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Framing Effects and Output Interference in a Concurring Partner Review Context: Theory and Exploratory Analysis

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INTRODUCTION

A quality control procedure mandatory for audit firms in the SEC practice section is concurring partner review. The specific actions taken by the concurring partner in conducting the review, however, vary across audit firms. Some firms encourage a consultative role where the concurring partner and the engagement partner routinely interact to discuss the major decisions involved in the planning, conduct, and final review of the audit (Jamal et al. 1995). Other firms advocate an advisory role in which the concurring partner explores key judgments made by the engagement partner and verifies that no oversights or errors have been made (Jamal et al. 1995). Still other firms advocate an investigative role in which the concurring partner has no input in the planning or conduct of the audit and serves only to "ensure that auditing standards and SEC requirements have been fulfilled and that the audit report is appropriate in the circumstances" (Johnson et al. 1991, p. 80).

The key factor that differentiates each of these roles is the type of interaction that takes place between the engagement partner and the concurring partner. When assuming a consultative role, the engagement partner and concurring partner engage in a significant amount of interactive problem solving and decision making. In assuming an advisory role, the concurring partner reviews the most difficult audit issues in a relatively independent fashion and interacts with the engagement partner on only a limited basis. The investigative role implies almost no decision making or problem solving interaction between the engagement partner and the concurring partner. In fact, "the SEC has interpreted the role of a concurring partner as being independent and almost *adversarial* (emphasis added) with respect to the engagement partner" (Jamal et al. 1995, p. 6). It is unclear whether the alternative levels of interaction evidenced across concurring partner review roles will impact decision making, problem solving, and the outcome of the concurring partner review process.

For example, consider a case where an audit client has a material and unusual source of revenue and the appropriate revenue recognition process is not clear. The concurring partner, whether assuming a consultative, advisory, or investigative role, must aid in the resolution and/or evaluate the solution ultimately chosen. To be successful, the concurring partner must generate possible solutions that are acceptable under GAAP and acceptable to the client. To generate such solutions the concurring partner must access considerable technical knowledge and must engage in appropriate creative thinking.

There are many possible impediments to the effective performance of the concurring partner in this case. For example, the creativity of a concurring partner may be inhibited by the revenue recognition solution already suggested by the engagement partner. The inability to generate creative solutions in this situation is related to a psychological phenomenon, output interference, which has been the subject of considerable research in both psychology and auditing. "Output interference is a psychological concept that implies that whatever is thought about first interferes with, and thus inhibits, later thoughts about an issue" (Moser 1989, p. 433). This paper explores the notion that the level and type of interaction between the engagement partner and the concurring partner may impact

both the decision making process and the final decision made by the concurring partner. One purpose of this paper is to review the literature on output interference in order to draw implications for the practice of concurring partner review and to suggest future research.

Another possible complicating factor in the process of concurring partner review is the client-auditor relationship. Findings from the "framing effects" literature provide insight regarding the impact that alternative client-auditor relationships may have on the process of concurring partner review. A framing effect "is the induction of differential response through the use of particular forms of a given question or issue" (Bedard and Graham 1994, p. 79). The client-auditor relationship may be perceived in a variety of ways by the concurring partner. For example, an audit client may possess one of a variety of "red flags" (e.g., a risky industry, declining liquidity, a management team that is uncooperative with the audit firm) that cause the concurring partner to view the client in a negative light. Alternatively, the client may be viewed in a positive light due to a variety of other factors. The framing effects literature suggests that the concurring partner may approach the review process differently depending on whether the client is viewed in a positive or a negative light. A second purpose of this paper is to review the framing effects literature in order to provide implications for practice and to suggest avenues for future research in the area of concurring partner review.

A third purpose of the paper is to explore the possible interactive effects of output interference and framing effects for situations in which they might jointly occur. For example, there could be an interactive effect between the engagement partner-concurring partner relationship and the nature of the client-auditor relationship. These interactive effects could mitigate or compound the impact of one or both of the effects. However, no research exists that addresses these possible interactive effects. Thus, this paper provides direction for future research.

The remainder of this paper is organized as follows. The next section describes a variety of research questions and related background literature. A third section describes an exploratory study using verbal protocol analysis that illustrates the issues discussed in the second section. A final section concludes the paper and proposes possible extensions.

RESEARCH QUESTIONS AND BACKGROUND LITERATURE

Output Interference Research

Research Question 1: Will the concurring partner's knowledge of the engagement partner's proposed solution induce output interference as evidenced by a reduced number of alternative solutions proposed by the concurring partner?

In an auditing context, output interference can occur as the engagement partner and concurring partner interact to propose possible accounting treatments for complex revenue recognition or inventory valuation issues. A plausible solution for the issue suggested by the engagement partner may limit additional independent thoughts by the concurring partner, especially in the current audit environment that stresses engagement efficiency.

Slamecka (1968) first reported output interference in a study utilizing part-list cueing. Participants who received a subset of cue words from a previously viewed list were able to recall significantly fewer critical items (items on the original list that were not used as cues) than those participants who were not given the subset of cue words. Slamecka (1968) found that cue words interfered with the ability of participants to recall critical items from the original list.

Raaijmakers and Shiffrin (1981) further explored output interference using the part-list cueing methodology and have proposed the Search of Associative Memory theory (SAM) to explain the cognitive processes underlying output interference. SAM predicts that retrieval from memory is achieved through associations between images stored in memory. Inferior performance by the cued participants is predicted by SAM because cued participants are forced (via the cues) to consider the randomly selected cue words as they sample the associated images in memory. As such, SAM predicts that they will recall/retrieve more items associated with the random list and fewer critical items (Raaijmakers and Shiffrin 1981).

To relate the predictions of SAM to the concurring partner review process, consider the following example. An engagement partner encounters a complex inventory valuation issue and, after careful consideration, reaches a tentative but plausible conclusion as to the manner in which the issue might be accounted for. The engagement partner then consults with the concurring partner¹ and informs him of the issue and the proposed treatment (the introduction of the part-list cueing effect)². According to SAM, the concurring partner will evaluate the proposed treatment by activating images in memory that are associated with the type of treatment that the engagement partner suggested. That is, the SAM model assumes that the probability of retrieving associated memory images is increased and the probability of retrieving less directly associated images is simultaneously decreased. Accordingly, images of alternative accounting treatments for the revenue recognition issue may be neglected.

Two outcomes are possible in light of the existence of output interference. First, the solution/cue suggested by the engagement partner might be the "right" revenue recognition treatment, one that is theoretically sound and is deemed to be an "acceptable" solution to the problem. If the engagement partner provides the "right" accounting treatment, the concurring partner is expected, according to SAM, to concentrate on that treatment and to neglect the consideration of other treatments. If this situation were to occur, output interference would enable the audit services to be equally effective and more efficient than if no output interference had occurred.

However, in practice, a variety of solutions may be acceptable. As such, another view of effectiveness may be that of the ability to creatively generate a variety of possible solutions. In a

¹ This scenario assumes a consultative or advisory role, rather than an investigative role, for the concurring partner.

² While this cue is, admittedly, not randomly selected it is an approximation of the assumptions of the part-list cueing paradigm.

competitive audit environment, an effective auditing firm will offer services that enable a client to achieve the accounting treatment that they desire while still adhering to GAAP. For instance, a revenue recognition issue may have a different potential solution if some part of the sales contract is modified slightly. An effective audit service would provide advice to the client concerning acceptable means to achieve their financial reporting objectives. If this definition of effectiveness is accepted, then output interference may be viewed as decreasing audit effectiveness even if the engagement partner suggests the "right" solution. Efficiency would be gained in the scenario where the critical cue and the cue provided are equivalent because the concurring partner would have achieved the correct solution with a minimum of cognitive effort/time expended.

The second outcome that may occur due to output interference is that the engagement partner may not suggest the "right" accounting treatment. In this scenario, the solution/cue provided by the engagement partner is anticipated to cause the concurring partner to concentrate on that solution and to neglect consideration of other alternatives. In this case, output interference would cause the audit services provided to be ineffective, but the service may still be evaluated as superficially efficient. The decision process may be viewed by the auditors as efficient because the engagement partner's suggestion saved time for the concurring partner. The decision process is really only superficially efficient because the sub optimal decision may cause later repercussions such as the loss of the client. The effects of this superficial efficiency may be downplayed by auditors due to the low level of feedback commonly found in auditing settings.

Several studies have examined output interference in accounting contexts (cf. Anderson et al. 1992; Church and Schneider 1993; Frederick 1991; and Moser 1989). Frederick (1991) studied output interference by utilizing both free recall and part-list cueing methodologies. Participants were provided a list of internal controls that they later recalled. Consistent with output interference, Frederick (1991) found that "providing subjects with a portion of the controls was detrimental to the recall of the remaining controls" (p. 241).

Anderson et al. (1992) and Moser (1989) initiated output interference by requesting participants to list hypotheses for an event in a specific order. For example, in Moser (1989), participants generated supporting or opposing reasons that a company might attain a pre-specified earnings level. In Anderson et al. (1992), participants generated error or non-error explanations for a ratio change in analytical review. Output interference was demonstrated by the finding that the order in which the participants listed the hypotheses affected their ability to list items in the other category.

Church and Schneider (1993) presented participants with one of two possible inherited hypotheses regarding the cause of a fluctuation in a client's gross margin ratio; they inherited either a sales error or a purchases error hypothesis. Then, the participants were requested to identify potential causes for the change in the gross margin ratio. The findings demonstrated the impact of output interference since "auditors who inherited a superior's suggestion from a particular transaction cycle generated fewer additional hypotheses from the same transaction cycle than did auditors who were not provided with a superior's suggestion" (Church and Schneider 1993, p. 345).

Research Question 2: Will the alternative levels of engagement partner-concurring partner interaction evidenced across concurring partner review roles (e.g., consultative, advisory, investigative) impact the process and effectiveness of concurring partner review?

The following examples will serve to illustrate Research Question 2. Imagine that you are a concurring partner and that your firm advocates a consultative concurring partner review role. As such, you are actively involved with the engagement partner in the planning, conduct, and review of the audit engagement. Imagine further that the client has a complex revenue recognition issue that must be resolved. When discussing the issue with you, the engagement partner may adopt one of two approaches. First, the engagement partner may present the facts of the case and provide his opinion of how the issue should be addressed. Alternatively, the engagement partner may present the facts of the case and ask that you consider the issue independently before reaching a conclusion.

In the first case knowledge of the engagement partner's solution could interfere with your ability to think of alternatives, especially if the solution proposed seems reasonable. In the second case the opportunity for the engagement partner's solution to interfere with your ability to retrieve alternatives does not exist, making it more likely that you would propose a solution that the engagement partner had not previously considered.

Now imagine that your firm advocates an investigative concurring partner review role. This implies that you, the concurring partner, are to be independent and almost adversarial with respect to the engagement partner³. As such, you are to actively challenge and critically evaluate the revenue recognition issue decision made by the engagement partner. You have two choices in this situation. First, you could follow SEC recommendations and do a "cold" review whereby you reconstruct the decision alternatives considered by the engagement partner as documented in the workpapers. Second, the engagement partner could brief you on the alternatives considered and you could then evaluate the merits of the course of action chosen. In either situation, however, the information that you will receive is a description of the decision that has already been made by the engagement partner. As such, your ability to independently evaluate the solution chosen or to creatively generate alternative solutions may be diminished.

The examples above illustrate the potential interdependency that exists between the engagement partner and the concurring partner. Only in the consultative review case where the engagement partner chose not to immediately disclose his opinion was this interdependency in decision making eliminated⁴. Given the findings of this research, what types of answers might be anticipated for Research Questions 1 and 2? It appears that the interaction between the engagement partner and the concurring partner, whether this interaction occurs through joint problem solving or through indirect interaction via workpaper documentation, has the potential to significantly impact the process and outcome of concurring partner review.

The findings of the output interference literature suggest that the creative ability to generate additional solutions to complex audit issues may be impeded when a plausible solution to the issue is proposed before the decision maker has the opportunity to independently evaluate the issue. It is possible that since highly experienced partners are involved in the process they would not be subject to output interference. However, these effects have not been well documented in the concurring partner review setting.

Framing Effects Research

In addition to the potential difficulties imposed through the interaction of the engagement partner and the concurring partner, another complexity that may arise during the concurring partner review process is a consideration of factors related to the client-auditor relationship. For example, in resolving a complex audit issue, the client-auditor relationship may be one in which the client is amenable to suggestions made by the firm. Alternatively, a client may possess very strong opinions regarding the resolution of the issue. The process and outcome of the concurring partner review process may be impacted by these factors.

³ In fact, "the SEC has sanctioned concurring partners for relying on conversations with the engagement partner as to the adequacy of work performed (ASR #285) (and for) not examining audit working papers in detail (AAER #118)" (Jamal et al. 1995, p. 6).

⁴ Note that this situation could also occur when the concurring partner assumes an advisory role. Since the advisory role is intermediate between the consultative and investigative roles, no example of it is provided.

Research Question 3: Will framing effects induced by differences in the client-auditor relationship impact the process and effectiveness of concurring partner review?

Suppose that you serve as the concurring partner for two audit clients that are relatively similar except in one respect. One client generally reacts positively to the firm's recommendations for resolving complex revenue recognition issues and is generally agreeable to suggestions for conservative financial treatments of such issues. The other client generally reacts negatively to the firm's recommendations and is not agreeable to suggestions for conservative financial treatments of such issues. This scenario suggests two additional related questions:

Research Question 3a: Will framing effects induced by differences in the client-auditor relationship impact the manner in which the financial statement analysis portion of concurring partner review is conducted?

Research Question 3b: Will framing effects induced by differences in the client-auditor relationship impact the proposed solutions that the concurring partner suggests to the client?

The example provided above is meant to illustrate the impact that perceived "red flags" or client risk factors may have on concurring partner review. The important point to note, however, is that although a client may be generally disagreeable to suggestions for conservative revenue recognition solutions, or may possess other risk factors, it does not necessarily follow that the client is, in fact, a client that may exhibit fraudulent financial reporting or is a client that should be approached any differently in terms of concurring partner review. The following research provides the theoretical linkages between perceived positive/negative connotations about the audit client and the behavior by the concurring partner.

Framing effects have traditionally been initiated by introducing a situation in either a positive or a negative light (Tversky and Kahneman 1981). In conducting analytical procedures, for example, an auditor may interpret financial signals differently for a client that routinely accepts the audit firm's suggestions for conservative accounting treatments (a positively framed client) than for a client that routinely rejects such treatments (a negatively framed client).

Tversky and Kahneman (1981) first demonstrated that the inclusion of seemingly insignificant wording changes with either a positive or negative connotation significantly impacts decision making. Decision makers react more strongly to negatively framed situations than to positively framed situations (Bedard and Graham 1994; Kida 1984; Levin et al. 1986; Trotman and Sng 1989; Tversky and Kahneman 1981). This property may be particularly salient in the auditing arena due to the high costs associated with rendering an inaccurate audit opinion (e.g., legal liability, decline in professional reputation) or of providing sub optimal advice to a client (e.g., client dissatisfaction or loss of the client). Frisch (1993) found that subjects who compared versions of an alternatively framed problem "believe that changing the 'frame' significantly alters the situation (emphasis added), and therefore that it is reasonable to make different choices in different frames" (Frisch 1993, p. 422). This finding has important implications for concurring partner review because it demonstrates that framing may influence the auditors' perceptions of the facts in an audit service engagement.

Kida (1984) and Trotman and Sng (1989) examined framing effects in the going-concern decision. Following a review of company information, participants listed and ranked information relevant to whether the firm would fail (the failure group) or remain viable (the viability group). In both studies, negative information was recalled to a greater extent than was positive information for both treatment groups. In addition, participants in the failure treatment groups recalled a greater percentage of negative information.

Bedard and Graham (1994) described framing effects that were detected during the development of Risk Advisorsm. The development of Risk Advisorsm involved the collection of data from auditors regarding their knowledge of the assessment of audit risk. To elicit this

knowledge from the auditors, the same questions were worded in a positive manner, in a negative manner, and in a combination of positive and negative wording to determine the most effective knowledge elicitation method. "Negative wording of the questions evoked a better recall of negative aspects (risks) of the client than did positive or neutral wording. Overall, the development team observed an improvement in the identification and integration of issues when the statement was negatively worded" (Bedard and Graham 1994, p. 79).

Johnson et al. (1991) explored the cognitive representations employed in a concurring partner review task with embedded framing effects. This study did not utilize the traditional positive/negative framing manipulation. Instead, participants analyzed cases in which a financial statement error was either intentional or unintentional on the part of management. The framing effect was created by the communication of management in the management representation letter. In the intentional error case, for example, management framed the description of the company as a "growth" company when the company was in fact engaged in fraudulent manipulation of the financial statements. Participants that detected the error developed a problem representation different from the representation that was initially suggested by the facts of the case and related the implications of each of the cues in combination.

The preceding studies indicate differential response due to alternatively framed information. However, these studies provide little evidence regarding the cognitive processes underlying the framing effect. Dunegan (1993) provides evidence regarding these processes. Dunegan (1993) examined the notion of framing in the context of capital expenditure decisions and found that negatively framed information induces "controlled cognitive processing" while positively framed information induces "automatic cognitive processing." Information processing occurs along a continuum of depth of cognitive processing ranging from automatic to controlled processing (Gioia and Poole 1984). Controlled cognitive processing is evidenced by detailed and comprehensive information processing and the utilization of information cues in combination. Automatic cognitive processing is less detailed and comprehensive and involves reduced utilization of information cues in combination (Dunegan 1993; Gioia and Poole 1984; Shiffrin and Schneider 1977a, b; and Wofford and Goodwin 1990).

The above discussion indicates that framing effects are likely to have some impact on concurring partner review. In addition, research findings in other decision contexts suggest that such framing effects will result in process and outcome differences in concurring partner review. More specifically, aspects of the client-auditor relationship that induce framing effects could result in different amounts of automatic or controlled processing. These processing differences could, in turn, affect the outcome of the concurring partner review process. On the other hand, the expertise of the partners involved in the process might mitigate these potential effects. Auditing firms need to be aware of these effects and research is needed to resolve the existence and/or extent of such effects.

A Comparison of Framing Effects Research and Output Interference Research

The research questions and related background literature addressed up to this point have explored the independent impact that the engagement partner-concurring partner relationship and the client-auditor relationship may have on concurring partner review. However, these relationships may have an interactive effect. The following section explores this possibility.

Research Question 4: What is the interactive nature of the engagement partner-concurring partner relationship and the client-auditor relationship?

Suppose that you are a concurring partner and that your firm advocates an investigative concurring partner review role. As demonstrated by the discussion of Research Question 1, you may be subject to output interference since the input to your decision process is determined by the opinions and actions of the engagement partner. Now consider the following two alternatives: (1) no "red flags" exist regarding this client or (2) one or more "red flags" exist. Might you, as a result

of the controlled cognitive processing initiated by negatively framed information in the "red flags" exist case, be better able to overcome the output interference associated with the engagement partner's conclusions regarding the client in general or the revenue recognition issue specifically? Stated more formally:

Research Question 4a: Will a negatively framed client-auditor relationship mitigate the potentially detrimental impact of the output interference initiated by the interaction of the engagement partner and concurring partner?

Framing effects and output interference share several similarities and differences. To understand the similarity between the two effects, consider the following definitions: (1) the interference effect "implies that whatever is thought about first interferes with, and thus inhibits, later thoughts about an issue" (Moser 1989, p. 433), and (2) framing effects occur in situations "in which seemingly inconsequential changes in the formulation of choice problems cause significant shifts of preference" (Tversky and Kahneman 1981, p. 457). For both cognitive factors, then, the initial problem representation is an important determinant of the subsequent cognitive reaction to that problem. In this sense, framing effects and output interference are quite similar.

The impact of these effects, however, differs. The results of output interference studies indicate that output interference results in the *inhibition* of certain thoughts. For example, by providing participants with a partial listing of internal controls, the recall of additional controls was inhibited in Frederick (1991).

The results of framing effect studies, however, report changes in the *emphasis* of thought due to the effect (positive or negative) that has been introduced. In Kida (1984), for example, participants were asked to decide if a company would ultimately fail (negative frame) or would ultimately remain viable (positive frame). Participants that received the negative frame recalled fewer positive facts about the client than did participants in the positive frame, but participants in both treatment groups recalled the same number of negative facts about the client. Thus, participants in the negative frame placed greater emphasis on the negative information and less emphasis on the positive information.

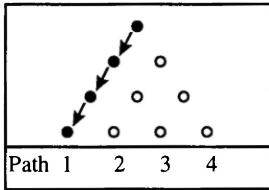
To illustrate the difference between the inhibition of thought due to output interference and the change in emphasis in thought due to framing effects, consider the following example. Suppose an auditor is conducting analytical procedures and notices unusual fluctuations in some accounts. A variety of interpretations of the financial cues are possible and alternative levels of analysis may be conducted to assess the fluctuations depending on a variety of client-specific characteristics.

Output interference implies that suggestions from other audit team members or management will inhibit the auditor from entertaining other explanations for the fluctuations (cf. Bedard et al. 1993; Libby 1985). As such, alternative lines of reasoning that might be indicated by the fluctuations may not be explored due to output interference. The framing effects literature indicates that positive or negative characteristics of the audit client will impact the emphasis of thought related to the fluctuations. The findings of Dunegan (1993) suggest that negatively framed information will cause the auditor to engage in relatively controlled processing with respect to the fluctuations while positively framed information will initiate relatively automatic processing.

Figure 1 provides a description of the independent and interactive impact of output interference and framing effects. The inhibition of thought due to output interference is portrayed by depicting a financial statement "fluctuation" knowledge representation where one line of reasoning is highlighted while other possible explanations for the fluctuation are inhibited due to the presence of output interference. The change in emphasis of thought due to framing effects is depicted using the same "fluctuation" knowledge representation. Here, the automatic cognitive processing induced by positively framed client information leads to a less than complete utilization of the "fluctuation" knowledge. The controlled cognitive processing induced by negatively framed client information, however, leads to a more thorough utilization of the "fluctuation" knowledge. A depiction of four possible interactive effects of output interference and framing effects are also provided in Figure 1.

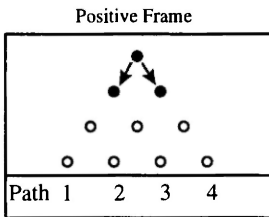
Figure 1
The Interaction of Framing Effects and Output Interference

The Inhibition of Thought Due To Output Interference

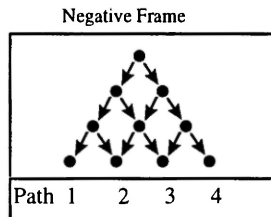


Consideration of paths 2, 3 and 4 is inhibited.

The Change in Emphasis of Thought Due To Framing Effects

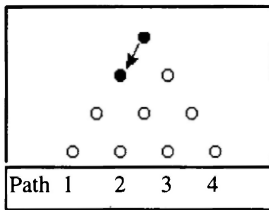


Less emphasis due to positive frame

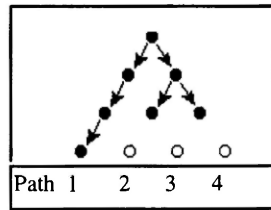


More emphasis due to negative frame

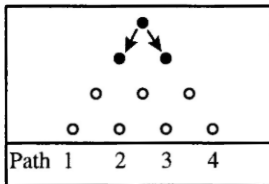
The Interaction of Framing Effects and Output Interference



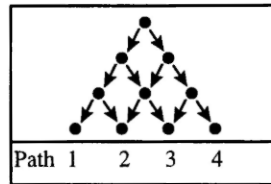
Positive Frame, Interference Present



Negative Frame, Interference Present



Positive Frame, Interference Absent



Negative Frame, Interference Absent

While no research yet exists to provide a definitive answer to Research Question 4, the implications of Figure 1 would indicate that affirmative answers to these questions may be supported by subsequent research. By initiating a deeper thought process that encompasses a broader range of lines of reasoning, (negative frame, interference absent diagram in Figure 1) a negatively framed client-auditor relationship may indeed mitigate the potentially detrimental impact of output interference.

VERBAL PROTOCOL ANALYSIS OF CONCURRING PARTNER REVIEW

Goals

The purpose of this section is to provide a preliminary application of the theories outlined above. The analysis described below addresses the research questions in the following manner. A scenario involving investigative concurring partner review was given to audit partners and their decision processes were analyzed according to the theory. Research Question 1 (regarding output interference) is addressed through the presence or absence of a solution proposed by the engagement partner. Because an investigative concurring partner review is used, Research Question 2 is not directly addressed but is left for future research. Research Question 3 (regarding framing effects) is addressed through manipulation of the client-auditor relationship. Research Question 4 (concerning the interactive effects of output interference and framing) is explored by examining the differential effects of framing in the presence of output interference.

Method

Experimental Task

Each participant performed a concurring partner review on one of four versions of a pre-tested case⁵ that contained background information about a continuing audit client, comparative financial statements and selected ratios, and a description of a revenue recognition issue relating to a government contract. The experiment consisted of five phases. First, the framing effect manipulation was embedded within the introductory portion of the case. As such, all subsequent tasks in the experiment are presumed to be subject to the impact of framing effects. Second, all participants were told that the client in the case resolved the revenue recognition issue using a "straight-line" methodology. However, the specifics of the calculation were not disclosed.

⁵ The case was developed from an actual audit client of a Big Six firm. The revenue recognition issue involved in the case was chosen because it was sufficiently complex to have warranted national consulting level analysis. The case was developed in conjunction with a partner of the firm and was pretested with two audit seniors and two doctoral students with prior public accounting experience.

Figure 2
Experimental Procedures

Stage	Description
1. Introduction/Framing Effect Manipulation	A description of the client was provided within an audit planning document required on all engagements at this particular firm. The framing manipulation was introduced at the beginning of this description as follows: "When complex accounting issues have arisen in the past, management has generally reacted positively (negatively) to our recommendations for resolving those issues. In addition, management has been (has not been) agreeable to our suggestions for conservative financial treatments of complex accounting issues".
2. Client Proposed Revenue Recognition Solution Presented	Still within the audit planning document, all partners were told that the client had tentatively recognized revenue related to the revenue recognition issue based on a "straight line" methodology. However, no numerical calculations were provided.
3. Financial Statement Analysis Task	A balance sheet, income statement, and selected financial ratios were presented next. Data from the two preceding years, as well as the projected and unaudited figures for the current year were provided. Partners were requested to respond to the following question: "What observations did you make and what questions did you raise during your review of Diamond's financial statements?". The same seeded error as that used in Bedard and Biggs (1991) was introduced into the data, as well as indications of an accounts receivable valuation problem.
4. Revenue Recognition Issue Description/ Output Interference Manipulation	Next, the revenue recognition issue was presented. All partners received contractual, firm-specific, and industry revenue and cost data. One-half of the partners received an inherited solution to the issue that was suggested by the engagement partner. The partners were asked to respond to the following question, "The engagement partner is considering alternative accounting treatments to determine the amount of revenue that should be recognized pursuant to this contract for the year ended December 31, 1994. We are interested in knowing how you think this issue could be handled. Please describe the plausible solutions that you have considered. Include numerical calculations".
5. Debriefing Task	Finally, several questions related to the task and the experience level of the partners were completed.

Figure 3
Experimental Design

Framing Effect Manipulation:

		Positive Frame	Negative Frame
Output Interference Manipulation:	Output Interference Present	Partner 1	Partner 3
	Output Interference Absent	Partner 2	Partner 4

Third, participants reviewed financial statements and financial ratios. Fourth, participants completed the revenue recognition task. The output interference manipulation was embedded within this task. The manipulation was achieved by describing an inherited solution advocated by the engagement partner. As such, the impact of output interference can only be observed in the revenue recognition task. Finally, a debriefing questionnaire was completed. Figure 2 provides a summary of the experimental procedures.

Participants and Data Collection

Four audit partners from a Big Six firm, ranging in experience from 13 to 30 years, completed the case. All had acted as consultants on more than three complex revenue recognition issues in the past three years. Only one partner routinely dealt with audit clients with governmental contracts. That partner (Partner 2) estimated that 15% of his time was spent on such engagements. The experimental sessions were completed in a conference room or office at the participant's workplace and lasted approximately 60 - 90 minutes. Each partner's discussion of the case was collected in the form of think-aloud verbal protocols, adhering to the procedures recommended by Ericsson and Simon (1984).

Experimental Design

The experiment employed a 2 X 2 design. The two independent between-subjects variables were: inherited revenue recognition solution (*present, absent*) and client-auditor relationship (*positive, negative*). The dependent variables were performance on the financial analysis task and performance on the revenue recognition task. Figure 3 summarizes the experimental design.

Procedures

Analysis of protocols involved three stages. The first stage involved transcription of the taped verbalizations. The resulting verbal protocols were then analyzed in the second stage to identify episode abstracts. Episode abstracts summarize the verbal protocols into sequences of goal directed decision processes (Newell and Simon 1972). Two of the authors independently coded the protocols for the episode abstracts, achieving a coding agreement of 84 percent. All differences were reconciled and the resulting episode abstracts are included in Appendix A. The reconciled episode abstracts provide data with a measured amount of reliability which serve as the basis for the third stage of analysis. The third stage of analysis involved the classification of decision process types used and issues identified. The results of this analysis will be presented around the two tasks in the study, financial statement analysis and revenue recognition.

Results

The purpose of this section is to describe the results of an exploratory analysis of output interference and framing effects in the concurring partner review task. The research involved a verbal protocol analysis of the decision processes of four partners. Since the research involved a limited number of auditors, it is not intended to be a test of these theories. Rather, it is intended to be a detailed description of auditor decision processes and as a result provides insight into both the independent and interactive impact of output interference and framing effects in concurring partner review.

Financial Statement Analysis Task

The financial statement analysis task involved only framing effects (see Figure 2, Experimental Procedures). Specifically, those partners in the negative frame conditions (Partners 3 and 4) were expected to exhibit a higher degree of controlled processing than the partners in the positive frame conditions (Partners 1 and 2). To explore this prediction, the partners' episode abstracts were analyzed to identify the types of decision processes used and the cues examined related to critical issues in the case.

Types of Decision Processes. Based on Wofford and Goodwin (1990), three types of decision processes were identified. These included evaluation, causal and strategy processing. The Wofford and Goodwin theory suggests that these processes will be present to varying degrees depending on the level controlled processing induced by the framing effect. Evaluation processes were indicated by a judgmental statement about the case (e.g., "COGS is up" see Partner 4, Episode 3.2.). Causal processes were evidenced by the presence of an attribution (e.g., "COGS is up, **probably due to inflation**" see Partner 4, Episode 3.2.1). Strategy processes were indicated by statements about future occurrences or audit implications of some aspect of the case (e.g. "Net income is high, **Risky because of public offering**" see Partner 3, Episode 1.1.1.). The absolute number of each of these processes, as well as their relative percentages, are shown Table 1. Two of the authors independently coded the protocols for the types of processing and achieved a coding agreement of 87 percent.

Table 1
Financial Statement Analysis Task - Summary of Process Results

Type of Processing	<u>Partner 1*</u> (Positive Frame)		<u>Partner 2</u> (Positive Frame)		<u>Partner 3</u> (Negative Frame)		<u>Partner 4</u> (Negative Frame)	
	Evaluation Statements	18	74%	38	68%	15	54%	26
Causal Statements	3	13%	9	16%	2	7%	3	7%
Strategy Statements	3	13%	9	16%	11	39%	17	36%
Total Statements	24	100%	56	100%	28	100%	46	100%

*Results are reported as the raw number and as the percentage of the total number of processing items.

Strategy, causal and evaluation processing occur along a continuum ranging from higher to lower levels of controlled processing. The results are consistent with the theory. Partners 3 and 4 (negative frame) exhibited relatively higher levels of strategy processing, 36-39 percent of the total decision processes compared to 13-16 percent of the decision processes of Partners 1 and 2 (positive frame).

Cues Used During Issue Identification. There were three significant issues in the case: (1) a misallocation between SGA and inventory, (2) an accounts receivable valuation issue, and (3) an overall evaluation of the company's financial health. The episode abstracts were coded to determine the extent to which cues related to these financial statement issues were examined by each partner. Results of this analysis are shown in Table 2. As seen in the table, all four partners used some cues related to the three significant issues. This suggests that all partners had some minimal awareness of the three important issues. Moreover, there is no discernible difference in cue usage between partners in the positive and negative frames.

While overall cue usage did not differ between the positive and negative frames, it is possible that cue usage related to particular types of processing was different. The framing theory suggests that negatively framed partners should better identify the seeded error and should simultaneously engage in more controlled processing (i.e., strategy processing). Since Table 1 illustrated that partners in the negative frame proposed a greater percentage of strategy statements, the episode abstracts were analyzed further to identify the use of cues related to the seeded error within strategy processing episodes. Cues used within strategy processing episodes are depicted as check marks in Table 3. Because a single use of a cue is the critical determinant for issue identification, multiple uses of a single cue may distort the analysis. Thus, even though a cue may have been mentioned several times, it is simply denoted as a single check mark.

Table 2
Financial Statement Analysis Task - Summary of Issue Identification Results

Issue 1: Seeded Error	Partner 1* (Positive Frame)	Partner 2 (Positive Frame)	Partner 3 (Negative Frame)	Partner 4 (Negative Frame)
Account Name:				
Sales	3	5	1	1
COGS	1		2	2
Gross Margin		1		1
SGA	1	5	3	3
Income Before Tax		1		
Net Income	1		1	1
Inventory	1	3	1	2
Gross Margin%	1			
IBT/Sales				1
NI/Sales			1	1
Inv. Turnover	1	2	1	1
Total	9	17	10	13
Issue 2: Accounts Receivable Valuation				
Account Name:				
A/R	7	3	2	3
Allowance	1	1	2	2
A/R Turnover	1	1		1
Total	9	5	4	6
Issue 3: General Evaluation				
<u>Liquidity:</u>				
Cash		2	1	1
Current Ratio	1	2		1
Quick Ratio	1			
<u>Capital Structure:</u>		1		
Current Liab.				1
LT Debt			2	1
Equity		1		
Total	2	6	3	4

*Results are reported as the raw number of times an account name was mentioned by the auditor.

Table 3
Seeded Error Cues Used During Strategy Processing

Issue 1: Seeded Error Cue	<u>Partner 1*</u> (Positive Frame)	<u>Partner 2</u> (Positive Frame)	<u>Partner 3</u> (Negative Frame)	<u>Partner 4</u> (Negative Frame)
Account Name:				
Sales	√	√	√	√
COGS			√	√
Gross Margin		√		√
SGA		√	√	√
Income Before Tax				
Net Income			√	√
Inventory		√	√	√
Gross Margin%				
IBT/Sales				√
N _i /Sales				√
Inv. Turnover		√	√	√
Total	1	5	6	9

Several conclusions may be drawn from Table 3. Both negatively framed partners (Partners 3 and 4) exhibited the most controlled processing as evidenced by the number of cues used during the strategy episodes. Partner 3 used fewer cues in strategy processing than Partner 4, but the effects of the negative frame are illustrated best by analyzing the content of the episodes. Particularly, it is interesting to contrast Partner 3 and Partner 1 in this regard, using Table 3 and the episode abstracts in Appendix A. Partner 3 immediately recognized a potentially overstated net income and sought to evaluate its possible causes (see Partner 3, Episode 1). This partner's analysis seemed to be driven by a realization of increased risk from the impending public offering. The analysis was quite detailed and resulted in the conclusion that the primary cause of income overstatement was an understated SGA expense. On the other hand, Partner 1 (who used one seeded error cue in strategy statements) had a very superficial analysis of the seeded error and did not mention the increased risk of overstated income associated with an impending public offering. In fact, the understated SGA expense was only identified at the very end of the decision process of Partner 1 (see Partner 1, Episode 3.4.1.).

The other partner in the positive frame, Partner 2, did not use any net income cues in strategy processing. About half way through the decision process, Partner 2 (Episode 2.4.) mentioned that income had increased, but tied that increase to the possible curtailing of discretionary expenditures by the client rather than relating the changes in income to risk factors as did Partner 3. Thus, while these results need to be corroborated by further research, the decision processes of these four partners suggests that negative framing affects the conduct of financial statement analysis.

Revenue Recognition Task

The revenue recognition task involved both framing effects and output interference (see Figure 3, Experimental Design). Specifically, those partners who received the output interference manipulation (Partners 1 and 3) were expected to generate fewer independent solutions to the revenue recognition issue than those partners who did not receive the output interference manipulation (Partners 2 and 4). In addition, the impact of framing effects (via enhanced levels of controlled processing) was expected to mitigate output interference. As such, Partner 3 was expected to generate more independent solutions than Partner 1. To explore these predictions, the

partners' episode abstracts were analyzed to identify the major decision episodes and to determine the number of solutions generated by each partner.

Decision Episodes. Each partner began the revenue recognition task by evaluating the contract details. Next, the partners engaged in one or more of the following behaviors: (1) the generation of an independent solution, (2) an evaluation of the client's proposed solution, (3) an evaluation of the engagement partner's solution for partners in the output interference present conditions, (4) the comparison of alternative solutions, and (5) the rejection of the client's proposed solution. Flowcharts showing the major decision episodes are shown in Figure 4.

The major observation related to Figure 4 involves the fact that the two positively framed partners (Partners 1 and 2) did not reject the client proposed solution whereas the two negatively framed partners (Partners 3 and 4) did reject that solution. It is interesting to note that Partners 3 and 4 both rejected the client's straight-line method based on concerns about the matching of revenue and expenses. This concern about overstatement of income may reflect the more critical analysis associated with controlled, strategy processing.

Decision Outcome. In addition to analyzing the variations in decision processing, a determination was made regarding the number of solutions generated by each partner. Comparing the numerical outcomes in such a small sample study is intended only to provide exploratory descriptive evidence of the independent and interactive impact of framing and output interference. Credit was given for independently generated solutions as well as for the numerical calculation of the solution proposed by the client. Recall that a qualitative description of the client's proposed "straight-line" approach was provided to all partners. However, Partner 1 did not attempt to review the client's suggestion or to calculate the numerical implications of such a solution. As such, Partners 2, 3, and 4 received credit for making such an analysis.

As seen in Figure 4, Partner 1 (positive frame, output interference present) generated only one solution. Partners 2 (positive frame, output interference absent) and 3 (negative frame, output interference present) each generated two solutions. Partner 4 (negative frame, output interference absent) generated three solutions. These outcomes are supportive of the predictions of framing effects and output interference theories.

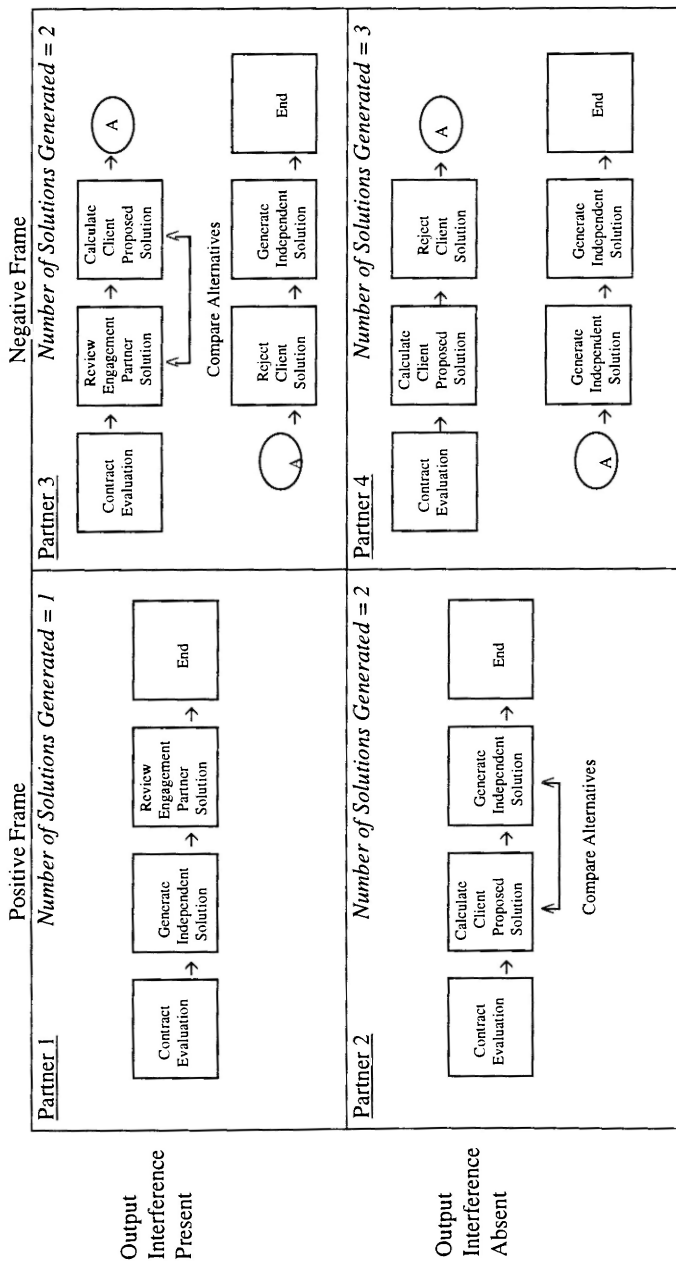
The impact of output interference may be judged by comparing the combined outcomes of Partners 1 and 3 versus Partners 2 and 4. Partners 1 and 3 combined generated three solutions whereas Partners 2 and 4 combined generated five solutions. As such, partners receiving the output interference manipulation generated fewer additional independent solutions. The mitigating impact of framing effects is demonstrated by comparing the performance of Partners 1 and 3, since they both received the output interference manipulation but they differed in terms of the framing manipulation. Partner 3 generated one more solution than Partner 1, providing support for the proposed interactive impact of framing effects and output interference.

CONCLUSIONS AND FUTURE RESEARCH

The purpose of this study is to initiate discussion regarding the cognitive factors that may impact the process and performance of concurring partner review. Specifically, research questions are posited that relate to the impact of framing effects, output interference, and the interactive impact of these two judgment effects in a concurring partner review context. An exploratory verbal protocol analysis was conducted to illustrate these effects.

By understanding the impact of framing effects and output interference, implications for the practice of concurring partner review may be drawn. First, there is currently uncertainty in audit practice regarding the "level of responsibility and scope of the work to be performed by the concurring partner" (Jamal et al. 1995, p. 1). The findings of this paper provide input to the resolution of this uncertainty. For example, the output interference literature predicts, and our results suggest, that concurring partners who receive an inherited solution to a revenue recognition issue generate fewer additional independent solutions to that issue. Thus, the availability of potential

Figure 4
Revenue Recognition Task - Summary of Results



solutions from engagement partners may inhibit full consideration of alternatives during concurring partner review.

Second, in cases where the concurring partner assumes a consultative role, the close working relationship between the engagement partner and the concurring partner may cause output interference to be particularly difficult to avoid. While the current study did not directly address this issue, it may be a fruitful avenue for future research.

Third, this paper proposes and examines process effects related to framing. Findings indicate that negative framing induces controlled processing, particularly with respect to the proposal of strategy statements and the utilization of cues within those statements. The initiation of a negative frame could be accomplished in audit practice by keeping knowledge regarding the client-auditor relationship from the concurring partner. While "no knowledge" is certainly not as negative as "negative knowledge", it may be sufficient to engender enough uncertainty in the mind of the concurring partner to attain some of the benefits associated with decision processing in negatively framed situations. Since concurring partners at local offices will have knowledge of the client-auditor relationship, the use of national consulting advice in the resolution of some concurring partner review issues may be appropriate.

Fourth, a previously unexplored avenue for future research relates to the potential interactive impact of framing and output interference. Since negatively framed information appears to evoke better recall of the risk factors of a client and improve the identification and integration of audit issues (Bedard and Graham 1994) through the initiation of more intensive levels of controlled cognitive processing (Dunegan 1993), this paper explores whether a decline in the impact of output interference may be predicted in situations where the client-auditor relationship is framed negatively. Some evidence supportive of an interactive effect was found. By exploring methods to initiate a negative frame for the concurring partner in actual audit practice, audit firms may mitigate the potential for the detrimental impact of output interference in situations where intensive engagement partner-concurring partner interaction is unavoidable.

Implications for practice are suggested based on literature related to output interference and framing. While most auditing research is conducted by academics, it is also possible for firms to conduct research into the effectiveness of various approaches to concurring partner reviews and other audit issues. For example, firms could experiment with the idea of output interference by allowing some concurring partners to be aware of suggested solutions proposed by engagement partners while in other situations the concurring partner would not be aware of such suggested solutions. In this way firms could begin to understand which situations lead to more or less effective concurring partner reviews. Similar research in audit practice is reported in Bedard and Graham (1994). On the other hand, the research questions posed in this paper could also lead to additional research conducted in academic settings. For example, see Johnstone et al. 1997).

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Appendix A Episode Abstracts

Episode Analysis Partner 1: Financial Analysis Task

1. Information Acquisition and Problem Recognition: Balance Sheet and Income Statement
 - 1.1. How is the revenue recognition issue (Navy Contract) represented on the balance sheet?
 - 1.1.1. Reviews contract information in planning memo
 - 1.1.2. No important changes in assets except receivables
 - 1.1.3. Either it is not reflected in balance sheet or it is in receivables.
 - 1.2. Steady profitability
 - 1.3. Inventory is high in relation to COGS
 - 1.4. Receivables are out of line in relation to sales.
 - 1.4.1. We need to look at the revenue recognition policies
 - 1.4.2. Need to evaluate the collectibility of receivables
2. Information Acquisition and Problem Recognition: Ratio Analysis
 - 2.1. Current ratio is improving
 - 2.1.1. Probably due to increase in receivables
 - 2.2. Quick ratio is improving
 - 2.2.1. Probably due to increase in receivables
 - 2.3. Gross margin is steady
 - 2.4. There is a deterioration in receivable turnover
 - 2.4.1. Indicates a change in the relationship between receivables and sales
 - 2.4.2. Appears that some change in the business has occurred
3. Summary of Significant Observations and Issues
 - 3.1. A/Rec. out of line with sales
 - 3.1.1. Appears to be a significant deterioration in collections
 - 3.1.2. Aging has deteriorated but there hasn't been a change in the allowance
 - 3.2. Inventory turnover is a problem
 - 3.3. Accounting for Navy contract is an issue
 - 3.4. Review of Income Statement
 - 3.4.1. Significant decrease in SGA in terms of both historical and projected figures
 - 3.4.2. Interest expense is right on, as expected
 - 3.4.3. Provision for income tax is higher

Episode Analysis Partner 1: Revenue Recognition Task

4. Contract Evaluation
 - 4.1. Need to make sure contract is not in a loss situation
 - 4.1.1. Are historical numbers applicable to the present
 - 4.1.1.1. Need to look at current year costs
 - 4.1.1.2. Can't rely on past costs
 - 4.1.1.3. Need to determine if there are any unusual costs associated with the contract
 - 4.1.1.3.1. If so need to relate them to the contract
 - 4.2. Need information about contract payments
 - 4.2.1. Is there any uncertainty about collectibility
5. Mentions Cost Recovery Method as a Potential Solution
6. Review Underlying Assumptions of Engagement Partner's Approach
 - 6.1. Current approach uses historical costs and assumes a steady state
 - 6.2. An appropriate alternative should consider actual costs to date
 - 6.3. An assurance about contract profitability is needed
 - 6.3.1. Margins should be similar to historical margins
 - 6.4. If the margins are similar then current approach is acceptable
 - 6.5. If margins are not similar, a new method must be adopted.
7. Summary of Alternative Solutions
 - 7.1. Cost recovery method
 - 7.1.1. This method is appropriate if there is uncertainty about contract profitability (error - contract guarantees at least break even)
 - 7.2. Alternative Gross Margin Approach
 - 7.2.1. Base gross margin on actual 1994 costs and projected 1995 costs
 - 7.3. Percentage of Completion Method (using cost-to-cost approach)

Episode Analysis Partner 2: Financial Analysis Task

1. Information Acquisition and Problem Recognition: Balance Sheet
 - 1.1. A lot of cash on hand now and historically
 - 1.2. Receivables have grown from year to year
 - 1.3. Allowance seems reasonable.
 - 1.4. Inventory has gone up
 - 1.5. There is a lot of PPE
 - 1.5.1. It is a capital intensive business
 - 1.5.2. \$27 out of \$38 million of assets is PPE
 - 1.5.3. Need to understand that
 - 1.5.4. But, it seems like a normal progression
 - 1.6. There is a reasonable amount of equity
 - 1.6.1. 30% equity
 - 1.6.2. Equity base is not made up of intangibles
 - 1.6.3. No imminent capital structure problems
 - 1.7. Balance sheet summary
 - 1.7.1. Relatively solid company
 - 1.7.2. They have working capital
 - 1.7.3. They have positive cash
 - 1.7.4. They have positive current ratio
2. Information Acquisition and Problem Recognition: Income Statement and Ratios
 - 2.1. Sales have not changed much
 - 2.1.1. That causes concern, given the increase in receivables
 - 2.1.1.1. Are there collectibility issues?
 - 2.1.2. Inventory didn't go up much
 - 2.1.2.1. There could be valuation issues
 - 2.1.2.2. They lost some on the margin but not too much
 - 2.2. Cut back on R&D expenses compared to projections
 - 2.2.1. It must have occurred during the fourth quarter
 - 2.3. Cut back on SGA also
 - 2.4. Looks like they are curtailing discretionary expenditures toward the end of the year.
 - 2.4.1. That is how they achieved the increase in IBT
 - 2.5. Calculate current and prior effective tax rates
 - 2.5.1. It went down a little from prior years
 - 2.5.1.1. Find out why it went down
 - 2.5.1.2. But, 40% is not too unreasonable.
 - 2.6. Inventory Turnover decreased
 - 2.6.1. Inventory up and sales are stable
 - 2.7. Receivable turnover had a significant decrease
 - 2.7.1. Valuation seems to be a concern
 - 2.8. SGA/Sales has gone down compared to last year
 - 2.9. R&D/Sales is also down from projected, but similar to prior years
 - 2.10. Hard to understand why SGA is down so much
3. Summary of Significant Observations and Issues
 - 3.1. Receivables
 - 3.1.1. Growth of receivables on flat sales
 - 3.1.2. May be a valuation problem
 - 3.2. Inventory
 - 3.2.1. Inventory turnover is down
 - 3.2.2. May be a valuation problem
 - 3.3. Discretionary spending
 - 3.3.1. Find out from management why projected from actual is so far off
 - 3.4. Tax rate is down
 - 3.4.1. 40% is not unusual
 - 3.4.2. but, they might be a bit aggressive on their effective rate this year

Episode Analysis Partner 2: Revenue Recognition Task

4. Contract Evaluation
 - 4.1. How does the average rate (\$1,993) relate to the flight rate (\$2,274) and ferry rate (\$1,423)?
 - 4.1.1. It is not a direct average
 - 4.2. Minimum contract cost is about \$800,000
 - 4.3. Evaluation of rental rate per hour
 - 4.3.1. The rental rate must cover all costs
 - 4.3.2. I don't see a profit element (error)
 - 4.3.3. I don't understand that
 - 4.4. At year end have used 144 hours of the 400 minimum contract hours
 - 4.4.1. That means they are 36% complete
 - 4.5. Gross margin evaluation
 - 4.5.1. They have earned a 42% gross margin on past contracts
 - 4.5.2. Revenue is \$1,993/ hour and standard costs is \$631/hour
 - 4.5.3. So there is a substantial profit in the contract (correction of error)
 - 4.6. Revisits question in Part 4.1. above
 - 4.6.1. The contract is weighted toward flight time since the average price (\$1,993) is closer to the \$2,274
 - 4.7. Revisits question in Part 4.3. above
 - 4.7.1. Does the rental rate per hour cover all costs?
 - 4.7.1.1. Isn't price significantly above costs?
 - 4.7.1.2. So, a loss contract is not an issue
5. Review of Client-Proposed Solution (Straight Line)
 - 5.1. Calculated as \$800,000 divided by 12 months and multiply by 8 months for the current year
 - 5.1.1. Why didn't they just use the rate per hour in the contractual agreement?
6. Generate Alternative Solution Based on Contractual Rates
 - 6.1. 78 flight hours x \$2,274/ hour = \$177,000
 - 6.2. 66 ferry hours x \$1,423/ hour = \$94,000
 - 6.3. That gives \$271,000 of revenue
7. Compare Solution Based on Contractual Rates versus Client Proposed Solution (straight line)
 - 7.1. The client would recognize \$533,000 versus the \$271,000 based on my method
 - 7.2. We need to discuss an adjustment or better understand the \$262,000 difference between the methods
8. Evaluation of Client's Possible Rationale For Use of Straight Line Method
 - 8.1. The Navy will pay for not less than 400 hours
 - 8.2. Would like to see a budget for the hours expected on the project
 - 8.2.1. Was a budget made for the expected contracted hours?
 - 8.2.1.1. If yes, the client proposed straight line method is unacceptable because it does not match revenues and effort
 - 8.2.2. Perhaps there was no budget for expected contract hours made
 - 8.2.2.1. I'm still not sure that the straight line method best matches revenues and costs
 - 8.3. Is this contract like a take-or-pay contract?
 - 8.3.1. If all 400 hours are not used, the Navy still has to pay
 - 8.3.1.1. The minimum 400 hours is probably something anticipated to be easily attained and therefore should not come into play
 - 8.4. How does the ultimate cash payment come into play?
 - 8.4.1. The client gets payment at the end of the contract
 - 8.4.2. When should the difference between the revenue recognized and the cash payment be recognized?
 - 8.4.2.1. Is it more acceptable to recognize it at the end?
 - 8.4.2.2. Or is it more acceptable to amortize it on a continuous basis over the 12 months of the contract?
 - 8.4.2.3. I don't know the answer to that

Episode Analysis Partner 3: Financial Analysis Task

1. Information Acquisition and Problem Recognition: Income Statement
 - 1.1. Net income is high
 - 1.1.1. Risky because of Public Offering
 - 1.1.2. Sales trend stable
 - 1.1.3. COGS under (error)
 - 1.1.4. SGA under
 - 1.1.5. Income taxes OK
 - 1.1.6. Review and understanding of high net income
 - 1.1.6.1. Any staff explanations?
 - 1.1.6.1.1. NO
 - 1.1.6.2. Ratio analysis
 - 1.1.6.2.1. NI/Sales is High
 - 1.1.6.3. Return to Income Statement
 - 1.1.6.3.1. Revenue recognition issues?
 - 1.1.6.3.1.1. Revenues stable
 - 1.1.6.3.1.2. Rev. rec. not problem
 - 1.1.6.3.2. Expenditures
 - 1.1.6.3.2.1. COGS is actually up (Corrects earlier error)
 - 1.1.6.3.2.2. So it is SGA
2. Information Acquisition and Problem Recognition: Balance Sheet
 - 2.1. Cash no problem
 - 2.2. Receivable allowance is low
 - 2.2.1. Allowance not keeping up with receivable growth
 - 2.2.2. Need to review aging
 - 2.2.3. Need to test receivables
 - 2.3. Inventory is high
 - 2.3.1. Inventory turnover has dropped
 - 2.3.2. Obsolescence problems?
 - 2.3.3. May simply be a timing problem.
 - 2.4. Evaluate remaining balance sheet items
 - 2.4.1. Examine restructured debt impact
 - 2.4.2. Examine income tax liability.
3. Summary of Significant Observations and Issues
 - 3.1. Investigate Receivable/Allowance Issue
 - 3.2. Investigate high inventory
 - 3.3. Investigate debt restructuring
 - 3.4. Investigate low SGA expense.

Episode Analysis Partner 3: Revenue Recognition Task

4. Contract Evaluation
 - 4.1. Flight operations and ferry time rates
 - 4.2. Minimum contract usage is 400 hours.
 - 4.3. What is the rental rate per hour?
 - 4.3.1. Rate must cover fixed and variable costs
 - 4.3.1.1. So it is a cost-plus contract.
 - 4.4. Time and usage
 - 4.4.1. Eight out of twelve months have past
 - 4.4.2. 144 out of 400 hours have been used
 - 4.4.2.1. But, they are guaranteed 400 hours
5. Review and Evaluate Engagement Partner Proposed Solution
 - 5.1. Review of numerical calculations and underlying assumptions
 - 5.1.1. use standard costs to determine gross margin
 - 5.1.2. use gross margin to determine revenue (\$263,800)
 - 5.2. Evaluation of proposed solution
 - 5.2.1. Why use standard costs when we could be using actual costs?
6. Review of Client Proposed Solution
 - 6.1. How does the client propose to recognize revenue?
 - 6.1.1. Client proposes straight-line method.
 - 6.1.2. Numerical calculation of straight-line method (\$531,000)
7. Compare Client and Partner Proposed Solutions
 - 7.1. Evaluation of standard cost assumptions of partner's proposed solution.
 - 7.1.1. Why not use actual costs?
 - 7.1.2. Actual costs could exceed revenue.
 - 7.1.2.1. Could be a net realizable value problem
 - 7.1.2.2. But, no indication of that here.
 - 7.2. Evaluation of revenue recognized under client's proposed solution
 - 7.2.1. There may a cost/revenue matching problem
 - 7.2.1.1. May cause overstatement of revenue in current year
8. Attempt to Generate Alternative Solutions
 - 8.1. Percentage of completion is mentioned, but is abandoned without further calculation
 - 8.2. Restates cost concerns
 - 8.3. Restates matching concerns
 - 8.4. Suggests that a compromise between client and partner solutions be adopted

Episode Analysis Partner 4: Financial Analysis Task

1. Information Acquisition and Problem Recognition: Balance Sheet
 - 1.1. Cash is down from prior years and projected
 - 1.2. Receivables are up
 - 1.2.1. See what explanation we have for that
 - 1.3. Allowance is almost flat only slightly higher than last year
 - 1.3.1. Although receivables are up about 30%
 - 1.3.2. Need to investigate why allowance isn't greater
 - 1.4. Inventories are up over prior years and projected
 - 1.5. Other current assets do not seem to be that significant
 - 1.6. PPE up over prior year but below projections
 - 1.6.1. Need to find about additions to PPE
 - 1.6.2. Not too concerned though
 - 1.7. Other assets are close to projections but below last year
 - 1.8. A/Pay. down from prior year but close to projection
 - 1.8.1. Seems to be in line.
 - 1.9. LTD is up
2. Information Acquisition and Problem Recognition: Ratio Analysis
 - 2.1. Current ratio is better than prior year and even with projections
 - 2.1.1. That is good
 - 2.2. Gross margins are down
 - 2.2.1. Have to find out what caused that
 - 2.3. IBT/S is up considerably from projected and last year.
 - 2.3.1. I'd like to find out what caused that
 - 2.4. NI/S is up from last year
 - 2.4.1. I'd like to find out what caused that
 - 2.5. Inventory Turnover is down
 - 2.5.1. Are there issues of slow moving or obsolete inventory.
 - 2.6. Receivable turnover has improved from projection but is down from last year.
 - 2.6.1. Doesn't make sense
 - 2.6.2. Have to look at that in terms of aging.
3. Information Acquisition and Problem Recognition: Income Statement
 - 3.1. Sales are flat with last year and even with projections
 - 3.1.1. Doesn't seem consistent with increase in inventory and receivables
 - 3.1.2. Have to look into that further
 - 3.2. COGS is up
 - 3.2.1. Probably due to inflation
 - 3.2.2. Have to look into that
 - 3.3. SGA is down considerably from projections and down from last year.
 - 3.3.1. Have to find out what caused that
 - 3.4. Interest expense
 - 3.4.1. Can easily investigate that because the rates didn't change much
 - 3.5. NI is up from projected and last year
 - 3.5.1. Probably due to SGA
 - 3.5.2. Have to find out what caused that
4. Summary of significant observations and issues
 - 4.1. Follow up on inventory
 - 4.2. Follow up on receivables and allowance
 - 4.3. Do more probing of SGA
 - 4.4. Do more probing of COGS

Episode Analysis Partner 4: Revenue Recognition Task

5. Contract Evaluation
 - 5.1. Contract total is \$797,000
 - 5.2. Calculate implied gross margin
 - 5.2.1. Average rate (\$1,993/hr.) less standard cost (\$630/hr.) equals a gross margin of about \$1,400.
 - 5.2.2. That is a significantly higher margin than for last year
6. Review of Client-Proposed Solution (Straight Line)
 - 6.1. Determines that straight line implies taking 2/3 of revenue this year.
 - 6.1.1. Could they recognize revenue even if flight time were zero?
 - 6.1.2. Straight line is not acceptable in terms of matching.
7. Generate Alternative Solution Based on Hourly Usage
 - 7.1. Actual hours x average rate (144 hours x \$1,993/hour)
8. Generate Alternative Solution Based on Contractual Rates
 - 8.1. (78 flight hours x \$2,274/ hour) + (66 ferry hours x \$1,423/ hour)
 - 8.2. This method would more closely match revenues and expenses
 - 8.3. But, need to determine if the 78 hour and 66 hour relationship is valid for all 400 hours.
9. Review of Alternative Solutions
 - 9.1. Use of solution based on hourly usage (144 hours x \$1,993) would probably be most appropriate