or a fraud specialist mindset. I consulted with a panel of experts consisting of auditors and fraud specialists to ensure the reasonableness and validity of these mindset descriptors. The second manipulation was introduced by varying the experimental case context. Specifically, fraud risk factors were seeded in the case to suggest either a high or low fraud risk conditions. After introducing experimental manipulations to the research participants, they were asked to assess the risk of fraud for a hypothetical company. During the experiment,

participants were also instructed to complete both a recall and memory recognition task. I used these tasks as a means to elicit participants' problem representations.

The results from this experiment support prior research findings that examined mindsets and subsequent performances. These studies have shown that while keeping variables such as knowledge, experience, and training constant, a simple difference in mindset can lead individuals to render substantially different judgments and decisions (Gollwitzer, 1990; Brandstatter and Frank, 2002; Armor and Taylor, 2003; Gagné et al., 2003; Torelli and Kaikati, 2009). Consistent with my theoretical prediction, participants in the fraud specialist mindset treatment group assessed fraud risk significantly higher than those in the audit mindset group in both high and low fraud risk conditions. Thus, my results provided evidence to suggest that, in a high fraud risk situation, it is possible to increase auditors' fraud risk assessment effectiveness by inducing them with a fraud specialist mindset or ways of thinking. In addition, the results from this study suggest that there is a propensity for fraud specialists to assess fraud risk at a higher level in a low fraud risk context. This propensity may lead to expending too much resources and time than necessary to accomplish a certain audit task or procedure at a specific effectiveness level. In other words, while adopting the fraud specialist mindset may help improve auditors' fraud risk assessment performance, it may lead auditors to over-audit and reduce audit efficiency.

Results from my study suggested that participants with the fraud specialist mindset developed a different problem representation than those with the audit mindset. Specifically, participants in the audit mindset group, as compared to those in the fraud specialist mindset group, recalled significantly more case information that was associated to materiality. This finding was consistent with my panel of experts' evaluation that while auditors focus primarily on materiality as a guide to their evaluation of audit evidence, fraud specialists are less likely to

be concerned with materiality in their investigation. Finally, contrary to my expectation, data collected from my experiment did not suggest that problem representation was a mediator between mindset and fraud risk assessment performance.

Limitations

As with any research study, this dissertation is subject to a number of limitations. First, it is a challenging task to design a fraud case to assess auditors' fraud risk assessment performance. Due to the nature of an experiment, it is not always practical to include in-depth case information. Thus, the case in this study may lack realism in practice. Nevertheless, the case used in my experiment is adapted from Lindberg (1999) and revised in subsequent fraud risk assessment studies (Carpenter et al., 2002; Carpenter et al., 2008). Thus, it provides a degree of assurance that this case is adequate for assessing individuals' fraud risk assessment performance.

The second limitation is the relatively small sample size in this study. A total of 82 participants were randomly assigned into the following groups: 21 in the audit mindset/low fraud risk group, 18 in the audit mindset/high fraud risk group, 21 in the fraud specialist mindset/low fraud risk group, and 22 in the fraud specialist mindset/high fraud risk group. A larger sample would provide more recall items for the study and may have the potential to improve the results of the mediation test. Nevertheless, the current sample size appears to be sufficient in supporting the major hypotheses of this study. Specifically, different mindset leads to different performance and problem representation.

The final limitation of this study pertains to the nature of individuals' problem representations. As an internal cognitive state, problem representation cannot be observed directly. Thus, it may be necessary to employ different techniques in addition to those used in

this study to proxy for such an internal mental state. Nevertheless, this study followed prior literature (i.e. Christ, 1993; Kadous and Sedor, 2004) by using validated methods such as recall and memory recognition tests to elicit individuals' problem representations. Thus, the methods used in this study were consistent with prior published studies.

Opportunities for Future Research

Despite the above limitations, this study contributes to the literature by being the first to directly examine how different mindsets impact fraud-related judgments. The results of my study provide some encouraging news that it is possible to improve auditors' fraud risk assessment performance through inducing a fraud specialist mindset. This has the potential to help audit firms develop low cost alternatives to train auditors in the acquisition of fraud/forensic-related knowledge and skill sets. In addition, I found that the fraud specialist mindset, as compared to the audit mindset, has the propensity to lead individuals to assess fraud risk high in either a high or low fraud risk condition. Finally, my study also provided some preliminary evidence that individuals with the fraud specialist mindset developed different problem representations than those with the audit mindset.

Based on the results of my study, future research in this area could examine how to incorporate mindset into audit-related decision aids. Bonner (2007) suggests that decision aids typically have positive effects on the quality of cognitive processing specially problem representation. Thus, it is desirable for researchers to explore decision aids that would aid auditors' in their fraud-related task. In addition to decision aid, it would be interesting for researchers to examine the relationships between the costs of the consultation of fraud specialists and the auditors' propensity to consult. As my study has suggested that individuals with the

fraud specialist mindset have the tendency to assess fraud risk at a higher level in both high and low fraud risk conditions, this may be a worthwhile topic for future research.

Finally, I think it would be interesting to examine the relationships among mindset, problem representation, and knowledge structure. While knowledge is kept constant in this study, it plays an important role in both fraud specialist and auditors' judgment and decision making process. Recent studies have found that fraud specialists have a different knowledge structure than that of the auditors (see Rose et al., 2009). Thus, it would be valuable to do further research in this area.

APPENDIX A
MINDSETS MANIPULATION

Fraud Specialist (Forensic Auditors) versus Auditor

Fraud Specialist	Auditor
<p>Role and objective as a fraud specialist As a fraud specialist, your primary responsibility is to determine whether fraud exists, regardless of its size or magnitude. You also have the responsibility to determine the overall extent of fraud (if it exists), how it occurred and how the risk of its future occurrences can be reduced or prevented.</p> <p>Expectations for a fraud specialist You would be asked to examine either a single account or a single transaction to see if fraud exists. You may also be asked to look at a series of transactions since fraud may not necessarily occur in a single transaction.</p> <p>You do not work with a materiality level. In other words, you are not concerned with the concept of materiality. Materiality is irrelevant to you because fraud may often occur below the materiality level.</p> <p>You would be expected to examine everything in great depth and you would generally not rely on audit sampling.</p> <p>You would be concerned with any minor discrepancies. You would assess these discrepancies to understand their nature and to determine if they are indicative of fraud.</p> <p>You would generally not be driven by a fixed budget. You would examine your work and review certain findings at the end of each phase. This will give you the opportunity to assess whether additional work is required. You may request more time and resources for your investigation until you are satisfied with your assessment of whether fraud exists.</p> <p>How to think like a fraud specialist You should think about accounting records in terms of the authenticity of the events and activities that are behind the reported</p>	<p>Role and objective as an Auditor As an auditor, your primary responsibility is to gather documentation to determine whether the company's reported financial statements taken as a whole (including footnotes) are stated fairly, in all material respects, in conformity with Generally Accepted Accounting Principles (GAAP).</p> <p>Expectations for an auditor You would be asked to look at your client's accounts either individually or in aggregate with other accounts. You would especially focus on accounts with a reasonable possibility of containing a material misstatement.</p> <p>You work with a materiality level. In other words, you are primarily concerned with material matters in an audit. Materiality is relevant to you because it serves as a guide to your evaluation of audit evidence.</p> <p>You would not be expected to examine every transaction and you would generally rely on audit sampling.</p> <p>You would not be concerned with minor discrepancies in any single account. You would only be concerned if these discrepancies are indicative of larger or pervasive problems.</p> <p>You would generally have a predetermined time budget for your work. If you spend too much time examining one area, you may have to spend less time somewhere else or you may run the risk of going over budget. While time is of the essence in an audit, you still have to do a sufficient amount of work and should not intentionally reduce or eliminate a procedure.</p> <p>How to think like an auditor You should think about accounting records in terms of the availability of supporting documents and the authenticity of the audit</p>

<p>transactions. In other words, you have to evaluate whether these transactions actually took place and are consistent with other information in your investigation. You should also consider the possibility of any unreported transactions.</p> <p>You should be sensitive to, and on the lookout for, the warning signs of fraud. These warning signs are often referred to as red flags or anomalies indicative of fraud. You can often identify them if you are willing to look deeply for them. To discover fraud, it is important to be able to think like a thief by asking yourself how he or she would probe and exploit any weaknesses of a company.</p> <p>You should keep in mind that things are not always as they appear to be. A visible immaterial misstatement may appear to be inconsequential, but the hidden portion of the misstatement could be substantial.</p> <p>Things to look for as a fraud specialist You should assume that fraud is possible even in the presence of strong internal control. No controls can prevent fraud if there is pressure, opportunity, and rationalization. Anyone is susceptible to committing fraud given the means, motive, and the opportunity. Thus, you should consider by whom and under what circumstances your client's controls may be compromised.</p>	<p>trail. In other words, you have to decide whether there is valid documentation to support the recorded transactions and whether they are presented in conformance with Generally Accepted Accounting Principles (GAAP).</p> <p>You should maintain an appropriate level of professional skepticism by having a questioning mind when you are evaluating audit evidence. Risk factors relating to fraudulent financial reporting include motive, opportunity, and rationalization. Although these factors are often present in situations where fraud exists, they do not necessarily indicate the existence of fraud.</p> <p>You should keep in mind that the possibility that a material misstatement due to unintentional error or fraud could be present, regardless of your belief about your client's honesty and integrity.</p> <p>Things to look for as an auditor You do not have to look at all of your client's internal controls and you are not always required to test the operating effectiveness of them. However, you are expected to at least look at the design of your client's internal controls. You are also to evaluate them in order to determine whether they are being implemented, in appropriate places, and are being monitored.</p>
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APPENDIX B
FRAUD RISK CONDITIONS MANIPULATION

High Fraud Risk Condition	Low Fraud Risk Condition
<p>Management Characteristics John usually arrives at work with his Porsche sport car. He and his wife have recently taken out a loan to purchase a new home in an upscale neighborhood.</p> <p>Terry has extensive and detailed knowledge of the Lakeview Lumber’s accounting systems as well as their weaknesses. Terry has been advocating for less formality in controls. Terry suggested that this would allow the accounting department to operate more efficiently and effectively, with fewer constraints.</p> <p>Managerial Compensation Each key personnel will receive a cash bonus based on a predetermined percentage of the company’s reported net income.</p> <p>The Accounting Environment Based on your firm’s prior year audits, Lakeview Lumber Inc. appeared to have some minor weaknesses in its accounting systems. However, these weaknesses did not appear to allow material errors into the company’s financial reporting process. Lakeview management reassured your firm that Lakeview will take appropriate actions to upgrade its accounting systems.</p> <p>Audit Issues Bad Debts Expense as a percentage of credit sales was approximately 3.2 percent for FY2008, whereas in the prior two years Bad Debts Expense as a percentage of credit sales was 5.0 percent for both FY2007 and FY2006.</p> <p>Lakeview Lumber's Warranty Expense account for FY2008 was approximately \$83,200, representing a 25 percent decrease from FY2007.</p> <p>When Karen asked John about the decrease in</p>	<p>Management Characteristics John usually arrives at work with his old Ford pickup truck. He and his wife have recently been saving money to remodel their kitchen.</p> <p>Terry has extensive and detailed knowledge in accounting as well as operational management. Terry has been advocating for more formality in controls and procedures. Terry suggested that this would allow the accounting department to better monitor its financial reporting process.</p> <p>Managerial Compensation Each key personnel will receive a cash bonus based on their salary level and their years of service. The maximum cash bonus is 1% of the key personnel’s salary.</p> <p>The Accounting Environment Based on your firm’s prior year audits, Lakeview Lumber Inc. appeared to have no issue with its accounting systems. No material deficiencies related to the company’s transactions were noted in prior audits. Lakeview Lumber, Inc. seemed to have a good control over its financial reporting process. Lakeview management assured your firm that Lakeview will continue to maintain the quality of its accounting systems.</p> <p>Audit Issues Bad Debts Expense as a percentage of credit sales was approximately 4.8 percent for FY2008, whereas in the prior two years Bad Debts Expense as a percentage of credit sales was 5.0 percent for both FY2007 and FY2006.</p> <p>Lakeview Lumber's Warranty Expense account for FY2008 was approximately \$119,000, representing a 6 percent increase from FY2007.</p> <p>When Karen asked John about the increase in</p>

<p>Warranty Expenses, John stated that the decrease was due to the better than expected economic growth in the area. He explained that builders were less particular in a stronger economic climate and they were less inclined to return wood and supplies that might be slightly flawed.</p> <p>Adam said he didn't think that the returns during FY2008 were much different from those of FY2007.</p> <p>Additional Audit Analysis The current reported net income may have been overstated by \$29,016 due to the Bad Debts Expense account.</p> <p>The current reported net income may have been overstated by \$21,481 due to the Product Warranties Expense account.</p> <p>The combined effects of both the Bad Debts Expense and the Product Warranties Expense accounts may have overstated the Lakeview Lumber Inc.'s net income by \$50,497 (\$29,016 + \$21,481).</p>	<p>Warranty Expenses, John stated that the increase was due to the better than expected economic growth in the area. He explained that builders were more particular in a stronger economic climate and they tended to return wood and supplies that might be slightly flawed.</p> <p>Adam said he did remember handling more returns during FY2008 than in FY2007.</p> <p>Additional Audit Analysis The current reported net income may have been overstated by \$3,224 due to the Bad Debts Expense account.</p> <p>The current reported net income may have been overstated by \$401 due to the Product Warranties Expense account.</p> <p>The combined effects of both the Bad Debts Expense and the Product Warranties Expense accounts may have overstated the Lakeview Lumber Inc.'s net income by \$3,625 (\$3,224 + \$401).</p>
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APPENDIX C

RECALL TASK CODING INSTRUCTIONS AND CATEGORIES DEFINITIONS

For Independent Coder

You will be given a list of items in regard to individuals' comments about a company. Based on your judgment, please classify these items into one of the following 12 categories. Definitions and examples of each of these categories are presented as follows:

(1) Materiality represents statements relating to the magnitude and significance of an accounting transaction or amount. Examples are:

"I will be using a threshold for materiality to test client's accounts"

"Bad debt expense and product warranty were under the materiality amount"

"The client's materiality level was 1% of sales"

(2) Misstatement (material) represents statements associated with any major discrepancies and material misstatements in client's accounts. Example includes:

"The client's fixed assets account was materially overstated"

(3) Misstatement (immaterial) represents statements related to any minor discrepancies and immaterial misstatements in client's accounts. Example includes:

"The discrepancy in bad debt expense was immaterial"

(4) Misstatement (with no mention of materiality) represents general statements related to client's misstatements with no mention of materiality. Example includes:

"The client's balance sheet was overstated"

(5) Recorded transaction (substance) represents statements related to whether a recorded transaction has actually taken place. Examples are:

"Verifying if transactions occurred"

"Examining whether the recorded transaction took place"

(6) Recorded transaction (audit trail) represents statements associated with whether the recorded transaction was supported by a proper audit trail. Examples are:

"We are concerned with whether the client has adequate documentation"

"The client provided us with proper documentation to support their reported transactions"

(7) Internal control evaluation (potential compromise) represents statements associated with observations of how the company's internal control may be circumvented or compromised. Examples are:

"Accounting manager at the company wants to loosen internal controls"

"The controller knew how to take advantage of the company's internal controls"

(8) Internal control evaluation (monitored) represents statements related to observations of whether the company's control was being put in place and monitored. Examples are:

"The client has fairly strong internal controls in place"

"The client's controls appeared to have been properly implemented"

(9) Audit-related issues represent statements associated with particular audit matters in regard to the client. Examples are:

“The audit firm has been performing this audit since 1982”

“Karen the in-charge auditor was over the planned audit time”

“The audit samples tested were valid”

“Bad debt expenses were presented fairly and accurately”

(10) Potential fraud-related issues represent statements that are related to potential fraud situations. Examples are:

“The controller drives a new Porsche to work”

“The controller took out a loan to buy an expensive house”

“Arbitrary reason for reduction in bad debt expense with no valid reasons”

“John the controller is suspect to fraud by boosting net income”

(11) Business operations represent statements that are related to the company’s business operations as well as its economic environment. It also encompasses issues related to managerial compensation. Examples are:

“Building economy is booming around the company”

“The company competes directly with Home Depot”

“The key personnel were to be given a cash bonus”

“Most regular customers pay with credit”

(12) Changes in accounting estimate and trends represent statements that describe changes or revisions in the company’s accounting estimate such as bad debt and product warranties expenses. It also represents statements that describe trends in the company’s financial data such as sales and earnings per share. Examples are:

“Bad debt account has an increase of 2%”

“Sales are increasing”

“Warranty expense increased by 6% from previous years”

“EPS was up over last year by about \$1 per share”

Categories Definitions Reference Table

Category	Description	Example
(1) Materiality	Concept relating to the magnitude and significance of an accounting transaction or amount	<i>“I will be using a threshold for materiality to test client’s accounts” “Bad debt expense and product warranty were under the materiality amount” “The client’s materiality level was 1% of sales”</i>
(2) Misstatement (material)	Any major discrepancies and material misstatements in client’s accounts	<i>“The client’s fixed assets account was materially overstated”</i>
(3) Misstatement (immaterial)	Any minor discrepancies and immaterial misstatements in client’s accounts	<i>“The discrepancy in bad debt expense was immaterial”</i>
(4) Misstatement (with no mention of materiality)	General statements related to client’s misstatements with no mention of materiality	<i>“The client’s balance sheet was overstated”</i>
(5) Recorded transaction (substance)	Whether a recorded transaction has actually taken place	<i>“Verifying if transactions occurred” “Examining whether the recorded transaction took place”</i>
(6) Recorded transaction (audit trail)	Whether the recorded transaction was supported by a proper audit trail	<i>“We are concerned with whether the client has adequate documentation” “The client provided us with proper documentation to support their reported transactions”</i>
(7) Internal control evaluation (potential compromise)	Observations of how the company’s internal control may be circumvented or compromised	<i>“Accounting manager at the company wants to loosen internal controls” “The controller knew how to take advantage of the company’s internal controls”</i>
(8) Internal control evaluation (monitored)	Observations of whether the company’s control was being put in place and monitored	<i>“The client has fairly strong internal controls in place” “The client’s controls appeared to have been properly implemented”</i>
(9) Audit-related issues	Associated with particular audit matters in regard to the client	<i>“The audit firm has been performing this audit since 1982” “Karen the in-charge auditor was over the planned audit time” “The audit samples tested were valid” “Bad debt expenses were presented</i>

		<i>fairly and accurately”</i>
(10) Potential fraud-related issues	Items that are related to potential fraud situations	<i>“The controller drives a new Porsche to work”</i> <i>“The controller took out a loan to buy an expensive house”</i> <i>“Arbitrary reason for reduction in bad debt expense with no valid reasons”</i> <i>“John the controller is suspect to fraud by boosting net income”</i>
(11) Business operations	Items related to the company’s business operations as well as its economic environment It also encompasses issued related to managerial compensation	<i>“Building economy is booming around the company”</i> <i>“The company competes directly with Home Depot”</i> <i>“The key personnel were to be given a cash bonus”</i> <i>“Most regular customers pay with credit”</i>
(12) Changes in accounting estimate and trends	Changes or revisions in the company’s accounting estimate such as bad debt and product warranties expenses It also represents statements that describe trends in the company’s financial data such as sales and earnings per share	<i>“Bad debt account has an increase of 2%”</i> <i>“Sales are increasing”</i> <i>“Warranty expense increased by 6% from previous years”</i> <i>“EPS was up over last year by about \$1 per share”</i>

APPENDIX D

PARTICIPANTS' RECALLS AND THEIR CORRESPONDING CATEGORIES

(1) Materiality³⁰

Fraud Specialist Mindset

1. *the materiality level was \$52,800 (H)*
2. *the materiality level for Lakeview lumber was about \$52,000 (H)*
3. *the under estimated liability account were really close to the materiality threshold (H)*
4. *both bad debt and product warranties accounts were under the materiality level but were close to the threshold when combined (H)*
5. *materiality is just over \$52,000 (H)*
6. *\$52,020 is materiality (L)*
7. *the materiality threshold is around \$250,000 (L)*
8. *materiality is 10% (L)*
9. *the materiality threshold for the client is \$5,020 (L)*

Audit Mindset

1. *both product warranty and bad debt expenses were below the threshold (H)*
2. *materiality level for the Lakeview was set at \$52,085 (H)*
3. *the materiality level was around \$52,000 (H)*
4. *materiality level is 1% of sales (H)*
5. *materiality level was about \$52,000 (H)*
6. *materiality level was set at 1% of revenues (H)*
7. *materiality level was \$52,050 (H)*
8. *materiality level is 1% of sales or about \$52,025 in the current year (L)*
9. *materiality was \$52,000 (L)*
10. *the materiality level for the client is \$52,000 (L)*
11. *the materiality amount was 1% of sales or around \$56,000 (L)*
12. *material level is 1% of sales = about \$57,000 (L)*
13. *the materiality threshold was \$52,000 (L)*
14. *the materiality was \$52,850 or close to it (L)*
15. *the materiality was set just over \$52,000 (L)*

(2) Misstatement (material)

Fraud Specialist Mindset

1. *net income was probably understated by at least \$50,000 (H)*

Audit Mindset

1. *bad debt expense had a material misstatement (H)*
2. *product warranties had a material misstatement (H)*
3. *Lakeview had a possible material misstatement in bad debt expense (L)*

(3) Misstatement (immaterial)

Fraud Specialist Mindset

1. *the bad debt expense and product warranty expense risks of misstatements were just under the \$52k materiality level (H)*

³⁰ (H) = High Fraud Risk Condition and (L) = Low Fraud Risk Condition

2. *the total overstatement of net income is slightly less than \$52,000 which is the materiality standard (H)*
3. *bad debt expense and warranty expense were below materiality (H)*
4. *differences in bad debt and warranty accounts were immaterial (H)*
5. *materiality assessment over bad debt expense is below the materiality level (L)*
6. *warranty product assessment is below the materiality level (L)*
7. *bad debt expense and warranties were both below materiality (L)*
8. *the discrepancy amount was far less than material amount of \$52,025 (L)*
9. *the recording numbers were below the level of materiality setup for the client (L)*
10. *misstatements were very minor (L)*

Audit Mindset

1. *together the misstatement did not go over the predetermined threshold of \$52,000 (H)*
2. *the bad debt expense changes is immaterial according to the 1% of sales or the materiality level of \$52,000 (H)*
3. *changes in amount is immaterial according to the materiality amount (H)*
4. *both bad debt and warranty expenses were under materiality level (H)*
5. *bad debt expense and warranty expense are below material level (H)*
6. *bad debt and warranty expenses changes were below the materiality level (H)*
7. *the aggregate of bad debt and warranty expense was just below the materiality threshold (H)*
8. *both the bad debt and warranties expenses accounts had discrepancies that were both immaterial (H)*
9. *the overall change of both bad debt and warranties accounts was just below the material level (H)*
10. *bad debt does not exceed materiality limits (L)*
11. *neither decrease in the bad debt and product warranty accounts were material (L)*
12. *neither the bad debt nor product warranty accounts were material according to the 1% of sales materiality level (L)*
13. *both warranty expense and bad debt expense put together was below materiality (L)*
14. *bad debt and warranty were immaterial (L)*
15. *the amount in bad debts was not above the \$50,025 threshold (L)*
16. *the product warranty expense wasn't over threshold (L)*
17. *the client had misstatements of about \$36,000. we set materiality for the client at \$52,000. (L)*

(4) Misstatement (with no mention of materiality)

Fraud Specialist Mindset

1. *There is discrepancy in the client's bad debt expense account (H)*
2. *there is discrepancy in the client's warranty expense account (H)*
3. *bad debt expense is misstated (H)*
4. *product warranty expense is misstated (H)*
5. *bad debt expense was potentially (most likely) understated (H)*
6. *net income was most likely overstated (H)*
7. *warranty expense may have been understated (H)*
8. *the overstatement of net income would lead to overstated retained earnings (H)*

9. *warranty expense estimate at 2.1% (H)*
10. *both the bad debt and product warranty expense accounts overstated net income (H)*
11. *the client overstated their income by about \$51,000 (H)*
12. *net income is possibly overstated by bad debt and product warranties (H)*
13. *management estimates seem wrong (H)*
14. *both bad debt and product warranty expenses were overstated (H)*
15. *product warranty expense is understated by a lot (H)*
16. *client seemed overstated bad debt expense (L)*
17. *client seemed overstated warranty expense (L)*
18. *client seemed understated income by roughly \$3,600 (L)*
19. *these misstatements allow the client to pay less taxes (L)*
20. *net income was potentially overstated by close to \$3,600 (L)*
21. *net income could be off by about \$4,000 (L)*
22. *both questionable accounts differences made possible the \$6,000 overstatement of net income (L)*
23. *both accounts were overstated (L)*
24. *bad debt possibly understated (L)*
25. *warranty expense possibly understated (L)*
26. *the total amount of discrepancies in both accounts was \$3,625 (L)*
27. *the amount in bad debt and product warranties maybe off (L)*

Audit Mindset

1. *bad debt and warranty expenses were low (H)*
2. *the bad debt expense for FY2008 was understated as a result net income may have been overstated (H)*
3. *net income was overstated by \$50,487 (H)*
4. *both bad debt and warranty expenses were understated (H)*
5. *net income was overstated by \$20,000 (H)*
6. *bad debt expense was too low (H)*
7. *warranty expense was too low (H)*
8. *ADA and product returns could have overstated net income by \$50,492 or something like that*
9. *there were discrepancies in the warranties expenses account (H)*
10. *net income was more than likely over-stated (H)*
11. *bad debt expense was overstated by \$3,000 (L)*
12. *product warranty was overstated by \$400 (L)*
13. *net income may have been overstated by \$411 due to bad debt expense (L)*
14. *net income may have been overstated by \$3,400 due to product warranty expense (L)*
15. *warranty expense caused \$401 difference in net income (L)*
16. *the effect of the bad debt expense change was just over \$3,000 (L)*
17. *the effect of the product warranties change was about \$400 (L)*

(5) Recorded transaction (substance)

Fraud Specialist Mindset

1. *product returns were "just a guess" (H)*
2. *warranty expense accounting was being investigated (L)*

3. *the returns were supported by Adam, manager in the cabinet department (L)*

Audit Mindset

1. *product returns at Lakeview lumber were rarely recorded (L)*

(6) Recorded transaction (audit trail)

Fraud Specialist Mindset

1. *it appears to take the clients a long time to get the requested information in order (H)*
2. *The estimates all came from the controller and did not follow calculations of previous years (H)*
3. *John used low percentage for bad debt expense because he expects everyone to pay (H)*
4. *when Karen, the in-charge auditor, asked Terry about bad debt expenses, he said that John the controller hold him to use a lower % possible (H)*
5. *when Karen talked to the cabinet manager she found out that documentations of product returns have not been kept (H)*
6. *Karen found out that changes in warranty expenses didn't quite matched with cabinet manager's explanation. - he didn't think there were much different (H)*
7. *the department with highest product returns didn't recall returns being lower less last year (H)*
8. *controller give a highly optimistic view of his forecast (H)*
9. *wasn't sure about the client's explanation as to why customers wouldn't return defective products (H)*
10. *manager doesn't appear to be looking at the correct information (H)*
11. *Adam, the cabinet manager, wasn't sure about the change in estimate because he "didn't think" there were much changes in product returns (H)*
12. *controller told accounting department to lower accounting estimates (H)*
13. *accounting manager said that the use of the estimate were just given by the controller (H)*
14. *product returns were not documented as they should be (H)*
15. *the bad debt expense decreased in percentage because the controller "expects people to pay quickly" (L)*
16. *the head of the cabinets department does not keep any records of returns (L)*
17. *no paper document was available for product returns (L)*
18. *cabinet department doesn't have a record of product returns (L)*
19. *there is no product return records kept by the client. They just use best guesses (L)*
20. *accounting transactions had adequate documentation (L)*
21. *John, the controller gives all the information to bad debt expense and warranties (L)*
22. *manager of the cabinet department does not keep track of all returns but fills all the proper paperwork (L)*

Audit Mindset

1. *when questioned about bad debt and warranty expense, Karen, the audit-charge was given the same answers (H)*
2. *management had asked the accounting management to use a lower bad debt expense number (H)*
3. *explanation of the bad debt information was a bit confusing (H)*
4. *all 30 warranty and return examples had proper documentation (H)*

5. *a manager claimed returns seem about the same as last year (H)*
6. *controller worked for the audit firm (H)*
7. *when asked by Karen the in-charge auditor why the % had decreased, the controller gave answers, controller said he predicted things to be better to justify decrease in % (H)*
8. *accounting manager lowered bad debt "per controller" (L)*
9. *cabinet department manager "remembers" more returns last year than this year (L)*
10. *accounting manager can produce legitimate documents for product returns (L)*
11. *none of the management know why the company increased or decreased bad debt expense and warranty expense (L)*
12. *the company doesn't keep product returns documentation (L)*
13. *warranty had risen and there was supporting evidence to support the change (L)*
14. *Terry said bad debt expense was an estimate from John, the controller (L)*

(7) Internal control evaluation (potential compromise)

Fraud Specialist Mindset

1. *the client's accounting manager wants lax internal controls (H)*
2. *the accounting manager wants to deformatize the company accounting system (H)*
3. *Terry the accounting manager wants less formal controls so that the accounting department can run more efficiently (H)*
4. *Terry appears to just use whatever accounting estimates given by John (H)*
5. *an accountant was asking for fewer controls in the accounting system (H)*
6. *accounting department replying on top management (H)*
7. *Terry wants less stringent rules for the company's accounting system so that he can make it move efficient (H)*
8. *Terry, the accounting manager thinks the company internal controls need to be loosened (H)*
9. *there are some minor issues with the client's accounting systems (H)*
10. *can't rely on the company's internal controls to address fraud (L)*
11. *no controls over the actual information that listed is accurate (L)*

Audit Mindset

1. *some employees asked for leniency with rules in accounting department (H)*
2. *accounting managers wants to loosen controls (H)*
3. *bad debt and warranty expense ratios were manipulated by controller (H)*
4. *accounting manager was pushing for less formal controls (H)*
5. *the accounting manager wants to reduce controls in order to make operations more efficient (H)*
6. *accounting manager wants looser controls (H)*
7. *account manager want lenient rule on accounting system (H)*
8. *the accounting manager was fighting for more relaxed accounting techniques (H)*
9. *the accounting manager was an advocate of less formal controls (H)*
10. *only one person seemed to be in charge of the making accounting changes (H)*

(8) Internal control evaluation (monitored)

Fraud Specialist Mindset

1. *the controller is good at coming up with answers to questions (H)*
2. *the accounting manager was very familiar with the accounting system (H)*

3. *the controller is a simple guy that wants good controls (L)*
4. *accounting manager wants to implement control to better monitor the accounting system (L)*
5. *the accounting manager wanted tougher internal controls (L)*
6. *controller and general accountant have separate duty (L)*
7. *accounting manager wants to implement more controls (L)*
8. *management is trying to upgrade the accounting system (L)*

Audit Mindset

1. *the accounting system had good controls (L)*
2. *the accounting manager has been advocating for better controls (L)*
3. *the accounting manager was a night auditor for a motel and wants better internal controls (L)*
4. *Terry, the accountant, wants more controls in place (L)*

(9) Audit-related issues

Fraud Specialist Mindset

1. *Lakeview was our client since 1982 (H)*
2. *my firm has been auditing Lakeview since 1982 (H)*
3. *the audit in-charge was pressed for time (H)*
4. *my firm has been the auditor of Lakeview since 1982 (H)*
5. *John the controller has been an auditor with my audit firm for 6 years before he joined Lakeview in 1995 (H)*
6. *during these 6 years, Lakeview was John's (the current auditor) client (H)*
7. *supporting documentation was good for 30 sampled (H)*
8. *my audit firm has been Lakeview auditors since 1982 (H)*
9. *the controller was familiar with the audit firm procedures (H)*
10. *the inventory manager and the controller have different opinion on warranty expenses (H)*
11. *the audit in-charge is already over the budget and audit time (H)*
12. *there wasn't much time for auditing since the audit is already overtime (H)*
13. *the audit in-charge feels there was not enough time budgeted to complete all substantive procedures(L)*
14. *bad debt expense account was being investigated (L)*
15. *there is a question about their bad debt expense (L)*
16. *there is a question about warranty expense (L)*
17. *the client sells wood, lawn products, and wood cabinets (L)*
18. *our audit firm has audited Lakeview since 1982 (L)*
19. *audit samples supported that the product returns were acceptable (L)*
20. *Karen, the in-charge got vague answers for her questions about changes in both bad debt and product warranties expenses (L)*
21. *the company performing audit has done so far many years (L)*

Audit Mindset

1. *30 product warranty transactions were worked at and nothing wrong was found (H)*
2. *the audit was over the time budget (H)*
3. *important audit issues were assigned to assistant instead of audit in-charge (H)*

4. *an internal auditor within the company is assisting the audit (H)*
5. *Karen is the in-charge auditor of the current audit (H)*
6. *bad debt expense calculations have been changed (H)*
7. *Karen the in-charge auditor did sampling and everything checked out (H)*
8. *Karen was the audit in-charge (H)*
9. *Karen is the in-charge auditor (L)*
10. *30 product returns were sampled and tested (L)*
11. *bad debt expense was reasonable (L)*
12. *the audit firm was not independent to the controller (L)*
13. *only two accounts in question bad debt expense and product warranty expense (L)*
14. *our audit firm is auditing the client currently (L)*
15. *Lakeview has been a client since the early 80's (L)*
16. *the in-charge auditor has already "busted" the audit time budget (L)*
17. *bad debt expense and warranty expense have been questioned by in-charge auditor (L)*
18. *no real fraud threats in prior audits (L)*
19. *the client has been audited by the audit firm since 1982 (L)*
20. *sampled 30 returns and all paperwork was in order (L)*
21. *Lakeview has been a client since 1982 (L)*
22. *the lead auditor is a female and has her BS in accounting (L)*
23. *the in-charge auditor did most of the investigation into the audit issue (L)*
24. *Karen the audit in-charge gave me information about Lakeview (L)*
25. *there seemed to be question of % used to compute the bad debt and warranty numbers (L)*
26. *Karen did a lot of tracing between people to get the information (L)*
27. *Karen was the in-charge auditor (L)*
28. *we have been auditing the client since like 1964 (L)*
29. *Karen is the lead auditor in the audit (L)*

(10) Potential fraud-related issues

Fraud Specialist Mindset

1. *top managers are living lavish lifestyle (H)*
2. *a key executive drives a Porsche and bought a new house (H)*
3. *the controller has a Porsche (H)*
4. *the controller recently bought an expensive house (H)*
5. *fraud is possible (H)*
6. *the controller drives a Porsche (H)*
7. *the controller and his wife took out a new loan for a house (H)*
8. *John, the controller, just got an expensive Porsche sport car (H)*
9. *John and his family just moved into an expensive house (H)*
10. *the controller drives a Porsche and he and his wife are buying a new home (H)*
11. *there are two accounts that were susceptible to fraud - bad debt expense and product warranty (H)*
12. *controller lived a lavish lifestyle (H)*
13. *the accounting manager did want he was told (H)*
14. *key executive drove a sport car and took out a loan on a house (H)*
15. *I felt that the company have a fraud issue with its accounts (H)*
16. *the controller drives an expensive car (H)*

17. *the controller drives a Porsche (H)*
18. *there is a possibility that the client's documents are fraudulent (L)*
19. *it is possible that the client's management decision is fraud (L)*
20. *controller drives old truck and is remodeling the kitchen (L)*
21. *there seemed to be fraud (L)*
22. *fraud seems likely given the client's control (L)*
23. *John had excuses to manipulate bad debt and product warranty expenses (L)*
24. *controller drives a old pickup truck (L)*
25. *controller and his wife are planning to remodel their kitchen (L)*
26. *bad debt expense warrants further investigation there is potential fraud (L)*
27. *warranty expense warrants further investigation there is potential fraud (L)*
28. *John the controller drives an old truck and wants to remodel his house (L)*
29. *the controller was saving money to remodel his kitchen (L)*
30. *there is a possible fraud in the bad debt expenses and warranty expenses accounts (L)*
31. *fraud may be possible (L)*
32. *the controller drives a pickup truck (L)*
33. *an employee of the client borrow money for home remodeling (L)*

Audit Mindset

1. *the controller drove a sport car (H)*
2. *the controller is buying a new house (H)*
3. *controller lives an expensive lifestyle (H)*
4. *controller drives a Porsche (H)*
5. *controller just financed a large expensive house (H)*
6. *controller opened a loan for a house (H)*
7. *controller drives a Porsche (H)*
8. *controller drives a nice sport car and is moving to a nice part of town (H)*
9. *controller has expensive lifestyle (H)*
10. *controller and wife applied for a loan for new home (H)*
11. *controller drives an expensive car (H)*
12. *controller drives a new Porsche (H)*
13. *controller and wife took out loan for new house (H)*
14. *the controller is buying a house and drives a sports car (H)*
15. *controller drives a sport car (H)*
16. *controller just took out loan to purchase house in upscale neighborhood (H)*
17. *controller drives an old pickup truck (L)*
18. *controller and his wife are saving money for kitchen remodeling (L)*
19. *John Mosher had a Ford and is saving money to remodel his kitchen with his wife (L)*
20. *the controller has a wife and kids and is saving for a house (L)*
21. *top executive is saving up for home improvements (L)*
22. *top executive drives an old ford truck (L)*
23. *employees do what top executives says without asking questions (L)*
24. *controller is remodeling his house (L)*
25. *the controller drove a Ford pickup truck to work everyday (L)*
26. *Terry wasn't confident on his response/reasoning (L)*

(11) Business operations

Fraud Specialist Mindset

1. *managers are getting bonus based on % of company's revenues (H)*
2. *employees receive bonuses based on net income (H)*
3. *the controller said that changes in estimates were low because of economy booming in the area (H)*
4. *the key employees are receiving cash bonuses based on a % of net income (H)*
5. *one of the competitor of Lakeview is Home depot (H)*
6. *the client do business in the area with population of 200k (H)*
7. *majority of Lakeview's customers have account with Lakeview and were billed monthly (H)*
8. *when Karen asked John about the estimates, he said that it was because the market is improving (H)*
9. *dividends paid in each year were 100k (H)*
10. *the bad debt expense was estimated using a lower % due to improved market conditions (H)*
11. *the warranty expense was estimated to be lower because of improve in housing market (H)*
12. *the client's reason for both bad debt and product warranty expense accounts was because of economic growth (H)*
13. *payments were expected to increase in year 2009 due to increase economy (H)*
14. *management decided to give out cash bonuses at fiscal year end (H)*
15. *bonus was based contingent of income level (H)*
16. *the company decided to give cash bonus based on net income (H)*
17. *the company has a new policy for bonuses based on net income (H)*
18. *controller claimed the reasons to change the accounting estimate were based on an upturn economy (H)*
19. *company offers new bonus based on net income (H)*
20. *in 2008, the company decides to give bonus (H)*
21. *the product warranties expense increased because the controller "expects economics growth" (L)*
22. *the client is a retailer for lumber building suppliers (L)*
23. *Home depot is a major competitor of Lakeview (L)*
24. *the economy is currently doing better according to Lakeview lumber (L)*
25. *Lakeview operates in a town that has 200,000 residents (L)*
26. *worker said many warranties were cash based (L)*
27. *Lakeview operates in a town of 200,000 people (L)*
28. *the client provides building material for homes (L)*
29. *the housing market has been better in 2008 than previous years, per controller (L)*
30. *controller's rationalized that bad debt expense difference is due to better housing market (L)*
31. *controller's rationalization for warranty expense differences is that worker are returning more products due to better market (L)*
32. *Lakeview is in a "up" market (L)*
33. *the company approved executives bonuses (L)*
34. *cabinet department did not notice an increase in product returns (L)*

35. *the controller says changes in warranty expense is because of higher product returns (L)*
36. *there is an increase in business due to housing growth (L)*
37. *the company decided to give key employees a bonus based on salary and years of service*
38. *the majority of product returns are in the cabinet department (L)*
39. *Lakeview competes with Home Depot (L)*
40. *the city was experiencing economic growth and because of this, the client thinks people would pay debts quickie (L)*
41. *Home Depot is one of their competitors (L)*
42. *the cabinet manager claimed that he had a higher number of product returns (L)*
43. *the company does not record all of their product returns (L)*
44. *Lakeview thought economic growth leads to more product returns (L)*
45. *the controller's excuse for the increase in warranty expenses, builders are pickier in a stronger housing market, doesn't seem reasonable (L)*
46. *there was no evidence of the improved housing market and how it helps customers to pay quicker, it's just the words of the controller (L)*
47. *there was no evidence of the improved housing market and how it helps customers to pay quicker, it's just the words of the controller (L)*
48. *one of the client's competitor is Home Depot (L)*
49. *company has shown positive earnings for the last 3 years (L)*
50. *one of the companies major competitors is Home Depot (L)*
51. *the client decides to give employees a cash bonus (L)*
52. *Lakeview increased warranty and bad debt expense because of recent growth around the area as explained by the controller (L)*

Audit Mindset

1. *the company gave a cash bonus at the end of the year (H)*
2. *the client sales 20,000 to 30,000 homes (H)*
3. *Lakeview lumber has a couple of competitors in the area (H)*
4. *cash bonus tied to net income results (H)*
5. *Terry, the accounting manager says the economy is why the percent went down (H)*
6. *Terry states that the economy is a reason for the decrease in product warranty cost (H)*
7. *key executives get a bonus based on net income (H)*
8. *Lakeview lumber has two major competitors in the area (H)*
9. *controller claimed warranty expense down because of builder confidence in supposedly better economic times (H)*
10. *bad debt expense down because of "better economic standing" (H)*
11. *no significant product changes (H)*
12. *new bonuses for "key executives" (H)*
13. *cash bonus based on net income (H)*
14. *the controller claims that the market is good and that's why the estimated expenses have been lower (H)*
15. *based on board minutes they are going to start bonuses in 2008 by performance of company*
16. *company makes building materials (H)*
17. *biggest competition is Home Depot (H)*
18. *Lakeview decided to give cash incentive to employees based on net income (H)*

19. Lakeview lumber collects mostly cash except with a few suppliers (H)
20. the managers starting in 2008 will get a bonus as a % of net income (H)
21. they began decreasing bad debt expense because of economic conditions (H)
22. they changed their warranties for the same reason (H)
23. there is economic growth in the surrounding area (L)
24. executives are receiving cash bonus (L)
25. new bonuses haven't been approved (L)
26. bonuses based on salary and years of services were maxed at 1% of salary (L)
27. Lakeview's competes locally with Home Depot and Eagle Garden (L)
28. controller expects faster payment due to better economy (L)
29. the cabinet department experienced most product returns (L)
30. Lakeview's customers buy on credit and are billed monthly (L)
31. warranty expense changes because customers bring back worn wood (L)
32. bad debt was lower because increase in building houses in the area so the client expects the customers to pay quicker (L)
33. Lakeview key personnel are offered 1% bonus based on years of services (L)
34. bad debt expense was decreased because of a better economy (L)
35. warranty expense was increased because of area growth (L)
36. company sells lumber and home/garden products (L)
37. Lakeview has 2 major competitors - Home Depot and Eagle Home and Garden (L)
38. the company expects higher returns this year (L)
39. Lakeview lumber is a small business (L)
40. most contract orders are done on credit and other customer paid cash (L)
41. the warranty expense account was 6% higher than the previous year, auditor was told it was because the company has a good year (L)
42. Home Depot is a main competitor (L)
43. everyone was on salary in previous years (L)
44. bonuses will be given based on salary and number of years worked there (L)
45. the company supplies around 25,000 different types of wood/lumber (L)
46. its biggest competitor is Home Depot (L)
47. the company has been successful the past couple years (L)
48. the company introduces a new compensation for key employees/management (L)
49. John attributed increases in estimates to a growing housing market (L)
50. they just implemented a bonus for executives up to 1% of their annual salary (L)
51. they typically sell between 30-35 thousand units of lumber (L)
52. the executives believe the market will be better in 2009 (L)

(12) Changes in accounting estimate and trends

Fraud Specialist Mindset

1. cash was higher in 2008 than all previous years (H)
2. sales were higher in 2008 (H)
3. A/R increased but not to the extent of sales (H)
4. the higher net income gave the company an increased EPS (H)
5. inventory was higher in 2008 than previous years (H)
6. product returns did not seem to have changed much from 2007 to 2008 (H)
7. bad debt expense was estimated at 3.2%, not 5%, like years 2007 and 2008 (H)

8. *the cabinet department manager said product warranties were no less than last year (H)*
9. *bad debt expenses were lower than the previous year (last year it was 5% of sales and this year it is only 3.2%) (H)*
10. *warranty expenses were lower than previous years (H)*
11. *bad debt expense % went down 2-8% (H)*
12. *warranty expense went down (H)*
13. *the controller expected the bad debt expense to decrease to 3.2% (H)*
14. *the previous bad debt expenses were valued at 5% (H)*
15. *the controller also expected product warranties to decrease (H)*
16. *the percentage of bad debt expense decreased (H)*
17. *the accounting manager said to use lower bad debt % (H)*
18. *product returns were higher in same department than others (H)*
19. *product warranty expense had decreased from 5% to 3.2% (H)*
20. *all numbers in on the unaudited financial statements had notable changes*
21. *numbers on B/S and I/S had some unusual numbers (H)*
22. *the client has decreased the % on bad debt expense for FY2008 (H)*
23. *they also have decreased the warranty expense % for FY2008 (H)*
24. *both of the reason for decreasing % on these accounts are based on controller's decision (H)*
25. *the sales of current year have increased, but cost of good sold for the year didn't increase as much (H)*
26. *the increased net income for the current seemed to be unusual (H)*
27. *Lakeview's bad debt expense dropped, did not go up (H)*
28. *the company's earnings per share had dropped the last 3 years (H)*
29. *bad debt and warranty expense estimates nearly 1/2 of last year (H)*
30. *net income was way up compared to prior years (H)*
31. *bad debt expense was down from previous years (H)*
32. *product warranty was also down (H)*
33. *manager of the cabinet department didn't think product returns were down from previous years (H)*
34. *the controller didn't give any accounting reasons for the estimates given to the manager (H)*
35. *bad debt expenses were lower than last year (H)*
36. *product returns were different than last year (H)*
37. *income is higher this year than last (H)*
38. *accounts payable was lower than last year (H)*
39. *product warranties accounting were different than last year (H)*
40. *bad debt expense is understated at 3.2% compared to 5% from last year (H)*
41. *it was John, the controller's idea/call to lower bad debt and product warranties expenses to increase income (H)*
42. *there was an increase in retained earnings (H)*
43. *bad debt expense went down to 3.2% from 5% (H)*
44. *key executive instructs the accounting manager to use 4.8% bad debt rate instead of 5% (L)*
45. *bad debt expense is set to about 4.8% (L)*
46. *the client's earnings per share increased every year (L)*

47. sales are up in 2008 (L)
48. bad debt expense % understated this year, last year was 5% and this year was 4.8% (L)
49. warranty expense was less than previous year (L)
50. product warranty expense was up (L)
51. bad debt expense was down (L)
52. bad debt expense was \$124,800 for 2008 (L)
53. warranty expense was \$119,000 for 2008 (L)
54. bad debt expense was 5% in prior years, but is now 4.8% (L)
55. warranty expense is up in 2008 (minimal amount, but more than ever) (L)
56. bad debt expense percentage dropped (L)
57. warranty expense percentage increased (L)
58. bad debt estimate used to be 5% of sales and in FY08 (current year) it went down to 4.8% (L)
59. bad debt expense was 5% for 2006 and 2007 (L)
60. bad debt expense was 4.8% for 2008 (L)
61. the unaudited net income from the comparative income statements of \$318 million was \$3million less than the \$315 million reported on the unaudited retained earnings statement (L)
62. the controller's decision to use the smaller percentages for bad debt doesn't seem appropriate (L)
63. Lakeview has an increase of profit from fiscal year 2006 to fiscal year 2008 (L)
64. the percentage for evaluating bad debt expense has been decreasing from 5% to 4.8% (L)
65. earnings per share has been increased from 2006-2008 (L)
66. in current year audit, bad debt expense was 5% of credit sales (L)
67. previous 2 years of bad debt was 4.8% of credit sales (L)
68. credit sales were \$2,660,000 (L)
69. warranty expense increased because there were more product returns (L)
70. even though bad debt expense was 5% previously, John dropped it to 4.8% (L)
71. Lakeview lumber has an increase in product warranty expenses (L)
72. the client didn't use the same percentage to calculate bad debt expense in 2008 as it did in previous years (L)
73. Lakeview has growing numbers in gross profit, net income, and earnings per share from 06-08 (L)

Audit Mindset

1. bad debt went from 5% to 3.2% of net sales (H)
2. the bad debt expense was \$83,000 in 2008 (H)
3. the bad debt expense was \$123,000 in 2007 (H)
4. all financial statements information was the same the past 3 years (H)
5. warranties expense was low in FY2008 as opposed to 07 and 06 (H)
6. bad debt expense was down in FY2008 as opposed to 07 and 06 (H)
7. sales had increased yet both bad debt expense and warranty expense decreased (H)
8. bad debt expense estimate percentage decreased by half, John the controller attributed the decrease of bad debt expense due to better economy (H)
9. warranty expense estimate percentage was also decreased by half, John attributed the decrease to a booming economy (H)

10. *bad debt expense and product warranty expense % both decreased by a total of \$50,025 (H)*
11. *bad debt expense increased by 25% (H)*
12. *warranty expense decreased by 22% (H)*
13. *product warranty expense has been reduced (H)*
14. *the bad debt expense % changed from 5% of current sales to 3.5% (H)*
15. *the warranty expense decrease for FY2008 however the cabinet manager hasn't noticed a change in the returns from prior years to the current year (H)*
16. *the company EPS had increased considerably from the previous year (H)*
17. *bad debt expense was much less in 2008 (H)*
18. *warranty expense was much less in 2008 (H)*
19. *sales up but CGS did not go up proportionately (H)*
20. *earnings up, but not dividends (H)*
21. *changes in financial data from year to year weren't significant (H)*
22. *there is a 25% decrease in warranty expense (H)*
23. *bad debt expense decreased by half (H)*
24. *bad debt expenses were cut nearly in half (H)*
25. *bad debt expense was estimated at around 3% of credit sales this year to 5% in the two previous years (H)*
26. *Lakeview had continuously decreased warranty expense (H)*
27. *Lakeview had decreased bad debt expense (H)*
28. *bad debt expense for the current FY2008 was drastically lower when compared to other years (H)*
29. *there is a decrease in client's bad debt expenses (L)*
30. *there is an increase in client's product warranty expense (L)*
31. *warranty expense increased (L)*
32. *bad debt expense decreased (L)*
33. *bad debt expense was 4.8% of credit sales FY2008 (L)*
34. *bad debt expense was 5% of credit sales FY2006-2007 (L)*
35. *limited warranty liability increased to 6% from FY2007 to FY2008 (L)*
36. *bad debt expense is lower than prior 2 years (L)*
37. *all aging percentage are lower than prior 2 years (L)*
38. *product warranty expense was higher than last 2 years (L)*
39. *bad debt expense percent was higher (L)*
40. *client used a lower percentage of product warranty (L)*
41. *bad debt expense had a lower percentage compared to previous year (L)*
42. *product warranty expense increased (L)*
43. *product returns were more this year than in the previous year (L)*
44. *product warranties were higher than normal (L)*
45. *management gave good information as to why bad debt and warranty accounts were higher (L)*
46. *bad debt expense decreased (L)*
47. *lower percentages were used to calculate bad debt expense (L)*
48. *warranty expense decreased (L)*
49. *in prior years bad debt expenses was estimated at 5% (L)*
50. *in the current year bad debt expense was estimated at 4.8% (L)*

51. *bad debt expense dropped from 5% to 4.8% (L)*
52. *warranty expense increase by 6% (L)*
53. *they expects bad debt to be lower (L)*
54. *inventory went up more than in the past year (L)*
55. *bad debt expense was up 4.8% in the past 2 years, it has only gone up by 5% combined (L)*
56. *there was a slightly change on estimate concerning the percentage of bad debt (L)*
57. *the allowance for bad debt expense in 2007 was 5% of sales (L)*
58. *the allowance for bad debt expense in 2008 was estimated to be 4.8% of sales (L)*
59. *sales have increased (L)*
60. *warranty expense has increased (L)*
61. *bad debt expense was similar to prior years (L)*
62. *income statement/balance sheets are consistent year to year (L)*
63. *Lakeview had similar reporting from year to year (L)*
64. *bad debt expense was at 4.8% in FY2008 (L)*
65. *bad debt expense was at 5% in FY2007 and FY2006 (L)*
66. *product warranties were slightly higher (L)*
67. *bad debt % went from 4.8% in 2008 to 5% for 07 and 06 (L)*
68. *they decreased estimates for bad debt from 5 to 4.8% (L)*

(13) Case facts

Fraud Specialist Mindset

1. *John is the controller (H)*
2. *bad debt expense and warranty expense was the issue of the current investigation (H)*
3. *Terry is the accounting manager (H)*
4. *the controller used to work for my firm (H)*
5. *controller name was John (H)*
6. *the controller used to work for the audit company (H)*
7. *the controller audited Lakeview lumber for 6 years before working for Lakeview (H)*
8. *the accounting manager has been with Lakeview lumber for 4 years (H)*
9. *the accounting manager was a night auditor at his previous job (H)*
10. *the controller was used to be the auditor for the audit firm for 6 years (H)*
11. *the controller used to be an auditor (H)*
12. *the controller used to be an auditor as the current audit firm (H)*
13. *accounting manager used to be an auditor (H)*
14. *John, the controller used to work for the audit firm (H)*
15. *John is now in charge of Lakeview lumber (H)*
16. *Terry is the accounting manager (H)*
17. *the client's controller used to be an auditor for our audit firm (L)*
18. *the accounting manager used to be an auditor (L)*
19. *controller worked for the current audit firm (L)*
20. *controller is wanting more responsibility (L)*
21. *accounting manager was night auditor for a hotel (L)*
22. *2.3% warranty expense (L)*
23. *4.8% bad debt expense (L)*
24. *Lakeview has a controller and a lead accountant (L)*

25. *lead accountant has a bachelors degree and is smart (L)*
26. *controller used to work for the auditing firm that is conducting the current audit (L)*
27. *controller has been working for Lakeview lumber for a long time (L)*
28. *accounting manager had a BA accounting major (L)*
29. *accounting manager has been working for Lakeview lumber for 4 years (L)*
30. *key employee is an ex-audit team member (L)*
31. *the client is in a city called Lakeview (L)*
32. *they have a controller named John, he used to work for the audit firm (L)*
33. *they have an accounting manager (L)*
34. *the controller used to work for an audit firm (L)*
35. *the accounting manager has a lot of experience (L)*
36. *the controller was a former employee of the auditing firm (L)*
37. *controller for Lakeview lumber used to audit the company he now works for (L)*
38. *the controller used to work for the audit firm (L)*
39. *an employee of the client used to work for the audit firm (L)*
40. *Lakeview controller was a former employee of the audit firm and worked on the Lakeview audit in the past (L)*

Audit Mindset

1. *Lakeview had only minor misstatements in previous years (H)*
2. *controller worked for audit firm before working for Lakeview lumber (H)*
3. *John, a former auditor works as a controller for Lakeview (H)*
4. *Terry the accounting manager is well informed about the company's operations (H)*
5. *controller once worked for the audit firm and on this client audit (H)*
6. *controller worked for the audit firm for 4 years before becoming controller (H)*
7. *most other accounts have no noticeable changes (H)*
8. *the controller had been a previous auditor for the company (H)*
9. *controller was an auditor for Lakeview before becoming controller (H)*
10. *controller use to work for the audit firm (H)*
11. *the controller used to work for the audit firm (H)*
12. *controller audited the company like every year when he was the auditor (H)*
13. *accounting manager used to work as an night auditor in a hotel (H)*
14. *accounting manager has been at Lakeview since 1995 (H)*
15. *the controller of Lakeview was a former auditor (H)*
16. *one of the employees at Lakeview lumber used to work for the audit firm (H)*
17. *company's controller once audited the client for 6 consecutive years (L)*
18. *the controller worked for the audit company (L)*
19. *bad debt expense was 4.8% of credit sales (L)*
20. *the controller is a former auditor with my audit firm (L)*
21. *the controller conducted several of Lakeview prior audits (L)*
22. *the accounting manager came from a hotel where he used to be an night auditor (L)*
23. *the controller used to audit Lakeview lumber for several years (L)*
24. *John is the controller (L)*
25. *Terry is the accounting manager (L)*
26. *John Mosher was the controller (L)*
27. *Terry was the accounting manager (L)*

28. *Karen Rohan was the in-charge auditor (L)*
29. *the company's controller use to work for the audit firm (L)*
30. *the other management personnel worked as a night auditor for a motel (L)*
31. *controller is a former auditor of the audit firm (L)*
32. *accounting manager is experienced and worked at a motel as an night auditor (L)*
33. *controller has been there for 6 years (L)*
34. *some of the Lakeview employees were former audit firm employees (L)*
35. *the controller has audited Lakeview lumber for 6 years (L)*
36. *one of the top accounting executives worked for the audit company (L)*
37. *one top executive was a night auditor at a hotel (L)*
38. *the controller has worked for the audit firm (L)*
39. *the controller previously work for the audit firm (L)*
40. *the accountant had a BA degree (L)*
41. *John, the controller started his career at the audit firm (L)*
42. *one of our former auditors, Terry, is now the controller for our client (L)*
43. *the other key employee name is John (L)*

APPENDIX E
RESEARCH INSTRUMENT
(FRAUD SPECIALIST MINDSET/HIGH FRAUD RISK CONDITION)

General Instructions

You will be provided with information about a company. After reviewing the information, you will be asked to provide your assessment about the company. This study will take approximately 30 to 40 minutes to complete.

There is no right or wrong answer. It is important that you answer all of the questions. To ensure the reliability of the information gathered, please avoid discussing the study with others until you have completed all tasks. Your responses will be kept strictly confidential. Your participation will be anonymous and in no way will your responses be traced or attributed to you.

You will be given two envelopes (A and B). Please complete all of the requirements in the envelope marked A before opening Envelope B. Once you have completed the requirements in Envelope A, please put all materials back into Envelope A. After you have secured the materials back into Envelope A, you may proceed with the materials in Envelope B. Under no circumstances should you reopen Envelope A while you are completing the requirements in Envelope B. Your participation in the study is complete once you finish Envelope B.

Thank you for your participation in this study. You may now proceed with Envelope A.

Sincerely,
Lawrence Chui, CPA
University of North Texas
(940) 565-3172
lawrence.chui@unt.edu

Experiment Instrument – Fraud Specialist Mindset and High Fraud Risk Condition

Part I – (Envelope A)

Your role and objective

You are a **fraud specialist** working for a public accounting firm, Becker & Pippen LLP. As a fraud specialist, your primary responsibility is to determine whether fraud exists, regardless of its size or magnitude. You also have the responsibility to determine the overall extent of fraud (if it exists), how it occurred and how the risk of its future occurrences can be reduced or prevented.

As a fraud specialist, you would be expected to keep the following principles in mind:

- You would be asked to examine either a single account or a single transaction to see if fraud exists. You may also be asked to look at a series of transactions since fraud may not necessarily occur in a single transaction.
- You do not work with a materiality level. In other words, you are not concerned with the concept of materiality. Materiality is irrelevant to you because fraud may often occur below the materiality level.
- You would be expected to examine everything in great depth and you would generally not rely on audit sampling.
- You would be concerned with any minor discrepancies. You would assess these discrepancies to understand their nature and to determine if they are indicative of fraud.
- You would generally not be driven by a fixed budget. You would examine your work and review certain findings at the end of each phase. This will give you the opportunity to assess whether additional work is required. You may request more time and resources for your investigation until you are satisfied with your assessment of whether fraud exists.

To better help you carry out your assignment, your firm, Becker & Pippen LLP, has provided you with an excerpt from its training manual titled “**How to think like a fraud specialist**”.

How to think like a fraud specialist

To be an effective fraud specialist, it is important for you to remember the following concepts as you proceed with your assignment.

- You should think about accounting records in terms of the authenticity of the events and activities that are behind the reported transactions. In other words, you have to evaluate whether these transactions actually took place and are consistent with other information in your investigation. You should also consider the possibility of any unreported transactions.
- You should be sensitive to, and on the lookout for, the warning signs of fraud. These warning signs are often referred to as red flags or anomalies indicative of fraud. You can often identify them if you are willing to look deeply for them. To discover fraud, it is important to be able to think like a thief by asking yourself how he or she would probe and exploit any weaknesses of a company.
- You should keep in mind that things are not always as they appear to be. A visible immaterial misstatement may appear to be inconsequential, but the hidden portion of the misstatement could be substantial.
- You should assume that fraud is possible even in the presence of strong internal control. No controls can prevent fraud if there is pressure, opportunity, and rationalization. Anyone is susceptible to committing fraud given the means, motive, and the opportunity. Thus, you should consider by whom and under what circumstances your client’s controls may be compromised.

Please keep the above concepts in mind as you are completing this study.

Your assignment

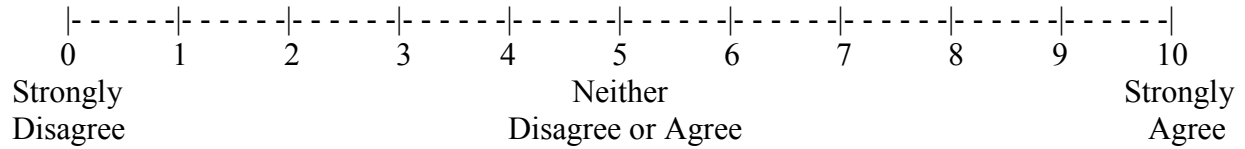
Your assignment as a fraud specialist is to determine whether fraud exists in your firm’s current client, Lakeview Lumber, Inc. Specifically, you are responsible to evaluate whether fraud exists in Lakeview’s bad debt expense and product warranties expense accounts. You are assigned to assist Karen Rohan. Karen is the “in-charge” auditor on the FY2008 Lakeview Lumber audit. She will provide you with details about Lakeview Lumber, Inc. in the following pages. After reviewing the client’s information, you will be asked to provide Karen with your assessment about Lakeview.

You should pay attention to all of the information, but your primary responsibility is to determine whether fraud exists, regardless of its size or magnitude. You also have the responsibility to determine the overall extent of fraud (if it exists), how it occurred and how the risk of its future occurrences can be reduced or prevented.

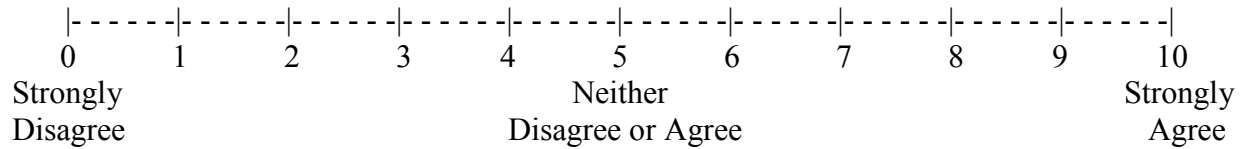
Please complete the following questions before you proceed to Part II of this study.

Based on your understanding of the role and objective of a fraud specialist, please rank the extent of your agreement with the following statements on the scale below.

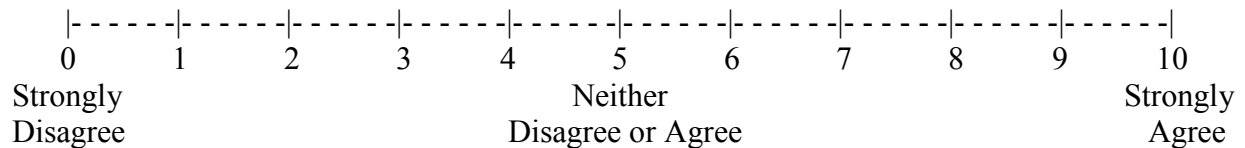
Q1: You do not work with a materiality level.



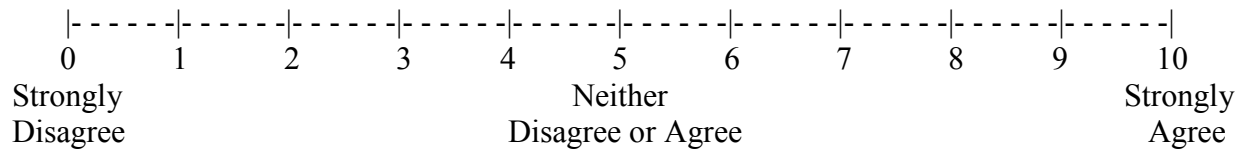
Q2: You do not normally rely on sampling.



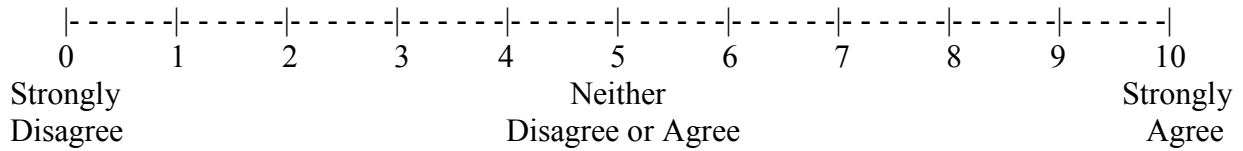
Q3: You would be concerned with minor discrepancies when evaluating your client's accounts.



Q4: You would not be overly concerned with any immaterial misstatements in your client's accounts.



Q5: You would be satisfied with the effectiveness of your client's internal controls if you are able to determine that they have been implemented and properly monitored.



Based on your understanding of the role and objective of a fraud specialist, please answer the following question by circling the most appropriate answer.

Q6: Based on the training given to you by your firm, Becker & Pippen LLP, which of the following is more important to you in regard to accounting records?

- a. Determining whether the reported accounting transactions actually took place.
- b. Determining whether there is valid and proper documentation to support the recorded transactions.

Experiment Instrument – High Fraud Risk Condition

Part II – (Envelope A)

Background Information on Lakeview Lumber

Lakeview Lumber, Inc. is located in the city of Lakeview, a metropolitan area of approximately 200,000 people. Lakeview Lumber sells between 30,000 and 35,000 different kinds of building materials, lawn and garden products, and home improvement supplies to retail customers, as well as to contractors and other building professionals. Retail customers are required to pay in cash or by a major credit card at the time of their purchase. However, the vast majority of contractors and building professionals has established credit accounts and are billed on a monthly basis. Lakeview Lumber's main competitors in the area are The Home Depot, Inc. and Eagle Hardware & Garden.

Your firm, Becker & Phippen LLP, has been the auditors for Lakeview Lumber since 1982. You are assigned to assist Karen Rohan, the “in-charge” auditor on the FY2008 Lakeview Lumber audit. Your assignment as a fraud specialist is to determine whether fraud exists in Lakeview regardless of its size or magnitude.

Key Personnel

Lakeview Lumber, Inc.'s top management team consists of the following key executives. Based on your firm's prior interaction with these key executives, you have some basic knowledge of their background.

John Mosher – Controller

- John started his career as an auditor with Becker & Phippen LLP. John was assigned to the audit of Lakeview Lumber each of the six years he worked for Becker & Phippen. He has been the Controller for Lakeview Lumber since 1995. John usually arrives at work with his Porsche sport car. He and his wife have recently taken out a loan to purchase a new home in an upscale neighborhood.

Terry James – Accounting Manager

- Terry has a B.A. in accounting and has been with Lakeview Lumber for four years. Prior to working for Lakeview Lumber, Terry was the night auditor for a small hotel. Terry has extensive and detailed knowledge of the Lakeview Lumber's accounting systems as well as their weaknesses. Terry has been advocating for less formality in controls. Terry suggested that this would allow the accounting department to operate more efficiently and effectively, with fewer constraints.

Managerial Compensation

Lakeview Lumber, Inc. compensates its key personnel primarily through a fixed salary schedule. In a recent board meeting, Lakeview's board of directors approved the motion to award all key personnel a cash bonus at the end of each year, starting in FY2008. Each key personnel will receive a cash bonus based on a predetermined percentage of the company's reported net income.

Lakeview Lumber's Accounting Environment

Based on your firm's prior year audits, Lakeview Lumber Inc. appeared to have some minor weaknesses in its accounting systems. However, these weaknesses did not appear to allow material errors into the company's financial reporting process. Lakeview management reassured your firm that Lakeview will take appropriate actions to upgrade its accounting systems.

The Lakeview Lumber's Audit

Karen, the current "in-charge" auditor is responsible for seeing that she completes the field work for the Lakeview Lumber as soon as possible. Audit hours were already over the time that had been budgeted for the job, and Karen believed that there was still a substantial amount of time needed to finish the audit, because several audit matters had not yet been resolved. Karen approached you with the following audit issues regarding Bad Debts Expense and Product Warranties Expense for FY2008. She would like you to review her analyses of these accounts and provide her with your recommendations.

Bad Debts Expense

Bad Debts Expense as a percentage of credit sales was approximately 3.2 percent for FY2008, whereas in the prior two years Bad Debts Expense as a percentage of credit sales was 5.0 percent for both FY2007 and FY2006. Credit sales for FY2008 were about \$2,600,000. Review and testing of the aged trail balance of Accounts Receivable indicated that the amount and percentage of accounts receivable in each aging category were comparable to prior years. The percentages used to estimate the uncollectible accounts were almost reduced by half in practically every aging category to prior year.

When Karen questioned Terry James, the Accounting Manager, about the decreased percentages, he stated that John Mosher, the Controller, had instructed him to use the lower percentages for FY2008. Karen subsequently discussed the matter with John, who informed Karen that he was expecting customers to pay more quickly in FY2009, due to a better than expected growth of the housing market in the area in which Lakeview Lumber does business.

Product Warranties Expense

Lakeview Lumber's Warranty Expense account for FY2008 was approximately \$83,200, representing a 25 percent **decrease** from FY2007. Based on Karen's review, the audit had not disclosed any significant changes in Lakeview Lumber's product mix. Thus, Karen discussed the increase with Terry. Terry stated that the charge to Warranty Expense was "just an estimate provided by John." When Karen asked John about the decrease in Warranty Expenses, John stated that the decrease was due to the better than expected economic growth in the area. He explained that builders were less particular in a stronger economic climate and they were less inclined to return wood and supplies that might be slightly flawed.

Karen then discussed product warranties with Adam Lester, the manager of the cabinets department, since that department seemed to experience the largest number of returns. Adam stated while he did not keep records of returns per se, he would fill out the appropriate paperwork and forward them to the accounting department. Adam said he **didn't think that** the returns during FY2008 were much different from those of FY2007. Karen subsequently asked

Terry from the accounting department to provide her with a complete list of returns for FY2008. Karen sampled 30 transactions throughout FY2008. All of the sampled transactions were supported by proper documentation.

Additional Analysis

In addition to the above information, Karen provided you with some preliminary analysis of both the Bad Debts Expense and the Product Warranties Expense accounts prepared by another audit staff member on the Lakeview audit.

The materiality level for the Lakeview Lumber Inc. audit has been set to approximately 1.0 percent of the company’s reported sales. The materiality level for FY2008 was \$52,020.

Bad Debts Expense:

	Amounts	Supporting Calculations
Bad Debts Expense as currently recorded (approximately 4.8% of FY2008 credit sales)	\$83,200	\$2,600,000 FY2008 credit sales x 3.2%
Bad Debts Expense (if applied the same percentage – 5.0% for both FY2007 and FY2006)	\$130,000	\$2,600,000 FY2008 credits sales x 5.0%
Potential understatement of Bad Debts Expense for FY2008	\$46,800	\$130,000 - \$83,200
Less: Income Taxes (@ 38%)	\$17,784	\$46,800 x 38%
Potential Decrease to currently recorded net income	\$29,016	\$46,800 - \$17,784

Comment 1: The current reported net income may have been overstated by \$29,016 due to the Bad Debts Expense account. However, this is below the materiality level of \$52,020.

Product Warranties Expense:

	Amounts	Supporting Calculations
Warranty Expense as currently recorded	\$85,000	
Warranty Expense (if applied the same percentage – 2.3% for FY2007)	\$119,646	(1) FY2007 warranty expense percentage = warranty expense / sales = 113,000 / 4,876,000 = 2.3% (2) FY2008 warranty expense = \$5,202,000 x 2.3%
Potential understatement of Warranty Expense for FY2008	\$34,646	\$119,646 - \$85,000
Less: Income Taxes (@ 38%)	\$13,165	\$34,646 x 38%
Potential Decrease to currently recorded net income	\$21,481	\$34,646 - \$13,165

Comment 2: The current reported net income may have been overstated by \$21,481 due to the Product Warranties Expense account. However, this is below the materiality level of \$52,020.

Comment 3: The combined effect of both the Bad Debts Expense and the Product Warranties Expense accounts may have overstated the Lakeview Lumber Inc.'s net income by \$50,497 (\$29,016 + \$21,481). However, the combined effect of these two accounts was still below the materiality level of \$52,020.

Lakeview Lumber's Financial Statements

Lakeview Lumber's Income Statements for the past three fiscal years are presented in Exhibit 1. Exhibit 2 includes the Statements of Retained Earnings for FY2006 through FY2008. The Balance Sheets for Lakeview Lumber for FY2008, FY2007, and FY2006 are shown in Exhibit 3.

EXHIBIT 1			
Lakeview Lumber, Inc.			
Income Statements			
(amounts in thousands, except per share data)			
	<u>FY2008</u>	<u>FY2007</u>	<u>FY2006</u>
	Unaudited	Audited	Audited
Sales	\$ 5,202	\$ 4,876	\$ 4,424
Cost of Sales	<u>3,451</u>	<u>3,359</u>	<u>3,101</u>
Gross Profit	\$ 1,751	\$ 1,517	\$ 1,323
Depreciation	184	174	169
Bad Debts Expense	83	125	118
Warranty Expense	85	113	117
Other Selling Expenses	<u>575</u>	<u>465</u>	<u>342</u>
Total Selling Expenses	\$ 927	\$ 877	\$ 746
General & Administrative Expenses	<u>235</u>	<u>224</u>	<u>215</u>
Total Expenses	\$ 1,162	\$ 1,101	\$ 961
Income Before Income Taxes			
Taxes	589	416	362
Income Taxes	<u>224</u>	<u>158</u>	<u>138</u>
Net Income	\$ 365	\$ 258	\$ 224
Earnings per share	\$ 3.65	\$ 2.58	\$ 2.24

EXHIBIT 2	
Lakeview Lumber, Inc.	
Statements of Retained Earnings	
(amounts in thousands)	
Retained Earnings @ end of FY2005	\$ 1,735
FY2006 (Audited)	
Add: Net Income	224
Less: Dividends	<u>(100)</u>
Retained Earnings @ end of FY2006	<u>\$ 1,859</u>
FY2007 (Audited)	
Add: Net Income	258
Less: Dividends	<u>(100)</u>
Retained Earnings @ end of FY2007	<u>\$ 2,017</u>
FY2008 (Unaudited)	
Add: Net Income	365
Less: Dividends	<u>(100)</u>
Retained Earnings @ end of FY2008	<u>\$ 2,282</u>

EXHIBIT 3
Lakeview Lumber, Inc.
Balance Sheets
(amounts in thousands)

	<u>FY2008</u> Unaudited	<u>FY2007</u> Audited	<u>FY2006</u> Audited
Assets:			
Cash and Cash Equivalents	\$ 173	\$ 167	\$ 131
Accounts Receivable	327	325	267
Less: Allowance	(134)	(152)	(144)
Inventory	1,102	1,009	989
Other Current Assets	<u>89</u>	<u>94</u>	<u>139</u>
Total Current Assets	\$ 1,557	\$ 1,427	\$ 1,227
Property, Plant & Equipment	5,411	5,351	5,219
Less: Accumulated Depreciation	<u>(1,987)</u>	<u>(1,803)</u>	<u>(1,629)</u>
Total Assets	<u>\$ 4,981</u>	<u>\$ 4,991</u>	<u>\$ 4,972</u>
Liabilities:			
Accounts Payable	\$ 595	\$ 765	\$ 798
Estimated Liability for Warranties	98	109	115
Accrued Salaries and Wages	87	83	85
Income Taxes Payable	<u>19</u>	<u>17</u>	<u>15</u>
Total Current Liabilities	\$ 799	\$ 974	\$ 1,013
Long-term Debt	<u>300</u>	<u>400</u>	<u>500</u>
Total Liabilities	\$ 1,099	\$ 1,374	\$ 1,513
Stockholders' Equity:			
Retained Earnings	\$ 2,282	\$ 2,017	\$ 1,859
Common Stock, par value \$0.01 Authorized 500,000 shares; issued and outstanding—100,000 shares	<u>1,600</u>	<u>1,600</u>	<u>1,600</u>
Total Stockholders' Equity	<u>\$ 3,882</u>	<u>\$ 3,617</u>	<u>\$ 3,459</u>
Total Liabilities and Stockholders' Equity	<u>\$ 4,981</u>	<u>\$ 4,991</u>	<u>\$ 4,972</u>

End of Company Information



Before you proceed to the next page, please take a moment to review the following information.

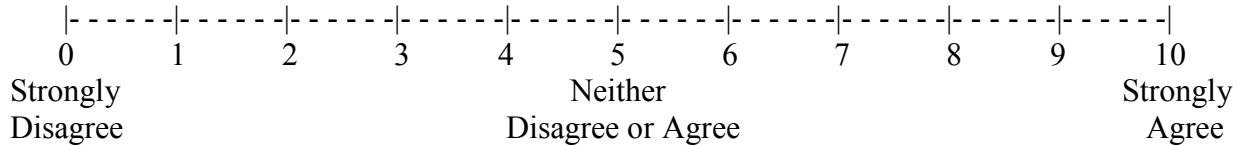
As a fraud specialist YOU WOULD...

- not work with a materiality level. Materiality is irrelevant to you because fraud may often occur below the materiality level.
- be concerned with any minor discrepancies. You would assess these discrepancies to understand their nature and to determine if they are indicative of fraud.
- have to decide whether the reported transactions actually took place.
- not assume that controls can prevent fraud if there is pressure, opportunity, and rationalization. Anyone is susceptible to committing fraud given the means, motive, and the opportunity. Thus, you should consider by whom and under what circumstances that your client's controls may be compromised.

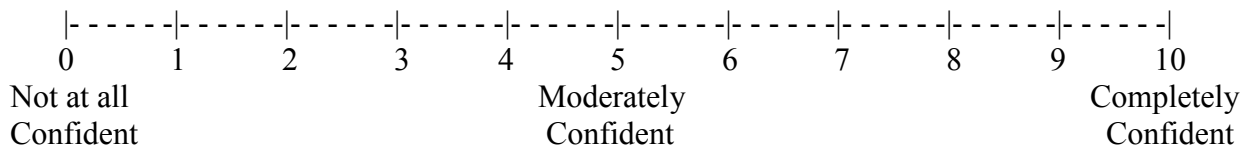
Now that you have finished reviewing the information pertaining to Lakeview Lumber, Inc., Karen would like to have you provide her with the following assessment:

Based on your evaluation of Lakeview, please rank the extent of your agreement with the following statement on the scale below.

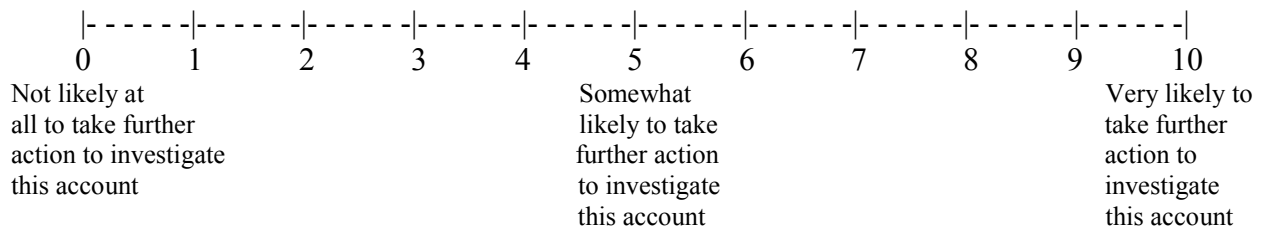
Q1a: The Lakeview **Bad Debt Expense account** was fairly presented. Place an “X” at the appropriate place on the scale below.



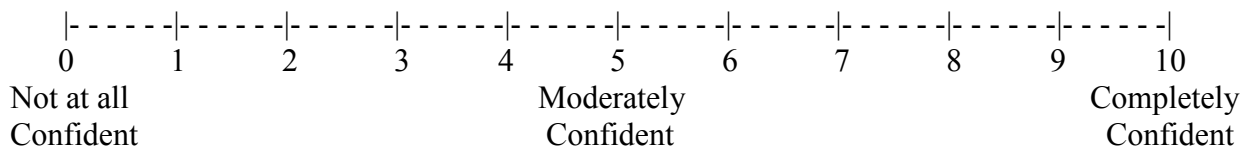
Q1b: How **confident** are you about your assessment that you have just made? Place an “X” at the appropriate place on the scale below.



Q2a: How likely would you do the following in regard to the Lakeview **Bad Debt Expense account**? Place an “X” at the appropriate place on the scale below.

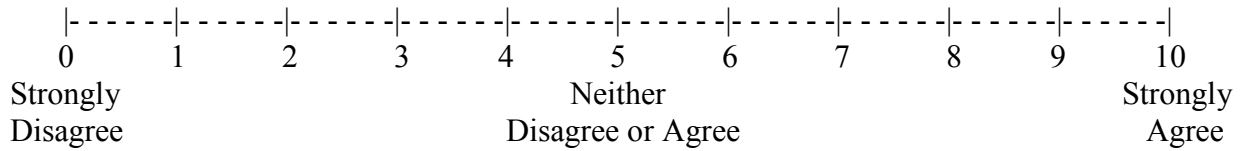


Q2b: How **confident** are you about your assessment that you have just made? Place an “X” at the appropriate place on the scale below.

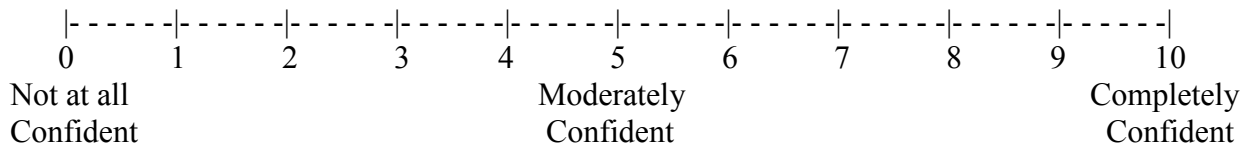


Based on your evaluation of Lakeview, please rank the extent of your agreement with the following statement on the scale below.

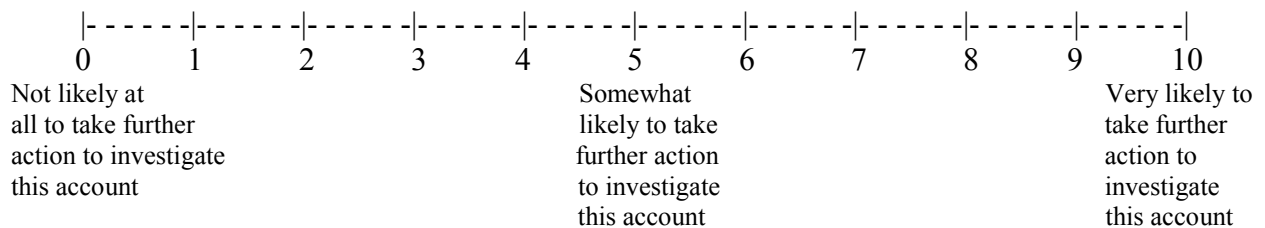
Q3a: The Lakeview Product Warranties Expense account was fairly presented. Place an “X” at the appropriate place on the scale below.



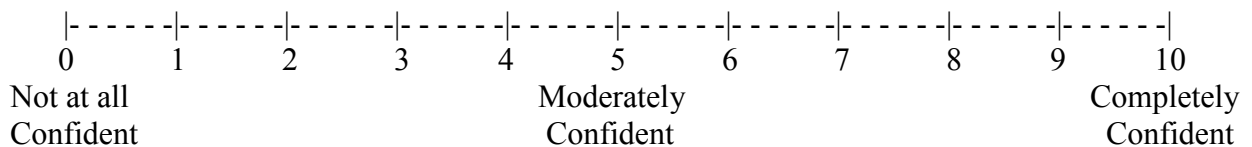
Q3b: How confident are you about your assessment that you have just made? Place an “X” at the appropriate place on the scale below.



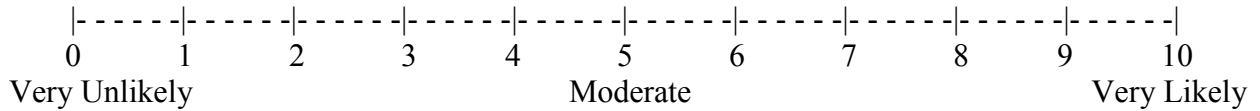
Q4a: How likely are you to do the following in regard to the Lakeview Product Warranties Expense account? Place an “X” at the appropriate place on the scale below.



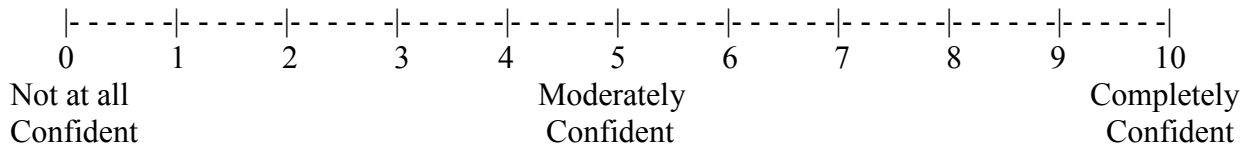
Q4b: How confident are you about your assessment that you have just made? Place an “X” at the appropriate place on the scale below.



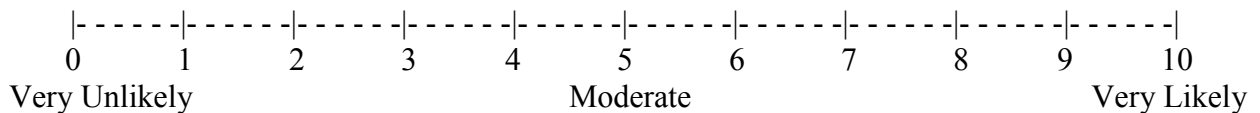
Q5a: Based on all the information you have reviewed about Lakeview Lumber Inc., how likely do you think fraud exists in Lakeview’s **Bad Debt Expense account**? Place an “X” at the appropriate place on the scale below.



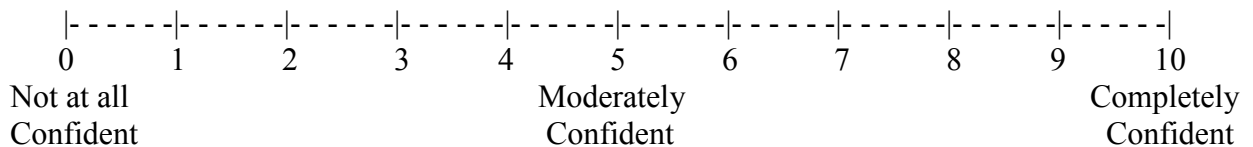
Q5b: How **confident** are you about your assessment that you have just made? Place an “X” at the appropriate place on the scale below.



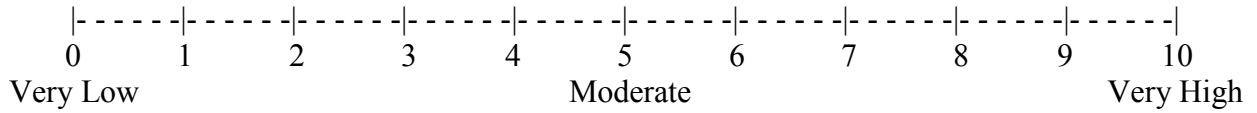
Q6a: Based on all the information you have reviewed about Lakeview Lumber Inc., how likely do you think fraud exists in Lakeview’s **Product Warranties Expense account**? Place an “X” at the appropriate place on the scale below.



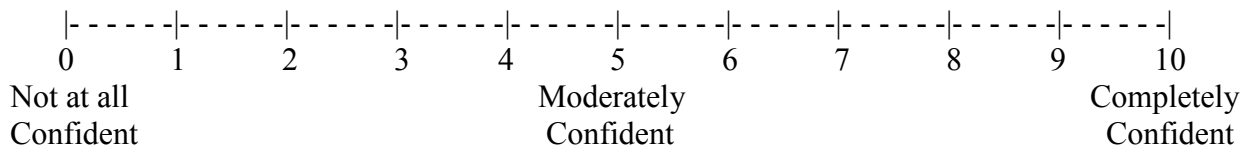
Q6b: How **confident** are you about your assessment that you have just made? Place an “X” at the appropriate place on the scale below.



Q7a: Based on all the information you have reviewed about Lakeview Lumber Inc., what is your assessment of the overall **fraud risk** for this client? Place an “X” at the appropriate place on the scale below.



Q7b: How **confident** are you about your assessment that you have just made? Place an “X” at the appropriate place on the scale below. Place an “X” at the appropriate place on the scale below.



Experiment Instrument – Distracter Task for all Conditions

Questions about You

The statements on this and the following page concern your personal reactions to a number of different situations. No two statements are exactly alike, so consider each statement carefully before answering. If a statement is TRUE or MOSTLY TRUE as applied to you, circle **T**. If a statement is FALSE or NOT USUALLY TRUE as applied to you, circle **F**.

It is important that you answer as frankly and as honestly as you can. Your answers will be kept in the strictest confidence.

- | | | | |
|-----|------------------------------------------------------------------------------------------------------|---|---|
| 1. | I find it hard to imitate the behavior of other people. | T | F |
| 2. | My behavior is usually an expression of my true inner feelings, attitudes, and beliefs. | T | F |
| 3. | At parties and social gatherings, I do <u>not</u> attempt to do or say things that others will like. | T | F |
| 4. | I can only argue for things that I already believe in. | T | F |
| 5. | I can make impromptu speeches - even on topics about which I have almost no information. | T | F |
| 6. | I guess I put on a show to impress or entertain people. | T | F |
| 7. | When I am uncertain how to act in a social situation, I look to the behavior of others for cues. | T | F |
| 8. | I would probably make a good actor. | T | F |
| 9. | I rarely need the advice of my friends to choose movies, books, or music. | T | F |
| 10. | I sometimes appear to others to be experiencing deeper emotions than I actually am. | T | F |
| 11. | I laugh more when I watch a comedy with others than when alone. | T | F |
| 12. | In a group of people I am rarely the center of attention. | T | F |
| 13. | In different situations with different people, I often act like very different persons. | T | F |

- | | | | |
|-----|-------------------------------------------------------------------------------------------------------|---|---|
| 14. | I am <u>not</u> particularly good at making other people like me. | T | F |
| 15. | Even if I am <u>not</u> enjoying myself, I often pretend to be having a good time. | T | F |
| 16. | I'm not always the person I appear to be. | T | F |
| 17. | I would <u>not</u> change my opinions in order to please someone else or win their favor. | T | F |
| 18. | I have considered being an entertainer. | T | F |
| 19. | In order to get along and be liked, I tend to be what people expect me to be rather than anyone else. | T | F |
| 20. | I have never been good at games like charades or improvisational acting. | T | F |
| 21. | I have trouble changing my behavior to suit different people and different situations. | T | F |
| 22. | At a party I let others keep the jokes and stories going. | T | F |
| 23. | I feel a bit awkward in company. | T | F |
| 24. | I can look anyone in the eye and tell a lie with a straight face – if for a good cause. | T | F |
| 25. | I may deceive people by being friendly when I really dislike them. | T | F |

<p>When you are finished, please put all materials back into <u>Envelope A</u>. Once you have secured the materials in <u>Envelope A</u>, you may open and proceed with the materials in <u>Envelope B</u>. Under no circumstances should you reopen <u>Envelope A</u> while you are completing the requirements in <u>Envelope B</u>.</p>

Experiment Instrument – Recall Task for all Conditions

Part III – (Envelope B)

In the space provided below please list all of the **important information** that you can remember about Lakeview Lumber Inc. and the FY2008 audit. Write down the information **in the order** that you remember it. Start a new line for each piece of information. There is also space on the next page. You do not need to use up all the space provided for you, but please try to remember as much as you can.

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____
13. _____
14. _____
15. _____
16. _____
17. _____
18. _____
19. _____
20. _____

Part IV – (Envelope B)

Please answer the following questions about Lakeview Lumber, Inc by circling **YES** if the item is in the case you have just read and by circling **NO** if the item is not in the case you have just read.

	Is the Item in the case you just read?	
	Yes	No
1. John Mosher, the Controller of Lakeview, was a former auditor of Lakeview.	Yes	No
2. Terry has a strong interest in advocating for more formality in controls so that Lakeview will be able to better monitor its financial reporting process.	Yes	No
3. Lakeview gives its management stock options as an incentive to meet earnings targets.	Yes	No
4. John Mosher, the Controller of Lakeview, is heavily in debt.	Yes	No
5. Adam Lester, the Manager of the Cabinets Department, did not keep detailed records receiving reports, but merely forwarded them to Terry James, the Accounting Manager.	Yes	No
6. Several matters had not been resolved in the current audit.	Yes	No
7. Karen Rohan, the “in-charge” auditor for the current year Lakeview audit, has already exceeded her audit time budget.	Yes	No
8. The discrepancy in the product warranties expense account was immaterial.	Yes	No
9. Lakeview has some minor issues with its accounting system.	Yes	No
10. Lakeview key personnel will receive a cash bonus this year based on their salary level and their years of service.	Yes	No
11. The majority of customers pay in cash.	Yes	No
12. Lakeview’s management has future plans to upgrade its accounting system.	Yes	No
13. The economic conditions are making account receivable collections less difficult.	Yes	No
14. The discrepancy in the bad debt expense account was immaterial.	Yes	No

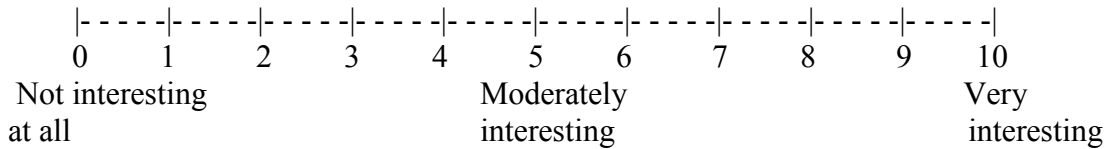
		Is the Item in the case you just read?	
		Yes	No
15.	John Mosher, the Controller of Lakeview, has a rather expensive lifestyle.	Yes	No
16.	Your firm, Becker & Pippen LLP, has been the auditor of Lakeview since 1982.	Yes	No
17.	Lakeview's prior years financial statements were fairly presented.	Yes	No
18.	Lakeview's management has been receiving substantial earning bonuses.	Yes	No
19.	The combined potential misstatements of other accounts exceeded the materiality level set forth by your firm, Becker & Pippen LLP.	Yes	No
20.	Lakeview has significant weaknesses in its accounting system.	Yes	No
21.	Lakeview's accounting controls may be susceptible to compromise and override.	Yes	No
22.	Lakeview's prior years financial statements were not fairly presented. However, Lakeview's management had taken appropriate actions to restate them.	Yes	No
23.	All audit samples were supported by proper documentation.	Yes	No
24.	John Mosher, the Controller, has a rather modest lifestyle.	Yes	No
25.	Lakeview gives its management stock options as an incentive to meet earnings targets.	Yes	No
26.	Lakeview has many highly complex transactions.	Yes	No
27.	Lakeview operates in a competitive market.	Yes	No
28.	Lakeview's EPS has been gradually increasing since the past several years.	Yes	No
29.	Terry James, Accounting Management, provided valid explanations in regard to the changes in accounting estimates used for the current year audit.	Yes	No
30.	There were no materiality discrepancies in any of the Lakeview's accounts.	Yes	No

Experiment Instrument – Post-Experimental Questionnaire for all Conditions

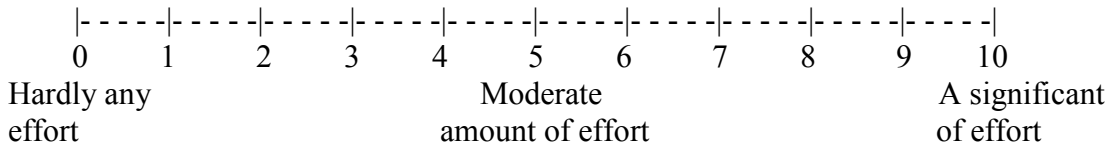
Part V – (Envelope B)

Please circle your answer or to fill in the blank to the following questions.

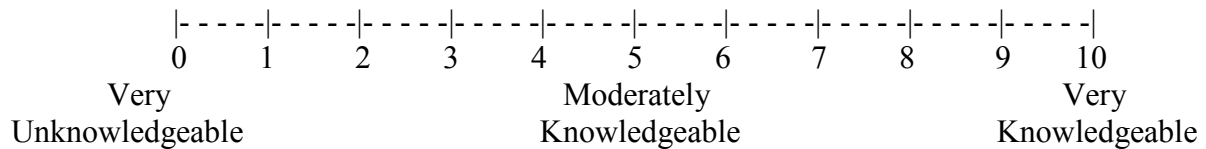
Q1. How interesting was this project?



Q2. How much effort did you put into completing this project?



Q3. How knowledgeable do you think you are with the material presented in this project?



Q4. What is your gender?

- a. Male.
- b. Female.

Q5. How old are you? _____

Q6. How many years of accounting related professional experience do you have? _____
years/months (ex: 1.5 years)

- Q7.** Did you intern in the accounting field?
- a. Yes – with a Big 4 public accounting firm.
 - b. Yes – with a non-Big 4 public accounting firm.
 - c. Yes - with a company in industry.
 - d. Yes - other.
 - e. No.

Q8. How many college credit hours have you completed? _____

Q9. What is your GPA? _____

- Q10.** What is your ethnic origin?
- a. Caucasian.
 - b. African-American.
 - c. Asian.
 - d. Hispanic.
 - e. Other (please specify)_____

Q11. What was your place of birth?

- Q12.** What is your major?
- a. BS-ACS
 - b. MBA.
 - c. MS-Auditing.
 - d. MS-Tax.
 - e. MS-Accounting Information System.
 - f. MS-Managerial.
 - g. Other (please specify)_____

Q13. Please provide any comments that you may have about this study in the space below.

You are done. Thank you for your participation!

Please put all materials back into **Envelope B**. When you are finished, please raise your hand. The instructor will pick up both **Envelopes A and B** from you.

APPENDIX F
RESEARCH INSTRUMENT
(FRAUD SPECIALIST MINDSET/LOW FRAUD RISK CONDITION)

General Instructions

You will be provided with information about a company. After reviewing the information, you will be asked to provide your assessment about the company. This study will take approximately 30 to 40 minutes to complete.

There is no right or wrong answer. It is important that you answer all of the questions. To ensure the reliability of the information gathered, please avoid discussing the study with others until you have completed all tasks. Your responses will be kept strictly confidential. Your participation will be anonymous and in no way will your responses be traced or attributed to you.

You will be given two envelopes (A and B). Please complete all of the requirements in the envelope marked A before opening Envelope B. Once you have completed the requirements in Envelope A, please put all materials back into Envelope A. After you have secured the materials back into Envelope A, you may proceed with the materials in Envelope B. Under no circumstances should you reopen Envelope A while you are completing the requirements in Envelope B. Your participation in the study is complete once you finish Envelope B.

Thank you for your participation in this study. You may now proceed with Envelope A.

Sincerely,
Lawrence Chui, CPA
University of North Texas
(940) 565-3172
lawrence.chui@unt.edu

Experiment Instrument – Fraud Specialist Mindset and Low Fraud Risk Condition

Part I – (Envelope A)

Your role and objective

You are a **fraud specialist** working for a public accounting firm, Becker & Pippen LLP. As a fraud specialist, your primary responsibility is to determine whether fraud exists, regardless of its size or magnitude. You also have the responsibility to determine the overall extent of fraud (if it exists), how it occurred and how the risk of its future occurrences can be reduced or prevented.

As a fraud specialist, you would be expected to keep the following principles in mind:

- You would be asked to examine either a single account or a single transaction to see if fraud exists. You may also be asked to look at a series of transactions since fraud may not necessarily occur in a single transaction.
- You do not work with a materiality level. In other words, you are not concerned with the concept of materiality. Materiality is irrelevant to you because fraud may often occur below the materiality level.
- You would be expected to examine everything in great depth and you would generally not rely on audit sampling.
- You would be concerned with any minor discrepancies. You would assess these discrepancies to understand their nature and to determine if they are indicative of fraud.
- You would generally not be driven by a fixed budget. You would examine your work and review certain findings at the end of each phase. This will give you the opportunity to assess whether additional work is required. You may request more time and resources for your investigation until you are satisfied with your assessment of whether fraud exists.

To better help you carry out your assignment, your firm, Becker & Phippen LLP, has provided you with an excerpt from its training manual titled “**How to think like a fraud specialist**”.

How to think like a fraud specialist

To be an effective fraud specialist, it is important for you to remember the following concepts as you proceed with your assignment.

- You should think about accounting records in terms of the authenticity of the events and activities that are behind the reported transactions. In other words, you have to evaluate whether these transactions actually took place and are consistent with other information in your investigation. You should also consider the possibility of any unreported transactions.
- You should be sensitive to, and on the lookout for, the warning signs of fraud. These warning signs are often referred to as red flags or anomalies indicative of fraud. You can often identify them if you are willing to look deeply for them. To discover fraud, it is important to be able to think like a thief by asking yourself how he or she would probe and exploit any weaknesses of a company.
- You should keep in mind that things are not always as they appear to be. A visible immaterial misstatement may appear to be inconsequential, but the hidden portion of the misstatement could be substantial.
- You should assume that fraud is possible even in the presence of strong internal control. No controls can prevent fraud if there is pressure, opportunity, and rationalization. Anyone is susceptible to committing fraud given the means, motive, and the opportunity. Thus, you should consider by whom and under what circumstances your client’s controls may be compromised.

Please keep the above concepts in mind as you are completing this study.

Your assignment

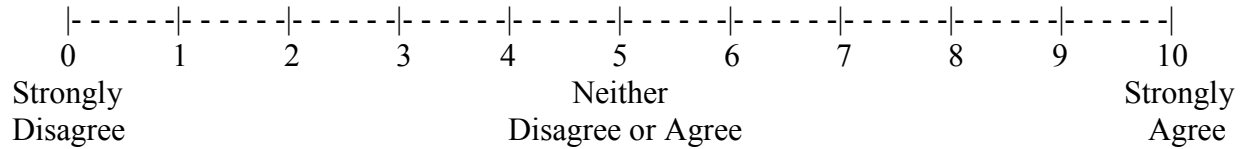
Your assignment as a fraud specialist is to determine whether fraud exists in your firm’s current client, Lakeview Lumber, Inc. Specifically, you are responsible to evaluate whether fraud exists in Lakeview’s bad debt expense and product warranties expense accounts. You are assigned to assist Karen Rohan. Karen is the “in-charge” auditor on the FY2008 Lakeview Lumber audit. She will provide you with details about Lakeview Lumber, Inc. in the following pages. After reviewing the client’s information, you will be asked to provide Karen with your assessment about Lakeview.

You should pay attention to all of the information, but your primary responsibility is to determine whether fraud exists, regardless of its size or magnitude. You also have the responsibility to determine the overall extent of fraud (if it exists), how it occurred and how the risk of its future occurrences can be reduced or prevented.

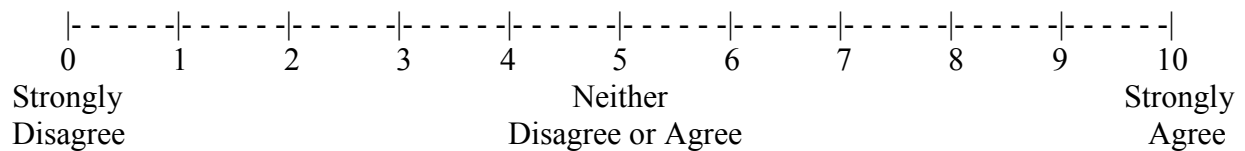
Please complete the following questions before you proceed to Part II of this study.

Based on your understanding of the role and objective of a fraud specialist, please rank the extent of your agreement with the following statements on the scale below.

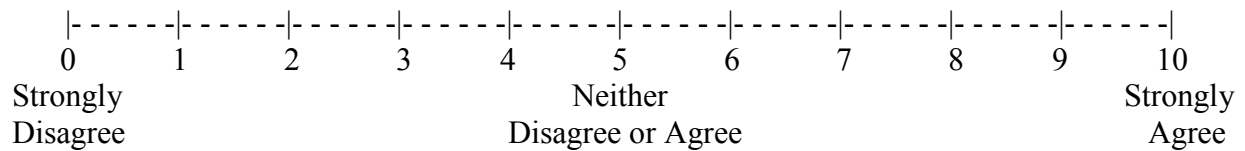
Q1: You do not work with a materiality level.



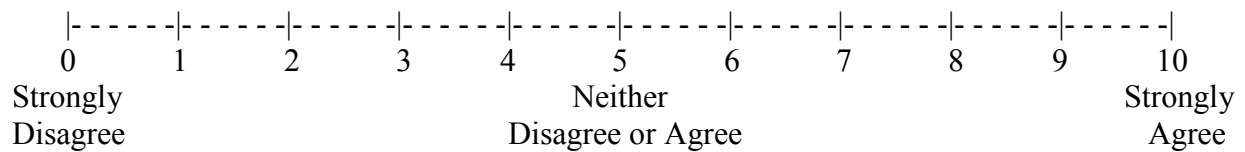
Q2: You do not normally rely on sampling.



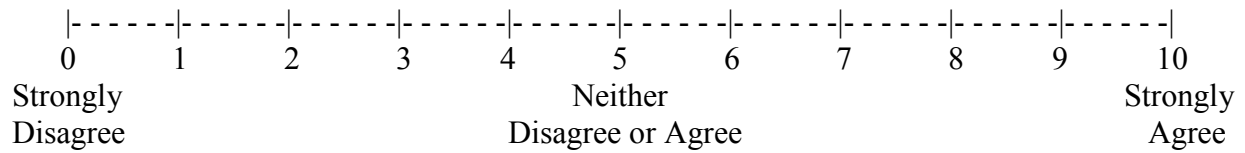
Q3: You would be concerned with minor discrepancies when evaluating your client's accounts.



Q4: You would not be overly concerned with any immaterial misstatements in your client's accounts.



Q5: You would be satisfied with the effectiveness of your client's internal controls if you are able to determine that they have been implemented and properly monitored.



Based on your understanding of the role and objective of a fraud specialist, please answer the following question by circling the most appropriate answer.

Q6: Based on the training given to you by your firm, Becker & Pippen LLP, which of the following is more important to you in regard to accounting records?

- a. Determining whether the reported accounting transactions actually took place.
- b. Determining whether there is valid and proper documentation to support the recorded transactions.

Experiment Instrument – Low Fraud Risk Condition

Part II – (Envelope A)

Background Information on Lakeview Lumber

Lakeview Lumber, Inc. is located in the city of Lakeview, a metropolitan area of approximately 200,000 people. Lakeview Lumber sells between 30,000 and 35,000 different kinds of building materials, lawn and garden products, and home improvement supplies to retail customers, as well as to contractors and other building professionals. Retail customers are required to pay in cash or by a major credit card at the time of their purchase. However, the vast majority of contractors and building professionals has established credit accounts and are billed on a monthly basis. Lakeview Lumber's main competitors in the area are The Home Depot, Inc. and Eagle Hardware & Garden.

Your firm, Becker & Phippen LLP, has been the auditors for Lakeview Lumber since 1982. You are assigned to assist Karen Rohan, the “in-charge” auditor on the FY2008 Lakeview Lumber audit. Your assignment as a fraud specialist is to determine whether fraud exists in Lakeview regardless of its size or magnitude.

Key Personnel

Lakeview Lumber, Inc.'s top management team consists of the following key executives. Based on your firm's prior interaction with these key executives, you have some basic knowledge of their background.

John Mosher – Controller

- John started his career as an auditor with Becker & Phippen LLP. John was assigned to the audit of Lakeview Lumber each of the six years he worked for Becker & Phippen. He has been the Controller for Lakeview Lumber since 1995. John usually arrives at work with his old Ford pickup truck. He and his wife have recently been saving money to remodel their kitchen.

Terry James – Accounting Manager

- Terry has a B.A. in accounting and has been with Lakeview Lumber for four years. Prior to working for Lakeview Lumber, Terry was the night auditor for a small hotel. Terry has extensive and detailed knowledge in accounting as well as operational management. Terry has been advocating for more formality in controls and procedures. Terry suggested that this would allow the accounting department to better monitor its financial reporting process.

Managerial Compensation

Lakeview Lumber, Inc. compensates its key personnel primarily through a fixed salary schedule. In a recent board meeting, Lakeview's board of directors approved the motion to award all key personnel a cash bonus at the end of each year, starting in FY2008. Each key personnel will receive a cash bonus based on their salary level and their years of service. The maximum cash bonus is 1% of the key personnel's salary.

Lakeview Lumber's Accounting Environment

Based on your firm's prior year audits, Lakeview Lumber Inc. appeared to have no issue with its accounting systems. No material deficiencies related to the company's transactions were noted in prior audits. Lakeview Lumber, Inc. seemed to have a good control over its financial reporting process. Lakeview management assured your firm that Lakeview will continue to maintain the quality of its accounting systems.

The Lakeview Lumber's Audit

Karen, the current "in-charge" auditor is responsible for seeing that she completes the field work for the Lakeview Lumber as soon as possible. Audit hours were already over the time that had been budgeted for the job, and Karen believed that there was still a substantial amount of time needed to finish the audit, because several audit matters had not yet been resolved. Karen approached you with the following audit issues regarding Bad Debts Expense and Product Warranties Expense for FY2008. She would like you to review her analyses of these accounts and provide her with your recommendations.

Bad Debts Expense

Bad Debts Expense as a percentage of credit sales was approximately 4.8 percent for FY2008, whereas in the prior two years Bad Debts Expense as a percentage of credit sales was 5.0 percent for both FY2007 and FY2006. Credit sales for FY2008 were about \$2,600,000. Review and testing of the aged trail balance of Accounts Receivable indicated that the amount and percentage of accounts receivable in each aging category were comparable to prior years. The percentages used to estimate the uncollectible accounts for FY2008 were slightly lower in practically every aging category to prior year.

When Karen questioned Terry James, the Accounting Manager, about the decreased percentages, he stated that John Mosher, the Controller, had instructed him to use the lower percentages for FY2008. Karen subsequently discussed the matter with John, who informed Karen that he was expecting customers to pay more quickly in FY2009, due to a better than expected growth of the housing market in the area in which Lakeview Lumber does business.

Product Warranties Expense

Lakeview Lumber's Warranty Expense account for FY2008 was approximately \$119,000, representing a 6 percent **increase** from FY2007. Based on Karen's review, the audit had not disclosed any significant changes in Lakeview Lumber's product mix. Thus, Karen discussed the increase with Terry. Terry stated that the charge to Warranty Expense was "just an estimate provided by John." When Karen asked John about the increase in Warranty Expenses, John stated that the increase was due to the better than expected economic growth in the area. He explained that builders were more particular in a stronger economic climate and they tended to return wood and supplies that might be slightly flawed.

Karen then discussed product warranties with Adam Lester, the manager of the cabinets department, since that department seemed to experience the largest number of returns. Adam stated while he did not keep records of returns per se, he would fill out the appropriate paperwork and forward them to the accounting department. Adam said he did remember handling **more returns** during FY2008 than in FY2007. Karen subsequently asked Terry from

the accounting department to provide her with a complete list of returns for FY2008. Karen sampled 30 transactions throughout FY2008. All of the sampled transactions were supported by proper documentation.

Additional Analysis

In addition to the above information, Karen provided you with some preliminary analysis of both the Bad Debts Expense and the Product Warranties Expense accounts prepared by another audit staff member on the Lakeview audit.

The materiality level for the Lakeview Lumber Inc. audit has been set to approximately 1.0 percent of the company's reported sales. The materiality level for FY2008 was \$52,020.

Bad Debts Expense:

	Amounts	Supporting Calculations
Bad Debts Expense as currently recorded (approximately 4.8% of FY2008 credit sales)	\$124,800	\$2,600,000 FY2008 credit sales x 4.8%
Bad Debts Expense (if applied the same percentage – 5.0% for both FY2007 and FY2006)	\$130,000	\$2,600,000 FY2008 credits sales x 5.0%
Potential understatement of Bad Debts Expense for FY2008	\$5,200	\$130,000 - \$124,800
Less: Income Taxes (@ 38%)	\$1,976	\$5,200 x 38%
Potential Decrease to currently recorded net income	\$3,224	\$5,200 - \$1,976

Comment 1: The current reported net income may have been overstated by \$3,224 due to the Bad Debts Expense account. However, this is below the materiality level of \$52,020.

Product Warranties Expense:

	Amounts	Supporting Calculations
Warranty Expense as currently recorded	\$119,000	
Warranty Expense (if applied the same percentage – 2.3% for FY2007)	\$119,646	(1) FY2007 warranty expense percentage = warranty expense / sales = 113,000 / 4,876,000 = 2.3%
		(2) FY2008 warranty expense = \$5,202,000 x 2.3%
Potential understatement of Warranty Expense for FY2008	\$646	\$119,646 - \$119,000
Less: Income Taxes (@ 38%)	\$245	\$646 x 38%
Potential Decrease to currently recorded net income	\$401	\$646 - \$245

Comment 2: The current reported net income may have been overstated by \$401 due to the Product Warranties Expense account. However, this is below the materiality level of \$52,020.

Comment 3: The combined effect of both the Bad Debts Expense and the Product Warranties Expense accounts may have overstated the Lakeview Lumber Inc.'s net income by \$3,625 (\$3,224 + \$401). However, the combined effect of these two accounts was still below the materiality level of \$52,020.

Lakeview Lumber's Financial Statements

Lakeview Lumber's Income Statements for the past three fiscal years are presented in Exhibit 1. Exhibit 2 includes the Statements of Retained Earnings for FY2006 through FY2008. The Balance Sheets for Lakeview Lumber for FY2008, FY2007, and FY2006 are shown in Exhibit 3.

EXHIBIT 1			
Lakeview Lumber, Inc.			
Income Statements			
(amounts in thousands, except per share data)			
	FY2008	FY2007	FY2006
	Unaudited	Audited	Audited
Sales	\$ 5,202	\$ 4,876	\$ 4,424
Cost of Sales	<u>3,451</u>	<u>3,359</u>	<u>3,101</u>
Gross Profit	\$ 1,751	\$ 1,517	\$ 1,323
Depreciation	184	174	169
Bad Debts Expense	124	125	118
Warranty Expense	120	113	117
Other Selling Expenses	<u>575</u>	<u>465</u>	<u>342</u>
Total Selling Expenses	\$ 1,003	\$ 877	\$ 746
General & Administrative Expenses	<u>235</u>	<u>224</u>	<u>215</u>
Total Expenses	\$ 1,238	\$ 1,101	\$ 961
Income Before Income Taxes			
Taxes	513	416	362
Income Taxes	<u>195</u>	<u>158</u>	<u>138</u>
Net Income	\$ <u>318</u>	\$ <u>258</u>	\$ <u>224</u>
Earnings per share	\$ 3.18	\$ 2.58	\$ 2.24

EXHIBIT 2	
Lakeview Lumber, Inc.	
Statements of Retained Earnings	
(amounts in thousands)	
Retained Earnings @ end of FY2005	\$ 1,735
FY2006 (Audited)	
Add: Net Income	224
Less: Dividends	<u>(100)</u>
Retained Earnings @ end of FY2006	<u>\$ 1,859</u>
FY20X7 (Audited)	
Add: Net Income	258
Less: Dividends	<u>(100)</u>
Retained Earnings @ end of FY2007	<u>\$ 2,017</u>
FY20X8 (Unaudited)	
Add: Net Income	315
Less: Dividends	<u>(100)</u>
Retained Earnings @ end of FY2008	<u>\$ 2,232</u>

EXHIBIT 3
Lakeview Lumber, Inc.
Balance Sheets
(amounts in thousands)

	<u>FY2008</u> Unaudited	<u>FY2007</u> Audited	<u>FY2006</u> Audited
Assets:			
Cash and Cash Equivalents	\$ 173	\$ 167	\$ 131
Accounts Receivable	327	325	267
Less: Allowance	(145)	(152)	(144)
Inventory	1,102	1,009	989
Other Current Assets	<u>89</u>	<u>94</u>	<u>139</u>
Total Current Assets	\$ 1,546	\$ 1,427	\$ 1,227
Property, Plant & Equipment	5,411	5,351	5,219
Less: Accumulated Depreciation	<u>(1,987)</u>	<u>(1,803)</u>	<u>(1,629)</u>
Total Assets	<u>\$ 4,970</u>	<u>\$ 4,991</u>	<u>\$ 4,972</u>
Liabilities:			
Accounts Payable	\$ 595	\$ 765	\$ 798
Estimated Liability for Warranties	137	109	115
Accrued Salaries and Wages	87	83	85
Income Taxes Payable	<u>19</u>	<u>17</u>	<u>15</u>
Total Current Liabilities	\$ 809	\$ 974	\$ 1,013
Long-term Debt	<u>300</u>	<u>400</u>	<u>500</u>
Total Liabilities	\$ 1,109	\$ 1,374	\$ 1,513
Stockholders' Equity:			
Retained Earnings	\$ 2,232	\$ 2,017	\$ 1,859
Common Stock, par value \$0.01 Authorized 500,000 shares; issued and outstanding—100,000 shares	<u>1,600</u>	<u>1,600</u>	<u>1,600</u>
Total Stockholders' Equity	<u>\$ 3,832</u>	<u>\$ 3,617</u>	<u>\$ 3,459</u>
Total Liabilities and Stockholders' Equity	<u>\$ 4,970</u>	<u>\$ 4,991</u>	<u>\$ 4,972</u>

End of Company Information



Before you proceed to the next page, please take a moment to review the following information.

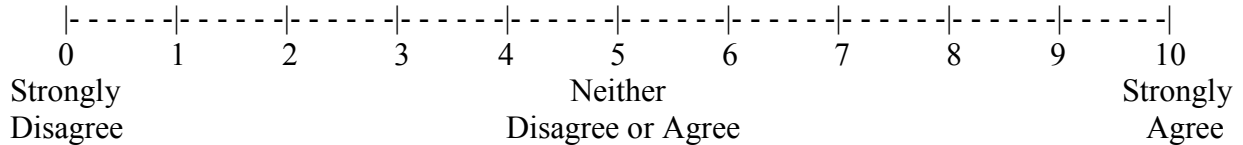
As a fraud specialist YOU WOULD...

- not work with a materiality level. Materiality is irrelevant to you because fraud may often occur below the materiality level.
- be concerned with any minor discrepancies. You would assess these discrepancies to understand their nature and to determine if they are indicative of fraud.
- have to decide whether the reported transactions actually took place.
- not assume that controls can prevent fraud if there is pressure, opportunity, and rationalization. Anyone is susceptible to committing fraud given the means, motive, and the opportunity. Thus, you should consider by whom and under what circumstances that your client's controls may be compromised.

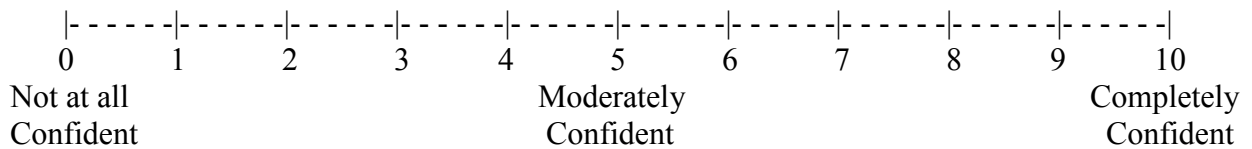
Now that you have finished reviewing the information pertaining to Lakeview Lumber, Inc., Karen would like to have you provide her with the following assessment:

Based on your evaluation of Lakeview, please rank the extent of your agreement with the following statement on the scale below.

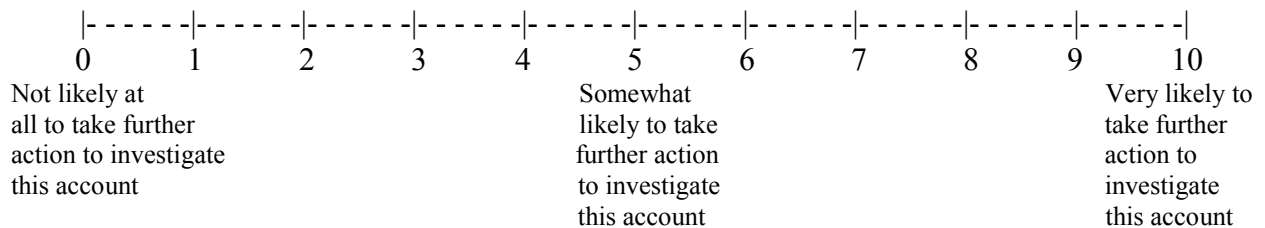
Q1a: The Lakeview **Bad Debt Expense account** was fairly presented. Place an “X” at the appropriate place on the scale below.



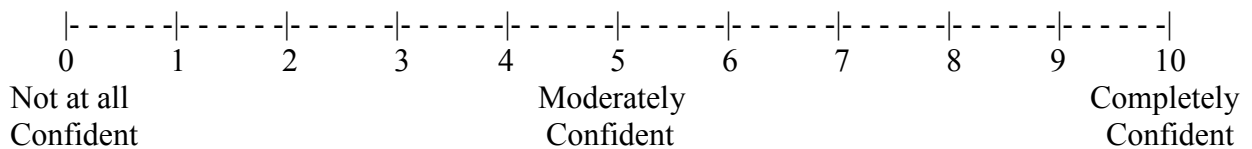
Q1b: How **confident** are you about your assessment that you have just made? Place an “X” at the appropriate place on the scale below.



Q2a: How likely would you do the following in regard to the Lakeview **Bad Debt Expense account**? Place an “X” at the appropriate place on the scale below.

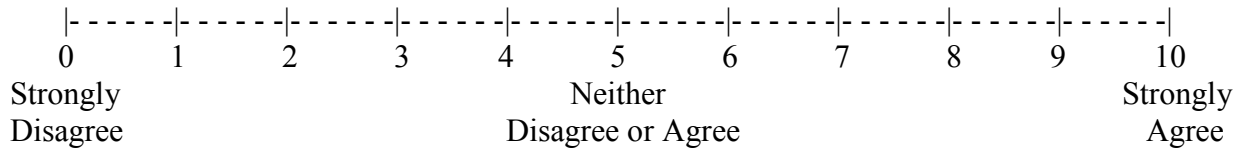


Q2b: How **confident** are you about your assessment that you have just made? Place an “X” at the appropriate place on the scale below.

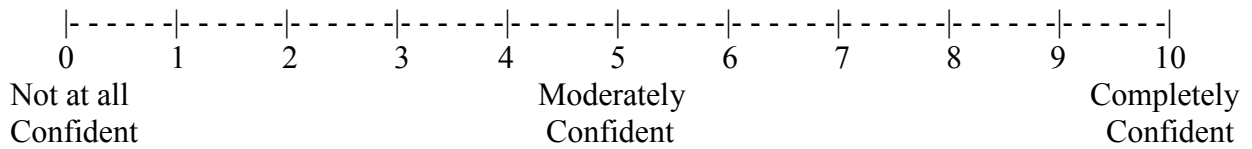


Based on your evaluation of Lakeview, please rank the extent of your agreement with the following statement on the scale below.

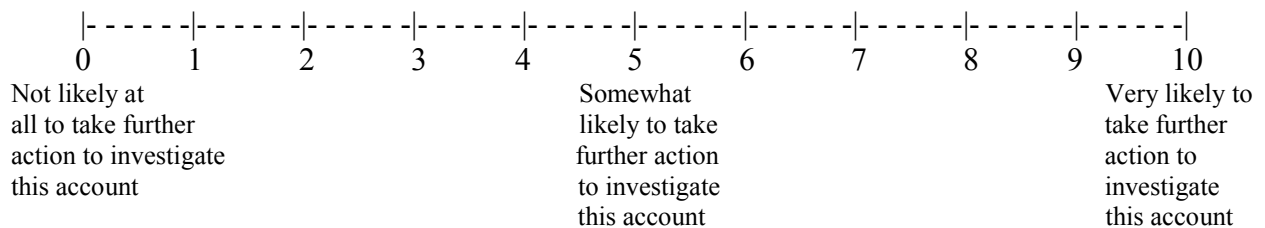
Q3a: The Lakeview Product Warranties Expense account was fairly presented. Place an “X” at the appropriate place on the scale below.



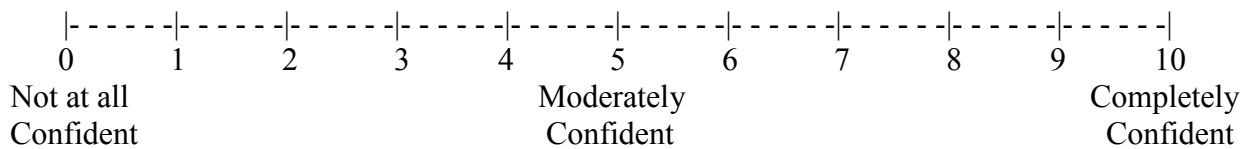
Q3b: How confident are you about your assessment that you have just made? Place an “X” at the appropriate place on the scale below.



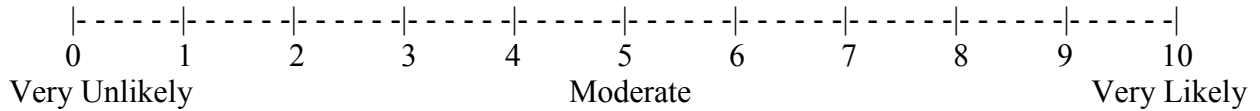
Q4a: How likely are you to do the following in regard to the Lakeview Product Warranties Expense account? Place an “X” at the appropriate place on the scale below.



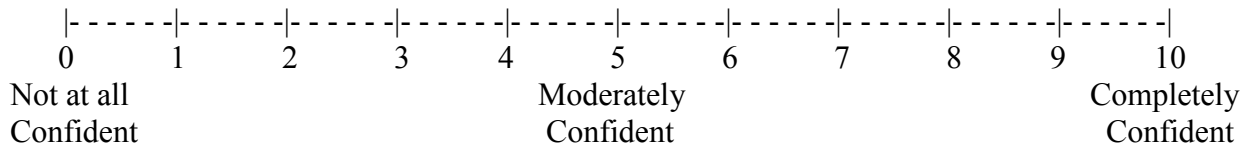
Q4b: How confident are you about your assessment that you have just made? Place an “X” at the appropriate place on the scale below.



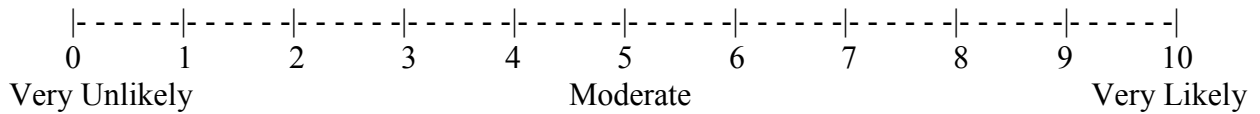
Q5a: Based on all the information you have reviewed about Lakeview Lumber Inc., how likely do you think fraud exists in Lakeview’s **Bad Debt Expense account**? Place an “X” at the appropriate place on the scale below.



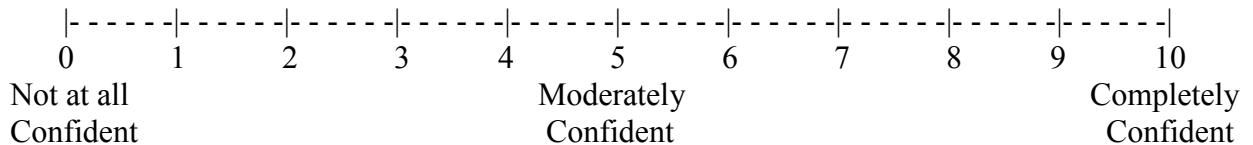
Q5b: How **confident** are you about your assessment that you have just made? Place an “X” at the appropriate place on the scale below.



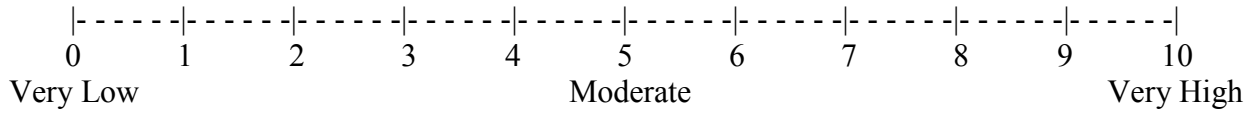
Q6a: Based on all the information you have reviewed about Lakeview Lumber Inc., how likely do you think fraud exists in Lakeview’s **Product Warranties Expense account**? Place an “X” at the appropriate place on the scale below.



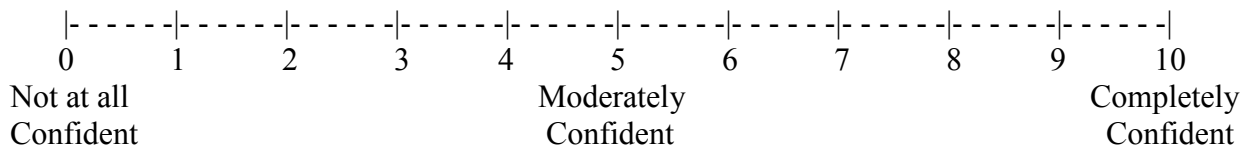
Q6b: How **confident** are you about your assessment that you have just made? Place an “X” at the appropriate place on the scale below.



Q7a: Based on all the information you have reviewed about Lakeview Lumber Inc., what is your assessment of the overall **fraud risk** for this client? Place an “X” at the appropriate place on the scale below.



Q7b: How **confident** are you about your assessment that you have just made? Place an “X” at the appropriate place on the scale below. Place an “X” at the appropriate place on the scale below.



Experiment Instrument – Distracter Task for all Conditions

Questions about You

The statements on this and the following page concern your personal reactions to a number of different situations. No two statements are exactly alike, so consider each statement carefully before answering. If a statement is TRUE or MOSTLY TRUE as applied to you, circle **T**. If a statement is FALSE or NOT USUALLY TRUE as applied to you, circle **F**.

It is important that you answer as frankly and as honestly as you can. Your answers will be kept in the strictest confidence.

- | | | | |
|-----|------------------------------------------------------------------------------------------------------|---|---|
| 1. | I find it hard to imitate the behavior of other people. | T | F |
| 2. | My behavior is usually an expression of my true inner feelings, attitudes, and beliefs. | T | F |
| 3. | At parties and social gatherings, I do <u>not</u> attempt to do or say things that others will like. | T | F |
| 4. | I can only argue for things that I already believe in. | T | F |
| 5. | I can make impromptu speeches - even on topics about which I have almost no information. | T | F |
| 6. | I guess I put on a show to impress or entertain people. | T | F |
| 7. | When I am uncertain how to act in a social situation, I look to the behavior of others for cues. | T | F |
| 8. | I would probably make a good actor. | T | F |
| 9. | I rarely need the advice of my friends to choose movies, books, or music. | T | F |
| 10. | I sometimes appear to others to be experiencing deeper emotions than I actually am. | T | F |
| 11. | I laugh more when I watch a comedy with others than when alone. | T | F |
| 12. | In a group of people I am rarely the center of attention. | T | F |
| 13. | In different situations with different people, I often act like very different persons. | T | F |

- | | | | |
|-----|-------------------------------------------------------------------------------------------------------|---|---|
| 14. | I am <u>not</u> particularly good at making other people like me. | T | F |
| 15. | Even if I am <u>not</u> enjoying myself, I often pretend to be having a good time. | T | F |
| 16. | I'm not always the person I appear to be. | T | F |
| 17. | I would <u>not</u> change my opinions in order to please someone else or win their favor. | T | F |
| 18. | I have considered being an entertainer. | T | F |
| 19. | In order to get along and be liked, I tend to be what people expect me to be rather than anyone else. | T | F |
| 20. | I have never been good at games like charades or improvisational acting. | T | F |
| 21. | I have trouble changing my behavior to suit different people and different situations. | T | F |
| 22. | At a party I let others keep the jokes and stories going. | T | F |
| 23. | I feel a bit awkward in company. | T | F |
| 24. | I can look anyone in the eye and tell a lie with a straight face – if for a good cause. | T | F |
| 25. | I may deceive people by being friendly when I really dislike them. | T | F |

<p>When you are finished, please put all materials back into <u>Envelope A</u>. Once you have secured the materials in <u>Envelope A</u>, you may open and proceed with the materials in <u>Envelope B</u>. Under no circumstances should you reopen <u>Envelope A</u> while you are completing the requirements in <u>Envelope B</u>.</p>

Experiment Instrument – Recall Task for all Conditions

Part III – (Envelope B)

In the space provided below please list all of the **important information** that you can remember about Lakeview Lumber Inc. and the FY2008 audit. Write down the information **in the order** that you remember it. Start a new line for each piece of information. There is also space on the next page. You do not need to use up all the space provided for you, but please try to remember as much as you can.

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____
13. _____
14. _____
15. _____
16. _____
17. _____
18. _____
19. _____
20. _____

Part IV – (Envelope B)

Please answer the following questions about Lakeview Lumber, Inc by circling **YES** if the item is in the case you have just read and by circling **NO** if the item is not in the case you have just read.

	Is the Item in the case you just read?	
	Yes	No
1. John Mosher, the Controller of Lakeview, was a former auditor of Lakeview.	Yes	No
2. Terry has a strong interest in advocating for more formality in controls so that Lakeview will be able to better monitor its financial reporting process.	Yes	No
3. Lakeview gives its management stock options as an incentive to meet earnings targets.	Yes	No
4. John Mosher, the Controller of Lakeview, is heavily in debt.	Yes	No
5. Adam Lester, the Manager of the Cabinets Department, did not keep detailed records receiving reports, but merely forwarded them to Terry James, the Accounting Manager.	Yes	No
6. Several matters had not been resolved in the current audit.	Yes	No
7. Karen Rohan, the “in-charge” auditor for the current year Lakeview audit, has already exceeded her audit time budget.	Yes	No
8. The discrepancy in the product warranties expense account was immaterial.	Yes	No
9. Lakeview has some minor issues with its accounting system.	Yes	No
10. Lakeview key personnel will receive a cash bonus this year based on their salary level and their years of service.	Yes	No
11. The majority of customers pay in cash.	Yes	No
12. Lakeview’s management has future plans to upgrade its accounting system.	Yes	No
13. The economic conditions are making account receivable collections less difficult.	Yes	No
14. The discrepancy in the bad debt expense account was immaterial.	Yes	No

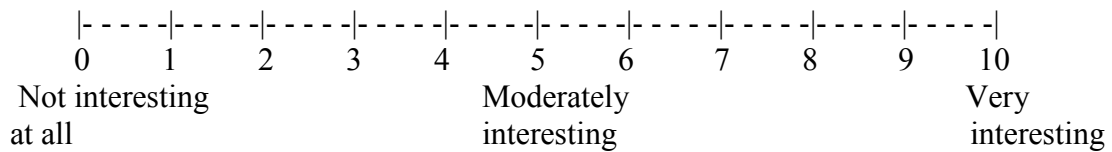
		Is the Item in the case you just read?	
		Yes	No
15.	John Mosher, the Controller of Lakeview, has a rather expensive lifestyle.	Yes	No
16.	Your firm, Becker & Pippen LLP, has been the auditor of Lakeview since 1982.	Yes	No
17.	Lakeview's prior years financial statements were fairly presented.	Yes	No
18.	Lakeview's management has been receiving substantial earning bonuses.	Yes	No
19.	The combined potential misstatements of other accounts exceeded the materiality level set forth by your firm, Becker & Pippen LLP.	Yes	No
20.	Lakeview has significant weaknesses in its accounting system.	Yes	No
21.	Lakeview's accounting controls may be susceptible to compromise and override.	Yes	No
22.	Lakeview's prior years financial statements were not fairly presented. However, Lakeview's management had taken appropriate actions to restate them.	Yes	No
23.	All audit samples were supported by proper documentation.	Yes	No
24.	John Mosher, the Controller, has a rather modest lifestyle.	Yes	No
25.	Lakeview gives its management stock options as an incentive to meet earnings targets.	Yes	No
26.	Lakeview has many highly complex transactions.	Yes	No
27.	Lakeview operates in a competitive market.	Yes	No
28.	Lakeview's EPS has been gradually increasing since the past several years.	Yes	No
29.	Terry James, Accounting Management, provided valid explanations in regard to the changes in accounting estimates used for the current year audit.	Yes	No
30.	There were no materiality discrepancies in any of the Lakeview's accounts.	Yes	No

Experiment Instrument – Post-Experimental Questionnaire for all Conditions

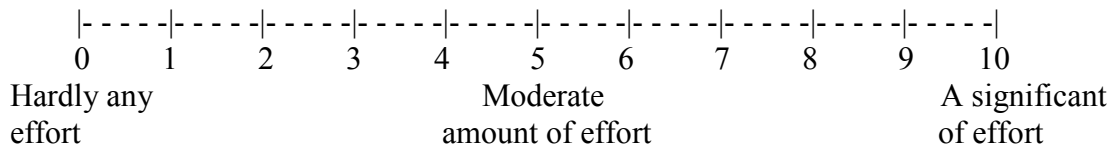
Part V – (Envelope B)

Please circle your answer or to fill in the blank to the following questions.

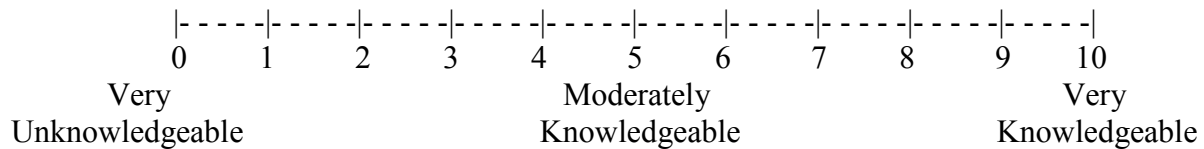
Q1. How interesting was this project?



Q2. How much effort did you put into completing this project?



Q3. How knowledgeable do you think you are with the material presented in this project?



Q4. What is your gender?

- c. Male.
- d. Female.

Q5. How old are you? _____

Q6. How many years of accounting related professional experience do you have? _____
years/months (ex: 1.5 years)

Q7. Did you intern in the accounting field?

- f. Yes – with a Big 4 public accounting firm.
- g. Yes – with a non-Big 4 public accounting firm.
- h. Yes - with a company in industry.
- i. Yes - other.
- j. No.

Q8. How many college credit hours have you completed? _____

Q9. What is your GPA? _____

Q10. What is your ethnic origin?

- f. Caucasian.
- g. African-American.
- h. Asian.
- i. Hispanic.
- j. Other (please specify)_____

Q11. What was your place of birth?

Q12. What is your major?

- h. BS-ACS
- i. MBA.
- j. MS-Auditing.
- k. MS-Tax.
- l. MS-Accounting Information System.
- m. MS-Managerial.
- n. Other (please specify)_____

Q13. Please provide any comments that you may have about this study in the space below.

You are done. Thank you for your participation!

Please put all materials back into **Envelope B**. When you are finished, please raise your hand. The instructor will pick up both **Envelopes A and B** from you.

APPENDIX G

RESEARCH INSTRUMENT (AUDIT MINDSET/HIGH FRAUD RISK CONDITION)

General Instructions

You will be provided with information about a company. After reviewing the information, you will be asked to provide your assessment about the company. This study will take approximately 30 to 40 minutes to complete.

There is no right or wrong answer. It is important that you answer all of the questions. To ensure the reliability of the information gathered, please avoid discussing the study with others until you have completed all tasks. Your responses will be kept strictly confidential. Your participation will be anonymous and in no way will your responses be traced or attributed to you.

You will be given two envelopes (A and B). Please complete all of the requirements in the envelope marked A before opening Envelope B. Once you have completed the requirements in Envelope A, please put all materials back into Envelope A. After you have secured the materials back into Envelope A, you may proceed with the materials in Envelope B. Under no circumstances should you reopen Envelope A while you are completing the requirements in Envelope B. Your participation in the study is complete once you finish Envelope B.

Thank you for your participation in this study. You may now proceed with Envelope A.

Sincerely,
Lawrence Chui, CPA
University of North Texas
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Experiment Instrument – Audit Mindset and High Fraud Risk Condition

Part I – (Envelope A)

Your role and objective

You are an **auditor** working for a public accounting firm, Becker & Phippen LLP. As an auditor, your primary responsibility is to gather documentation to determine whether the company's reported financial statements taken as a whole (including footnotes) are stated fairly, in all material respects, in conformity with Generally Accepted Accounting Principles (GAAP).

As an auditor, you would be expected to keep the following principles in mind:

- You would be asked to look at your client's accounts either individually or in aggregate with other accounts. You would especially focus on accounts with a reasonable possibility of containing a material misstatement.
- You work with a materiality level. In other words, you are primarily concerned with material matters in an audit. Materiality is relevant to you because it serves as a guide to your evaluation of audit evidence.
- You would not be expected to examine every transaction and you would generally rely on audit sampling.
- You would not be concerned with minor discrepancies in any single account. You would only be concerned if these discrepancies are indicative of larger or pervasive problems.
- You would generally have a predetermined time budget for your work. If you spend too much time examining one area, you may have to spend less time somewhere else or you may run the risk of going over budget. While time is of the essence in an audit, you still have to do a sufficient amount of work and should not intentionally reduce or eliminate a procedure.

To better help you carry out your assignment, your firm, Becker & Pippen LLP, has provided you with an excerpt from its training manual titled “**How to think like an auditor**”.

How to think like an auditor

To be an effective auditor, it is important for you to remember the following concepts as you proceed with your assignment.

- You should think about accounting records in terms of the availability of supporting documents and the authenticity of the audit trail. In other words, you have to decide whether there is valid documentation to support the recorded transactions and whether they are presented in conformance with Generally Accepted Accounting Principles (GAAP).
- You should maintain an appropriate level of professional skepticism by having a questioning mind when you are evaluating audit evidence. Risk factors relating to fraudulent financial reporting include motive, opportunity, and rationalization. Although these factors are often present in situations where fraud exists, they do not necessarily indicate the existence of fraud.
- You should keep in mind that the possibility that a material misstatement due to unintentional error or fraud could be present, regardless of your belief about your client’s honesty and integrity.
- You do not have to look at all of your client’s internal controls and you are not always required to test the operating effectiveness of them. However, you are expected to at least look at the design of your client’s internal controls. You are also to evaluate them in order to determine whether they are being implemented, in appropriate places, and are being monitored.

Please keep the above concepts in mind as you are completing this study.

Your assignment

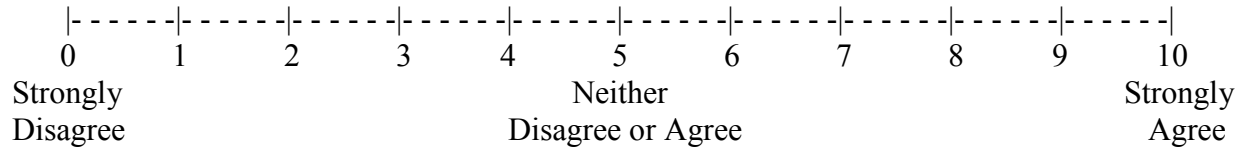
Your assignment as an auditor is to review your firm’s current client, Lakeview Lumber, Inc., and their operations. You are assigned to assist Karen Rohan. Karen is the “in-charge” auditor on the FY2008 Lakeview Lumber audit. She will provide you with details about Lakeview Lumber, Inc. in the following pages. After reviewing the client’s information, you will be asked to provide Karen with your assessment about Lakeview.

You should pay attention to all of the information, but your primary responsibility is to gather documentation to determine whether the company’s reported financial statements taken as a whole (including footnotes) are stated fairly, in all material respects, in conformity with Generally Accepted Accounting Principles (GAAP).

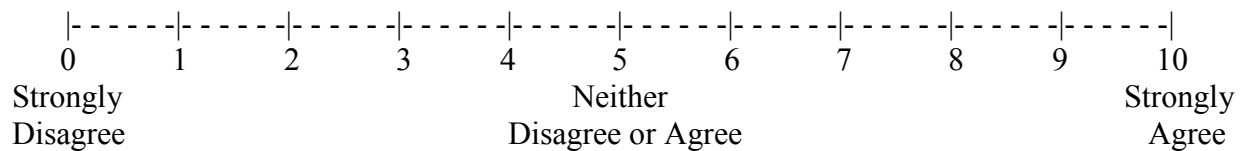
Please complete the following questions before you proceed to Part II of this study.

Based on your understanding of the role and objective of an auditor, please rank the extent of your agreement with the following statements on the scale below.

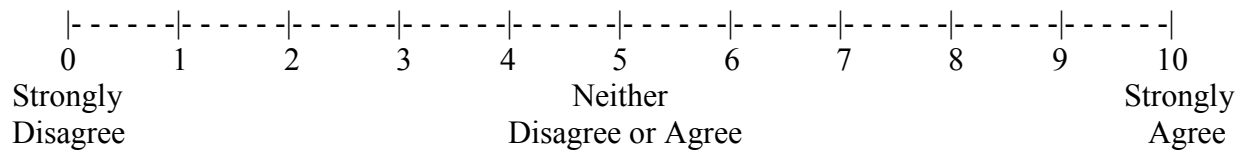
Q1: You do not work with a materiality level.



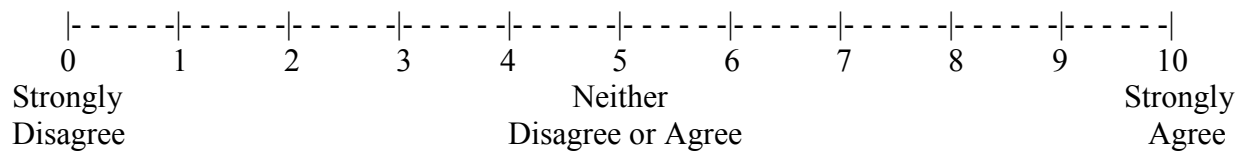
Q2: You do not normally rely on sampling.



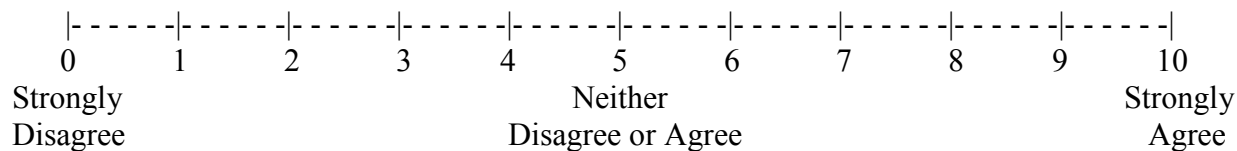
Q3: You would be concerned with minor discrepancies when evaluating your client's accounts.



Q4: You would not be overly concerned with any immaterial misstatements in your client's accounts.



Q5: You would be satisfied with the effectiveness of your client's internal controls if you are able to determine that they have been implemented and properly monitored.



Based on your understanding of the role and objective of an auditor, please answer the following question by circling the most appropriate answer.

Q6: Based on the training given to you by your firm, Becker & Pippen LLP, which of the following is more important to you in regard to accounting records?

- a. Determining whether the reported accounting transactions actually took place.
- b. Determining whether there is valid and proper documentation to support the recorded transactions.

Experiment Instrument – High Fraud Risk Condition

Part II – (Envelope A)

Background Information on Lakeview Lumber

Lakeview Lumber, Inc. is located in the city of Lakeview, a metropolitan area of approximately 200,000 people. Lakeview Lumber sells between 30,000 and 35,000 different kinds of building materials, lawn and garden products, and home improvement supplies to retail customers, as well as to contractors and other building professionals. Retail customers are required to pay in cash or by a major credit card at the time of their purchase. However, the vast majority of contractors and building professionals has established credit accounts and are billed on a monthly basis. Lakeview Lumber's main competitors in the area are The Home Depot, Inc. and Eagle Hardware & Garden.

Your firm, Becker & Phippen LLP, has been the auditors for Lakeview Lumber since 1982. You are assigned to assist Karen Rohan, the “in-charge” auditor on the FY2008 Lakeview Lumber audit. Your assignment as an auditor is to determine whether Lakeview’s reported financial information was fairly presented.

Key Personnel

Lakeview Lumber, Inc.’s top management team consists of the following key executives. Based on your firm’s prior interaction with these key executives, you have some basic knowledge of their background.

John Mosher – Controller

- John started his career as an auditor with Becker & Phippen LLP. John was assigned to the audit of Lakeview Lumber each of the six years he worked for Becker & Phippen. He has been the Controller for Lakeview Lumber since 1995. John usually arrives at work with his Porsche sport car. He and his wife have recently taken out a loan to purchase a new home in an upscale neighborhood.

Terry James – Accounting Manager

- Terry has a B.A. in accounting and has been with Lakeview Lumber for four years. Prior to working for Lakeview Lumber, Terry was the night auditor for a small hotel. Terry has extensive and detailed knowledge of the Lakeview Lumber’s accounting systems as well as their weaknesses. Terry has been advocating for less formality in controls. Terry suggested that this would allow the accounting department to operate more efficiently and effectively, with fewer constraints.

Managerial Compensation

Lakeview Lumber, Inc. compensates its key personnel primarily through a fixed salary schedule. In a recent board meeting, Lakeview’s board of directors approved the motion to award all key personnel a cash bonus at the end of each year, starting in FY2008. Each key personnel will receive a cash bonus based on a predetermined percentage of the company’s reported net income.

Lakeview Lumber's Accounting Environment

Based on your firm's prior year audits, Lakeview Lumber Inc. appeared to have some minor weaknesses in its accounting systems. However, these weaknesses did not appear to allow material errors into the company's financial reporting process. Lakeview management reassured your firm that Lakeview will take appropriate actions to upgrade its accounting systems.

The Lakeview Lumber's Audit

Karen, the current "in-charge" auditor is responsible for seeing that she completes the field work for the Lakeview Lumber as soon as possible. Audit hours were already over the time that had been budgeted for the job, and Karen believed that there was still a substantial amount of time needed to finish the audit, because several audit matters had not yet been resolved. Karen approached you with the following audit issues regarding Bad Debts Expense and Product Warranties Expense for FY2008. She would like you to review her analyses of these accounts and provide her with your recommendations.

Bad Debts Expense

Bad Debts Expense as a percentage of credit sales was approximately 3.2 percent for FY2008, whereas in the prior two years Bad Debts Expense as a percentage of credit sales was 5.0 percent for both FY2007 and FY2006. Credit sales for FY2008 were about \$2,600,000. Review and testing of the aged trail balance of Accounts Receivable indicated that the amount and percentage of accounts receivable in each aging category were comparable to prior years. The percentages used to estimate the uncollectible accounts were almost reduced by half in practically every aging category to prior year.

When Karen questioned Terry James, the Accounting Manager, about the decreased percentages, he stated that John Mosher, the Controller, had instructed him to use the lower percentages for FY2008. Karen subsequently discussed the matter with John, who informed Karen that he was expecting customers to pay more quickly in FY2009, due to a better than expected growth of the housing market in the area in which Lakeview Lumber does business.

Product Warranties Expense

Lakeview Lumber's Warranty Expense account for FY2008 was approximately \$83,200, representing a 25 percent **decrease** from FY2007. Based on Karen's review, the audit had not disclosed any significant changes in Lakeview Lumber's product mix. Thus, Karen discussed the increase with Terry. Terry stated that the charge to Warranty Expense was "just an estimate provided by John." When Karen asked John about the decrease in Warranty Expenses, John stated that the decrease was due to the better than expected economic growth in the area. He explained that builders were less particular in a stronger economic climate and they were less inclined to return wood and supplies that might be slightly flawed.

Karen then discussed product warranties with Adam Lester, the manager of the cabinets department, since that department seemed to experience the largest number of returns. Adam stated while he did not keep records of returns per se, he would fill out the appropriate paperwork and forward them to the accounting department. Adam said he **didn't think that** the returns during FY2008 were much different from those of FY2007. Karen subsequently asked

Terry from the accounting department to provide her with a complete list of returns for FY2008. Karen sampled 30 transactions throughout FY2008. All of the sampled transactions were supported by proper documentation.

Additional Analysis

In addition to the above information, Karen provided you with some preliminary analysis of both the Bad Debts Expense and the Product Warranties Expense accounts prepared by another audit staff member on the Lakeview audit.

The materiality level for the Lakeview Lumber Inc. audit has been set to approximately 1.0 percent of the company’s reported sales. The materiality level for FY2008 was \$52,020.

Bad Debts Expense:

	Amounts	Supporting Calculations
Bad Debts Expense as currently recorded (approximately 4.8% of FY2008 credit sales)	\$83,200	\$2,600,000 FY2008 credit sales x 3.2%
Bad Debts Expense (if applied the same percentage – 5.0% for both FY2007 and FY2006)	\$130,000	\$2,600,000 FY2008 credits sales x 5.0%
Potential understatement of Bad Debts Expense for FY2008	\$46,800	\$130,000 - \$83,200
Less: Income Taxes (@ 38%)	\$17,784	\$46,800 x 38%
Potential Decrease to currently recorded net income	\$29,016	\$46,800 - \$17,784

Comment 1: The current reported net income may have been overstated by \$29,016 due to the Bad Debts Expense account. However, this is below the materiality level of \$52,020.

Product Warranties Expense:

	Amounts	Supporting Calculations
Warranty Expense as currently recorded	\$85,000	
Warranty Expense (if applied the same percentage – 2.3% for FY2007)	\$119,646	(1) FY2007 warranty expense percentage = warranty expense / sales = 113,000 / 4,876,000 = 2.3%
		(2) FY2008 warranty expense = \$5,202,000 x 2.3%
Potential understatement of Warranty Expense for FY2008	\$34,646	\$119,646 - \$85,000
Less: Income Taxes (@ 38%)	\$13,165	\$34,646 x 38%
Potential Decrease to currently recorded net income	\$21,481	\$34,646 - \$13,165

Comment 2: The current reported net income may have been overstated by \$21,481 due to the Product Warranties Expense account. However, this is below the materiality level of \$52,020.

Comment 3: The combined effect of both the Bad Debts Expense and the Product Warranties Expense accounts may have overstated the Lakeview Lumber Inc.'s net income by \$50,497 (\$29,016 + \$21,481). However, the combined effect of these two accounts was still below the materiality level of \$52,020.

Lakeview Lumber's Financial Statements

Lakeview Lumber's Income Statements for the past three fiscal years are presented in Exhibit 1. Exhibit 2 includes the Statements of Retained Earnings for FY2006 through FY2008. The Balance Sheets for Lakeview Lumber for FY2008, FY2007, and FY2006 are shown in Exhibit 3.

EXHIBIT 1			
Lakeview Lumber, Inc.			
Income Statements			
(amounts in thousands, except per share data)			
	FY2008	FY2007	FY2006
	Unaudited	Audited	Audited
Sales	\$ 5,202	\$ 4,876	\$ 4,424
Cost of Sales	<u>3,451</u>	<u>3,359</u>	<u>3,101</u>
Gross Profit	\$ 1,751	\$ 1,517	\$ 1,323
Depreciation	184	174	169
Bad Debts Expense	83	125	118
Warranty Expense	85	113	117
Other Selling Expenses	<u>575</u>	<u>465</u>	<u>342</u>
Total Selling Expenses	\$ 927	\$ 877	\$ 746
General & Administrative Expenses	<u>235</u>	<u>224</u>	<u>215</u>
Total Expenses	\$ 1,162	\$ 1,101	\$ 961
Income Before Income Taxes			
Taxes	589	416	362
Income Taxes	<u>224</u>	<u>158</u>	<u>138</u>
Net Income	\$ 365	\$ 258	\$ 224
Earnings per share	\$ 3.65	\$ 2.58	\$ 2.24

EXHIBIT 2	
Lakeview Lumber, Inc.	
Statements of Retained Earnings	
(amounts in thousands)	
Retained Earnings @ end of FY2005	\$ 1,735
FY2006 (Audited)	
Add: Net Income	224
Less: Dividends	<u>(100)</u>
Retained Earnings @ end of FY2006	<u>\$ 1,859</u>
FY2007 (Audited)	
Add: Net Income	258
Less: Dividends	<u>(100)</u>
Retained Earnings @ end of FY2007	<u>\$ 2,017</u>
FY2008 (Unaudited)	
Add: Net Income	365
Less: Dividends	<u>(100)</u>
Retained Earnings @ end of FY2008	<u>\$ 2,282</u>

EXHIBIT 3
Lakeview Lumber, Inc.
Balance Sheets
(amounts in thousands)

	<u>FY2008</u> Unaudited	<u>FY2007</u> Audited	<u>FY2006</u> Audited
Assets:			
Cash and Cash Equivalents	\$ 173	\$ 167	\$ 131
Accounts Receivable	327	325	267
Less: Allowance	(134)	(152)	(144)
Inventory	1,102	1,009	989
Other Current Assets	<u>89</u>	<u>94</u>	<u>139</u>
Total Current Assets	\$ 1,557	\$ 1,427	\$ 1,227
Property, Plant & Equipment	5,411	5,351	5,219
Less: Accumulated Depreciation	<u>(1,987)</u>	<u>(1,803)</u>	<u>(1,629)</u>
Total Assets	<u>\$ 4,981</u>	<u>\$ 4,991</u>	<u>\$ 4,972</u>
Liabilities:			
Accounts Payable	\$ 595	\$ 765	\$ 798
Estimated Liability for Warranties	98	109	115
Accrued Salaries and Wages	87	83	85
Income Taxes Payable	<u>19</u>	<u>17</u>	<u>15</u>
Total Current Liabilities	\$ 799	\$ 974	\$ 1,013
Long-term Debt	<u>300</u>	<u>400</u>	<u>500</u>
Total Liabilities	\$ 1,099	\$ 1,374	\$ 1,513
Stockholders' Equity:			
Retained Earnings	\$ 2,282	\$ 2,017	\$ 1,859
Common Stock, par value \$0.01 Authorized 500,000 shares; issued and outstanding—100,000 shares	<u>1,600</u>	<u>1,600</u>	<u>1,600</u>
Total Stockholders' Equity	<u>\$ 3,882</u>	<u>\$ 3,617</u>	<u>\$ 3,459</u>
Total Liabilities and Stockholders' Equity	<u>\$ 4,981</u>	<u>\$ 4,991</u>	<u>\$ 4,972</u>

End of Company Information



Before you proceed to the next page, please take a moment to review the following information.

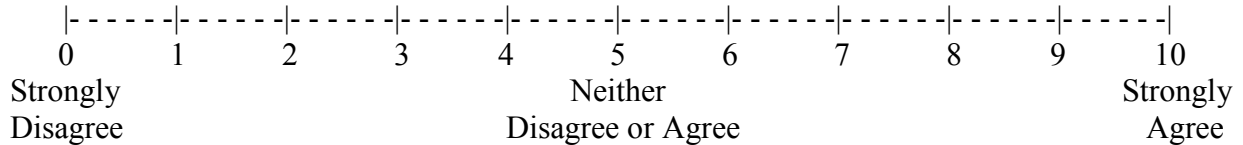
As an auditor YOU WOULD...

- work with a materiality level. Materiality is relevant to you because it serves as a guide to your evaluation of audit evidence
- not be concerned with minor discrepancies in any single accounts. You would only be concerned if these discrepancies are indicative of larger or pervasive problems.
- have to decide whether there is valid documentation to support the recorded transactions.
- not have to look at all of your client's internal controls and you are not always required to test the operating effectiveness of them. However, you are expected to at least look at the design of your client's internal controls. You are also to evaluate them in order to determine whether they are being implemented, in appropriate places, and are being monitored.

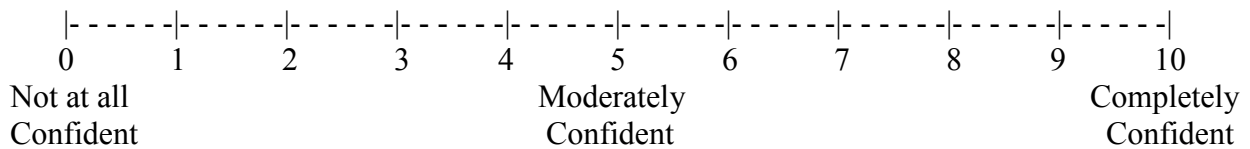
Now that you have finished reviewing the information pertaining to Lakeview Lumber, Inc., Karen would like to have you provide her with the following assessment:

Based on your evaluation of Lakeview, please rank the extent of your agreement with the following statement on the scale below.

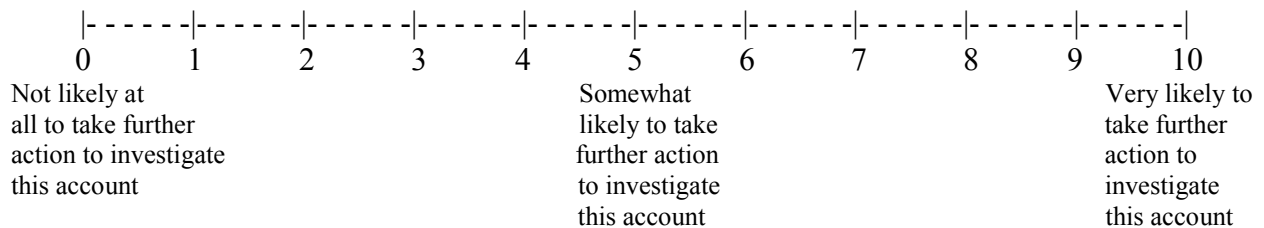
Q1a: The Lakeview **Bad Debt Expense account** was fairly presented. Place an “X” at the appropriate place on the scale below.



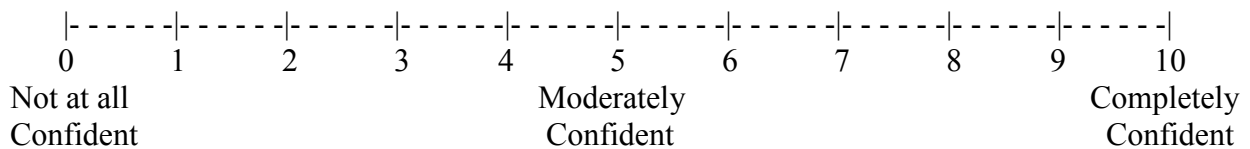
Q1b: How **confident** are you about your assessment that you have just made? Place an “X” at the appropriate place on the scale below.



Q2a: How likely would you do the following in regard to the Lakeview **Bad Debt Expense account**? Place an “X” at the appropriate place on the scale below.

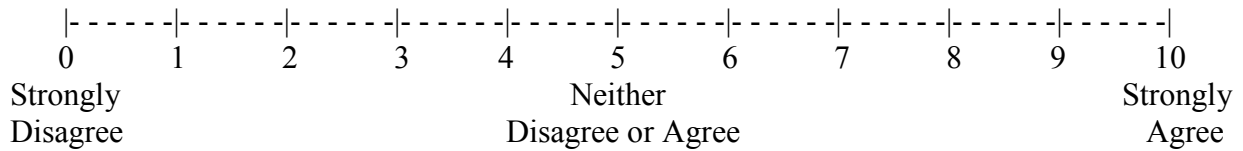


Q2b: How **confident** are you about your assessment that you have just made? Place an “X” at the appropriate place on the scale below.

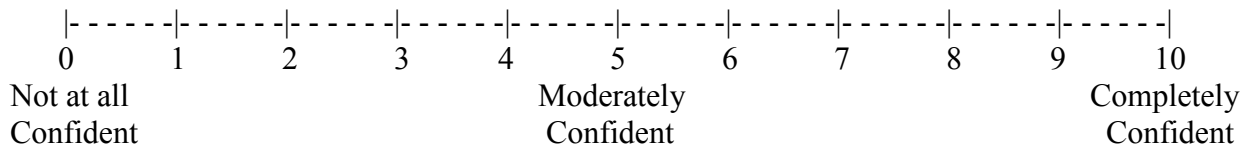


Based on your evaluation of Lakeview, please rank the extent of your agreement with the following statement on the scale below.

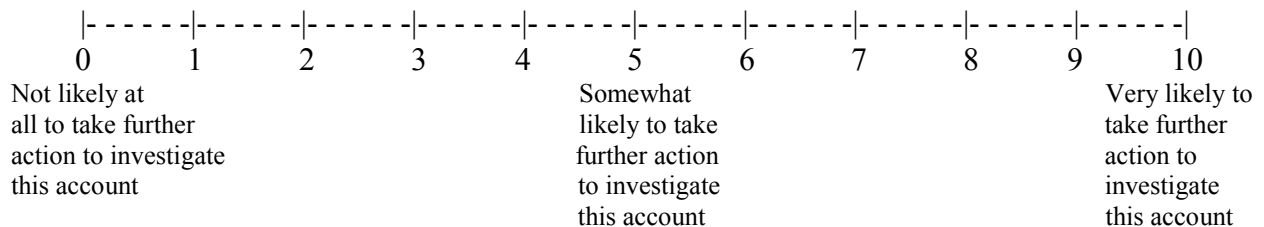
Q3a: The Lakeview Product Warranties Expense account was fairly presented. Place an “X” at the appropriate place on the scale below.



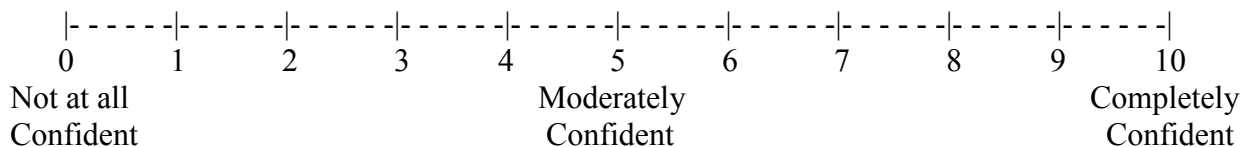
Q3b: How confident are you about your assessment that you have just made? Place an “X” at the appropriate place on the scale below.



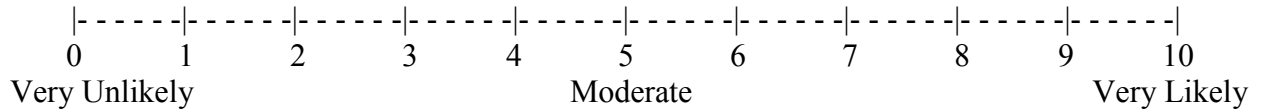
Q4a: How likely are you to do the following in regard to the Lakeview Product Warranties Expense account? Place an “X” at the appropriate place on the scale below.



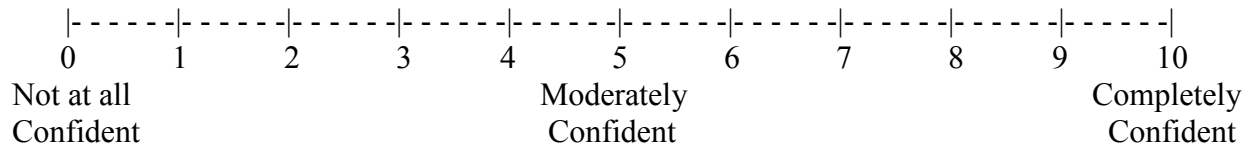
Q4b: How confident are you about your assessment that you have just made? Place an “X” at the appropriate place on the scale below.



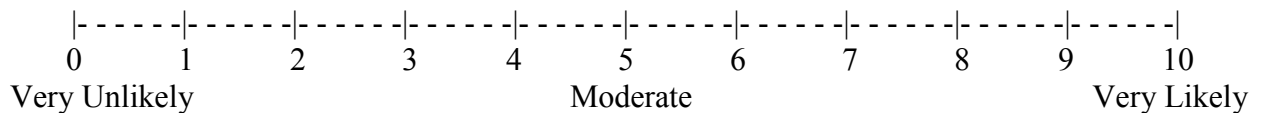
Q5a: Based on all the information you have reviewed about Lakeview Lumber Inc., how likely do you think fraud exists in Lakeview’s **Bad Debt Expense account**? Place an “X” at the appropriate place on the scale below.



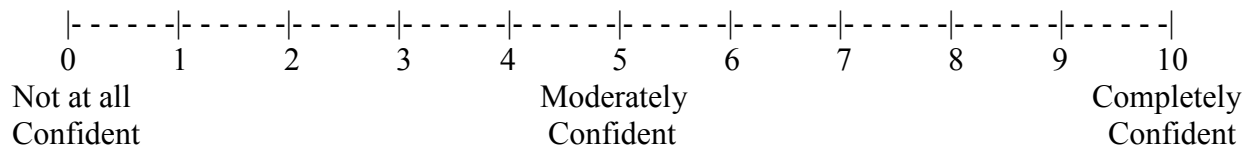
Q5b: How **confident** are you about your assessment that you have just made? Place an “X” at the appropriate place on the scale below.



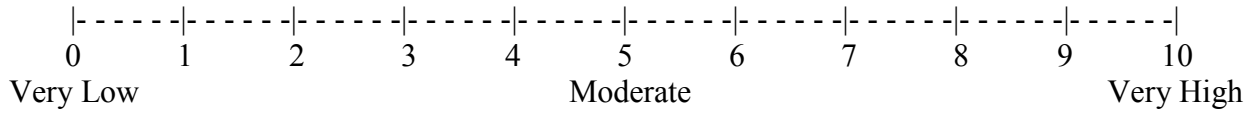
Q6a: Based on all the information you have reviewed about Lakeview Lumber Inc., how likely do you think fraud exists in Lakeview’s **Product Warranties Expense account**? Place an “X” at the appropriate place on the scale below.



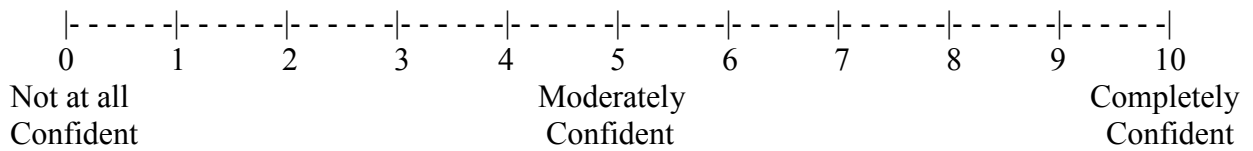
Q6b: How **confident** are you about your assessment that you have just made? Place an “X” at the appropriate place on the scale below.



Q7a: Based on all the information you have reviewed about Lakeview Lumber Inc., what is your assessment of the overall **fraud risk** for this client? Place an “X” at the appropriate place on the scale below.



Q7b: How **confident** are you about your assessment that you have just made? Place an “X” at the appropriate place on the scale below. Place an “X” at the appropriate place on the scale below.



Experiment Instrument – Distracter Task for all Conditions

Questions about You

The statements on this and the following page concern your personal reactions to a number of different situations. No two statements are exactly alike, so consider each statement carefully before answering. If a statement is TRUE or MOSTLY TRUE as applied to you, circle **T**. If a statement is FALSE or NOT USUALLY TRUE as applied to you, circle **F**.

It is important that you answer as frankly and as honestly as you can. Your answers will be kept in the strictest confidence.

- | | | | |
|-----|------------------------------------------------------------------------------------------------------|---|---|
| 1. | I find it hard to imitate the behavior of other people. | T | F |
| 2. | My behavior is usually an expression of my true inner feelings, attitudes, and beliefs. | T | F |
| 3. | At parties and social gatherings, I do <u>not</u> attempt to do or say things that others will like. | T | F |
| 4. | I can only argue for things that I already believe in. | T | F |
| 5. | I can make impromptu speeches - even on topics about which I have almost no information. | T | F |
| 6. | I guess I put on a show to impress or entertain people. | T | F |
| 7. | When I am uncertain how to act in a social situation, I look to the behavior of others for cues. | T | F |
| 8. | I would probably make a good actor. | T | F |
| 9. | I rarely need the advice of my friends to choose movies, books, or music. | T | F |
| 10. | I sometimes appear to others to be experiencing deeper emotions than I actually am. | T | F |
| 11. | I laugh more when I watch a comedy with others than when alone. | T | F |
| 12. | In a group of people I am rarely the center of attention. | T | F |
| 13. | In different situations with different people, I often act like very different persons. | T | F |

- | | | | |
|-----|-------------------------------------------------------------------------------------------------------|---|---|
| 14. | I am <u>not</u> particularly good at making other people like me. | T | F |
| 15. | Even if I am <u>not</u> enjoying myself, I often pretend to be having a good time. | T | F |
| 16. | I'm not always the person I appear to be. | T | F |
| 17. | I would <u>not</u> change my opinions in order to please someone else or win their favor. | T | F |
| 18. | I have considered being an entertainer. | T | F |
| 19. | In order to get along and be liked, I tend to be what people expect me to be rather than anyone else. | T | F |
| 20. | I have never been good at games like charades or improvisational acting. | T | F |
| 21. | I have trouble changing my behavior to suit different people and different situations. | T | F |
| 22. | At a party I let others keep the jokes and stories going. | T | F |
| 23. | I feel a bit awkward in company. | T | F |
| 24. | I can look anyone in the eye and tell a lie with a straight face – if for a good cause. | T | F |
| 25. | I may deceive people by being friendly when I really dislike them. | T | F |

<p>When you are finished, please put all materials back into <u>Envelope A</u>. Once you have secured the materials in <u>Envelope A</u>, you may open and proceed with the materials in <u>Envelope B</u>. Under no circumstances should you reopen <u>Envelope A</u> while you are completing the requirements in <u>Envelope B</u>.</p>

Experiment Instrument – Recall Task for all Conditions

Part III – (Envelope B)

In the space provided below please list all of the **important information** that you can remember about Lakeview Lumber Inc. and the FY2008 audit. Write down the information **in the order** that you remember it. Start a new line for each piece of information. There is also space on the next page. You do not need to use up all the space provided for you, but please try to remember as much as you can.

1. _____
2. _____
3. _____
4. _____
5. _____
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10. _____
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12. _____
13. _____
14. _____
15. _____
16. _____
17. _____
18. _____
19. _____
20. _____

Part IV – (Envelope B)

Please answer the following questions about Lakeview Lumber, Inc by circling **YES** if the item is in the case you have just read and by circling **NO** if the item is not in the case you have just read.

	Is the Item in the case you just read?	
	Yes	No
1. John Mosher, the Controller of Lakeview, was a former auditor of Lakeview.	Yes	No
2. Terry has a strong interest in advocating for more formality in controls so that Lakeview will be able to better monitor its financial reporting process.	Yes	No
3. Lakeview gives its management stock options as an incentive to meet earnings targets.	Yes	No
4. John Mosher, the Controller of Lakeview, is heavily in debt.	Yes	No
5. Adam Lester, the Manager of the Cabinets Department, did not keep detailed records receiving reports, but merely forwarded them to Terry James, the Accounting Manager.	Yes	No
6. Several matters had not been resolved in the current audit.	Yes	No
7. Karen Rohan, the “in-charge” auditor for the current year Lakeview audit, has already exceeded her audit time budget.	Yes	No
8. The discrepancy in the product warranties expense account was immaterial.	Yes	No
9. Lakeview has some minor issues with its accounting system.	Yes	No
10. Lakeview key personnel will receive a cash bonus this year based on their salary level and their years of service.	Yes	No
11. The majority of customers pay in cash.	Yes	No
12. Lakeview’s management has future plans to upgrade its accounting system.	Yes	No
13. The economic conditions are making account receivable collections less difficult.	Yes	No
14. The discrepancy in the bad debt expense account was immaterial.	Yes	No

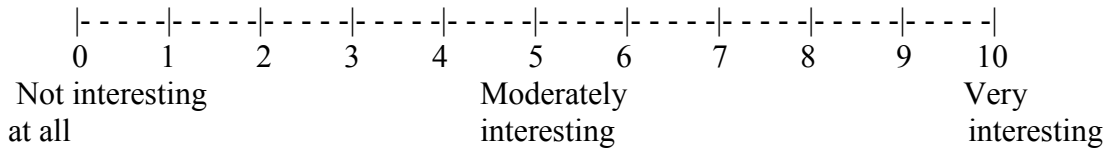
		Is the Item in the case you just read?	
		Yes	No
15.	John Mosher, the Controller of Lakeview, has a rather expensive lifestyle.	Yes	No
16.	Your firm, Becker & Pippen LLP, has been the auditor of Lakeview since 1982.	Yes	No
17.	Lakeview's prior years financial statements were fairly presented.	Yes	No
18.	Lakeview's management has been receiving substantial earning bonuses.	Yes	No
19.	The combined potential misstatements of other accounts exceeded the materiality level set forth by your firm, Becker & Pippen LLP.	Yes	No
20.	Lakeview has significant weaknesses in its accounting system.	Yes	No
21.	Lakeview's accounting controls may be susceptible to compromise and override.	Yes	No
22.	Lakeview's prior years financial statements were not fairly presented. However, Lakeview's management had taken appropriate actions to restate them.	Yes	No
23.	All audit samples were supported by proper documentation.	Yes	No
24.	John Mosher, the Controller, has a rather modest lifestyle.	Yes	No
25.	Lakeview gives its management stock options as an incentive to meet earnings targets.	Yes	No
26.	Lakeview has many highly complex transactions.	Yes	No
27.	Lakeview operates in a competitive market.	Yes	No
28.	Lakeview's EPS has been gradually increasing since the past several years.	Yes	No
29.	Terry James, Accounting Management, provided valid explanations in regard to the changes in accounting estimates used for the current year audit.	Yes	No
30.	There were no materiality discrepancies in any of the Lakeview's accounts.	Yes	No

Experiment Instrument – Post-Experimental Questionnaire for all Conditions

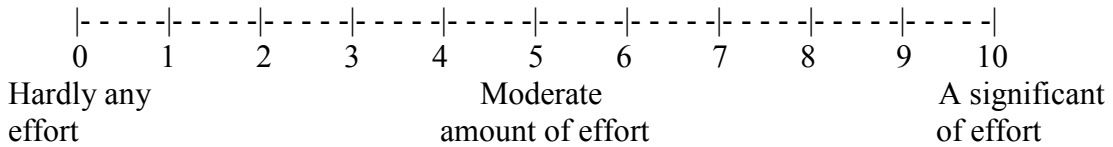
Part V – (Envelope B)

Please circle your answer or to fill in the blank to the following questions.

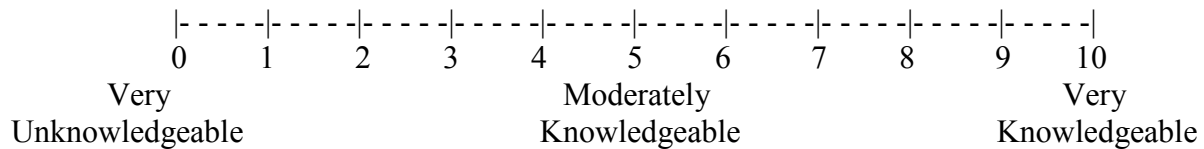
Q1. How interesting was this project?



Q2. How much effort did you put into completing this project?



Q3. How knowledgeable do you think you are with the material presented in this project?



Q4. What is your gender?

- e. Male.
- f. Female.

Q5. How old are you? _____

Q6. How many years of accounting related professional experience do you have? _____
years/months (ex: 1.5 years)

Q7. Did you intern in the accounting field?

- k. Yes – with a Big 4 public accounting firm.
- l. Yes – with a non-Big 4 public accounting firm.
- m. Yes - with a company in industry.
- n. Yes - other.
- o. No.

Q8. How many college credit hours have you completed? _____

Q9. What is your GPA? _____

Q10. What is your ethnic origin?

- k. Caucasian.
- l. African-American.
- m. Asian.
- n. Hispanic.
- o. Other (please specify)_____

Q11. What was your place of birth?

Q12. What is your major?

- o. BS-ACS
- p. MBA.
- q. MS-Auditing.
- r. MS-Tax.
- s. MS-Accounting Information System.
- t. MS-Managerial.
- u. Other (please specify)_____

Q13. Please provide any comments that you may have about this study in the space below.

You are done. Thank you for your participation!

Please put all materials back into **Envelope B**. When you are finished, please raise your hand. The instructor will pick up both **Envelopes A and B** from you.

APPENDIX H

RESEARCH INSTRUMENT (AUDIT MINDSET/LOW FRAUD RISK CONDITION)

General Instructions

You will be provided with information about a company. After reviewing the information, you will be asked to provide your assessment about the company. This study will take approximately 30 to 40 minutes to complete.

There is no right or wrong answer. It is important that you answer all of the questions. To ensure the reliability of the information gathered, please avoid discussing the study with others until you have completed all tasks. Your responses will be kept strictly confidential. Your participation will be anonymous and in no way will your responses be traced or attributed to you.

You will be given two envelopes (A and B). Please complete all of the requirements in the envelope marked A before opening Envelope B. Once you have completed the requirements in Envelope A, please put all materials back into Envelope A. After you have secured the materials back into Envelope A, you may proceed with the materials in Envelope B. Under no circumstances should you reopen Envelope A while you are completing the requirements in Envelope B. Your participation in the study is complete once you finish Envelope B.

Thank you for your participation in this study. You may now proceed with Envelope A.

Sincerely,
Lawrence Chui, CPA
University of North Texas
(940) 565-3172
lawrence.chui@unt.edu

Experiment Instrument – Audit Mindset and Low Fraud Risk Condition

Part I – (Envelope A)

Your role and objective

You are an **auditor** working for a public accounting firm, Becker & Phippen LLP. As an auditor, your primary responsibility is to gather documentation to determine whether the company's reported financial statements taken as a whole (including footnotes) are stated fairly, in all material respects, in conformity with Generally Accepted Accounting Principles (GAAP).

As an auditor, you would be expected to keep the following principles in mind:

- You would be asked to look at your client's accounts either individually or in aggregate with other accounts. You would especially focus on accounts with a reasonable possibility of containing a material misstatement.
- You work with a materiality level. In other words, you are primarily concerned with material matters in an audit. Materiality is relevant to you because it serves as a guide to your evaluation of audit evidence.
- You would not be expected to examine every transaction and you would generally rely on audit sampling.
- You would not be concerned with minor discrepancies in any single account. You would only be concerned if these discrepancies are indicative of larger or pervasive problems.
- You would generally have a predetermined time budget for your work. If you spend too much time examining one area, you may have to spend less time somewhere else or you may run the risk of going over budget. While time is of the essence in an audit, you still have to do a sufficient amount of work and should not intentionally reduce or eliminate a procedure.

To better help you carry out your assignment, your firm, Becker & Pippen LLP, has provided you with an excerpt from its training manual titled “**How to think like an auditor**”.

How to think like an auditor

To be an effective auditor, it is important for you to remember the following concepts as you proceed with your assignment.

- You should think about accounting records in terms of the availability of supporting documents and the authenticity of the audit trail. In other words, you have to decide whether there is valid documentation to support the recorded transactions and whether they are presented in conformance with Generally Accepted Accounting Principles (GAAP).
- You should maintain an appropriate level of professional skepticism by having a questioning mind when you are evaluating audit evidence. Risk factors relating to fraudulent financial reporting include motive, opportunity, and rationalization. Although these factors are often present in situations where fraud exists, they do not necessarily indicate the existence of fraud.
- You should keep in mind that the possibility that a material misstatement due to unintentional error or fraud could be present, regardless of your belief about your client’s honesty and integrity.
- You do not have to look at all of your client’s internal controls and you are not always required to test the operating effectiveness of them. However, you are expected to at least look at the design of your client’s internal controls. You are also to evaluate them in order to determine whether they are being implemented, in appropriate places, and are being monitored.

Please keep the above concepts in mind as you are completing this study.

Your assignment

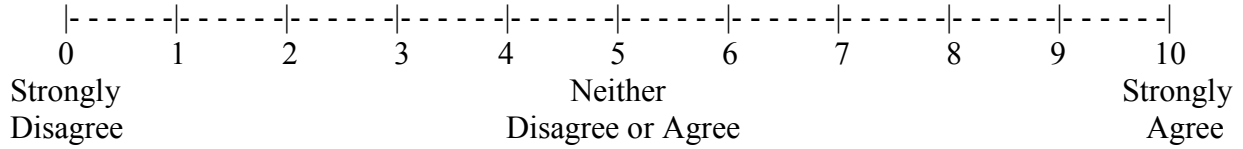
Your assignment as an auditor is to review your firm’s current client, Lakeview Lumber, Inc., and their operations. You are assigned to assist Karen Rohan. Karen is the “in-charge” auditor on the FY2008 Lakeview Lumber audit. She will provide you with details about Lakeview Lumber, Inc. in the following pages. After reviewing the client’s information, you will be asked to provide Karen with your assessment about Lakeview.

You should pay attention to all of the information, but your primary responsibility is to gather documentation to determine whether the company’s reported financial statements taken as a whole (including footnotes) are stated fairly, in all material respects, in conformity with Generally Accepted Accounting Principles (GAAP).

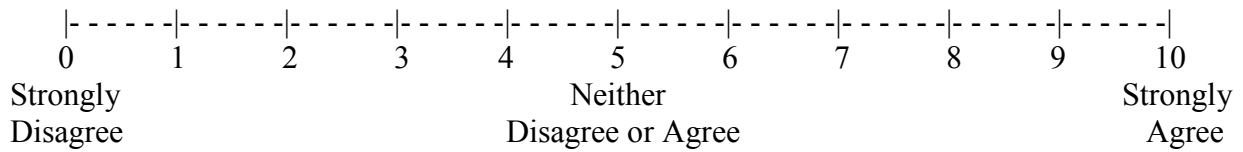
Please complete the following questions before you proceed to Part II of this study.

Based on your understanding of the role and objective of an auditor, please rank the extent of your agreement with the following statements on the scale below.

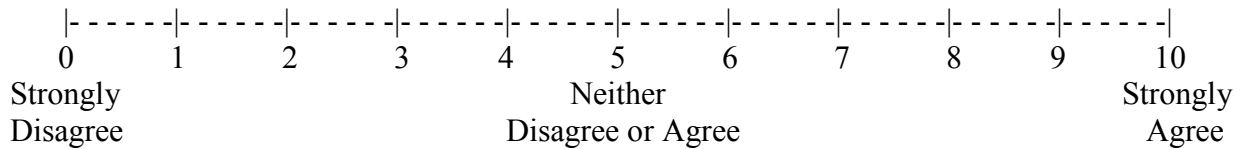
Q1: You do not work with a materiality level.



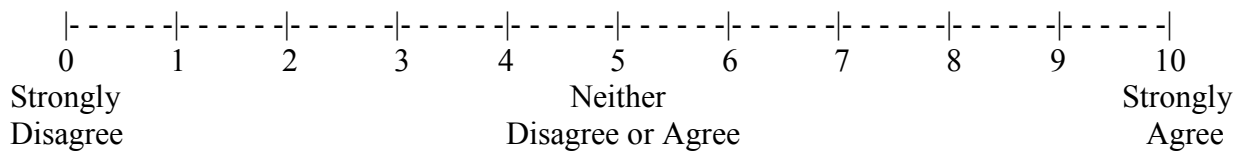
Q2: You do not normally rely on sampling.



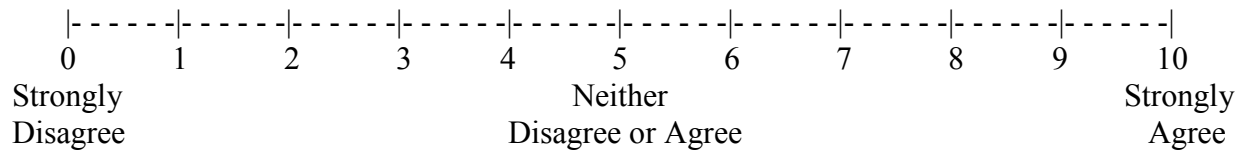
Q3: You would be concerned with minor discrepancies when evaluating your client's accounts.



Q4: You would not be overly concerned with any immaterial misstatements in your client's accounts.



Q5: You would be satisfied with the effectiveness of your client's internal controls if you are able to determine that they have been implemented and properly monitored.



Based on your understanding of the role and objective of an auditor, please answer the following question by circling the most appropriate answer.

Q6: Based on the training given to you by your firm, Becker & Pippen LLP, which of the following is more important to you in regard to accounting records?

- a. Determining whether the reported accounting transactions actually took place.
- b. Determining whether there is valid and proper documentation to support the recorded transactions.

Experiment Instrument – Low Fraud Risk Condition

Part II – (Envelope A)

Background Information on Lakeview Lumber

Lakeview Lumber, Inc. is located in the city of Lakeview, a metropolitan area of approximately 200,000 people. Lakeview Lumber sells between 30,000 and 35,000 different kinds of building materials, lawn and garden products, and home improvement supplies to retail customers, as well as to contractors and other building professionals. Retail customers are required to pay in cash or by a major credit card at the time of their purchase. However, the vast majority of contractors and building professionals has established credit accounts and are billed on a monthly basis. Lakeview Lumber's main competitors in the area are The Home Depot, Inc. and Eagle Hardware & Garden.

Your firm, Becker & Phippen LLP, has been the auditors for Lakeview Lumber since 1982. You are assigned to assist Karen Rohan, the “in-charge” auditor on the FY2008 Lakeview Lumber audit. Your assignment as an auditor is to determine whether Lakeview’s reported financial information was fairly presented.

Key Personnel

Lakeview Lumber, Inc.’s top management team consists of the following key executives. Based on your firm’s prior interaction with these key executives, you have some basic knowledge of their background.

John Mosher – Controller

- John started his career as an auditor with Becker & Phippen LLP. John was assigned to the audit of Lakeview Lumber each of the six years he worked for Becker & Phippen. He has been the Controller for Lakeview Lumber since 1995. John usually arrives at work with his old Ford pickup truck. He and his wife have recently been saving money to remodel their kitchen.

Terry James – Accounting Manager

- Terry has a B.A. in accounting and has been with Lakeview Lumber for four years. Prior to working for Lakeview Lumber, Terry was the night auditor for a small hotel. Terry has extensive and detailed knowledge in accounting as well as operational management. Terry has been advocating for more formality in controls and procedures. Terry suggested that this would allow the accounting department to better monitor its financial reporting process.

Managerial Compensation

Lakeview Lumber, Inc. compensates its key personnel primarily through a fixed salary schedule. In a recent board meeting, Lakeview’s board of directors approved the motion to award all key personnel a cash bonus at the end of each year, starting in FY2008. Each key personnel will receive a cash bonus based on their salary level and their years of service. The maximum cash bonus is 1% of the key personnel’s salary.

Lakeview Lumber's Accounting Environment

Based on your firm's prior year audits, Lakeview Lumber Inc. appeared to have no issue with its accounting systems. No material deficiencies related to the company's transactions were noted in prior audits. Lakeview Lumber, Inc. seemed to have a good control over its financial reporting process. Lakeview management assured your firm that Lakeview will continue to maintain the quality of its accounting systems.

The Lakeview Lumber's Audit

Karen, the current "in-charge" auditor is responsible for seeing that she completes the field work for the Lakeview Lumber as soon as possible. Audit hours were already over the time that had been budgeted for the job, and Karen believed that there was still a substantial amount of time needed to finish the audit, because several audit matters had not yet been resolved. Karen approached you with the following audit issues regarding Bad Debts Expense and Product Warranties Expense for FY2008. She would like you to review her analyses of these accounts and provide her with your recommendations.

Bad Debts Expense

Bad Debts Expense as a percentage of credit sales was approximately 4.8 percent for FY2008, whereas in the prior two years Bad Debts Expense as a percentage of credit sales was 5.0 percent for both FY2007 and FY2006. Credit sales for FY2008 were about \$2,600,000. Review and testing of the aged trail balance of Accounts Receivable indicated that the amount and percentage of accounts receivable in each aging category were comparable to prior years. The percentages used to estimate the uncollectible accounts for FY2008 were slightly lower in practically every aging category to prior year.

When Karen questioned Terry James, the Accounting Manager, about the decreased percentages, he stated that John Mosher, the Controller, had instructed him to use the lower percentages for FY2008. Karen subsequently discussed the matter with John, who informed Karen that he was expecting customers to pay more quickly in FY2009, due to a better than expected growth of the housing market in the area in which Lakeview Lumber does business.

Product Warranties Expense

Lakeview Lumber's Warranty Expense account for FY2008 was approximately \$119,000, representing a 6 percent **increase** from FY2007. Based on Karen's review, the audit had not disclosed any significant changes in Lakeview Lumber's product mix. Thus, Karen discussed the increase with Terry. Terry stated that the charge to Warranty Expense was "just an estimate provided by John." When Karen asked John about the increase in Warranty Expenses, John stated that the increase was due to the better than expected economic growth in the area. He explained that builders were more particular in a stronger economic climate and they tended to return wood and supplies that might be slightly flawed.

Karen then discussed product warranties with Adam Lester, the manager of the cabinets department, since that department seemed to experience the largest number of returns. Adam stated while he did not keep records of returns per se, he would fill out the appropriate paperwork and forward them to the accounting department. Adam said he did remember handling **more returns** during FY2008 than in FY2007. Karen subsequently asked Terry from

the accounting department to provide her with a complete list of returns for FY2008. Karen sampled 30 transactions throughout FY2008. All of the sampled transactions were supported by proper documentation.

Additional Analysis

In addition to the above information, Karen provided you with some preliminary analysis of both the Bad Debts Expense and the Product Warranties Expense accounts prepared by another audit staff member on the Lakeview audit.

The materiality level for the Lakeview Lumber Inc. audit has been set to approximately 1.0 percent of the company’s reported sales. The materiality level for FY2008 was \$52,020.

Bad Debts Expense:

	Amounts	Supporting Calculations
Bad Debts Expense as currently recorded (approximately 4.8% of FY2008 credit sales)	\$124,800	\$2,600,000 FY2008 credit sales x 4.8%
Bad Debts Expense (if applied the same percentage – 5.0% for both FY2007 and FY2006)	\$130,000	\$2,600,000 FY2008 credits sales x 5.0%
Potential understatement of Bad Debts Expense for FY2008	\$5,200	\$130,000 - \$124,800
Less: Income Taxes (@ 38%)	\$1,976	\$5,200 x 38%
Potential Decrease to currently recorded net income	\$3,224	\$5,200 - \$1,976

Comment 1: The current reported net income may have been overstated by \$3,224 due to the Bad Debts Expense account. However, this is below the materiality level of \$52,020.

Product Warranties Expense:

	Amounts	Supporting Calculations
Warranty Expense as currently recorded	\$119,000	
Warranty Expense (if applied the same percentage – 2.3% for FY2007)	\$119,646	(1) FY2007 warranty expense percentage = warranty expense / sales = 113,000 / 4,876,000 = 2.3%
		(2) FY2008 warranty expense = \$5,202,000 x 2.3%
Potential understatement of Warranty Expense for FY2008	\$646	\$119,646 - \$119,000
Less: Income Taxes (@ 38%)	\$245	\$646 x 38%
Potential Decrease to currently recorded net income	\$401	\$646 - \$245

Comment 2: The current reported net income may have been overstated by \$401 due to the Product Warranties Expense account. However, this is below the materiality level of \$52,020.

Comment 3: The combined effect of both the Bad Debts Expense and the Product Warranties Expense accounts may have overstated the Lakeview Lumber Inc.'s net income by \$3,625 (\$3,224 + \$401). However, the combined effect of these two accounts was still below the materiality level of \$52,020.

Lakeview Lumber's Financial Statements

Lakeview Lumber's Income Statements for the past three fiscal years are presented in Exhibit 1. Exhibit 2 includes the Statements of Retained Earnings for FY2006 through FY2008. The Balance Sheets for Lakeview Lumber for FY2008, FY2007, and FY2006 are shown in Exhibit 3.

EXHIBIT 1			
Lakeview Lumber, Inc.			
Income Statements			
(amounts in thousands, except per share data)			
	FY2008	FY2007	FY2006
	Unaudited	Audited	Audited
Sales	\$ 5,202	\$ 4,876	\$ 4,424
Cost of Sales	<u>3,451</u>	<u>3,359</u>	<u>3,101</u>
Gross Profit	\$ 1,751	\$ 1,517	\$ 1,323
Depreciation	184	174	169
Bad Debts Expense	124	125	118
Warranty Expense	120	113	117
Other Selling Expenses	<u>575</u>	<u>465</u>	<u>342</u>
Total Selling Expenses	\$ 1,003	\$ 877	\$ 746
General & Administrative Expenses	<u>235</u>	<u>224</u>	<u>215</u>
Total Expenses	\$ 1,238	\$ 1,101	\$ 961
Income Before Income Taxes			
Taxes	513	416	362
Income Taxes	<u>195</u>	<u>158</u>	<u>138</u>
Net Income	\$ <u>318</u>	\$ <u>258</u>	\$ <u>224</u>
Earnings per share	\$ 3.18	\$ 2.58	\$ 2.24

EXHIBIT 2	
Lakeview Lumber, Inc.	
Statements of Retained Earnings	
(amounts in thousands)	
Retained Earnings @ end of FY2005	\$ 1,735
FY2006 (Audited)	
Add: Net Income	224
Less: Dividends	<u>(100)</u>
Retained Earnings @ end of FY2006	<u>\$ 1,859</u>
FY20X7 (Audited)	
Add: Net Income	258
Less: Dividends	<u>(100)</u>
Retained Earnings @ end of FY2007	<u>\$ 2,017</u>
FY20X8 (Unaudited)	
Add: Net Income	315
Less: Dividends	<u>(100)</u>
Retained Earnings @ end of FY2008	<u>\$ 2,232</u>

EXHIBIT 3
Lakeview Lumber, Inc.
Balance Sheets
(amounts in thousands)

	<u>FY2008</u> Unaudited	<u>FY2007</u> Audited	<u>FY2006</u> Audited
Assets:			
Cash and Cash Equivalents	\$ 173	\$ 167	\$ 131
Accounts Receivable	327	325	267
Less: Allowance	(145)	(152)	(144)
Inventory	1,102	1,009	989
Other Current Assets	<u>89</u>	<u>94</u>	<u>139</u>
Total Current Assets	\$ 1,546	\$ 1,427	\$ 1,227
Property, Plant & Equipment	5,411	5,351	5,219
Less: Accumulated Depreciation	<u>(1,987)</u>	<u>(1,803)</u>	<u>(1,629)</u>
Total Assets	<u>\$ 4,970</u>	<u>\$ 4,991</u>	<u>\$ 4,972</u>
Liabilities:			
Accounts Payable	\$ 595	\$ 765	\$ 798
Estimated Liability for Warranties	137	109	115
Accrued Salaries and Wages	87	83	85
Income Taxes Payable	<u>19</u>	<u>17</u>	<u>15</u>
Total Current Liabilities	\$ 809	\$ 974	\$ 1,013
Long-term Debt	<u>300</u>	<u>400</u>	<u>500</u>
Total Liabilities	\$ 1,109	\$ 1,374	\$ 1,513
Stockholders' Equity:			
Retained Earnings	\$ 2,232	\$ 2,017	\$ 1,859
Common Stock, par value \$0.01 Authorized 500,000 shares; issued and outstanding—100,000 shares	<u>1,600</u>	<u>1,600</u>	<u>1,600</u>
Total Stockholders' Equity	<u>\$ 3,832</u>	<u>\$ 3,617</u>	<u>\$ 3,459</u>
Total Liabilities and Stockholders' Equity	<u>\$ 4,970</u>	<u>\$ 4,991</u>	<u>\$ 4,972</u>

End of Company Information



Before you proceed to the next page, please take a moment to review the following information.

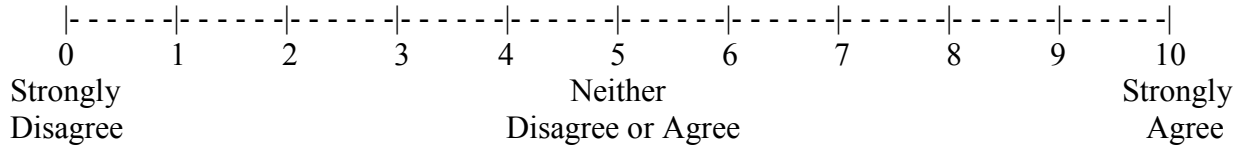
As an auditor YOU WOULD...

- work with a materiality level. Materiality is relevant to you because it serves as a guide to your evaluation of audit evidence
- not be concerned with minor discrepancies in any single accounts. You would only be concerned if these discrepancies are indicative of larger or pervasive problems.
- have to decide whether there is valid documentation to support the recorded transactions.
- not have to look at all of your client's internal controls and you are not always required to test the operating effectiveness of them. However, you are expected to at least look at the design of your client's internal controls. You are also to evaluate them in order to determine whether they are being implemented, in appropriate places, and are being monitored.

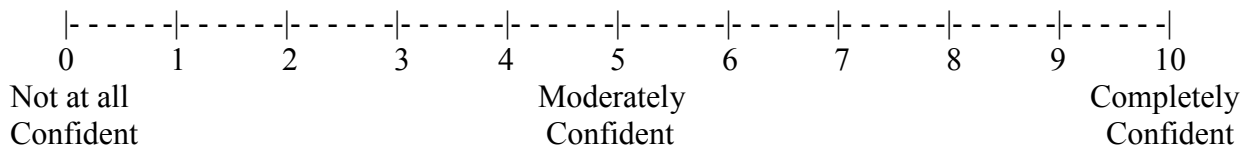
Now that you have finished reviewing the information pertaining to Lakeview Lumber, Inc., Karen would like to have you provide her with the following assessment:

Based on your evaluation of Lakeview, please rank the extent of your agreement with the following statement on the scale below.

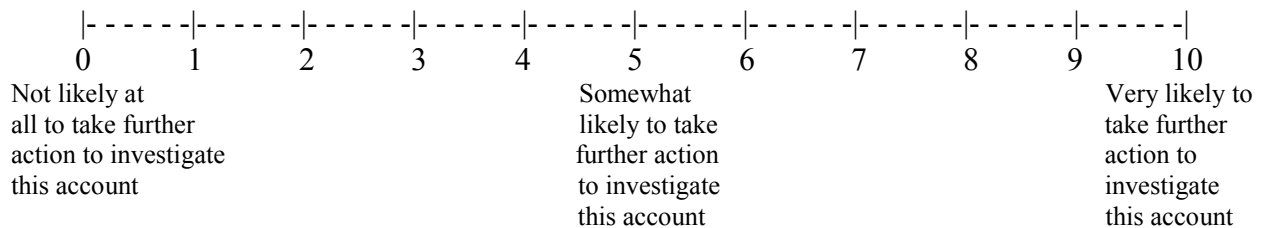
Q1a: The Lakeview **Bad Debt Expense account** was fairly presented. Place an “X” at the appropriate place on the scale below.



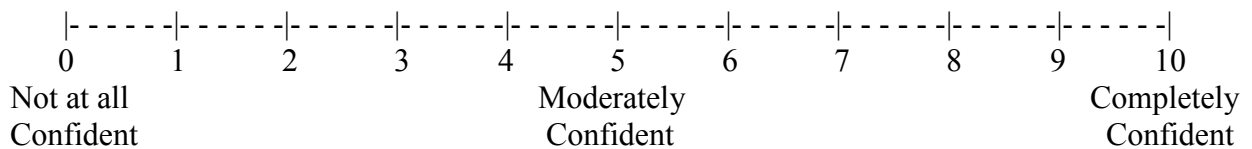
Q1b: How **confident** are you about your assessment that you have just made? Place an “X” at the appropriate place on the scale below.



Q2a: How likely would you do the following in regard to the Lakeview **Bad Debt Expense account**? Place an “X” at the appropriate place on the scale below.

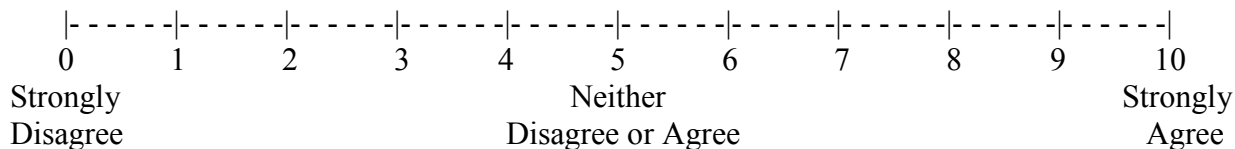


Q2b: How **confident** are you about your assessment that you have just made? Place an “X” at the appropriate place on the scale below.

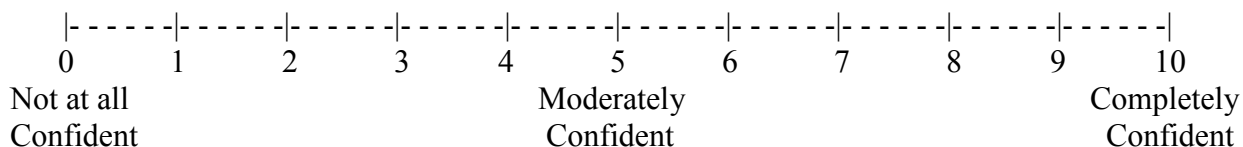


Based on your evaluation of Lakeview, please rank the extent of your agreement with the following statement on the scale below.

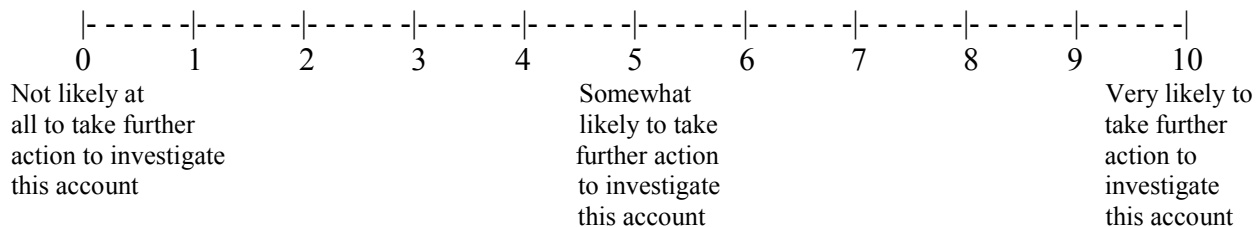
Q3a: The Lakeview Product Warranties Expense account was fairly presented. Place an “X” at the appropriate place on the scale below.



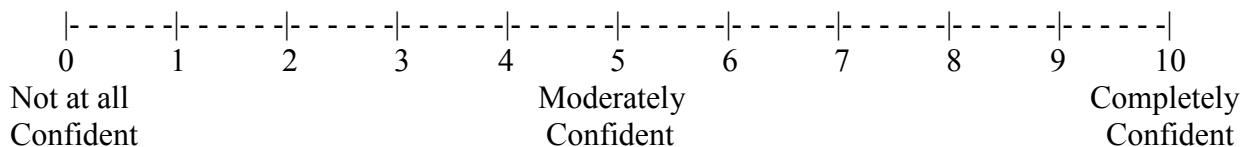
Q3b: How confident are you about your assessment that you have just made? Place an “X” at the appropriate place on the scale below.



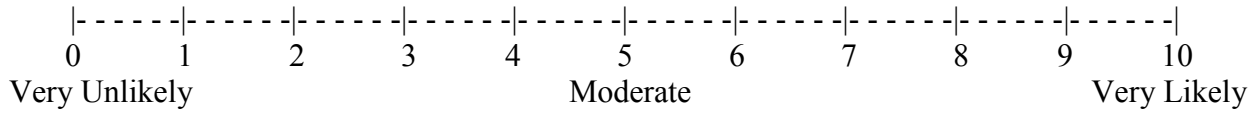
Q4a: How likely are you to do the following in regard to the Lakeview Product Warranties Expense account? Place an “X” at the appropriate place on the scale below.



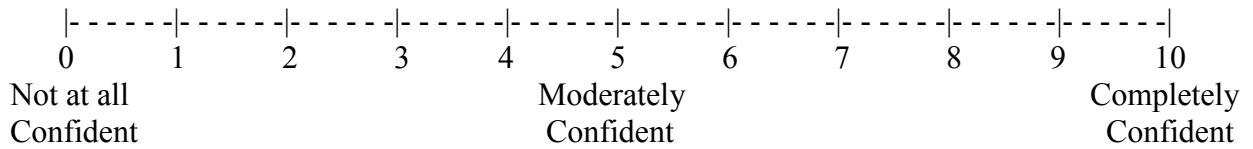
Q4b: How confident are you about your assessment that you have just made? Place an “X” at the appropriate place on the scale below.



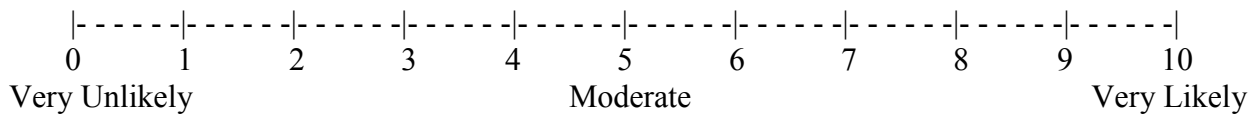
Q5a: Based on all the information you have reviewed about Lakeview Lumber Inc., how likely do you think fraud exists in Lakeview’s **Bad Debt Expense account**? Place an “X” at the appropriate place on the scale below.



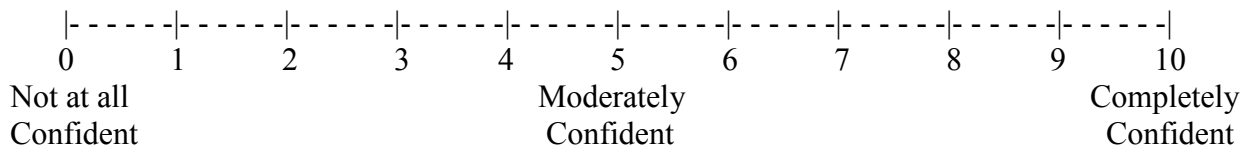
Q5b: How **confident** are you about your assessment that you have just made? Place an “X” at the appropriate place on the scale below.



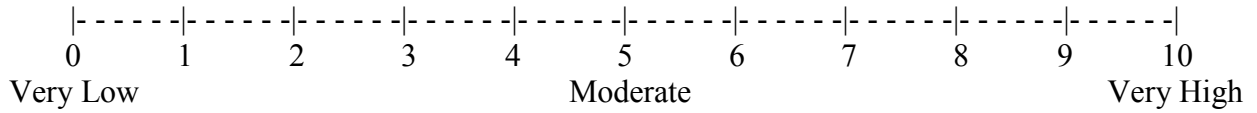
Q6a: Based on all the information you have reviewed about Lakeview Lumber Inc., how likely do you think fraud exists in Lakeview’s **Product Warranties Expense account**? Place an “X” at the appropriate place on the scale below.



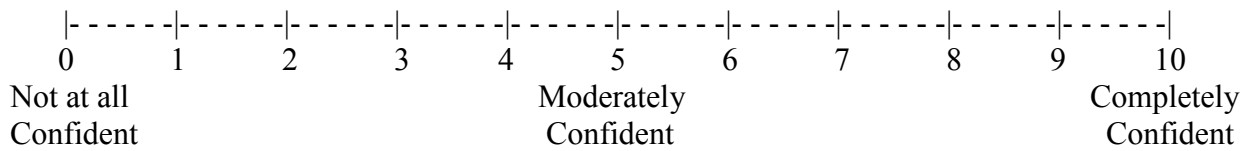
Q6b: How **confident** are you about your assessment that you have just made? Place an “X” at the appropriate place on the scale below.



Q7a: Based on all the information you have reviewed about Lakeview Lumber Inc., what is your assessment of the overall **fraud risk** for this client? Place an “X” at the appropriate place on the scale below.



Q7b: How **confident** are you about your assessment that you have just made? Place an “X” at the appropriate place on the scale below. Place an “X” at the appropriate place on the scale below.



Experiment Instrument – Distracter Task for all Conditions

Questions about You

The statements on this and the following page concern your personal reactions to a number of different situations. No two statements are exactly alike, so consider each statement carefully before answering. If a statement is TRUE or MOSTLY TRUE as applied to you, circle **T**. If a statement is FALSE or NOT USUALLY TRUE as applied to you, circle **F**.

It is important that you answer as frankly and as honestly as you can. Your answers will be kept in the strictest confidence.

- | | | | |
|-----|------------------------------------------------------------------------------------------------------|---|---|
| 1. | I find it hard to imitate the behavior of other people. | T | F |
| 2. | My behavior is usually an expression of my true inner feelings, attitudes, and beliefs. | T | F |
| 3. | At parties and social gatherings, I do <u>not</u> attempt to do or say things that others will like. | T | F |
| 4. | I can only argue for things that I already believe in. | T | F |
| 5. | I can make impromptu speeches - even on topics about which I have almost no information. | T | F |
| 6. | I guess I put on a show to impress or entertain people. | T | F |
| 7. | When I am uncertain how to act in a social situation, I look to the behavior of others for cues. | T | F |
| 8. | I would probably make a good actor. | T | F |
| 9. | I rarely need the advice of my friends to choose movies, books, or music. | T | F |
| 10. | I sometimes appear to others to be experiencing deeper emotions than I actually am. | T | F |
| 11. | I laugh more when I watch a comedy with others than when alone. | T | F |
| 12. | In a group of people I am rarely the center of attention. | T | F |
| 13. | In different situations with different people, I often act like very different persons. | T | F |

- | | | | |
|-----|-------------------------------------------------------------------------------------------------------|---|---|
| 14. | I am <u>not</u> particularly good at making other people like me. | T | F |
| 15. | Even if I am <u>not</u> enjoying myself, I often pretend to be having a good time. | T | F |
| 16. | I'm not always the person I appear to be. | T | F |
| 17. | I would <u>not</u> change my opinions in order to please someone else or win their favor. | T | F |
| 18. | I have considered being an entertainer. | T | F |
| 19. | In order to get along and be liked, I tend to be what people expect me to be rather than anyone else. | T | F |
| 20. | I have never been good at games like charades or improvisational acting. | T | F |
| 21. | I have trouble changing my behavior to suit different people and different situations. | T | F |
| 22. | At a party I let others keep the jokes and stories going. | T | F |
| 23. | I feel a bit awkward in company. | T | F |
| 24. | I can look anyone in the eye and tell a lie with a straight face – if for a good cause. | T | F |
| 25. | I may deceive people by being friendly when I really dislike them. | T | F |

<p>When you are finished, please put all materials back into <u>Envelope A</u>. Once you have secured the materials in <u>Envelope A</u>, you may open and proceed with the materials in <u>Envelope B</u>. Under no circumstances should you reopen <u>Envelope A</u> while you are completing the requirements in <u>Envelope B</u>.</p>

Experiment Instrument – Recall Task for all Conditions

Part III – (Envelope B)

In the space provided below please list all of the **important information** that you can remember about Lakeview Lumber Inc. and the FY2008 audit. Write down the information **in the order** that you remember it. Start a new line for each piece of information. There is also space on the next page. You do not need to use up all the space provided for you, but please try to remember as much as you can.

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____
13. _____
14. _____
15. _____
16. _____
17. _____
18. _____
19. _____
20. _____

Part IV – (Envelope B)

Please answer the following questions about Lakeview Lumber, Inc by circling **YES** if the item is in the case you have just read and by circling **NO** if the item is not in the case you have just read.

	Is the Item in the case you just read?	
	Yes	No
1. John Mosher, the Controller of Lakeview, was a former auditor of Lakeview.	Yes	No
2. Terry has a strong interest in advocating for more formality in controls so that Lakeview will be able to better monitor its financial reporting process.	Yes	No
3. Lakeview gives its management stock options as an incentive to meet earnings targets.	Yes	No
4. John Mosher, the Controller of Lakeview, is heavily in debt.	Yes	No
5. Adam Lester, the Manager of the Cabinets Department, did not keep detailed records receiving reports, but merely forwarded them to Terry James, the Accounting Manager.	Yes	No
6. Several matters had not been resolved in the current audit.	Yes	No
7. Karen Rohan, the “in-charge” auditor for the current year Lakeview audit, has already exceeded her audit time budget.	Yes	No
8. The discrepancy in the product warranties expense account was immaterial.	Yes	No
9. Lakeview has some minor issues with its accounting system.	Yes	No
10. Lakeview key personnel will receive a cash bonus this year based on their salary level and their years of service.	Yes	No
11. The majority of customers pay in cash.	Yes	No
12. Lakeview’s management has future plans to upgrade its accounting system.	Yes	No
13. The economic conditions are making account receivable collections less difficult.	Yes	No
14. The discrepancy in the bad debt expense account was immaterial.	Yes	No

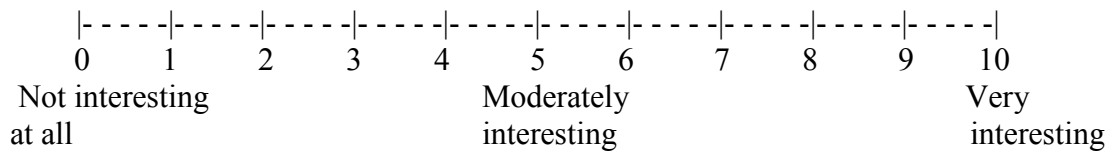
		Is the Item in the case you just read?	
		Yes	No
15.	John Mosher, the Controller of Lakeview, has a rather expensive lifestyle.	Yes	No
16.	Your firm, Becker & Pippen LLP, has been the auditor of Lakeview since 1982.	Yes	No
17.	Lakeview's prior years financial statements were fairly presented.	Yes	No
18.	Lakeview's management has been receiving substantial earning bonuses.	Yes	No
19.	The combined potential misstatements of other accounts exceeded the materiality level set forth by your firm, Becker & Pippen LLP.	Yes	No
20.	Lakeview has significant weaknesses in its accounting system.	Yes	No
21.	Lakeview's accounting controls may be susceptible to compromise and override.	Yes	No
22.	Lakeview's prior years financial statements were not fairly presented. However, Lakeview's management had taken appropriate actions to restate them.	Yes	No
23.	All audit samples were supported by proper documentation.	Yes	No
24.	John Mosher, the Controller, has a rather modest lifestyle.	Yes	No
25.	Lakeview gives its management stock options as an incentive to meet earnings targets.	Yes	No
26.	Lakeview has many highly complex transactions.	Yes	No
27.	Lakeview operates in a competitive market.	Yes	No
28.	Lakeview's EPS has been gradually increasing since the past several years.	Yes	No
29.	Terry James, Accounting Management, provided valid explanations in regard to the changes in accounting estimates used for the current year audit.	Yes	No
30.	There were no materiality discrepancies in any of the Lakeview's accounts.	Yes	No

Experiment Instrument – Post-Experimental Questionnaire for all Conditions

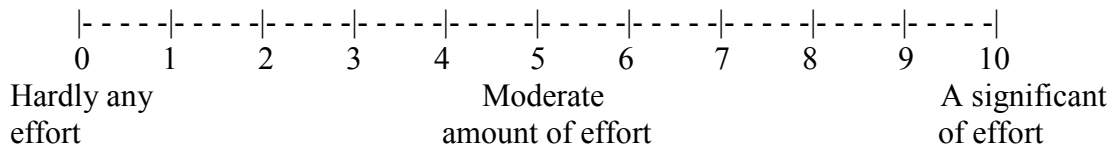
Part V – (Envelope B)

Please circle your answer or to fill in the blank to the following questions.

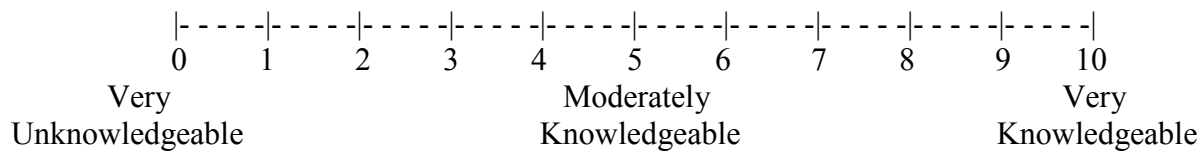
Q1. How interesting was this project?



Q2. How much effort did you put into completing this project?



Q3. How knowledgeable do you think you are with the material presented in this project?



Q4. What is your gender?

- g. Male.
- h. Female.

Q5. How old are you? _____

Q6. How many years of accounting related professional experience do you have? _____
years/months (ex: 1.5 years)

Q7. Did you intern in the accounting field?

- p. Yes – with a Big 4 public accounting firm.
- q. Yes – with a non-Big 4 public accounting firm.
- r. Yes - with a company in industry.
- s. Yes - other.
- t. No.

Q8. How many college credit hours have you completed? _____

Q9. What is your GPA? _____

Q10. What is your ethnic origin?

- p. Caucasian.
- q. African-American.
- r. Asian.
- s. Hispanic.
- t. Other (please specify)_____

Q11. What was your place of birth?

Q12. What is your major?

- v. BS-ACS
- w. MBA.
- x. MS-Auditing.
- y. MS-Tax.
- z. MS-Accounting Information System.
- aa. MS-Managerial.
- bb. Other (please specify)_____

Q13. Please provide any comments that you may have about this study in the space below.

You are done. Thank you for your participation!

Please put all materials back into **Envelope B**. When you are finished, please raise your hand. The instructor will pick up both **Envelopes A and B** from you.

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