ผลกระทบของระดับคำแนะนำและการใช้ดุลยพินิจที่มีต่อการกำหนดระดับนัยสำคัญสำหรับการวางแผนของผู้สอบบัญชี

นางจุฑาทิพ อัสสะบำรุงรัตน์

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THE IMPACT OF GUIDANCE LEVELS AND JUSTIFICATION REQUIREMENT ON DETERMINATION OF AUDITORS' PLANNING MATERIALITY

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A Dissertation Submitted in Partial Fulfillment of the Requirements
for the Degree of Doctor of Philosophy Program in Accountancy
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จุฑาทิพ อัสสะบำรุงรัตน์ : ผลกระทบของระดับคำแนะนำและการใช้ดุลยพินิจที่มีต่อการกำหนดระดับนัยสำคัญสำหรับการวางแผนของผู้สอบบัญชี. (THE IMPACT OF GUIDANCE LEVELS AND JUSTIFICATION REQUIREMENT ON DETERMINATION OF AUDITORS' PLANNING MATERIALITY) อ. ที่ปรึกษาวิทยานิพนธ์หลัก : ผศ.ดร.สมพงษ์ พรอุปถัมภ์, 100 หน้า.

การศึกษานี้มีวัตถุประสงค์ในการตรวจสอบผลกระทบของระดับคำแนะนำ และ การใช้ดุลยพินิจที่มีต่อ การกำหนดระดับนัยสำคัญ สำหรับการวางแผนของผู้สอบบัญชี การกำหนดระดับนัยสำคัญโดยรวมหรือนัยสำคัญสำหรับการวางแผนนั้นมีความสำคัญต่อผู้สอบบัญชี เนื่องจากเป็นขั้นตอนแรกในงานตรวจสอบที่มีผลต่อกระบวนการตรวจสอบทั้งหมด นอกจากนี้การกำหนดระดับนัยสำคัญสำหรับการวางแผนในทางปฏิบัติ มีความแตกต่างกัน ระหว่างสำนักงานสอบบัญชี ตั้งแต่การนำคำแนะนำที่มีขั้นตอนที่ชัดเจนมาใช้ในสำนักงาน จนถึงการให้พนักงานใช้ดุลยพินิจเยี่ยงผู้ประกอบวิชาชีพในการกำหนดสาระสำคัญ ผลงานวิจัยในอดีตพบว่าระดับคำแนะนำ ที่มีขั้นตอนที่ชัดเจน สามารถลดข้อจำกัดในกระบวนการคิดของมนุษย์ และเพิ่มประสิทธิภาพ และความสม่ำเสมอในการตัดสินใจได้ แต่ก็สามารถจำกัดขอบเขตของกระบวนการคิด ให้คิดตามคำแนะนำที่กำหนดให้เท่านั้นได้ ดังนั้นงานวิจัยนี้ ต้องการศึกษาถึง การให้ และ การไม่ให้คำแนะนำที่มีขั้นตอนที่ชัดเจนที่มีผลกระทบต่อการกำหนดระดับนัยสำคัญ สำหรับการวางแผนของผู้สอบบัญชี การใช้ดุลยพินิจสนับสนุนการตัดสินใจเป็นเครื่องมือชนิดหนึ่ง ที่ได้รับการยอมรับว่าสามารถช่วยปรับปรุงการตัดสินใจให้ดีขึ้น โดยลดความลำเอียงในการตัดสินใจให้เป็นไปตามที่ผู้ตัดสินใจต้องการได้ ดังนั้น การศึกษานี้ คาดว่า การใช้ดุลยพินิจสนับสนุนการตัดสินใจ จะสามารถช่วยลดข้อจำกัด ในกระบวนการคิดของมนุษย์ จากการใช้คำแนะนำที่มีขั้นตอนที่ชัดเจน โดยการเพิ่มความพยายาม ในการคิดเพื่อหาเหตุผลสนับสนุน งานวิจัยนี้ใช้กรณีศึกษาในการทดสอบ กับผู้สอบบัญชีในระดับผู้จัดการ จากสำนักงานสอบบัญชีขนาดใหญ่ ในประเทศไทย การศึกษานี้เป็นงานแรกที่แสดงผลกระทบร่วมของสองปัจจัย คือระดับคำแนะนำ และการใช้ดุลยพินิจสนับสนุนการตัดสินใจ ผลการศึกษาพบว่าระดับคำแนะนำที่มีขั้นตอนที่ชัดเจนทำให้จำกัดความสนใจของผู้สอบบัญชีได้ และทำให้การตระหนักถึงความเสี่ยงลดลง และเป็นไปตามที่คาดว่า การใช้ดุลยพินิจสนับสนุนการตัดสินใจ เพิ่มความพยายามในการคิดของผู้สอบบัญชี และ ช่วยลดความลำเอียงจากการใช้คำแนะนำที่มีขั้นตอนที่ชัดเจนได้

ภาควิชา.....การบัญชี.....ลายมือชื่อนิสิต.....Juthathip Assabumrungrat.....

สาขาวิชา....การบัญชี.....ลายมือชื่อ อ.ที่ปรึกษาวิทยานิพนธ์หลัก...Sompong Pornupatham...

ปีการศึกษา .....2554.....

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KEYWORDS : Guidance / Justification / Auditors / Materiality / Planning

JUTHATHIP AUDSABUMRUNGRAT: THE IMPACT OF GUIDANCE LEVELS AND JUSTIFICATION REQUIREMENT ON DETERMINATION OF AUDITORS' PLANNING MATERIALITY.
ADVISOR : ASST. PROF. SOMPONG PORNUPATHAM, 100 pp.

The purpose of this study is to examine the impact of guidance levels and justification requirement on planning materiality determination of auditors. Determination overall materiality or materiality for planning is important for auditors as it is an initial step that affects the whole process of auditing. In addition, setting materiality for planning in practice varies among audit firms from implementing the structured guidance to leaving to professional judgment. Previous research has shown that structured guidance could mitigate cognitive constraints of human and improve efficiency and consistency but it could limit their scope of thinking process only to the scope the guidance provided. Therefore, this research would like to study the impact of providing and not providing structured guidance on materiality decision in the planning stage. Justification requirement has been suggested as a tool to improve judgment performance by reducing confirmation bias. Thus, this paper expects that the justification requirement can reduce the drawback effect of structured guidance by increasing effort of thinking before coming up with the underlying reason. This research is the case-based experiment using audit managers from Big audit firms in Thailand as the sample group. This study may be the first to provide evidence of the interaction effect of guidance and justification. The results indicate that the structured guidance could limit attention of auditors and thus weaken their risk awareness. Justification, as expected, can improve thinking effort of auditors and mitigate the bias from the structured guidance.

Department : Accountancy Student's Signature Juthathip Audsabumrungrat
Field of Study : Accountancy Advisor's Signature Sompong Pornupatham
Academic Year : 2011

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CHAPTER I
INTRODUCTION

1.1 Motivation of the study

Following the collapse of Enron, a greater number of public users of audited financial statements have questioned the audit materiality of the financial reports, which in turn erodes the creditability of the financial statements. Materiality has been viewed as an excuse for auditors to avoid litigation. Sound materiality judgment has been an important requirement since then. Auditors are required to use professional judgment on materiality because materiality affects not only the quality of audited financial statements, but also the amount of audit work or execution cost of auditing.

Materiality is important for the whole process, from planning and execution to completion. However, this paper involves merely the stage of setting overall materiality (or planning materiality) because it is an initial step that can influence the quality of audit in later steps. As materiality is closely related to risk assessment as stated in the Thai Standards on Auditing and in the International Standards on Auditing section 320 that "there is an inverse relationship between materiality and level of audit risk", setting the overall materiality must incorporate risk assessment into auditor's judgment on materiality. If auditors set an unrealistically high materiality level or underestimate risks, they would underperform audit procedures, which could lead to insufficient audit evidence to support their audit opinion. Inability to detect the existing material misstatement could cause audit failure, higher litigation and reputation risks. In contrast, if they set an unreasonably low materiality level or overestimate risks, they would over-perform audit procedures, which would lead to audit inefficiency. Both types of errors are costly to audit firms regarding either litigation and reputation risks or loss of competitive advantage.

Good judgment on materiality is difficult to define even though it is crucial for auditor's success. In the past, the auditing standards do not provide any formal guidance for auditors to implement materiality concept. The implementation and the methodology of materiality setting vary across audit firms. Big audit firms have provided guidance for setting materiality levels, such as certain percentages of earnings before tax, which I call structured guidance hereafter. One large audit firm in

Thailand ceases providing structured guidance for materiality determination this year[1]. Different types of decision aids or guidelines have differing impacts on judgment performance (Asare and Wright, 2004). Thus, this paper investigates the impact of two different types of guidance, structured guidance and unstructured guidance, on auditors' judgment on planning materiality determination.

Justification is found to increase auditors' judgment performance (Ashton, 1992; Wheeler and Arunachalam, 2008). In practice, justification is used to increase auditors' cognitive effort and encourage them to think more carefully on materiality setting. The level of justification varies among big audit firms. One audit firm requires audit staff members to provide underlying reasons only when they set materiality out of the range specified in the firm's guidelines. Another audit firm requires justification for all decision making although the materiality setting complies with the guideline. This paper compares justification requirement with no justification requirement to determine the role of justification in auditors' judgment.

Both the guidance and justification requirement were found to increase the accuracy of auditors' judgment on classification of bond ratings. However, the results of interaction effect between these two factors are inconclusive. For instance, the Ashton (1990) showed that justification could impair auditors' decision at the presence of decision aid. On the contrary, the justification requirement has been found to remedy confirmation bias of tax professionals (Wheeler and Arunachalam, 2008). Therefore, this paper wants to investigate whether the justification requirement could remedy the heuristic bias or anchoring effect in the presence of structured guidance.

To examine the interaction effect of the guidance factor and the justification factor, this paper uses fully crossing two levels of guidance (structured guidance versus unstructured guidance) with two levels of justification requirement (justification requirement versus no justification requirement). The subjects in this paper were audit managers from big audit firms in Thailand. Participants were randomly assigned to one of the four cells created by guidance and justification requirement levels.

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[1] One of the big four firms has changed its guideline from mechanical rule to individual judgment for the fiscal year 2010.

1.2 Research Objectives

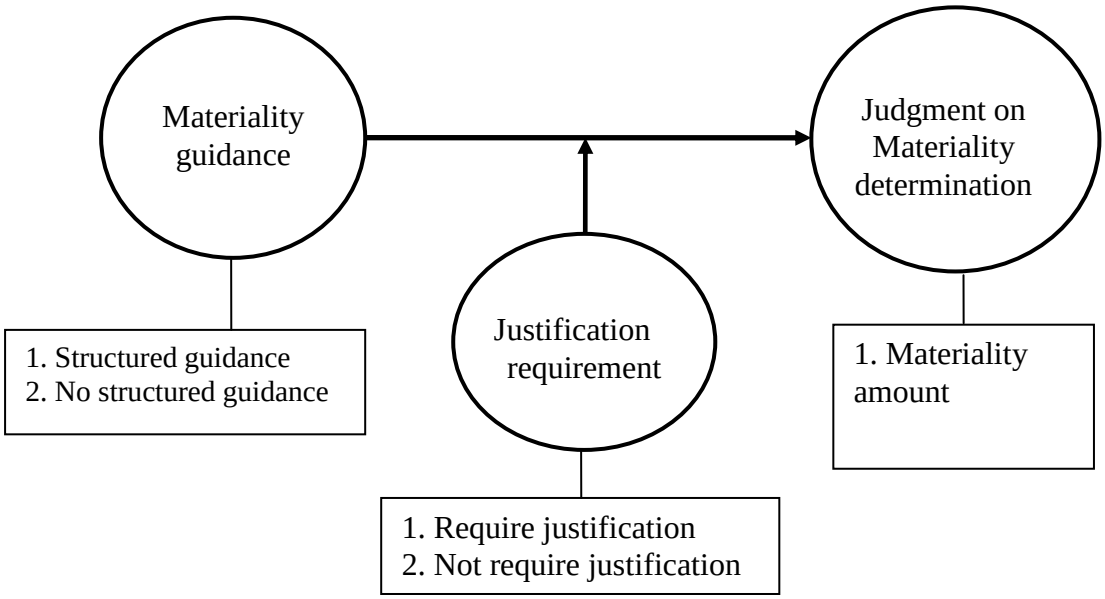
The purpose of this study is to examine the main effect of providing structured guidance and justification requirement on planning materiality determination of audit managers. This paper also investigates the interaction effect in the presence and absence of both structured guidance and justification requirement.

1.3 Research Questions

The research questions of this paper are as follows:

1. Does the provided structured guidance impact auditors' planning materiality decision?
2. Does the requirement for justification impact auditors' planning materiality decision?
3. Does the justification requirement could have greater impact on auditors' planning materiality decision in the presence of structured guidance than in the absence of structured guidance?

Figure 1.1 Conceptual Framework



1.4 Scope of the Study and Limitation

This study investigates the impact of providing structured guidance and justification requirement on auditors' determination of planning materiality. The effect of structured guidance is studied by comparing the outcomes in which structured guidance was provided with those in which no structured guidance was provided. Even though guidance form or format of guidance could impact decision process of decision makers, this study employed only one form of guidance (i.e., step-by-step guidance), which might differ from real practice. In addition, there might be other decision aids that could be used with greater success.

This study examines the effect of justification requirement by comparing the judgments of auditors required to justify with those not required to justify. Even though various types of justification have different impacts on auditors' judgment (Agoglia, Kida and Hanno, 2003), this study examines solely the existence of justification requirement without specifying the justification types. Participants in this study are audit managers from three out of four big audit firms in Thailand because one of the big audit firms did not allow data collection inside the organization. I engage audit managers with materiality planning experience in materiality setting tasks so as to investigate the impacts of both provided guidance and justification requirement on the participating auditors.

There are certain limitations in this paper. First, this paper includes not only ten material events selected from Pinsker, Pitre and Daigle (2009), which subsequently are assigned as either low or high risks, but also some inherent risks and control risks. However, the case used in this research does not include all other relevant issues due to time constraint for experimental session. In addition, the experimental instrument is in the form of paper-based case whereas auditors normally use computer aids in practice. This could limit the auditors' ability to search for more information as they do in real practice. Furthermore, the experimental procedure asks individual auditors to set planning materiality while in reality there would a discussion among engagement team members before determining planning materiality. Finally, only audit managers were engaged in this study. The results as such could not be applied to the more experienced level such as partners or less experienced level such as audit seniors and assistants since different professional

levels may have varieties in knowledge and experience. The difference in tacit managerial and technical knowledge could vary the justification techniques of auditors (Shankar and Tan, 2006).

1.5 Contributions

First, this paper would provide academic knowledge about the interaction between the effect of guidance and justification requirement. Ashton (1990) reported that justification requirement could improve accuracy and consensus of judgment on bond ratings only when there was no aid provided to auditors. When auditors were provided the decision aid, justification could impair the quality of judgment (Ashton, 1990). My results contradict Ashton's results in that justification could improve auditors' judgment on materiality setting either in the presence or absence of the guidance. In the study of Ashton (1990), auditors were told that they could correctly determine bond ratings for half of the bonds if they followed the provided decision aid. However, auditors had a chance to outperform the decision by using some strategies that combined reliance on decision aid and professional judgment. The decision aid in Ashton's (1990) could pressure auditors to outperform the decision aid. Since auditors are not familiar with the bond rating task, trial use of a variety of strategies that are not well-identified could deteriorate the judgment performance. On the contrary, the guidance in my case showed the opposite. If the auditors follow the guidance, their decision would be impaired. Therefore, the justification in my study would mitigate the negative results from following the guidance. Furthermore, since auditors are familiar with the materiality setting task, the justification could improve their judgment performance by increasing their cognitive effort and mitigating the cognitive bias toward the guidance. The benefit of justification is stronger when auditors are provided the guidance than when they are not provided. It implies that the interaction of guidance and justification might depend on the motivated direction of the guidance.

Second, this paper would provide useful implications for standard setters, regulators as well as financial practitioners by shedding light on the limitation of providing structured guidance in planning materiality determination and emphasizing the benefits of justification requirement on audit managers in big n firms. Almost all

big audit firms have utilized structured guidance and my results would raise awareness of audit firms about the drawbacks of the provided guidance in such a way that the provided guidance could limit attention of auditors and induce them to concern with less relevant information. Furthermore, the results would emphasize the benefits of justification requirement in mitigating cognitive bias toward the guidance. Therefore, if audit firms decide to provide the guidance to their staff, it would be better to emphasize the justification mechanism in order to mitigate the potential bias toward the guidance.

Third, this paper would fill the gap by examining the process of materiality decision in the planning stage as previous research papers have focused mostly either on materiality decision at later auditing stages, such as recording or waiving audit differences (Hermanson, 1997; Braun, 2001; Estes and Reames, 1988; Morris and Nichols, 1988; Carpenter, Dirsmith and Gupta, 1994; Ng and Tan, 2007) or on materiality decision on accounting issue (Carpenter and Dirsmith, 1992), accounting restatement (Chen, Pany and Zhang, 2008) and fraud issue (Bernardi and Pincus, 1996). There are several research papers that studied the planning stage of audit process. For example, Blokdijk et al (2003) examined archival evidence of the determinants of planning materiality of auditors. Cushing, Searfoss and Randall (1979) is another study that examined the statistical model for assisting auditors in planning materiality allocation to each item on a financial statement. However, there is no paper that examines the process of setting planning materiality by using the materiality guidance exists. My study provides direct evidence of the impact of using materiality guidance on auditors' judgment on planning materiality.

Fourth, this paper engages one hundred and twenty-eight audit managers from three big n firms in Thailand in an experimental study. Furthermore, it could be said that my study is the first in Thailand to use experimental study at big audit firms. Previous research in Thailand used survey or questionnaires as a tool to study audit context whereas my study engages practitioners or auditors in which decisions were made in front of a researcher in the training sessions of each firm. The results in this study came from auditors of big N firms. By using experiment technique, I could control other non-interested variables. Thus, the results of my study could indicate the impact of the two interested variables, i.e. guidance and justification, by excluding

other intervening variables. Furthermore, I directly contacted the managing partner of each audit firm prior to and during this experiment, and my results were directly reported back to the engaging partners. As a result, the audit firms could readily realize the drawbacks of structured guidance and the benefits of justification requirement from the results of the study in which their audit staff members were participants. The same findings could be drawn upon by the audit firms to adjust their existing practice concerning guidance and justification.

The organization of this study is as follow. Chapter two provides the literature review and the development of research hypotheses. Chapter three discusses the research design while chapter four discusses results of this paper. The last chapter concludes some remarks with a discussion of the implications and areas for future research.

CHAPTER II
LITERATURE REVIEW AND DEVELOPMENT OF RESEARCH HYPOTHESES

2.1 Audit quality

There are many types of audits, such as the attestation or financial statement audit, compliance audit, and special audit. This study limits the scope to the attestation or financial statement audit. The objective of the financial statement audit is to assure that the financial statements of an audited entity fairly present its financial position and performance. Therefore, the audit quality is defined as the degree to which auditors perform the audit processes that meet the auditing standards and assure the reliability of financial statements. Even though auditors do not assure the absolute accuracy of financial statements, they still can assure of no material misstatement in the financial statements. Thus, materiality concept is involved in every part of audit process in order to ensure a fair presentation of financial statements.

There exist a variety of methods to measure audit quality. The first group focuses on the judgmental decision making of auditors. Audit quality of this group is mainly measured by the number of correct answers or variance from professional consensus for no right or wrong answers (DeZoort, Harrison and Taylor, 2006). The second group looks at the audit report which is the output of auditors. Some researchers measured audit quality as the likelihood of issuing going concern opinion (Francis and Krishnan, 2002; Chi et al, 2009; Francis and Yu, 2009). The third group infers audit quality from the quality of financial statements. Many studies measure audit quality as the level of earnings management of audited entities, such as discretionary accruals, accruals quality, or earnings response coefficient (Francis, Maydew and Sparks, 1999; Frankel, Johnson and Nelson, 2002; Fargher, Lee and Mande, 2008; Francis and Yu, 2009). Besides the above three groups, some researchers use audit firm size as proxy for audit quality (Behn, Choi and Kang, 2008; DeAngelo, 1981). Other researchers use the vote against auditor ratification as a proxy for investors' perception about audit quality (Dao, Mishra and Raghunandan, 2008)

2.2 Materiality

Materiality has long been important not only for auditors, but also for preparers as well as users of financial statements. Materiality continues to be one of the most common topics for concern among practitioners, researchers and regulators since materiality level is perceived differently by different parties. Regulators, such as FASB, SEC and IASB, have put great effort into defining the meaning of materiality in order to raise an agreeable level of understanding. The following section presents the definitions of materiality as stated by professional regulators. The relation between materiality and audit process will be discussed next.

2.2.1 Definition of materiality

Many standards setters or regulators have provided the definitions of materiality. The Financial Accounting Standards Board (FASB) defines materiality in the glossary of Statement of Financial Accounting Concepts No.2, Qualitative Characteristics of Accounting Information, as "the magnitude of an omission or misstatement of accounting information that, in light of surrounding circumstances, makes it probable that the judgment of a reasonable person relying on the information would have been changed or influenced by the omission or misstatement."

The International Accounting Standards Board (IASB) provides the definition of materiality in its Framework for the Preparation and Presentation of Financial Statements as "Information is material if its omission or misstatement could influence the economic decisions of users taken on the basis of the financial statements. Materiality depends on the size of the item or error judged in the particular circumstances of its omission or misstatement. Thus, materiality provides a threshold or cutoff point rather than being a primary qualitative characteristic which information must have if it is to be useful."

The U.S. Securities Exchange Commission (SEC) issued the Staff Accounting Bulletin No.99 in order to correct the misuse of the materiality concept. The example of misusing materiality concept is that of auditors not booking small audit differences that are of qualitative materiality in the client's financial statements. The International Auditing and Assurance Standards Board (IAASB) also revised the international

auditing standards by requiring auditors to give greater attention to the qualitative materiality.

The International Federation of Accountants (IFAC) provides the definition of materiality in the International Standards on Auditing 320 as "misstatements, including omissions, are considered to be material if they, individually or in the aggregate, could reasonably be expected to influence the economic decisions of users taken on the basis of the financial statements. Judgments about materiality are made in light of surrounding circumstances, and are affected by the size or nature of a misstatement, or a combination of both. Judgments about matters that are material to users of the financial statements are based on a consideration of the common financial information needs of users as a group. The possible effect of misstatements on specific individual users, whose needs may vary widely, is not considered.

From the above definitions, the determination of materiality requires professional judgment of auditors and is affected by auditors' perception of users' needs of financial information.

2.2.2 Relation between materiality and audit process

Auditors are concerned about materiality throughout the whole process of auditing, starting from engaging with clients, planning audit work, executing and evaluating audit evidence, as well as making decision on the issuance of audit opinion.

While engaging with clients, auditors are concerned about whether new or current clients have any potential material risks that would lead auditors to have reputation risk or litigation risk. For new clients, auditors must contact prior auditors and review their working papers to ensure that there was no material concern or argument for prior auditors to resign from clients. For continuing clients, auditors consider prior year issues and changes in their clients' business environment and other factors that might materially affect the clients.

Once accepting to audit a client, auditors assess the client's business risk and control risks after evaluating the client's internal control mechanisms. Client risks that could not be discovered by internal control are labeled as audit risk. The acceptable level of misstatements on financial statements is called tolerable misstatement.

The auditing standards state that auditors should consider audit risk and materiality in order to obtain sufficient competent evidence on which to properly evaluate the financial statement later on. In the planning stage, auditors determine the nature of work, scope of work, audit strategies, timing and extent of audit procedures to be executed and audit team. Whittington and Margheim (1993) provided experimental evidence that audit managers allocated time to audit staff based on materiality level. Moreover, internal auditors were assigned to do more tests of control when materiality level was low.

In practice, auditors must define the magnitude of materiality as a whole or "planning materiality" for each client in the planning stage. Factors that are related to the planning materiality determination include knowledge about client's business, size of the entity, nature of the client's operation and related transactions, as well as the control mechanisms of the client (Blokdijk et al., 2003). Some big audit firms assign managers to initially set the planning materiality while other big audit firms assign the task to seniors. Irrespective of who sets the initial planning materiality amount, the engaged partner and all audit team members must agree on the amount. This planning materiality is closely associated with risk assessment and has an impact on audit planning, the appropriate nature, extent and timing of audit procedures of particular accounts and transactions. The appropriate planning is the first step to obtain sufficient evidence to make a reasonable assessment of errors, if any, in financial statements. On the contrary, inappropriate planning can impose risk of under-auditing or over-auditing (inefficiency) on auditors.

Auditors subsequently estimate the allowable error for individual accounts or transactions of financial statements. The maximum error that might reasonably exist in the financial statement is called "tolerable error" or "tolerable misstatement". There are many factors affecting auditors' determination of tolerable misstatement, such as magnitude of accounts or transactions, inherent risk, and control risk related to the accounts or transactions. Determination of tolerable error requires professional judgment because it is closely related to sample selection. Auditors refer to this tolerable misstatement as a benchmark for making judgment on sample selection. This tolerable error is also used as a benchmark to define the material errors which should be corrected before issuing audited financial reports. The methodology for allocating

planning materiality to tolerable misstatement varies across audit firms. One of the big audit firms has a materiality guideline that identifies a specific percentage of the planning materiality. Although audit firm revised its materiality guidance by emphasizing that auditors should assess risks (i.e., inherent risk, control risk, and audit risk) and incorporate the risk assessment into planning materiality, an individual auditor has a propensity to allocate planning materiality based on previous guidance.

Bernardi and Pincus (1996) provided experimental evidence that the majority of audit managers evaluated materiality and risk of inventory fraud by using ten rules of thumb to set materiality. Martinov and Roebuck (1998) analyzed audit firms' materiality guidance to investigate audit firms' approach when setting overall planning materiality and tolerable misstatement level. They found that big audit firms had differences in setting planning materiality and individual auditors exercised different judgment when setting tolerable misstatement. In order to improve auditor's judgment on setting tolerable misstatement level, Cushing et al (1979) proposed a materiality allocation model which required statistical knowledge and estimation of required parameters in its model. Both requirements seem to be an impediment to utilizing this model.

Toward the completion of the audit fieldwork, the audit team compares detected misstatements to tolerable misstatement in order to make a final decision and discuss with the client to decide whether these misstatements are material and thus render adjustments in the client's book necessary. Braun (2001) investigated the influence of risk and reward factors on auditors' decision to waive proposed audit adjustments. Client financial position and performance, the subjectivity of the proposed audit adjustments, and the effect of proposed audit adjustments had an impact on the auditors' decision to waive whereas the audit fee had no effect.

Finally, an audit partner will make the final decision on the type of the audit report and also consider whether there is any unadjusted material misstatement or any material events that affect financial statements and disclosure.

2.2.3 Association between materiality judgment and audit quality

The quality of audit depends on the professional judgment of auditors. Prior research studied factors that influenced auditors' decision making in order to raise the

quality of auditors' judgment performance. It was found that ability, knowledge, expertise, monetary and non-monetary incentives (such as accountability), and environmental factors, such as group decision and audit technology, could affect judgment performance of professionals (DeZoort et al., 2006; Moroney and Simnet, 2009; Rose, 2007; Wright, 2007; Abdolmohammadi, Searfoss and Shanteau, 2004; Bierstaker and Wright, 2001; Tan and Libby, 1997; Tan, Jubb and Houghton, 1997, Tan and Kao, 1999; Tan, Terence and Mak, 2002).

The previous section explains the relation between the materiality and audit process. The level of planning materiality is the starting point for planning the audit. The optimum materiality level cannot be defined but the auditors must incorporate risk assessment when setting planning materiality in order to perform the audit process successfully in later steps. There are two ramifications of improper setting of materiality. First, if auditors set the materiality level too high or underestimate risks, they would under-plan audit procedures which lead to insufficient collection of audit evidence to support their audit opinions. Inappropriate audit opinions or unfairly stated financial statements could result in higher litigation and reputation risk for auditors. Second, if auditors set the materiality level too low or overestimate risks, they would over-plan audit procedures. Unnecessary audit work would be undertaken by the audit team and lead to an inefficiency problem.

2.2.4 Underlying theories

Judgment on setting materiality is based on Probabilistic Judgment. Auditors' assessment of materiality level is based on their initial belief which might come from prior year information or prior experience. Their initial belief needs revision when auditors obtain more current information, such as a change in the client's business or in related risk assessment. According to Bayes's theorem, the result from adjusting original belief with the amount of revision from initial belief resulting from new information should be equal to the posterior decision of probability. However, the results from the fundamental human thinking process differ from Bayes's theorem. This indicated that the human process is more complex than Bayes's theorem and might have some systematic decision errors.

Another explanation for human decision making refers to the rules of thumb or human bias. People have limited cognitive abilities. When they encounter complex circumstances with a lot of information, they try to simplify complex judgment by using rules of thumb which can be categorized into three types.

First, "Representativeness" states that the more the particular item represents the population, the more that same particular item has higher probability to occur. Using this rule of thumb will lead people to make poorer judgments because they tend to ignore other information that is relevant to decision making. They are likely to rely on prior similar information as a basis for current decision.

Second, "Availability" states that people assess current situations based on prior experience or knowledge about a similar situation that comes to mind. The relevant case that people are familiar with is easily coming into their mind and has an impact on decision making of current occurrence. Libby (1985) provided the evidence of availability heuristic which showed that there was a relationship between auditors' frequency and recent experience and hypotheses generation.

Third, "Anchoring and adjustment" (Joyce and Biddle, 1981) states that people initially generate or construct an anchor based on what they have known. When they got additional information, they would simply adjust or revise their judgment by incorporating new evidence. However, people might insufficiently revise their judgment in light of changing events or move far enough from the anchor. On the other hand, some people tend to overweight information received later and underweight information received before. This bias is called "recency bias", which is a sequential anchoring and adjustment process and potentially exists with step by step processing strategy (Hogarth and Einhorn, 1992). This recency bias is effort-related bias and could be mitigated by accountability (Kennedy, 1993). In addition, the recency bias did not exist when the judgment was made by experienced professionals (Kennedy, 1993).

2.2.5 Academic research on materiality

There are two main streams of materiality research. The first stream focuses on determinants or factors that impact the materiality decision. The second one

examines the impact of materiality guidance which will be discussed in section 2.3.2 “Materiality guidance”.

Factors that affect materiality decision are personal characteristics of auditors, audit firm culture, and transaction characteristics. Firstly, different personal characteristics impact materiality decision in different contexts. For example, auditor’s age was significantly related to materiality judgment on both obsolete inventory and uncollectible receivables while a place of employment significantly related only to material judgment on uncollectible receivables (Estes and Reames, 1988). Arnold, Bernardi and Neidermeyer (2001) studied the impact of qualitative factors, such as client integrity ratings, culture and uncertainty avoidance, and litigiousness level, on materiality estimates in inventory account. They indicated that materiality was higher for high client integrity rating, culture of high uncertainty avoidance, and high litigiousness level.

Wang-On-Wing, Reneau and West (1989) investigated whether the auditors’ perception of management power (i.e., management’s impact on audit decisions and judgments) had an impact on their materiality threshold decision. They found a significant relation between more disposition inference about management and lower materiality thresholds. The higher perceived importance of disclosure was related to lower materiality thresholds.

Secondly, audit firm culture, which has long been defined at a theoretical level and at an empirical level (Dirsmith and Haskins, 1991; Francis, 1994), affects materiality judgment on accounting issues (Morris and Nichols, 1988; Carpenter et al., 1994). Morris and Nichols (1988) indicated the positive relation between audit firm structure and auditors’ decision on interest capitalization. Not only the audit firm culture but also the auditor’s experience (i.e., partner’s, manager’s, and senior’s) had an impact on materiality evaluation of early debt extinguishment transaction (Carpenter et al., 1994). Partners and managers in organic firms utilized fewer numbers of cues in indicating materiality level of gain from debt extinguishment transaction than those in mechanistic firms. Unexpectedly, seniors in organic firms used more cues than those in mechanistic firms.

Thirdly, transaction characteristics, such as size and nature of early extinguishment transactions, were related to materiality judgment (Carpenter and

Dirsmith, 1992). They found that the transaction size relative to net income and total assets and the absolute dollar amount of transactions had an impact on auditors' judgment on materiality. Moreover, auditors seemed to consider the direction of transactions. Any transactions that negatively impacted earnings trends were considered as material items.

Besides auditors' personal characteristics, audit firm culture, and transaction characteristics, materiality characteristics can impact auditors' decision. Libby and Kinney (2000) had shed light on two types of materiality, i.e. quantitative and qualitative materiality. The misstatement with its magnitude exceeding the materiality threshold and thereby warranting correction is referred to as quantitative materiality. The misstatement that causes client's earnings not to meet expectations of analysts' forecast, prior year earnings, or management's forecast is referred to as qualitative materiality. The quantitative immateriality could be qualitative materiality. Libby and Kinney (2000) examined auditors' judgment on quantitatively immaterial misstatements for inventory obsolescence and found that when quantitatively immaterial misstatements led to lower client's EPS than forecast EPS, auditors expected to make full correction of such misstatements.

2.2.6 Practical applications on materiality

Even though auditing standards are issued as a framework or guideline for auditors to follow, there have long been differences in practice among large audit firms (Prawitt, 1995). There are two main differences for materiality determination in current practice. The first difference lies in the initial setters and the other is in the internal materiality guidance utilized by different audit firms. The initial setters can be seniors or managers. One big firm assigns managers to initially set the planning or overall materiality. Other two big firms assign the task to seniors for small and medium clients while to managers for large or listed clients. The remaining big firm assigns the engagement team which consists of partner, manager and senior to set the materiality level.

Regarding the materiality guidance, three big firms provide mechanic or structured guidance for materiality setting but vary on provided range or specific figure. If the materiality determination deviates from the provided guidance, the

auditor must justify reason to support his or her decision. The fourth firm has changed from mechanic or structured guidance to no guidance since the fiscal year end of 2010, which means that an auditor can choose the percentage and the base, such as earnings before tax or sales or total assets. After an auditor selects the materiality determination, he or she must provide the reasons to support the decision.

2.3 Hypotheses development

In the past, the standards-setting bodies issued accounting standards and auditing standards which provided guidance in terms of generalities rather than specifics. Their pronouncement in the past stated some percentages as materiality guidance. For instance, to classify leasing transaction as a capital lease, preparers and auditors compared the lease term, specifically whether it exceeded 75% of the economic life of leased property. This kind of guidance was expected to assist preparers and auditors in making decision on materiality judgment and to reduce controversial arguments among involved parties. However, it leaves room for creative accounting because transactions can be intentionally manipulated to comply with the quantitative guidance.

The concept of materiality has been increasingly important for auditors. Auditors are required to plan the audit work to ensure that there is no material misstatement or material omission in the financial statements. Although the standard setters provide definitions of materiality, it is difficult to find the optimum materiality level. In addition, materiality level can vary for different persons. The standard setters and regulators have put more effort in issuing materiality guidance to help auditors make decisions on materiality. For instance, SAS No.47 and No.107 provide quantitative guidelines for auditors to evaluate materiality. International Federation of Accountants (IFAC) also provides quantitative guidance in its implementation guide 2007 for auditing small and medium sized entities.

Some large audit firms have developed and instructed their mechanic or structured guidance to assist their audit staff members when planning materiality and to increase internal consistency in the audit firms. Other large audit firms implement only framework and leave the decision on materiality level to partners and the audit team. Therefore, the availability of guidance would have different advantages and

disadvantages in an auditor's decision making. The next section will discuss two structure levels of guidance and materiality guidance will be discussed later on.

2.3.1 Guidance (Provided mechanical rule called "structured guidance" versus Not provided mechanical rule called "unstructured guidance")

Utilization of structured audit approaches has been common since the 1980's. Many researchers are interested in the determinants of the use of structured audit approaches while several other researchers are interested in the consequences of structured audit approaches. This paper will respectively discuss determinants, consequences and other considerations of using guidance.

Determinants of the use of structured audit approaches

The first determinant is environment characteristics, such as the level of uncertainty in environment, competition, and litigation risk. The direction of relation between uncertainty and formalization of audit procedures is nevertheless inconclusive. Watson (1975) investigated and found a negative relation between the level of environmental uncertainty and the structure level of procedures utilized by audit teams of large firms. This could be explained by the fact that the unstructured or less formalized structure would not limit the attention of decision-makers or auditors to a contracted set of information. Therefore, the large CPA firms preferred using less formalized structure in order to utilize much related information under a dynamic environment. Audit firms that had different structured audit approaches responded differently to task uncertainty. Prawitt (1995) revealed that managers in structured firms would more likely assign less experienced auditors to perform tasks than those in unstructured firms. However, when uncertainty of task increased, they would seek advice from specialists. On the contrary, managers from unstructured firms would assign more experienced staff members instead of seeking specialists' advice in dealing with complexity. Mutchler and William (1990) indicated that when the client's business was risky, auditors would execute a higher level of structured approaches.

Higher audit market competition would lead to lower audit service prices. Audit firms seek cost control while being able to maintain audit quality level. Many audit firms have moved toward more structured audit approaches during the past

decades. Gist (1994) provided empirical evidence that audit service fees of structured audit firms were lower than those of semi- or unstructured audit firms.

Regarding litigation risk in auditor context, Francis (1994) provided evidence that Big Six audit firms utilized structured audit approaches in order to gain legitimacy. They expected that public scrutiny and criticism would lower after the adoption of formalized audit procedures. Anderson et al (1995) and Lys and Watts (1994) found that using structured audit approaches led to higher consistency and uniformity and to more suitable management of staff assignment. The higher consistency could lead to lower litigation risks. Carpenter and Dirsmith (1993) also revealed the association between using statistical sample techniques and professionals' desire to reduce litigation risk. Lys and Watts (1994) also provided the empirical evidence that audit firms using unstructured audit methodologies were more likely to be engaged in lawsuits than firms utilizing structured approaches.

Regarding litigation risk in jurist context, jurists made different decisions about auditors' culpability and liability when auditors used structured or unstructured audit approaches. Jennings, Knee and Reckers (1993) provided experimental evidence that jurists used internal decision aids or material decision aids as an evaluative anchor. They also found the interaction effect between the internal decision aids and pre-case jurists' attitudes on jurists' perception of auditors' culpability and liability. Anderson et al (1995) compared partial use of analytical procedures decision aids to no use of decision aids and found that judges perceived that auditors with partial adoption of the decision aids had higher liability than those with no use of decision tools.

The second determinant is the audit partner's preference. Bierstaker and Wright (2005) investigated in the context of revenue cycle and found that under partner's preference on efficiency due to fee pressure, audit programs revised by seniors were less risk-adjusted. On the other hand, audit programs were more risk-adjusted when a partner chose to balance between efficiency and effectiveness.

Consequences of using structured audit approaches

Researchers in this area would like to investigate whether the structured audit methodologies either led to desired outcomes, such as efficiency, effectiveness,

consistency and uniformity, lower litigation risk, direct and control audit process, etc.; or ultimately led to higher audit quality.

The first expected outcome is efficiency. Abdolmohammadi (1992) indicated that the efficiency from using decision aids was contingent on the experience of auditors. Experienced auditors had higher efficiency while inexperienced ones had lower efficiency when using decision aids. Abdolmohammadi (1999) further emphasized the importance of task structure on developing decision aids and assigning staff level. Bamber, Snowball and Tubbs (1989) investigated the perception of auditors who used structured versus unstructured procedures and found that the structured approach did not make auditors uncomfortable nor cause inflexibility. Bamber, Bamber and Schoderbek (1993) found that audit firms with higher structure (i.e., relying more on systematic policies and some decision tools) had longer completion time but shorter abnormal reporting lag. McDaniel (1990) found that structured audit procedures provided the benefits of improved audit efficiency in performing substantive testing inventory under time pressure.

The second expected outcome is effectiveness. Hermanson (1997) revealed that among big audit firms, auditors from highly structured firms (i.e., the firms with more structured approaches) were more conservative and tended to project more errors. Carcello, Hermanson and Huss (1995) also found that auditors with greater audit structure had a greater propensity to qualify bankruptcy-related opinion after controlling client portfolio differences.

The third expected outcome is consistency. DeZoort et al (2006) investigated the availability of structured planning materiality decision aids under various accountability pressure levels. Their result indicated that structured aids could lower planning materiality decision variations across accountability pressure levels. McDaniel (1990) found that structured audit procedures provided both efficiency and consistency.

Literature results reveal that the outcome from using structured guidance is contingent upon task characteristics (Abdolmohammadi, 1999), decision makers (Abdolmohammadi, 1992) and time pressure (McDaniel, 1990). Structured guidance can reduce cognitive effort and is found to be beneficial for structured tasks, such as substantive test.

In contrast, structured guidance has drawbacks when used with ill-structured tasks. The first underlying theory for supporting the drawback evidence is anchoring effect. Auditors will limit their attention to solely providing structured guidance. Other relevant information that is not in the structured guidance can be ignored by the auditors. Asare and Wright (2004) investigated the effectiveness of audit plan for fraud tasks by comparing performance of participants who had standard checklists with those who had no checklists. They found that participants with provided checklists underperformed those without checklists by making a fewer number of risk assessments. The underperformance was likely caused by the provided checklists which in turn limited the scope of thinking of participants and thus reduced their cognitive efforts. Bernard and Biggs (1991) also found that auditors would cling to the checklists and might not think about unique risk of a particular client.

The second drawback comes from "confirmation bias" which means that users of guidance would be biased in selecting or overweighting evidence that would support their prior decision or belief (Bedard and Biggs, 1991) or would "work backward" which means that users of decision aids would manipulate input data of decision aids in order to get the desired outcome. For example, Kachelmeier and Messier (1990) studied utilizing non-statistical decision aids for sample size judgment. They found that when auditors had their initial desired sample sizes, they bias-selected parameters of decision aids.

The third drawback is loss of professional autonomy, which however is inconclusive. Francis (1994) informed that structured audit approach level was associated with loss of professional autonomy and turnover among senior levels increased consequently. In contrast, Bamber et al (1993) did not find that auditors felt uncomfortable when using structured guidance.

The forth drawback comes from the format of structured guidance. An uncategorized checklist could impair the auditor's ability to perform ill-structured problem. Auditors could not develop an overall picture or "coherent story" when using long and uncategorized checklist and perceived it as less reliable (Pincus, 1989).

Consequences of using unstructured audit approaches

An unstructured audit approach requires cognitive effort because there is no explicit guidance with which to start. Large audit firms prefer using unstructured audit

approaches under a dynamic environment because audit staff members could incorporate all relevant information during an audit (Watson, 1975).

Other considerations of using guidance

Data format presented by the decision support systems can impact judgment. The data format that matches task characteristics could enhance decision making in the form of increased accuracy and reduced performance time. Mahoney, Roush and Bandy (2003) provided the experimental evidence to support cognitive fit theory. They found that both the matching of symbolic tasks and tabular displays and the matching of spatial tasks and graphical displays could enhance accuracy and reduce the time of performance.

2.3.2 Materiality Guidance

Previously the standards setting bodies such as the American Institute of Public Accountants (AICPA) provided their Audit and Accounting Manual (2005) as suggestion to assist auditors in their decision making on planning, performing, and reporting. Although the AICPA has stopped providing this manual, one big firm in Thailand has internally developed and implemented the structured guidance, not similar to but not much different from the manual, and used the structured guidance in the firm. Other two big firms have their materiality guidance but the guidance emphasizes more qualitative concern. The other big audit firm ceases providing the materiality guidance this year and provides only the materiality definition. Materiality setting of the last audit firm is left to the judgment of their staff.

Even though there are different instructions in their materiality guidance, the figure and materiality base are similar to those in the Audit and Accounting Manual (2005). The Audit and Accounting Manual (2005) suggests as follows:

(1) Non-conservative materiality approaches:
    a. 10 percent of income;
    b. 1.5 percent of the greater between total assets and revenues; and
    c. the larger of the two benchmarks above.

(2) Conservative materiality approaches:
    a. 5 percent of income;
    b. 1 percent of the greater between total assets and revenues; and

c. the larger of the two benchmarks above.

Thus, the structured guidance to be tested in my study is adopted from the Audit and Accounting Manual (2005).

The IAASB currently issued the revised draft of ISA 315 "Identifying and Assessing the Risk of Material Misstatement through Understanding the Entity and Environment". The standard provides the conceptual framework on materiality. However, the availability of quantitative guidance for setting planning materiality is limited. Even though the standard places the importance on both quantitative and qualitative materiality, it leaves materiality setting to individual auditors and their professional judgment. Therefore, the unstructured guidance to be tested in my paper presents only definition of materiality. This could reflect the practice of one audit firm in Thailand.

Literature on Materiality guidance

Many research studies investigated the impact of the authoritative guidance on auditors' judgment. There are three groups of literature on materiality guidance. The first group investigates the impact of SAB99 (i.e., a staff bulletin issued by the SEC), which raises the awareness of qualitative factors. The following research studies examined the SAB99 in various contexts.

Firstly, the guidance that is authoritative and available to auditors can affect the auditors' perception about their ability to negotiate with clients in the context of audit adjustment (Ng and Tan, 2003). The authors examined the quantitatively immaterial misstatement and further investigated whether the availability of authoritative guidance and audit committee effectiveness influenced the auditors' perception about negotiation outcomes with clients about making adjustments for quantitatively immaterial misstatements. They found the joint effect of availability of authoritative guidance and audit committee effectiveness on auditors' perceived negotiation outcomes.

Secondly, the qualitative factor salience and an expression of client concern affected auditors' adjustment decision regarding quantitatively immaterial differences (Ng and Tan, 2007). The authors investigated the impact of qualitative factor salience and expressed client concern on auditors' decision to adjust or waive a quantitatively immaterial audit difference. Their result indicated that audit managers with lower

qualitative threshold had a propensity to book the audit difference under qualitative factor salience condition. However, their propensity to book audit difference declined when they were given the client concern about the negative effect of booking audit difference on its ability to meet analysts' forecast. In addition, the researchers revealed the variation in materiality threshold used to evaluate qualitative materiality.

Thirdly, the availability of explicit materiality guidance could raise the awareness of the earnings threshold of auditors in various levels (Ng, 2007). The author studied how auditors made decision on booking or waiving the audit differences that impacted various earnings thresholds. He found that the auditors' decision varied depending on their awareness of different thresholds, different materiality, and different risk assessment. The materiality guidance has the greatest impact in the least awareness threshold condition by making it more salient to auditors.

Fourthly, Iyer and Whitecotton (2008) surveyed and conducted an experimental study on qualitative factors as suggested in SAB99. They revealed that several qualitative factors were agreed upon by current and prospective members of management as well as audit seniors as to the importance of the factors to materiality judgment.

The second group of materiality literature studies an impact of potential materiality events as suggested in SEC FD 33-8400 on users' decision. Pinsker et al. (2009) examined whether the potential materiality events as suggested by the SEC impacted users' decision. They provided both listed and non-listed events to nonprofessional investors and studied their reactions from trading decision. The researchers indicated that nonprofessional investors perceived materiality of SEC listed or non-listed events similarly. The direction of consequences from events did not impact nonprofessional investors' decision on materiality. The order of events nevertheless did impact nonprofessional investors' decision on materiality because the investors reacted to events disclosed at the beginning of sequence more significantly than to those disclosed at the end. Anchoring effect explanation can support this result. Since participants received a long series of events over times (i.e., 24 events in each round of trading), they perceived the initial information differently from later

information. They could use the initial information as their anchor but were unable to sufficiently adjust to later information.

The third group of materiality guidance investigates the impact of the quantitative guidance of planning materiality on auditors' judgment. This quantitative guidance was suggested by the American Institute of Certified Public Accountant (AICPA). Chen et al (2008) compared the restatement amounts in subsequent year to the various materiality amounts of the fiscal year. The various materiality amounts in the study of Chen et al (2008) were planning materiality amount, calculated from total income, total revenues, or total assets, and tolerable misstatement amount which is calculated in later stage of audit. Their results revealed that the subsequent restatement amounts were less than the magnitude of planning material benchmark. In addition, use of materiality benchmark based on total assets or total revenues led to greater restatements than that based on income. This could raise the question as to whether the materiality benchmark is currently too high, thus leading to insufficient incorporation of assessed risks into planning materiality determination.

Decision aids or guidelines are found to help auditors in some constructs. Decision aids or guidance can improve or hinder judgment depending on how well types of decision aids are matched with task requirement. The structured guidance or checklist is found to mitigate cognitive overload. However, the structured guidance could lower judgment performance (Asare and Wright, 2004). The structured guidance could lower the amount of effort (Wheeler and Arunachalam, 2008) and lead to "interference effects" or confirmation bias (Bedard and Biggs, 1991). For instance, Asare and Wright (2004) found that auditors who followed standard risk checklist made lower effort in fraud risk assessment. Structured audit programs, such as checklists, were more utilized by experienced auditors than a statistical decision aid when a going concern issue is considered (Davis, 1992). The higher utilization of checklists suggests that auditors incorporate their judgment into the decision-making process instead of merely relying on results from statistical models.

Hypotheses development

The first type of guidance is structured guidance. To apply structured guidance in planning materiality, participants were provided with a range of planning

materiality figures as suggested in Audit and Accounting Manual (2005). The instructions are shown step by step as follows:

Step 1: Use 5% - 10% of Earnings before income tax

Step 2: Use 1% - 1.5% of Total assets or Total revenues, whichever is higher

Step 3: Take the higher amount of (1) or (2) as planning materiality

The structured guidance would help auditors make decisions on materiality level by lowering their cognitive effort on the suitable range of planning materiality. The structured guidance has been found to improve auditors' judgment by showing an increase in audit efficiency (McDaniel, 1990) and raising judgment accuracy, consistency, and consensus (Ashton, 1992). On the contrary, the structured guidance can both lower judgment performance as it induces auditors to process risk factors less deeply and reduce thinking effort as it provides scope of thinking framework (Todd and Benbasat, 1992; Asare and Wright, 2004; Wheeler and Arunachalam, 2008), especially when used with ill-structured tasks. Besides lowering thinking effort, the structured guidance can induce decision makers to preferentially select evidence and be overweight on evidence confirming their belief, a behavior called confirmation bias (Bedard and Biggs, 1991). The provided number in structured guidance could be used by participants as their anchor and may hinder participants in recognizing unique risks of a particular client (interference effect). Participants might be unable to adjust for risk information (anchoring effect) or unusual items. Auditors will limit their attention to solely providing structured guidance while other relevant information that is not in the structured guidance can be ignored by auditors. Therefore, I expect that participants with structured guidance would follow the step by step instruction and would determine planning materiality at higher amount as suggested in the structured guidance.

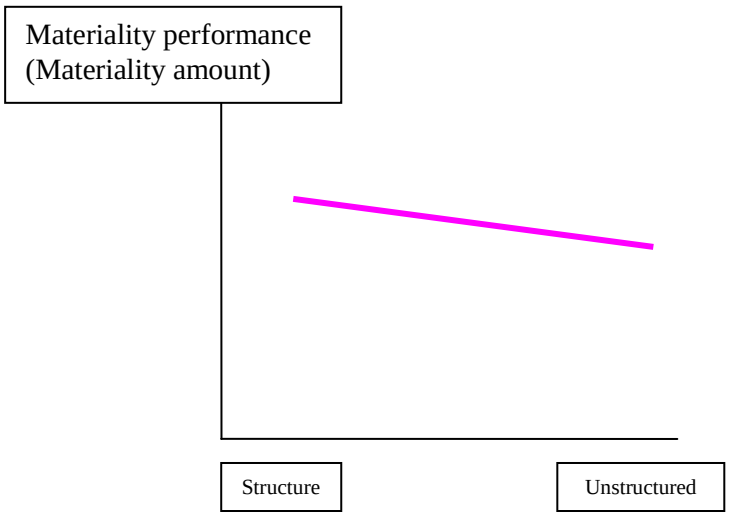
The second type of guidance does not provide any planning materiality figures range as suggested in Audit and Accounting Manual (2005). This paper provides only framework or definition of materiality to participants. Unstructured guidance would not limit the attention of participants to a contracted set of information but may facilitate more strategic or creative thinking. Therefore, the large CPA firms preferred using less formalized structure in order to utilize much related information under a dynamic environment. Asare and Wright (2004) found that auditors with no checklists

could make greater number of risk assessments than those with checklists since the former could incorporate much information and were not limited in their thinking process by structured guidance.

The auditing standards state that auditors should consider audit risk and materiality in order to obtain sufficient competent evidence on which to properly evaluate the financial statement. Auditors must assess relevant risk factors, including business risks and control risks, to determine the materiality for planning. Based on the anchoring effect (Joyce and Biddle, 1981), the given mechanical guidance which suggests basis and percentage range for planning materiality determination is expected to limit auditors' attention and induce auditors to ignore relevant risk factors. Specifically, I posit that auditors with the existence of structured guidance would set higher planning materiality amount than those with the absence of the structured guidance (see picture 2.1).

H1: In determining the planning materiality, auditors will set higher (lower) materiality amount when they are provided (not provided) the structured guidance.

Figure 2.1: Main effect of guidance level (structured vs. unstructured guidance)



2.3.3 Justification

Justification means the documentation written to support the decision. It is of great importance for auditors to justify their decisions during audit process as they are accountable to many different parties. The justification is crucial for judging the

quality of auditors' decision (Peecher and Kleinmuntz, 1991). Since auditors work as a team and have hierarchical relationships among them, lower rank auditors usually collect, integrate, and assess evidence before documenting audit evidence including their conclusion, while higher rank auditors would review their subordinates' work. Thus, auditors who are required to justify their judgment or who are accountable for their decision are likely to use more conscientiousness, awareness, analytical judgment strategies (Messier and Quilliam, 1992), especially when no preference of their superiors exists.

Even though the justification requires an auditor to write down the evidence or reason to support his decision, which probably leads to an increase in cognitive effort, deeper thinking, and greater physical effort to do the task, it may produce different effects on judgment processes (Ashton, 1992) and might not improve performance as a result of complexity of the tasks (Chang, Ho and Liao, 1997). The next section is going to discuss an underlying theory related to justification.

2.3.3.1 Underlying Theory on Justification

When people are accountable for their decisions and actions, they are expected to provide justification for their decisions and actions. The accountability and justification are mechanisms to motivate people to increase their effort in performing the given tasks. The underlying theory related to justification is the motivated reasoning framework by Kunda (1990). Consistent with Kunda's motivated reasoning framework, Lerner and Tetlock (1999) classified accountability into two types: accountability without a known view and accountability with a known view.

Accountability without a known view could positively affect the quality of judgment. Since people are expected to justify their decisions and actions and they do not know which points they would be asked, they would think of all possible directions, would search as much relevant information as possible, and would be more aware of their decision. This would call for greater effort, more careful thinking, more information search, and deeper evaluation of information. This would lead to more complex cognitive processing, resulting in better performance.

On the other hand, when people know what they will be asked or criticized, they would minimize their cognitive effort by biasing effort toward the known view.

Thus, accountability with a known view could positively impact the quality of judgment only when the known view is correct.

Based on the motivated reasoning framework, participants who are required to justify their decisions but do not know how their judgment would be judged would search as much relevant information as possible and be more aware of their decisions.

2.3.3.2 Academic research on justification

Consistent with the motivated reasoning framework, the preference of reviewer could have an impact on the evaluation of reviewees' evidence (Peecher, 1996). For a high integrity client, auditors tended to accept the client's explanation and still be able to justify their decision when they recognized that their reviewer preferred audit efficiency. The acceptance level of client explanation would decline when their reviewer emphasized professional skepticism. But for a low integrity client, auditors were unlikely to use reviewer's preference as an acceptable heuristic. They instead would discredit the client's explanation when they acknowledged the client's low integrity (Peecher, 1996).

Without the reviewer's preference, auditors with justification requirement made decision on bond ratings more accurately and more consistently than those without justification requirement (Ashton, 1992). In addition, justification without preference notification could induce auditors to be more conservative and exert more efforts as they conducted more audit testing for ratio fluctuation task (Asare et al, 2008).

Besides the view or preference of reviewer, there could be other factors that could affect the justification. First, justification types or techniques could impact not only the justification process of reviewees but also that of reviewers (Agoglia et al., 2003; Agoglia, Beaudoin and Tsakumis, 2009). When reviewees were required to justify their judgments on component of their task, they provided greater evidence than those who were required to justify in the balanced and supporting techniques. Unfortunately, providing greater evidence did not result in better task performance of fraud risk assessment, which is called dilution effect.

Second, timing of justification awareness could impact justification process as Tectlock (1983b) found that subjects who realized justification requirement before

reading information for performing the task tended to be more conscientious and not to be affected by sequence of information. On the other hand, both subjects who recognized justification requirement after viewing the evidence and non-accountable subjects were heavily influenced by sequence of information.

Third, the accountability and the types of evidence could impact auditors' justification (Koonce, Anderson and Marchant, 1995). For instance, when auditors were expected to be reviewed, they were found to document greater numbers of justification. In addition, auditors wrote more justification when receiving inconsistent evidence than when getting consistent evidence.

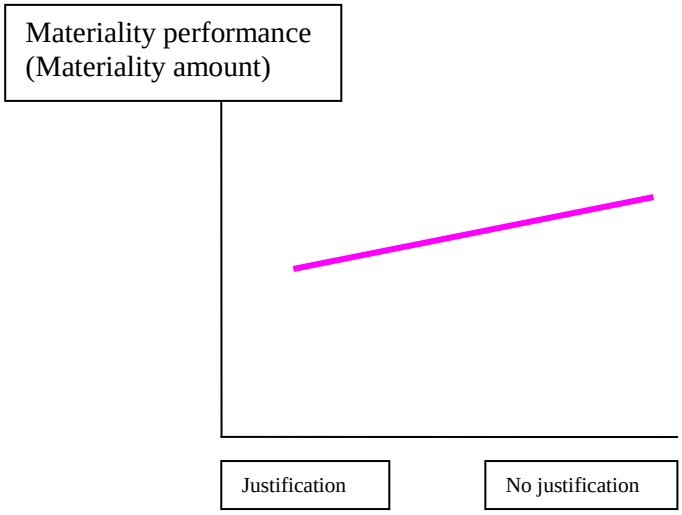
Fourth, personal attributes such as tacit managerial and technical knowledge could influence the justification forms (Shankar and Tan, 2006). Auditors with high technical knowledge and managerial knowledge would have a greater propensity to persuade reviewers with more persuasive evidence and wider breadth of issues when the former's task preferences are inconsistent with their reviewers'.

Hypotheses development

The justification has been suggested as a tool to improve judgment performance and was found to remedy the confirmation bias problem (Wheeler and Arunachalam, 2008), which could subsequently lead to better performance. Without the preference, justification was found to increase accuracy and consistency of judgment (Ashton, 1992). On the contrary, when an individual is not required to do justification, he could make a decision quickly and might not deeply and carefully think about relevant information. Auditors who are required to justify their planning materiality determination would think more thoroughly about relevant risks and be more aware of their decision. Thus, this paper hypothesizes that auditors with justification requirement would concern more with relevant risks, which leads to lower materiality amount for planning (see picture 2.2).

H2: For a high risk client, auditors with justification requirement when planning materiality would incorporate more risk factors or set lower materiality amount than those without justification requirement.

Figure 2.2: Main effect of justification requirement



2.3.4 Interaction between Guidance and Justification

To examine the interaction effect of guidance and justification, this paper divides participants into four groups as shown below.

Table 2.1 Group combination between guidance and justification levels

Justification / *Guidance*	Yes	No
Yes	Group 1	Group 2
No	Group 3	Group 4

Group 1 represents auditors who are given the structured guidance and are required to write down their supporting reasons when performing planning materiality decision *(Provide guidance and required justification)*

Group 2 represents auditors who are given the structured guidance but are not required to write down their supporting reasons when performing planning materiality decision *(Provide guidance but not required justification)*

Group 3 represents auditors who are not given the structured guidance (unstructured) but are required to write down their supporting reasons when performing planning materiality decision *(Not provide guidance but required justification)*

Group 4 represents auditors who are not given the structured guidance (unstructured) and are not required to write down their supporting reasons when performing planning materiality decision *(Not provide guidance and not required justification)*

The justification requirement was found to remedy confirmation bias by forcing participants to deeply assess reasons to support their answers whereas the factor evaluation checklist (structured checklist) could not reduce the confirmation bias occurring during information search strategies of tax professionals (Wheeler and Arunachalam, 2008). Since the structured guidance tends to limit subjects' attention solely to the guidance, subjects without justification requirement would easily use the guidance as heuristic, adhere to the guidance, and ignore other relevant information. On the other hand, subjects required to justify their decision would concern more deeply although they have decision aid on hand. Thus, this paper expects that justification requirement can lower the cognitive limitation impact of provided structured guidance, leading to higher judgmental performance.

This expectation is not consistent with the study of Ashton (1990) and Ashton (1992), which revealed that the existence of mechanical aid could significantly increase the accuracy and the consensus of decision making. The justification could increase judgmental performance in terms of accuracy and consensus only when there was no decision aid provided to participants. On the contrary, justification requirement could lower accuracy and consensus of decision making when participants were provided the decision aid (Ashton, 1990). The main reason is differences in task and aid. The task in Ashton's (1990) was classifying bond ratings based on three financial ratios while the task in this paper is setting planning materiality based on ten cues (i.e., more complex task). In addition, the aid in Ashton's (1990) was based on a statistical linear regression of Moody's rating and three financial ratios while the guidance in this paper is in the form of range which does not provide any statistical relation with the cues. Furthermore, Ashton (1990) indicated that if participants followed the aid, they would have a chance to get correct answers. This is contrary to my context in the sense that there is some relevant information outside the aid that auditors should concern and use in their decision. If auditors followed the structured guidance in my context and did not adjust for

relevant information, they would lower their judgmental performance. Therefore, the guidance or decision aid in this paper is expected to diminish the judgmental performance of auditors when performing ill-structured tasks by leading to heuristic bias. Explicitly, this paper posits that when auditors are provided the structured guidance, auditors who are required to justify their decisions could not limit their thinking process within the guidance, leading to the determination of lower materiality amount than those without justification requirement (see picture 2.3).

H3.1: Under the availability of structured guidance, auditors with justification requirement (Group 1) would incorporate more risk factors or set lower materiality than those without justification requirement (Group 2).

The unstructured guidance provides only definition of materiality that possibly varies in interpretation by different people but it does not limit the attention of subjects. The justification requirement itself forces individual auditors to deeply think and exert cognitive effort before making decision. On the other hand, people without justification requirement are not forced to think and be aware of the underlying reason for their judgment. Even though they would not be limited in their thinking process by the provided guidance, they could spend their thinking effort at the lower level. Thus, this paper expects that using unstructured guidance with the justification requirement (i.e., writing supporting evidence or underlying indicators for making decision of planning materiality) would lead to better incorporation of risk factors than using unstructured guidance without justification requirement, ceteris paribus (see picture 2.3).

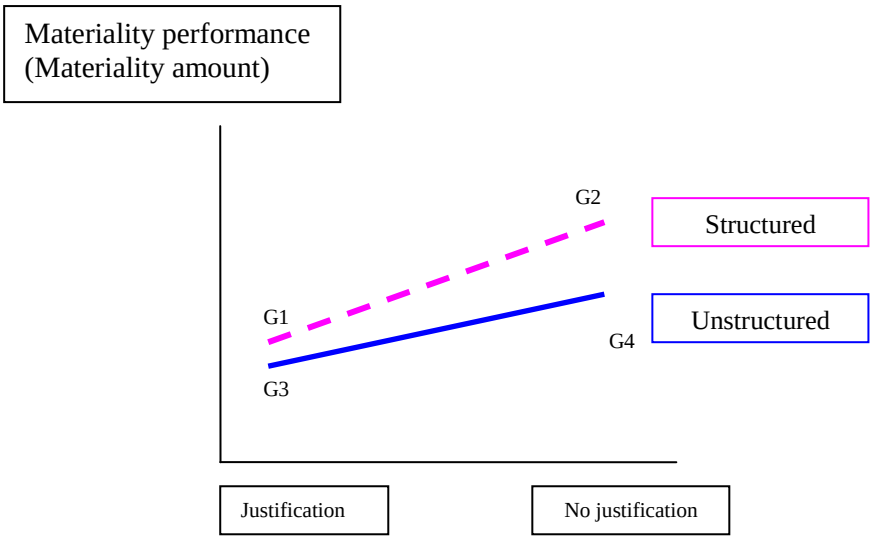
H3.2: Under the unstructured guidance, auditors with justification requirement (Group 3) would incorporate more risk factors or set lower materiality level for high risk client than those without justification requirement (Group 4).

Since auditors who are not provided the guidance can independently process their thinking and could incorporate more information than auditors who are provided the guidance, the effect of justification to increase more cognitive effort in the absence of guidance could be lower than that in the presence of guidance. I posit that the difference in materiality amounts of auditors who are required to justify and of those without justification requirement in the presence of guidance (Group 1 – Group

2) would be greater than that of both groups in the absence of guidance (Group 3 – Group 4).

H3.3: The difference in materiality amount set by auditors with and without justification requirement in the presence of the structured guidance (Group 1 – Group 2) would be greater than that in the absence of the guidance (Group 3 – Group 4).

Figure 2.3: Interaction effect of guidance level and justification requirement



CHAPTER III
RESEARCH DESIGN

3.1 Participants

Big audit firms put greater effort during planning and control risk assessment than during substantive testing and completion while non-big firms rely more on substantive testing (Blokdijk et al, 2006). Auditors from big N firms were chosen to participate in my experiment because they have task knowledge and ability to perform planning materiality decision. Initially, 128 audit managers from big N firms in Thailand took part in the experiment but seven audit managers were subsequently excluded as they failed to answer the experimental case completely, resulting to 121 participants who answered the case completely. I also exclude two aberrations in the third case. Total usable samples consist of 119 participants. Numbers of participants in each treatment or case are shown in Table 3.1.

Table 3.1 Numbers of participants

	Case 1	Case 2	Case 3	Case 4	Total
Manager	31	31	35	31	128
Incomplete	-5	-1	-1	-	-7
	26	30	34	31	121
Outliers	-	-	-2	-	-2
	26	30	32	31	119

3.2 Research Methodology

3.2.1 Dependent variable

Participants are required to provide the basis and the percentage used for calculating the materiality amount. Then, the final amount of materiality will be calculated and used as dependent variable.

3.2.2 Independent variables

The research design is a 2 x 2 between subject variables, with guidance (structured versus unstructured) and justification requirement (required versus not required).

Under the structured guidance, the following instructions are shown step by step in the case material:

Step 1: Use 5% - 10% of Earnings before income tax

Step 2: Use 1% - 1.5% of Total assets or Total revenues, whichever is higher

Step 3: Take the higher amount of (1) or (2) as planning materiality

Under the unstructured guidance, I provide only materiality definition as *"The planning materiality level will be used to determine the audit procedures in order to get sufficient evidence for issuing an audit opinion and to assure that financial statements have no material misstatement or errors that could impact the decision of financial statement users".*

The justification condition requires participants to write down their reasons to support their determination of materiality. The participants were unaware that their reasons would be reviewed by their supervisors so as to mitigate influences from other factors except for that of justification requirement. Thus, the justification condition in this paper could be a weak form of justification requirement. Under no justification requirement, participants are not required to write any reasons to support their decision.

Four experimental cases were constructed with structured or unstructured guidance and justification requirement variables. The case research design is 2 by 2.

	Type of Guidance	**Justification requirement**
Case 1	Structured	Justify
Case 2	Structured	No Justify
Case 3	Unstructured	Justify
Case 4	Unstructured	No Justify

Four cases require three dummy variables, L1, L2 and L3, to represent each case as follows:

Case1: Providing structured guidance and requiring justification:

L1 = 1, L2 = 0, L3 = 0

Case 2: Providing structured guidance but not requiring justification:

L1 = 0, L2 = 1, L3 = 0

Case 3: Providing unstructured guidance and requiring justification:

L1 = 0, L2 = 0, L3 = 1

Case4: Providing unstructured guidance but not requiring justification:

L1 = 0, L2 = 0, L3 = 0

3.2.3 Control Variables

3.2.3.1 Time pressure

Auditors usually perform audit task under time pressure. Auditors must meet both client reporting and regulatory filing deadlines. When auditors perceive the time budget to be too restrictive to complete the assigned audit procedures, they become stressed, which may in turn impede their ability to deal with new or complex issues. McDaniel (1990) studied auditors' performance of substantive test under time pressure and found that audit efficiency increased while audit effectiveness declined under time pressure.

Glover (1997) examined the influence of time pressure and accountability on auditors' judgment of non-diagnostic information in two different cases. One case contains only diagnostic information while the other contains both diagnostic and non-diagnostic information. The results show that time pressure moderated the influence of non-diagnosis information on auditor judgment. This means that time pressure has the potential to reduce judgment bias. On the contrary, the results show no significant influence of the accountability on the dilution effect. However, the study of Glover (1997) gave no attention to the mediating effect of knowledge on task complexity-performance relation.

Interaction effect of Time pressure and Guidance

As time pressure induces stress, a person would put in greater effort to complete the task within the time limit. He/she would seek a method or cue that would help him/her perform the task faster. The structured audit program is found to increase audit efficiency under the time constraint (McDaniel, 1990). However, McDaniel's study was limited to detailed testing task which required less judgment. To perform the complex task, auditors are required to incorporate all relevant information and use their judgment. Thus, structured guidance could lower auditors' performance in complex task (Asare and Wright, 2004). Ordóñez and Benson (1997)

also found that when participants in their study faced time constraint, they changed their strategies to use the one that required less cognitive load although it could lower their effectiveness. As such, in this study I hold constant the time pressure by not restricting the time allocated to auditors to complete the task. In addition, I asked participants to write down the amount of time spent on the task and the figures were then transferred to the returned answer sheets of the participants. The time data were included in my model as a control variable.

3.2.3.2 Audit firm culture and Familiarity with the guidance

Carpenter et al (1994) states that organizational culture is something that management creates institutionalized and standardized modes of behavior in order to achieve the desired result. They examined two types of audit firm culture, mechanistic and organic firm cultures. The mechanistic firm strictly and rationally defines goal and standardizes operating procedures. Thus, individual in the mechanistic firm has greater propensity to incorporate more judgment cues in order to justify their decision. On the other hand, the organic firm emphasizes context-specific decision and empowers the autonomy of decision makers. Therefore, individual in organic firm is likely to use a single, well-documented or well-accepted cue due to his limited knowledge and abilities.

Carpenter et al (1994) found that audit firm culture was related to auditors' decisions on materiality in the context of early debt extinguishment transaction. By the researchers' classification, PriceWaterhouseCoopers is defined as organic firm, Ernst&Young as intermediate firm, and Deloitte and Peat Marwick as mechanic firm. They found that higher professional ranks in organic firm used fewer numbers of cues in making materiality judgment and the reverse occurred in mechanic firm. The participants in the experiment are asked to rate their familiarity with structured guidance in percentages which are used as proxy for audit firm culture in order to control the impact of organizational culture on the materiality judgment.

In addition, the familiarity of decision aid itself could be positively related to decision aid reliance (Whitecotton, 1996). Thus, the familiarity score rated by the participants was included as a control variable to control the impact of both organizational culture and familiarity.

3.2.3.3 Accountability

Differences in accountability levels can have an impact on materiality decision. Dezoort et al (2006) revealed that higher accountability pressure caused auditors to increase their cognitive effort regarding available information and to attach more importance to qualitative factors. The accountability factor was controlled by informing all participants that their answers would be reviewed solely by the researcher and thus by applying one single accountability level with all participants.

3.2.3.4 Quality of client's control environment

Once auditors accept audit a client, they assess the client's business risk and control risks after evaluating the quality of the client's internal control mechanisms. The internal control mechanisms could prevent and detect intentional and unintentional misstatements. Low quality of internal control mechanism could lead to greater number of misstatements and higher audit risks. Auditors should assure that there is no material misstatement in client's financial statements. They would set lower materiality level when planning audit procedures if they anticipate misstatements to be unearthed. The quality of client's control environment is related to auditors' planning materiality (Blokdijk et al, 2003). Therefore, the participants are asked to score the quality of control environment of the case on the scale of one to seven with one indicating the lowest quality of control environment and seven the highest. The scores are then included in the model as a control variable.

3.2.3.5 Client's complexity

The complexity of client can be defined as challenges confronting the client's own personnel and auditors. When the client engages in new business transactions in which the client's own employees and/or auditors do not fully understand, they would not know how to proceed with those transactions. As a consequence, incorrect recording of transactions would easily occur and lead to high audit risk. Auditors would set lower materiality amount in order to discover those potential misstatements. The complexity of business is related to auditors' planning materiality level (Blokdijk et al, 2003). Therefore, the participants are asked to score the client's complexity on the scale of one to seven with one indicating the lowest complexity and seven the

highest complexity. The resulting score is then introduced to the model as another control variable.

3.2.4 Case Materials

I initially used material events as indicated by Pinsker et al. (2009) because they included both quantitative and qualitative material events that auditors should be concerned with in materiality judgment. Some inherent risks and control risks of inventories and fixed assets are added to the case materials.

The client for this case is a manufacturer of steel assemblies. The manufacturing industry was selected because it is a less complicated industry for which no specific knowledge, such as that required of financial institution industry, is required from auditors. The overall information of client (ABC public company) and the summary of two-year comparative financial information were given. The current year in the case presented a profit from selling obsolete machines for about 3.48 million Baht, which was recognized as "other income". The current machinery was expected to be in use for the next seven years. This implies that gain from selling obsolete machines in the current year was a non-recurring item which should be excluded before calculating materiality for planning. In addition, the company invested in one associated company four years ago, but this year it has just received dividend for the first time in the amount of 4.4 million Baht. This dividend income was expected to be excluded before calculating materiality for planning. The case materials were reviewed and commented by one senior manager and two audit partners from two big audit firms.

The financial statement was manipulated to show high total assets (192.72 million Baht) while having earnings before tax only 17.24 million Baht. If the participants followed the guidance, they would set up the materiality amount 1%-1.5% of total assets. If participants took into account the nature of business and concerned more with relevant risks, they would use earnings before tax as the initial base for materiality determination. Since the case states that the company has just received dividend from an associated company invested four years ago and this year the company has gains by selling fixed assets, which is not expected to recur for another seven years, participants would adjust for these two one-time items before

calculating materiality for planning. In addition, the case will be in the Thai language in order to avoid the English language misunderstanding. Appendix presents the case that was used in the experiment.

3.2.5 Procedure

The experiment was separately conducted during in-house training sessions run by each audit firm.[2] I did not put a constraint on time in the experiment as it could impact participants' decision (Ordóñez and Benson, 1997; Glover, 1997; McDaniel, 1990). Each session took approximately 30 minutes. The combinations of the guidance and the justification requirement comprise four types of cases. Participants were randomly assigned to each case.

Table 3.2: Case material based on guidance and justification requirement

	With Structured guidance	With Unstructured guidance
With Justification requirement	Case 1	Case 3
Without justification requirement	Case 2	Case 4

This table shows the combination of two treatment factors in constructing the experimental cases

All participants received a package of case comprising client's background information, the two-year consecutive financial statements, and distinctive answer sheet for determining planning materiality amount. After completing the materiality task, they provided demographic information, including their experience relating to materiality determination (i.e., how many clients, number of years, etc.)..

3.2.6 Model specification

The experiment uses the 2 X 2 design of guidance levels (providing structured guidance versus providing unstructured guidance) and justification levels (requiring justification versus not requiring justification). ANCOVA analysis is used because the time spent (a control variable) is measured in minutes. The research model is as follows:

[2] The different experiment sessions did not significantly impact planning materiality determination ($p = 0.09$)

Full model:

$Y_{ijk} = \mu + \tau_i + \beta_j + (\tau\beta)_{ij}$ + Control variables $+\varepsilon_{ijk}$

where Y_{ijk} is planning materiality amount

τ_i is guidance levels and i = 1 if providing structured guidance

i = 0 if providing unstructured guidance

β_j is justification levels and j = 1 if requiring justification

j = 0 if not requiring justification

Terms and Definitions

1. Providing structured guidance means the instructions adopted from the Audit and Accounting Manual (2005) of the American Institute of Certified Public Accountant (AICPA) were shown step by step in the case material.
2. Providing unstructured guidance means only materiality definition was shown up in the case material.
3. Requiring justification means that participants were required to justify their decision.
4. Not requiring justification means that participants were not required to justify their decision.
5. Materiality is defined by the International Standards of Auditing as "Misstatements, including omissions, which, individually or in the aggregate, could reasonably be expected to influence the economic decisions of users taken on the basis of the financial statements. Judgments about materiality are made in light of surrounding circumstances, and are affected by the size or nature of a misstatement or a combination of both. Judgments about matters that are material to users of the financial statements are based on a consideration of the common financial information needs of users as a group. The possible effect of misstatements on specific individual users, whose needs may widely vary, is not considered."

Main effects of guidance levels and justification levels are analyzed with the following model:

$Y_{ijkl} = \mu + \tau_i + \beta_j$ + Control variables + ε_{ijk}

Two-way interaction effects will be analyzed with the following model:

$Y_{ijkl} = \mu + \tau_i + \beta_j + (\tau\beta)_{ij}$ + Control variables + ε_{ijk}

Since I do not expect disordinal interaction between guidance and justification treatments, the interaction term in ANCOVA table is expected to be insignificant. Thus, the interaction is further investigated using a contrast coding approach as Bradley's (2009) referring to Buckless and Ravenscroft's (1990). The mean of the auditors with structured guidance and without justification requirement (Group 2) is compared to that of the other three groups (coded G1 G2 G3 G4 as -1 3 -1 -1, respectively). To perform the robustness of the contrast coding, two coding contrasts for G1 G2 G3 G4 as -1 4 -2 -1 and -1 5 -3 -1 are used.

Variables	Proxied by	Symbol
Dependent variable		
Materiality decision	Materiality amount	Y1
Independent variables		
Materiality guidance levels	Dummy variable; 1 = Providing structured guidance 0 = Providing unstructured guidance	Guide
Justification requirement levels	Dummy variable; 1 = Requiring justification 0 = Not requiring justification	Justify
Control variables		
Time spent for the task	Minutes	Time
Audit firm culture and Familiarity	Familiarity with structured guidance. 0 = represents unfamiliarity, 1 = represents full familiarity	Fami
Quality of control	1 = lowest quality of control environment 7 = higher quality of control environment	Control
Client's complexity	1 = lowest complexity 7 = highest complexity	Complex

3.2.7 Summary of hypotheses testing

Guidance Levels

H1: In determining the planning materiality, auditors will set higher (lower) materiality amount when they are provided (not provided) the structured guidance.

Justification

H2: For high risk client, auditors with justification requirement when planning materiality would incorporate more risk factors or set lower materiality amount than those without justification requirement.

Interaction between Guidance and Justification

H3.1: Under the availability of structured guidance, auditors with justification requirement (Group 1) would incorporate more risk factors or set lower materiality than those without justification requirement (Group 2).

H3.2: Without the structured guidance, auditors with justification requirement (Group 3) would incorporate more risk factors or set lower materiality amount than those without justification requirement (Group 4).

H3.3: The difference in materiality amount set by auditors with and without justification requirement in the presence of the structured guidance (Group 1 – Group 2) would be greater than that in the absence of the guidance (Group 3 – Group 4).

CHAPTER IV
RESULTS

4.1 Sample Characteristics

Participants are audit managers from big N firms in Thailand. As discussed in Chapter 3, Total usable samples consist of 119 participants. Almost all of the participants have some experience in auditing manufacturing companies.

Table 4.1 Descriptive statistics

	Unit of measurement	Mean	Median	Standard Deviation	Min	Max
Age	Year	32	32	3.84	26	46
Audit tenure	Year	10	9	3.53	5	23
Materiality amount	(‘000 Baht)	786.02	749.00	426.75	68.72	1977.00
Control environment 1 = lowest quality 7 = highest quality	Scale 1 to 7	3.10	3.00	0.91	1.00	6.00
Client’s complexity 1 = lowest complexity 7 = highest complexity	Scale 1 to 7	3.64	4.00	1.01	1.00	6.00
Risk assessment 1 = lowest risk 7 = highest risk	Scale 1 to 7	4.72	5.00	1.05	2.00	7.00
Time spent	minutes	13.88	15.00	4.94	5.00	30.00
Familiarity with firm’s guidance 0 = Not familiar 1= Absolutely familiar	Scale 0 to 1	0.94	1.00	0.10	0.50	1.00

The ages of audit managers in the experiment range from twenty-six to forty-six with average and median ages being thirty-two. Their audit tenure ranges from five years to twenty-three years with average and median audit tenure periods ten and nine years, respectively. The planning materiality amount determined by the participants range from 68.72 thousand Baht to 1,977 thousand Baht with the average and median materiality amount of 786.02 and 749 thousand Baht, respectively. The

average of the quality of client's control environment is regarded as fairly low at 3.1 out of the full quality score of 7 while that of the complexity of business is somewhat high at 3.64 out of the full complexity score of 7. The average of client's risk is regarded as relatively risky at 4.72 out of the full risk score of 7. The average length of time spent is fourteen minutes with the minimum being five minutes and the maximum thirty minutes. The average familiarity with the guidance of their respective audit firms is ninety-four percent, with fifty percent as the lowest and one hundred percent the highest.

4.2 Results of Data Analysis

Included in this paper is an ANOVA table in which control variables were excluded from the result analysis because the control variables did not display any significant impact on auditors' judgment of planning materiality. In addition, the impacts of both guidance and justification requirement, which are the two variables of interest, on planning materiality judgment do not change neither in the presence nor absence of the control variables. The results with control variables present in the model are shown in the sensitivity analysis section.

Table 4.2 ANOVA results on materiality amount determined by auditors

Dependent Variable: Materiality amount ('000 Baht)

Source of variation	**Sum of Squares**	**df**	**Mean Square**	**F**	**P**
Model	3750122	3	1250041	8.10	<0.0001***
Error	17739800	115	154259		
Corrected Total	21489922	118			
R-Square	Coeff Var		Mat Amt		
0.174506	49.97		786.02		
Between-Subjects					
Guidance	1458161	1	1458161	9.45	0.0026***
Justify	1964883	1	1964883	12.74	0.0005***
Guidance x Justify	209149	1	209149	1.36	0.2467
Error (Total)	17739800	115			

*This table shows main significant effect of guidance and justification requirement.. ***, ** and * indicate significance at 1, 5, and 10 percent levels, respectively.*
The variables are defined as follows:
Guidance = Main effect of structured guidance versus unstructured guidance
Justification = Main effect of justification requirement versus no justification requirement
Guidance x Justification = Interaction effect of guidance treatment and justification treatment
Please noted that this table does not include control variables such as time spent, familiarity, quality of control environment, client's complexity and risk assessment because all these control variables were not significant impact materiality determination. In addition, controlling these variables in the model does not change the results.

The overall ANOVA results in Table 4.2 indicate that both guidance and justification requirement significantly impact auditors' determination of planning materiality. The model of guidance treatment and justification treatment is significant (p value was <0.0001). The main effect of both guidance and justification were significant at one percent (p value = 0.0026 and p value = 0.0005, respectively), suggesting that both guidance and justification have impact on materiality decision. The two-way interaction effect is statistically insignificant.

Table 4.3 Effect of guidance and justification requirement: Materiality amount (standard deviation) for all participants

Dependent Variable: Materiality amount ('000 Baht)

Guidance	**Justify**	**No Justify**	**Main effect of Guidance**	**Compare contrast[a]**	**Effect of Justification S vs U**
Structured					
LSMEAN	**727.62**	**1,069.54**	**898.58**	**SJ – SNj = -341.92** ***(p value[b] = 0.00075)***	**(SJ-SNj) – (UJ-UNj)**
MEAN	*727.62*	*1,069.54*	*910.79*		**= 341.92 – 173.70**
(Std Dev)	*(312.08)*	*(577.45)*	*(499.70)*		**= 168.22**
No.of mgr	SJ = 26	SNj = 30	S = 56		***(p value[b] < 0.0001)***
Unstructured					
LSMEAN	**589.64**	**763.34**	**676.49**	**UJ – UNj = -173.70** ***(p value[b] = 0.04095)***	
MEAN	*589.64*	*763.34*	*675.11*		
(Std Dev)	*(277.31)*	*(329.18)*	(313.92)		
No.of managers	UJ = 32	UNj = 31	U = 63		
Main effect of Justification					
LSMEAN	**658.63**	**916.44**		**J – Nj = -257.81** ***(p value[b] = 0.00025)***	
MEAN	651.50	913.93			
(Std Dev)	(298.88)	(489.05)			
No.of managers	J = 58	Nj = 61			
Compare Contrast[a]	**SJ – UJ = 137.98** ***(p value[b] = 0.093)***	**SNj – UNj = 306.20** ***(p value[b] = 0.00145)***	**S – U = 222.09** ***(p value[b] = 0013)***		

This table presents the materiality amount ('000 Baht) for each combination of guidance and justification requirement. This table shows both lsmean(or adjusted mean) and mean (or unadjusted mean).

[a] The contrast comparison is calculated from lsmean

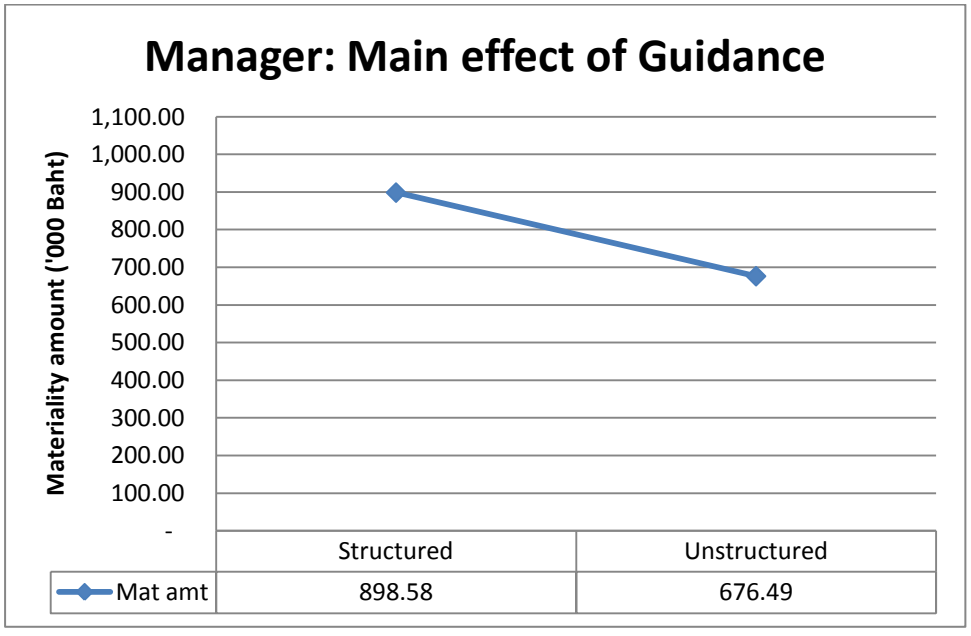
[b]The p value in the table is one-tailed.

Definition of abbreviations in table is as follows:

SJ = Structured guidance and Justification requirement
SNj = Structured guidance and No justification requirement
UJ = Unstructured guidance and Justification requirement
UNj = Unstructured guidance and No justification requirement
S = Structured guidance
U = Unstructured guidance
J = Justification requirement
Nj = No justification requirement

The first hypothesis expects that the materiality amount determined by auditors with the existence of structured guidance will be higher than that set by auditors with unstructured guidance. As predicted, the Table 4.3 and Figure 4.1 show that the materiality amount under structured guidance is significantly higher than that under unstructured guidance (898.58 versus 676.49; p value = 0.0013). When auditors were provided with the structured guidance, they were likely to follow the structured guidance and less concerned with two manipulated non-recurring items in the case. When the two non-recurring items were not adjusted before calculating planning materiality, the planning materiality would be higher. Therefore, the results significantly support our first hypothesis that the structured guidance could limit auditors' attention to materiality level provided in the guidance and lower the amount of thinking effort although the participants have task experience.

Figure 4.1: Result of Main Effect of Guidance



The second hypothesis expects that justification requirement could increase thinking effort of auditors; hence, materiality amount determined by auditors who justified their decision would be lower than that set by auditors without justification requirement. The ANOVA result in Table 4.2 shows that justification requirement significantly affects materiality determination of auditors (p = 0.0005). The

justification requirement effect in Table 4.3 and Figure 4.2 also show that the materiality amount under justification requirement is markedly lower than that under no justification condition (658.63 versus 916.44; p value = 0.00025). When audit managers were not required to provide justification for their decision, they could easily make their judgment and would overlook two non-recurring items in the case. When the two non-recurring items were not adjusted before calculating planning materiality, the planning materiality would be higher. Thus, the result supports the second hypothesis that the justification requirement increases cognitive effort and induces participants to think more deeply and be concerned more with relevant information.

Figure 4.2: Result of Main Effect of Justification Requirement

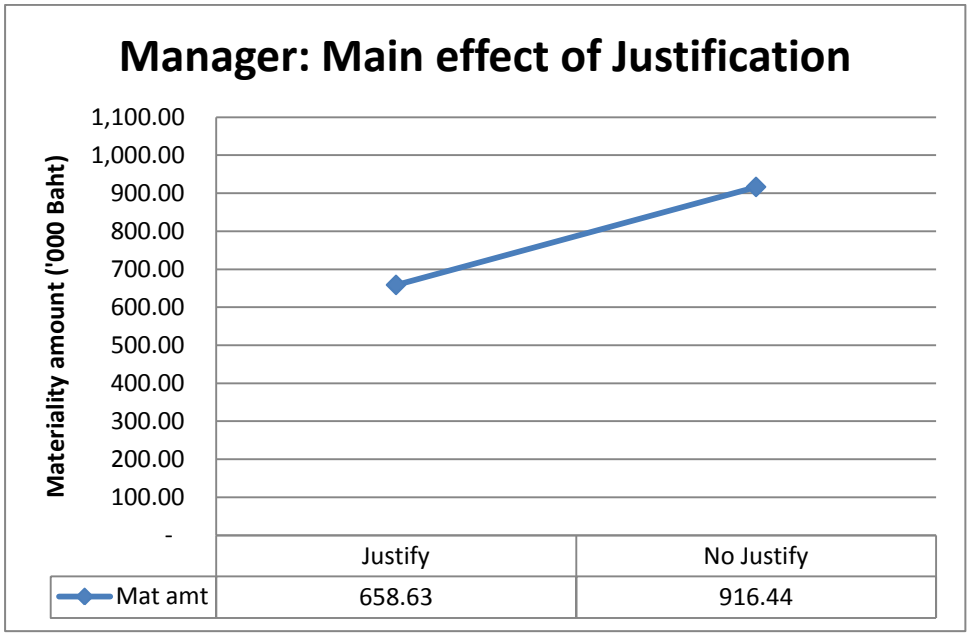


Table 4.2 illustrates that the interaction effect of guidance and justification insignificantly impacts materiality determination, while the main effects of structured guidance and justification requirement significantly influence the materiality determination (p value of interaction effect = 0.2467; p value of main effect of guidance = 0.0026; p value of main effect of justification = 0.0005). This suggests that there would not be disordinal interaction effect between structured guidance and justification requirement. This paper uses contrast comparison to test hypotheses 3.1, 3.2 and 3.3.

Hypothesis 3.1 conjectures that justification could mitigate the cognitive bias toward the provided guidance. Specifically, under the availability of structured guidance, auditors with justification requirement determine lower materiality amount than those without justification requirement. To test this conjecture, the mean of materiality amount of the first case or treatment (Structured guidance and Justification requirement or SJ = 727.62 in Table 4.3) is compared with that of materiality amount of the second case or treatment (Structured guidance and No Justification requirement or Cell SNj = 1,069.54 in Table 4.4). The results in compare contrast column in Table 4.3 statistically supports hypothesis 3.1 (p value = 0.00075). This shows that when audit managers with the existence of the structured guidance were not required to justify their decision, they were likely to follow the structured guidance and were less aware of two non-recurring items. On the contrary, when audit managers with the existence of the structured guidance were required to justify, they would be careful with their decision and concern all relevant information, including these two non-recurring items. As a result, audit managers with justification requirement would pay more attention to these two non-recurring items and adjust them before calculating planning materiality amount even though they were provided the structured guidance. The planning materiality amount of audit managers with justification requirement was, therefore, lower than that of audit managers without justification requirement. This indicates that justification requirement could induce participants to put in more cognitive efforts and contemplate more relevant information in the presence of structured guidance. In addition, the justification requirement could mitigate the cognitive bias toward the provided guidance.

Hypothesis 3.2 predicts that justification requirement could increase thinking efforts and lead to assessing relevant information more deeply and thoroughly under the absence of structured guidance. In the absence of structured guidance, the materiality amount under justification requirement is significantly lower than that under no justification requirement (589.64 versus 763.34, different amount is 173.70, p value = 0.041), thereby supporting hypothesis 3.2. The notable difference under the unstructured guidance is the force of justification mechanism as a tool to improve auditors' judgment on planning materiality decision. The motivated reasoning goal states that when people do not know the preferential results, they would target

accuracy goal. Even though audit managers independently process their thinking in the presence of unstructured guidance, they could be forced to increase their thinking effort and concern more with relevant information, such as the two non-recurring items in the case, with the justification requirement. These results indicate that justification requirement could successfully improve judgment on planning materiality determination even in the absence of structured guidance.

Hypothesis 3.3 posits that the effect of justification requirement to improve materiality judgment would be greater in the presence of structured guidance than in the absence of structured guidance. The justification requirement is expected to increase cognitive efforts of auditors both in the presence and the absence of the structured guidance. However, the structured guidance could induce auditors to concern less with relevant information and set high materiality amount, whereas the unstructured guidance would not limit the attention of auditors. Thus, the justification requirement is expected to induce auditors to concern more relevant information in the presence of structured guidance more than in the absence of structured guidance. Table 4.3 shows that in the presence of the structured guidance, auditors with justification requirement set planning materiality lower than those without justification requirement in the amount of 341,920 Baht. On the other hand, in the absence of the structured guidance, auditors with justification requirement set planning materiality lower than those without justification requirement in the amount of 173,700 Baht. The effect in monetary terms of justification in the presence of structured guidance is greater than in the absence of structured guidance with a difference of 168,220 Baht (341,920 – 173,700).

To test statistical impact, the materiality amount of auditors in the presence of both structured guidance and justification requirement (Group 1) is compared with that of auditors in the absence of both structured guidance and justification requirement (Group 4). It is found that the materiality amounts of both groups are insignificantly different (p value of two-tailed = 0.733). To test the effect of justification requirement on the existence and non-existence of structured guidance using compare contrast, equal weights are assigned to auditors in Group 1 and Group 4. The highest weight is assigned to auditors with structured guidance but without justification requirement (Group 2) while the lowest weight to auditors without

structured guidance but with justification requirement (Group 3). The contrast results show that the justification requirement has greater impact on auditors' judgment in the presence of structured guidance than in the absence of structured guidance (p value < 0.0001).[3]

Figure 4.3: Result of Interaction Effect of Guidance and Justification Requirement

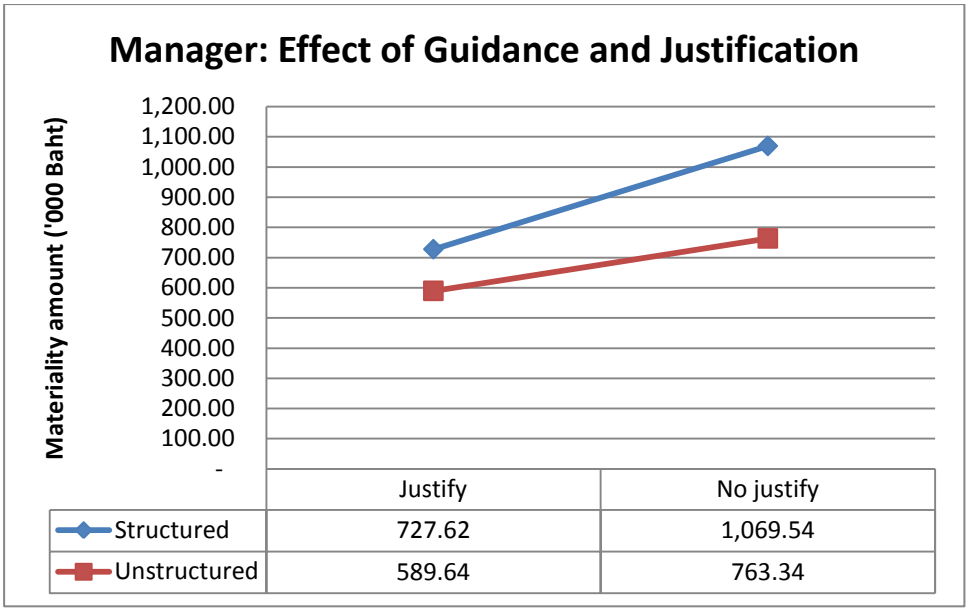


Figure 4.3 reveals that auditors without structured guidance would think more deeply through relevant risks and set lower materiality for planning because they do not have any mechanical tools on which to rely. When they were required to justify, their materiality amount was lower than when their justification was not required. However, the improvement from justification requirement under the absence of structured guidance (173.70 in compare contrast column of Table 4.3) was lower than that under the presence of structured guidance (341.92 in compare contrast column of Table 4.3). This implies that justification requirement could be used as a tool to mitigate cognitive bias toward the structured guidance or lessen the anchoring effect of structured guidance for audit managers. Furthermore, justification requirement

[3] Different combinations of weights are assigned to the four groups (-1 3 -1 -1 and -1 4 -2 -1 and -1 5 -3 -1). The contrast results using different combinations are identical (p value < 0.0001).

could induce auditors to think more deeply and concern more with relevant information even though auditors could independently process their judgment. The incremental effect of justification requirement under unstructured guidance is also significant (p value = 0.04, see Table 4.3).

Additional analysis

I further investigated the materiality base the audit managers used in their decision. If participants followed the structured guidance, they would use total assets as materiality base. Table 4.4 shows that ninety-eight audit managers, equivalent to eighty-two percent, of total participants decided to use earnings before tax as materiality base. There are only ten audit managers, equivalent to eight percent, of total participants selected total assets as materiality base. Although the eight percent of participants is relatively small, they were provided with the structured guidance. This implies that when audit managers are provided with the structured guidance, some of them (i.e., eighteen percent of audit managers with the structured guidance) are likely to bias toward the guidance. In other words, the anchoring effect of the guidance could influence certain experienced auditors.

By comparing the first case group (Structured with justification) to the second case group (Structured without justification), only one audit manager, equivalent to four percent, of participants in the first group used total assets as materiality base while nine audit managers, or thirty percent, of participants in the second group used total assets as materiality base. The figures lead to an implication that justification could mitigate the anchoring effect of the structured guidance for some experienced auditors. In other words, experienced auditors are more likely to limit their attention to the provided structured guidance, especially when they are not required to justify their decision.

Table 4.4 Number of audit managers by materiality base

	EBT	EBIT	TA	NI	RE	TOTAL
Structured Guidance	45	-	10	-	1	56
Unstructured Guidance	53	3	-	7	-	63
TOTAL	98	3	10	7	1	119
Justification	51	1	1	5	-	58
No Justification	47	2	9	2	1	61
TOTAL	98	3	10	7	1	119
Case 1 (S J)	25	-	1	-	-	26
Case 2 (S Nj)	20	-	9	-	1	30
Case 3 (U J)	26	1	-	5	-	32
Case 4 (U Nj)	27	2	-	2	-	31
TOTAL	98	3	10	7	1	119

This table presents the number of participants in each treatment by their materiality base
Definition of abbreviations in table is as follows:
SJ = Structured guidance and Justification requirement
SNj = Structured guidance and No justification requirement
UJ = Unstructured guidance and Justification requirement
UNj = Unstructured guidance and No justification requirement
S = Structured guidance
U = Unstructured guidance
J = Justification requirement
Nj = No justification requirement

I further analyzed to determine whether participants could adjust non-recurring items before calculating planning materiality as these two non-recurring items are included in the experimental case. Table 4.5 shows that forty-eight percent of audit managers with the presence of structured guidance did not adjust non-recurring items whereas only twenty-five percent of those with the absence of structured guidance did not adjust non-recurring items. The markedly higher percentage of participants who did not adjust non-recurring items in the presence of structured guidance reflects the former's less concern with relevant information in setting materiality.

The percentages of audit managers who adjusted two non-recurring items both in the presence and absence of justification requirement are not much different (53% and 48%, respectively, see Table 4.5). On the contrary, the difference in percentages of audit managers who did not adjust two non-recurring items both in the absence and

presence of justification requirement is nevertheless more pronounced (41% and 31%, respectively, see Table 4.5). These results indicate that justification requirement could motivate participants to concern more with non-recurring items.

Table 4.5 Number and percentage of participants by adjustment of non-recurring items

	Adjust two items	**Adjust one item**	**No adjustment**	**Total**
Structured Guidance	24 (43%)	5 (9%)	27 (48%)	56 (100%)
Unstructured Guidance	36 (57%)	11 (18%)	16 (25%)	63 (100%)
TOTAL	60	16	43	119
Justification	31 (53%)	9 (16%)	18 (31%)	58 (100%)
No Justification	29 (48%)	7 (11%)	25 (41%)	61 (100%)
TOTAL	60	16	43	119
Case 1 (S J)	13 (50%)	1 (4%)	12 (46%)	26 (100%)
Case 2 (S Nj)	11 (37%)	4 (13%)	15 (50%)	30 (100%)
Case 3 (U J)	18 (56%)	8 (25%)	6 (19%)	32 (100%)
Case 4 (U Nj)	18 (58%)	3 (10%)	10 (32%)	31 (100%)
TOTAL	60	16	43	119

This table presents the number of participants in each treatment by adjustment of non-recurring items. The percentage of participants are shown in the parenthesis

Definition of abbreviations in table is as follows:

SJ = Structured guidance and Justification requirement
SNj = Structured guidance and No justification requirement
UJ = Unstructured guidance and Justification requirement
UNj = Unstructured guidance and No justification requirement
S = Structured guidance
U = Unstructured guidance
J = Justification requirement
Nj = No justification requirement

In order to investigate the impact of justification requirement with the existence of structured guidance, I compare the percentage of participants who adjusted either one or both non-recurring items under the first case (structured guidance with justification requirement) to that under the second case (structured guidance without justification requirement). The percentage of participants who adjusted both non-recurring items under the first case is noticeably higher than that under the second case (50% versus 37%, respectively, see Table 4.5). However, when the participants who adjusted only one non-recurring item were included, the

combined percentage of participants who adjusted either one or both non-recurring items under the first case (50% + 4% = 54%) and that under the second case (37% + 13% = 50%) became less different. This shows that justification requirement is likely to increase cognitive process but the improvement in mitigating the anchoring effect of structured guidance is still unclear.

There might be other tools or techniques other than justification requirement to increase cognitive effort while lowering the anchoring effect of structured guidance at the same time. Another future research avenue that could mitigate the anchoring effect of structured guidance is increasing accountability level of auditors. The example of increasing accountability is requiring auditors to justify to their supervisors or reviewers, who could directly evaluate their performance instead of requiring them to justify to the researchers. When auditors were expected to be reviewed, they would document greater numbers of justifications (Koonce et al, 1995). In addition, Dezoort et al (2006) also revealed that higher accountability pressure prompted auditors to raise their cognitive effort with regard to available information.

Besides the increased accountability level, justification techniques or justification types could be investigated to improve the quality of materiality determination in future research. For instance, three types of justification memo[4] were examined in Agoglia et al (2003). Their study indicated that types of justification memo could impact the judgment of auditors on quality of control environment. When reviewees were required to use the balance or supporting approach, they were less conservative than reviewees who used the component approach.

Since I do not specify justification types or justification techniques in my experiment, participants might write justification superficially, which in turn could lead to lower cognitive effort. Table 4.6 summarizes justification sentences of participants.

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[4] Three types of justification memo are supporting, balance and component justification memos. Supporting justification memo has only reasons that support decision. Balance justification memo has both positive and negative information. Component justification memo has reasons on components of the task.

As seen in Table 4.6, an audit manager who used total assets as materiality base gave superficial answers in justification as he stated that it was an acceptable level or as a normal practice. In the group of audit managers who used earnings before tax as their base, only forty-five percent of them concerned about inherent and contorl risks, twenty-five percent of them stated that the company was profit-oriented business and sixteen percent justified that the company had continuing profit, and thirty-seven percent of them mentioned that financial statements users were interested in company's profitability. Furthermore, only thirty-senven percentage of audit managers who used earnings before tax as materiality base mentioned about the non-recurring items.

The above evidence indicates that participants wrote simply to support their decision. No audit managers justified their decision on planning materialiy referencing to the strengths in general and weaknesses in particular of the clients' business risks, control risks, and inherent risks. This could leave to future researchers to study different types of justification, such as requiring the participants to use either component, support, or balance techniques in writing justification because different justification techniques could impact auditors' judgment (Agoglia et al, 2003).

TABLE 4.6: Qualitative analysis for justification by materiality base

	EBT base (N = 51)	**TA base (N = 1)**	**Other bases (N = 6)**	**Total (N = 58)**
1. The company has inherent risks and control risks	23 (45%)	-	3 (50%)	26 (45%)
2. The company is profited oriented	13 (25%)	-	2 (33%)	15 (26%)
3. The company has continuing profit	8 (16%)	-	-	8 (14%)
4. Financial statements users are interested in operating results or profitability	19 (37%)	-	-	19 (33%)
5. Management wants to maintain dividend and high management risk	11 (22%)	-	1 (17%)	12 (21%)
6. Fluctuation in assets	1 (2%)	-	-	1 (2.0%)
7. No significant change from last year	1 (2%)	-	-	1 (2.0%)
Other justifications				
1. Normal practice or acceptable level	6 (12%)	1 (100%)	1 (17%)	8 (14%)
2. Adjust for non-recurring items	19 (37%)	-	5 (83%)	24 (41%)

This table presents the justification sentences given by audit managers who used different materiality base. The percentages in the parenthesis represent the proportion of audit managers claiming each justification relative to the total number of auditor managers in each materiality base group (N).

Definition of abbreviations in table is as follows:
EBT = earnings before tax
TA = total assets

4.3 Robustness tests

I test the robustness for the main results by using two approaches. The first approach is including the control variables in the model and use ANCOVA analysis. The second approach is using the new dependent variable. Specifically, I use the consensus of five audit partner decision on planning materiality as a benchmark. The new dependent variable is the absolute value of the difference between planning materiality amount determined by each audit manager and that determined by the consensus of audit partners' decision.

Including control variables

According to the first robustness test, four control variables were included in the model and ANCOVA was used for result analysis. The results from ANCOVA analysis show that both guidance and justification requirement significantly impact audit managers' judgment of planning materiality (p values = 0.0041 and 0.0008, respectively, see Table 4.7). The interaction effect of guidance and justification requirement is insignificant (p value = 0.2392, see Table 4.7). The results remain similar to the main results which exclude control variables (see Table 4.2). In addition, all control variables in the robustness test do not statistically impact planning materiality determination of audit managers.

Table 4.7 ANCOVA results on materiality amount determined by auditors

Dependent Variable: Materiality amount ('000 Baht)

Source of variation	**Sum of Squares**	**df**	**Mean Square**	**F**	**P**
Model	4345890	7	620841	4.02	0.0006***
Error	17144032	111	154451		
Corrected Total	21489922	118			
R-Square	Coeff Var		Mat Amt		
0.202229	50.00		786.02		
Between-Subjects					
Guidance	1324217	1	1324217	8.57	0.0041***
Justify	1843029	1	1843029	11.93	0.0008***
Guidance x Justify	216314	1	216314	1.40	0.2392
Control environment	322148	1	322148	2.09	0.1515
Complexity	83048	1	83048	0.54	0.4649
Time spent	58974	1	58974	0.38	0.5379
Familiarity of guidance	151203	1	151203	0.98	0.3246
Error (Total)	17739800	115			

*This table shows main significant effect of guidance and justification requirement.. ***, ** and * indicate significance at 1, 5, and 10 percent levels, respectively.*
The variables are defined as follows:
Guidance = Main effect of structured guidance versus unstructured guidance
Justification = Main effect of justification requirement versus no justification requirement
Guidance x Justification = Interaction effect of guidance treatment and justification treatment
The following control variables are defined as follows:
Control environment = participants' evaluation of the quality of the client's internal control mechanism
Time spent = time spent on the case by participants
Complexity = participants' scoring of client's complexity
Familiarity of guidance = participants' rating of their familiarity with the structured guidance..

New dependent variable

Prior research suggests that the audit quality could be measured by a variety of methods such as number of correct answer, variance from professional consensus, quality of financial statements, etc (DeZoort et al., 2006; Francis et al., 1999; Frankel et al., 2002; Fargher et al., 2008; Francis and Yu, 2009). Since the task of planning materiality is an ill-structured task and does not have absolute right or wrong answers, the judgmental quality of each participant could be measured by comparing each decision to the consensus of audit partners' decision.

To compare the quality of participants under each combination group between guidance and justification levels, five audit partners from two big audit firms were asked to decide on planning materiality in the absence of structured guidance and justification requirement. The median of planning materiality determined by these five audit partners was used as the benchmark. The absolute value of the difference between planning materiality amount determined by each audit manager and the benchmark was used as dependent variable in the robustness test to ensure that the impact of guidance levels and justification requirement on judgment performance of materiality determination is consistent with the main results.

The ages of five audit partners range from thirty-eight to fifty years old. The audit tenure of the audit partners ranges from fifteen to twenty-two years with the average and median tenure being eighteen years. The planning materiality amount determined by the participants ranged from 70.23 thousand Baht to 862.20 thousand Baht with average and median planning materiality amounts at 467.90 thousand Baht and 468.20 thousand Baht, respectively. The client in the case was regarded as relatively risky with the average of client's risk at 4.80 out of the full risk score of 7 while the quality of control environment had a slightly low score at 2.80 out of the full quality score of 7. The complexity of client's business was somewhat high at 3.60 out of the full complexity score of 7. Twelve minutes were expended to complete the case on average. Their familiarity with the guidance of their audit firms averages ninety-five percent with the lowest at seventy-five percent and the highest at one-hundred percent.

Table 4.8 Descriptive statistics of five audit partners

	Unit of measurement	Mean	Median	Standard Deviation	Min	Max
Age	Year	44	43	4.64	38	50
Audit tenure	Year	18	18	2.70	15	22
Materiality amount	(‘000 Baht)	467.90	468.20	287.93	70.23	862.20
Control environment 1 = lowest quality 7 = highest quality	Scale 1 to 7	2.80	2.00	1.30	2.00	5.00
Client’s complexity 1 = lowest complexity 7 = highest complexity	Scale 1 to 7	3.60	4.00	0.55	3.00	4.00
Risk assessment 1 = lowest risk 7 = highest risk	Scale 1 to 7	4.80	5.00	0.84	4.00	6.00
Time spent	minutes	12	10	2.74	10.00	15.00
Familiarity with firm’s guidance 0 = Not familiar 1 = Absolutely familiar	Scale 0 to 1	0.95	1.00	0.11	0.75	1.00

In Table 4.9 the differences between materiality amount determined by audit managers and that by audit partners (i.e., the benchmark) were dependent variables in the analysis to determine the impact of guidance and justification factors. The table shows that guidance and justification requirement have an impact on audit managers’ decision on materiality amount. The analysis outcome supports my main analysis. Contrast analysis was then employed to assess whether justification requirement could improve audit managers’ judgment in comparison with audit partners’ decision. With the existence of the structured guidance, the materiality amount of audit managers was closer to that of audit partners when the formers were required to justify than when they were not (a difference of 259.50 versus of 601.38, respectively, p value = 0.0004 in Table 4.10). This indicates that audit managers would be more careful with

their decision when they were required to justify, thereby the justification requirement likely to mitigate the cognitive bias toward the provided guidance and improve judgment of audit managers.

Table 4.9 ANOVA results on difference between materiality amount determined by auditors and the benchmark determined by audit partners

Dependent Variable: Different materiality amount ('000 Baht) or Absolute variance from benchmark

Source of variation	**Sum of Squares**	**df**	**Mean Square**	**F**	**P**
Model	2740345	3	913448	6.59	<0.0004***
Error	15946419	115	138665		
Corrected Total	18686764	118			
R-Square	Coeff Var		Variance Amt		
0.1466	105.51		352.94		
Between-Subjects					
Guidance	721482	1	721482	5.20	0.0244**
Justify	1637104	1	1637104	11.81	0.0008***
Guidance x Justify	335676	1	335676	2.42	0.1225
Error (Total)	15946419	115			

*This table shows main significant effect of guidance and justification requirement.. ***, ** and * indicate significance at 1, 5, and 10 percent levels, respectively.*
The variables are defined as follows:
Guidance = Main effect of structured guidance versus unstructured guidance
Justification = Main effect of justification requirement versus no justification requirement
Guidance x Justification = Interaction effect of guidance treatment and justification treatment
Please noted that this table does not include control variables such as time spent, familiarity, quality of control environment, client's complexity and risk assessment because all these control variables were not significant impact materiality determination. In addition, controlling these variables in the model does not change the results.

On the other hand, without structured guidance, the difference between audit managers' materiality amount under justification requirement and that of audit partners under the same requirement was marginally significantly less than the difference between both groups under no justification requirement (209.84 versus 338.60, respectively, p value = 0.086 in Table 4.10). This indicates that the absence of structured guidance would not limit cognitive process of the participants while justification requirement would marginally improve audit managers' decision. The outcome as such slightly supports my main results earlier which indicate that justification could increase cognitive effort and performance of audit managers in the absence of structured guidance. Unlike audit partners' performance which is also

used as benchmark, audit managers' performance is not significantly influenced by justification requirement. The reason is probably that when audit managers are not provided the structured guidance, the judgment made by audit managers is almost identical to audit partners' irrespective of whether or not justification is required.

Table 4.10 Effect of guidance and justification requirement: Deviation of materiality amount from the benchmark (standard deviation) for all participants

Dependent Variable: Deviation of Materiality amount ('000 Baht)

Guidance	Justify	No Justify	Main effect of Guidance	Compare contrast[a]	Effect of Justification S vs U
Structured					
LSMEAN	**259.50**	**601.38**	**430.44**	**SJ – SNj = -341.88** ***(p value[b] = 0.0004)***	**(SJ-SNj) – (UJ-UNj)**
MEAN	*259.50*	*601.38*	*442.65*		**= 341.88 – 128.76**
(Std Dev)	*(312.01)*	*(577.41)*	*(499.65)*		**= 213.12**
No.of mgr	SJ = 26	SNj = 30	S = 56		***(p value[b] < 0.0001)***
Unstructured					
LSMEAN	**209.84**	**338.60**	**274.22**	**UJ – UNj = -128.76** ***(p value[b] = 0.08635)***	
MEAN	*209.84*	*338.60*	*273.20*		
(Std Dev)	*(216.04)*	*(282.67)*	(257.31)		
No.of managers	UJ = 32	UNj = 31	U = 63		
Main effect of Justification					
LSMEAN	**234.67**	**468.99**		**J – Nj = -235.32** ***(p value[b] = 0.0004)***	
MEAN	232.10	467.84			
(Std Dev)	(262.11)	(467.59)			
No.of mgr	J = 58	Nj = 61			
Compare Contrast[a]	**SJ – UJ = 49.66** ***(p value[b] = 0.3072)***	**SNj – UNj = 262.78** ***(p value[b] = 0.0034)***	**S – U = 156.22** ***(p value[b] = 0.012)***		

This table presents the materiality amount ('000 Baht) for each combination of guidance and justification requirement. This table shows both lsmean(or adjusted mean) and mean (or unadjusted mean).

[a] The contrast comparison is calculated from lsmean

[b]The p value in the table is one-tailed.

Definition of abbreviations in table is as follows:

SJ = Structured guidance and Justification requirement
SNj = Structured guidance and No justification requirement
UJ = Unstructured guidance and Justification requirement
UNj = Unstructured guidance and No justification requirement
S = Structured guidance
U = Unstructured guidance
J = Justification requirement
Nj = No justification requirement

Comparing the case in which the structured guidance under justification requirement was present with that in the absence of the guidance, I found that the deviation of audit managers' decision from audit partners' decision was insignificantly different (259.50 versus 209.84, p value = 0.31 in Table 4.10). The main result of this comparison is marginally significant (p value = 0.093 in Table 4.3). This result implies the power of justification in reducing drawback of structured guidance even receiving the unstructured guidance. However, without the justification requirement, the deviation in the presence of the structured guidance was significantly higher than that in the absence of the structured guidance (601.38 versus 338.60, respectively, p value = 0.003 in Table 4.10). The analysis outcome suggests that, without the justification requirement, the structured guidance could limit audit managers' attention, thus leading to lower auditors' judgment quality, meaning that exercise of caution is required with the use of structured guidance.

Comparing the incremental impact of justification with structured guidance present to that with the structured guidance absent, it is found that the deviation of audit managers' decision from audit partners' decision was significantly different (341.88 versus 128.76, p value < 0.0001 in Table 4.10). The analysis outcome suggests that in the presence of structured guidance justification requirement could improve audit managers' attention more than in the absence of structured guidance. This indicates that justification requirement is an important tool to induce auditors to concern more with relevant information, especially when auditors are provided the structured guidance.

CHAPTER V
CONCLUSION AND IMPLICATIONS

5.1 Conclusion

This paper investigates the question of whether the availability of structured guidance limits auditors' attention to relevant risks when determining materiality for planning. Justification requirement is further examined to determine whether it increases thinking effort and can remedy the cognition bias arising from the existence of structured guidance. Consistent with my expectation, the experimental results suggest that the structured guidance could limit attention of auditors. Specifically, I find that the materiality amount of auditors with the existence of structured guidance is significantly higher than that of auditors without structured guidance. This indicates that auditors with structured guidance concern less with relevant information in the case. The justification requirement in this study could increase cognitive effort and induce participants to think more deeply as well as be concerned more with relevant information. In addition, I find that the justification requirement could mitigate bias toward the structured guidance. The compare contrast shows that, in the presence of structured guidance, the materiality amount of participants who justified is significantly lower than that of participants who did not justify. Furthermore, the justification requirement could significantly induce more cognitive effort when participants were not provided the structured guidance or when they independently processed their thinking.

A closer look at audit managers' materiality base and their adjustment of non-recurring items hints that audit managers with structured guidance could potentially limit their attention to the guidance. This cognitive bias could nevertheless be mitigated by justification requirement. In addition, when qualitative analysis is applied to the justifications given by the participants, some auditors are found to provide their justification in a superficial manner. This thus offers an opportunity for future researchers to deploy more specific justification techniques to increase auditors' cognitive effort and quality of their judgment.

5.2 Contribution and Implications

The results of this research study will contribute a new insight to the knowledge pool of the existing auditing literature on decision aid and justification. The results of this study regarding the interaction effect between guidance and justification contradict those of Ashton (1990). Aston (1990) presented that justification could not improve judgment performance in the presence of guidance whereas the results of this paper shows that justification could improve decision making performance in the presence of structured guidance. The contradictory results imply that the impact of justification in the presence of guidance depends on the motivated direction of guidance. If the guidance could pressure auditors and the latter are not proficient in the task, the performance of auditors in the presence of both guidance and justification could be compromised.

This would offer some thoughts for standard setters, regulators, and practitioners to exercise greater caution when implementing structured guidance through auditors, especially at the early stage of audit process. The implementation of structured guidance requires great care for and caution to its ramifications because some experienced auditors could easily limit their attention to the structured guidance. Justification requirement provides opportunities for improving the quality of auditors' judgment both in the presence and absence of the guidance.

In addition, this study investigates the process of setting planning materiality and presents direct evidence of the impact of using materiality guidance on auditors' judgment on planning materiality. While most research studies in the field of audit in Thailand have employed survey or archival technique, this paper however could be said to be the first in Thailand to use an experimental technique and involve audit managers from big audit firms. This methodology requires the permission of managing partner of each audit firm. The results from their participating staff members with intervening variables controlled were directly submitted to managing directors. The audit firms could make use of the results and implications by adjusting their current practice relating to guidance and justification.

5.3 Limitations

The experimental study described in this paper contains some limitations. First, this paper includes not only ten material events selected from Pinsker's (2009), which subsequently are assigned as either low or high risks, but also some inherent risks and control risks. The experimental case does not include all other relevant information due to time constraint for experimental session. There may be more issues in reality that affect decision on materiality. Second, the experimental instrument is in the form of paper-based case while auditors normally use computer aids. This could limit the auditors' ability to search for more information as they do in real practice. Third, the experimental procedure asks individual auditors to set planning materiality, while in practice there would be a discussion among engagement team before determining planning materiality. Fourth, only two types of guidance are examined in this paper. There might be other decision aids that could be used with greater success. Fifth, I only compare justification requirement to no justification requirement. Other forms or types of justification requirement that could impact auditors' judgment (Agoglia et al., 2003) are not investigated in this paper. Sixth, a number of participants are audit managers whose experience and knowledge, such as materiality setting experience, tacit managerial knowledge, and technical knowledge, likely differ from those of audit seniors and audit assistants (Emby and Etherington, 1996). The difference in tacit managerial knowledge and technical knowledge could vary the justification techniques of auditors (Shankar and Tan, 2006).

5.4 Suggestions for Future Research

Since the reviewer's preference was found to influence auditors' evaluation of evidence and cognitive effort (Peecher, 1996; Tan et al., 1997) and supervisor's preference could influence subordinate to bias his decision toward the former's (Piercey, 2009) as supervisor was found to give higher performance rating to subordinate who had goal-congruence and had strong justification (Tan and Shankar, 2010), future research might investigate how the preference of reviewer or supervisor impacts auditors' materiality determination and how it influences written justification. The congruence of task preference between preparers and reviewers could also impact the justification forms of preparers (Shankar and Tan, 2006). This would give an

avenue for future research to investigate whether the planning materiality preferences which are similar to or dissimilar from reviewers' impact justification techniques and materiality determination of preparers. In addition, types of justification, such as supporting, balance, and component justification memos, could be examined for planning materiality decision. Furthermore, auditors with different tacit managerial knowledge and technical knowledge could use different justification memos (Shankar and Tan, 2006). A future research avenue may assess whether this paper's findings which are related to guidance and justification apply to other professional levels such as audit seniors and audit assistants. Finally, extant research has compared judgment of auditors in Thailand those in other countries. It would be a room for comparing decision of auditors in Thailand to those in other countries in the future.

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APPENDIX

Case study

You have been newly assigned by an audit partner who has been auditing this firm for the past two years to be an in-charge auditor of ABC Co., Ltd. for another auditor who has been responsible for this client but is currently on another audit assignment. In the last audit, certain audit issues were discovered. One of your responsibilities as an in-charge audit is to determine the materiality for audit planning. Please read the following general and financial information of ABC Co., Ltd., and then make a decision concerning the materiality for audit planning.

Please enter the time you commence …….

General Information

ABC Co., Ltd. was founded in 1980. The company manufactures and supply metal parts to other machinery manufacturers. It has three manufacturing plants located in Samut Sakhon province. During the first two decades of its operation, the firm catered to only domestic customers. It was in 1999 that the company began exporting to Japan, and then in 2002 to Europe. In 2009, the proportion of its domestic sales to international sales was 70:30. During the last three years, there has been a dramatic increase in its sales to Europe. ABC has successfully adjusted its manufacturing plan and boosted its capital investment in light of the increasing orders.

Due to the nature of its business, ABC has to manage the exchange rate risks. Its export revenues are in Japanese Yen and Euro, whereas the raw materials which are imported from Japan are paid in Japanese Yen. Although last yearend's appreciation of Thai Baht helped reduce the cost of imports, it was offset by the 3-to-4-month credit terms demanded by its overseas customers, incurring the exchange rate losses on the company. ABC has mitigated the exchange rate risks by entering into FX forward or swap contracts with financial institutions. Still, ABC has incurred exchange rate losses due to its staff's inexperience in FX risk management. ABC's management thus has decided to continue using the forward or swap contracts and provided since early 2011 necessary training on FX risk management to its concerned employees.

The company has upgraded its production lines by replacing some old machines with new ones with a higher throughput and more compatible with the changing technology. The obsolete machines were sold to manufacturers in Vietnam, from which the company made a profit of about 3.5 million Baht, which was recognized as "other income". The remaining machines are expected to be in use for seven years. The products produced with the obsolete machines would be revoked, some of which are incompatible with the new technology and could not be sold, so they are included in the inventory balance. The new machines have been running much below their full capacity, causing sales to drop during the initial period. ABC nevertheless expects the new machines to be able to run at their full capacity within next year. In 2010, ABC's product mix changed from the previous year because of the new entrants who merely focus on specific industrial customers, whereas ABC's customer profile consists of customers in various industries with different profit margins. The management believes that it is necessary for ABC to revise its strategy and to make decisions on the company's market position in order to increase market share and improve its return of equity (ROE), which has been on a decline for the past five years. ABC has invested in one associated company four years ago, but this year it has just received dividends for the first time.

Customers are generally impressed with ABC's products as confirmed by a recent market survey in which ABC scores high on product quality and reasonable prices. However, the respondents have expressed concerns over ABC's delivery time. Mr. Kitti, managing director, held an urgent meeting with his management team to find a solution to the delivery-time problem, but unfortunately they were able to agree on a concrete solution. He also held another meeting with the board of directors but many directors could not attend. Mr. Kitti is known to be highly self-confident and very knowledgeable. He is also energetic, efficient, and result-oriented. His hands-on approach to work results in stressful working environment and high employee turnover. Moreover, the company attempts to maintain upward annual dividend payment to its shareholders.

The audit team from previous year has noted that ABC has a weak internal control over its machinery and inventories. It does not physically count its fixed assets every year. Some of the tags on the fixed assets are smeared with oil and are illegible. The obsolete inventories are not separated from the normal ones. In addition, some inventories were moved during the year-end physical count because the company wanted to avoid delay in dispatching them to Europe.

Financial information of ABC Company

Currency: ’000 Baht

Total Assets	Dec 31, 2010 (Unaudited)	Dec 31, 2009 (Audited)
Cash on hand and at banks	14,904	8,691
Account receivables-net	22,170	13,475
Inventories	42,711	33,552
Other current assets	2,870	2,670
Total current assets	82,655	58,388
Investment in an associated company	10,000	10,000
Property, plants and equipment	95,840	73,658
Goodwill	4,225	4,225
Total non-current assets	110,065	87,883
Total assets	**192,720**	**146,271**
Liabilities and Shareholders’ equity		
Account payables	28,705	21,162
Short term loans and current portion of long-term loans	12,190	7,740
Accrued expenses	5,120	4,144
Income tax payable	5,080	5,436
Total current liabilities	51,095	38,482
Long term loans	17,800	12,000
Total liabilities	68,895	50,482
Shareholders’ equity		
Common shares	40,000	30,000
Share premium	23,850	13,350
Retained earnings	59,975	52,439
Total shareholders’ equity	123,825	95,789
Total liabilities and shareholders’ equity	**192,720**	**146,271**

Currency: ’000 Baht

	Dec 31, 2010 (Unaudited)	Dec 31, 2009 (Audited)
Sales revenues	84,770	104,274
Dividend income from an associated company	4,400	-
Gain from selling fixed assets	3,480	210
Total Revenues	92,450	104,450
Cost of goods sold	(47,369)	(60,096)
Selling and Administrative expenses	(27,776)	(23,703)
Total Expenses	(75,145)	(83,799)
Earnings/(loss) before financial expenses and income tax	17,505	20,685
Financial expenses	(261)	(312)
Earnings/(loss) before income tax	**17,244**	**20,373**
Income tax expenses	(5,958)	(6,846)
Net profit/(loss)	**11,286**	**13,527**
Retained earnings at the beginning	52,439	41,912
Dividend paid	(3,750)	(3,000)
Retained earnings at the end	59,975	52,439

Instructions for group 1

Assume that your firm has implemented the following guidelines for determining planning materiality for 2010. Modification is possible where necessary.

(Please study and fill in the numbers from the financial statements in the provided boxes)

Currency: '000 Baht

Step 1: Use 5% - 10% of earnings before income tax

Earnings/(loss) before income tax		(1)
Adjusted amount (if any)		(2)
Adjusted earnings/(loss) before income tax		(3) = (1)± (2)
Selected percentage (5% – 10%)		(4)
Materiality amount based on adjusted earnings/(loss) before income tax		(5) = (3) * (4)

Step 2: Use 1% - 1.5% of total assets or total revenues, whichever is higher

Total assets		(6)
Total revenues		(7)
Take the higher of total assets or total revenues		(8) = (6) or (7)
Adjusted amount (if any)		(9)
Adjusted total assets or adjusted total revenues		(10) = (8) ± (9)
Selected percentage (1% – 1.5%)		(11)
Materiality amount based on adjusted total assets or adjusted total revenues		(12)=(10)*(11)

Step 3: Take the higher amount of (1) and (2) as planning materiality

Materiality amount based on adjusted earnings/(loss) before tax		from **(5)**
based on adjusted total assets or total revenues		from **(12)**
Take the higher amount as planning materiality by comparing (5) and (12)		**(13)**

Please decide whether the planning materiality amount from the guideline above (13) is appropriate. Please justify your answer about with respect to (a) the base and (b) percentage of the base used.

☐ **Appropriate because ……**

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☐ **NOT appropriate because ……**

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If the planning materiality amount from the guideline above (13) is NOT appropriate, please indicate the planning materiality amount you believe is more appropriate. Show your calculation and provide the justification for your assessed materiality amount, if any.

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Please indicate time you complete the case ……

Instructions for group 2

Assume that your firm has implemented the following guidelines for determining planning materiality for 2010. Modification is possible where necessary.

(Please study and fill in the numbers from the financial statements in the provided boxes)

Currency: '000 Baht

Step 1: Use 5% - 10% of earnings before income tax

Earnings/(loss) before income tax		(1)
Adjusted amount (if any)		(2)
Adjusted earnings/(loss) before income tax		(3) = (1)± (2)
Selected percentage (5% – 10%)		(4)
Materiality amount based on adjusted earnings/(loss) before income tax		(5) = (3) * (4)

Step 2: Use 1% - 1.5% of total assets or total revenues, whichever is higher

Total assets		(6)
Total revenues		(7)
Take the higher of total assets or total revenues		(8)=(6)or(7)
Adjusted amount (if any)		(9)
Adjusted total assets or adjusted total revenues		(10)= (8)± (9)
Selected percentage (1% – 1.5%)		(11)
Materiality amount based on adjusted total assets or adjusted total revenues		(12)=(10)*(11)

Step 3: Take the higher amount of (1) and (2) as planning materiality

Materiality amount based on adjusted earnings/(loss) before tax		from **(5)**
based on adjusted total assets or total revenues		from **(12)**
Take the higher amount as planning materiality by comparing (5) and (12)		**(13)**

Please decide whether the planning materiality amount from the guideline above (13) is appropriate. Please justify your answer with respect to (a) the base and (b) the percentage of the base used.

☐ **Appropriate**
☐ **NOT appropriate**

If NOT appropriate, please indicate a better planning materiality by showing your calculation

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Please indicate time you complete the case ……

Instructions for group 3

Please determine planning materiality for 2010 using **your professional judgment** and **justify** your answers.

Definition of Planning Materiality

"The planning materiality level will be used to determine the audit procedures in order to get sufficient evidence for issuing an audit opinion and to assure that financial statements have no material misstatement or errors that could impact the decision of financial statement users."

Currency: '000 Baht

1. Selected basis amount for calculating planning materiality		(1)
Adjusted amount (if any)		(2)
Adjusted basis amount		(3)=(1)± (2)
2. Selected percentage for calculating planning materiality (%)		(4)
3. Planning materiality amount		(5)=(3)*(4)

Why do you think that your determined planning materiality amount is appropriate? Please also justify your answer about the basis and percentage used.

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Please indicate time you complete the case ……………………

Instructions for group 4

Please determine planning materiality for 2010 using **your professional judgment**.

Planning Materiality

"The planning materiality level will be used to determine the audit procedures in order to get sufficient evidence for issuing an audit opinion and to assure that financial statements have no material misstatement or errors that could impact the decision of financial statement users."

	Currency: '000 Baht	
1. Selected basis amount for calculating planning materiality		(1)
Adjusted amount (if any)		(2)
Adjusted basis amount		(3)=(1)± (2)
2. Selected percentage for calculating planning materiality (%)		(4)
3. Planning materiality amount		(5)=(3)*(4)

Please indicate time you complete the case ……

Please mark √ in the column that most fits your evaluation.	1	2	3	4	5	6	7
1. Please evaluate the quality of overall control environment 1 = Lowest quality 7 = Highest quality							
2. Please evaluate the entity's complexity 1 = Least complexity 7 = Most complexity							
3. What is the risk level of this client in your opinion for planning the audit of 2010 financial statements? 1 = Lowest risk 7 = Highest risk							

Personal information

1. Age_____ Contact phone number _____
2. Gender □ Female □ Male
3. Current professional position

   □ Audit manager □ Other position (please specify) _____
   □ Audit Senior
4. Do you have experience in determining the materiality for audit planning?

   □ Yes _____year(s) _____month(s)

   □ No
5. In your opinion, does task experience on planning materiality determination have an impact on your planning materiality judgment?

   □ 0% (no impact) □25% □50% □75% □100% (highest impact)
6. Have you ever audited a manufacturing company?

   □ Yes □ No
7. How long have you worked for the audit firm, i.e., tenure with audit firm? ____years.
8. How long did you spend completing this case study? _____ (minutes)
9. How familiar are you with the internal mechanical guidance prescribed by your audit firm, such as % of earnings before tax?

   □ 0% □ 25% □ 50% □ 75% □ 100%

   100% means you are completely aware that your audit firm has used internally the mechanical guidance and you always follow that guidance.

   0% means you are completely unaware that your audit firm has mechanical guidance and you always use your personal judgment in setting the planning materiality.
10. Please indicate any other basis for setting the planning materiality that you are aware of.

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    ……

กรณีศึกษา

ท่านได้รับมอบหมายให้เป็นหัวหน้าทีมตรวจสอบ (in-charge auditor) บริษัท เอ บี ซี จำกัด เป็นปีแรกแทนหัวหน้าทีมตรวจสอบเดิมซึ่งติดงานตรวจสอบบริษัทอื่น ท่านได้รับมอบหมายจาก audit partner ที่ตรวจสอบลูกค้ารายนี้มาแล้ว 2 ปี ซึ่งในปีที่ผ่านมายังมีประเด็นทางการตรวจสอบบางประการ ส่วนหนึ่งของความรับผิดชอบของท่านคือการกำหนดระดับนัยสำคัญสำหรับใช้ในการวางแผนการตรวจสอบ (materiality for planning) ขอให้ท่านอ่านข้อมูลต่อไปนี้ซึ่งเป็นข้อมูลทั่วไปและข้อมูลทางการเงินของบริษัท เอ บี ซี จำกัด และทำการตัดสินใจเกี่ยวกับระดับนัยสำคัญสำหรับใช้ในการวางแผนการตรวจสอบ

กรุณาใส่เวลาขณะที่เริ่มทำ ……

<u>ข้อมูลทั่วไปของบริษัท เอ บี ซี จำกัด</u>

บริษัท เอ บี ซี จำกัด (บริษัทฯ) จัดตั้งในปี พ.ศ. 2523 ประกอบกิจการเป็นผู้ผลิตชิ้นส่วนเครื่องจักรที่ทำจากเหล็กให้กับผู้ผลิตเครื่องจักรต่างๆ บริษัทฯ มีโรงงานสามแห่งตั้งอยู่ที่จังหวัดสมุทรสาคร โดยเริ่มจำหน่ายผลิตภัณฑ์ให้แก่ลูกค้าภายในประเทศ จากนั้นเริ่มส่งออกไปขายให้ลูกค้าในประเทศญี่ปุ่นในปี พ.ศ. 2542 และลูกค้าในทวีปยุโรปในปีพ.ศ. 2545 สัดส่วนการขายในประเทศต่อการขายต่างประเทศสำหรับปี พ.ศ. 2552 อยู่ที่ 70 ต่อ 30 ลูกค้ายุโรปเพิ่มการสั่งซื้ออย่างมากในช่วงสามสี่ปีที่ผ่านมา ซึ่งกิจการสามารถปรับเปลี่ยนแผนการผลิตและสามารถระดมทุนจากผู้ถือหุ้นเพื่อขยายการลงทุนในเครื่องจักรต่างๆสำหรับรองรับคำสั่งซื้อที่เพิ่มขึ้นนี้ได้อย่างสำเร็จ

กิจการจำเป็นต้องบริหารความเสี่ยงจากอัตราแลกเปลี่ยน เนื่องจากมีรายได้จากการส่งออกนี้เป็นเงินสกุลเยนและเงินสกุลยูโร ในขณะที่วัตถุดิบเหล็กต้องสั่งซื้อจากญี่ปุ่นเป็นเงินเยน ค่าเงินบาทที่แข็งขึ้นในช่วงปลายปีส่งผลให้ต้นทุนเหล็กที่นำเข้าถูกลงแต่การส่งออกไปต่างประเทศที่มีการให้เครดิตเทอม 3-4 เดือนทำให้กิจการมีผลขาดทุนจากอัตราแลกเปลี่ยน กิจการทำการป้องกันความเสี่ยงจากการเปลี่ยนแปลงของอัตราแลกเปลี่ยนต่างประเทศในรูปของการซื้อสัญญาซื้อขายเงินตราต่างประเทศล่วงหน้าหรือการทำสัญญาแลกเปลี่ยนเงินสกุลต่างประเทศล่วงหน้า แต่เนื่องจากพนักงานยังไม่มีประสบการณ์และไม่มีความรู้ความเข้าใจในการบริหารความเสี่ยงดังกล่าวอย่างดี กิจการยังประสบปัญหาขาดทุนจากอัตราแลกเปลี่ยนเงินตราต่างประเทศ ผู้บริหารตัดสินใจที่จะทำสัญญาซื้อขายเงินตราต่างประเทศล่วงหน้าต่อไป โดยจะส่งพนักงานไปอบรมเกี่ยวกับบริหารความเสี่ยงด้านอัตราแลกเปลี่ยนเพิ่มขึ้นตั้งแต่ต้นปีพ.ศ. 2554

กิจการมีการปรับเปลี่ยนสายการผลิตใหม่ โดยยกเลิกเครื่องจักรบางสายการผลิตและเปลี่ยนเป็นเครื่องจักรรุ่นใหม่ที่สามารถผลิตได้มากขึ้นและรองรับกับเทคโนโลยีของเครื่องจักรที่เปลี่ยนไป เครื่องจักรรุ่นเก่าหลายเครื่องที่ถูกยกเลิกนั้นได้ถูกขายไปให้กับผู้ประกอบการในประเทศเวียดนามโดยมีกำไรประมาณ 3.5 ล้านบาทซึ่งรับรู้กำไรจากการขายสินทรัพย์นี้ในรายได้อื่น กิจการคาดว่าเครื่องจักรที่เหลืออยู่จะสามารถใช้งานได้กับสายการผลิตใหม่ต่อไปได้อีกอย่างน้อยเจ็ดปี สินค้าที่ผลิตจากเครื่องจักรเก่านั้นได้ถูกยกเลิกไป บางส่วนของสินค้าที่ผลิตแล้วนั้นไม่รองรับกับเทคโนโลยีที่เปลี่ยนไป ทำให้ไม่สามารถจำหน่ายได้และยังคงค้างอยู่ในสินค้าคงเหลือ และสินค้าที่ผลิต

จากเครื่องจักรใหม่ยังผลิตได้ไม่เต็มที่ ส่งผลให้ยอดขายของกิจการลดลงในช่วงแรก แต่กิจการคาดว่าจะสามารถเดินเครื่องจักรใหม่เต็มกำลังการผลิตได้ในปีหน้า สัดส่วนผลิตภัณฑ์ (Product mix) ของกิจการในปี พ.ศ. 2553 เปลี่ยนแปลงไปจากปีก่อน เนื่องจากมีคู่แข่งขันรายใหม่เข้ามาในตลาดที่จับกลุ่มลูกค้าเฉพาะอุตสาหกรรม ในขณะที่กิจการมีลูกค้าอยู่ในหลายอุตสาหกรรมซึ่งมีอัตรากำไรขั้นต้นแตกต่างกัน กิจการจำเป็นต้องทบทวนกลยุทธ์และตัดสินใจวางตำแหน่งของกิจการในตลาดเพื่อหาโอกาสที่จะขยายส่วนแบ่งทางการตลาด (market share) สำหรับธุรกิจชิ้นส่วนเครื่องจักรที่ผลิต และเพื่อปรับปรุงผลประกอบการของกิจการที่มีอัตราผลกำไรต่อส่วนของผู้ถือหุ้น (ROE) ลดลงในช่วงห้าปีที่ผ่านมา ในปีนี้กิจการได้รับเงินปันผลจากบริษัทร่วมแห่งหนึ่งเป็นครั้งแรกหลังจากที่กิจการนำเงินไปลงทุนเมื่อสี่ปีที่แล้ว

แม้ว่าที่ผ่านมาลูกค้าจะประทับใจในตัวผลิตภัณฑ์ของกิจการ และจากการสำรวจทางการตลาดพบว่ากิจการได้รับคะแนนความพึงพอใจจากลูกค้าในระดับสูงทางด้านคุณภาพและราคาที่เหมาะสม แต่ลูกค้ามีความกังวลเกี่ยวกับระยะเวลาในการขนส่งสินค้า ซึ่งนายกิตติ ผู้บริหารระดับสูงของกิจการได้เรียกประชุมคณะผู้บริหารของกิจการเพื่อหาแนวทางแก้ไขปัญหาดังกล่าว แต่ยังไม่มีข้อสรุปสำหรับแนวทางการแก้ปัญหาดังกล่าว นายกิตติได้ตัดสินใจเชิญคณะกรรมการอิสระ (Board of director) มาประชุมวิสามัญ แต่กรรมการหลายท่านไม่สามารถมาร่วมประชุมได้เนื่องจากติดภาระกิจต่างๆ นายกิตตินั้นได้รับการกล่าวขานว่าเป็นคนที่มีความเชื่อมั่นในตนเองสูง มีความสามารถรอบด้าน ทุกคนในบริษัทฯ ต่างรับทราบกันโดยทั่วว่านายกิตตินั้นเป็นผู้ที่มีพละกำลังในการทำงานไม่ย่อท้อต่อปัญหาต่างๆ และสามารถทำงานได้อย่างมีประสิทธิผล จากการทำงานเชิงรุกของนายกิตติทำให้บรรยากาศในการทำงานในองค์กรค่อนข้างตึงเครียด อัตราการหมุนเวียนพนักงานจึงค่อนข้างสูง นอกจากนี้กิจการมีความพยายามที่จะรักษาระดับการจ่ายเงินปันผลให้เพิ่มทุกปี

จากการสอบถามทีมการตรวจสอบปีก่อนพบว่า การควบคุมภายในเกี่ยวกับเครื่องจักรและสินค้าคงเหลือของกิจการยังไม่เพียงพอ กิจการไม่ได้มีการตรวจนับสินทรัพย์ถาวรทุกปี นอกจากนี้ป้ายทะเบียนสินทรัพย์ถาวรที่ติดอยู่กับเครื่องจักรบางตัวเปื้อนน้ำมันเครื่องจนไม่สามารถอ่านเลขทะเบียนได้ สินค้าคงเหลือที่ล้าสมัยไม่ได้จัดวางแยกจากสินค้าทั่วไป และการตรวจนับสินค้าคงเหลือปีก่อนพบว่ามีการเคลื่อนย้ายสินค้าในระหว่างการตรวจนับเนื่องจากพนักงานต้องการรีบจัดส่งสินค้าให้ทันเรือที่กำลังจะไปยุโรป

ข้อมูลทางการเงินของบริษัท เอ.บี.ซี จำกัด

หน่วยเงินตรา : '000 บาท

สินทรัพย์	**31 ธ.ค. 2553 (ยังไม่ได้ตรวจสอบ)**	31 ธ.ค. 2552 (ตรวจสอบแล้ว)
เงินสดและรายการเทียบเท่าเงินสด	14,904	8,691
ลูกหนี้การค้าสุทธิ	22,170	13,475
สินค้าคงเหลือ	42,711	33,552
สินทรัพย์หมุนเวียนอื่น	2,870	2,670
รวมสินทรัพย์หมุนเวียน	82,655	58,388
เงินลงทุนในบริษัทร่วม	10,000	10,000
ที่ดิน อาคาร และอุปกรณ์ สุทธิ	95,840	73,658
ค่าความนิยม	4,225	4,225
รวมสินทรัพย์ไม่หมุนเวียน	110,065	87,883
รวมสินทรัพย์	**192,720**	**146,271**
หนี้สินและส่วนของผู้ถือหุ้น		
เจ้าหนี้การค้า	28,705	21,162
เงินกู้ยืมระยะสั้นจากสถาบันการเงินและส่วนที่ครบกำหนดชำระใน1ปี	12,190	7,740
ค่าใช้จ่ายค้างจ่าย	5,120	4,144
ภาษีเงินได้นิติบุคคลค้างจ่าย	5,080	5,436
รวมหนี้สินหมุนเวียน	51,095	38,482
เงินกู้ยืมระยะยาว	17,800	12,000
รวมหนี้สิน	68,895	50,482
ส่วนของผู้ถือหุ้น		
หุ้นสามัญ	40,000	30,000
ส่วนเกินมูลค่าหุ้น	23,850	13,350
กำไรสะสม	59,975	52,439
รวมส่วนของผู้ถือหุ้น	123,825	95,789
รวมหนี้สินและส่วนของผู้ถือหุ้น	**192,720**	**146,271**

หน่วยเงินตรา : ‘000 บาท

	31 ธ.ค. 2553 (ยังไม่ได้ตรวจสอบ)	31 ธ.ค. 2552 (ตรวจสอบแล้ว)
รายได้จากการขาย	84,770	104,274
รายได้อื่น-เงินปันผลจากบริษัทร่วม	4,400	-
-กำไรจากการขายสินทรัพย์	3,480	210
รวมรายได้	92,450	104,484
ต้นทุนขาย	(47,369)	(60,096)
ค่าใช้จ่ายในการขายและการบริหาร	(27,776)	(23,703)
รวมค่าใช้จ่าย	(75,145)	(83,799)
กำไรก่อนหักค่าใช้จ่ายทางการเงินและภาษี	17,505	20,685
ค่าใช้จ่ายทางการเงิน	(261)	(312)
กำไรก่อนภาษี	**17,244**	**20,373**
ภาษีเงินได้นิติบุคคล	(5,958)	(6,846)
กำไรสุทธิ	**11,286**	**13,527**
กำไรสะสมต้นปี	52,439	41,912
เงินปันผลจ่าย	(3,750)	(3,000)
กำไรสะสมปลายปี	59,975	52,439

คำแนะนำสำหรับกลุ่มที่หนึ่ง

กำหนดให้ใช้เกณฑ์ต่อไปนี้สำหรับการพิจารณากำหนดระดับนัยสำคัญเพื่อการวางแผนการตรวจสอบสำหรับปี พ.ศ. 2553 แต่**อาจปรับเปลี่ยนได้**ตามความเหมาะสม (**ให้พิจารณาและใส่ตัวเลขจากงบการเงินในช่องที่กำหนด ตั้งแต่ขั้นที่ 1 ถึงขั้นที่ 3 ตามลำดับ เพื่อการคำนวณ**)

ขั้นที่ 1 : ร้อยละ 5 ถึงร้อยละ 10 ของกำไร(ขาดทุน)ก่อนภาษี **(พันบาท)**

มูลค่าของกำไร(ขาดทุน)ก่อนภาษี		(1)
มูลค่าของรายการปรับปรุง (หากมี)		(2)
มูลค่าของกำไร(ขาดทุน)ก่อนภาษีหลังปรับรายการ		(3) = (1) ± (2)
ร้อยละที่ท่านเลือก (5% – 10%)		(4)
มูลค่าระดับนัยสำคัญ ที่คิดจากกำไร(ขาดทุน)ก่อนภาษีหลังปรับรายการ		(5) = (3) * (4)

ขั้นที่ 2 : ร้อยละ 1 ถึงร้อยละ 1.5 ของสินทรัพย์รวมหรือรายได้รวม (แล้วแต่อย่างใดจะมากกว่า)

มูลค่าของสินทรัพย์รวม		(6)
มูลค่าของรายได้รวม		(7)
เลือกมูลค่าที่**สูงกว่า**ระหว่างสินทรัพย์รวมหรือรายได้รวม		(8)=(6)หรือ(7)
มูลค่าของรายการปรับปรุง (หากมี)		(9)
มูลค่าของสินทรัพย์รวมหรือรายได้รวมหลังปรับรายการ		(10)= (8)± (9)
ร้อยละที่ท่านเลือก (1% – 1.5%)		(11)
มูลค่าระดับนัยสำคัญ ที่คิดจากสินทรัพย์รวมหรือรายได้รวมหลังปรับรายการ		(12)=(10)*(11)

ขั้นที่ 3 : พิจารณาเลือกจำนวนที่สูงกว่าระหว่างขั้นที่ 1 หรือ ขั้นที่ 2

มูลค่าระดับนัยสำคัญที่คิดจากกำไร(ขาดทุน)ก่อนภาษีหลังปรับ		**จาก (5)**
มูลค่าระดับนัยสำคัญที่คิดจากสินทรัพย์รวมหรือรายได้รวมหลังปรับ		**จาก (12)**
มูลค่าระดับนัยสำคัญที่ใช้สำหรับการวางแผนกำหนดจาก จำนวนที่สูงกว่า โดยเปรียบเทียบ (5) และ (12)		**(13)**

ท่านคิดว่ามูลค่าจากตามเกณฑ์ข้างต้นจาก(13)เหมาะสมหรือไม่ กรุณาให้เหตุผลประกอบการตัดสินใจของท่านในส่วนของฐานและร้อยละที่ใช้

☐ **เหมาะสม เพราะ**.....

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☐ **ไม่เหมาะสม เพราะ**.....

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กรณีที่ท่านตอบว่ามูลค่าที่ได้<u>จาก(13)</u> ไม่เหมาะสม กรุณาระบุมูลค่าระดับนัยสำคัญอื่นที่เหมาะสมกว่าเกณฑ์ข้างต้น พร้อมทั้งแสดงเหตุผลและการคำนวณประกอบ.

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<u>กรุณาระบุเวลาที่ทำเสร็จ</u> .....

คำแนะนำสำหรับกลุ่มที่สอง

กำหนดให้ใช้เกณฑ์ต่อไปนี้สำหรับการพิจารณากำหนดระดับนัยสำคัญเพื่อการวางแผนการตรวจสอบปี พ.ศ. 2553 แต่**อาจปรับเปลี่ยนได้**ตามความเหมาะสม **(ให้พิจารณาและใส่ตัวเลขจากงบการเงินในช่องที่กำหนด ตั้งแต่ขั้นที่ 1 ถึงขั้นที่ 3 ตามลำดับ เพื่อการคำนวณ)**

ขั้นที่ 1 : ร้อยละ 5 ถึงร้อยละ 10 ของกำไร(ขาดทุน)ก่อนภาษี **(พันบาท)**

มูลค่าของกำไร(ขาดทุน)ก่อนภาษี		(1)
มูลค่าของรายการปรับปรุง (หากมี)		(2)
มูลค่าของกำไร(ขาดทุน)ก่อนภาษีหลังปรับรายการ		(3) = (1) - (2)
ร้อยละที่ท่านเลือก (5% – 10%)		(4)
มูลค่าระดับนัยสำคัญ ที่คิดจากกำไร(ขาดทุน)ก่อนภาษีหลังปรับรายการ		(5) = (3) * (4)

ขั้นที่ 2 :ร้อยละ 1 ถึงร้อยละ 1.5 ของสินทรัพย์รวมหรือรายได้รวม (แล้วแต่อย่างใดจะมากกว่า)

มูลค่าของสินทรัพย์รวม		(6)
มูลค่าของรายได้รวม		(7)
เลือกมูลค่าที่**สูงกว่า**ระหว่างสินทรัพย์รวมหรือรายได้รวม		(8)=(6)หรือ(7)
มูลค่าของรายการปรับปรุง (หากมี)		(9)
มูลค่าของสินทรัพย์รวมหรือรายได้รวมหลังปรับรายการ		(10)= (8) - (9)
ร้อยละที่ท่านเลือกในช่วง (1% – 1.5%)		(11)
มูลค่าระดับนัยสำคัญ ที่คิดจากสินทรัพย์รวมหรือรายได้รวมหลังปรับรายการ		(12)=(10)*(11)

ขั้นที่ 3 : พิจารณาเลือกจำนวนที่สูงกว่าระหว่างขั้นที่ 1 หรือ ขั้นที่ 2

มูลค่าระดับนัยสำคัญที่คิดจากกำไร(ขาดทุน)ก่อนภาษีหลังปรับ		**จาก (5)**
มูลค่าระดับนัยสำคัญที่คิดจากสินทรัพย์รวมหรือรายได้รวมหลังปรับ		**จาก (12)**
มูลค่าระดับนัยสำคัญจากจำนวนที่สูงกว่า โดยเปรียบเทียบ (5) และ (12)		**(13)**

ท่านคิดว่ามูลค่าจากตามเกณฑ์ข้างต้น (จากขั้นที่ 3) เหมาะสมหรือไม่

☐ **เหมาะสม**

☐ **ไม่เหมาะสม**

ถ้าไม่เหมาะสม กรุณาระบุมูลค่าระดับนัยสำคัญอื่นที่เหมาะสมกว่าเกณฑ์ข้างต้น พร้อมทั้งแสดงการคำนวณประกอบ.....ใ.....

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กรุณาระบุเวลาที่ทำเสร็จ .....

<u>คำแนะนำสำหรับกลุ่มที่สาม</u>

ในการพิจารณากำหนดระดับนัยสำคัญเพื่อการวางแผนการตรวจสอบปี พ.ศ. 2553 ขอให้ท่านใช้**<u>ดุลยพินิจ</u>**ของท่านตามความเหมาะสม และ**<u>ระบุเหตุผล</u>**ประกอบการตัดสินใจของท่านในช่องที่กำหนด

<u>ความหมายของระดับนัยสำคัญ</u>

"ระดับนัยสำคัญสำหรับการวางแผนการตรวจสอบนี้ใช้เพื่อกำหนดแผนงานตรวจสอบเพื่อให้ได้มาซึ่งหลักฐานการตรวจสอบที่เพียงพอต่อการแสดงความเห็นต่องบการเงิน และเพื่อให้แน่ใจว่างบการเงินนั้นไม่มีข้อผิดพลาดที่มีนัยสำคัญต่อการตัดสินใจของผู้ใช้งบการเงิน"

	(พันบาท)	
1. มูลค่าของฐานที่ท่านเลือกใช้กำหนดระดับนัยสำคัญสำหรับการวางแผน		(1)
มูลค่าของรายการปรับปรุงรายการ (ถ้ามี)		(2)
มูลค่าของฐานหลังปรับรายการ		(3)
2. ร้อยละที่ใช้ในการคำนวณระดับนัยสำคัญสำหรับการวางแผน (%)		(4)
3. มูลค่าระดับนัยสำคัญ (พันบาท)		(5)=(3)*(4)

ท่านคิดว่ามูลค่าจากตามที่ท่านคำนวณข้างต้นเหมาะสมอย่างไร กรุณาให้เหตุผลประกอบในส่วนของ<u>ฐานและร้อยละ</u>ที่ใช้

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กรุณาใส่เวลาที่ท่านทำเสร็จ ……

<u>คำแนะนำสำหรับกลุ่มที่สี่</u>

ในการพิจารณากำหนดระดับนัยสำคัญเพื่อการวางแผนการตรวจสอบปี พ.ศ. 2553 ขอให้ท่านใช้**<u>ดุลยพินิจ</u>**ของท่านตามความเหมาะสม

<u>ความหมายของระดับนัยสำคัญ</u>

"ระดับนัยสำคัญสำหรับการวางแผนการตรวจสอบนี้ใช้เพื่อกำหนดแผนงานตรวจสอบเพื่อให้ได้มาซึ่งหลักฐานการตรวจสอบที่เพียงพอต่อการแสดงความเห็นต่องบการเงิน และเพื่อให้แน่ใจว่างบการเงินนั้นไม่มีข้อผิดพลาดที่มีนัยสำคัญต่อการตัดสินใจของผู้ใช้งบการเงิน"

	(พันบาท)	
1. มูลค่าของฐานที่ท่านเลือกใช้กำหนดระดับนัยสำคัญสำหรับการวางแผน		(1)
มูลค่าของรายการปรับปรุง (ถ้ามี)		(2)
มูลค่าของฐานหลังปรับรายการ		(3)
2. ร้อยละที่ใช้ในการคำนวณระดับนัยสำคัญสำหรับการวางแผน (%)		(4)
3. มูลค่าระดับนัยสำคัญ (พันบาท)		(5)=(3)*(4)

กรุณาใส่เวลาที่ท่านทำเสร็จ .....

ให้ทำเครื่องหมาย (/) ลงในช่องที่เห็นสมควรเพียงช่องเดียว	1	2	3	4	5	6	7
1. กรุณาประเมินคุณภาพของ**สภาวะแวดล้อมของการควบคุมภายในโดยรวม** (Overall control environment) 1 = คุณภาพต่ำสุด 7 = คุณภาพสูงสุด							
2. กรุณาประเมิน **ระดับความซับซ้อนของกิจการลูกค้า** (Entity's complexity) 1 = ไม่ซับซ้อน 7 = ซับซ้อนมากสุด							
3. กรุณาประเมิน**ระดับความเสี่ยงสำหรับการวางแผนการตรวจสอบปี พ.ศ. 2553** 1 = ความเสี่ยงต่ำสุด 7 = ความเสี่ยงสูงสุด							

ข้อมูลผู้ตอบแบบสอบถาม

1. อายุ .....เบอร์ติดต่อได้.....
2. เพศ ☐ หญิง ☐ ชาย
3. ตำแหน่งทางวิชาชีพ (กรณีทำอยู่ในสำนักงานสอบบัญชี หรือตำแหน่งในสำนักงานสอบบัญชีที่ท่านเคยทำ)

   ☐ ผู้จัดการสอบบัญชี (Audit manager) ☐ อื่นๆ โปรดระบุ .....

   ☐ ผู้ช่วยผู้สอบบัญชีอาวุโส (Audit Senior)
4. ท่านมีประสบการณ์ในการกำหนดระดับนัยสำคัญสำหรับวางแผนการตรวจสอบหรือไม่

   ☐ มี ระยะเวลาที่ท่านมีประสบการณ์ ....ปี.....เดือน

   ☐ ไม่มี
5. ท่านคิดว่าการที่มี<u>ประสบการณ์โดยตรง</u>ต่อการกำหนดระดับนัยสำคัญในการวางแผนมีผลต่อการตัดสินใจเกี่ยวกับการกำหนดระดับนัยสำคัญในการวางแผนอย่างไร

   ประสบการณ์มีผลต่อการตัดสินใจ ☐ **0%** (ไม่มีผลเลย) ☐**25%** ☐**50%** ☐**75%** ☐**100%** (มีผลมาก)
6. ท่านมีประสบการณ์ในการตรวจสอบกิจการผลิตและจำหน่ายสินค้าหรือไม่

   ☐ มี ☐ ไม่มี
7. ระยะเวลาที่ท่านทำงานในสำนักงานสอบบัญชี (Tenure with audit firm) .....ปี
8. ท่านใช้เวลาในการทำกรณีศึกษานี้ประมาณกี่นาที **.....**(นาที)

9. ท่านมีความคุ้นเคยกับนโยบายการกำหนดระดับนัยสำคัญสำหรับการวางแผนที่ทางสำนักงานสอบบัญชีระบุให้ไว้หรือไม่ เช่น กำหนดเป็นเปอร์เซ็นต์ของกำไรก่อนภาษี

   (How are you familiar with mechanical guidance such as % of Earnings before tax?)

   ระดับความคุ้นเคย □ **0%** □ **25%** □ **50%** □ **75%** □ **100%**

   0% หมายถึงท่านไม่ทราบว่าสำนักงานสอบบัญชีมีการวางแนวทางให้กับผู้สอบบัญชีในสำนักงาน และท่านใช้ดุลยพินิจของท่านเองในการวางแผนงานตรวจสอบเสมอ

   100% หมายถึงท่านทราบเป็นอย่างดีว่าสำนักงานสอบบัญชีมีการวางแนวทางให้กับผู้สอบบัญชีในสำนักงาน และท่านใช้แนวทางนั้นในการวางแผนงานตรวจสอบเสมอ

10. กรุณาระบุเกณฑ์อื่นที่ท่านรู้จักที่สามารถใช้เป็นฐานในการกำหนดระดับนัยสำคัญ

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BIOGRAPHY

Juthathip Audsabumrungrat was born on January 1st, 1971 in Nakhon Sawan, Thailand. She received her Bacherlor of Accountancy with 2nd class honor from Chulalongkorn University in 1992. She obtained her Master of Business Administration from Seattle University, USA, in 1997, and Master of Accountancy from Chulalongkorn University in 2001.

She started working with Coopers & Lybrand for two years before pursuing Master degree in USA. After graduated Master degree from Seattle University, she worked as a project analyst in an investment banking group at the Bangkok Bank Public Company Limited before changing to accounting area. She was an accounting manager for a subsidiary of an international company for 3 years. After that, she decided to work with PricewaterhouseCoopers as an audit manager for three years. She has been working with Accounting department, Faculty of Commerce and Accountancy, Chulalongkorn University since 2004.