The Effects of Supervisor Preferences and Group Engagement Oversight on Component Auditor Skepticism in a Group Audit Engagement

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ABSTRACT

The AICPA recently released new authoritative audit guidance related to group audits of nonpublic organizations which requires group engagement teams to be involved in the work of a component auditor, including certain minimum baseline requirements and the option for more extensive involvement at the group auditor's discretion. Accordingly, group audits create a scenario where auditors are under the direct oversight of a component audit supervisor, yet their work product is monitored and used by the group engagement team when expressing an opinion on the group financial statements. To my knowledge, prior accounting research has not explored the complexity of auditor decision making in a group audit scenario.

Drawing on theory from motivated reasoning, this study investigates how the level of group engagement team involvement in component audit work may influence auditor decision making when a component audit supervisor has expressed preferences for more or less professional skepticism during the component audit process. Prior research in non-group audit settings finds the preferences of audit supervisors can influence the skepticism exhibited by their subordinates. However, in a group audit setting I find that the effects of component supervisor preferences interact with the level of group engagement team involvement in component auditors' work to influence component auditors' budgeted audit hours and planned substantive audit procedures.

Results showed that during an accounts receivable audit planning task, auditors who faced an optimistic component supervisor recommended the use of more audit hours and suggested confirming a greater percentage of the accounts receivable balance when a group engagement team chose to be more actively involved in the component audit process than when the group engagement team chose only to review component audit work. However, there were no differences in budgeted audit hours or planned audit procedures when auditors faced a skeptical component supervisor, regardless of the level of group engagement team involvement. Thus, increased involvement of the group engagement team mitigated the influence of an optimistic component supervisor on auditor decision making, but did not significantly influence component auditor judgments when auditors faced a more conservative component supervisor.

Path analyses indicated this phenomenon was caused by auditors' sense of pressure to reach appropriate audit conclusions induced by the increased involvement of the group engagement team. These results suggest that the effects of supervisor preferences are complex within a group audit environment, such that the nature of instructions received from a group engagement team may mitigate the effects of supervisor preferences on component auditor decision making. This research has implications for audit practice as it relates to the implementation of the new group audit standard as well as for regulators who establish future auditing guidance.

DEDICATION

To my best friend and wife, Valerie Lauck. Thank you.

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CHAPTER I: INTRODUCTION

The Auditing Standards Board of the American Institute of Certified Public Accountants (AICPA) has released guidance (AU-C Section 600) that revises the requirements related to the audit of group financial statements of nonpublic entities (AICPA 2011).[1] A group audit represents the audit of financial statements that include financial information of two or more components. A component is a business activity or entity for which financial information is prepared that is included in the group financial statements (AICPA 2013). In this setting, a group engagement team is responsible for expressing an audit opinion on the group financial statements while other audit teams conduct audit procedures on component entities of the group based on the instructions of the group engagement team. Thus, the unique structure of a group audit entails component audit team members conducting audit procedures on part of a larger group audit engagement while working under the immediate direction of a component audit supervisor—with his or her own unique preferences and perspectives on client reporting practices.[2] Although, the revised standard requires the group engagement team to be involved in the work of component auditors, significant leeway is permitted in terms of the form of this oversight. This study examines how the nature of group engagement team oversight and component audit supervisor preferences affect component auditor professional skepticism in an accounting estimate evaluation task. Prior research has not examined the complexity of auditors' decision making in a group audit environment. As such, I seek to enhance understanding of how the group audit process may influence the judgments of component audit team members.

[1] Group audit engagement standards for public companies fall under AU Section 543, which preceded the AICPA's recent group audit standard (PCAOB 2014).

[2] The rank of the supervisor to whom a member of a component audit team directly reports may vary depending on the nature of the component audit work to be performed. Accordingly, I use the term "supervisor" throughout this manuscript except when referring to the actual experimental instrument where the participant is informed by a component audit manager of the preferences of a component audit partner.

Recently, concerns have been raised by regulators about the quality of work conducted in a group audit setting. Speaking in 2011, James Doty, Chairman of the PCAOB, noted that PCAOB inspectors had identified numerous deficiencies in the work of component auditors in multi-national engagements, both in instances where component audit work was conducted in the U.S. and abroad. Furthermore, he indicated that the deficiencies had gone undetected by the group auditor until they were uncovered by PCAOB inspectors (Doty 2011). Although the AICPA's revised standard for nonpublic group audits outline specific steps that must be performed by the group engagement team to determine the appropriateness of audit work conducted at the component level, it also allows significant leeway in the involvement of the group engagement team in the work of component auditors. As such, group audit situational factors such as component supervisor preferences and the extent of engagement oversight exercised by the group engagement team are important constructs that may influence the quality of component auditors' work.

In a non-group audit setting, extensive research has examined the effects of supervisor preferences on auditor judgment. This research has found that auditors tend to adjust their judgments toward their supervisor's known preferences (Wilks 2002; Turner 2001; Peecher et al. 2010; Carpenter and Reimers 2013). As such, auditors tend to take more (less) conservative positions depending on the skeptical (optimistic) views of their supervisors. Psychology research in motivated reasoning indicates decision makers may possess accuracy goals to reach a correct conclusion, or directional goals to reach a desired conclusion, and that accuracy goals tend to induce unbiased decision making, while directional goals tend to induce biased decision making which allows decision makers to justify their conclusions (Kunda 1990). Peecher et al. (2010) note that supervisor preferences are the result of directional goals which are often the

result of unconscious decisions. In a group audit setting, component audit supervisors may unintentionally pass directional goals about their tolerance for client reporting practices to other members of the component audit team. This environment presents a scenario where the preferences of an immediate supervisor might influence auditor decision making which, in turn, may affect the audited group financial statements. However, it is unclear how component supervisor preferences might affect auditor decision making in a group audit setting in light of the fact that work is conducted at the component level for the completion of a group-wide engagement and this work is monitored by the group engagement team, with varying degrees of oversight.

Specifically, the oversight of component auditors and the involvement of the group engagement team in their audit work may vary in terms of level and form.[3] For example, the group engagement team is required to take part in the risk assessment process of certain component audits and this involvement may take the form of baseline requirements including the review of work performed by component audit team members, or may consist of the group engagement team making specific inquiries of the component audit team about aspects of the component audit, depending on the discretion of the group engagement team (AICPA 2013). Accordingly, the group engagement team must take part in aspects of the work of component audit teams but can choose to take a more or less active role in the component audit process. As such, the level of group engagement oversight selected by the group engagement team may influence the effects of supervisor preferences on component auditor decision making.

This study examines how the level of group engagement team involvement in the work of a component auditor influences the effects of supervisor preferences on component auditor

[3] Discussions with Big 4 audit managers with prior group audit experience confirm the diversity in level of oversight provided by group engagement teams to component engagement teams in practice.

professional skepticism and audit judgments. Specifically, I examine how the known preferences of an audit supervisor (i.e. optimistic or skeptical) may differentially influence auditor judgments in the presence of a minimum level of involvement by the group engagement team (i.e. review of audit documentation), or a more active oversight role in the component auditor's work (i.e. detailed risk documentation instructions).

The theoretical underpinnings of this study are grounded in motivated reasoning theory which suggests that there are two paths by which decision making may be influenced. Directional goals facilitate the biased processing of information which allows decision makers to justify their support for a particular conclusion, while accuracy goals lead individuals to exert increased cognitive effort which leads to deeper and more complex processing of information and less biased decision making (Kunda 1990). Moreover, individuals increase their cognitive effort when they face an audience with unknown views, a desire for accuracy, and an interest in the processes used to make a decision (Lerner and Tetlock 1999). Arguably, a group engagement team represents such an audience to component auditors, in that the group engagement team will review and use the work completed by component audit team members. Thus, this study investigates how the cognitive effort exerted by component auditors (manipulated through the level of documentation instruction provided to the component auditor by the group engagement team) interacts with the directional goals of component auditors (manipulated through the preferences of a component audit supervisor for more or less skeptical analysis of audit evidence), to influence the decision making process of component audit team members.

In a group auditing context, it is not clear, prima facie, whether the previously documented influence of supervisor preferences on auditor decision making will persist when

component audit team members are aware that, at a minimum, their work will be reviewed by members of the group engagement team. However, if the group engagement team chooses to merely review the documentation completed by the component audit team, this minimal involvement of the group engagement team may not be sufficient to alter the effects of supervisor preferences. This notion is supported by the unconscious influence of directional goals (such as inherited preferences) on the decision making process which cause decision makers to engage in biased information searches and analysis, but not outright adoption of the exact views expressed by another party (Kunda 1990). Accordingly, when the group engagement team chooses to review component audit work, component auditors may inherit the directional goals of their supervisors which may lead to biased analysis of audit evidence. Specifically, component auditors who face a skeptical supervisor will likely engage in biased information analysis and reach conclusions that are consistent with the conservative preferences of their supervisor. Conversely, component auditors who face an optimistic supervisor also will engage in biased information analysis and reach conclusions that are consistent with the relatively more optimistic preferences of their supervisor.

However, if the group engagement team chooses to be relatively more involved in the work of the component auditor by providing detailed risk documentation instructions to the component engagement team, the salience of the group engagement team may induce component auditors to experience increased pressure to exert cognitive effort in order to reach appropriate audit judgments. Specifically, motivated reasoning theory suggests decision makers consider the amount of effort they must invest to reach accurate outcomes and expend increased levels of cognitive effort as the perceived need for accuracy increases (Kunda 1990). Accordingly, as the perceived pressure to reach appropriate audit judgments by exerting increased cognitive effort

increases, the decision making bias associated with directional goals inherited from a component audit supervisor should decrease. Indeed, when accuracy goals and directional goals are both present, evidence suggests decision makers may engage in more thorough evaluations of available evidence similar to the effects noted in the presence of accuracy goals alone (Kunda 1990).

Although component auditors who face a more skeptical supervisor will likely inherit directional goals to reach more conservative judgments, it is unlikely that any additional cognitive effort induced by the involvement of the group engagement team will significantly influence these auditors' conclusions. This is due to the fact that professional standards, audit firm policies, and auditor training generally support heightened levels of professional skepticism throughout the audit process (Nelson 2009; Hurtt et al. 2013). As such, component auditors with accuracy goals are likely to reach the same conservative conclusions as auditors who are motivated by directional goals for skepticism. Conversely, while component auditors who face an optimistic supervisor likely engage in biased information analysis when the group engagement team is minimally involved in their work, motivated reasoning theory indicates these auditors will be less likely to reach optimistic conclusions if the increased involvement of the group engagement team induces them to exert increased cognitive effort.

Given the nature of directional goals and accuracy motives, I specifically predict that when component auditors face a skeptical supervisor, the level of group engagement team involvement (i.e. reviewing the risk assessment documentation prepared by the component engagement team versus providing detailed risk documentation instructions to the component engagement team), will not significantly influence component auditors' budgeted audit hours or planned procedures. However, when component auditors face an optimistic supervisor, I predict

they will exhibit less skepticism when the group engagement team chooses to review the work of the component auditor than when the group engagement team chooses to be actively involved in the component audit process.

This study employed a 2 (supervisor preference) x 2 (level of group engagement team involvement) design utilizing an experimental instrument where participants were asked to assume the role of an auditor working on the accounts receivable area of a component entity as part of a group audit engagement. Participants learned either that the partner in charge of the component engagement tends to prefer more skeptical or more optimistic analysis of clients' accounting estimates before they reviewed information about the component entity's accounts receivable and allowance for doubtful accounts. Participants also received information indicating that the group engagement team would either only be reviewing the risk assessment documentation completed at the component level, or that the group engagement team had provided detailed risk documentation instructions and planned to be actively involved in the component audit process. In both group engagement team involvement conditions, participants were informed that the group engagement team would review the auditor's documentation before an upcoming planning meeting with both engagement teams. Finally, participants documented their understanding of the accounts receivable audit area and responded to dependent variable questions indicating the number of hours they thought should be budgeted for the accounts receivable area compared to the prior year (0 = much fewer hours than last year, 50 = the same number of hours as last year, and 100 = much more hours than last year), the percent of total accounts receivable they suggested confirming (0 = none, 50 = half, and 100 = all), and their assessment of the likelihood that the unaudited allowance for doubtful accounts balance was materially misstated (0 = extremely unlikely and 100 = extremely likely).

Results indicated auditors budgeted more audit hours and recommend the use of more substantive audit procedures when the group engagement team chose to be more actively involved in the component audit process (i.e. providing detailed risk documentation instructions) than when the group engagement team chose the minimum level of involvement in component auditor work (i.e. reviewing documentation prepared by the component engagement team). Additionally, results indicated an interactive relationship between component supervisor preferences and group engagement team involvement. Group engagement team involvement did not influence auditors' planned audit effort or audit procedures when component auditors faced a skeptical component supervisor, regardless of whether the group engagement team chose to be more involved in the component audit process or chose only to review the work completed by component auditors. However, auditors who faced an optimistic component supervisor budgeted significantly more hours and recommend significantly more substantive procedures when the group engagement team chose to be more involved in the component audit process than when they chose to only review the work completed by component auditors.

Path analyses indicated that higher auditor assessments of group engagement team involvement induced auditors to experience more pressure to make appropriate audit judgments, which in turn caused auditors to budget more audit hours and perform more substantive audit test work. However, supervisor preferences did not significantly influence the amount of pressure auditors experienced to reach appropriate audit conclusions. Further analysis indicated these findings are robust to alternative explanations including the amount of information documented by auditors across experimental conditions, risk signaling from the involvement of the group engagement team, or inappropriate auditor perceptions of the structure of the group audit engagement or their role within that structure.

This study contributes to audit research by examining the effects of group engagement team oversight of the component audit process on component auditor decision making, hitherto an unexplored topic in auditing literature. Additionally, this research provides insight into how the AICPA's group audit guidance may influence auditor decision making in practice. The results also suggest that firm policies and procedures might be subordinated to the preferences of an individual audit supervisor unless audit firms or group engagement teams are sufficiently involved in the work conducted at the component audit level. These findings reflect the risks associated with the so-called "tone from the middle" (SAI Global 2013) or "mood in the middle" (CAQ 2010) associated with individual engagement supervisors who oversee the work of other auditors in public accounting settings. This middle tone refers to the tone adopted and promoted by middle managers which can either accentuate or undermine the values and initiatives communicated to employees from the top of an organization (SAI Global 2013). The results of this study provide evidence of conditions under which undesirable effects associated with the middle tone may be reduced.

The findings of this research identify specific strategies audit firms or group engagement teams may employ to increase audit effectiveness in instances when component auditors face optimistic supervisors, without decreasing audit efficiency when component supervisors are sufficiently skeptical. Specifically, results suggest that a group engagement team can effectively mitigate the biasing influence of component auditor directional goals by increasing component auditors' perception of the level of group engagement team involvement in component audit work. Moreover, while increased group engagement team involvement significantly increases component auditors' planned audit effort when they face an optimistic supervisor, there does not appear to be a significant loss of component audit efficiency when auditors face a more skeptical

component supervisor. Collectively, these findings provide audit firms and group engagement teams with actionable strategies that may produce more standardized, skeptical, auditor judgments across firm offices and audit engagements.

CHAPTER II: BACKGROUND, LITERATURE REVIEW, AND HYPOTHESES

2.1 Group Audits

The revised pronouncement of the Auditing Standards Board related to audits of private entity group financial statements broadened the scope of what constituted a group audit engagement, potentially requiring group audit considerations even for engagements conducted by separate audit teams within the same firm and office (Westervelt 2014).[4] Specifically, the AICPA (2013) defines a group audit as: "…the audit of financial statements that include the financial information of more than one component (group financial statements)…[Where] a component is an entity or business activity for which group or component management prepares financial information that is required to be included in the group financial statements….The concept of group financial statements is broader than consolidated or combined financial statements because it encompasses business activities in addition to separate entities. Additionally, this standard applies in all audits of group financial statements regardless of whether different auditor firms are involved in the audit."

The standard formalizes the responsibilities of the group engagement team—who is responsible for issuing the audit opinion on the group financial statements—including the team's responsibility for establishing group and component materiality, communications between the group engagement team and the component auditors, and determining the appropriate level of the group engagement team's involvement in the work of the component auditor (AICPA 2013). The group engagement team is required to identify components that constitute significant components because of their financial significance. For these significant components, the standard requires that an audit of the component's financial information be performed, modified

[4] The Public Company Accounting Oversight Board standards related to the use of work performed by other auditors is based on AU Section 543, which preceded the AICPA's revised group audit standard.

as necessary based on the needs of the group engagement team. The requirements for the group engagement team with respect to components may vary depending on the structure of the group audit engagement. For example, the group engagement partner may choose to take responsibility for the work of a component auditor, thus making the group engagement team responsible for determining the type of audit work to be performed during the component audit process. In this case, the group engagement team is responsible for communicating to the component auditor the audit work to be performed and the amount of component materiality to be used during the audit, as well as the communication requested in return from the component auditor (AICPA 2011).

Implementation guidance issued by the AICPA indicates that the group engagement team should participate in the risk assessment of significant component engagements by discussing with the component auditors significant business activities of the component, discussing with the component auditors risks of material misstatement of the component's financial information, and reviewing documentation prepared by the component auditors related to identified risks. Additionally, based on the group engagement team's understanding of the component auditor, the group engagement team's involvement in a component auditor's work may include reviewing documentation prepared by the component audit team, or requesting that the component audit team reply to specific questions about the component entity (AICPA 2013). In summary, despite the requirement for the group engagement team's involvement in the work to be performed by component auditors, the standard allows for latitude in the scope of audit procedures to be performed by the component auditor based on the needs of the group engagement team (Thomas and Wedemeyer 2013). Moreover, the standard allows the group engagement team significant leeway in both the type of guidance communicated to the component auditor as well as their level of oversight of the work of a component audit team.

In practice, the structure of group audits conducted by a single firm frequently consist of both an audit partner and staff members constituting the group engagement team and other audit partners and their subordinates constituting component audit teams. Thus, an environment exists where group engagement oversight is exercised by the group engagement team, yet component audit supervisors—with their own preferences and motives—are responsible for the day-to-day direction and management of the component audit engagement. Accordingly, component auditors find themselves in a unique environment where they work under the immediate oversight of a component partner or manager who will likely complete the auditor's performance evaluation at the end of the component engagement, yet their work product is ultimately used by a different audit team and engagement partner, with whom the component auditor might have only limited (if any) personal contact. Moreover, the permitted flexibility in oversight of the group engagement team produces an environment where component audit team members may receive instruction and guidance from multiple sources with multiple engagement management styles.

As the group engagement team exercises increased engagement oversight, this intervention in the work of the component auditor may change the way component auditors gather, interpret, and evaluate audit evidence, thus changing the perceived pressure auditors experience to make appropriate judgments and reach accurate conclusions. Therefore, it is important to evaluate the conflicting motivations auditors may encounter in a group audit scenario. In order to more fully understand the relationship between component supervisor preferences and the level of oversight exercised by the group engagement team, the psychological properties of motivated reasoning need to be explored.

2.2 Motivated Reasoning

Motivated reasoning is a psychological phenomenon whereby people can be motivated to make accurate decisions (accuracy goals), motivated to reach a certain conclusion (directional goals), or motivated by both types of goals simultaneously. When people possess directional goals, they attempt to use rational decision processes and develop justifications for their desired outcomes that would be persuasive to an outside observer and to accomplish this end, people engage in a biased review of prior knowledge which only accesses a subset of available information. However, when people are motivated by accuracy goals, they are induced to exert increased cognitive effort in order to reach appropriate conclusions (Kunda 1990). Furthermore, evidence suggests that accuracy goals and directional goals do not operate in a mutually exclusive manner. For example, Jollineau et al. (2014) suggest directional goals and accuracy goals frequently coexist and that the relative balance of these goals may influence decision making processes. Bonner (2008, 55) describes motivated reasoning as an intermediate process, where different motivated states remain flexible and may be induced by factors common in accounting scenarios such as monetary rewards, reputational concerns, and accountability. Accordingly, these factors appropriately describes the conditions present in many accounting settings, including the group audit environment where auditors perform audit procedures and prepare audit documentation that is reviewed (or even directed) by the group engagement team.

The mechanism through which accuracy goals induce unbiased information processing and mitigate the influence of directional goals appears to be the level of cognitive effort exerted by decision makers. Kunda (1990) indicates decision makers with accuracy motivations use more mental effort and more carefully consider information that is relevant to the decision process. Moreover, Bonner (2008, 55) notes accuracy motivated decision makers exert more

cognitive effort when searching available information and while assessing their understanding of this evidence. Accordingly, cognitive effort, pressure to reach appropriate conclusions, and critical thinking induce decision makers to engage in less biased information analysis and may even mitigate the bias caused by directional goals.

To that end, research in accountability by Lerner and Tetlock (1999, 259) indicate "Self-critical and effortful thinking is most likely to be activated when decision makers learn prior to forming any opinions that they will be accountable to an audience (a) whose views are unknown, (b) who is interested in accuracy, (c) who is interested in processes rather than specific outcomes, (d) who is reasonably well informed, and (e) who has a legitimate reason for inquiring into the reasons behind [decision makers'] judgments." Thus, on one hand, knowing the views or opinions of a supervisor may cause auditors to inherit the directional goals of their superiors, which may lead to biased audit judgments (Peecher et al. 2010). While on the other hand, different features of the group audit environment may simultaneously induce auditors to exert increased cognitive effort, mitigating the effects of directional goals.

Consistent with the mechanisms of effortful thinking described above (Lerner and Tetlock 1999), a group engagement team represents an audience who has a legitimate stake in the component audit process, is appropriately informed about the nature of the component audit engagement, and is concerned with the accurate completion of component audit procedures. Moreover, from the perspective of a component auditor, a group engagement team represents an audience with unknown views relative to the preferences of a component engagement supervisor who oversees the day-to-day operations of the engagement. Finally, the concept of evaluating decision making processes versus outcomes also appears to apply to the role of a group engagement team who needs to ensure that not only appropriate decisions were made by

component auditors, but also that the methodologies used to make those decisions were appropriate. Collectively, the group audit environment represents a scenario where the psychological attributes of directional goals as well as auditor cognitive effort may have implications for group-wide audit outcomes and quality. Specifically, these attributes may explain how supervisor preferences and the level of engagement oversight exercised by the group engagement team might interactively combine to influence component auditor skepticism during a group audit engagement.

2.3 Supervisor Preferences

Auditing research on superior preferences has been conducted using different scenarios including audit firm instructions, reviewer preferences, and engagement partner preferences with results documenting the significant influence that supervisors have on the audit decision making process.[5] To date, this research has focused on non-group audit settings. Peecher (1996) was one of the first to examine how the preferences of a party to whom an auditor must justify his or her work influenced auditor decision making. In his study, auditors in an experiment were provided information about the preferences of their firm indicating that the firm was concerned that auditors were either not exercising enough skepticism, were making judgments without evaluating all evidence, or were unjustifiably pursuing costly investigations of audit details that resulted in inefficiencies. Results showed that auditors who were told not to pursue costly investigations of audit details made significantly higher assessments of the likelihood that the client's explanations for an audit issue were correct than auditors in the other two conditions when client integrity was high (Peecher 1996). Turner (2001) found that auditors facing

[5] Related research has also examined the effects of client preference on auditor acceptance of accounting policies (Kadous et al. 2003) and tax preparer acceptance of client preferred positions (Cloyd and Spilker 1999; Kadous et al. 2008). Results of these studies generally support the theory that client preferences influence auditor and tax preparer decision making toward the preferred views of the client.

supervisors with efficiency preferences examined fewer items of audit evidence and conducted searches for information supporting client explanations than did auditors facing reviewers with skepticism preferences or unknown preferences. Consistent with previous research, she finds that auditors who face a reviewer with unknown preferences appear to approach audit tasks as if the reviewer had a skepticism preference. Finally, Wilks (2002) found that managers who learned the views of a partner before making their own evaluations of audit evidence generated assessments that were more consistent with views expressed by the partner than did managers who learned the views of the partner after evaluating the evidence. Collectively, these studies show that auditors are susceptible to decision bias induced by knowledge of their superiors' audit preferences.

The effects of supervisor preferences on auditor judgment appear to not only be persistent but also pervasive throughout the audit review process. Peecher et al. (2010) demonstrate that a supervisor's intervention in the audit decision process of a subordinate not only influences the subordinate's judgments toward the preferences of their superior, but also influences the review process judgments of the supervisor themselves. These results are robust to controls for superior preferences and the effects of subordinate decision inputs. Thus, superior preferences have the potential to affect even final audit decisions through an iterative biasing phenomenon during the review process.

The impact of superior preferences on auditor judgment is likely the result of motivated reasoning (Piercey 2009), when there is sufficient ambiguity in the appropriate solution to a given audit task, and auditors possess directional goals to reach a particular conclusion. Indeed, prior research has shown that directional goals influence subordinate decision making in

ambiguous audit tasks whereby the directional goals of the superior are inherited by the subordinate auditor, often as a result of unconscious processes (Peecher et al. 2010).

In a group audit scenario, if a component audit supervisor has preferences which induce directional goals in auditor subordinates that are inconsistent with those of the audit firm or the group engagement team, the potential exists for the audit judgments made by auditors at the component level to be biased toward an undesirable outcome. Specifically, a component audit supervisor who places more or less emphasis on optimism or skepticism toward client proposed accounting treatments or accounting estimates may have an impact on subordinate auditor judgments that is inconsistent with the desired level of professional skepticism that the group engagement team or firm wishes to maintain across the group audit engagement. This is potentially problematic because lack of professional skepticism in the audit process has been an issue of concern for both audit firms and regulatory agencies such as the PCAOB (PCAOB 2012). Furthermore, supervisor preferences have been shown to have a powerful impact on subordinate incentives and their motivation to exhibit skepticism, or a lack thereof (Hurtt et al. 2013).

However, although the influence of supervisor preference on auditor skepticism has been demonstrated in non-group audit settings, it is an open empirical question if this phenomenon will persist in a group audit engagement. For example, Peecher et al. (2010) note that the effects of directional goals on decision making may not be the result of a conscious process. Indeed, the effects of directional goals on decision making appear to induce a biased evidence search process, and not the outright acceptance of another's desired position (Kunda 1990). Additionally, the revised group audit standard requires the active involvement of the group engagement team in the work of component auditors so it is unclear whether or how the

previously documented effects of supervisor preferences on auditor judgment will persist in a group audit engagement where a group engagement team is required to have active communication with the component engagement team and may take a more active role in the component audit process. Accordingly, the level or type of group engagement team involvement in a component auditor's work may increase the pressure auditors experience to make appropriate audit judgments for the sake of the group audit process, which may affect the previously documented influence of supervisor preferences to varying degrees. Thus, if the previously documented effects of supervisor preferences persist in a group audit setting, the effects of these preferences on auditor decision making may behave differentially depending on the level of oversight exercised by the group engagement team.

2.4 Oversight by the Group Engagement Team

AU-C Section 600 specifically increases the communication requirements between group auditors and component engagement teams as well as the requirements related to the group engagement team's understanding of group-wide material misstatement risks (AICPA 2013). Thus, the current group audit environment is dynamic in that the group engagement team is required to be involved in the work of the component audit team, at least to some degree. Accordingly, the extent of engagement oversight exercised by the group engagement team warrants further discussion given the discretion allowed the group engagement team by existing auditing standards. In practice, the audit risk assessment of a significant component affords the group engagement team two broad options which they may pursue related to their involvement in the work conducted by the component auditor. Specifically, the group engagement team may choose to either review component audit work (e.g. request that documentation be prepared or review existing documentation prepared by component auditors), or perform more active

involvement in the component auditor's work (e.g. make specific inquiries about the engagement or the reporting environment at the component entity) (AICPA 2013). Existing theory from motivated reasoning research indicates that the type of oversight chosen by the group engagement team may interact with the preferences of the component audit supervisor in the decision making process of component auditors.

2.4.1 Review of the Component Auditor's Work

In the course of a component audit engagement, the group engagement team may choose to review the documentation and work completed by the component auditor as it relates to the risk assessment process (ACIPA 2013). The knowledge of this review places component audit team members responsible for this documentation in a situation where the auditor reports directly to his or her component audit supervisor while preparing audit documentation that will be used by a third party, the group engagement team. Accordingly, both directional goals and incentives to exert increased cognitive effort may exist together in a group auditing scenario. However, knowledge of an impending review by the group engagement team may be insufficient to significantly influence the effects of component auditor directional goals. Specifically, directional goals are difficult to overcome given their subconscious nature and increased cognitive effort is usually required to mitigate this decision bias. Consequently, the mere knowledge that audit work will be reviewed by a group engagement team may not be sufficient to produce the effort necessary to mitigate the effects of motivations induced by directional goals. It seems, therefore, unlikely that knowledge of the upcoming group engagement team review would be sufficient to mitigate the effects of any directional goals an auditor may have inherited from his or her supervisor.

2.4.2 Active Involvement in the Component Auditor's Work

Conversely, when the group engagement team believes it is necessary to take proactive involvement in the work of the component auditor, their oversight may take the form of specific inquiries about the component audit engagement made of the component auditor (AICPA 2013). In a non-group audit setting, DeZoort et al. (2006) show that the type of documentation requested of auditors and the level of review of their work resulted in more or less conservative materiality assessments. Specifically, they show that when auditors were required to justify their materiality assessments they made lower (more conservative) assessments than auditors who were only told that their assessments would be reviewed. However, it is unknown if these results will hold in a group audit scenario when component auditors hold directional goals inherited by knowledge of the preferences of a component supervisor. Thus, it is not clear if active intervention on the part of the group engagement team, by providing more detailed instructions to component auditors, will influence component auditor decision making.

The effects of the group engagement team's involvement in the risk assessments of component auditors will likely depend on how this oversight effects cognitive effort exerted by component auditors during the decision making process. As noted, decision makers engage in more effortful and self-critical thinking when the views of their audience are unknown, when their audience desires accuracy, and when their audience is more concerned about the process used to reach a decision than the outcome itself (Lerner and Tetlock, 1999). In a group audit setting, the group engagement team meets these criteria in that their concern is for accurate audit judgments, and their specific views about engagement management practices and auditor conservatism are likely unknown to component auditors. Since the group engagement team is responsible for reviewing and synthesizing audit evidence in order to express their opinion on the

group financial statements, they likely appear to component auditors to be more concerned with the process used to collect and evaluate evidence than the specific conclusions reached by component audit team members.

Research in non-group auditing settings confirms auditors exert more effort as the level of an anonymous reviewer's involvement in their work increases (DeZoort et al. 2006). While Kim and Trotman (2015) found auditors who are asked to justify the appropriateness of their decision process exhibited more professional skepticism than auditors who were asked to justify their ultimate conclusions. Thus, to the extent involvement of the group engagement team induces component auditors to exert more cognitive effort, they may exercise more careful and less biased decision making. However, this increased effort has to be sufficient to mitigate the influence of directional goals by highlighting the potentially undesirable views of component audit supervisors.

Prior research indicates increased cognitive effort appears to be a robust debiasing mechanism that induces better decision making processes. For example, Jollineau et al. (2014) suggest the relative weight of accuracy goals may counteract the biased evaluation of information caused by directional goals. More specifically, Kunda (1990, 491) notes that "…[when] both accuracy goals and directional goals are aroused, there is considerable evidence that such a combination leads to more detailed and thorough processing of goal-related information not unlike that obtained when only accuracy goals are present. This deeper processing is capable of uncovering information that clashes with directional goals, and such information is not ignored." Accordingly, group engagement team oversight of the work of the component audit team in the form of detailed risk documentation instructions will likely induce increased cognitive effort and critical thinking, thus reducing biased decision making.

Moreover, considering the importance of professional skepticism in the policies of most audit firms and the requirements for professional skepticism in auditing standards, component auditors who are induced to exert more cognitive effort will likely recommend the use of more audit resources when making audit planning decisions. I state this prediction as hypothesis one in alternative form:

H1: Component auditors who receive detailed risk documentation instructions from the group engagement team will exhibit higher levels of professional skepticism when evaluating a client's accounting estimate than component auditors whose work will be reviewed by the group engagement team.

2.5 Interaction of Component Supervisor Preferences and Oversight by the Group Engagement Team

Motivated reasoning theory suggests that component auditors who work under the direction of a supervisor who favors a more skeptical audit approach will inherit the conservative goals of their supervisor. Accordingly, when a group engagement team chooses only to review component audit work, component audit team members who face a skeptical supervisor likely bias their decision making process toward reaching a conservative conclusion.

Alternatively, because skepticism is the de facto position of most professional standards and audit firm policies, auditors who are induced to exert more cognitive effort by the involvement of the group engagement team will likely arrive at the same skeptical conclusions as those who merely adopted the skeptical position of their supervisor. Put differently, both skepticism induced through inherited directional goals and skepticism induced through increased cognitive effort are consistent with motivated reasoning theory and should lead component auditors to similar conclusions about the appropriate number of audit hours to budget and substantive procedures to perform. Accordingly, the group engagement team's active

involvement in the work of component audit team members who face a skeptical supervisor should not significantly influence the auditor's skepticism.

Conversely, component auditors under the direction of an optimistic supervisor likely possess directional goals to reach less conservative conclusions whereby they unconsciously inherit the known preferences of their supervisor which results in lower skepticism, ceteris paribus. However, as the involvement of the group engagement team becomes more salient to these component auditors through the group engagement team's detailed risk documentation instructions, component auditors should increase the pattern of critical thinking they experience as well as the amount of cognitive effort they expend to reach appropriate audit judgments. Indeed, prior research indicates auditors who are induced to hold accuracy goals are more likely to propose conservative accounting adjustments compared to auditors with goals to get along with their client for the sake of business relations (Asare and Cianci 2009). Accordingly, motivated reasoning theory suggests increased group engagement team involvement in the work of component auditors who face an optimistic supervisor should induce auditors to exhibit less biased decision making, thus mitigating the effects of an optimistic supervisor's preferences and increasing the amount of audit resources component auditors plan to use. I state these predictions as hypothesis two in alternative form:

Component supervisor preferences will interact with the level of engagement oversight exercised by the group engagement team such that:

H2(a) When the component auditor faces a skeptical supervisor, there will be no differences in their professional skepticism when evaluating a client's accounting estimate between instances when the group engagement team chooses to review the work of the component auditor, and instances when the group engagement team provides detailed risk documentation instructions to the component auditor.

H2(b) When the component auditor faces an optimistic supervisor, they will exhibit less professional skepticism when evaluating a client's accounting estimate in instances when the group engagement team chooses to review the work of the component auditor compared to instances when the group engagement team provides detailed risk documentation instructions to the component auditor.

CHAPTER III: RESEARCH METHODOLOGY

3.1 Participants

Auditor participants were randomly assigned to one of four treatment conditions from the study's 2 x 2 experimental design which crossed supervisor preferences (skeptical, optimistic) with group engagement team oversight (involved, review). Auditors were recruited from continuing professional education conferences, through contacts at public accounting firms, and through an online research participant provider. Participants completed the experimental process online or using a Microsoft Word version of the case.[6]

Eighty-two auditors provided usable responses to the experimental instrument. Because this study examined the effects of component audit supervisor preferences and group engagement team oversight of the component audit on component auditor professional skepticism, participants must have the requisite decision making experience necessary for this experimental task. Specifically, participants needed to indicate they had previously worked in some capacity on group audit engagements or had worked as an in-charge auditor on past audit engagements. Auditors with group auditing experience are familiar with a multiple engagement team structure where audit instructions are communicated from a group engagement team to component engagement teams, while audit work progresses under the supervision of an immediate supervisor. Alternatively, auditors with in-charge experience are likely to have training on conducting group audits and are sufficiently familiar with the design, coordination, and communication of audit procedures and the supervision of engagement team staff as well as

[6] Chi-Square and Fisher's Exact tests indicated no differences in the proportion of Big 4 versus non-Big 4 auditors between experimental treatment conditions. In addition, these tests also indicated there were no differences in the distribution of participants obtained through the online research participant provider and those who were not, and auditors completing the instrument manually versus online between experimental treatment conditions. Additionally, statistical inferences remain unchanged when covariates are included in the analyses of dependent variables for Big 4 auditor, instrument format, or participant from online provider.

the unique demands of engagement partner preferences. Accordingly, auditors with group audit experiences or audit in-charge experience were retained for analysis. This resulted in the removal of twelve participants.[7]

Table 1 reports participant demographic information for the 66 auditors that were retained for analysis. Participants had an average of 43.41 months of audit experience with job titles ranging from staff to partner. 69.7% of participants had in-charge experience and 78.50% had experience working on group audit engagements.[8] Collectively, the demographic information indicated participants possessed the requisite knowledge necessary to perform the audit tasks required of them in the experimental instrument. Additionally, no differences were noted in auditor experience levels between experimental conditions ($F = 1.05$, $p = 0.38$), indicating that the professional backgrounds of participants' were evenly distributed across treatment groups.

3.2 Experimental Materials

In this study I employ a 2x2 experimental design by crossing level of group engagement team oversight and component supervisor preference. Therefore, participants were randomly divided into four groups: optimistic supervisor and review by group engagement team; optimistic supervisor and detailed risk documentation instructions from group engagement team; skeptical supervisor and review by group engagement team; and skeptical supervisor and detailed risk documentation instructions from group engagement team. The experimental instrument

[7] Another four auditors were removed who exhibited an incorrect understanding of the component audit supervisor's preference for professional skepticism. Because the component audit partner's skeptical preference is an integral aspect of the experimental design, participant's correct understanding of this manipulation must be appropriately documented. Furthermore, inaccurate understandings of the case materials may indicate a lack of attention to the experimental task. The removal of participants who fail to exhibit a correct understanding of supervisor preferences is consistent with prior research (Peecher 1996; Shankar and Tan 2006). In total, the responses of 66 auditors were retained for analysis.

[8] Statistical inferences remain unchanged when auditor experience was included as a covariate in analyses of dependent variables.

presented participants with a hypothetical group audit case scenario involving the audit of a manufacturer of small engine components which is a wholly-owned subsidiary consolidated as part of a larger conglomerate. In the experimental instrument, participants were asked to assume the role of an auditor working on the accounts receivable area of the subsidiary entity while another audit team from the same accounting firm acted as the group engagement team and was conducting the audit of the consolidated financial statements of the conglomerate and was responsible for the issuance of the audit opinion on the group financial statements. Accordingly, the engagement meets the criteria for a group audit based on the AICPA's AU-C Section 600. Participants received aggregated information about total revenues, total assets, and net income for the subsidiary. Next, participants were provided information about the composition of the two audit teams and were informed by the component engagement team manager that the partner in charge of the subsidiary engagement had either stressed their concern that auditors were frequently overly conservative in their audit judgments and should not ignore their client's insight into their own business, or that the partner had stressed their concern about overly aggressive accounting estimates and the importance of not accepting client explanations without justification.[9] Consistent with prior research (Peecher 1996), participants were then asked to briefly document their understanding of the partner's preferences.

Participants were informed of materiality set by the group engagement team for this audit area and were provided with the prior year's audited and current year's unaudited account balances. Participants also received accounts receivable aging schedules for both years. The information shows that total revenues had increased from the previous year as well as current accounts receivable and the allowance for doubtful accounts. However, the aging analysis

[9] The wording used for these two treatment conditions was based on wording in Piercey (2009) which has also been used in other supervisor preference studies.

indicated that the proportion of past due accounts had increased significantly from the previous year while the percentage of each aging category estimated to be uncollectible had remained unchanged. Thus, despite the relative increase in past due accounts, the percent of aged accounts used to calculate the allowance had not changed. Therefore, the pattern of the data resulted in a scenario in which the appropriate balance for net accounts receivable was ambiguous, with no clear correct or incorrect balance. The ambiguous nature of the scenario and task were specifically chosen because previous research suggests that decision makers are most susceptible to motivated reasoning when no clear support for a given position is present (Kunda 1990). This scenario is also realistic in that auditors frequently encounter audit issues for which they have little a priori knowledge on which to base their analysis and conclusion.

Next, participants received the group engagement team involvement manipulation which was designed to induce component auditors' to exert more or less cognitive effort, depending on the documentation instructions provided by the group engagement team. Participants in both the low and high group engagement team involvement conditions were given a screenshot of an email from the component engagement team manager which included an email forwarded from the group engagement team manager. Participants were told by either their component team manager or the group engagement team manager that they would later provide a memo documenting risk assessment information depending on the treatment condition (detailed information about these manipulations will be provided later).

Next, participants read the transcript of a conversation with the subsidiary's Controller. In the conversation, the Controller indicated that the significant change in sales and accounts receivable was the result of granting more flexible enforcement of payment terms to new

customers.[10] The Controller also explains that the total allowance for doubtful accounts had increased from around 4% of total receivables to over 8% of total receivables, but that the same assumed uncollectible percentage of past due balances had been used because these percentages had proven to be historically accurate. Finally, the Controller indicated that the subsidiary did not anticipate any write-offs that would be in excess of the allowance. At this point, participants reviewed an aged accounts receivable trial balance by customer along with the Controller's analysis of the collectability of accounts over 30 days past due. Participants next reviewed an independently prepared industry analysis report for the engine components industry.

Participants in both group engagement team oversight conditions next reviewed the email correspondence they had previously received from their manager. In both group engagement team oversight treatment conditions participants received an email from the group engagement team manager that had been forwarded to them by their component engagement team manager. Participants whose work was to be reviewed by the group engagement team were asked by the component engagement team manager to prepare a memo documenting their understanding of the increase in net receivables, including specific factors that are indicative of increased or decreased audit risks associated with the subsidiary's industry, customer base, and the ability of the subsidiary's customer's to pay their debts as they became due. The manager also instructed them to provide the documentation to both the group engagement team manager and himself. The message also included a forwarded email from the group engagement team manager asking the component manager to provide him with copies of the component team's risk assessment documentation. Participants in the group review condition were next provided a blank text box to perform their documentation.

[10] A change in payment terms as a client's nonerror explanation for an increase in accounts receivable is consistent with previous research (Peecher 1996).

Increased involvement of the group engagement team is hypothesized to induce component auditors to exert increased cognitive effort in terms of the amount of audit documentation they prepare. Accordingly, participants who received detailed risk documentation instructions from the group engagement team were asked by the component engagement team manager to follow the instructions from the group engagement team manager in the forwarded email which indicated that they would need to document specific factors that are indicative of increased or decreased audit risks associated with the component's industry, customer base, and customer ability to pay debts as they became due. In this email, the group engagement team manager also indicated that the group engagement team would be actively involved in the component audit process. Participants in this documentation instruction condition were also told by the component engagement team manager to provide their documentation to both managers. Participants in the involved group condition next received a template provided by the group engagement team with separate text boxes for each requested documentation item.[11]

Participants in both conditions were told by the group engagement team manager that their documentation would be reviewed by the group engagement team prior to a joint upcoming planning meeting with both engagement teams. Participants were also informed that following their documentation they would be asked to make some preliminary planning recommendations that would also be used during the planning process. After participants documented the

[11] This approach is consistent with group audit guidance which suggests group engagement teams may choose to employ a standard memorandum of instructions which can be adapted as necessary based on the unique circumstances of individual component engagement teams (AICPA 2013).

information requested in the email they responded to dependent variable and post experimental questions.[12]

3.3 Independent Variables

The first independent variable in this experiment was partner preference which was manipulated between participants to reflect the views of a component engagement partner who either preferred an optimistic analysis of client prepared accounting estimates or a more skeptical analysis. The second independent variable was the level of oversight chosen by the group engagement team (also manipulated between participants) where the group engagement team either asked to review the work performed by the component engagement team, or provided detailed risk documentation instructions.

It must be noted that there was no difference in the audit information or evidence provided to participants between any of the four treatment conditions. That is, all participants received the same information related to the audit task and the only changes between groups related to the preference of the component engagement partner and the documentation requested by the component and group audit managers. Additional risk documentation was not provided in any condition, but instead participants were asked to assess risk based on all available evidence in the presence of directional goals and varying manifestations of group engagement team oversight.

[12] To ensure the realistic nature of the group audit scenario investigated in this study, numerous graduate students with public accounting and industry backgrounds reviewed the experimental materials related to this study during the development of the experimental instrument that was used during data collection. Moreover, the final version of the experimental instrument was reviewed by two multi-national auditing firms to ensure realism and consistency with firm procedures.

3.4 Dependent Variables

Following a prompt for their risk assessment documentation, participants in all four treatment conditions responded to four dependent variable questions. Several questions were used to measure the professional skepticism exhibited by participants. Specifically, participants were asked to report the number of hours they thought should be budgeted for the accounts receivable area compared to the prior year (0 = much fewer hours than last year, 50 = the same number of hours as last year, and 100 = much more hours than last year), and the percent of total accounts receivable they suggested confirming (0 = none, 50 = half, and 100 = all). These variables, which were designed to measure auditors' planned audit effort and substantive audit procedures have important practical implications for the audit process because in addition to capturing measures of professional skepticism, they also indicate potential audit fees charged by the auditor and the allocation of audit resources. Similar measures have also been utilized in prior audit research (Quadackers et al. 2014; Nelson 2009). Participants were also asked to rate their assessment of the likelihood that the unaudited allowance for doubtful accounts balance was materially misstated (0 = extremely unlikely and 100 = extremely likely) and to record what they thought an appropriate balance would be for the year-end allowance for doubtful accounts.

3.5 Demographic and Post Experimental Questions

Participants also responded to post experimental questions related to the preferences of the component engagement partner as either optimistic/aggressive or skeptical/conservative as well as questions about their perceptions of the engagement structure and the audit tasks they completed in the experimental instrument. Finally, participants completed the experiment by providing demographic information including their job title, experience, familiarity with the

AICPA's AU-C Section 600 group audit standard, experience working on group audit engagements, and gender. The experimental instrument is presented in appendices A-C.

CHAPTER IV: DATA ANALYSIS AND RESULTS

4.1 Manipulation checks

Panel A of Table 2 reports the results of the manipulation checks. Component supervisor skepticism was manipulated between participants in the experimental instrument with a narrative from the component audit manager who indicated the component engagement partner either stressed the importance of critically analyzing the client's accounting estimates, or stressed not ignoring the client's insight into their own business activities when developing their estimates. Participants then documented their understanding of the partner's views and were later asked to rate their perception of the component engagement team audit partner as preferring more skeptical analysis of client estimates, or more optimistic analysis of client estimates as a post experimental question using a 101 point scale where 0 = conservative/skeptical, 50 = neutral, and 100 = aggressive/optimistic.

A one-way analysis of variance indicated significant differences between auditors' assessment of the skeptical preferences of the component engagement team partner between treatment conditions ($F = 29.67$, $p < 0.001$). Specifically, participants' rating of partner optimism were significantly higher in the Optimistic—Involved condition (mean = 67.86) than in the Skeptical—Involved condition (mean = 9.71) [$t = 8.02$, $p < 0.001$, two tailed]. As were ratings of partner optimism in the Optimistic—Review condition (mean = 73.68) than in the Skeptical—Review condition (mean = 23.13) [$t = 5.49$, $p < 0.001$, two tailed].[13] These

[13] I did not expect any theoretical differences in auditors' perception of partner optimism between group involvement conditions. However, I confirmed this expectation by comparing auditor assessments of partner optimism within each partner preference group between both group involvement treatment conditions and found no significant differences in auditor assessments of partner optimism (all *p*s > 0.10).

differences indicate the manipulation of component partner skepticism was successful between experimental conditions.[14]

Group engagement team involvement was manipulated between participants through their communication with the group engagement team and the documentation instructions provided by the group engagement team to the component auditor. Participants then provided the requested audit documentation before responding to dependent variable questions and completing the experimental instrument. Recall that increased involvement of the group engagement team is intended to induce increased cognitive effort. DeZoort et al. (2006) use the volume of documentation auditors prepared to assess the amount of cognitive effort they exerted. Accordingly, the number of unique information items identified by the participants were analyzed between experimental conditions. This approach is also consistent with other auditing research where experimental design influenced the amount of information auditors' documented between treatment conditions (Agoglia et al. 2003). To verify information item rating coding, a list of unique information items appearing in the experimental instrument was developed and a graduate student who was blind to hypotheses and experimental condition independently rated a random sample of participant responses. Interclass correlation between raters was .978 which is significantly different from zero ($p < 0.001$). All disagreements between raters were mutually resolved.

One-way analysis of variance indicated significant differences in the number of unique audit information items documented by auditors between experimental conditions ($F = 5.15$, $p = 0.003$). Specifically, comparisons between experimental conditions indicated auditors'

[14] Participants were also asked to document how the component engagement team perceived the level of risk associated with net receivables. Participants indicated the component engagement team perceived audit risks as significantly lower in the optimistic supervisor condition (mean = 59.85) than in the skeptical supervisor condition (mean = 81.15) [$t = 4.45$, $p < 0.001$, two tailed].

documented significantly more unique information items from the experimental instrument in the Optimistic—Involved condition (mean = 10.50) than in the Optimistic—Review condition (mean = 7.21) [$t = 2.16$, $p = 0.038$, two tailed]. Auditors also documented significantly more unique information items in the Skeptical—Involved condition (mean = 10.94) than in the Skeptical—Review condition (mean = 6.19) [$t = 3.33$, $p = 0.002$, two tailed].[15] These differences indicate the manipulation of group engagement team oversight was successful between experimental conditions.

4.2 Post Experimental Questions

Participants also responded to several post experimental questions designed to verify that the manipulations of supervisor preferences and group engagement team oversight did not have unintended consequences on auditors' perceptions about the group audit engagement. Specifically, auditors typically report directly to their engagement supervisor who is ultimately responsible for evaluating their performance. However, in a group audit setting, the group engagement team also has an active interest in the work completed by the component auditor. Although the group engagement team is required to work with the component audit team, the group engagement team is not directly responsible for the performance evaluation of component audit team members. Thus, the manipulation of group engagement team oversight should not increase auditor's perception of accountability to the group engagement team, or decrease their perception of accountability to their component team and immediate supervisor. Indeed, this is unlikely to occur in practice where auditors' receive performance feedback and promotion recommendations from their immediate supervisor. Rather, increased involvement of the group

15 I did not expect any theoretical differences in the influence of group involvement between partner optimism conditions. However, I confirmed this expectation by comparing auditors' information documentation within each group involvement condition between both partner preference treatment groups and found no significant differences in auditors' information documentation (all ps > 0.10).

engagement team should induce auditors to engage in more effortful and self-critical thinking. Accordingly, participants were asked post-experimental questions to ensure their sense of workplace accountability and job function were not influenced by the experimental manipulations.

Panel B of Table 2 presents one-way ANOVA results for these post experimental questions. Specifically, participants were asked to rate whether the audit documentation instructions received from the group engagement team influenced their assessment of audit risk. This question was designed to ensure the manipulation of group engagement team involvement did not affect how auditors' perceived overall risk associated with the experimental materials. Additionally, participants rated their sense of accountability to the group and component engagement teams, respectively; and their sense of responsibility for the outcome of the group and component audit engagements, respectively. Participants indicated high average levels of accountability to both the component engagement team and the group engagement team (92 and 73, respectively, where 0 = completely unaccountable and 100 = completely accountable), as well as high average levels of responsibility for the outcome of both the component audit and the group audit (82 and 59, respectively, where 0 = not responsible and 100 = completely responsible). Additionally, results indicated no significant differences between experimental treatment conditions.

Paired samples t-tests confirmed auditors' sense of accountability to the component engagement team was significantly higher than their sense of accountability to the group engagement team (all ps < 0.03, two tailed) in all four experimental treatment conditions, and auditors' sense of responsibility for the outcome of the component audit was significantly higher than their sense of responsibility for the outcome of the group audit (all ps < 0.003, two tailed) in

all four experimental treatment conditions. Collectively, these results indicated neither the preferences of the component supervisor, nor the involvement of the group engagement team influenced how auditors perceived their role or procedural accountability during the group audit process.

4.3 Preliminary Analysis

I conducted my primary investigation of results using analysis of covariance (ANCOVA) models to determine the effects of component audit supervisor preferences and group engagement team oversight on component auditor professional skepticism. Accordingly, I performed a preliminary analysis of the appropriateness of ANCOVA methodologies by considering the assumptions of ANCOVA. I found ANCOVA is an appropriate statistical methodology for use in this study.

Specifically, to evaluate the appropriateness of ANCOVA methodologies, I first considered the assumptions of analysis of variance (ANOVA), which are: independent scores, normality of observations, and homogeneity of variance (Keppel 1991, 97). Independence of observations was established by experimental design, which randomly assigned participants to one of four treatment groups. I tested the assumption of normality of observations using Shapiro-Wilk tests for all dependent variables across each experimental treatment group and observed occasional instances of non-normality. Although non-normality can lead to increased type I error rates, evidence suggests ANOVA methodologies are robust to normality assumption violations and type I and type II error rates tend to remain constant when the normality assumption is violated (Schmider et al. 2010). Lix et al. (1996) also note the extant research on normality shows *F* tests are relatively insensitive to violations of the normality assumption. Finally, Keppel and Wickens (2004, 228) note that between-group homogeneity of variance

represents the most critical of the ANOVA assumptions. Using Levene's tests, I found no evidence of homogeneity of variance assumption violations for any of the dependent variables (all *p*s > 0.05).

In this study, I used auditor participants' self-reported familiarity with the AICPA's group auditing standard as a covariate in my primary analyses.[16] In addition to the ANOVA assumptions described above, Keppel and Wickens (2004, 330) note ANCOVA also makes the following, additional assumptions: linearity of the regression of the covariate and dependent variable, homogeneity of the regression slopes between experimental conditions, and the exact measurement of covariates. In separate regressions for every experimental treatment condition, I tested the linearity of regression by regressing each dependent variable on the covariate as well as a mean centered, quadratic transformation of the covariate, as outlined by Keppel and Wickens (2004, 335). I found that the coefficient of the quadratic transformation of the covariate is insignificant (*p*s > 0.05) in all but three of the sixteen regressions, indicating general linearity between the covariate and dependent variables. Consistent with Keppel and Wickens (2004, 336), I confirmed that the observed instances of nonlinearity did not adversely influence the results reported for my primary analyses by performing the ANCOVAs and planned contrast comparisons used in my primary analyses which included both the covariate and the quadratic transformation of the covariate and found that all statistical inferences remained unchanged when the quadratic transformation of the covariate was included.

Keppel and Wickens (2004, 331) note homogeneity of regression is the more critical of the ANCOVA assumptions, in practice. To test homogeneity of regression I conducted a univariate analysis using a general linear model where I interacted the covariate with each

[16] I describe this covariate and the theoretical underpinnings for its use in more detail in a later section.

independent variable, as well as a three-way interaction between both of the independent variables and the covariate for each dependent variable. Results indicated no violations of the homogeneity of regression slope assumptions for any of the dependent variables across any of the treatment groups (all *p*s > 0.05).

I consider the third assumption of ANCOVA (exact measurement of covariates) in light of how this variable was measured during the experimental process. Specifically, auditors' were asked to self-report how familiar they were with the AICPA's group auditing standard by reporting their familiarity with the audit standard using a 101 point scale anchored by 0 = not at all familiar, and 100 = very familiar. Accordingly, this measure provided a relatively objective measure for self-reporting knowledge by professionals who are experienced in analysis of authoritative auditing standards. Additionally, Keppel and Wickens (2004, 341) note considerations of homogeneity of regression can lend support to analyses of measurement exactness when regression slopes behave in a consistent and linear manner. Accordingly, the homogeneity of regression slopes across treatment conditions described above indicated auditors' self-assessments of familiarity with the standard appeared to influence their decision making processes consistently across treatment conditions. Collectively, these analyses of assumptions support the use of ANCOVA methodologies in this study.

4.4 Auditor Assessments of Budgeted Audit Hours

Table 3 reports the results of auditor assessments of budgeted audit hours. Nelson (2009) argues the actions auditors' undertake during audit testing influence the nature or quantity of available audit evidence during the engagement. This is important in a group audit engagement where group engagement teams must review the work completed by component auditors. Thus, the quality and amount of evidential matter collected by a component auditor is critical because

it allows the group engagement team to identify potential irregularities without conducting audit procedures themselves. Quadackers et al. (2014) note budgeted audit hours are the most commonly used measure of planned audit testing in professional skepticism research.[17] Accordingly, participants were asked to record their recommendation for the number of audit hours that should be budgeted to audit accounts receivable and the allowance for doubtful accounts (0 = much fewer hours than last year to 100 = much more hours than last year). Panel A of Table 3 reports the results of a 2 x 2 ANCOVA with factors: supervisor preference (skeptical, optimistic) and group engagement team oversight (involved, review), with auditor knowledge of AU-C 600 (0 = not at all familiar to 100 = very familiar) as a covariate (see Figure 1 for interaction plots of the four treatment conditions).

As previously discussed, the AICPA's revised group auditing standard updated numerous aspects of the group audit environment, including the required communications between the group and component engagement teams (AICPA 2013). Since this study investigated how the unique group engagement team communication requirements of the standard influenced component auditor decision making, auditor familiarity with the standard would be relevant to performing the experimental task. As such, I controlled for auditors' knowledge about the AICPA's group audit standard in my primary analyses. Specifically, I included auditor knowledge of AU-C 600 as a covariate in all dependent variable analyses. This approach is consistent with auditing research that suggests self-reported levels of auditor experience with specialized topics should be controlled as a covariate (Hammersley et al. 2011). Pike et al. (2013) also note that the use of covariates to control for auditor experience with

[17] For examples, Cohen and Kida (1989) investigated time allocated to audit testing procedures following the completion of analytical procedures, and Koonce et al. (1995) measured the amount of adjustment auditors recommend to budgeted audit hours when assessing managements' audit explanations.

specialized auditing areas is consistent with past studies, and research specifically examining auditor expertise has used the amount of specialists' recent industry training as a covariate for the purposes of robustness testing (Solomon et al. 1999).

Hypothesis 1 predicts auditors will exhibit greater professional skepticism when they face a more involved group engagement team that provide detailed risk documentation instructions than when the group engagement team only reviews the work of the component auditor. The ANCOVA shows a significant main effect for group engagement team involvement, indicating auditors recommend budgeting significantly more audit hours when the group engagement team provided detailed risk documentation instructions (mean = 78.02) than when the group engagement team only reviewed the work prepared by the component auditor (mean = 71.33) [$F = 3.75$, $p = 0.029$, one tailed]. Thus, increased involvement by the group engagement team appeared to induce the use of more audit resources (hours) by component audit team members, supporting H1.

Hypotheses 2(a) and 2(b) predict an interaction between supervisor preference and group engagement team oversight such that level of group involvement will not influence auditors' skepticism when auditors face a skeptical component supervisor. However, auditors under the direction of an optimistic component supervisor will exhibit more professional skepticism when the group engagement team chooses to provide detailed risk documentation instructions than when the group engagement team chooses only to review the work of the component auditor.

As hypothesized, ANCOVA results indicated a significant interaction between component supervisor preference and group engagement team involvement [$F = 2.81$ $p = 0.049$, one tailed]. An analysis of estimated marginal means and planned contrast comparisons of treatment groups (Panels B and C of Table 3, respectively) indicated there were no differences in

recommended audit hours between auditors in the Involved Group—Skeptical Supervisor condition (mean = 76.10) and the Review Group—Skeptical Supervisor condition (mean = 75.14) [F = 0.04, p = 0.423, one tailed]. However, recommended audit hours were significantly higher in the Involved Group—Optimistic Supervisor condition (mean = 79.95) than in the Review Group—Optimistic Supervisor condition (mean = 67.52) [F = 6.63, p = 0.006, one tailed], supporting H2(a) and H2(b).

Additional analysis indicated that recommended audit hours were higher in the Review Group—Skeptical Supervisor condition (mean = 75.14) than in the Review Group—Optimistic Supervisor condition (mean = 67.52) [F = 2.69, p = 0.053, one tailed]. Furthermore, although auditors in the Involved Group—Optimistic Supervisor condition recommended the highest amount of budgeted audit hours, there was not a significant difference between the Involved Group—Optimistic Supervisor condition (mean = 79.95) and the Involved Group—Skeptical Supervisor condition (mean = 76.10) [F = 0.58, p =0.225, one tailed]. Thus, the increased involvement of the group engagement team diminished the impact of supervisor preferences by inducing auditors to allocate similar audit hours regardless of whether they faced a skeptical or optimistic supervisor.

Collectively, these findings suggest increased group engagement team involvement in the work of component auditors' increases the amount of audit resources component audit team members intend to use for audit procedures, and this increase is magnified when component auditors face an optimistic component supervisor. In general, auditors who face a skeptical supervisor recommend the use of more audit hours. However, when component auditors face a skeptical supervisor, group involvement does not appear to significantly affect the number of audit hours they plan to use.

4.5 Auditor Assessments of Substantive Procedures

Nelson (2009) notes that although auditors frequently adjust their planned number of budgeted hours during fieldwork, this increase has not always correlated with adjustments to audit programs and planned audit procedures in past studies. Thus, participants were also asked to report the percent of the accounts receivable balance they suggested confirming during substantive audit testing (0 = none to 100 = all) to verify their increased skepticism resulted in meaningful audit action.[18] Panel A of Table 4 reports the results of a 2 x 2 ANCOVA with factors: supervisor preference (skeptical, optimistic) and group engagement team oversight (involved, review) with familiarity with AU-C 600 as a covariate. Panel B of Table 4 reports estimated marginal means by treatment group (see Figure 2 for interaction plots of the four treatment conditions). As with recommended audit hours, results indicated a significant main effect for group engagement team involvement on auditors' planned accounts receivable audit procedures, indicating auditors suggested confirming significantly more of the accounts receivable balances when the group engagement team was more involved in the component audit risk assessment documentation process (mean = 66.73) than when the group engagement team only reviewed the work of the component auditor (mean = 55.85) [$F = 4.05$, $p = 0.024$, one tailed]. Consistent with the measure of budgeted audit hours, increased involvement by the group engagement team appeared to induce component auditors to plan more substantive audit procedures to detect potential misstatements in the client's accounting estimate, providing further support for H1.

[18] Arguably, there are numerous other procedures auditors may also wish to undertake to verify all of managements' assertions related to net accounts receivable, but I limit my analysis of specific audit program modifications to the confirmation of accounts receivable to minimize the time required to complete the experimental instrument and facilitate auditor participation.

The ANCOVA results also showed a significant interaction between component supervisor preference and group engagement team involvement [$F = 2.89$ $p = 0.047$, one tailed]. Planned contrast comparisons of treatment groups reported in Panel C of Table 4 indicated there were no differences in the percent of accounts receivable auditors suggested confirming between the Involved Group—Skeptical Supervisor condition (mean = 63.45) and the Review Group—Skeptical Supervisor condition (mean = 61.66) [F = 0.05, $p = 0.409$, one tailed]. However, ratings of the percent of accounts receivable to confirm were significantly higher in the Involved Group—Optimistic Supervisor condition (mean = 70.02) than in the Review Group—Optimistic Supervisor condition (mean = 50.07) [F = 7.00, $p = 0.005$, one tailed], providing additional support for H2(a) and H2(b). Additional analysis also indicated percent of accounts receivable to confirm was higher in the Review Group—Skeptical Supervisor condition (mean = 61.66) than in the Review Group—Optimistic Supervisor condition (mean = 50.07) [F = 2.55, $p =$ 0.058, one tailed], but not different between the Involved Group—Optimistic Supervisor condition (mean = 70.02) and the Involved Group—Skeptical Supervisor condition (mean = 63.45) [F = 0.69, $p =$0.205, one tailed].

Consistent with the analysis of auditors' recommendations for budgeted audit hours, these results suggest group engagement team involvement is positively associated with component auditors' willingness to modify audit procedures and increase the amount of audit resources they plan to use to detect potential misstatements in the client's accounting estimates. As before, the results also suggest that this increase in planned substantive audit procedures occurs when auditors face an optimistic component supervisor. However, this increase is not significant when the component supervisor expresses a higher degree of professional skepticism.

4.6 Auditor Assessments of the Likelihood of Material Misstatement

To assess how component supervisor preferences and group engagement team oversight influenced auditors' preliminary assessment of misstatement risks, participants were asked to assess the likelihood that the allowance for doubtful accounts was materially misstated. Panel A of Table 5 presents the results of a 2 x 2 ANCOVA for auditors' assessment of the likelihood that the allowance for doubtful accounts was materially misstated (0 = extremely unlikely to 100 = extremely likely) with factors: supervisor preference (skeptical, optimistic) and group engagement team oversight (involved, review), and familiarity with AU-C 600 as a covariate. Panels B and C of Table 5 report estimated marginal means by treatment group and planned contrast comparisons of treatment groups, respectively. ANCOVA results showed a significant main effect for component supervisor preference indicating auditors assessed a higher likelihood of material misstatement in the client's unaudited allowance for doubtful accounts when they faced a skeptical component supervisor (mean = 66.60) than when they faced an optimistic component supervisor (mean = 56.52) [$F = 3.06$, $p = 0.043$, one tailed].

However, the ANCOVA results do not indicate a significant main effect for group engagement team involvement on auditor assessments of the likelihood of material misstatement [$F = 0.21$, $p = 0.325$, one tailed], thus, while group engagement team oversight appears to influence the use of audit resources recommended by component audit team members, the involvement of the group engagement team did not appear to influence the inherent level of risk auditors perceived related to client estimates. Analysis of treatment means from Panel B of Table 5 and interaction plots of the four treatment conditions (see Figure 3) indicated the directional effects of group involvement on auditor assessments are consistent with the hypothesized relationship, but these differences did not rise to the level of statistical significance,

particularly because of the limited influence involvement appeared to have on misstatement likelihood assessments in the optimistic component supervisor condition.

Similarly, planned contrast comparisons between treatment groups indicated no significant differences in auditor assessments of misstatement likelihood between group oversight conditions in either the skeptical supervisor or optimistic supervisor conditions [F = 0.38, p = 0.271, one tailed; and F = 0.00, p = 0.488, one tailed, respectively]. Accordingly, the results did not indicate an interactive effect between group engagement team oversight and component supervisor preferences on auditor risk assessments.[19]

Collectively, these findings indicate component supervisor optimism or skepticism about a client's accounting estimates significantly influence auditors' preliminary assessment of misstatement likelihood, but the level of involvement exercised by the group engagement team does not significantly influence auditor's preliminary assessment of misstatement likelihood. However, increased group engagement team involvement in the work of the component audit team does influence auditors' planned use of audit resources, particularly when they face an optimistic component supervisor. These findings are not inappropriate given the nature of group audit engagements. Presumably, audit effort is of more importance to a group engagement team than risk likelihood assessments from an audit quality perspective, in that increased audit effort leads to increased audit evidence, which in turn may iteratively influence the audit evidence gathering process, as noted by Nelson (2009). Additionally, increased audit effort will result in increased audit documentation and evidence which may benefit group engagement team decision making when reviewing the work of component auditors. Moreover, these findings are

[19] Auditors were also asked to document the allowance for doubtful accounts balance they believed was appropriate based on their preliminary review. Auditor's reported an average suggested allowance balance of $881,421.16, with no significant differences between treatment conditions [F = 0.329, p = 0.804]

consistent with non-supervisory component audit staff primarily directing their efforts toward the completion of audit procedures and the documentation of audit evidence, but not the assessment of engagement risks that are traditionally the responsibility of the component and group engagement team managers and partners.

4.7 Path Analysis

Path analyses were conducted to gain additional understanding of the relationship between group engagement team oversight of the component audit process and component auditors' planned use of audit resources. Figure 4 presents of the results of a path analysis which examined the effects of group engagement team involvement and component supervisor preferences on auditors' budgeted audit hours. Although the effects of directional goals are largely unconscious, Kunda (1990) argues that decision makers are aware of both the benefits and costs of exerting increased cognitive effort and choose the level of effort they are willing to invest in order to obtain their desired level of accuracy. Accordingly, to test the theory that increased involvement of the group engagement team increases auditor cognitive effort which induces auditors to more carefully examine available evidence, participants were asked to record how much pressure they felt during the audit work they had just completed to make appropriate audit judgments using a 101 point scale where 0 = no pressure and 100 = a great deal of pressure.[20] This variable appears as *PRESSURE* in the path analysis in Figure 4.

Motivated reasoning theory suggests that when a group engagement team chooses only to review component audit work, auditors will be influenced by inherited directional goals during their decision making process. Accordingly, they will be motivated to reach relatively more optimistic conclusions or relatively more conservative conclusions, depending on the preferences

[20] The wording of this question was derived from DeZoort et al. (2006).

of their supervisor. However, when the group engagement team chooses to be more involved in component audit work, auditors will exert more cognitive effort which will induce them to reach relatively more conservative judgments because of the de facto requirement for skepticism in auditing standards. Accordingly, I used auditors' perception of group engagement team involvement in the audit work they completed (*GROUP INVOLVEMENT*, where 0 = not involved to 100 = very involved); and auditors' perception of the component supervisors' preferences (*SUPERVISOR OPTIMISM*, where 0 = conservative/skeptical to 100 = aggressive/optimistic) as predictive variables in the path analysis. The use of continuous predictive variables provided finer measures of the association between *SUPERVISOR OPTIMSIM* and *PRESSURE*, as well as the association between *GROUP INVOLVEMENT* and *PRESSURE* across all experimental conditions. I also included auditors' rating of their familiarity with the group audit standard (*AU-C* 600, where 0 = not at all familiar to 100 = very familiar) as a covariate.

Model goodness of fit was verified by a Tucker-Lewis Index (TLI) of 1.50, where values greater than 0.9 are considered acceptable (Bentler and Bonett 1980) and a comparative fit index (CFI) of 1.0, where values greater than 0.95 indicate good fit (Hu and Bentler 1999). Furthermore, the model's root square mean error approximation (RMSEA) is 0.001, where significance levels below 0.06 indicate appropriate model fit (Hu and Bentler 1999). Finally, a traditional χ^2 analysis reported an insignificant χ^2 value of 2.23, p = 0.694, which generally indicates appropriate model fit (Cheung and Rensvold 2002). Accordingly, these analyses indicated that the model appropriately fit the data.

Results of the path analysis indicated *GROUP INVOLVEMENT* was positively and significantly related to auditors' sense of pressure to perform well on the audit task with a

standardized regression coefficient of 0.186 (p = 0.069, one tailed). This indicated that auditors' sense of pressure to make appropriate judgments increased as their perception of group engagement team involvement in component audit work increased. The path analysis also indicated *SUPERVISOR OPTIMISM* had a negative, but insignificant relationship with *PRESSURE* (-0.039, p = 0.378, one tailed). The insignificant relationship between *SUPERVISOR OPTIMISM* and *PRESSURE* is consistent with the theory that auditors are motivated by directional goals when their work is only going to be reviewed by the group engagement team, regardless of supervisor optimism or skepticism. Moreover, the analysis indicated a positive and significant relationship between *PRESSURE* and auditors recommendation for the number of budgeted audit hours, with a standardized regression coefficient of 0.229 (p = 0.026, one tailed). This indicated that auditors' recommended the use of more audit hours as their sense of pressure to make appropriate audit judgments increased. These patterns are consistent with the theory that increased involvement of the group engagement team causes auditors to engage in more effortful, self-critical, and complex decision making which, in turn, induces auditors to exert increased levels of audit effort (as measured by budgeted audit hours) to gather more audit evidence.

Using the same predictor variables, Figure 5 presents of the results of a path analysis which examines the effects of group engagement team involvement and component supervisor preferences on the percent of accounts receivable auditors' suggest confirming during substantive audit testing. Again, model goodness of fit was verified by a TLI of 1.11, CFI of 1.0, RMSEA of 0.001, and a χ^2 value of 3.66, with p = 0.453, all of which indicated that the model appropriately fit the data.

As before, the path analysis indicated group involvement was positively and significantly related to auditors' sense of pressure to perform well on the audit task (0.186, $p = 0.069$, one tailed), and component supervisor optimism had a negative but insignificant relationship with *PRESSURE* (-0.039, $p = 0.378$, one tailed). The analysis also indicated a positive and significant relationship between *PRESSURE* and auditors' recommendation for the percent of accounts receivable to confirm (0.254, $p = 0.017$). This pattern indicated that auditors' sense of pressure to make appropriate judgments increased as their perception of group engagement team involvement in component audit work increased, and this increased sense of pressure caused auditors to recommend confirming a greater percentage of accounts receivable. However, supervisor preferences did not appear to influence cognitive effort. Again, these patterns are consistent with the theory that increased involvement of the group engagement team causes auditors to engage in more effortful, self-critical, and complex decision making, which induces them to perform more extensive substantive audit procedures, while less group engagement team involvement allows component auditors to pursue the directional goals they inherited from their supervisor.

4.8 Robustness Tests

To rule out potential alternative explanations for the findings discussed above, I conducted several robustness tests to corroborate the veracity of my findings. Because auditors in the involved group engagement team conditions documented more unique information items than auditors in the review only group engagement team conditions, it could be argued that inducing auditors to document more evidence increased audit risk salience which influenced auditors' professional skepticism. To investigate whether the documentation requirements affected auditor skepticism, I conducted the ANCOVAs previously described in my primary

analysis with dependent variables for budgeted audit hours and the percent of accounts receivable to confirm with factors: supervisor preference (skeptical, optimistic) and group engagement team oversight (involved, review) and familiarity with AU-C 600 as a covariate. However, I also included the number of unique risk factors identified by participants as an additional covariate.[21]

ANCOVA results indicated the interaction of group engagement team involvement and component supervisor preference is significant for both budgeted audit hours and percent of accounts receivable to confirm ($p = 0.035$, one tailed; and $p = 0.045$, one tailed, respectively). Analysis of planned contrast comparisons between experimental groups indicated the same pattern of hypothesized differences between treatment conditions that were previously reported. That is, auditors' budgeted audit hours and recommended percent of accounts receivable to confirm were significantly higher in the Involved Group—Optimistic Supervisor conditions than in the Review Group—Optimistic Supervisor conditions (ps < 0.05, one tailed), but were not different between the Involved Group—Skeptical Supervisor and Review Group—Skeptical Supervisor conditions (ps > 0.20, one tailed).[22] Accordingly, these results confirmed that the amount of information documented by participants did not create an alternative explanation for the observed interaction between group engagement team involvement and component supervisor preferences on auditor decision making, whereby risk salience induced by documentation requirements influenced auditor skepticism. Specifically, after controlling for the number of risk factors auditors documented during the experimental process, results were

[21] To verify risk factor rating coding, a list of unique risk factors appearing in the experimental instrument was developed and a graduate student who was blind to hypotheses and experimental condition independently rated a random sample of participant responses. Interclass correlation between raters was .914 which is significantly different from zero ($p < 0.001$). All disagreements between raters were mutually resolved.

[22] I conduct the same analysis using the total number of unique information items identified by participants as a covariate instead of number of unique risks identified with similar results and consistent statistical inferences.

consistent with the explanation that involvement of the group engagement team interacts with component supervisor preferences to influence the amount of audit effort and audit resources component auditors plan to use during fieldwork.

As a second robustness test, I examined if participants' sense of accountability to the group engagement team or component engagement team may have influenced their recommendation for budgeted audit hours or planned audit procedures. Increased involvement of the group engagement team should induce component auditors to exert increased cognitive effort which should, in turn, manifest itself in terms of the sense of pressure auditors experience to make appropriate audit judgments and reach accurate conclusions. However, the oversight of the group engagement team should not cause auditors to report a greater sense of accountability to the group engagement team than the component engagement team, as this may indicate auditors perceived that they would be evaluated by the group engagement team or that their performance review would be conducted by someone other than their immediate, component supervisor. Furthermore, research suggests auditors who face a supervisor with unknown views tend to assume that supervisor is skeptical, absent information to the contrary (Turner 2001), and when accountabilities conflict, decision makers tend to take the position of the most powerful perceived source of accountability (Tetlock 1999; Piercey 2011). Thus, it is imperative to verify that auditors did not perceive the group engagement team as a more powerful source of accountability than their component audit supervisor or team, who is responsible for their performance evaluation, as this scenario is unlikely to arise in practice.

In post experimental questions auditors rated their sense of accountability to the group and component engagement teams as well as their sense of responsibility for the outcomes of the group audit and component audit, respectively. Panel B of Table 2 reported one-way ANOVA

results indicating no significant differences in these ratings between experimental conditions and paired samples t-tests indicated auditors' sense of accountability to the component engagement team was significantly higher than their sense of accountability to the group engagement team across all experimental treatment conditions. To investigate if auditor perceptions of accountability affected their skepticism, I conducted the ANCOVAs used in my primary analysis with dependent variables for budgeted audit hours and the percent of accounts receivable to confirm with factors: supervisor preference (skeptical, optimistic) and group engagement team oversight (involved, review) and familiarity with AU-C 600 as a covariate. However, I also included auditors' ratings of their sense of accountability to the group and component engagement teams as covariates.

ANCOVA results indicated the interaction of group engagement team involvement and component supervisor preference remained for both budgeted audit hours and percent of accounts receivable to confirm ($p = 0.083$, one tailed; and $p = 0.037$, one tailed, respectively). Furthermore, analysis of planned contrast comparisons between experimental groups indicated the same pattern of hypothesized differences between treatment conditions that were previously reported. Specifically, auditors' budgeted audit hours and recommended percent of accounts receivable to confirm were significantly higher in the Involved Group—Optimistic Supervisor conditions than in the Review Group—Optimistic Supervisor conditions (ps < 0.05, one tailed), but were not different between the Involved Group—Skeptical Supervisor and Review Group—Skeptical Supervisor conditions (ps > 0.20, one tailed). Accordingly, these results indicated that the manipulation of group engagement team oversight did not create an unrealistic pattern of accountability unlikely to arise in practice, nor did the manipulation cause participants to view the group engagement team as having a supervisory role over their work. Furthermore,

participants' perceptions of their accountability to the group engagement team and component audit team did not influence the pattern of skepticism they exhibited.

Finally, as a third robustness test I examined whether the previously reported results may have been attributable to component auditor perceptions of risk triggered by the increased involvement of the group engagement team. Specifically, in instances when the group engagement team chose to be more involved in the work of the component auditor, it could be argued that results are driven by group engagement team involvement serving a signaling function, whereby component auditors interpreted the increased involvement as a signal of increased risk and adjusted their planned audit effort and use of audit procedures accordingly. Moreover, Lerner and Tetlock (1999) caution that if decision makers believe they are able to anticipate the views of their audience, they will fail to engage in increased cognitive effort.

To investigate this possibility, I conducted the ANCOVAs used in my primary analysis with dependent variables for budgeted audit hours and the percent of accounts receivable to confirm with factors: supervisor preference (skeptical, optimistic) and group engagement team oversight (involved, review) and familiarity with AU-C 600 as a covariate. However, I also included participants' response to a post experimental question which asked them to document how the group engagement team perceived the level of risk associated with accounts receivable as a covariate. Specifically, participants were asked to rate how the group engagement team perceived the level of risk associated with net receivables using a 101 point scale where 0 = low risk and 100 = high risk.

After controlling for auditors' rating of group engagement team risk perception, I continued to find significant interactions between group engagement team involvement and component supervisor preferences on auditors' assessment of the number of audit hours to

budget and the percent of accounts receivable to confirm ($p = 0.049$, one tailed; and $p = 0.039$, one tailed, respectively). Again, analysis of planned contrast comparisons between experimental groups indicated the same pattern of hypothesized differences between treatment conditions that were previously reported. Specifically, auditors' budgeted audit hours and recommended percent of accounts receivable to confirm were significantly higher in the Involved Group—Optimistic Supervisor conditions than in the Review Group—Optimistic Supervisor conditions (ps < 0.05, one tailed), but were not different between the Involved Group—Skeptical Supervisor and Review Group—Skeptical Supervisor conditions (ps > 0.20, one tailed). These findings indicated the influence of group engagement team involvement and component supervisor preferences on auditor skepticism were not induced by the group engagement team signaling increased audit risk to the component auditors through their increased involvement in the component auditors' work. They also indicated auditor assumptions about the views of the group engagement team did not drive the results associated with group engagement team involvement.

In summary, these robustness analyses suggest the generalizability of the experiment to practice scenarios as indicated by participants' reported understanding of the group audit process and their role in the engagement structure hierarchy. That is, participants appeared to have a realistic understanding of their personal role and responsibilities in the group engagement structure. Additionally, results confirmed that the interactive effects of group engagement team involvement and component supervisor preferences remained consistent after controlling for the number of risk factors identified by the participants as well as their rating of the group engagement teams' risk perception. By ruling out alternative explanations, these analyses offer additional support for the findings that increased group engagement team involvement in the

work of component auditors influences their planned audit effort and allocation of audit resources when they face an optimistic component supervisor. Such an association is consistent with the increased involvement of the group engagement team inducing auditors to expend more cognitive effort and think more thoroughly about the audit process to arrive at an unbiased conclusion.

CHAPTER V: CONCLUSION, CONTRIBUTIONS, AND LIMITATIONS

5.1 Summary and Conclusions

Collectively, results showed that increased involvement in the work of component auditors by a group engagement team increased the amount of cognitive effort exerted by these auditors, which induced them to exhibit increased levels of professional skepticism in terms of their budgeted audit hours and use of audit resources. However, when a group engagement team chooses only to review component audit work, component auditors were motivated by directional goals to reach conclusions consistent with their supervisor's preferences. These findings support the hypothesis that increased involvement of the group engagement team in the work of component audit teams mitigates the influence of optimistic component audit supervisors on auditors' planned audit work. However, this increased involvement did not significantly influence planned audit work when auditors faced a more skeptical supervisor. Path analyses confirmed auditor perceptions of the level of involvement of the group engagement team in their work caused component auditors to experience a greater sense of pressure during their decision making process to make appropriate audit judgments, and this increase in pressure is causally related to the observed increase in budgeted audit hours and planned substantive testing recommended by component auditors. Collectively, these findings are consistent with expectations derived from motivated reasoning.

What may be of particular interest from a group auditor perspective are the findings related to the differential influence of increased group engagement team oversight of component audit work when component auditors faced an optimistic versus a skeptical supervisor. Specifically, group engagement team involvement interacted with component supervisor preferences such that auditors working for a relatively optimistic supervisor budgeted more audit

hours and planed more substantive procedures when the group engagement team chose to be more involved in component audit work. However, the level of group engagement team involvement did not appear to influence component auditors' budgeted audit hours or planned substantive procedures when they worked under the direction of a more skeptical component supervisor. It must be noted that component auditors in the Involved Group—Optimistic Supervisor condition did not make significantly different recommendations for the use of audit resources than component auditors in the Involved Group—Skeptical Supervisor or Review Group—Optimistic Supervisor conditions. Accordingly, increased involvement of the group engagement team appears to mitigate risks associated with audit effectiveness when component audit supervisors are unduly optimistic, without decreasing audit efficiency when component audit supervisors are appropriately skeptical. These findings have practical implications because budgeted audit hours and planned substantive procedures will likely influence how available audit resources are utilized and may potentially influence the total audit fees charged to an auditors' clients.

The pattern of results reported above is consistent with motivated reasoning which suggests component auditors whose work will only be reviewed by the group engagement team are motivated by directional goals they inherit from their supervisors, regardless of whether those goals are to be more skeptical or more optimistic. However, when a group engagement team chooses to be more actively involved in component audit work, component auditors exert more cognitive effort and are motivated to arrive at accurate, more skeptical, conclusions, consistent with auditing standards. Furthermore, the pattern of professional skepticism exhibited by component auditors when a group engagement team chooses to be more involved in their work is presumably consistent with the goals of a group audit engagement team, in that increased group

involvement induces auditors to gather and document more evidence related to the audit area. Thus, a more involved group engagement team would likely have more audit evidence available to review when examining the work of the component audit team, which may be especially beneficial when component audit work is geographically dispersed, making it difficult for the group engagement team to perform audit procedures on component engagements themselves.

Robustness tests also limit alternative explanations for the findings presented in this study. Specifically, the manipulation of group engagement team involvement did not create an unrealistic performance review evaluation scenario in that auditors in all four experimental treatment conditions reported significantly more accountability to their component audit team than the group engagement team as well as a higher sense of responsibility for the outcome of the component audit engagement than the group audit engagement. Accordingly, I rule out auditor perceptions of the group engagement team performing a supervisory or performance evaluation function as an alternative explanation for the reported results. Additional tests also confirmed that neither the level of documentation requested by the group engagement team, nor the number of risks auditors identified as a result of preparing the documentation significantly influenced the reported interactions between group involvement and component supervisor preferences. Finally, I confirmed that auditor perceptions of risk signaling induced by the mere involvement of the group engagement team in their work did not affect any of the reported findings. Thus, these alternative explanations do not appear to account for the observed results.

5.2 Contributions

This research makes contributions to both academic research and audit practice in that it is the first to examine auditor decision making in the complex and unique group audit setting. This study extends existing research by investigating how multiple sources of intra-firm input in

the audit process affect auditor decision making. Specifically, this study examined how the preferences of a component audit supervisor may influence component auditor decision making when the group engagement team chooses to review component audit work, or take a more active role in the component audit process by providing detailed audit documentation instructions to members of the component engagement team. Such an investigation is important because scenarios may arise where the views of an audit firm or group engagement team about appropriate levels of auditor skepticism may conflict with the views, preferences, or engagement management styles of individual component supervisors, and auditors working under their supervision may be susceptible to biased decision making processes if they inherit these supervisors' directional goals.

This study provides evidence that inducing auditors to exert more cognitive effort during the audit process may mitigate the effects of directional goals on auditor decision making. Moreover, these findings are consistent with motivated reasoning theory which suggests the presence of accuracy goals can mitigate bias when directional goals are present (Kunda 1990). Moreover, the current research indicates that relatively low cost interventions by a group engagement team (i.e. providing increased guidance and involvement in the work of component auditors) may be sufficient to mitigate the bias associated with directional goals. However, this debiasing effect does not appear to cause the loss of component audit efficiency when component auditors are already motivated to be sufficiently skeptical.

This study also contributes to the extant body of research in motivated reasoning by examining the effects of directional goals when decision makers are also induced to exert increased cognitive effort and engage in more self-critical and evaluative thinking. Specifically, results show that professional auditors engaged in a decision making task in their field of

employment produced more consistent and less biased evaluations in an auditing scenario when they were induced to engage in more effortful thinking after they had inherited the directional goals of a superior. Thus, consistent with motivated reasoning theory, this study finds that effective mechanisms exist that mitigate the biases associated with directional goals in a professional setting.

From an audit practice perspective, accounting firms can be quite large with geographically dispersed offices and attempts at standardization of firm wide policies and practices may be undermined by the actions of individual supervisors who manage engagements and conduct performance reviews throughout the organization. This research provides evidence about factors that may mitigate the influence of superior preferences on the audit decision process. Specifically, this research suggests group engagement teams can increase the audit effort of component team members who work under the supervision of an optimistic supervisor merely by adjusting the perceived level of the group engagement team's involvement in component audit work through the specificity of their instructions to component auditor team members. Conversely, component audit efficiency does not appear to be compromised by increased group engagement team involvement, as the level of group involvement does not create differences in audit resource consumption when component auditors face a skeptical component supervisor.

From a more practical perspective, this research examines how the AICPA's group audit guidance influences auditor decision making in group audit settings and explores the implications of the broad leeway in component audit oversight currently afforded to group engagement teams who are ultimately responsible for expressing an opinion on the group financial statements. Such an investigation is important given the recent concerns expressed by

regulatory policy makers who are in a position to mandate how, and to what extent, group engagement teams are involved in the work of component auditors. This analysis is among the first to investigate auditor decision making in a group audit environment and may inform both policy makers and practitioners about the implications of auditor interaction and communication in the audits of large, potentially geographically dispersed, audit engagements.

5.3 Limitations and Opportunities for Future Research

This research is also subject to limitations that provide opportunities for future research. To avoid potential confounds introduced from peripheral experimental design choices, I examined the influence of group engagement team oversight and component supervisor preferences on auditor decision making where the group team and component team worked within the same accounting firm. Although this scenario frequently arises in practice under the revised audit guidance, it is not known how the constructs of group engagement team oversight and component supervisor preferences would influence auditor decision making when the group and component engagement teams are from different firms. Although I find participants felt greater accountability to the component team in all experimental conditions, it is an open empirical questions how this relationship may manifest itself when multiple accounting firms are involved in the audit, or if the group and component audits are conducted in different regions or countries.

Additionally, I manipulated group involvement such that participants were provided instructions from the group engagement team that were forwarded directly to them by the manager of their component engagement team. Differences in the form and structure of group engagement team involvement in the work of component audit team members may impact the pattern of thinking and cognitive effort expended by component auditors which may in turn

affect the pressure induced by the group team's involvement to make appropriate audit judgments. Finally, this study did not manipulate performance evaluation scenarios, allowing auditors to make their own assumptions about both formal and informal assessments of their performance and decision making, as would be the case in practice. Thus, the salience of an upcoming performance evaluation, as well as the parties with input in the evaluation process, may affect how auditor decision making is influenced by component supervisor preferences and group engagement team involvement. However, certain aspects of the psychological processes explored in this study do not necessarily operate on a conscious level, thus such peripheral features of the audit task structure may not significantly influence auditor decision making in this regard.

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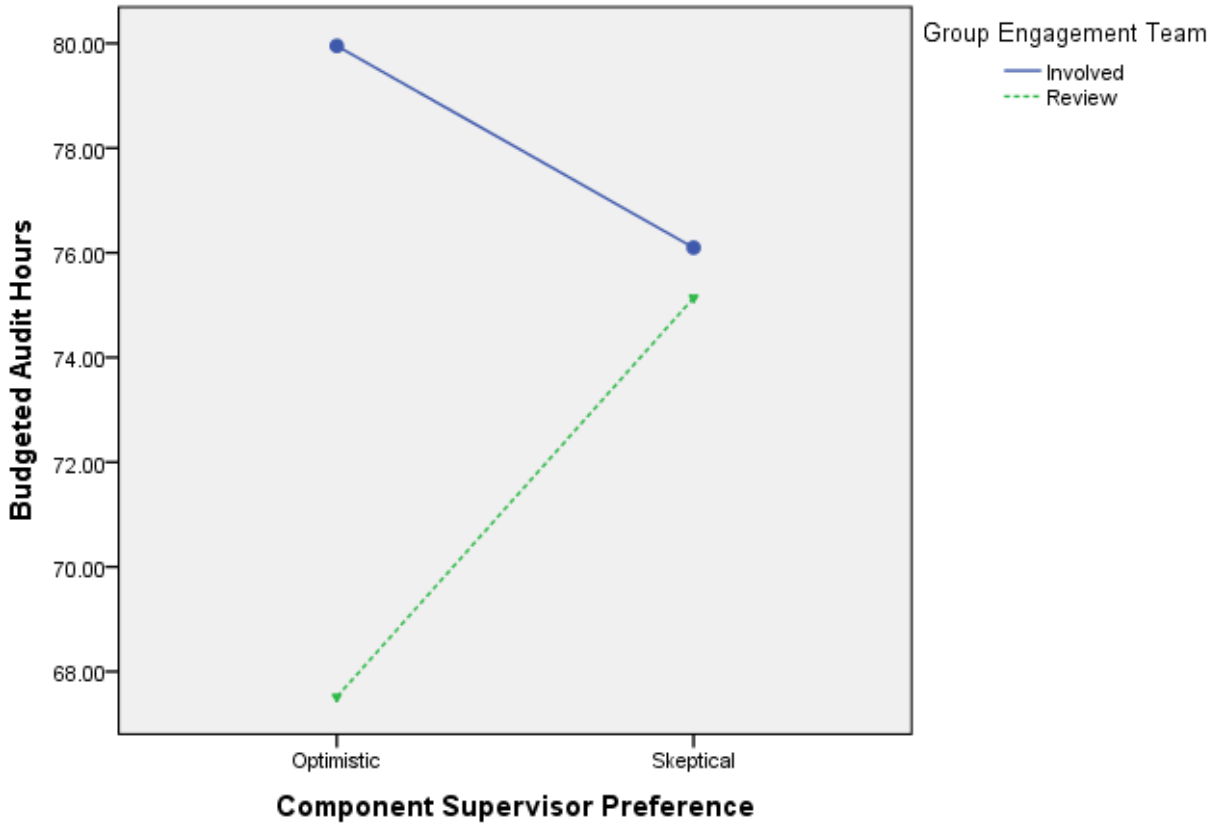
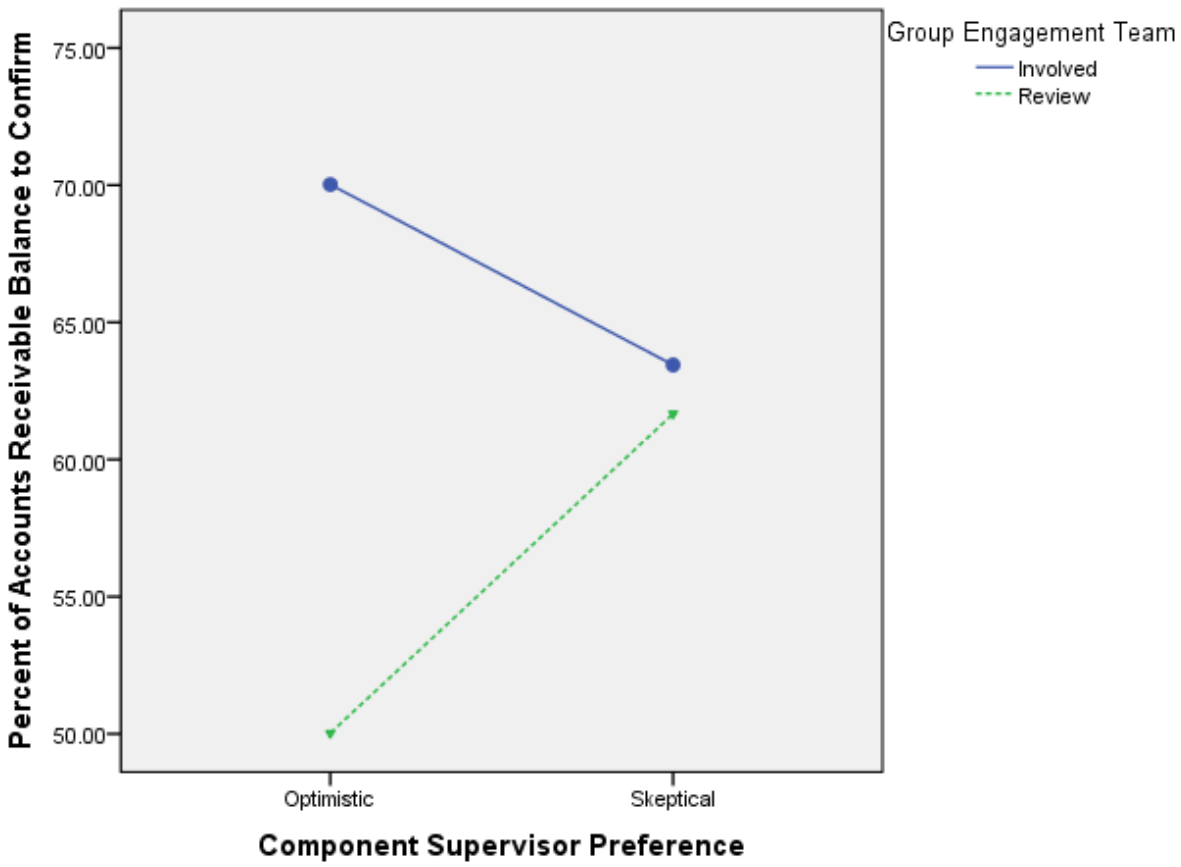
Figure 1: Interaction between Group Engagement Team Involvement and Component Supervisor Preference on Number of Budgeted Audit Hours



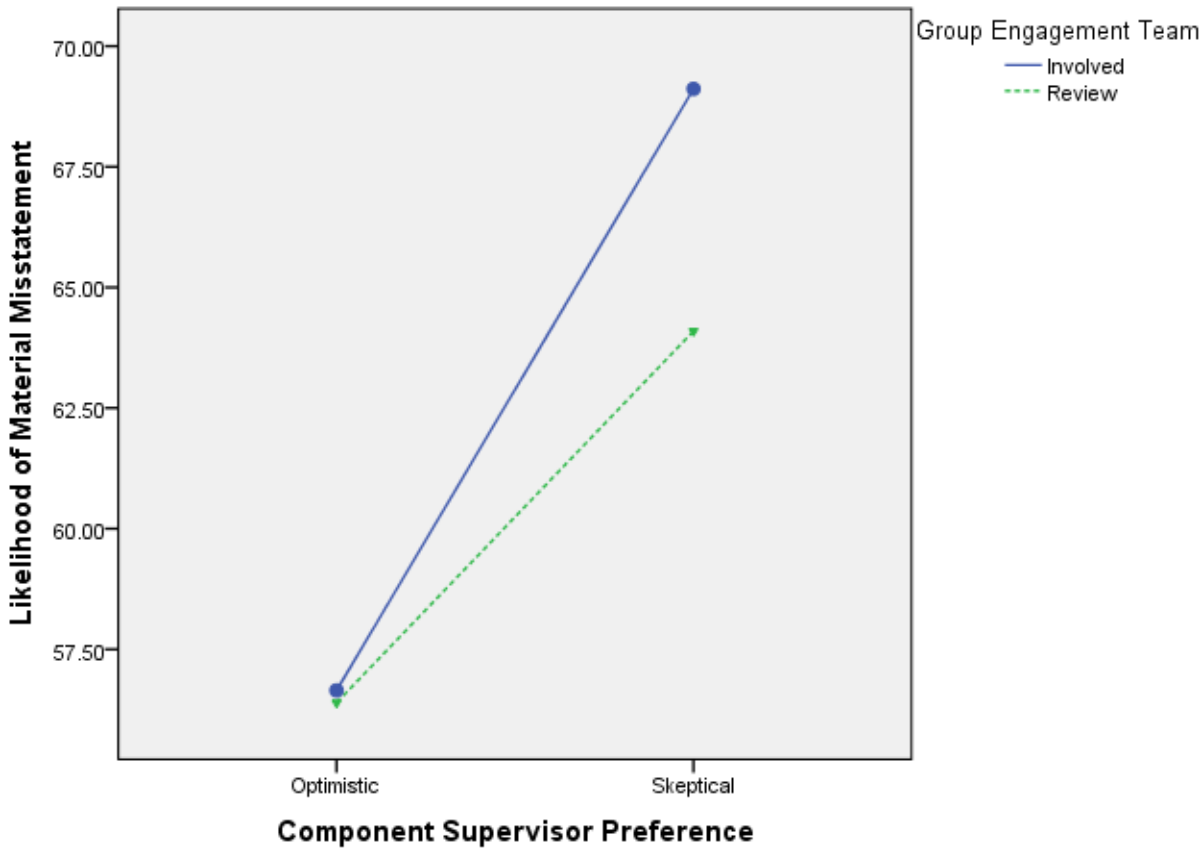
Covariates appearing in the model are evaluated at the following values: Familiarity with AU-C 600 = 41.2879

Figure 2: Interaction between Group Engagement Team Involvement and Component Supervisor Preference on Percent of Accounts Receivable Balance to Confirm



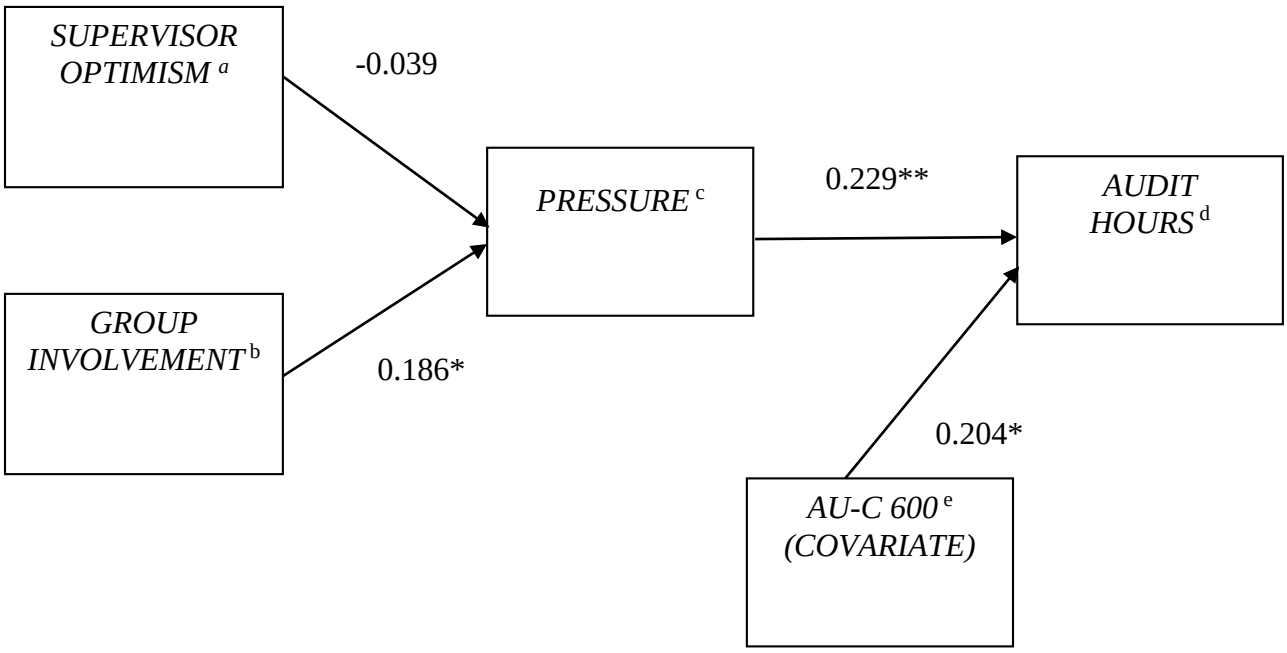
Covariates appearing in the model are evaluated at the following values: Familiarity with AU-C 600 = 41.2879

Figure 3: Interaction between Group Engagement Team Involvement and Component Supervisor Preference on Assessment of Likelihood of Material Misstatement



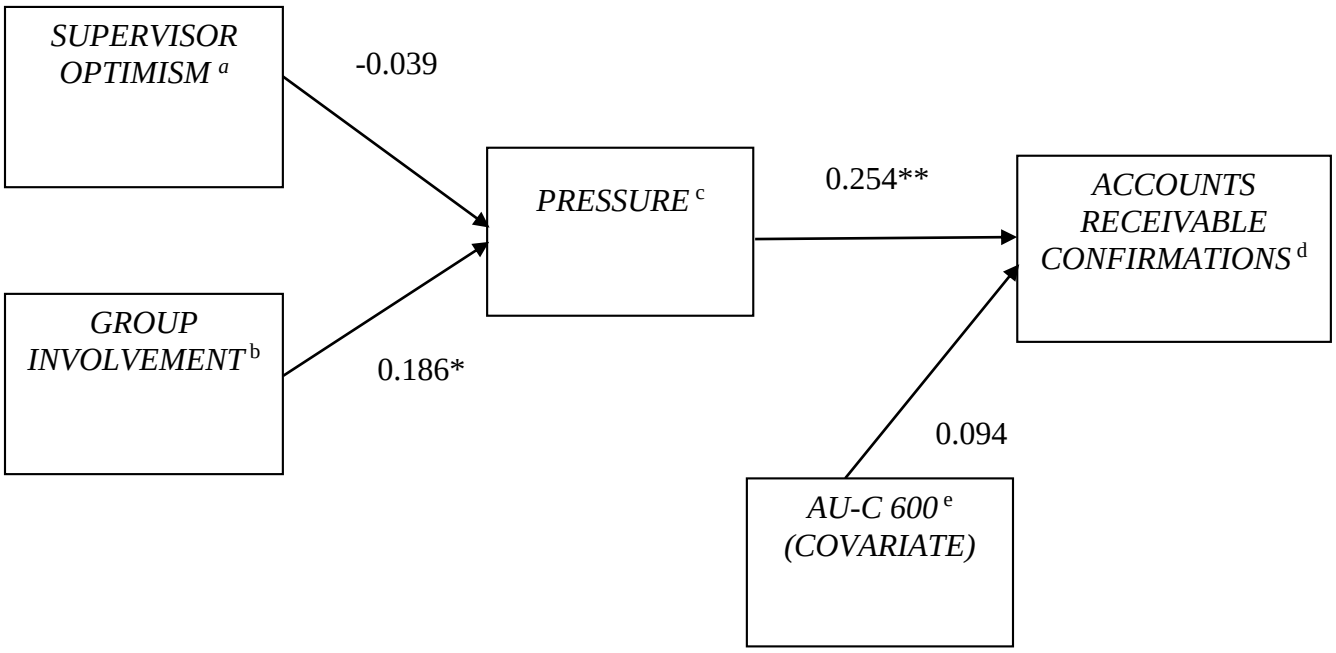
Covariates appearing in the model are evaluated at the following values: Familiarity with AU-C 600 = 41.2879

Figure 4: Path Analysis – Budgeted Audit Hours



Notes:
Goodness of model fit is indicated by: TLI = 1.5, CFI = 1.00, RMSEA = 0.001, χ^2 = 2.23 (p = 0.694)
Standardized regression weights are reported for paths.
*, and ** represent statistical significance at the 10% and 5% levels, respectively.
One-tailed p-values are reported for all variables except AU-C 600, which is included as a control variable and for which there is no theoretical directional prediction.
[a] Participants were asked to report whether the audit partner in charge of their audit team preferred more conservative/skeptical analysis of accounting estimates, or more aggressive/optimistic analysis of accounting estimates by responding to a 101-point scale where 0 = Conservative/Skeptical and 100 = Aggressive/Optimistic.
[b] Participants were asked to report how involved the group engagement team was in the audit work they were asked to complete by responding to a 101-point scale where 0 = Not Involved and 100 = Very Involved.
[c] Participants were asked to report how much pressure they felt to make appropriate audit judgments during the audit work they were asked to complete by responding to a 101-point scale where 0 = No Pressure and 100 = A Great Deal of Pressure.
[d] Participants were asked to report their recommendation for the number of hours that should be budgeted to audit accounts receivable and the allowance for doubtful accounts compared to last year by responding to a 101-point scale where 0 = Much Fewer Hours than Last Year and 100 = Much More Hours than Last Year.
[e] Participants were asked to report their familiarity with the AICPA's group auditing standard, AU-C Section 600 by responding to a 101-point scale where 0 = Not at All Familiar and 100 = Very Familiar.

Figure 5: Path Analysis – Substantive Procedures



Notes:
Goodness of model fit is indicated by: TLI = 1.11, CFI = 1.00, RMSEA = 0.001, χ^2 = 3.66 (p = 0.453)
Standardized regression weights are reported for paths.
*, and ** represent statistical significance at the 10% and 5% levels, respectively.
One-tailed p-values are reported for all variables except AU-C 600, which is included as a control variable and for which there is no theoretical directional prediction.
[a] Participants were asked to report whether the audit partner in charge of their audit team preferred more conservative/skeptical analysis of accounting estimates, or more aggressive/optimistic analysis of accounting estimates by responding to a 101-point scale where 0 = Conservative/Skeptical and 100 = Aggressive/Optimistic.
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[c] Participants were asked to report how much pressure they felt to make appropriate audit judgments during the audit work they were asked to complete by responding to a 101-point scale where 0 = No Pressure and 100 = A Great Deal of Pressure.
[d] Participants were asked to report their assessment of the percent of the total $8,260,000 accounts receivable balance that they suggest confirming during substantive audit procedures by responding to a 101-point scale where 0 = None and 100 = All.
[e] Participants were asked to report their familiarity with the AICPA's group auditing standard, AU-C Section 600 by responding to a 101-point scale where 0 = Not at All Familiar and 100 = Very Familiar.

TABLE 1
Overall Participant Demographic Characteristics
(n = 66)

Panel A: Demographics

	Frequency	Percent
Rank		
Staff	26	39.4%
Senior	35	53.0%
Manager	3	4.6%
Partner	2	3.0%
	66	100.0%
In-Charge		
Yes	46	69.7%
No	20	30.3%
Total	66	100.0%
Group Experience		
Yes:		
Component	10	15.5%
Group	14	21.5%
Both	27	41.5%
No	14	21.5%
Total	65	100.0%
Gender		
Male	33	50.0%
Female	33	50.0%
Total	66	100.0%

Panel B: Audit Experience

	Mean (Standard Deviation)				
	Skeptical Supervisor Group Involvement (n=17)	**Optimistic Supervisor Group Involvement (n=14)**	**Skeptical Supervisor Group Review (n=16)**	**Optimistic Supervisor Group Review (n=19)**	**ANOVA F-Statistic (p-value)**
Experience [a]	28.82	56.79	60.63	32.11	1.049
	(17.87)	(85.03)	(98.14)	(31.97)	(0.377)

Notes:
All p-values are two-tailed.
[a] Months of work experience as an auditor.

TABLE 2
Descriptive Statistics of Manipulation Checks and Post-Experiment Questions by Condition and Analysis of Variance

Panel A: Manipulation Checks

	Mean (Standard Deviation)				
	Skeptical Supervisor Group Involvement (n=17)	**Optimistic Supervisor Group Involvement (n=14)**	**Skeptical Supervisor Group Review (n=16)**	**Optimistic Supervisor Group Review (n=19)**	**ANOVA F-Statistic (p-value)**
Partner Skepticism [a]	9.71 (14.19)	67.86 (25.55)	23.13 (29.77)	73.68 (24.71)	29.67 (0.000)
Number of Unique Information Items Documented [b]	10.94 (4.94)	10.50 (5.95)	6.19 (2.93)	7.21 (2.57)	5.15 (0.003)

Panel B: Post-Experimental Questions

	Mean (Standard Deviation)				
	Skeptical Supervisor Group Involvement (n=17)	**Optimistic Supervisor Group Involvement (n=14)**	**Skeptical Supervisor Group Review (n=16)**	**Optimistic Supervisor Group Review (n=19)**	**ANOVA F-Statistic (p-value)**
Inference of Risk from Instructions [c]	50.59 (35.39)	44.29 (30.81)	56.25 (26.49)	42.89 (27.90)	0.68 (0.566)
Group Accountability [d]	77.94 (23.12)	73.57 (23.97)	80.94 (19.51)	62.11 (34.37)	1.769 (0.162)
Component Accountability [e]	92.35 (12.51)	88.57 (13.93)	91.88 (10.63)	94.89 (7.72)	0.86 (0.467)
Group Responsibility [f]	59.59 (23.73)	61.43 (27.13)	65.94 (23.61)	51.39† (34.72)	0.81 (0.492)
Component Responsibility [g]	84.12 (18.73)	81.79 (20.25)	84.38 (20.24)	80.79 (30.10)	0.10 (0.960)

Notes:
All p-values are two-tailed.
[a] Participants were asked to indicate whether the audit partner in charge of their audit team preferred more conservative/skeptical analysis of accounting estimates, or more aggressive/optimistic analysis of accounting estimates by responding to a 101-point scale where 0 = Conservative/Skeptical and 100 = Aggressive/Optimistic.
[b] The number of unique pieces of information pertaining to the audit that were documented by participants per the instructions they received from the group engagement team.
[c] Participants were asked to indicate whether the documentation instructions they received influenced their assessment of the risk of material misstatement associated with the allowance for doubtful accounts by responding to a 101-point scale where 0 = No Influence at All and 100 = Completely Influenced.
[d] Participants were asked to indicate how accountable they felt to the group engagement team when making their decisions by responding to a 101-point scale where 0 = Completely Unaccountable and 100 = Completely Accountable.
[e] Participants were asked to indicate how accountable they felt to the component engagement team when making their decisions by responding to a 101-point scale where 0 = Completely Unaccountable and 100 = Completely Accountable.
[f] Participants were asked to indicate how responsible they felt for the outcome of the group audit engagement by responding to a 101-point scale where 0 = Not Responsible and 100 = Completely Responsible.
[g] Participants were asked to indicate how responsible they felt for the outcome of the component audit engagement by responding to a 101-point scale where 0 = Not Responsible and 100 = Completely Responsible.
† n = 18

TABLE 3
Auditors' Recommendation for the Number of Budgeted Audit Hours: Analysis of Covariance, Estimated Marginal Means (Standard Deviations), and Tests of Contrasts

Panel A: Analysis of Covariance for Recommended Budgeted Audit Hours.

Source	DF	Sum of Squares	F-statistic	p-value‡
Component Supervisor Preference	1	55.89	0.30	0.294
Group Team Involvement	1	703.39	3.75	0.029
Involvement X Preference	1	526.80	2.81	0.049
Covariate:				
Familiarity with AU-C 600	1	683.73	3.64	0.061

Panel B: Estimated Marginal Cell Means (SD): Recommended Budgeted Audit Hours.

Group Team Involvement	*Supervisor Preference*		
	Optimistic	**Skeptical**	**Overall**
Involved	79.95	76.10	78.02
	(3.67)	(3.44)	(2.50)
Review	67.52	75.14	71.33
	(3.17)	(3.43)	(2.34)
Overall	73.73	75.62	74.68
	(2.43)	(2.41)	(2.42)

Panel C: Planned Contrast Comparisons of Groups

Comparisons	F-statistic	p-value‡
Involved Group – Optimistic Supervisor vs. Involved Group – Skeptical Supervisor	0.58	0.225
Review Group – Optimistic Supervisor vs. Review Group – Skeptical Supervisor	2.69	0.053
Involved Group – Optimistic Supervisor vs. Review Group – Optimistic Supervisor	6.63	0.006
Involved Group – Skeptical Supervisor vs. Review Group – Skeptical Supervisor	0.04	0.423

Notes:
‡p-values are one-tailed.
The dependent variable is auditors' recommendation for the number of hours that should be budgeted to audit accounts receivable and the allowance for doubtful accounts compared to last year (0 = Much Fewer Hours than Last Year; 100 = Much More Hours than Last Year).

TABLE 4
Auditors' Assessment of the Percent of Accounts Receivable Balance to Confirm: Analysis of Covariance, Estimated Marginal Means (Standard Deviations), and Tests of Contrasts

Panel A: Analysis of Covariance for Percent of Accounts Receivable Balance to Confirm.

Source	DF	Sum of Squares	F-statistic	p-value‡
Component Supervisor Preference	1	100.73	0.22	0.321
Group Team Involvement	1	1860.05	4.05	0.024
Involvement X Preference	1	1326.92	2.89	0.047
Covariate:				
Familiarity with AU-C 600	1	462.63	1.01	0.320

Panel B: Estimated Marginal Cell Means (SD): Percent of Accounts Receivable to Confirm.

Group Team Involvement	*Supervisor Preference*		
	Optimistic	**Skeptical**	**Overall**
Involved	70.02	63.45	66.73
	(5.74)	(5.38)	(3.91)
Review	50.07	61.66	55.85
	(4.96)	(5.38)	(3.68)
Overall	60.03	62.55	61.29
	(3.81)	(3.77)	(3.79)

Panel C: Planned Contrast Comparisons of Groups

Comparisons	F-statistic	p-value‡
Involved Group – Optimistic Supervisor vs. Involved Group – Skeptical Supervisor	0.69	0.205
Review Group – Optimistic Supervisor vs. Review Group – Skeptical Supervisor	2.55	0.058
Involved Group – Optimistic Supervisor vs. Review Group – Optimistic Supervisor	7.00	0.005
Involved Group – Skeptical Supervisor vs. Review Group – Skeptical Supervisor	0.05	0.409

Notes:
‡p-values are one-tailed.
The dependent variable is auditors' assessment of the percent of the total $8,260,000 accounts receivable balance that they suggest confirming during substantive audit procedures (0 = None; 100 = All).

TABLE 5
Auditors' Assessment that the Allowance for Doubtful Accounts is Materially Misstated: Analysis of Covariance, Estimated Marginal Means (Standard Deviations), and Tests of Contrasts

Panel A: Analysis of Covariance for Likelihood of Material Misstatement.

Source	DF	Sum of Squares	F-statistic	p-value‡
Component Supervisor Preference	1	1602.26	3.06	0.043
Group Team Involvement	1	109.12	0.21	0.325
Involvement X Preference	1	90.88	0.17	0.339
Covariate:				
Familiarity with AU-C 600	1	1017.90	1.95	0.168

Panel B: Estimated Marginal Cell Means (SD): Likelihood of Material Misstatement.

Group Team Involvement	*Supervisor Preference*		
	Optimistic	**Skeptical**	**Overall**
Involved	56.65	69.12	62.88
	(6.12)	(5.74)	(4.17)
Review	56.39	64.09	60.24
	(5.29)	(5.73)	(3.92)
Overall	56.52	66.60	61.56
	(4.06)	(4.02)	(4.04)

Panel C: Planned Contrast Comparisons of Groups

Comparisons	F-statistic	p-value‡
Involved Group – Optimistic Supervisor vs. Involved Group – Skeptical Supervisor	2.17	0.073
Review Group – Optimistic Supervisor vs. Review Group – Skeptical Supervisor	0.98	0.163
Involved Group – Optimistic Supervisor vs. Review Group – Optimistic Supervisor	0.00	0.488
Involved Group – Skeptical Supervisor vs. Review Group – Skeptical Supervisor	0.38	0.271

Notes:
‡p-values are one-tailed.
The dependent variable is auditors' assessment of the likelihood that the unaudited allowance for doubtful accounts is materially misstated (0 = Extremely Unlikely; 100 = Extremely Likely).

Appendix A: Experimental Instrument—Optimistic Supervisor and Review by Group Engagement Team

1.0 Introduction

Thank you for participating in my study. I am a PhD student at Virginia Tech and this research is part of my dissertation for my doctorate in accounting. With this case study I plan to examine auditors' decision making during a group audit engagement. I realize that your time is valuable and I appreciate your willingness to participate.

The following study asks you to assume the role of an auditor for a hypothetical client which represents a subsidiary (component) business of a larger, group audit engagement. On the following pages you will receive background information about the client, selected financial information, and information related to the audit. After receiving this material you will be asked to make some preliminary assessments about the client related to the audit. There are no correct or incorrect answers to this study. Rather, you are asked to make assessments you feel are most appropriate using your own professional judgment.

This study should take approximately 25 minutes to complete. Your responses to this study will remain confidential. All responses will remain anonymous. All individual and firm responses will only be analyzed in the aggregate. If you have any questions or concerns about the study, please contact me at lauckjr@vt.edu, or my faculty advisor Sudip Bhattacharjee at sudipb@vt.edu.

Thank you very much for your time and your assistance!

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Please continue to the next page to begin the case

2.0 Client Background Information – ABC Corp. and XYZ Subsidiary

ABC Corp. is a large private entity which manufactures and sells heavy engine components for large commercial and off-road vehicles. The company also has several wholly-owned subsidiaries in related industries. XYZ Subsidiary is one such subsidiary that manufactures and sells small engine components for lawn and garden equipment. XYZ Subsidiary's management prepares financial statements for the subsidiary which are consolidated along with the financial statements of the other subsidiaries in the consolidated financial statements of ABC Corp.

Revenue, net income, and total assets for XYZ Subsidiary for the year's ended 12/31/X2 and 12/31/X3 are presented below:

	12/31/X3	**12/31/X2**
	UNAUDITED	**AUDITED**
Total Revenues	$36,120,000	$27,076,000
Net Income	$1,575,000	$1,040,000
Total Assets	$51,440,000	$41,032,000

2.1 Structure of Group and Component Audit Engagements

Your firm is engaged to audit the consolidated financial statements of ABC Corp. Your firm conducts the engagement with one audit team who is responsible for establishing the overall group audit strategy and expressing an opinion on the consolidated financial statements (the group engagement team). In addition to the group engagement team, separate audit teams perform audit procedures on each of the subsidiary companies (the component audit teams). During the past several years, neither ABC Corp. nor XYZ Subsidiary have made any significant accounting policy changes, or reported any extraordinary items or other unusual non-operating activities. ABC Corp. is considering going public as one consolidated entity through an initial public offering but no decision has been reached by the company at this time. Your firm has performed audits for ABC Corp. and XYZ Subsidiary for many years and both audits typically run smoothly with no significant issues or difficulties with the client or management.

You have been assigned to the component audit team for the XYZ subsidiary. The structure of this engagement meets the criteria for a group audit based on the AICPA's AU-C Section 600. Accordingly, the audit team responsible for the overall engagement direction is the group engagement team and your audit team represents a component audit team.

Group Engagement Team

The group engagement team (ABC Corp. audit team), consists of a partner, a manager (Jon Hill), two seniors, and several staff.

Component Audit Team

In addition to you, the XYZ Subsidiary audit team consists of a partner, a manager (Frank Green), and two staff. The group engagement team works out of a different office of your firm than you do. Accordingly, there is no overlap between the members of the two audit teams. That is, the members of the group (ABC Corp.) audit team are all different from the members of your component (XYZ Subsidiary) audit team.

Your audit manager, Frank Green, also indicated that the component audit team partner (i.e. XYZ subsidiary partner) in charge of your audit team tends to be concerned about unduly conservative accounting judgments (such as unnecessary audit adjustments to earnings), because the partner feels that auditors may overreact to recent accounting scandals and reforms. The partner also wants auditors to be alert for red flags during the audit process when they are present, but not where such red flags do not exist. As such, the partner stressed not ignoring the client's insights into its own business, and allowing the client to adopt less conservative accounting estimates, within the rules, where there is subjectivity.

To gain an understanding of your responses in this case, please briefly summarize the views and concerns of the XYZ Subsidiary audit partner mentioned above:

3.0 The Audit Task

You have been assigned to work on the accounts receivable area of XYZ Subsidiary during fieldwork. It is currently just after year-end and you are preparing for an upcoming planning meeting with your audit team and members of the group (ABC) engagement team. You have been asked by Frank Green, your audit manager, to do a preliminary review of unaudited accounts receivable net of the allowance for doubtful accounts (net receivables) and then meet with Charles Barnes, Controller of XYZ subsidiary, to discuss the balances. Your audit manager indicated that Charles is competent and a reliable and forthcoming source of information. Following your meeting with the Controller, you will be asked to make some preliminary judgments and suggestions related to audit planning.

Below is information related to the current year's (unaudited) and last year's (audited) sales revenue, accounts receivable, and allowance for doubtful accounts. The group engagement team indicated that materiality for this audit area of XYZ Subsidiary was $100,000. All unaudited balances were provided by the client.

3.1 Accounts Receivable Aging and Allowance for Doubtful Accounts Balances

	12/31/X3	12/31/X2	
	UNAUDITED	**AUDITED**	**Percent Change**
Accounts Receivable	$8,260,000	$6,400,000	29.06%
(Allowance for Doubtful Accounts)	($691,198)	($287,305)	140.58%
Net Receivables	$7,568,802	$6,112,695	
Total Revenues	$36,120,000	$27,076,000	33.40%

12/31/X2 Accounts Receivable Aging - AUDITED					
Age	Current	1-30 Days Past Due	31-60 Days Past Due	>60 Days Past Due	TOTAL
Amount Receivable	$5,102,429	$896,318	$344,221	$57,032	$6,400,000
Estimated Percent Uncollectible	0%	10%	45%	75%	-
Allowance	$0	$89,632	$154,899	$42,774	$287,305

12/31/X3 Accounts Receivable Aging - UNAUDITED					
Age	Current	1-30 Days Past Due	31-60 Days Past Due	>60 Days Past Due	TOTAL
Amount Receivable	$6,029,227	$1,226,929	$614,593	$389,251	$8,260,000
Estimated Percent Uncollectible	0%	10%	45%	75%	-
Allowance	$0	$122,693	$276,567	$291,938	$691,198

3.2 Email Regarding XYZ Subsidiary Documentation

Before your meeting with Charles Barnes, Controller of XYZ Subsidiary you received the following email forwarded to you by your audit manager.

Email

From: Green, Frank (Manager of XYZ Subsidiary Audit)
Date: January 3, 21X3
Subject: FW: Documentation of XYZ's receivables and allowance account risk assessment

After you've met with Charles and reviewed the information related to XYZ's receivables, please document your understanding of the changes in accounts receivable net of the allowance (net accounts receivable), including specific factors that are indicative of increased or decreased audit risks associated with XYZ's industry, XYZ's customer base, and The ability of XYZ's customer's to pay their debts as they become due. When you're done, please send your documentation back to both Jon Hill (manager of the group engagement team) and me.
Thanks,
Frank

From: Hill, Jon (Manager of ABC Corp. Audit)
To: Green, Frank
Date: January 3, 21X3
Subject: Documentation of XYZ's receivables and allowance account risk assessment

>>>>>Frank,

>>>>>Please send me copies of any risk assessment documentation your team is preparing before our upcoming planning meeting.

>>>>>The group engagement team will review the information prior to the upcoming planning meeting.

>>>>>Thanks,
>>>>>Jon

3.3 Meeting with Charles Barnes (XYZ Subsidiary's Controller)

Dialogue

You: "Thanks for meeting with me. I just wanted to sit down with you before the audit and discuss some of the fluctuations in accounts receivable and the allowance for doubtful accounts from last year. I noticed that sales, receivables, and the allowance all increased from last year. Can you take me through any major events or changes that have taken place this past year related to those accounts?"

Charles Barnes (Controller): "Sure, I'd be happy to help. Over the past year or so we've been actively pursuing new customers through an extensive marketing campaign to attract customers from industries we haven't traditionally served in the past. Much of the increase in revenue we recognized this year is due to purchases from several new customers of ours who started doing business with us in the second half of the current year. Many of the new customers are start-up businesses who were concerned about their cash flows during the early stages of their operations so we agreed to their request for more flexible enforcement of our normal payment terms which are 2/10 net/30. Most of the balances that appear as past due on our aging report at 12/31/X3 related to the new customers, however, all of our new customers continue to make regular payments on their accounts and we also keep close track of the credit limits we established with them to make sure they don't exceed these amounts."

As for the allowance, we use the percentage of-receivables (balance sheet) approach for calculating the allowance for doubtful accounts. To address the risks associated with relaxed credit policies, we increased our total allowance for doubtful accounts from more than 4% of total receivables to more than 8% of total receivables. When calculating the allowance, we decided to keep the same assumed uncollectible percentage of past due balances because these percentages have proven to be historically accurate for many years. We think that the 12/31/X3 allowance of $691,198 is appropriate after carefully considering all available information"

You: "How do you feel about the ultimate collectability of the individual past due accounts?"

Charles Barnes (Controller): "Well since the year just ended we haven't had any significant collections after year end, but as you know, in past years our allowance estimates have been reasonably accurate compared to write-offs. I feel that we conduct a thorough and methodical calculation of the allowance for doubtful accounts. We have not had to write-off any receivables related to the new customers and we expect that write-offs related to 12/31/X3 receivables will not exceed the allowance for doubtful accounts balance."

You: "Would it be possible to get an aged accounts receivable report by customer along with some notes about the collectability of the accounts reported with balances over 30 days past due?"

Charles Barnes (Controller): “Yes that shouldn’t be a problem. I can get that to you later today.”

You: “Great. Thanks for your help. I really appreciate it.”

Charles Barnes (Controller): “No problem. Let me know if you need anything else.”

PBC – Accounts Receivable aging provided, by Charles Barnes, Controller XYZ Subsidiary. Per auditor request, Charles indicated accounts with past due balances over 30 days old and provided additional notes on the collectability of these accounts

XYZ Subsidiary						
Accounts Receivable Aged Trial Balance						
Aging As of 12/31/X3						
ID	**Customer**	**Current**	**1-30 Days Past Due**	**31-60 Days Past Due**	**>60 Days Past Due**	**TOTAL**
A-4369	**Alexandria** Machine					
	Balance	306,001	32,000			338,001
A-5189	**Allied Associates**					
	Balance	38,234				38,234
A-1112	**Allied Hydraulics**					
	Balance	5,721				5,721
A-7250	**Anderson & Co.**					
	Balance	373,550	10,022			383,572
C-1231	**Cleveland Motor**					
	Balance	33,616				33,616
D-4956	**Davidson & Riggins**					
	Balance	41,432				41,432
D-9619	**Dixie Technologies**					
	Balance	137,131	119,174	85,775	74,992	417,072
E-1732	**Engine Corp U.S.**					
	Balance	193,000				193,000
F-9011	**Federated Machine**					
	Balance	5,659				5,659
F-1239	**Frasier Engines**					
	Balance	21,406	2,910			24,316
H-1823	**Henderson Hobby**					
	Balance	107,430	46,222	9,403		163,055
H-7620	**HGF Development**					
	Balance	148				148

ID	Customer	Current	1-30 Days Past Due	31-60 Days Past Due	>60 Days Past Due	TOTAL
H-9994	High-Point Tech					
	Balance	565,696	18,350	38,754		622,800
J-3211	Jackson Industries					
	Balance	34,051				34,051
J-4646	Johnson Mechanical					
	Balance	20,297				20,297
K-1222	Kellogg Racing					
	Balance	44,102				44,102
L-1873	Larson Engines					
	Balance	11,589	245			11,834
L-1901	Lawn and Field Tech					
	Balance	605,250	85,442			690,692
L-1900	Lawn Care Inc.					
	Balance	76,714				76,714
M-115	Mechanical Robotic					
	Balance	330,275	43,002	29,224		402,501
M-110	Mine Machines Inc.					
	Balance	9,124				9,124
N-8509	National Machine					
	Balance	44,806				44,806
N-1332	Northern Dynamics					
	Balance	9,231				9,231
O-1000	Oregon Engineering					
	Balance	30,003				30,003
P-1204	Peregrine Industries					
	Balance	1,110,134	340,277	425,966	248,009	2,124,386
P-1907	Petersburg Labs					
	Balance	27,737				27,737
Q-1001	Quincy Locomotion					
	Balance	21,085				21,085

ID	Customer	Current	1-30 Days Past Due	31-60 Days Past Due	>60 Days Past Due	TOTAL
R-1002	**Rhode Island Metals**					
	Balance	15,843				15,843
S-2236	**SC Adventure Sports**					
	Balance	18,849				18,849
S-8900	**Southern Outfitters**					
	Balance	24,513				24,513
S-8667	**Staunton Motors**					
	Balance	185,066	37,645	25,471		248,182
T-6454	**Track Day Engines**					
	Balance	4,240				4,240
U-0517	**Union Mechanical**					
	Balance	1,389,324	481,188		66,250	1,936,762
V-9991	**Verdez South Texas**					
	Balance	3,296				3,296
W-365	**West Coast Motor**					
	Balance	1,333				1,333
W-110	**Wyatt Industries**					
	Balance	183,341	10,452			193,793
TOTAL	**BALANCE**	**6,029,227**	**1,226,929**	**614,593**	**389,251**	**8,260,000**

PBC - Notes on collectability of accounts receivable with balances over 30 days old – Prepared by Charles Barnes, Controller, XYZ Subsidiary

ID	Customer	Current	1-30 Days Past Due	31-60 Days Past Due	>60 Days Past Due	TOTAL
D-9619	Dixie Technologies					
	Balance	137,131	119,174	85,775	74,992	417,072

Dixie Technologies is a new customer of ours this year. They are a developer of efficient, small, hybrid-electric engines. As a new company, much of their work includes research and development activities and they have recorded modest revenues as they attempt to develop a standard product line and increase market share. We receive regular payments from Dixie and have not written off any balances related to their account.

ID	Customer	Current	1-30 Days Past Due	31-60 Days Past Due	>60 Days Past Due	TOTAL
H-1823	Henderson Hobby					
	Balance	107,430	46,222	9,403		163,055

Henderson Hobby is a manufacturer of powered model boats, cars, and other mechanized toys. Henderson experienced a significant set-back this year when their largest wholesale client defaulted on their outstanding payables to Henderson. Henderson has since entered chapter 11 bankruptcy. Our general counsel estimates that we should ultimately be able to collect about 25% of their balance, however, the accuracy of the estimate is loose so we have not written off any balance outstanding at this time. We did, however, take this into consideration when calculating our allowance.

ID	Customer	Current	1-30 Days Past Due	31-60 Days Past Due	>60 Days Past Due	TOTAL
H-9994	High-Point Tech					
	Balance	565,696	18,350	38,754		622,800

Another new customer of ours who manufactures efficient small engines. High-Point Tech is the plaintiff in a patent infringement lawsuit related to their primary product offering. If judgment is in their favor it will drastically reduce their competition and should improve their sales and cash flows.

ID	Customer	Current	1-30 Days Past Due	31-60 Days Past Due	>60 Days Past Due	TOTAL
M-115	Mechanical Robotic					
	Balance	330,275	43,002	29,224		402,501

Mechanical robotic is a new customer who makes regular payments. We are their primary provider of components used in their manufacturing process.

ID	Customer	Current	1-30 Days Past Due	31-60 Days Past Due	>60 Days Past Due	TOTAL
P-1204	**Peregrine Industries**					
	Balance	1,110,134	340,277	425,966	248,009	2,124,386

Peregrine Industries is our largest new customer. They produce small, lightweight, unmanned aircraft and are in the process of negotiating a large contract with the Department of Defense and have been stockpiling finished goods inventory to meet anticipated future demand from the D.O.D.

ID	Customer	Current	1-30 Days Past Due	31-60 Days Past Due	>60 Days Past Due	TOTAL
S-8667	**Staunton Motors**					
	Balance	185,006	37,645	25,471		248,182

Staunton is a new customer who engineers and develops custom engines for other manufacturing companies. We receive regular payments from Staunton but because of the nature of their contract work, their cash inflows frequently lag significantly behind their purchases from us. Accordingly, they tend to pay most of their balances after 60 days.

ID	Customer	Current	1-30 Days Past Due	31-60 Days Past Due	>60 Days Past Due	TOTAL
U-0517	**Union Mechanical**					
	Balance	1,389,324	381,188		66,250	1,936,762

Union Mechanical is a customer we've had for years. They are our largest customer and have never defaulted on an invoice. They tend to have a large balance because many of their orders are placed using a direct interface between their inventory management software and our order management software. However, union frequently receives volume discounts which must be processed manually which causes delays in finalized invoice amounts. The $66,250 balance in the >60 days past due category is related to an order Union claims they returned to us but we can't track down the shipping documentation. We're working with union to get more information about the return but it should be resolved shortly.

3.4 Independent Industry Analyst Report

In addition to the information provided by Charles Barnes, Controller, XYZ Subsidiary, you have also obtained the following engine components manufacturing industry analysis report from an independent business analyst firm.

Industry Report: Engine Components Manufacturing

General Economic Trends

The engine components manufacturing industry has experienced several revenue trend changes over the past five years, after remaining relatively stable for several previous decades. As an industry with almost exclusively commercial customers, the recent global economic slowdown didn't significantly affect the industry until their customers began to experience the effects. The effects experienced by these commercial customers of the industry were difficult for many to overcome and resulted in several engine component consumers exiting the market or experiencing significant liquidity difficulties. As a result of these difficulties, commercial consumers began putting pressure on engine component manufacturers to reduce costs and as a result the components manufacturing industry has become increasingly competitive. Although some manufacturers have left the market, those who remain compete heavily on price with their competitors which has driven margins increasingly lower over the past several years.

Emerging Markets

As a result of increased competition and decreased margins, many engine component manufacturers have entered new markets in an attempt to increase sales volume.

Opportunities

Through relaxed customer screening policies and credit terms, engine component manufacturers have the opportunity to expand into new markets that previously were not considered viable sales avenues such as start-up ventures and commercial customers with extensive research and development operations. Opportunities exist for engine component manufacturers to gain long-term and potentially highly profitable commercial consumers through developing relationships when these customers are in a development or growth stage.

Risks

Although expanded customer channels have resulted in industrywide revenue stabilization, potential risks have also been realized to varying degrees. Many of the start-up commercial customers of engine component manufacturers face significant cash-flow and liquidity concerns as they balance product development, marketing, and supply chain management considerations. Although the success of many new market entrants has been reported, business results are choppy across these relative newcomers and punctuated by several large failures in the past 12 months. Significant risks are present that start-up commercial customers may fail to gain market success or maintain sufficient liquidity to remain a going concern. Additionally, some research

and development firms have been unable to avoid default and bankruptcy after the loss of large contracts or failed contract negotiations. Due to the nature of the product, engine component manufacturers are rarely able to recover inventory through repossession if customer default occurs.

3.5 Requested Documentation

Recall that you previously received an email regarding the preparation of audit documentation. Please review the email you received (presented below) before continuing to the next page to complete the requested documentation.

Email

From: Green, Frank (Manager of XYZ Subsidiary Audit)
Date: January 3, 21X3
Subject: FW: Documentation of XYZ's receivables and allowance account risk assessment

After you've met with Charles and reviewed the information related to XYZ's receivables, please document your understanding of the changes in accounts receivable net of the allowance (net accounts receivable), including specific factors that are indicative of increased or decreased audit risks associated with XYZ's industry, XYZ's customer base, and The ability of XYZ's customer's to pay their debts as they become due. When you're done, please send your documentation back to both Jon Hill (manager of the group engagement team) and me.
Thanks,
Frank

From: Hill, Jon (Manager of ABC Corp. Audit)
To: Green, Frank
Date: January 3, 21X3
Subject: Documentation of XYZ's receivables and allowance account risk assessment

>>>>>Frank,

>>>>>Please send me copies of any risk assessment documentation your team is preparing before our upcoming planning meeting.

>>>>>The group engagement team will review the information prior to the upcoming planning meeting.

>>>>>Thanks,
>>>>>Jon

Please use the space below to document your **understanding of the changes in accounts receivable net of the allowance (net accounts receivable) as well as factors you feel are important for audit planning.**

Next you will be asked to make some preliminary judgments and suggestions related to audit planning:

Based on the assessment you just made of XYZ Subsidiary's accounts receivable, what is your assessment of the likelihood that the unaudited 12/31/X3 allowance for doubtful accounts balance is materially misstated?

0-----10-----20-----30-----40-----50-----60-----70-----80-----90-----100
* * *
Extremely Unlikely Extremely Likely

Please indicate your response by choosing a number between 0 and 100: _____

The current, unaudited, allowance for doubtful accounts is $691,198. Based on your preliminary review, what do you think an appropriate amount for the allowance for doubtful accounts balance would be at 12/31/X3?

What is your recommendation for the number of hours that should be budgeted to audit accounts receivable and the allowance for doubtful accounts compared to last year?

0-----10-----20-----30-----40-----50-----60-----70-----80-----90-----100
* * *

Much fewer hours than last year	Same number of hours as last year	Much more hours than last year

Please indicate your response by choosing a number between 0 and 100: _____

What percent of the total $8,260,000 accounts receivable balance do you suggest confirming during substantive audit procedures?

0-----10-----20-----30-----40-----50-----60-----70-----80-----90-----100
* * *
None Half All
Please indicate your response by choosing a number between 0 and 100: _____

4.0 Judgments about the Audit Engagement

1. In your opinion, did the audit partner in charge of your audit team prefer more conservative/skeptical analysis of accounting estimates, or more aggressive/optimistic analysis of accounting estimates?

0-----10-----20-----30-----40-----50-----60-----70-----80-----90-----100
* * *
Conservative/Skeptical Neutral Aggressive/Optimistic

Please indicate your response by choosing a number between 0 and 100: _____

2. During the audit work you just completed, how much pressure did you feel to make appropriate audit judgments?

0-----10-----20-----30-----40-----50-----60-----70-----80-----90-----100
* * *
No Pressure A Great Deal of Pressure

Please indicate your response by choosing a number between 0 and 100: _____

3. Recall that you received an email with instructions related to your audit work. Did these documentation instructions influence your assessment of the risk of material misstatement associated with the allowance for doubtful accounts?

0-----10-----20-----30-----40-----50-----60-----70-----80-----90-----100
* * *
No Influence at all Completely Influenced

Please indicate your response by choosing a number between 0 and 100: _____

4. Thinking about the audit work you just completed, how accountable did you feel to the *group engagement team* when making your decisions?

0-----10-----20-----30-----40-----50-----60-----70-----80-----90-----100
* * *
Completely Unaccountable Completely Accountable

Please indicate your response by choosing a number between 0 and 100: _____

5. Thinking about the audit work you just completed, how accountable did you feel to the *component engagement team* when making your decisions?

0-----10-----20-----30-----40-----50-----60-----70-----80-----90-----100
* * *

Completely Unaccountable Completely Accountable

Please indicate your response by choosing a number between 0 and 100: _____

6. Thinking about the audit work you just completed, how responsible did you feel for the outcome of the *group audit engagement*?

0-----10-----20-----30-----40-----50-----60-----70-----80-----90-----100
* * *

Not Responsible Completely Responsible

Please indicate your response by choosing a number between 0 and 100: _____

7. Thinking about the audit work you just completed, how responsible did you feel for the outcome of the *component audit engagement*?

0-----10-----20-----30-----40-----50-----60-----70-----80-----90-----100
* * *

Not Responsible Completely Responsible

Please indicate your response by choosing a number between 0 and 100: _____

8. When you think of the relationship between the *group engagement team* and the *component engagement team*, do you think of them as representing one large auditing unit, or as two separate auditing units?

0-----10-----20-----30-----40-----50-----60-----70-----80-----90-----100
* * *

One large Auditing Unit Two Separate Auditing Units

Please indicate your response by choosing a number between 0 and 100: _____

9. How involved was the *group engagement team* in the audit work you were asked to complete?

0-----10-----20-----30-----40-----50-----60-----70-----80-----90-----100
* * *

Not involved Very involved

Please indicate your response by choosing a number between 0 and 100: _____

10. How involved was the *component engagement team* in the audit work you were asked to complete?

0-----10-----20-----30-----40-----50-----60-----70-----80-----90-----100
* * *

Not involved Very involved

Please indicate your response by choosing a number between 0 and 100: _____

11. Thinking about the audit work you just completed, how did the *group engagement team* perceive the level of risk associated with net receivables?

0-----10-----20-----30-----40-----50-----60-----70-----80-----90-----100
* * *

Low risk High risk

Please indicate your response by choosing a number between 0 and 100: _____

12. Thinking about the audit work you just completed, how did the *component engagement team* perceive the level of risk associated with net receivables?

0-----10-----20-----30-----40-----50-----60-----70-----80-----90-----100
* * *

Low risk High risk

Please indicate your response by choosing a number between 0 and 100: _____

5.0 Demographic Information (all personally identifying information will remain confidential)

1. How long have you worked as an auditor?

   _____ Years _____ Months

2. Please provide your current job title (e.g., staff, senior, manager, etc.):

   _____

3. Do you have In-Charge experience?

   ___ Yes ___ No

4. How familiar are you with the AICPA's group auditing standard, AU-C Section 600:

   0-----10-----20-----30-----40-----50-----60-----70-----80-----90-----100
   * * *

Not at all Familiar Very Familiar

Please indicate your response by choosing a number between 0 and 100: _____

5. Have you worked on group audit engagements?

   ___ Yes ___ No

6. If you answered "yes" to question 4, have you worked on group audit teams, component audit teams, or both? _____

7. What is your gender?

   ___ Female ___Male

You have finished the case study. Thank you very much for your participation.

Appendix B: Skeptical Supervisor Manipulation

Your audit manager, Frank Green, also indicated that the component audit team partner (i.e. XYZ subsidiary partner) in charge of your audit team tends to be concerned about unduly aggressive accounting judgments (such as boosting earnings), because the partner feels that auditors may not sufficiently react to recent accounting scandals and reforms. The partner also wants auditors to be alert for red flags in all aspects of the audit process. As such, the partner stressed not accepting the client's explanations without adequate justification, and expects the client to adopt aggressive accounting estimates where there is subjectivity.

Appendix C: Detailed Risk Documentation Instructions from Group Engagement Team Manipulation

3.5 Requested Documentation

Recall that you previously received an email regarding the preparation of audit documentation. Please review the email you received (presented below) before continuing to the next page to complete the requested documentation.

Email

From: Green, Frank (Manager of XYZ Subsidiary Audit)
Date: January 3, 21X3
Subject: FW: Documentation of XYZ's receivables and allowance account risk assessment

After you've met with Charles and reviewed the information related to XYZ's receivables, please follow the instructions in the email from Jon Hill (manager of the group engagement team) below. When you're done, please send your documentation back to both Jon and me.
Thanks,
Frank

From: Hill, Jon (Manager of ABC Corp. Audit)
To: Green, Frank
Date: January 3, 21X3
Subject: Documentation of XYZ's receivables and allowance account risk assessment

>>>>>Frank,

>>>>>Please have whoever is working on the accounts receivable area complete the attached form to document their understanding of the changes in accounts receivable net of the allowance (net accounts receivable), including specific factors that are indicative of increased or decreased audit risks. Specifically, they should document risks and risk mitigating factors associated with:

- XYZ's industry
- XYZ's Customer base
- The ability of XYZ's customer's to pay their debts as they become due.

They will also need to provide copies of any documentation they receive from the client related to the accounts receivable area, as the group engagement team plans to be actively involved in the risk assessment process and audit planning for XYZ Subsidiary.

>>>>>The group engagement team will review the information prior to the upcoming planning meeting.

>>>>>Thanks,
>>>>>Jon

Please use the space below to document your **understanding of the changes in accounts receivable net of the allowance (net accounts receivable).**

Please specifically document factors that are indicative of increased or decreased risks related to XYZ's **industry**:

Please specifically document factors that are indicative of increased or decreased risks related to XYZ's **customer base**:

Please specifically document factors that are indicative of increased or decreased risks related to XYZ's **customer's ability to pay their debts as they become due**:

Next you will be asked to make some preliminary judgments and suggestions related to audit planning: