

INFORMATION TO USERS

This manuscript has been reproduced from the microfilm master. UMI films the text directly from the original or copy submitted. Thus, some thesis and dissertation copies are in typewriter face, while others may be from any type of computer printer.

The quality of this reproduction is dependent upon the quality of the copy submitted. Broken or indistinct print, colored or poor quality illustrations and photographs, print bleedthrough, substandard margins, and improper alignment can adversely affect reproduction.

In the unlikely event that the author did not send UMI a complete manuscript and there are missing pages, these will be noted. Also, if unauthorized copyright material had to be removed, a note will indicate the deletion.

Oversize materials (e.g., maps, drawings, charts) are reproduced by sectioning the original, beginning at the upper left-hand corner and continuing from left to right in equal sections with small overlaps. Each original is also photographed in one exposure and is included in reduced form at the back of the book.

Photographs included in the original manuscript have been reproduced xerographically in this copy. Higher quality 6" x 9" black and white photographic prints are available for any photographs or illustrations appearing in this copy for an additional charge. Contact UMI directly to order.

U·M·I

University Microfilms International
A Bell & Howell Information Company
300 North Zeeb Road, Ann Arbor, MI 48106-1346 USA
313/761-4700 800/521-0600

Order Number 9320707

**External auditor reliance on internal auditors: An examination
of the similarity of auditor judgments**

Moore, Perry Glen, Ph.D.

University of Georgia, 1993

U·M·I
300 N. Zeeb Rd.
Ann Arbor, MI 48106

EXTERNAL AUDITOR RELIANCE ON INTERNAL AUDITORS:
AN EXAMINATION OF THE SIMILARITY OF AUDITOR JUDGMENTS

by

PERRY GLEN MOORE

B.S., David Lipscomb College, 1981

M.A., University of Alabama at Tuscaloosa, 1985

A Dissertation Submitted to the Graduate Faculty
of The University of Georgia in Partial Fulfillment
of the
Requirements for the Degree
DOCTOR OF PHILOSOPHY

ATHENS, GEORGIA

December 1992

EXTERNAL AUDITOR RELIANCE ON INTERNAL AUDITORS:
AN EXAMINATION OF THE SIMILARITY OF AUDITOR JUDGMENTS

by

PERRY GLEN MOORE

Approved:

Carl S. Warren Date 12/17/92
Major Professor

Approved:

Gordhan L. Patel
Graduate Dean

December 18, 1992
Date

PERRY GLEN MOORE

External Auditor Reliance on Internal Auditors: An
Examination of the Similarity of Auditor Judgments
(Under the direction of CARL S. WARREN)

External auditors increasingly rely upon internal auditors in the performance of the external audit. Such reliance provides one means by which an external auditor can reduce fees and thus compete more effectively in the market place. Under Statement on Auditing Standards (SAS) No. 65, The Auditor's Consideration of the Internal Audit Function in an Audit of Financial Statements, external auditors may rely on the work of internal auditors in gaining an understanding of the internal control structure, in assessing control risk, and in substantive testing. Implicit in this reliance is the assumption that internal auditor judgments are similar to those of external auditors.

This study investigated this similarity assumption. Specifically, this study examined whether internal auditors, as a group, made similar judgment(s) as external auditors. These judgments were analyzed within a framework that studied both the context (internal control test vs. substantive test) and the nature (objective vs. subjective) of the audit judgments.

One hundred fifty-one research instruments were distributed to 81 internal and 70 external auditors in two Southeastern cities. 53 (44) internal (external) auditors responded. The results of this study demonstrate that internal auditors and external auditors do not make similar

judgments. Judgments in areas involving substantive tests and subjective assessments were not similar. However, similar judgments were made for judgments relating to internal control tests and objective assessments. In such areas, external auditors may rely on the work of internal auditors. To that extent, this study lends partial support to SAS No. 65. In addition, the study identifies a consistent bias by internal auditors to not place as much reliance on the internal control structure as external auditors do.

INDEX WORDS: Internal Audit, External Audit, Auditor Judgment, Competence, Objectivity, Organizational Independence, SAS No. 65

ACKNOWLEDGEMENTS

While this dissertation only bears my name, it has been influenced by many different people over the past five years.

First, I must thank Dr. Axel Swang, Dr. Earl Dennis, and Dr. Jim Arnett for their subtle, but gentle pressure on me to return to school to complete this Ph.D. program.

Second, I must thank Dr. Mary Doucet. As part of her Auditing II class, we responded to the AICPA exposure draft that eventually led to SAS No. 65. That project serves as the foundation for this dissertation.

Third, I must thank my Chairman, Dr. Carl Warren. His very demanding oversight has contributed greatly to the success of this entire project. His guidance has not only shaped this dissertation but also my entire outlook on auditing.

I must also thank the remaining members of the committee: Dr. Mary Doucet, Dr. James Don Edwards, Dr. Skip Shockley, Dr. Ron Clark, and Dr. Mike Bamber. In particular, I would like to thank Dr. Bamber for his Behavioral Auditing Seminar during Fall, 1990. That class thoroughly prepared me for the Auditing Comprehensive Exam

and opened my eyes to what contemporary auditing research was all about.

My five classmates have also made invaluable contributions over the years: Jim Dodd, Tom Doucet, Venkat Iyer (my officemate), John Pendley, and Suzy Summers. We stuck together and encouraged each other when the going got tough.

On a personal level, I must thank my parents, Glen and Elaine, and my two brothers, Neely and Paul. They have never ceased to support me. In addition, Kim Taylor, Dick Stratton, and Steve and Mary Lynn Zimpfer have been friends above and beyond the call of duty. I extend a heart-felt thank you to those firms, companies, and auditors who participated in this project and also acknowledge financial support from The University of Georgia and David Lipscomb University.

Finally, I thank God for the many talents that he gave me. Without his many blessings, I would not be where I am today:

From everyone who has been given much, much will be demanded; and from the one who has been entrusted with much, much more will be asked.
[Luke 12:48, New International Version]

TABLE OF CONTENTS

| | |
|---|-----|
| ACKNOWLEDGEMENTS | iii |
| LIST OF TABLES | vii |
| CHAPTER I: INTRODUCTION | 1 |
| Today's Auditing Environment | 3 |
| Focus of This Study | 6 |
| Organization of Research | 8 |
| CHAPTER II: THE OVERALL AUDIT PROCESS | 10 |
| Phase I - Plan and Design an Audit Approach | 10 |
| Phase II - Test Controls and Transactions | 12 |
| Phase III - Perform Analytical Procedures and Tests of Details of Balances | 12 |
| Phase IV - Complete the Audit | 13 |
| Impact of the Internal Audit Function on the External Audit | 14 |
| Issues Related to Reliance on the Internal Audit Function | 19 |
| CHAPTER III: LITERATURE REVIEW | 25 |
| Characteristics of Competence, Objectivity, and Quality of Work | 25 |
| Reliance Judgment Process | 27 |
| Other Research Pertinent to This Study | 29 |
| Implications of Prior Research for This Study | 30 |
| Contributions of This Study | 30 |
| CHAPTER IV: RESEARCH DESIGN | 32 |
| Independent Variables | 32 |
| Dependent Variables | 37 |
| Summary | 38 |
| Research Hypotheses | 39 |
| Research Instrument | 39 |
| Statistical Analysis | 51 |
| CHAPTER V: DATA ANALYSIS | 53 |
| Administration of Research Instrument | 53 |
| Demographic Information | 55 |
| Review of Hypotheses and Related Theory | 57 |
| Analysis of Results | 60 |
| Related Analyses | 87 |
| Additional Analyses | 89 |
| Summary | 93 |

| | |
|--|---------|
| CHAPTER VI: CONCLUDING REMARKS | 96 |
| Discussion of Results | 96 |
| Extensions to Prior Research | 100 |
| Limitations of This Study | 102 |
| Implications of This Study | 103 |
| BIBLIOGRAPHY | 107 |
| APPENDIX A | 111 |
| APPENDIX B | 114 |

LIST OF TABLES

| | | |
|-----------|--|----|
| TABLE 1: | Internal Audit Work Which May Be Relied Upon . | 18 |
| TABLE 2: | Relationship of Cases to the Independent Variables | 49 |
| TABLE 3: | Demographic Information | 56 |
| TABLE 4: | Certification and Staffing Levels | 59 |
| TABLE 5: | Cases 1 - 11 Summary Results | 62 |
| TABLE 6: | Case 12 Summary Results | 63 |
| TABLE 7: | Case 2 Results | 64 |
| TABLE 8: | Case 4 Results | 65 |
| TABLE 9: | Case 5 Results | 66 |
| TABLE 10: | Case 1 Results | 68 |
| TABLE 11: | Case 3 Results | 69 |
| TABLE 12: | Case 6 and Case 7 Results | 72 |
| TABLE 13: | Case 6* and Case 7* Results | 73 |
| TABLE 14: | Case 8 Results | 75 |
| TABLE 15: | Case 9 Results | 77 |
| TABLE 16: | Case 10 Results | 80 |
| TABLE 17: | Case 11 Results | 83 |
| TABLE 18: | Case 12 Results | 85 |
| TABLE 19: | Case Significance Summary | 94 |
| TABLE 20: | Case Results by Predicted Differences | 95 |

CHAPTER I
INTRODUCTION

Accounting has been identified as an information system designed to communicate relevant quantitative/qualitative data about economic events affecting a business organization. As such, accounting functions as the language of business. An important component of that language is auditing, which is defined as

. . . the process by which a competent, independent person accumulates and evaluates evidence about quantifiable information related to a specific economic entity for the purpose of determining and reporting on the degree of correspondence between the quantifiable information and established criteria [Arens and Loebbecke 1991, 2].

This definition emphasizes several characteristics of auditing. First, the auditor must be independent. This separation from the auditee lends credibility to the auditor's report.¹ Second, the auditor gathers evidence about the auditee's operations. A report cannot be issued without sufficient evidence supporting the work performed. Third, the auditor must issue an opinion, a disclaimer of opinion, or some other type of report. Generally, auditors

¹This standard of independence is different for internal and external auditors. External auditors must be independent of their clients, while internal auditors must be independent of the activities they audit.

are engaged for specific purposes, and their reports communicate the auditee's success in meeting a set of pre-established criteria. For example, a public accounting firm may issue a standard audit report (opinion) on the fairness of the auditee's financial statements. An internal audit function may release an audit report on the effectiveness of the auditee's internal controls with regard to their compliance with federal and/or state pollution policies. As Chapter II will demonstrate, the objectives of these two groups of auditors are different. External auditors are primarily engaged to express an opinion on the fairness of the financial statements. On the other hand, internal audit departments are established within business entities to assist the company in becoming more efficient and effective.

Business entities request audits for a variety of reasons. Wallace [1985] discusses this demand for auditing. She proposes three different arguments which result in a demand for auditing. First, she recognizes the impact of agency theory on auditing. Under this argument, managers, who act as stewards for absentee owners, contract for outside audits to monitor their activities. Second, Wallace discusses the importance of information to investors. Under this scenario, an audit is demanded by investors because it increases the quality of financial information. Third, she examines the insurance relationship of the audit. Under this hypothesis, managers demand an audit to diversify their risk of expected loss due to litigation. Wallace stresses

that these arguments are not competing hypotheses and that each may have some impact on the demand for auditing.

Within this business environment, auditors may operate in a variety of areas. In particular, this paper focuses on auditing from two different perspectives: external auditing and internal auditing. External auditors are primarily hired to conduct the entity's annual financial statement audit. As a result, their work and association with the client is somewhat limited. On the other hand, internal auditors function within the entity on a year-round basis. This continuous presence enables the internal audit department to focus on different aspects in addition to the traditional financial oriented audit. Internal audits encompass many areas, including operational, EDP, managerial, and compliance. The next section discusses today's auditing environment.

Today's Auditing Environment

Internal auditors and external auditors attempt to operate in an environment which has significantly changed in the past twenty years. Public accounting firms could not advertise or directly solicit clients prior to ethics changes in the late 1970's. Such changes made it easier for the external auditing consumer to compare services across firms. More recent developments allow the external auditor to accept contingent fees, except for engagements where

independence is required (i.e., a financial statement audit).

The Foreign Corrupt Practices Act of 1977 focused management's attention on the entity's internal control structure. This act reinforced management's responsibility for that structure. At that time, many entities without internal auditors created such functions to supplement the control structure and existing internal audit functions were strengthened [Sawyer 1988].

In addition, the recessionary period of the early 1980's and the increased threat of stronger competition for American consumer dollars (i.e., imports) challenged many entities. Such pressures led many businesses to examine their entire cost structure. For example, the success of Japanese automobile imports forced General Motors, Ford, and Chrysler to trim billions of dollars in costs.

One cost closely examined by public accounting firms and their clients was the cost of the external audit. This cost consists of two components: (1) the direct cost of the external audit and (2) the internal costs of supporting the external audit function. Management, the board of directors, and audit committees have increasingly focused on reducing the external auditor's fee [Sawyer 1988; Berry 1983; Macchiaverna 1981]. In some cases, companies have even changed auditors to decrease audit fees [Couch 1988]. This fee pressure has also affected public accounting firms. Simon and Francis [1988] document the existence of price-

discounting on initial engagements by public accounting firms.

The internal costs of supporting the external audit function have also attracted attention [Wallace 1984]. These costs include, among others, the development and maintenance of the client's internal control structure. Statement on Auditing Standards (SAS) No. 55 [1988], *Consideration of the Internal Control Structure in a Financial Statement Audit*, indicates that the internal control structure consists of three elements: the control environment, the accounting system, and control procedures. The internal audit function is specifically identified as a component of the control environment [paragraph 9].

External auditors increasingly rely upon and use the internal audit function in the performance of the external audit. Such reliance on and use of internal auditors provides one means by which an external auditor can reduce fees and thus compete more effectively in the market place. Such use of and reliance on internal auditors led to the revision of SAS No. 9 [1975], *The Effect of an Internal Audit Function on the Scope of the Independent Audit*. SAS No. 9 provided guidance for external auditors planning to rely on the internal audit function. Under SAS No. 9, external auditors relied on the internal audit function primarily in gaining an understanding of the internal control structure and in assessing control risk. External

auditors also used internal auditors for direct assistance under close supervision in a para-professional role.

The Auditing Standards Board (ASB) revised SAS No. 9 in 1991 by issuing SAS No. 65, *The Auditor's Consideration of the Internal Audit Function in an Audit of Financial Statements*. SAS No. 65 expands on SAS No. 9 by permitting additional reliance on internal auditors in performing substantive tests and by encouraging coordination between the two audit functions. The next section discusses the external auditor's concern regarding their reliance on the work of internal auditors.

Focus of This Study

Internal audit judgments made under SAS No. 9 were relatively routine: to assist the external auditor in gaining an understanding of the internal control structure and in assessing control risk. In contrast, under SAS No. 65, internal audit performance of substantive tests generally requires more judgment than the other types of tests. Some of these judgments may be subjective in nature.

This concern with external auditors' reliance on internal auditors' performance of substantive tests was expressed by Robert Roussey, an ASB member, who qualified his assenting vote on SAS No. 65 as follows:

. . . the Statement [SAS No. 65] may be interpreted to mean that the [external] auditor may consider work performed by internal auditors as a replacement for the substantive procedures the [external] auditor should perform to obtain sufficient, competent, evidential matter to support the audit opinion [SAS No. 65, page 14].

While internal audit work may not be substituted for external audit work,² the work of internal auditors is increasingly being relied upon by external auditors [Wallace 1984; Mautz et al. 1984]. Implicit in this reliance is the assumption that internal auditor judgments are similar to those of external auditors. This study will investigate this similarity assumption. The research question examined by this study is the following:

Do internal auditors and external auditors make similar judgments?

To illustrate, an Auditing Procedures Study [American Institute of Certified Public Accountants (AICPA) and Canadian Institute of Chartered Accountants (CICA) 1989] indicates that resolving exceptions from Accounts Receivable confirmations is an activity which may be performed by internal auditors. SAS No. 65 explicitly provides for such internal audit work:

. . . the internal auditors . . . may confirm certain accounts receivable . . . The results of these procedures can provide evidence the [external] auditor may consider in restricting detection risk for the related assertions. Consequently, the [external] auditor may be able to change the timing of the confirmation procedures, the number of accounts receivable to be confirmed . . . [paragraph 17].

A judgment made by an internal auditor in resolving one or more exceptions may not be similar to one made by an external auditor. Such differences and subsequent reliance on that judgment by the external auditor may affect the

²Substitution is explicitly prohibited by SAS No. 9 [paragraph 1] and implied by SAS No. 65.

external auditor's assessments of the likelihood of material misstatements. This, in turn, may affect the ultimate opinion on the financial statements and the effectiveness of the external auditor.

The results of this study demonstrate that internal auditors and external auditors do not make similar judgments. Judgments in areas involving substantive tests and subjective assessments were not similar. However, similar judgments were made for judgments relating to internal control tests and objective assessments. In such areas, external auditors may rely on the work of internal auditors. To that extent, this study lends partial support to SAS No. 65. In addition, the study identifies a consistent bias by internal auditors to not place as much reliance on the internal control structure as external auditors do.

Organization of Research

The remainder of this study is organized as follows. Chapter II provides additional background by discussing the overall audit process. This chapter also explores the impact of the internal audit function on the external audit and issues that are raised by external auditor reliance on internal audit work. Chapter III contains a literature review of past research and potential contributions of this study. Chapter IV discusses the methodology of the study. This chapter identifies possible judgment differences and

how these differences may be examined. A series of hypotheses is developed, and the research instrument is introduced. Chapter V describes the findings of this study. In Chapter VI, a summary of these results is presented, and appropriate limitations of the research are also identified.

CHAPTER II

THE OVERALL AUDIT PROCESS

The external auditor's primary objective is to express an opinion on the fairness of the client's financial statements [American Institute of Certified Public Accountants (AICPA) 1992: AU 110.01]. Over the course of an audit engagement, the external auditor gathers evidence to support the expression of an opinion. Arens and Loebbecke [1991] identify four phases to this opinion formulation process. Chapter II discusses this overall audit process and relates the internal audit function to the external audit process. In addition, the chapter explores some of the issues raised by external auditor reliance on the work of internal auditors.

Phase I - Plan and Design an Audit Approach

In the first phase, the external auditor acquires knowledge about the business to develop an overall audit strategy. As the external auditor develops the engagement strategy, the auditor focuses on the audit objectives and the available evidential matter to achieve these objectives. A detailed audit program is a product of this strategic analysis. The audit program serves as a guide for

conducting the audit and includes specific procedures required for arriving at an opinion.

During this planning phase, the external auditor gains an understanding of the client's internal control structure in order to plan how much reliance may be placed on this structure. In addition, the external auditor also acquires an understanding of the nature of the firm's business activities. Knowledge of these and other areas is an important component of this reliance judgment. Next, the external auditor makes a preliminary assessment of control risk. Materiality levels and acceptable levels for audit risk and inherent risk are also established during Phase I.

In addition, under Statement on Auditing Standards (SAS) No. 65 [1991], *The Auditor's Consideration of the Internal Audit Function in an Audit of Financial Statements*, the external auditor evaluates the internal audit function to determine whether internal audit activities are relevant to the financial statement audit [paragraphs 4-8]. If the activities are relevant, the external auditor evaluates the internal auditors' competence, objectivity, and quality of work under guidelines established by SAS No. 65. A satisfactory evaluation lends support to a closer working relationship. Coordination between the two functions on certain audit activities may also be provided for at this stage.

Phase II - Test Controls and Transactions

If reliance on the internal control structure is planned, the external auditor makes appropriate tests of the controls (e.g., compliance tests) to determine their effectiveness. For example, procedures related to the receipt of Cash on account may be analyzed to determine if they are adequate to ensure that Cash transactions are properly recorded. The external auditor uses such evidence to support the preliminary assessment of control risk. A low assessed level of control risk, combined with evidence that the controls are working effectively, can lead to a decrease in the extent of substantive testing planned.

External auditors use substantive tests to search for errors or irregularities within the account balances. Some of these tests involve evidential procedures such as observation, inquiries, or inspection to determine whether the balances on the balance sheet and income statement are fairly stated in all material respects. While some substantive tests are performed during Phase II, the majority of such tests are performed in Phase III.

Phase III - Perform Analytical Procedures and Tests of Details of Balances

In addition to using substantive tests, external auditors use analytical review procedures to substantiate the account balances. Such tests and procedures provide the external auditor with evidence to support management's representations in the financial statements. Due to their

complex nature, some of these accounts and representations (e.g., Loan Loss Reserves) are more difficult to substantiate than others (e.g., Cash).

Throughout the first three phases, the external auditor tests management's assertions in the financial statements. AU 326 [AICPA 1992] identifies these assertions as (1) existence or occurrence, (2) completeness, (3) rights and obligations, (4) valuation or allocation, and (5) presentation and disclosure. For example, ending Merchandise Inventory is physically observed and counted to verify its existence. Cut-off tests of Accounts Payable are performed after year-end to search for unrecorded liabilities to verify both completeness and rights and obligations. Ideally, the client's internal control structure functions to support and document these assertions by management.

Phase IV - Complete the Audit

The external auditor ties the evidence together in Phase IV. To supplement the testing performed in earlier phases, the auditor searches for, among other things, contingent liabilities and events subsequent to the balance sheet date. The external auditor integrates the evidence gathered, evaluates its content, and makes a judgment regarding the fairness of the financial statements. This judgment ultimately leads to the expression of an opinion.

Thus far, this discussion has focused on external auditor activities. However, external auditors do not operate in a vacuum. Increasingly, more firms are turning to their internal auditors for assistance [Wallace 1984]. The next section of this chapter explores the impact of such assistance.

Impact of the Internal Audit Function on the External Audit

Internal auditing is defined as "an independent appraisal function established within an organization to examine and evaluate its activities as a service to the organization" [*Standards for the Professional Practice of Internal Auditing* 1985, 1]³ (IIA Standards). The role portrayed by the internal audit function in regards to the financial statement audit has changed over the years [AICPA and Canadian Institute of Chartered Accountants (CICA) 1989]. First, as mentioned previously, competitive pressures on external auditors to reduce their fees led to more reliance on the internal audit function. Second, the Foreign Corrupt Practices Act of 1977 emphasized the importance of a strong internal control structure. Third, internal auditing took steps to be recognized as a profession. One of these steps, taken by the Institute of Internal Auditors (IIA), included the issuance of professional standards for internal auditors. SAS No. 65

³SAS No. 65 [footnote 2] notes that this concept of independence is different from that required of external auditors.

recognized these changes, broadened areas for potential reliance, and encouraged more coordination between the two functions.⁴

As discussed earlier, SAS No. 55 [1988], *Consideration of the Internal Control Structure in a Financial Statement Audit*, indicates that the internal audit function is an important aspect of the control environment. Internal auditors operate within this environment to test the effectiveness and efficiency of the accounting system and control procedures. As a part of this work, internal auditors routinely document the function and effectiveness of various controls [Schiff 1990]. This internal audit work contributes to the reliability of the control environment and the financial statements [AICPA and CICA 1989]. SAS No. 65 identifies two other areas where the internal audit function impacts the external audit function: (1) the external auditor may rely on the work of the internal auditor and (2) the external auditor may use the internal auditors to provide direct assistance. The following paragraphs discuss these areas.

Reliance on Internal Auditors

SAS No. 65 [paragraph 12] identifies three areas where an internal auditor's work may affect the nature, timing,

⁴For a summary of the similarities and differences between SAS No. 9, *The Effect of an Internal Audit Function on the Scope of the Independent Audit* [1975], and SAS No. 65, see Appendix A.

and extent of the external audit. These areas include the following types of external audit activities:

1. Procedures the auditor performs when obtaining an understanding of the entity's internal control structure
2. Procedures the auditor performs when assessing risk
3. Substantive procedures the auditor performs

For purposes of this study, these areas will be classified into two categories: work related to the internal control structure and work related to substantive testing. The first two activities are related to the client's internal control structure. Auditors use compliance tests and other related tests to investigate this structure. Reliance on such work was permitted under SAS No. 9. The third activity pertains to the use of different audit procedures which address the "accuracy" of the account balances on the financial statements. Reliance on these types of procedures is now permitted under SAS No. 65.

As discussed previously, the client's internal control structure is the focus of the first two phases of the external audit process. The external auditor assesses control risk during Phase I. The internal auditor's role as part of the control environment, in addition to their own work in evaluating controls, lends support to the external auditor's risk assessment. For example, the internal auditor's examination of an on-line disbursement system may document what controls exist and how effectively these controls are working. External auditors may use this information in assessing risk or in planning their own work.

External auditors primarily perform substantive tests during Phase III to verify the client's account balances. Internal auditors may also perform substantive tests during their audits of various activities within the entity. For example, an internal audit of an entity's distribution system at various warehouse locations may lead the external auditor to reduce the number of planned field visits. An internal audit of receivables may involve confirmation of certain balances. This may lead the external auditors to change the timing of their own confirmations or to reduce the number of receivables to be confirmed.⁵

In deciding whether to rely upon the work of internal auditors, the external auditor assumes that internal auditors will make judgments similar to their own. The similarity of judgments between the two groups increases in importance as more reliance is planned and/or placed on the internal audit function.⁶ Of course, this similarity assumption is applicable only in situations where the external auditor relies on the work of internal auditors. The next section discusses another alternative.

⁵The Auditing Procedures Study [AICPA and CICA 1989] referred to earlier elaborates on additional activities which may be performed by internal auditors. Table 1 contains a list of such activities.

⁶In discussing the relationship between internal auditors and external auditors, SAS No. 65 emphasizes the importance of materiality, the risk of material misstatement, and the degree of subjectivity in support of management's assertions. As these factors increase, ". . . the need for the [external] auditor to perform his or her own tests of the assertions increases. As these factors decrease, the need . . ." for external auditors to perform their own tests and review the internal auditor's work decreases [paragraph 20].

TABLE 1

INTERNAL AUDIT WORK WHICH MAY BE RELIED UPONAudit of revenue cycle and Accounts Receivable

1. Document system of internal control.
2. Perform observation and inquiry tests.
3. Test computer controls.
4. Perform analytic procedures.
5. Select accounts for confirmation, mail confirmations, and resolve exceptions.
6. Sales and sales returns cut-offs.
7. Test accuracy of aging schedule.
8. Review significant related-party transactions.

Audit of Purchases and Inventory control system

1. Document system of internal control.
2. Perform observation and inquiry tests.
3. Test computer controls.
4. Perform analytic procedures.
5. Observe physical inventory.
6. Sales and purchases cut-offs.
7. Search for unrecorded purchases and payables.
8. Clerical testing of inventory records.
9. Price testing.

Audit of multiple subsidiaries

1. Document system of internal control.
2. Test internal control at all subsidiaries and departments on a rotating basis.
3. Test controls at central computer location.
4. Audit other locations.

Using Internal Auditors to Provide Direct Assistance

Both SAS No. 9 and SAS No. 65 support the possibility of internal auditors providing direct assistance to the external audit function. In these situations, the internal auditor works under the direct supervision of the external auditor. In fact, direct assistance is not limited to

internal auditors. Client personnel from a variety of internal departments may assist the external auditor. This assistance does not usually require extensive judgment on the part of the internal auditor and is subject to review as if the work had been performed by a member of the external auditor's staff. In such situations, the internal auditors (or other client personnel) operate as members of the external audit "team". For these reasons, this form of assistance is not of interest to this study.

Issues Related to Reliance on the Internal Audit Function

This paper has discussed the external auditors' concern that internal auditor judgments will not be similar to their own judgments. External auditors investigate the internal audit function's competence, objectivity, and quality of work to alleviate such concerns.⁷ The following sections identify issues related to competence and objectivity.

Competence on Financial Statement Audits

As used in auditing, the word "competence" suggests several different auditor characteristics. AU 210 [AICPA 1992] elaborates on some of these characteristics. First, the auditor is to acquire the appropriate education. At a minimum, this education includes the basic accounting and

⁷As discussed previously in this chapter, under SAS No. 65 the external auditor is required to evaluate each of these components if reliance on the work of internal auditors is planned.

auditing knowledge required for entry into the profession. Second, the auditor is to be properly trained. This training includes knowledge and application of firm procedures, as well as continuing education about new developments. Third, competency includes acquiring professional experience. This "on the job" training enables the auditor to make judgments that increase in difficulty over time. These three characteristics (education, training, and experience) all deal with the knowledge the auditor gains over the years. This knowledge of accounting and auditing and how things work provides the auditor with the competence needed to complete their professional obligations.

In that specific light, external auditors may be considered more competent than internal auditors in performing the financial statement audit. External auditors undergo extensive training over their firm's standard procedures. This training emphasizes the successful completion of the financial statement audit. External auditors also acquire broad experience in financial statement audits through their work for various clients. Such experience emphasizes the importance of firm procedures and professional judgment in completing the audit. Internal auditors may not possess the same degree of competence or knowledge of financial statement audits as external auditors. This is because their education, training, and experience does not necessarily emphasize the financial

statement audit process.⁸ As a result, the potential exists for internal auditors to make different judgments than external auditors.

Objectivity/Organizational Independence

The concept of independence is applied differently by external auditors and internal auditors. Generally accepted auditing standards (GAAS) require the external auditor to be independent in appearance and in fact from their clients [AICPA 1992: AU 220]. The objective of this independence standard is to lend credibility to the external auditor's opinion on the client's financial statements. In contrast, internal auditors are not truly independent of their company due to the nature of their employment contract with management. However, the standards for internal auditors do require independence from the activities they audit [IIA Standards, Standard 100]. Under GAAS, external auditors are reluctant to apply the concept of independence to internal

⁸Internal auditing, as it is commonly practiced today, focuses on a broader picture than just financial audits. This training and experience encompasses various areas, including operational, compliance, and EDP. In Mautz et al. [1984], internal audit directors report that only 32 percent of their function's time is spent on monitoring internal accounting control. A 1983 survey of the internal auditing profession [White and Xander 1984] reports that 46 percent of audit efforts are spent on financial audits.

In addition, Schiff [1990] reports that 64 percent of internal audit directors view their function as a "tour of duty". In that light, some of these internal auditors may not possess much, if any, education, training, or experience in accounting or auditing.

auditors. Instead, GAAS refers to the objectivity of the function.

In Abdel-khalik et al. [1983, 218], ". . . organizational independence of the internal audit staff is a surrogate of its objectivity." Their foundation for this surrogate was SAS No. 9 [1975], which says:

When considering the objectivity of internal auditors, the independent auditor should consider the organizational level to which internal auditors report the results of their work and the organizational level to which they report administratively. This frequently is an indication of the extent of their ability to act independently of the individuals responsible for the functions being audited. . . [paragraph 7].

In contrast, SAS No. 65 requires the external auditor to make inquiries concerning the internal auditors' organizational status within the entity [paragraph 5]. In addition,

When assessing the internal auditors' objectivity, the [external] auditor should obtain or update information from prior years about such factors as:

- o The organizational status of the internal auditor responsible for the internal audit function, including --
 - Whether the internal auditor reports to an officer of sufficient status to ensure broad audit coverage and adequate consideration of, and action on, the findings and recommendations of the internal auditors.
 - Whether the internal auditor has direct access and reports regularly to the board of directors, the audit committee, or the owner-manager.
 - Whether the board of directors, the audit committee, or the owner-manager oversees employment decisions related to the internal auditor. [paragraph 10]

Under SAS No. 65, the external auditor focuses on the organizational status of the internal audit function as an indication of its objectivity. Such focus appears to be a surrogate measure for organizational independence.⁹ The "lack" of organizational independence of internal auditors may lead to a judgment bias in favor of management. Such bias may increase in likelihood for internal audit functions without a direct reporting relationship (either functional or administrative) to the audit committee of the board of directors.

Harrell et al. [1989] examine objectivity by investigating management's ability to bias the objectivity of internal auditors. Their study reports significant results between internal auditors who are IIA members and internal auditors who are not IIA members. This study will attempt to replicate the results of Harrell et al. [1989].

This chapter has summarized the overall audit process, particularly in regards to the external auditor. Internal audit departments may operate within this environment as both a complement and supplement to the external auditor's work. Naturally, external auditors are concerned whether internal audit judgments will be similar to their own. Different judgments may arise because external auditors are more competent in performing the financial statement audit. Differences may also arise because the internal auditors

⁹This study will use the same convention: organizational independence will serve as a surrogate for the objectivity of the internal audit function.

lack organizational independence. Chapter IV will further develop these two areas in the context of this study.

Chapter III discusses the contemporary academic literature, which has focused primarily on SAS No. 9. Implications of that prior body of research on the present study are identified, as are the potential contributions of this study.

CHAPTER III
LITERATURE REVIEW

Much of the contemporary academic research related to internal auditing has focused on the application of Statement on Auditing Standards (SAS) No. 9 [1975], The Effect of an Internal Audit Function on the Scope of the Independent Audit. This research concentrates on the external auditor's initial reliance judgment. Specifically, SAS No. 9 [paragraph 4] identified the internal auditor characteristics of competence, objectivity, and quality of work¹⁰ as the key components of this initial judgment. Early research attempted to identify specific characteristics of competence, objectivity, and quality of work. Subsequent research built upon these early studies to determine which component is considered to be the most important by external auditors in making the initial reliance judgment. The following sections discuss this research and its implications for this study.

Characteristics of Competence, Objectivity, and Quality of Work

SAS No. 9 identified competence, objectivity, and quality of work as components of the external auditor's

¹⁰Synonyms for quality of work in prior studies include the terms "performance" or "work performance".

reliance judgment. A criticism of SAS No. 9 was its failure to identify specific characteristics of these components. Gibbs and Schroeder [1979, 1980] and Clark et al. [1981] were among the first to study these components.

Gibbs and Schroeder [1979] identify factors useful in evaluating the competence of the internal audit function. The existence of a continuing education program, the educational background of the staff, and the quantity and quality of supervision are among the factors mentioned. In contrast to SAS No. 9, SAS No. 65 [1991], *The Auditor's Consideration of the Internal Audit Function in an Audit of Financial Statements*, explicitly identifies each of these items (in addition to several others) as factors in evaluating competence.¹¹

Gibbs and Schroeder [1980] note the failure of SAS No. 9 to provide specific criteria for operationalizing these assessments. They develop three lists of characteristics used in practice to evaluate competence, objectivity, and performance. Several of their characteristics appear on more than one list. For example, the fourth objectivity component, "Top management's support of the work of the internal auditing department," is also the second performance component. Two components appear on all three lists ("Form, content, and nature of internal audit department's reports" and "Internal audit department's degree of

¹¹Appendix A identifies each of the factors which may be used to evaluate competence, objectivity, and quality of work.

compliance with professional standards"). Studies reviewed in the next section discuss the issues associated with the overlap of such components.

Clark *et al.* [1981] focus on objectivity, report similar results to Gibbs and Schroeder [1979, 1980], and observe a marked variability by external auditors in assessing objectivity. Milton [1979] criticizes the approach of Gibbs and Schroeder [1979], in that they consider each factor individually. Milton questions whether this separation is actually performed in practice.

Subsequent research used these lists to determine which factor is most important to the external auditor in determining reliance or internal audit strength. Such studies are discussed in the next section.

Reliance Judgment Process

Schneider [1984] investigates how external auditors evaluate the strength of the internal audit function. He attempts to determine how external auditors consider the three factors together. His results identify work as the most important component, followed by competence and objectivity.

One problem in comparing the results from this study to other studies is that Schneider classifies some of the factors previously identified with work as characteristics of objectivity. For example, "Top management's support of

the internal audit function" is classified under objectivity and not under performance.

Messier and Schneider [1988] present contradictory results to Schneider [1984]. They report competence as most important, followed by objectivity and then work performance. Schneider [1985] focuses on the relationship between reliance judgments and evaluations of internal audit strength. His results show that reliance is occurring. The external auditors view competence and work as almost equally important. Brown [1983] finds two factors to dominate the reliability judgment: independence and satisfaction with the previous years' audit work.

These mixed results [Schneider 1984, 1985; Brown 1983; Messier and Schneider 1988] are not surprising. Brown and Karan [1986] find that their respondents can not easily distinguish between competence and performance in judging reliability. In addition, Messier and Schneider [1988] note that these studies use different constructs to measure each factor and emphasize the apparent overlap in operationalizing each factor. Margheim [1986] determines that external auditors did adjust the nature, timing, and extent of their work due to reliance on internal auditors. A combination of competence/work performance is identified as having a significant impact on this judgment.

A more recent study by Edge and Farley [1991] (an extension of Brown [1983]) examines this issue for external auditors in Australia. While Australian GAAS is somewhat

different, technical competence and due professional care are judged to be the most significant out of a list of five factors.¹² Their external auditors also exhibit a high degree of consensus across subjects.

Abdel-khalik et al. [1983] evaluate the impact of certain internal audit factors (EDP audit techniques and organizational independence) on the external auditor's initial reliance judgment. Their findings identify the organizational independence factor (the level to which internal audit reports) as the most significant. Their study notes that "[t]he importance of the level to which the chief internal auditor reports appears to be the only factor about which a high degree of consistency between subjects was achieved" [p. 226].

Other Research Pertinent to This Study

A study by Harrell et al. [1989] examines management's ability to bias the internal auditor's objectivity. Their results show that internal auditors who are members of the Institute of Internal Auditors (IIA) resist such efforts. However, internal auditors who are not IIA members do not resist such efforts.

¹²The other factors are organizational status, scope of the internal audit function, and satisfaction with previous audit work.

Implications of Prior Research for This Study

Prior studies [Messier and Schneider 1988; Schneider 1985; Margheim 1986; Edge and Farley 1991] identify competence as the most important factor in the initial reliance judgment by external auditors. The lack of such competence, particularly in regards to the financial statement audit, may suggest a misplaced reliance on the internal audit function. Chapter II identified competency, particularly in regards to the financial statement audit, as an important component in the evaluation of the internal audit function.

Prior studies also place an important emphasis on objectivity [Abdel-khalik et al. 1983; Brown 1983]. Abdel-khalik et al. [1983] reports that this factor is the only one which their respondents consistently agreed upon. SAS No. 65 places an increased emphasis on objectivity. Harrell et al. [1989] demonstrates management's ability to bias the objectivity of internal auditors who are not IIA members. Chapter II identified objectivity as another important component in the external auditor's evaluation of the internal audit function. The next section will discuss the contributions of this study.

Contributions of This Study

The expected results should (1) replicate prior research concerning external auditors [Ashton 1974; Ashton and Brown 1980; Brown and Solomon 1990; Burgstahler and

Jiambalvo 1986], (2) replicate prior research concerning internal auditors [Harrell et al. 1989], and (3) develop new research concerning differences between the two groups. No study has examined the experience/expertise issue¹³ for internal auditors. This study will test for differences both across and within professions [and extend Bonner 1990; Bonner and Lewis 1990; Frederick and Libby 1986].

In addition, a finding of similar judgments will support SAS No. 65 and reliance on internal auditors. The existence of different judgments creates concern for the external auditor's reliance on internal auditors, which may impact upon the effectiveness of the audit. Knowledge of such differences may allow external auditors to compensate for these differences. For example, external auditors might assign specific tasks to internal auditors in areas where similar judgments are demonstrated. Alternatively, in those areas where differences are identified, external auditors may provide the internal auditors with additional training or develop decision aids to generate similar judgments.

This chapter summarized the literature, its implications for this study, and the potential contributions of this study. Chapter IV discusses the research design and identifies the variables to be studied. That chapter also develops a series of hypotheses and introduces the research instrument to be used.

¹³See Chapter IV for more discussion of this point.

CHAPTER IV
RESEARCH DESIGN

As this research study has demonstrated, reliance on the work of internal auditors is allowable under generally accepted auditing standards (GAAS) within the context of Statement on Auditing Standards (SAS) No. 65 [1991], The Auditor's Consideration of the Internal Audit Function in an Audit of Financial Statements. Implicit in this reliance judgment is the assumption that internal auditors and external auditors will make similar judgments in given situations. Specifically, this study examines this similarity assumption: whether internal auditors, as a group, make similar judgment(s) as external auditors, as a group.

This chapter discusses the variables used in the study. These variables were derived from prior research of the professional literature (see Chapters II and III for this discussion) and through discussions with external and internal auditors. The chapter also develops a series of hypotheses and introduces the research instrument.

Independent Variables

This study examines differences in auditor judgments within the context of a variety of audit settings. These

judgments differ in three ways. First, different types of auditors are making the judgments (internal vs. external). Second, the judgment context varies (internal control test vs. substantive test). Third, the task is varied from those requiring an objective, knowledge-based measure to those requiring a more subjective assessment. Each of these areas is discussed in the following sections.

Type of Auditor

One objective of this study is to determine whether internal auditors and external auditors make similar judgments across a variety of situations. Several prior studies have reported judgment differences within the public accounting profession [see, for example, Bonner 1990; Bonner and Lewis 1990; Frederick and Libby 1986]. Such studies suggest an experience or expertise effect as one of the primary sources of such differences. As Chapter III indicated, one of the contributions of this study will be to extend this body of research to internal auditing. Currently, no study has examined the experience/expertise issue for internal auditors. Such studies report judgment differences between external auditors at different position levels (*i.e.*, between seniors and managers). These prior studies hypothesize that these differences may arise because of the increased experience (or expertise) gained by managers while on the job.

Judgment Context

External auditors may rely on internal auditors in work related to the internal control structure and in substantive tests. Both contexts may be influenced by various factors which may lead to differences in auditor judgments. Chapters II and III discussed the importance of organizational independence and competence. This chapter will develop their potential to create judgment differences.

Organizational Independence

The effects of organizational independence on differences in judgments may differ for internal control tests and substantive audit tests. Substantive audit procedures primarily focus on account balances, an important concern of management. As a result, management may attempt to exert more pressure on the internal audit function in the performance of such tests. In contrast, internal control tests only indirectly affect the account balances and should not be as subject to management's influence. In addition, the internal audit function is only a small part of the complete internal control structure. This structure, functioning as intended with its checks and balances, makes it more difficult for management to perpetuate systematic fraud. Therefore, the potential for bias may increase as internal auditors are asked to make decisions requiring more "judgment", a condition existing with substantive tests.

Competence with Financial Statement Audits

The effects of competence on differences in judgments may differ for internal control tests and substantive audit tests. Documenting the system of internal control and performing observation and inquiry tests are procedures internal auditors may perform [American Institute of Certified Public Accountants (AICPA) and Canadian Institute of Chartered Accountants (CICA) 1989]. Internal auditors frequently perform such tests as they evaluate the effectiveness and efficiency of the entity's internal control structure [Schiff 1990]. Such knowledge of and experience with the control system may not lead to differences in auditor judgments. In contrast, substantive tests are more closely related to determining the "fairness" of the account balances, a set of procedures normally associated with financial statement audits (and external auditors). Differences in judgment may arise for internal auditors who are asked to complete substantive audit procedures in which they have no education, training, or experience.¹⁴

Nature of Judgment

The nature of the judgment may also lead to differences in auditor judgment. Webster [1984] defines an objective

¹⁴Internal auditors do use substantive tests in the performance of their activities (*i.e.*, confirming Accounts Receivables). Therefore, such differences likely may arise in situations where the internal auditor is unfamiliar with a specific test.

judgment as "expressing or dealing with facts or conditions as perceived without distortion by personal feelings, prejudices, or interpretations." In accounting, objective judgments typically exhibit a normative¹⁵ answer and, in this study, are generally knowledge-based. These judgments are expected to be uniform across auditors. Webster [1984] defines a subjective judgment as "relating to or being experience or knowledge as conditioned by personal mental characteristics or states." In accounting, subjective judgments do not have a clear-cut, uniform answer. These objective and subjective judgments may be influenced by factors related to either organizational independence or competence with financial statement audits.

Organizational Independence

The effects of organizational independence on differences in judgments may differ for objective and subjective judgments. Objective judgments may not be influenced by a "lack" of independence because a departure from the normative response may be more readily observable. As judgments become more subjective, however, the ability of management to influence those judgments increases. In certain situations, management may emphasize the importance a particular response will have on the financial "success" of the entity. Such pressure is more difficult to detect

¹⁵In this study, the normative response is the expected consensus answer, as determined by a group of experts or authoritative standards.

since a uniform response may not exist. In fact, the absence of a clearly defined "response" may prompt management to exert more influence.

Competence with Financial Statement Audits

The effects of competence on differences in judgments may differ for objective and subjective judgments. The failure to acquire the appropriate knowledge of financial statement audits may not lead to differences in objective judgments since a normative, uniform response usually exists. Such objective judgments tend to be routine. However, subjective assessments require more "judgment" on the part of the auditor, "judgment" which is acquired through education, training, and experience (competency). Public accounting firms emphasize the importance of such subjective judgments through the training and experience they provide. This increased competency with financial statement audits on the part of external auditors may lead to different judgments between the two groups.

Dependent Variables

For each case in the research instrument, the dependent variable will be the judgment provided by the research subjects. The judgments are requested in several different formats:

1. Select the "best" response out of n , unordered possibilities ($n = 4$ or 5).
Cases: 1, 2, 3, 4, 5, 10, 11

2. Select a response on a n -point Likert-type (ordered) scale ($n = 3$ or 6).
Cases: 6, 7, 8, 12
3. Select a response on a continuous scale (0-100).
Case: 8
4. Select a "Yes/No" response. Case: 9

Summary

Thus far, this chapter has identified three independent variables:

| | |
|--------------------|--|
| Type of Auditor | Internal vs. External |
| Judgment Context | Internal control test vs. Substantive test |
| Nature of Judgment | Objective, knowledge-based measure vs. Subjective assessment |

As the prior section demonstrated, the form of the dependent variable will vary. Ultimately, the cases ask the participant to select the best response out of n possibilities ($n = 2 - 6$).¹⁶

These variables will be used to test the research question introduced in Chapter I:

Do internal auditors and external auditors make similar judgments?

The next section of Chapter IV identifies the research hypotheses to be examined.

¹⁶Except for Case 8 which requests a response on a continuous scale.

Research Hypotheses

The research question is examined through the following hypotheses, stated in null form:

- H₁: Internal auditors, as a group, will make similar¹⁷ judgments as external auditors, as a group.
- H₂: Internal auditors, as a group, will make similar judgments as external auditors, as a group, regardless of the judgment context (internal control tests vs. substantive tests).
- H₃: Internal auditors, as a group, will make similar judgments as external auditors, as a group, regardless of the nature of the judgment (objective, knowledge-based measure vs. subjective assessment).

H₁ is the primary hypothesis of the study. H₂ and H₃ study potential interactions between the variables. This study's primary focus is exploratory: to determine whether judgment differences exist across the two groups of auditors. The next section discusses the research instrument which will be used to test these hypotheses.

Research Instrument

The research instrument was administered to auditors working in two Southeastern cities. Due to time constraints imposed by the business entities, the research instrument was not personally administered by the investigator. A key contact person was identified at each company or firm. This person was instructed to randomly select the specific

¹⁷In this study, the word "similar" means that the judgments will not be significantly (statistically) different.

individuals (from various position levels) who would respond for their particular entity. These key contacts were provided with an appropriate number of research instruments and a suggested cover letter for them to attach to the individual packets.¹⁸ These key contacts then distributed the packets. A stamped envelope was included in the packets so that each respondent could return their research instruments directly to the investigator. Chapter V provides demographic information about each of these entities.

The population was limited to auditors in (1) companies (internal auditors) and (2) "Big Six" public accounting firms (external auditors). The study did not attempt to match internal auditors and external auditors who audited the same entity. Four different companies were selected in each city, as were three different public accounting firms. Each company or firm was asked to provide between five and fifteen auditors to serve as respondents.

The research instrument was composed of two parts.¹⁹ Part I contained a series of twelve cases set in a generic business environment. These cases were developed from several sources, including an analysis of research instruments used by other academic research, a study of

¹⁸The suggested cover letters are included in Appendix B as part of the research instrument.

¹⁹Appendix B contains the research instrument. Note that the headings listed above each case (i.e., Case 1, Case 2, etc.) were not printed on the actual research instrument given to the respondents.

examples provided in several auditing textbooks and on recent Certified Public Accountant examinations, and an examination of one public accounting firm's audit manual. Each of these cases was pre-tested by a group of auditors working in two Southeastern cities and by a group of the author's colleagues (Ph.D. students) who had prior auditing experience. Part II requested demographic information about the research participants. The following sections discuss the research instrument.

Part I - Research Cases

Case 1

Case 1 presents an audit procedure for Merchandise Inventory, a *substantive test*. The respondent is given a list of four audit objectives and requested to select the one objective best addressed by this procedure. In this case, answer "C" is the normative²⁰ answer for this *objective judgment*.

Case 2

This case also requests an *objective judgment* related to *internal control*. Respondents are given an internal control objective for Sales. Four internal control procedures are then listed, and the subjects are asked to

²⁰See footnote 15 for this study's definition of "normative."

identify the procedure which best satisfies this objective. Answer "C" is the normative response.

Case 3

Case 3 provides an audit procedure for Purchases. At their most basic level, all audit procedures address one or more of management's assertions in the financial statements (see Chapter II). The respondents are requested to select the specific assertion best addressed by this procedure. This *objective* judgment is set in the context of a *substantive test*, and "B" is the normative answer.

Case 4

In Case 4, the respondents are presented with a possible internal control error pertaining to cash disbursements. They are then asked to select the procedure which best prevents this error from occurring. The normative answer to this *internal control* related *objective* judgment is "C".

Case 5

Case 5 is similar to Case 2 in that an *objective* judgment is required in an *internal control* context. In both cases, the subject is presented with a control objective and asked to match the objective to the control procedure which best satisfies it. A control objective

pertaining to Merchandise Inventory is given, and the normative answer is "D".

Cases 6 and 7

Cases 6 and 7 contain a payroll system internal control questionnaire, and the respondent is asked to assess the strength of the control system in preventing and detecting misstatements to the accounts. This case uses an instrument introduced by Ashton [1974] and modified by Ashton and Brown [1980]. In their studies, a one-half fractional replication of a factorial design is used. This means that their respondents answered a lengthy series of cases (32 cases in 1974, and 160 cases in 1980). A complete replication of their design is not practical.

In this study, Question Nos. 3 and 4 are varied across respondents. In the 1974 study (which contains Question Nos. 1 - 6), these two questions explain 25.2 percent and 26.2 percent, respectively, of the variance. In the 1980 study, these same two questions explain 20.2 percent and 26.4 percent, respectively, of the variance. Question No. 4 was set to "No" in Case 6, while Question No. 3 was set to "No" in Case 7. In addition to searching for differences in auditor judgments, these cases will be used to replicate the prior studies.²¹

²¹This replication will be limited simply to determine whether Case 6 (using Question No. 4) produces different judgments than Case 7 (using Question No. 3). Ashton [1974] and Ashton and Brown [1980] imply that Question No. 4 is considered to be the most "important" of the two questions, so

In addition, the original studies ask for a strength assessment on a six-point scale (1 = extremely weak to 6 = adequate to strong). Actual practice does not usually provide for six possible responses; many firms use three categories (e.g., Low, Moderate, or High). This alternative scale was used on some versions of the cases to determine whether the type of response scale used leads to judgment differences. Cases 6 and 7 contain the instrument and scale used in the original studies, while Cases 6* and 7* contain the instrument with the modified response scale. The research instrument was structured so that each respondent received both scales (i.e., either Cases 6 and 7* or Cases 6* and 7). These judgments are *subjective* in an *internal control* context.

Case 8

Case 8 presents a cash disbursement system internal control questionnaire, and the participant is asked to assess the risk of material misstatement. This case uses an instrument developed by Brown and Solomon [1990], who are interested in configural information processing. These authors also use a one-half fractional replication, which means that their respondents answered a series of 16 cases. A complete replication of their design is impractical for this study.

its absence should lead to a lower perception of control strength.

In Brown and Solomon [1990], Question Nos. A - C represent controls not related primarily to the specified objective (checks issued for proper purposes). Question No. D lists three related segregation-of-duties controls. Question No. E, also a segregation-of-duties control, is designed to be a secondary preventive control, while Question No. F serves as a detective control. In Brown and Solomon, Question Nos. B and D-1 are held constant. Question Nos. A, C, D-2, D-3, E, and F are varied, with Question Nos. D-2 and D-3 varying jointly. Their results support configural information processing, as approximately 40 percent of their respondents ". . . attributed above-criterion judgment variance to one or both of the expected interactions (D/E and D/F . . .)" [Brown and Solomon, 33].

The focus of the present study is different and will not attempt to capture the same information. As a result, Brown and Solomon's instrument is used only to identify differences in auditor judgments for one specific control environment. Question Nos. D-2 and D-3 were set to "No". This setting provides a situation where two of the primary controls are not effective (D-2 and D-3) while the secondary preventive (E) and detective (F) controls are working as intended.

In addition, the original study by Brown and Solomon asks for a risk assessment on a 100-point scale (0 = no risk to 100 = maximum risk). As a means of comparing response scales, the alternative scale introduced in Cases 6 and 7

was also used on some versions of this case (Case 8*).²² This *internal control* judgment requires a *subjective* assessment.

Case 9

Case 9 presents two exceptions ("errors") identified during Accounts Receivable confirmation. The respondents are asked whether they will project the "error" to the population. This type of judgment is required during *substantive testing*, and the case draws on a research instrument developed by Burgstahler and Jiambalvo [1986]. As Chapter I demonstrated, resolving such exceptions is an activity which internal auditors may perform.

Case 9-A (Long) serves as the benchmark measurement in Burgstahler and Jiambalvo. Confirmations are designed to identify this type of "error" (a routine pricing error) which should be projected. Burgstahler and Jiambalvo expected all auditors to project this error, and 88 percent do. This judgment is classified as *objective*.

Case 9-B (Long) was developed for this study in the context of the Burgstahler and Jiambalvo instrument. The judgment required in this case is *subjective*, involving a

²²Due to a misleading statement on the actual research instrument for Case 8*, the results from this planned extension cannot be analyzed. Several respondents noted the discrepancy between what the instructions actually asked for and what the explanatory note implied. The data for this case, therefore, was thrown out.

potential irregularity. The auditor must decide who is telling the truth: the client or the customer.

This research study changes the original design of Burgstahler and Jiambalvo. In their study, if the "error" is projected, tolerable error is exceeded for the population, on every case. Cases 9-A (Long) and 9-B (Long) are presented in this format. In an attempt to create an organizational bias, this requirement was not identified in Cases 9-A (Short) and 9-B (Short) (i.e., tolerable error will not be exceeded if the "error" is projected). Respondents received either Cases 9-A (Long) and 9-B (Short) or Cases 9-A (Short) and 9-B (Long).

Case 10

Case 10 investigates judgments in a *substantive test* context regarding multiple location audits, a procedure performed by both groups of auditors [AICPA and CICA 1989]. Recent audit findings for one retail store are presented, and a *subjective* judgment is requested to determine the extent of additional testing planned. The respondents can choose to ignore the results and not extend tests, extend tests at stores already selected for examination, or add additional stores for increased testing.

Case 11

Case 11 is an analytical review procedure. The respondents are presented with a series of account balance

changes (expressed as a percentage) and then asked to select the store to be examined this year. This judgment is *subjective*, as the respondent can select any one of the five stores in a *substantive test* context.

Case 12

This case was suggested by an external auditor during pre-testing of the research instrument. A series of account titles or audit areas (*i.e.*, Cash, Accounts Payable, or Cost of Goods Sold) was listed with corresponding financial statement amounts. These classifications and amounts are based on an example from Zuber et al. [1983]. The respondents were asked to indicate the risk of material misstatement within each account or audit area on a three-point response scale (Low, Moderate, or High). This is a *substantive test* where the judgment is *subjective*.

These cases, set in a generic business environment, request a variety of auditor judgments. Both the nature (objective vs. subjective) and context (internal control tests vs. substantive tests) of the judgments are varied. These cases were selected as a representative sample of the many different types of judgments actually made in practice. Table 2 summarizes these cases on both of these independent variables.

TABLE 2
RELATIONSHIP OF CASES TO THE INDEPENDENT VARIABLES

| <u>Case</u> | <u>Nature</u> | <u>Context</u> | <u>Expected Result</u> |
|-------------|---------------|------------------|------------------------|
| 1 | Objective | Substantive Test | Possible Diff. |
| 2 | Objective | Internal Control | No Differences |
| 3 | Objective | Substantive Test | Possible Diff. |
| 4 | Objective | Internal Control | No Differences |
| 5 | Objective | Internal Control | No Differences |
| 6 | Subjective | Internal Control | Possible Diff. |
| 7 | Subjective | Internal Control | Possible Diff. |
| 8 | Subjective | Internal Control | Possible Diff. |
| 9-A | Objective | Substantive Test | Possible Diff. |
| 9-B | Subjective | Substantive Test | Diff. Expected |
| 10 | Subjective | Substantive Test | Diff. Expected |
| 11 | Subjective | Substantive Test | Diff. Expected |
| 12 | Subjective | Substantive Test | Diff. Expected |

Variations Within the Research Instrument

Several versions of the research instrument were distributed. The order of the questions was randomized²³ (except for the two parts of Case 9, where part A was always presented before part B). These versions were as follows:

| <u>Ver.</u> | <u>Cases</u> |
|-------------|--|
| A | 1-5, 6, 7*, 8, 9-A (Long), 9-B (Short), 10-12 |
| B | 1-5, 6*, 7, 8, 9-A (Long), 9-B (Short), 10-12 |
| C | 1-5, 6, 7*, 8*, 9-A (Long), 9-B (Short), 10-12 |
| D | 1-5, 6*, 7, 8*, 9-A (Long), 9-B (Short), 10-12 |
| E | 1-5, 6, 7*, 8, 9-A (Short), 9-B (Long), 10-12 |
| F | 1-5, 6*, 7, 8, 9-A (Short), 9-B (Long), 10-12 |
| G | 1-5, 6, 7*, 8*, 9-A (Short), 9-B (Long), 10-12 |
| H | 1-5, 6*, 7, 8*, 9-A (Short), 9-B (Long), 10-12 |

²³To achieve complete randomization, the researcher wrote a Pascal program which utilized a random number generator. This program produced a report which indicated the order of the cases for each of the research packets.

Part II - Demographic Information

In Part II, demographic information is obtained from each respondent. Some of the information requested includes the following:

- o Age
- o Certifications
- o Highest degree earned, and year when that degree was earned
- o Office location
- o Job title
- o Years in current position
- o For internal auditors, the number of employees they supervise
- o Years in internal or external auditing
- o Determine whether internal auditors are a member of the Institute of Internal Auditors or whether external auditors are a member of the American Institute of Certified Public Accountants
- o Determine whether the internal auditor ever worked in public accounting, and if so, how long
- o For internal auditors, the years of business experience outside of auditing
- o Determine the functional area(s) where each internal auditor primarily audits (*i.e.*, financial, operational, EDP)
- o Determine length of time since each internal auditor has performed or assisted with a financial audit
- o Determine internal auditor familiarity with different types of audit procedures (*i.e.*, compliance tests, substantive tests, analytical review procedures)

Two summary questions were also asked to measure the perceived interest in and realism of each case. In addition, the researcher will gather additional background information on each company or firm through discussions with appropriate management. For example, the director of the internal audit function at each company will be asked to identify who they normally report to.

Statistical Analysis

The similarity of judgments between internal auditors and external auditors will be examined both within and across professions. These cases request a variety of judgments and rely primarily on categorical data. In several cases (1 - 5, 10, 11), the judgment responses represent unordered alternatives. In other words, the individual responses are not related to each other. In cases 6, 7, 8, and 12, the judgment responses are ordered on an ordinal scale.

Due to the nature of the research instrument, each case will be analyzed separately by two different statistical methods. First, the statistical program SAS contains several procedures which may be useful in analyzing this data.²⁴ One such procedure is Proc NPAR1WAY, which analyzes the relationship between n populations to determine if their means are similar. This procedure utilizes non-parametric tests such as the Wilcoxon Rank-Sum Test (for $n = 2$ samples) to produce a Z-score and the Kruskal-Wallis Test (for $n > 2$ samples) to produce an approximate χ^2 .

Second, a Probit (or Ordered Probit) model will be used.²⁵ Probit uses a qualitative response model to analyze the data in techniques similar to regression analysis. These models can be used to analyze those cases with discrete outcomes, especially those with ordinal dependent

²⁴This discussion draws on material from SAS [1988].

²⁵This discussion draws on material from Greene [1990].

variables. LIMDEP [Greene 1988] is a statistical program that contains procedures which will be used to develop such models.

This chapter has introduced the dependent and independent variables to be used in testing the three hypotheses. In addition, details of the research instrument and its administration were discussed. Chapter V presents results from the analysis of this data.

CHAPTER V

DATA ANALYSIS

This chapter begins with a discussion of the administration of the research instrument. Second, a summary of relevant demographic information is presented for each internal audit "company" and external audit "firm". Next, the hypotheses, developed in Chapter 4, are reviewed. Finally, the results from each case are presented.

Administration of Research Instrument

The research instrument was pre-tested in August, 1992, by a group of auditors working in two Southeastern cities and by a group of the author's colleagues (Ph.D. students) who had prior auditing experience. All individuals were contacted by telephone in advance to solicit their participation. Twelve internal auditors (ten companies²⁶ and two colleagues) and six external auditors (five firm offices²⁷ and one colleague) participated in this process. In addition, two internal auditors and two external auditors

²⁶Of these companies, seven agreed to participate in the final research project.

²⁷Four of these offices agreed to distribute the final research instrument. In addition, two other offices who never returned the pre-test did agree to distribute the final research instrument.

participated in an extensive de-briefing of the research instrument. These and other comments were used to clarify and revise the research instrument. Discussions with one external auditor prompted the addition of a new case (number 12) in the final administration.

The final research instrument was composed of the following²⁸:

- Two consent forms
- Cover letter from researcher
- General instruction sheet
- Twelve cases
- Request for demographic information
- Self-addressed, postage-paid envelope

Each packet included two consent forms (as required by the Institutional Review Board of the University of Georgia). The respondents were asked to sign and return one of these consent forms with their completed research instruments. Both the consent form and the cover letter assured the participant of the confidentiality of their responses. The twelve cases, set in a variety of audit settings, were presented in random order.

One hundred fifty-one research instruments were distributed to 81 internal auditors (working for eight different publicly-held "Companies") and 70 external auditors (working for three different Big Six "Firms"²⁹) in two Southeastern cities. As discussed in Chapter IV, time constraints imposed by the business entities prevented the

²⁸Appendix B contains the research instrument.

²⁹The same Big Six firms were used in both cities.

researcher from personally administrating the instruments. The research packets were delivered to the key contact person³⁰ at each entity between October 5 - 7, 1992.³¹ Packets were distributed to the individual respondents as follows:

| | |
|--------------------|--|
| Week of October 5 | Firms 4 and 6; Companies 3, 4, 5, and 8 |
| Week of October 12 | Firms 1, 2, and 5 |
| Week of October 19 | Firm 3; Companies 1, 6, and 7 |
| Week of October 26 | Company 2 |

Response rates were similar for both groups: 53 (65 percent) of the internal auditors and 44 (63 percent) of the external auditors completed and returned the instruments by an arbitrarily set cut-off date of November 4, 1992³². The next section provides more information about these companies and firms.

Demographic Information

Table 3 presents detailed information about each participating firm or company. Table 3 also presents

³⁰This key contact person participated in the pre-test process for Companies 1, 2, 7, and 8 and Firms 1, 5 and 6. Individually, they were not allowed to participate in the final research administration. The key contact person at Company 3 and Firm 2 did complete and return a final research instrument (they did not participate in the pre-test).

³¹With the exception of Internal Audit Company 1, where the packets were not delivered until October 16, 1992.

³²Three responses were received after this cut-off date. They are not included in any of the analyses which follow.

TABLE 3
DEMOGRAPHIC INFORMATION - INTERNAL AUDITORS

Internal Auditors

| <u>Company</u> | <u>Size of Staff</u> | <u>n</u> | <u>Rcvd (%)</u> | <u>Mean Age</u> | <u>Age Range</u> |
|-------------------|----------------------|----------|----------------------------------|-----------------|------------------|
| 1* | 22 | 15 | 9 (60) | 29.4 | 23-36 |
| 2* | 14 | 10 | 3 (30) | 28.0 | 25-33 |
| 3* | 5 | 4 | 4 (100) | 26.3 | 22-32 |
| 4 | 20 | 10 | 7 (70) | 32.9 | 28-38 |
| 5* | 53 | 11 | 4 (36) | 26.3 | 25-27 |
| 6* | 60 | 11 | 11 (100) | 30.2 | 25-39 |
| 7* | 40 | 15 | 12 (80) | 35.9 | 22-55 |
| 8* | 14 | 5 | 3 (60) | 31.7 | 30-33 |
| Internal Auditors | | 81 | 53 (65) (55 percent of total) | 31.1 | 22-55 |
| External Auditors | | 70 | 44 (63) (45 percent of total) | 27.7 | 23-49 |
| Both Groups | | 151 | 97 (64) | 29.5 | 22-55 |

* Participated in the pre-test of the research instrument.

[Continued on next page]

information concerning the mean and range of the respondent's ages. Table 4 summarizes the extent of their certifications and the job titles of the respondents.

The participating entities were instructed to randomly select individuals from various staff levels. Almost one-half of the respondents (46 percent) were seniors. The other half was split fairly evenly between staff and those above the senior level (supervisors/managers to partners). The next section reviews the hypotheses developed in Chapter IV.

TABLE 3, CONTINUED

DEMOGRAPHIC INFORMATION - INTERNAL AUDITORS

| <u>Company</u> | <u>Business</u> | <u>Number of IIA Members</u> | <u>I/A With Prior E/A Experience</u> | <u>Functionally Report To</u> |
|----------------|-----------------------|----------------------------------|--|-----------------------------------|
| 1 | Retail | 9 | 2 | Audit Comm. |
| 2 | Financial Services | 2 | 1 | Audit Comm. |
| 3 | Utility | 4 | 0 | Audit Comm. |
| 4 | Health Care | 2 | 3 | CEO and Chairman |
| 5 | Food & Bev. | 4 | 3 | Audit Comm. |
| 6 | Paper Prod. | 11 | 6 | Audit Comm. |
| 7 | Utility | 11 | 2 | CEO and Audit Comm. |
| 8 | Utility | 2 | 1 | VP, Finance |

| <u>Company</u> | <u>Board Oversee Hiring</u> | <u>Assets</u> | <u>Sales</u> |
|----------------|---------------------------------|----------------|----------------|
| 1 | Yes | \$ 1.6 billion | \$ 3.4 billion |
| 2 | Yes | 7.8 billion | 1.4 billion |
| 3 | No | 0.4 billion | 0.2 billion |
| 4 | No | 2.4 billion | 2.7 billion |
| 5 | Yes | 10.2 billion | 11.6 billion |
| 6 | Yes | 10.6 billion | 11.5 billion |
| 7 | No | 10.8 billion | 4.3 billion |
| 8 | No | 1.5 billion | 1.0 billion |

[Continued on next page]

Review of Hypotheses and Related Theory

Chapter IV introduced the three independent variables to be studied: type of auditor (internal vs. external), judgment context (internal control test vs. substantive test), and nature of judgment (objective, knowledge-based assessment vs. subjective assessment). H_1 tests whether internal auditors and external auditors make similar judgments. H_2 tests the judgment context across both groups of auditors, and H_3 tests the nature of the judgment across internal and external auditors.

TABLE 3, CONTINUED

DEMOGRAPHIC INFORMATION - EXTERNAL AUDITORS

External Auditors

| <u>Firm</u> | <u>n</u> | <u>Rcvd (%)</u> | <u>Mean Age</u> | <u>Range</u> |
|-------------------|----------|----------------------------------|-----------------|--------------|
| 1* | 11 | 10 (91) | 27.4 | 25-34 |
| 2 | 11 | 8 (73) | 31.5 | 23-49 |
| 3 | 11 | 3 (27) | 28.3 | 24-33 |
| 4* | 15 | 6 (40) | 26.2 | 23-29 |
| 5* | 11 | 10 (91) | 25.8 | 23-31 |
| 6* | 11 | 7 (64) | 27.3 | 24-34 |
| External Auditors | 70 | 44 (63) (45 percent of total) | 27.7 | 23-49 |
| Internal Auditors | 81 | 53 (65) (55 percent of total) | 31.1 | 22-55 |
| Both Groups | 151 | 97 (64) | 29.5 | 22-55 |

Additional Information

| <u>Firm</u> | <u>Size of Professional Staff</u> | <u>Number of AICPA Members</u> |
|-------------|-----------------------------------|--------------------------------|
| 1 | 71 | 1 |
| 2 | 85 | 6 |
| 3 | 166 | 2 |
| 4 | 300 | 3 |
| 5 | 600 | 4 |
| 6 | 709 | 4 |

* Participated in the pre-test of the research instrument.

Differences in judgment may arise for a variety of reasons (see Chapter IV for a more complete discussion). The lack of organizational independence may lead to differences on substantive tests. Such tests primarily focus on account balances, an important concern of management (who may attempt to influence the performance or

TABLE 4

CERTIFICATION AND STAFFING LEVELS

| <u>Auditor</u> | <u>CPA</u> | <u>CIA</u> | <u>Other*</u> | <u>Staff(%)</u> | <u>Sr.(%)</u> | <u>>Sr.(%)</u> |
|----------------|------------|------------|---------------|------------------|----------------|--------------------|
| Internal | 31 | 17 | 8 | 18 (34) | 21 (40) | 14 (26) |
| External | 37 | 0 | 1 | 7 (16) | 24 (55) | 13 (30) |
| Combined | 68 | 17 | 9 | 25 (26) | 45 (46) | 27 (28) |

* Other is comprised of the following:
 Certified Management Accountant (n = 1)
 Certified Information Systems Auditor (n = 3)
 Certified Fraud Examiner (n = 4)
 Fellow, Life Management Institute (n = 1)

Note: 41 (77 percent) of the internal auditors and 37 (84 percent) of the external auditors had earned at least one certification.

analysis of such tests). Organizational independence may also lead to differences for subjective assessments. Unlike objective, knowledge-based assessments where a normative³³ response is observable, subjective assessments do not exhibit a clear-cut response. Such uncertainty increases the likelihood of management's bias. Differences are not expected for objective assessments or for those judgments involving internal control tests.

Differences may also arise because of a lack of competency with financial statement audits. The external auditor's education, training, and experience focuses on the financial statement audit. On the other hand, an internal

³³See footnote 15 for this study's definition of "normative."

auditor's education, training, and experience focuses on a different perspective because of the varied responsibilities and objectives of the internal audit function. Internal auditors may be familiar with internal control tests because they routinely perform such tests of the company's internal control structure. However, substantive tests are more closely related to procedures commonly associated with the financial statement audit process. Differences may arise where internal auditors are asked to complete tasks for which they have no education, training, or experience. In addition, concerns over competency may lead to differences for subjective assessments. Such assessments require more professional "judgment" on the part of the auditor, "judgment" which external auditors acquire through increased education, training, and experience which focuses on the financial statement audit process. As a result, internal auditors may be at a disadvantage during the financial statement audit process because of their lack of this specialized education, training, and experience.

The next section presents an analysis of the results for each case. This discussion is organized by the context and nature of the judgments requested.

Analysis of Results

As discussed in Chapter IV, the dependent variable for most of these cases is discrete. As a result, the responses were analyzed using such non-parametric techniques as the

Wilcoxon Rank-Sum Test ($n = 2$ groups) and the Kruskal-Wallis Test ($n > 2$ groups). The Wilcoxon Rank-Sum Test reports a Z-value and is used to determine whether the means of two groups are similar. This Z-value is the primary test statistic used in the study. The Kruskal-Wallis Test (the primary test statistic for the related analyses at the end of this chapter) reports a χ^2 and is used to determine whether the means of the multiple groups are similar. A potential limitation of this test is that it only identifies whether the means of the multiple groups are similar. The Kruskal-Wallis Test does not identify which group(s) are actually different if the means are dissimilar. Tables 5 and 6 provide an overall summary for the twelve cases.³⁴ For this study, significance was set at a 0.10 level. Six of the twelve cases are significant at this level. These results are presented in the following sections.

Objective Assessments in an Internal Control Test

As discussed earlier, differences are not expected for those judgments which are objective in nature and set in an internal control setting. Cases 2, 4, and 5 were set in this environment. None of these cases produced significant results.

³⁴In addition, each of the twelve cases was analyzed using Probit Analysis. These results are also reflected in Tables 5 and 6. No difference in significance was identified between the results from the Z-values and the t-ratios. As a result, all future references to significance will reflect the Z-values as computed by the Wilcoxon Rank-Sum Test or the χ^2 as computed by the Kruskal-Wallis Test.

TABLE 5

CASES 1 - 11 SUMMARY RESULTS

| <u>Case</u> | <u>Rcvd</u> | <u>Used</u> | <u>Z Value</u> ¹ | <u>Prob(Z)</u> | <u>t-Ratio</u> ² | <u>Prob(t)</u> |
|-------------|-------------|-------------|-----------------------------|----------------|-----------------------------|----------------|
| 1 | 96 | 96 | 1.4888 | 0.1366 | 1.498 | 0.13406 |
| 2 | 97 | 97 | -0.3659 | 0.7145 | -0.372 | 0.70968 |
| 3 | 97 | 97 | -1.9181 | 0.0551 * | -1.935 | 0.05295 |
| 4 | 97 | 97 | -1.4491 | 0.1473 | -1.457 | 0.14524 |
| 5 | 97 | 97 | 1.2138 | 0.2248 | 1.220 | 0.22237 |
| 6 | 47 | 47 | 2.9290 | 0.0034 ** | 2.983 | 0.00286 |
| 6* | 49 | 48 | 2.0009 | 0.0454 ** | 2.046 | 0.04075 |
| 7 | 49 | 49 | 1.2622 | 0.2069 | 1.320 | 0.18677 |
| 7* | 48 | 48 | 1.2623 | 0.2068 | 1.294 | 0.19554 |
| 8 | 50 | 50 | F=6.654 (df=1) | 0.0130 ** | -2.579 | 0.01301 |
| 9-A(Long) | 47 | 46 | -1.3449 | 0.1786 | -1.369 | 0.17106 |
| 9-A(Short) | 50 | 50 | -1.5025 | 0.1330 | -1.529 | 0.12631 |
| 9-B(Long) | 50 | 50 | 1.8895 | 0.0588 * | 1.913 | 0.05570 |
| 9-B(Short) | 47 | 46 | 0.7756 | 0.4380 | 0.796 | 0.42585 |
| 10 | 97 | 97 | 4.1278 | 0.0000 ** | 4.247 | 0.00002 |
| 11 | 97 | 97 | 0.6750 | 0.4997 | 0.530 | 0.59637 |

* Significant at 0.10

** Significant at 0.05

Note: The missing response on Cases 6* and 9-A (Long)/9-B (Short) was due to an ambiguous answer. On Cases 1 and 6, one response is missing because it was not included in that specific research packet (by accident).

¹As computed by the Wilcoxon Rank-Sum Test.

²As computed by Probit Analysis.

Case 2

In this case, the respondents were given a control objective pertaining to Sales and asked to identify the procedure best capable to achieve that objective. Almost one-third of both groups of auditors missed the normative response (see Table 7), but the difference between the two was not significant ($Z = -0.3659$, $\text{Prob}(Z) = 0.7145$).

TABLE 6

CASE 12 SUMMARY RESULTS

| <u>Category</u> | <u>Rcvd</u> | <u>Used</u> | <u>Z Value¹</u> | <u>Prob(Z)</u> | <u>t-Ratio²</u> | <u>Prob(t)</u> |
|-----------------------------------|-------------|-------------|----------------------------|----------------|----------------------------|----------------|
| Cash | 97 | 95 | -3.3267 | 0.0009 ** | -3.358 | 0.00079 |
| Accounts Rec. | 97 | 94 | -1.0933 | 0.2743 | -1.112 | 0.26610 |
| Inventory | 97 | 96 | -2.7395 | 0.0062 ** | -2.690 | 0.00715 |
| Property, Plant, and Equipment | 97 | 96 | -4.0310 | 0.0001 ** | -4.125 | 0.00004 |
| Other Assets | 97 | 96 | -1.8774 | 0.0605 * | -1.894 | 0.05822 |
| Current Portion of L-T Debt | 97 | 96 | -1.5561 | 0.1197 | -1.580 | 0.11399 |
| Accounts Payable | 97 | 96 | -0.8242 | 0.4099 | -0.783 | 0.43352 |
| Accrued Liab. | 97 | 96 | -0.5712 | 0.5679 | -0.471 | 0.63773 |
| Long-Term Debt | 97 | 96 | -0.9827 | 0.3257 | -1.045 | 0.29582 |
| Def. Income Taxes | 97 | 96 | 2.5479 | 0.0108 ** | 2.599 | 0.00935 |
| Common Stock | 97 | 96 | -2.5789 | 0.0099 ** | -2.448 | 0.01436 |
| Retained Earnings | 97 | 96 | -3.5005 | 0.0005 ** | -3.569 | 0.00036 |
| Sales | 97 | 96 | -1.1848 | 0.2361 | -1.063 | 0.28759 |
| Cost of Goods Sold | 97 | 96 | -2.4262 | 0.0153 ** | -2.409 | 0.01600 |
| Selling & Admin. Expenses | 97 | 96 | -1.5959 | 0.1105 | -1.633 | 0.10241 |
| Interest Expense | 97 | 96 | 0.1797 | 0.8574 | 0.186 | 0.85266 |
| Provision for Income Taxes | 97 | 96 | 3.7824 | 0.0002 ** | 3.804 | 0.00014 |

* Significant at 0.10

** Significant at 0.05

Note: One individual did not respond to any of the categories on the case. For Cash ($n = 1$) and Accounts Receivable ($n = 2$), the individuals just left that item blank.

¹As computed by the Wilcoxon Rank-Sum Test.

²As computed by Probit Analysis.

Case 4

This case asked the participants to assume that a specific control error related to cash disbursements had occurred. Next, they were instructed to select the procedure best able to prevent such an error from occurring. Over 85 percent of both auditors selected the normative response (see Table 8). Both groups responded similarly, and the difference between them was not significant ($Z = -1.4491$, $\text{Prob}(Z) = 0.1473$).

TABLE 7

CASE 2 RESULTS

The following control objective is one part of the internal control structure pertaining to sales:

Customer orders are properly authorized prior to shipment.

Based on your experience, which of the following procedures is primarily directed at achieving this objective?

[Frequency of responses is indicated on the line: Int/Ext]

- 1/ 1 a. Sales invoices are pre-numbered and properly accounted for.
- 16/11 b. Appropriate segregation of duties exists between the sales department and the credit department.
- 33/29 c. Sales are initiated through pre-numbered sales orders which are completed by reference to pre-approved customer lists, credit files, and price lists.
- Normative Answer**
- 3/ 3 d. Billings are independently checked for accuracy and agreement with approved price lists, discounts, written quotes, etc.

Overall Responses

| Judgment | Int. (%) | Ext. (%) | Combined (%) |
|-------------|----------------|----------------|----------------|
| Correct (c) | 33 (62) | 29 (66) | 62 (64) |
| Wrong | <u>20 (38)</u> | <u>15 (34)</u> | <u>35 (36)</u> |
| | 53 | 44 | 97 |

$$Z = -0.3659 \quad \text{Prob}(Z) = 0.7145$$

Case 5

Case 5 was structured similarly to Case 2, in that a control objective was given, and the respondents were asked to select the procedure primarily directed at achieving such

TABLE 8

CASE 4 RESULTS

Assume the following control error has occurred:

Duplicate payments were made for the same invoice.

Based on your experience, this error is **best** prevented by which of the following procedures?

[Frequency of responses is indicated on the line: Int/Ext]

- 2/ 0 a. Careful examination of the supporting documents is made by the check signer.
- 1/ 2 b. A proper separation of duties exists between the accounts payable function and the person responsible for signing the checks.
- 46/42 c. Supporting documentation is canceled with a "Paid" stamp when checks are written.
- 4/ 0 d. Accurate and prompt recording is required for all invoices.

Normative Answer

Overall Responses

| <u>Judgment</u> | <u>Int. (%)</u> | <u>Ext. (%)</u> | <u>Combined (%)</u> |
|-----------------|-------------------|-------------------|-----------------------|
| Correct (c) | 46 (87) | 42 (95) | 88 (91) |
| Wrong | <u>7 (13)</u> | <u>2 (5)</u> | <u>9 (9)</u> |
| | 53 | 44 | 97 |

$Z = -1.4491$ $Prob(Z) = 0.1473$

an objective. However, this case dealt with Merchandise Inventory. Table 9 shows that approximately three-quarters of all respondents identified the normative procedure in results that were not significant ($Z = 1.2138$, $Prob(Z) = 0.2248$).

TABLE 9

CASE 5 RESULTS

The following is an internal control objective for merchandise inventory:

Physical loss of inventory is prevented.

Based on your experience, which of the following procedures is **primarily** directed at achieving this objective?

[Frequency of responses is indicated on the line: Int/Ext]

- 9/12 a. Periodic comparisons of actual quantities to perpetual records for inventories is made.
- 0/ 0 b. The carrying value of inventory is periodically compared to net realizable value, and adjustments are recorded if necessary.
- 0/ 0 c. Inventory accounts are adjusted for results of periodic physical counts.
- 44/32 d. Materials leaving premises are checked for appropriate shipping documents.
- Normative Answer**

Overall Responses

| <u>Judgment</u> | <u>Int. (%)</u> | <u>Ext. (%)</u> | <u>Combined (%)</u> |
|-----------------|-------------------|-------------------|-----------------------|
| Correct (d) | 44 (83) | 32 (73) | 76 (78) |
| Wrong | <u>9 (17)</u> | <u>12 (27)</u> | <u>21 (22)</u> |
| | 53 | 44 | 97 |

$$Z = 1.2138 \quad \text{Prob}(Z) = 0.2248$$

None of these cases (2, 4, and 5) produced significant differences across the two groups. However, no differences were expected since these cases were set in an internal control setting while requesting an objective assessment.

Generally, a large majority of both groups of auditors selected the normative response, except for Case 2, where one-third of each group selected an incorrect response. The next section discusses those cases with objective assessments in a substantive test situation.

Objective Assessments in a Substantive Test

As discussed in the prior section, objective assessments are not expected to lead to differences in auditor judgments. However, substantive tests may lead to differences across the two groups, in contrast with internal control tests. Three cases were set in this environment: Cases 1, 3, and 9.³⁵ Case 3 produces significant results.

Case 1

Case 1 presented the respondents with an audit program step for Merchandise Inventory. Four possible audit objectives were given, and the respondents were asked to identify the objective best addressed by the procedure. This case (see Table 10) was not significant ($Z = 1.4888$, $\text{Prob}(Z) = 0.1366$). While a majority of both groups selected the normative response, a large percentage of both groups missed the case.

³⁵Case 9-A was set in this environment, but its results will be discussed in the subjective assessment and substantive test section, along with the results from Case 9-B.

TABLE 10

CASE 1 RESULTS

The following procedure is one step of the audit program for a financial statement audit of merchandise inventory:

Trace test counts of the physical inventory to the client's inventory compilation, and trace totals to the trial balance.

Based on your experience, this procedure **best** addresses which of the following audit objectives?

[Frequency of responses is indicated on the line: Int/Ext]

- 17/20 a. Inventories included in the balance sheet physically exist.
- 0/ 1 b. Inventories exclude items billed to customers or owned by others.
- 35/23 c. Inventory listings are accurately compiled and the totals are properly included in the inventory accounts.
Normative Answer
- 0/ 0 d. Slow-moving, excess, defective, and obsolete items included in inventories are properly identified.

Overall Responses

| <u>Judgment</u> | <u>Int. (%)</u> | <u>Ext. (%)</u> | <u>Combined (%)</u> |
|-----------------|-------------------|-------------------|-----------------------|
| Correct (c) | 35 (67) | 23 (52) | 58 (60) |
| Wrong | <u>17 (33)</u> | <u>21 (48)</u> | <u>38 (40)</u> |
| | 52 | 44 | 96 |

$$Z = 1.4888 \quad \text{Prob}(Z) = 0.1366$$

Case 3

Case 3 listed management's five assertions. The participants were instructed to identify the assertion best addressed by a given control procedure for Purchases. As

TABLE 11

CASE 3 RESULTS

The following is a control procedure for purchases:

Purchase orders, receiving reports, and vouchers are pre-numbered and periodically accounted for.

Based on your experience, this procedure primarily addresses which of the following management assertions?

[Frequency of responses is indicated on the line: Int/Ext]

- 15/ 8 a. Existence or occurrence
34/36 b. Completeness [**Normative Answer**]
4/ 0 c. Rights and obligations
0/ 0 d. Valuation or allocation
0/ 0 e. Presentation and disclosure

Overall Responses

| <u>Judgment</u> | <u>Int. (%)</u> | <u>Ext. (%)</u> | <u>Combined (%)</u> |
|-----------------|------------------|------------------|----------------------|
| Correct (b) | 34 (64) | 36 (82) | 70 (72) |
| Wrong | <u>19 (36)</u> | <u>8 (18)</u> | <u>27 (28)</u> |
| | 53 | 44 | 97 |

$$Z = -1.9181 \quad \text{Prob}(Z) = 0.0551$$

Table 11 demonstrates, a majority of the respondents selected the "Completeness" assertion, consistent with the normative answer. However, external auditors selected this response more frequently, in a significant difference from the internal auditors ($Z = -1.9181$, $\text{Prob}(Z) = 0.0551$). Many of the external auditor's procedures are assertion based. Therefore, these results may suggest an increased competence

with the specific assertions and procedures used to test those assertions.

In Cases 1 and 3, one-third of the internal auditors missed the normative response. For Case 3, especially, such results may suggest a lack of competency with the financial statement audit process, particularly in regards to assertion-based testing. The next section presents results from cases which request a subjective assessment in an internal control test.

Subjective Assessments in an Internal Control Test

As discussed previously, the subjective nature of these assessments may lead to differences in auditor judgments. However, the context of the judgments is not expected to produce differences due to the internal auditor's knowledge of and work with the entity's internal control structure. Cases 6, 7, and 8 are set in this environment, and two of the three cases (6 and 8) reflect significant differences between the two groups of auditors.

Cases 6 and 7

As discussed in Chapter IV, these cases replicate and extend prior work by Ashton [1974] and Ashton and Brown [1980]. The respondents were given an internal control questionnaire for payroll. In these prior studies, Question No. 4 (which is set to "No" in Case 6) explained 26.2 (26.4) percent of the variance in the 1974 (1980) studies.

Correspondingly, Question No. 3 (which is set to "No" in Case 7) explained 25.2 (20.2) percent of the variance in the 1974 (1980) studies. Answers to all other questions were set to "Yes."

Ashton [1974] and Ashton and Brown [1980] use a six-point response scale (Cases 6 and 7). Actual practice does not usually provide for six possible responses. An alternative, three-point response scale was developed (Cases 6* and 7*) to determine whether the type of response scale used leads to judgment differences. Therefore, two different versions of each case were distributed so that each respondent received both response scales³⁶: one on Case 6 and the other on Case 7. The results from the original response scale ($n = 6$ possibilities) are presented in Table 12, while the results from the alternative response scale ($n = 3$ possibilities) are reflected in Table 13.

Both versions of Case 6 produced significant differences (Case 6: $Z = 2.929$, $\text{Prob}(Z) = 0.0034$ and Case 6*: $Z = 2.0009$, $\text{Prob}(Z) = 0.0454$). Neither version of Case 7 yielded significant results (Case 7: $Z = 1.2622$, $\text{Prob}(Z) = 0.2069$ and Case 7*: $Z = 1.2623$, $\text{Prob}(Z) = 0.2068$). The absence of Question No. 4 (Case 6) led to differences in judgment, while the absence of Question No. 3 (Case 7) did not.

³⁶With one exception: by mistake, one participant was sent both cases on the same response scale (Cases 6* and 7*).

TABLE 12

CASE 6 AND CASE 7 RESULTS

You are auditing the internal controls of the payroll system. Following is a portion of the internal control questionnaire completed by an auditor on your staff:

. . . (See Appendix B for Questions 1 and 2)

3. Are the tasks of both payroll preparation and payment of employees adequately separated from the task of payroll bank account reconciliation? **Yes:** Case 6 **No:** Case 7

4. Are the tasks of both timekeeping and payment of employees adequately separated from the task of payroll preparation? **Yes:** Case 7 **No:** Case 6

. . . (See Appendix B for Questions 5 - 8)

Based on this internal control questionnaire, what is your perception of the strength of this system in preventing and detecting misstatements to the accounts?

| Judgment | Case 6 | | Case 7 | |
|-------------------------|------------------|-----------------|------------------|-----------------|
| | Int (%) | Ext (%) | Int (%) | Ext (%) |
| 1) Extremely Weak | 0 (0) | 0 (0) | 0 (0) | 0 (0) |
| 2) Very Weak | 3 (12) | 0 (0) | 3 (11) | 1 (5) |
| 3) Substantial Weakness | 5 (19) | 2 (10) | 8 (30) | 6 (27) |
| 4) Some Weakness | 10 (38) | 4 (19) | 6 (22) | 5 (23) |
| 5) Not Quite Adequate | 6 (23) | 8 (38) | 9 (33) | 4 (18) |
| 6) Adequate to Strong | <u>2 (8)</u> | <u>7 (33)</u> | <u>1 (4)</u> | <u>6 (27)</u> |
| | 26 | 21 | 27 | 22 |
| | Mean 3.96 | Mean 4.95 | Mean 3.89 | Mean 4.36 |
| | Z = 2.9290 | | Z = 1.2622 | |
| | Prob(Z) = 0.0034 | | Prob(Z) = 0.2069 | |

In other words, external auditors perceived the system to be stronger (less risk) across both cases and response scales, with significant differences for Case 6. External auditors placed more reliance on the system in preventing and detecting misstatements. One reason for these findings may be management's orientation to compliance with control directives in the internal audit companies. Internal

TABLE 13

CASE 6* AND CASE 7* RESULTS

You are auditing the internal controls of the payroll system. Following is a portion of the internal control questionnaire completed by an auditor on your staff:

. . . (See Appendix B for Questions 1 and 2)

3. Are the tasks of both payroll preparation and payment of employees adequately separated from the task of payroll bank account reconciliation? **Yes:** Case 6
No: Case 7

4. Are the tasks of both timekeeping and payment of employees adequately separated from the task of payroll preparation? **Yes:** Case 7
No: Case 6

. . . (See Appendix B for Questions 5 - 8)

Based on this internal control questionnaire, what is your perception of the strength of this system in preventing and detecting misstatements to the accounts?

| Judgment | Case 6* | | Case 7* | |
|----------|------------------|---------------|------------------|----------------|
| | Int (%) | Ext (%) | Int (%) | Ext (%) |
| Low | 7 (27) | 2 (9) | 9 (35) | 6 (27) |
| Moderate | 15 (58) | 12 (55) | 11 (42) | 6 (27) |
| High | <u>4 (15)</u> | <u>8 (36)</u> | <u>6 (23)</u> | <u>10 (45)</u> |
| | 26 | 22 | 26 | 22 |
| | Mean 1.88 | Mean 2.27 | Mean 1.88 | Mean 2.18 |
| | Z = 2.0009 | | Z = 1.2623 | |
| | Prob(Z) = 0.0454 | | Prob(Z) = 0.2068 | |

auditors may be less willing to accept risk in such environments.

Case 8

Case 8 presented the respondents with an internal control questionnaire for cash disbursements developed by Brown and Solomon [1990]. Due to the nature of their

experiment (configural information processing), the results from the two studies cannot be directly compared.³⁷

The dependent variable in Case 8 was continuous (on a 0-100 scale); therefore, it was the only one which could be examined using normal regression analysis. Table 14 presents the results which are significant ($F = 6.654$ ($df=1$), $\text{Prob}(F) = 0.0130$). For internal auditors, the distribution is fairly consistent across all ranges; however, for external auditors, the distribution is focused on the lower end of the scale. As the regression equation indicates, internal auditors perceived a much higher level of risk.³⁸

The results from cases 6 and 8 suggest that external auditors attach more reliance to controls than do the internal auditors. One reason for the internal auditor's reluctance to attach more strength to the controls may be their preoccupation with compliance on the controls. Alternatively, another explanation may be that the internal auditors are generally more restrained in their risk assessments and strength perceptions. Internal auditors, realizing the potential for independence concerns, may over-compensate in such assessments. Correspondingly, internal auditors may also recognize their lack of competence in a

³⁷See Chapter IV for a complete discussion of the internal control questionnaire.

³⁸A supplementary analysis was also performed using the intervals listed in Table 14 (e.g., 0-9, 10-19, etc.). Such results are also significant ($Z = -2.5728$, $\text{Prob}(Z) = 0.0101$), as computed by the Wilcoxon Rank-Sum Test.

TABLE 14

CASE 8 RESULTS

Following is a portion of a cash disbursement internal control questionnaire completed by an auditor on your staff:

. . . (See Appendix B for Questions A - C)

D. Are primary check signers independent of:

- | | |
|---|-----|
| 1. Purchasing and those requesting expenditures? | Yes |
| 2. Persons approving vouchers? | No |
| 3. Persons processing and recording cash disbursements? | No |

. . . (See Appendix B for Questions E and F)

Given the controls as represented above, assess the RISK that cash disbursements could be materially misstated AS A RESULT OF checks being written and/or disbursed for improper (unauthorized and/or invalid) purposes.

| | <u>Interval</u> | <u>Internal</u> | <u>External</u> | <u>Combined</u> |
|-------------|-----------------|-----------------|-----------------|-----------------|
| No Risk | 0 - 9 | 0 | 0 | 0 |
| | 10 - 19 | 0 | 5 | 5 |
| | 20 - 29 | 5 | 4 | 9 |
| | 30 - 39 | 3 | 5 | 8 |
| | 40 - 49 | 5 | 1 | 6 |
| | 50 - 59 | 2 | 3 | 5 |
| | 60 - 69 | 2 | 1 | 3 |
| | 70 - 79 | 4 | 1 | 5 |
| | 80 - 89 | 5 | 2 | 7 |
| Max. Risk | 90 - 100 | <u>2</u> | <u>0</u> | <u>2</u> |
| | | 28 | 22 | 50 |
| Mean Values | | 52.78 | 35.54 | 45.2 |

$R^2 = 0.1217$ Adjusted $R^2 = 0.1034$

| | <u>Parameter Estimates</u> | <u>Standard Error</u> | <u>t-value</u> | <u>Prob(t)</u> |
|-----------|----------------------------|-----------------------|----------------|----------------|
| Intercept | 52.7857 | 4.433 | 11.906 | 0.0001 |
| Auditor | -17.2403 | 6.684 | -2.579 | 0.0130 |

$F = 6.654$ (df=1) Prob(F) = 0.0130

certain area and select the more conservative response. In any event, external auditors and internal auditors made different judgments on these two cases. The next section

discusses those cases set in a substantive test environment while also requesting a subjective assessment.

Subjective Assessments in a Substantive Test

Both subjective assessments and substantive tests may lead to differences in auditor judgments for reasons which were discussed earlier. Cases 9, 10, 11, and 12 are set in this environment. Significant differences were expected for each of these cases. Cases 9, 10, and 12 identified significant results.

Case 9

This case was a partial replication and extension of Burgstahler and Jiambalvo (B&J) [1986]. Respondents were presented with two exceptions from the confirmation of Accounts Receivable and asked whether they would project or isolate that exception. One exception involved a routine pricing error, and the other involved a potential irregularity.

Cases 9-A (Long) and 9-B (Long) were presented in the B&J context, where projection implied more audit work (projecting the exception led to estimated error exceeding tolerable error). This condition was not stated or implied in Cases 9-A (Short) and 9-B (Short). In addition, the two types of cases were mixed, with respondents receiving either Cases 9-A (Long) and 9-B (Short) or Cases 9-A (Short) and 9-B (Long). A summary of Case 9 is presented in Table 15.

TABLE 15

CASE 9 RESULTS

Case 9-A: Routine Pricing Error

Account No. 8227 was overstated by \$1,456.72 due to a pricing error. The client apparently charged the price for an item located just below the correct item in the price book. The error was not detected by the normal review of invoice accuracy.

[Extra Paragraph] If the error is projected to the population by multiplying by 20, the estimated error (in conjunction with other sample errors, and allowing for sampling risk) will exceed tolerable error. If the error is "isolated" and not projected, the estimated error (allowing for sampling risk) will not exceed tolerable error.

| | Case 9-A (Long) | | Case 9-A (Short) | | Combined Totals | | |
|-------|------------------|----------------|------------------|---------------|-----------------|----------------|----------------|
| | With Extra Para. | | Without Extra P. | | Int(%) | Ext(%) | Both(%) |
| | Int(%) | Ext(%) | Int(%) | Ext(%) | Int(%) | Ext(%) | Both(%) |
| Proj. | 7 (28) | 10 (48) | 13 (48) | 16 (70) | 20 (38) | 26 (59) | 46 (48) |
| Isol. | <u>18 (72)</u> | <u>11 (52)</u> | <u>14 (52)</u> | <u>7 (30)</u> | <u>32 (62)</u> | <u>18 (41)</u> | <u>50 (52)</u> |
| | 25 | 21 | 27 | 23 | 52 | 44 | 96 |

$$Z = -1.3449$$

$$Z = -1.5025$$

$$\text{Prob}(Z) = 0.1786$$

$$\text{Prob}(Z) = 0.1330$$

Case 9-B: Potential Irregularity

On their confirmation response, one customer noted that the merchandise (totaling \$1,215.87) pertaining to this shipment had never been ordered or received. A check of the shipping documents indicates that the order was shipped by an independent carrier. This carrier has not responded to repeated requests for delivery information as of the end of the field work.

| | Case 9-B (Long) | | Case 9-B (Short) | | Combined Totals | | |
|-------|------------------|----------------|------------------|----------------|-----------------|----------------|----------------|
| | With Extra Para. | | Without Extra P. | | Int(%) | Ext(%) | Both(%) |
| | Int(%) | Ext(%) | Int(%) | Ext(%) | Int(%) | Ext(%) | Both(%) |
| Proj. | 19 (70) | 10 (43) | 16 (64) | 11 (52) | 35 (67) | 21 (48) | 56 (58) |
| Isol. | <u>8 (30)</u> | <u>13 (57)</u> | <u>9 (36)</u> | <u>10 (48)</u> | <u>17 (33)</u> | <u>23 (52)</u> | <u>40 (42)</u> |
| | 27 | 23 | 25 | 21 | 52 | 44 | 96 |

$$Z = 1.8895$$

$$Z = 0.7756$$

$$\text{Prob}(Z) = 0.0588$$

$$\text{Prob}(Z) = 0.4380$$

Only Case 9-B (Long) produced significant results ($Z = 1.8895$, Prob (Z) = 0.0588).

Case 9-A did not produce significant results. In a comparison of Case 9-A (Long) to Case 9-A (Short), projection rates almost doubled when the restriction (of exceeding tolerable error) was removed (i.e., both groups of auditors were reluctant to project the exception knowing that doing so would lead to more work). Generally, external auditors were more willing to project the exception (though not significantly).

Results for Case 9-B were almost the reverse. Internal auditors were more likely to project the exception, significantly so on Case 9-B (Long). In contrast to Case 9-A, internal auditors projected the exception at an even higher percentage (70 to 64) when the tolerable error restriction was imposed. On the other hand, external auditors were more prone to isolate the exception under such restrictions. This tendency by internal auditors to project Case 9-B may be a result of the exception's nature: a potential irregularity. The internal auditor's focus on compliance with controls may lead them to project such exceptions at higher levels than external auditors.

These results suggest that internal auditors and external auditors may not resolve exceptions in similar ways. For Case 9-A (a routine pricing error), external auditors projected the error while internal auditors isolated it. For Case 9-B (a potential irregularity),

internal auditors projected the exception while external auditors were more apt to isolate it. This reflects a different approach to resolving exceptions, perhaps a result of each group's different objectives. In addition, the restriction of exceeding tolerable error generally encouraged both groups to isolate the error, perhaps incorrectly. Finally, for Case 9-A, approximately 50 percent of all auditors failed to select the normative response (to project the exception). This may suggest a problem with how exceptions are viewed, particularly for "routine" items which confirmations are designed to identify.

Case 10

Case 10 provided the respondents with the preliminary audit results from one store (out of five to be examined) where control violations had been discovered. The participants were asked to indicate how these findings would affect further work at this and possibly other stores. These results were significant ($Z = 4.1278$, $\text{Prob}(Z) = 0.0000$). As Table 16 discloses, internal auditors chose responses leading to less work/effort than did external auditors. Fifty percent of all external auditors selected option "D", which would lead to the highest increase in work, and 77 percent of external auditors (compared to 53 percent of internal auditors) extended work to other stores. Apparently, internal auditors were more willing to live with

TABLE 16

CASE 10 RESULTS

The company operates retail stores in approximately 600 different locations throughout the United States. Each store has a standard operating manual which includes uniform controls to be implemented. Some of these controls are the following:

1. Cash registers are used to record sales, sales returns, and exchanges. All cash refunds and exchanges require supervisory approval.
2. Cash, personal checks, or major credit cards are accepted for payment by normal retail customers (individuals).
3. Subject to approval by the store manager, non-profit organizations and private businesses may establish credit (accounts receivable) for purchases made in the store.

Controls of five stores are being evaluated (as a representative sample) to determine if the prescribed controls are in place and working properly. A recent examination of store No. 14 (the first store to be visited this year) uncovered the following:

1. The standard operating manual could not be located by Store No. 14 management.
2. Based on further investigation, credit approvals for non-profit organizations and private businesses were made at Store No. 14 without adequate investigation or documentation.

Based on your experience, which of the following options would you perform?

| | <u>Int(%)</u> | <u>Ext(%)</u> |
|--|----------------|----------------|
| A) Do not expand tests of credit approvals. | 6 (11) | 1 (2) |
| B) Expand tests of credit approvals at Store No. 14, but not at other stores. | 19 (36) | 9 (20) |
| C) Expand tests of credit approvals to the other four stores selected for examination this year. | 24 (45) | 12 (27) |
| D) Expand tests of credit approvals to an additional sample of stores. (For example, expand the number of stores to be examined from 5 to 10). | 4 (8) | 22 (50) |
| | 53 | 44 |

$Z = 4.1278 \quad \text{Prob}(Z) = 0.0000$

these errors and isolate them to the specific store in question. External auditors, on the other hand, were strong in their desire to provide additional comfort by expanding their work to other stores.

Alternatively, these differences may also arise due to the different objectives of each group of auditors. External auditors design their tests to provide sufficient evidence that the financial statements are not materially misstated. Such tests, performed primarily on a sample of the population, tend to emphasize "problems" which may be discovered. On the other hand, internal auditors focus on a different perspective and attempt to identify compensating controls to neutralize or minimize such "problems." A continuous internal audit presence may also enable the internal audit function to devote more time into determining whether such problems are really localized occurrences.

Both Statement on Auditing Standards (SAS) No. 65 [1991], *The Auditor's Consideration of the Internal Audit Function in an Audit of Financial Statements*, and the Auditing Procedure Study [American Institute of Certified Public Accountants and Canadian Institute of Chartered Accountants 1989] identify the potential of multi-location audits as an increased source of external audit reliance on the work of internal auditors. SAS No. 65 says

. . . if the internal auditors' plan includes relevant audit work at various locations, the [external] auditor may coordinate work with the internal auditors and reduce the number of the entity's locations at which the [external] auditor would otherwise need to perform auditing procedures [paragraph 15].

Case 10's results may imply that internal auditors and external auditors are not making similar judgments in this specific situation. As a result, external auditors may need to exercise more care in relying on internal audit work involving multi-location audits.

Case 11

Respondents were asked to complete an analytical review process on Case 11. Account balance fluctuations (comparing the current year to the prior year) for Sales, Cash, Accounts Receivable, Inventories, and Fixed Assets were presented. The respondents were then asked to select the one store they would audit. As Table 17 indicates, almost 50 percent of both auditors selected Store E, whose results were indicative of a strong downturn with a corresponding increase in Accounts Receivable. These results were not significant ($Z = 0.6750$, $\text{Prob}(Z) = 0.4997$). One external auditor selected Store A (fairly normal results with an increase in fixed assets), while no one selected Store B, which reported fairly normal results. Store D, representing signs of rapid growth, and Store C, indicating a potential problem with inventories, generated mild interest on the part of both groups of auditors, including the attention of one-third of the internal auditors.

In summary, Cases 9 and 10 demonstrated that internal auditors and external auditors make different judgments. While only Case 9-B (Long) produced significant results (on

TABLE 17

CASE 11 RESULTS

The company operates retail stores in various states. You performed a review of internal controls at several stores during interim testing. At this time, you are planning the year-end substantive tests of balances for the following accounts: sales, cash, accounts receivable, inventories, and fixed asset additions.

Preliminary analytical review procedures have identified the following stores as potential audit sites for these substantive tests. You have decided to audit one of these stores and must now decide which store will be audited this year.

The following table contains selected trial balance information comparing the year just ended (1992) to the prior year (1991):

| Account | Store A | Store B | Store C | Store D | Store E |
|--------------|---------|---------|---------|---------|---------|
| Sales | +15.6% | +10.4% | -1.2% | +21.7% | -24.6% |
| Cash | +9.8% | +5.8% | -21.4% | +0.5% | -19.7% |
| Acc. Rec. | +8.3% | -1.3% | -1.7% | +26.4% | +18.7% |
| Inventories | +3.6% | +1.7% | -21.5% | -22.5% | +1.7% |
| Fixed Assets | +4.4% | -1.2% | +1.9% | +2.2% | -0.9% |

Which store will you visit?

| | <u>Int (%)</u> | <u>Ext (%)</u> |
|---------|------------------|------------------|
| Store A | 0 (0) | 1 (2) |
| Store B | 0 (0) | 0 (0) |
| Store C | 17 (32) | 8 (18) |
| Store D | 10 (19) | 12 (27) |
| Store E | <u>26 (49)</u> | <u>23 (52)</u> |
| | 53 | 44 |

$$Z = 0.6750 \quad \text{Prob}(Z) = 0.4997$$

Case 9), an analysis of the responses showed that on Case 9-A, the internal (external) auditors isolated (projected) a routine pricing error, while on Case 9-B, the internal (external) auditors projected (isolated) a potential irregularity. On Case 10, external auditors selected the

options leading to an increase in work at other stores, while internal auditors isolated the error to the store in question. Case 11's results, while not significant, demonstrated an increased focus by some of the internal auditors on Merchandise Inventory. The results from Case 12 are discussed next.

Case 12

Case 12 presented a series of 17 account titles or audit areas and asked the respondents to indicate the risk of material misstatement within each area on a three-point scale (Low, Moderate, and High). The classifications and amounts are based on an example from Zuber *et al.* [1983]. As Table 6 revealed earlier, one-half (9 of 17) of these areas led to significant differences across the two groups. Three interesting trends emerge from these results: all assets (but Accounts Receivable) and Cost of Goods Sold were significant, both tax items were significant, and both owner's equity items were significant. As Tables 6 and 18 indicate, in almost every instance internal auditors perceived a higher level of risk. Only for Deferred Income Taxes, the Provision for Income Taxes, and Interest Expense did the external auditors perceive a higher level of risk. These results may emphasize the existence of different materiality levels assumed by each group of auditors. In addition, the different objectives of each group may emphasize the relative importance of one item over another

TABLE 18

CASE 12 RESULTS

Various account titles or audit areas are listed below for a small, wholesale retailer. Based on your experience, indicate the risk of material misstatement (i.e., Low, Moderate, or High) within each of these accounts or audit areas [See Appendix B for the actual dollar values given for each account or audit area]:

| | Cash | | Accounts Rec. | | Inventory | |
|---|----------------|----------------|----------------|----------------|-----------------|----------------|
| | <u>Int(%)</u> | <u>Ext(%)</u> | <u>Int(%)</u> | <u>Ext(%)</u> | <u>Int(%)</u> | <u>Ext(%)</u> |
| L | 18 (35) | 28 (65) | 2 (4) | 3 (7) | 1 (2) | 2 (5) |
| M | 18 (35) | 12 (28) | 21 (42) | 22 (50) | 8 (15) | 17 (39) |
| H | <u>16 (31)</u> | <u>3 (7)</u> | <u>27 (54)</u> | <u>19 (43)</u> | <u>43 (83)</u> | <u>25 (57)</u> |
| | 52 | 43 | 50 | 44 | 52 | 44 |
| | Z = -3.3267 | | Z = -1.0933 | | Z = -2.7395 | |
| | Prob(Z)=0.0009 | | Prob(Z)=0.2743 | | Prob(Z)=0.0062 | |
| | PPE | | Other Assets | | Current LT Debt | |
| | <u>Int(%)</u> | <u>Ext(%)</u> | <u>Int(%)</u> | <u>Ext(%)</u> | <u>Int(%)</u> | <u>Ext(%)</u> |
| L | 24 (46) | 38 (86) | 35 (67) | 31 (84) | 37 (71) | 37 (84) |
| M | 23 (44) | 5 (11) | 17 (33) | 7 (16) | 13 (25) | 7 (16) |
| H | <u>5 (10)</u> | <u>1 (2)</u> | <u>0 (0)</u> | <u>0 (0)</u> | <u>2 (4)</u> | <u>0 (0)</u> |
| | 52 | 44 | 52 | 44 | 52 | 44 |
| | Z = -4.0310 | | Z = -1.8774 | | Z = -1.5561 | |
| | Prob(Z)=0.0001 | | Prob(Z)=0.0605 | | Prob(Z)=0.1197 | |
| | Accounts Pay. | | Accrued Liab. | | Long-Term Debt | |
| | <u>Int(%)</u> | <u>Ext(%)</u> | <u>Int(%)</u> | <u>Ext(%)</u> | <u>Int(%)</u> | <u>Ext(%)</u> |
| L | 8 (15) | 7 (16) | 6 (12) | 4 (9) | 32 (62) | 31 (70) |
| M | 27 (52) | 27 (61) | 25 (48) | 26 (59) | 17 (33) | 12 (27) |
| H | <u>17 (33)</u> | <u>10 (23)</u> | <u>21 (40)</u> | <u>14 (32)</u> | <u>3 (6)</u> | <u>1 (2)</u> |
| | 52 | 44 | 52 | 44 | 52 | 44 |
| | Z = -0.8242 | | Z = -0.5712 | | Z = -0.9827 | |
| | Prob(Z)=0.4099 | | Prob(Z)=0.5679 | | Prob(Z)=0.3257 | |

[Continued on next page]

for that specific group. In fact, the results may even be firm or company specific, based on a pre-conditioned risk

TABLE 18

CASE 12 RESULTS, CONTINUED

Various account titles or audit areas are listed below for a small, wholesale retailer. Based on your experience, indicate the risk of material misstatement (i.e., Low, Moderate, or High) within each of these accounts or audit areas [See Appendix B for the actual dollar values given for each account or audit area]:

| | Def. Income Tax | | Common Stock | | Retained Earn. | |
|---|-----------------|----------------|----------------|----------------|----------------|----------------|
| | <u>Int(%)</u> | <u>Ext(%)</u> | <u>Int(%)</u> | <u>Ext(%)</u> | <u>Int(%)</u> | <u>Ext(%)</u> |
| L | 20 (39) | 11 (25) | 42 (81) | 43 (98) | 26 (50) | 37 (84) |
| M | 30 (58) | 21 (48) | 10 (19) | 1 (2) | 20 (38) | 6 (14) |
| H | <u>2 (4)</u> | <u>12 (27)</u> | <u>0 (0)</u> | <u>0 (0)</u> | <u>6 (12)</u> | <u>1 (2)</u> |
| | 52 | 44 | 52 | 44 | 52 | 44 |

Z = 2.5479
Prob(Z)=0.0108

Z = -2.5789
Prob(Z)=0.0099

Z = -3.5005
Prob(Z)=0.0005

| | Sales | | Cost Goods Sold | | S & A Expenses | |
|---|----------------|----------------|-----------------|----------------|----------------|----------------|
| | <u>Int(%)</u> | <u>Ext(%)</u> | <u>Int(%)</u> | <u>Ext(%)</u> | <u>Int(%)</u> | <u>Ext(%)</u> |
| L | 5 (10) | 4 (9) | 4 (8) | 7 (16) | 13 (25) | 15 (34) |
| M | 23 (44) | 26 (59) | 27 (52) | 29 (66) | 32 (62) | 28 (64) |
| H | <u>24 (46)</u> | <u>14 (32)</u> | <u>21 (40)</u> | <u>8 (18)</u> | <u>7 (13)</u> | <u>1 (2)</u> |
| | 52 | 44 | 52 | 44 | 52 | 44 |

Z = -1.1848
Prob(Z)=0.2361

Z = -2.4262
Prob(Z)=0.0153

Z = -1.5959
Prob(Z)=0.1105

| | Interest Exp. | | Prov. Inc. Tax | |
|---|----------------|----------------|----------------|----------------|
| | <u>Int(%)</u> | <u>Ext(%)</u> | <u>Int(%)</u> | <u>Ext(%)</u> |
| L | 41 (79) | 34 (77) | 32 (62) | 12 (27) |
| M | 11 (21) | 10 (23) | 19 (37) | 23 (52) |
| H | <u>0 (0)</u> | <u>0 (0)</u> | <u>1 (2)</u> | <u>9 (20)</u> |
| | 52 | 44 | 52 | 44 |

Z = 0.1797
Prob(Z)=0.8574

Z = 3.7824
Prob(Z)=0.0002

model familiar to the individual respondents. The next section discusses related analyses pertaining to Cases 6, 7, and 9.

Related Analyses

The primary focus of this study was to identify whether the two groups of auditors made similar judgments. Related analyses were also performed on Cases 6, 7, and 9 to replicate prior research.

Cases 6 and 7

As discussed previously, Cases 6 and 7 were identical in every respect except for which question was marked "No". Ashton [1974] and Ashton and Brown [1980] indicate that Question No. 4 explains more of the variance than Question No. 3. As a result, its absence should be felt more strongly and lead to a lower perception of strength.

The absence of Question No. 4 did lead to significant differences in judgment on both versions of Case 6, while the absence of Question No. 3 did not lead to significant differences in judgment on Case 7 (see Tables 12 and 13). These findings lend partial support to the strength of Question No. 4. However, a separate analysis was also performed to test these findings. Internal auditor's responses on Case 6 were compared to internal auditor's responses on Case 7 (similar comparisons were also made for Case 6* and Case 7*, and both comparisons were also made for external auditors). None of these comparisons was significant, even though an analysis of the mean values for Cases 6 and 7 indicates that the controls in Case 6 are perceived to be as strong or stronger than those in Case 7.

The significance of both versions of Case 6 supports Ashton [1974] and Ashton and Brown [1980]. However, the failure of the supplementary analyses to duplicate these results limits the strength of that conclusion.

Case 9

In Burgstahler and Jiambalvo (B&J) [1986], 88 percent of their auditors (external only) project the exception (used in Case 9-A (Long)). In this study, only 48 percent of external auditors project this exception. This difference may have been caused by several factors. First, B&J present their respondents with eight different scenarios, with this particular exception serving as their benchmark. Their auditors may have detected this fact and used this case as an anchor. Second, modifications were made in the administration of the instrument for this study. The following paragraph, on the general information page, was added to this study's instrument:

Two "errors," identified by the confirmation process, will be presented on the following pages. You may assume that each "error" affects both the subsidiary ledger and the general ledger. The follow-up procedures performed on each "error" are also identified. These "errors" may be indicative of control weaknesses and may imply the need for additional testing.

In addition, B&J's instructions concerning estimated error exceeding tolerable error were included on all cases in their general information.

The results of this study demonstrate that internal auditors and external auditors do not make similar

judgments. However, a lack of organizational independence or competence with financial statement audits may not fully explain the differences between the two groups of auditors. Other situations, such as the impact of prior public accounting experience, may influence these results. These analyses are discussed in the next section.

Additional Analyses

Several other factors may impact the results presented in the prior sections. These factors include the following: impact of experience within the two professions, existence of prior public accounting experience, and impact of Institute of Internal Auditors (IIA) membership. The next sections discuss each of these variables.

Experience Effect

As Chapter IV discussed, several studies (e.g., Bonner 1990) identify an experience effect by external auditors across position levels. This study tested for a similar effect among the external auditors across three position levels: staff ($n = 7$), seniors ($n = 24$), and managers-partners³⁹ ($n = 13$). This study provides limited support for an experience effect. For Cases 1 - 11, only Case 3 ($\chi^2 = 9.85$ ($df=2$), $\text{Prob}(\chi^2) = 0.0073$) and Case 8 ($F = 5.360$ ($df=1$), $\text{Prob}(F) = 0.0314$) were significant. For Case

³⁹These positions were combined because of the small number of respondents in the manager, senior manager, and partner positions.

12, only three relationships were significant: Common Stock ($\chi^2 = 5.29$ (df=2), Prob(χ^2) = 0.0712), Other Assets ($\chi^2 = 4.72$ (df=2), Prob(χ^2) = 0.0943), and Cash ($\chi^2 = 4.66$ (df=2), Prob(χ^2) = 0.0975).⁴⁰

Similarly, this study investigated the possibility of an experience effect across internal audit staffing levels. Prior research had only investigated the external audit relationship, so this examination extends that body of research to the internal audit profession. Three position levels within the internal audit group were examined: staff ($n = 19$), seniors ($n = 20$), and managers/supervisors ($n = 14$). Only Case 6* ($\chi^2 = 7.32$ (df=2), Prob(χ^2) = 0.0258) produced significant results. For Case 12, four areas proved to be significant: Retained Earnings ($\chi^2 = 7.98$ (df=2), Prob(χ^2) = 0.0185), Accounts Payable ($\chi^2 = 6.68$ (df=2), Prob(χ^2) = 0.0354), the Current Portion of Long-Term Debt ($\chi^2 = 5.66$ (df=2), Prob(χ^2) = 0.0590), and Cost of Goods Sold ($\chi^2 = 5.09$ (df=2), Prob(χ^2) = 0.0787). Such results provide limited support of an experience effect among internal auditors.

⁴⁰To determine whether inexperienced auditors were driving the overall results, the main analyses were re-performed comparing experienced internal auditors (managers) to experienced external auditors (managers - partners). Cases 4, 8, and 10 produced significant results. In the main analysis, Cases 3, 6, 6*, 8, and 10 had produced significant results. Case 12 identified significant results on eight items, reflecting only minor differences with the main analysis (Cash and Common Stock were not significant while Sales was). Therefore, differences still exist between the two groups even after removing inexperienced auditors from the analysis.

Prior Public Accounting Experience

Intuition suggests that internal auditors with prior public accounting experience may make different judgments than internal auditors without such experience. Of the 53 internal auditors in this study, 18 (34 percent) had prior public accounting experience. All twelve cases were re-examined comparing the judgments of those internal auditors with prior experience to those without it. Case 6 ($Z = 2.5066$, $P(Z) = 0.0122$), Case 9-A (Short) ($Z = -1.6813$, $P(Z) = 0.0927$), and Case 11 ($Z = 2.5679$, $P(Z) = 0.0102$) indicated significant results. On Case 12, four areas proved significant: Retained Earnings ($Z = -2.7347$, $P(Z) = 0.0062$), Accounts Payable ($Z = 2.4719$, $P(Z) = 0.0134$), Accrued Liabilities ($Z = 2.0051$, $P(Z) = 0.0450$), and Common Stock ($Z = -1.7889$, $P(Z) = 0.0736$).⁴¹ These results provide limited support that those internal auditors with prior public accounting experience did make different judgments than those internal auditors without such experience. On Cases 6, 9-A (Short), 11, and parts of 12, the overall results appear to be driven by the internal auditors without prior public accounting experience.

⁴¹As a supplementary analysis, similar comparisons were also made between all external auditors and those internal auditors without prior public accounting experience. Cases 6, 9-A (Short), and 11 were still significant, as were the analyses of Common Stock and Retained Earnings. Accounts Payable and Accrued Liabilities were not significant.

Institute of Internal Auditors Membership

As mentioned in Chapter IV, Harrell et al. [1989] discuss the importance of membership within the Institute of Internal Auditors (IIA). In their study, management is able to bias the objectivity of those internal auditors without IIA membership. More importantly, they are not able to bias the objectivity of IIA members. In this study, the judgments of internal auditors with IIA membership are compared to those internal auditors without IIA membership. None of the differences in Cases 1 - 11 were significant, while five of Case 12's differences were significant: Common Stock ($Z = 3.3246$, $P(Z) = 0.0009$), Accounts Receivable ($Z = 2.0373$, $P(Z) = 0.0416$), Deferred Income Taxes ($Z = -1.7995$, $P(Z) = 0.0719$), Selling and Administrative Expenses ($Z = 1.7434$, $P(Z) = 0.0813$), and Inventory ($Z = -1.7190$, $P(Z) = 0.0856$). One limitation to such comparisons, however, is this study's population. Of 53 internal auditors responding, 45 (85 percent) were IIA members.⁴² These results seem to suggest that the existence of IIA membership does not lead to judgment differences, especially on Cases 1 - 11. Such results do not support Harrell et al. [1989].

⁴²A supplementary analysis was performed by removing the non-IIA members and then comparing all external auditors with internal auditors who were IIA members. For Cases 1 - 11, such comparisons produced significant results for Cases 4, 6, 6*, 9-B (Long), and 10. With the exception of Case 4, these were the same cases previously identified as having significant differences (in the main analysis, Case 3 was also significant).

Summary

Analysis of these results indicates that external auditors and internal auditors may not make similar judgments. Table 19 provides a summary of these results. Based on these findings, the following research hypotheses can be rejected.

H_1 tested for similar judgments across the two groups of auditors. Significant results for Cases 3, 6, 8, 9-B (Long), 10, and 12 suggest that different judgments are being made. As a result, H_1 is rejected for Cases 3, 6, 8, 9-B (Long), 10, and 12.

H_2 tested for similar judgments by the context of the task: an internal control test or a substantive test. In this study, six cases were set in each environment. Significant differences are indicated on four out of six substantive tests and for two out of six internal control tests. The context of the judgment leads to judgment differences. H_2 is rejected for Cases 3, 6, 8, 9-B (Long), 10, and 12.

H_3 tested for similar judgments by the nature of the assessment: an objective, knowledge-based judgment or a more subjective assessment. Two of the six objective assessments reflected significant differences, while five of seven subjective assessments led to significant differences. The nature of the assessments led to judgment differences, and H_3 can be rejected for cases 3, 6, 8, 9-B (Long), 10, and 12.

| <u>Case</u> | <u>Nature</u> | <u>Context</u> | <u>Significance</u> |
|-------------|---------------|------------------|-------------------------|
| 1 | Objective | Substantive Test | |
| 2 | Objective | Internal Control | |
| 3 | Objective | Substantive Test | 0.0551 |
| 4 | Objective | Internal Control | |
| 5 | Objective | Internal Control | |
| 6 | Subjective | Internal Control | 6: 0.0034 6*: 0.0454 |
| 7 | Subjective | Internal Control | |
| 8 | Subjective | Internal Control | 0.0130 |
| 9-A | Objective | Substantive Test | |
| 9-B | Subjective | Substantive Test | 9-B (Long): 0.0588 |
| 10 | Subjective | Substantive Test | 0.0000 |
| 11 | Subjective | Substantive Test | |
| 12 | Subjective | Substantive Test | 8 at 0.05 1 at 0.10 |

Table 2, discussed in Chapter IV, identified the expected differences for each case. Table 20 updates this earlier table with the actual results. As anticipated, no significant differences were reported for cases involving objective assessments and internal control tests. As predicted, significant differences were reported for three of the four cases involving subjective assessments and substantive tests. However, mixed results were reported for cases involving either (1) an objective assessment in a substantive test situation or (2) a subjective assessment in an internal control test. Predicted judgments on such cases were unclear, with different judgments possible. One-half of these cases produced significant differences. Further work can be performed in this area to identify those interactions of the context and nature variables that lead to judgment differences.

TABLE 20
CASE RESULTS BY PREDICTED DIFFERENCES

| Interaction | Predicted Differences | Results |
|--|-----------------------|--|
| Objective assessment, Internal control test | None | 2, 4, 5: not significant |
| Objective assessment, Substantive test Subjective assessment, Internal control test | Possible | 1, 9-A: not significant 3: significant 7: not significant 6, 8: significant |
| Subjective assessment, Substantive test | Expected | 9-B, 10, 12: significant 11: not significant |

This chapter has presented the results of this study. Chapter VI presents concluding remarks, which include a discussion of the results and its potential implications. In addition, limitations of this study are also identified.

CHAPTER VI

CONCLUDING REMARKS

This study has examined the following research question:

Do internal auditors and external auditors make similar judgments?

Chapter VI provides an overview of the results of this study (which are discussed in more detail in Chapter V). This is followed by a discussion of the contributions, limitations, and implications of this project and its findings.

Discussion of Results

As Chapter V demonstrated, these results imply that differences in judgment may exist for internal auditors and external auditors. These differences depend, in part, on the context (internal control test vs. substantive test) and the nature (objective vs. subjective) of the particular judgments.

As Tables 19 and 20 indicated, every case reflecting significant differences involved either a subjective assessment or a substantive test. External auditors need to be aware of the increased possibility of different judgments in these two areas.

The cases with significant results cover a variety of audit areas, including Purchases, payroll, cash disbursements, and Accounts Receivable. Significant results from two cases (3 and 12) may suggest potential problems with a lack of competence on the financial statement audit. On Case 3, internal auditors may not have been familiar with the role or mechanics of management's assertions. Many external audit procedures are assertion-based. On Case 12, internal auditors were asked for perceptions across 17 areas, including some for which they may not have any experience or knowledge.

Debriefing questions do not support this concern with competency. As Table 4 indicated, 77 percent of the internal auditors had earned at least one certification. In addition, 42 of 53 internal auditors (79 percent) indicated that they had performed or assisted with a financial audit within the past twelve months, and 25 of 49 internal auditors⁴³ (51 percent) had spent at least one-third of their time on financial audits. All eight internal audit departments require or compensate their employees for continuing professional education. In most firms (75 percent), internal audit was a separate career path within the entity (except for Companies 5 and 6). In addition, a debriefing question indicated that 36 of 53 internal auditors (68 percent) were very familiar with substantive tests, and only 5 of 53 (9 percent) indicated not much

⁴³Four auditors did not respond to this question.

familiarity. Lack of competence does not appear to drive the results unless it encouraged a more conservative bias by internal auditors.

Organizational independence does not appear to be a factor, either. In fact, as discussed previously, the results identify a consistent bias by internal auditors to not place as much reliance on the internal control structure as external auditors do (Cases 6, 8, 9, and 12). Only on Case 10 (see Table 16) did external auditors perceive a greater need for increased testing. Case 10's results may have been driven more by the external auditor's fear of litigation than by a lack of independence. Correspondingly, such different judgments may also be a product of the differing objectives of each group of auditors, as developed in further detail in Chapter V. Interestingly, Case 9-B (Long), a potential irregularity, produced a higher projection rate by internal auditors, even in situations where tolerable error would be exceeded (70 to 64 percent). Such results suggest an old maxim: when you know that you are being watched, you tend to err on the side of caution. Perhaps internal auditors are doing so in this instance.

Debriefing questions generally support such conclusions (see table 3). All eight internal audit departments had access to the board of directors, and all but one reported functionally to the audit committee or chairman of the board. However, in only 50 percent of these firms did the

audit committee oversee the employment of the internal audit director.

The results may also emphasize a potential problem in the manner that the two groups resolve exceptions to Accounts Receivable confirmations. While only Case 9-B (Long) produced significant results, analysis of the raw data raises some important concerns. First, disclosure that projecting the exception would cause tolerable error to be exceeded generally led to lower projection rates. In both Cases (9-A and 9-B), fewer external auditors projected such exceptions when the restriction was imposed. Internal auditors were only lower on Case 9-A.

Second, the two groups of auditors perceived each exception differently (see the combined totals in Table 15).⁴⁴ On Case 9-A, external auditors projected the exception while internal auditors isolated it. On Case 9-B, internal auditors projected the exception, while external auditors were almost equally divided on whether to isolate or project it. These results may imply a different perspective in the mindset of each group of auditors.

This study also identifies a possible difference in the manner that internal auditors and external auditors view the results of a multi-location audit. Case 10 produced significant results, where external auditors selected options extending work to other locations. Internal

⁴⁴No statistical inferences can be drawn from the combined totals since each is composed of two similar, but different, versions of the case.

auditors, however, selected options isolating the problem to the specific store under examination. External auditors may need to re-examine reliance on the work of internal auditors in multi-location audits. For example, external auditors may audit two stores while internal auditors may audit another fifteen stores. Different judgments between the two groups may ultimately lead the external auditor to an incorrect judgment regarding the fairness of the financial statements.

Finally, the impact of prior public accounting experience did appear to impact the judgments of internal auditors. These results indicated several cases (6, 9-A (Short), 11, and 12) where the existence of such experience led to different judgments among internal auditors. Generally, these results did not change even when those internal auditors with prior experience were removed from the analysis.

A future section of this chapter will discuss potential implications of these findings. The next section presents a summary of this study's extensions to prior research.

Extensions to Prior Research

This paper partially replicated the research instruments of Ashton [1974], Ashton and Brown [1980], Brown and Solomon [1990]⁴⁵, and Burgstahler and Jiambalvo [1986].

⁴⁵As discussed in Chapter IV, this study did not attempt to replicate the results from Brown and Solomon [1990] due to the different focus of this study.

Generally, the results of Ashton [1974] and Ashton and Brown [1980] are supported by this study (see Chapter V).

Question No. 4 (Case 6) produced significant results while Question No. 3 (Case 7) did not. In their earlier studies, Ashton [1974] and Ashton and Brown [1980] report that Question No. 4 had explained more of the variance than any other question.

The results of Burgstahler and Jiambalvo [1986] are not supported in this study. In their results, 88 percent of the (external) auditors project the exception used in Case 9-A (Long). As Table 15 indicated, only 48 percent of the external auditors projected the exception in this study. As discussed in Chapter V, these differences may be a result of the changes this study made to the research instrument. Alternatively, Burgstahler and Jiambalvo's subjects may have deduced the nature of their study and anchored on this one judgment.

Harrell et al. [1989] was also re-examined. Their results indicate management's ability to bias the objectivity of internal auditors who are not Institute of Internal Auditor (IIA) members. This study did not find a difference in judgments between those internal auditors who were members of the IIA and those who were not. However, the large number of IIA members (45 of 53) may override such

results. Removal of the non-IIA members generally produced the same main results.⁴⁶

The study also examined the judgments to determine whether an experience effect existed across position levels. Prior research [see, for example, Bonner 1990] identifies such an effect for external auditors, while no previous research has been performed on this topic for internal auditors. This study provides limited support for an experience effect (Cases 3, 8, and 12) among external auditors. A similar effect is also reported for internal auditors (Cases 6* and 12). Removing inexperienced auditors from the analysis still produced significant differences on four cases (4, 8, 10, and 12). The next section of this chapter discusses potential limitations of this study.

Limitations of This Study

One criticism of surveys of this nature is that they do not reflect the real world. Extensive pretesting and debriefing was performed on both groups of auditors in two Southeastern cities, and 91 (98) percent of internal (external) auditors found the cases to be either realistic or somewhat realistic, while 81 (86) percent of internal (external) auditors found them to be either interesting or

⁴⁶Limiting the analysis to internal auditors who were IIA members in comparison with all external auditors identified the same cases as significant, with the exception of Case 4 (significant) and Case 3 (not significant).

somewhat interesting. These results imply a real-world perception by the respondents.

Second, the results may not generalize beyond the eight companies and six firms studied. This may be a characteristic of the specific firms themselves, their locations, or some other factor not studied. However, the general consensus within each group supports the generalization of these results to the larger population.

Third, even though the respondents were instructed not to use outside aids for support, some participants may have used such materials to improve their judgments. Time constraints imposed by the entities themselves prevented the investigator from personally administering the instrument. An analysis of the time required to complete the research instrument (around 20 minutes) does not support such concerns.

Fourth, a reader of this study has identified another potential limitation. On those cases involving objective, normative responses (1 - 5, 9-A), the results may merely reflect which group of auditors got the case "right" the most, instead of measuring the similarity of judgments across auditors.

Implications of This Study

These findings lend mixed support to Statement on Auditing Standards (SAS) No. 65, The Auditor's Consideration of the Internal Audit Function in an Audit of Financial

Statements. Generally, significant differences were not identified for judgments where the task was internal control related or objective in nature. External auditors should have more confidence in their reliance on internal audit work in such areas.

However, differences did arise for judgments involving subjective assessments or substantive tests. Every case identifying significant results included one of these two factors. External auditors need to be aware of the potential for differences in such areas. Reliance on internal auditor judgments which are different may ultimately impact the external auditor's opinion. As a result, external auditors might desire to perform such tests or assessments themselves. In addition, increased internal auditor training or use of decision aids may encourage similar judgments. Finally, internal audit work in these areas may need to be reviewed more carefully in light of these findings.

Internal auditors, on the whole, expressed less confidence or perceived more risk in the internal control structure than did the external auditors. Such results may arise from a lack of competence in using such measures. These results may also be a factor of the different objectives of each audit group. External auditors may want to consider this "conservative bias" in the planning and execution of their work. Reliance on internal audit work

which contains such biases may result in over-auditing an area (and its resulting inefficiencies).

Differences were also reported in the manner in which auditors resolved exceptions to Accounts Receivable confirmations. Neither group of auditors appeared to handle the two exceptions (9-A and 9-B) similarly. If internal auditors isolated an exception, external auditors projected it (and vice versa). Such differences may be a factor of the different objectives of the two groups. Authoritative standards⁴⁷ state that resolving such exceptions is a task which internal auditors may perform. These results suggest the need to further investigate how both groups of auditors resolve such exceptions.⁴⁸

Multi-location audits may be another area where reliance needs to be closely examined. Results from Case 10 indicated that internal auditors were more likely to isolate the control errors to the store in question, while external auditors extended work to other locations. These differences may impact the external auditor's judgment,

⁴⁷See Statement on Auditing Standards No. 65, The Auditor's Consideration of the Internal Audit Function in an Audit of Financial Statements, and the Auditing Procedure Study (American Institute of Certified Public Accountants and Canadian Institute of Chartered Accountants).

⁴⁸In addition, knowing that the projection of the exception would lead to tolerable error being exceeded led to such exceptions being isolated (on 9-A and 9-B by external auditors and on 9-A by internal auditors). Perhaps those resolving such exceptions should not be made aware of the impact that those exceptions might have on tolerable error. Such knowledge more frequently led to the isolation of the exception.

specifically when they rely upon such internal audit work. Future research could investigate potential reasons for judgment differences in multi-location audits.

One other disturbing result involved those cases requesting an objective assessment. One-third of the internal auditors did not identify the normative⁴⁹ response on Cases 1 - 3, while similar numbers of external auditors failed to identify the normative response on Cases 1, 2, and 5. For Case 9-A, only version 9-A (Short) produced results where at least one group of auditors (external) selected the normative response at least fifty percent of the time. These results may imply concern over the competency of a small, but substantial minority, of both groups of auditors. Follow-up work in this area may identify why so many auditors failed to select the normative response.

In summary, internal auditors and external auditors made different judgments in certain situations, especially in situations involving either a subjective assessment or a substantive test. However, judgments involving objective assessments or tasks set in an internal control environment generally did not identify significant differences. As such, this study lends partial support to SAS No. 65. External audit reliance on the work of internal auditors may need to be carefully placed, particularly to those judgments involving internal control tests or objective assessments.

⁴⁹See footnote 15 for this study's definition of "normative."

BIBLIOGRAPHY

- Abdel-khalik, A.R., D. Snowball, and J.H. Wragge. 1983. "The Effects of Certain Internal Audit Variables on the Planning of External Audit Programs." The Accounting Review. April: 215-227.
- American Institute of Certified Public Accountants. 1992. Codification of Statements on Auditing Standards. New York: AICPA.
- _____. 1991. Statement on Auditing Standards No. 65. The Auditor's Consideration of the Internal Audit Function in an Audit of Financial Statements. New York: AICPA.
- _____. 1988. Statement on Auditing Standards No. 55. Consideration of the Internal Control Structure in a Financial Statement Audit. New York: AICPA.
- _____. 1975. Statement on Auditing Standards No. 9. The Effect of an Internal Audit Function on the Scope of the Independent Audit. New York: AICPA.
- _____. and Canadian Institute of Chartered Accountants. 1989. The Independent Auditor's Consideration of the Work of Internal Auditors. New York: AICPA.
- Arens, A.A. and J.K. Loebbecke. 1991. Auditing: An Integrated Approach (5th edition). Englewood Cliffs, New Jersey: Prentice-Hall.
- Ashton, R.H. 1974. "An Experimental Study of Internal Control Judgments." Journal of Accounting Research. Spring: 143-157.
- _____. and P.R. Brown. 1980. "Descriptive Modeling of Auditors' Internal Control Judgments: Replication and Extension." Journal of Accounting Research. Spring: 269-277.
- Berry, L.E. 1983. Coordinating Total Audit Coverage: Trends and Practices. Altamonte Springs, Florida: Institute of Internal Auditors Research Foundation.
- Bonner, S.E. 1990. "Experience Effects in Auditing: The Role of Task-Specific Knowledge." The Accounting Review. Spring: 72-92.

- _____ and B.L. Lewis. 1990. "Determinants of Auditor Expertise." Journal of Accounting Research. Supplement: 1-20.
- Brown, C.E. and I. Solomon. 1990. "Auditor Configural Information Processing in Control Risk Assessment." Auditing: A Journal of Practice and Theory. Fall: 17-38.
- Brown, P.R. 1983. "Independent Auditor Judgment in the Evaluation of Internal Audit Functions." Journal of Accounting Research. Autumn: 444-455.
- _____ and V. Karan. 1986. "One Approach for Assessing the Operational Nature of Auditing Standards: An Analysis of SAS 9." Auditing: A Journal of Practice and Theory. Fall: 134-147.
- Burgstahler, D. and J. Jiambalvo. 1986. "Sample Error Characteristics and Projection of Error to Audit Populations." The Accounting Review. April: 233-248.
- Clark, M.W., T.E. Gibbs, and R.G. Schroeder. 1981. "CPAs Judge Internal Audit Department Objectivity." Management Accounting. February: 40-43.
- Couch, R.L. 1988. "Outside Auditors: The Price You Pay." Financial Executive. May/June: 6-7.
- Edge, W.R. and A.A. Farley. 1991. "External Auditor Evaluation of the Internal Audit Function." Accounting and Finance. May: 69-83.
- Foreign Corrupt Practices Act of 1977. 1977. Public Law 95-213.
- Frederick, D.M. and R. Libby. 1986. "Expertise and Auditors' Judgments of Conjunctive Events." Journal of Accounting Research. Fall: 270-290.
- Gibbs, T.E. and R.G. Schroeder. 1980. "External Auditor Criteria for Evaluating Internal Audit Departments." The Internal Auditor. December: 34-42.
- _____ and _____. 1979. "Evaluating the Competence of Internal Audit Departments." In Illinois Symposium on Auditing Research III, 207-225. Urbana: Department of Accountancy, University of Illinois.
- Greene, W.H. 1990. Econometric Analysis. New York: Macmillan Publishing Company.
- _____. 1988. LIMDEP, version 5. New York: W.H. Greene.

- Harrell, A., M. Taylor, and E. Chewning. 1989. "An Examination of Management's Ability to Bias the Professional Objectivity of Internal Auditors." Accounting, Organizations and Society. Volume 14, Number 3: 259-269.
- Institute of Internal Auditors. 1985. Standards for the Professional Practice of Internal Auditing. Altamonte Springs, Florida: IIA.
- Macchiaverna, P.R. 1981. Corporations and Their Outside Auditors: A Changing Relationship. New York: The Conference Board.
- Margheim, L.L. 1986. "Further Evidence on External Auditors' Reliance on Internal Auditors." Journal of Accounting Research. Spring: 194-205.
- Mautz, R.K., P. Tiessen, and R.H. Colson. 1984. Internal Auditing: Directions and Opportunities. Altamonte Springs, Florida: Institute of Internal Auditors Research Foundation.
- Messier, W., Jr., and A. Schneider. 1988. "A Hierarchical Approach to the External Auditor's Evaluation of the Internal Auditing Function." Contemporary Accounting Research. Spring: 337-353.
- Milton, J.O. 1979. "Discussant's Response to 'Evaluating the Competence of Internal Audit Departments.'" In Illinois Symposium on Auditing Research III, 226-231. Urbana: Department of Accountancy, University of Illinois.
- SAS Institute, Inc. 1988. SAS/STAT User's Guide, Release 6.03 Edition. Cary, North Carolina: SAS Institute, Inc.
- Sawyer, L.B. 1988. Sawyer's Internal Auditing. Altamonte Springs, Florida: Institute of Internal Auditors.
- Schiff, J.B. 1990. New Directions in Internal Auditing. New York: The Conference Board.
- Schneider, A. 1985. "The Reliance of External Auditors on the Internal Audit Function." Journal of Accounting Research. Autumn: 911-919.
- _____. 1984. "Modeling External Auditors' Evaluations of Internal Auditing." Journal of Accounting Research. Autumn: 657-678.

- Simon, D.T. and J.R. Francis. 1988. "The Effects of Auditor Change on Audit Fees: Tests of Price Cutting and Price Recovery." The Accounting Review. April: 255-269.
- Wallace, W.A. 1985. The Economic Role of the Audit in Free and Regulated Markets. New York: Macmillan Publishing Company.
- _____. 1984. A Time Series Analysis of the Effect of Internal Audit Activities on External Audit Fees. Altamonte Springs, Florida: Institute of Internal Auditors Research Foundation.
- Webster. 1984. Webster's Ninth New Collegiate Dictionary. Springfield, Massachusetts: Merriam-Webster, Inc.
- White, K.R. and J.A. Xander. 1984. Survey of Internal Auditing: Trends and Practices. Altamonte Springs, Florida: Institute of Internal Auditors.
- Zuber, G.R., R.K. Elliott, W.R. Kinney, Jr., and J.J. Leisenring. 1983. "Using Materiality in Audit Planning." Journal of Accountancy. March: 42-54.

APPENDIX A

Comparison of SAS No. 9 and SAS No. 65

| SAS No. 9 | SAS No. 65 |
|---|--|
| Specifically prohibits substitution of internal audit work for external audit work [1] | Implied, but not explicitly mentioned |
| ----- | ----- |
| Possible areas for reliance [9]: 1. To gain understanding of internal control structure 2. Assessment of control risk | Possible areas for reliance [12]: 1. To gain understanding of internal control structure [13] 2. Assessing risk [14-16] 3. Substantive procedures [17] |
| ----- | ----- |
| Direct assistance permitted in performing substantive tests and tests of controls [10] | Direct assistance permitted in all three areas [27] |
| ----- | ----- |
| All judgments affecting the report must be those of the external auditor [11] | Same as SAS No. 9 [19] |
| ----- | ----- |
| No provisions mentioned | Coordination is encouraged in these areas [23]: 1. Holding periodic meetings 2. Scheduling audit work 3. Providing access to internal auditors' working papers 4. Reviewing audit reports 5. Discussing possible accounting and auditing issues |
| ----- | ----- |

SAS No. 9

If the internal audit function is to have a bearing on the audit, the external auditor must consider the competence and objectivity of internal auditors and evaluate their work [4]

 Criteria for evaluating competence [6]:

- Qualifications of staff, including hiring, training, and supervision

 Criteria for evaluating objectivity [7]:

1. Organizational level to which internal audit reports results
 2. Organizational level to which internal audit reports administratively
 3. Review recommendations made in their reports
-

SAS No. 65

Same, except as noted below in gaining an understanding of the internal audit function in obtaining an understanding of the internal control structure

 Criteria for evaluating competence [9]:

1. Educational level and professional experience
 2. Professional certification and continuing education
 3. Audit policies, programs, and procedures
 4. Practices regarding assignment of internal auditors
 5. Supervision and review of internal auditors' activities
 6. Quality of working-paper documentation, reports, and recommendations
 7. Evaluation of internal auditors' performance
-

 Criteria for evaluating objectivity [10]:

1. Organizational status of the director of internal auditing, including (a) reporting level, (b) access to board of directors, and (c) whether the board of directors oversees employment decisions related to the director
 2. Existence of policies to maintain objectivity
-

 SAS No. 9

Criteria for evaluating work [8]. Determine whether:

1. Scope of work is appropriate
2. Audit programs are adequate
3. Working papers adequately document work performed
4. Conclusions reached are appropriate in the circumstances
5. Any reports prepared are consistent with the results of the work performed

 No provisions mentioned

 SAS No. 65

Criteria for evaluating work [24-26]:

Same as SAS No. 9

 When obtaining understanding of internal control structure, the external auditor is to obtain an understanding of the internal audit function to identify activities relevant to planning the audit. This includes inquiries into [4-5]:

1. Organizational status
 2. Application of standards
 3. Audit plans
 4. Access to records
 5. Charter
-

APPENDIX B

Research Instrument

The research instrument contains the following documents:

| | |
|---|-----|
| Consent Form. | 115 |
| Cover Letter (from researcher to participant) | 116 |
| Part I: Judgment Cases | |
| Background (internal auditors) | 117 |
| Background (external auditors) | 118 |
| Case 1 | 119 |
| Case 2 | 120 |
| Case 3 | 121 |
| Case 4 | 122 |
| Case 5 | 123 |
| Case 6 | 124 |
| Case 7 | 126 |
| Case 8 | 128 |
| Case 9 | 130 |
| Case 10. | 135 |
| Case 11. | 136 |
| Case 12. | 137 |
| Part II: Demographic Information | |
| Internal Auditors. | 138 |
| External Auditors. | 140 |
| Suggested Cover Letters: | |
| For Responding Internal Audit Departments. | 141 |
| For Responding Public Accounting Firms | 142 |

CONSENT FORM

By signing this form, I agree to participate in this study on auditor judgments. Some specific judgments made by auditors will be investigated to better understand the audit judgment process. I understand that my participation consists of answering a series of twelve cases and related demographic questions. This research study is being conducted by:

Perry Glen Moore, CIA, CPA
 J. M. Tull School of Accounting
 Brooks Hall - Room 255
 University of Georgia
 Athens, GA 30602-6252
 (706) 542 - 1616

Your participation is entirely voluntary; however, you are free to withdraw from this study at any time without consequence to you and have the results of the participation, to the extent that it can be identified as yours, removed from the research records or destroyed.

You will not be asked to identify yourself by name. The results of your participation will be kept confidential and will not be released in any individually identifiable form without your prior consent, unless otherwise required by law. No individual responses will be seen by anyone other than the investigator.

I do not foresee any risk to you as you complete the research instrument. In addition, no discomforts or stresses are anticipated.

Please sign both copies of this form. You are to keep one copy and then return the other copy to the investigator.

| Perry Glen Moore | Date | Signature of | Date |
|------------------|------|--------------|------|
| Investigator | | Participant | |

Research at the University of Georgia which involves human participants is carried out under the oversight of the Institutional Review Board. Questions or problems regarding your rights as a participant should be addressed to Heidi L. Roof, M.S., or Dr. C. Michael Moriarty; Institutional Review Board; Office of V.P. for Research; The University of Georgia; 604-A Graduate Studies Research Center; Athens, Georgia 30602-7411; Telephone (706) 542-6514.

October 5, 1992

Dear Survey Participant:

Thank you for participating in this experiment on auditor judgments. As you are aware, judgments are an important part of the audit process. This research is designed to study some specific judgments made by auditors to better understand the audit judgment process.

For each of the twelve audit cases attached, you will be asked to make a judgment(s). Each case has been placed on a separate piece of paper and is to be treated independently of one another. Please read each case and answer the appropriate question(s). Due to the nature of the exercise, you must work alone. **Please do not refer to any audit manuals, textbooks, or other aids as you complete the cases.**

Following the cases, the last several pages request demographic information about you and your company. You are not asked to identify yourself by name. All responses will be kept confidential, and no company or individual will be identified when the results are reported.

Please place the completed instrument and one copy of the signed consent form in the enclosed, stamped envelope. Please mail both of these items directly to me as soon as you have finished the task.

Thank you for your participation in the study.

Sincerely,

Perry Glen Moore, CIA, CPA

Ph.D. Student

Case Materials

Background

This questionnaire is composed of two parts. Part One contains twelve audit cases dealing with audit judgments. Part Two requests information about you and your background in accounting and auditing.

NOTE: Please select only one answer for each case (*i.e.*, pick the **one** best choice).

Part One

In each of the following twelve cases, you are to assume the role of the internal auditor relative to the financial statement audit process.

Please indicate the time when
you begin this exercise: _____

Case Materials

Background

This questionnaire is composed of two parts. Part One contains twelve audit cases dealing with audit judgments. Part Two requests information about you and your background in accounting and auditing.

NOTE: Please select only one answer for each case (*i.e.*, pick the **one** best choice).

Part One

In each of the following twelve cases, you are to assume the role of the external auditor relative to the financial statement audit process.

Please indicate the time when
you begin this exercise: _____

Case 1

The following procedure is one step of the audit program for a financial statement audit of merchandise inventory:

Trace test counts of the physical inventory to the client's inventory compilation, and trace totals to the trial balance.

Based on your experience, this procedure **best** addresses which of the following audit objectives?

- _____ a. Inventories included in the balance sheet physically exist.
- _____ b. Inventories exclude items billed to customers or owned by others.
- _____ c. Inventory listings are accurately compiled and the totals are properly included in the inventory accounts.
- _____ d. Slow-moving, excess, defective, and obsolete items included in inventories are properly identified.

Case 2

The following control objective is one part of the internal control structure pertaining to sales:

Customer orders are properly authorized prior to shipment.

Based on your experience, which of the following procedures is **primarily** directed at achieving this objective?

- _____ a. Sales invoices are pre-numbered and properly accounted for.
- _____ b. Appropriate segregation of duties exists between the sales department and the credit department.
- _____ c. Sales are initiated through pre-numbered sales orders which are completed by reference to pre-approved customer lists, credit files, and price lists.
- _____ d. Billings are independently checked for accuracy and agreement with approved price lists, discounts, written quotes, etc.

Case 3

The following is a control procedure for purchases:

Purchase orders, receiving reports, and vouchers are pre-numbered and periodically accounted for.

Based on your experience, this procedure primarily addresses which of the following management assertions?

- _____ a. Existence or occurrence
- _____ b. Completeness
- _____ c. Rights and obligations
- _____ d. Valuation or allocation
- _____ e. Presentation and disclosure

Case 4

Assume the following control error has occurred:

Duplicate payments were made for the same invoice.

Based on your experience, this error is **best** prevented by which of the following procedures?

- a. Careful examination of the supporting documents is made by the check signer.
- b. A proper separation of duties exists between the accounts payable function and the person responsible for signing the checks.
- c. Supporting documentation is canceled with a "Paid" stamp when checks are written.
- d. Accurate and prompt recording is required for all invoices.

Case 5

The following is an internal control objective for merchandise inventory:

Physical loss of inventory is prevented.

Based on your experience, which of the following procedures is **primarily** directed at achieving this objective?

- a. Periodic comparisons of actual quantities to perpetual records for inventories is made.
- b. The carrying value of inventory is periodically compared to net realizable value, and adjustments are recorded if necessary.
- c. Inventory accounts are adjusted for results of periodic physical counts.
- d. Materials leaving premises are checked for appropriate shipping documents.

Case 6

You are auditing the internal controls of the payroll system. Following is a portion of the internal control questionnaire completed by an auditor on your staff:

| | | |
|--|-----|----|
| 1. Are the names on the payroll checked periodically against the active employee file of the personnel department? | Yes | |
| 2. Are formal procedures established for changing names on the payroll, pay rates, and deductions? | Yes | |
| 3. Are the tasks of both payroll preparation and payment of employees adequately separated from the task of payroll bank account reconciliation? | Yes | |
| 4. Are the tasks of both timekeeping and payment of employees adequately separated from the task of payroll preparation? | | No |
| 5. Is the payroll audited periodically by internal auditors? | Yes | |
| 6. Was the internal control over payroll found to be satisfactory during the previous audit? | Yes | |
| 7. Are the duties of those preparing the payroll rotated? | Yes | |
| 8. In hiring new employees, is an inquiry made as to his/her background and former employers? | Yes | |

Based on this internal control questionnaire, what is your perception of the strength of this system in preventing and detecting misstatements to the accounts?

| | | | | | |
|-------------------|--------------|-------------------------|------------------|-----------------------|-----------------------|
| Extremely Weak | Very Weak | Substantial Weakness | Some Weakness | Not Quite Adequate | Adequate to Strong |
| 1 | 2 | 3 | 4 | 5 | 6 |

Note: A low number indicates a weak system of internal control, while a high number indicates a strong system of internal control.

Case 6*

You are auditing the internal controls of the payroll system. Following is a portion of the internal control questionnaire completed by an auditor on your staff:

| | | |
|--|-----|----|
| 1. Are the names on the payroll checked periodically against the active employee file of the personnel department? | Yes | |
| 2. Are formal procedures established for changing names on the payroll, pay rates, and deductions? | Yes | |
| 3. Are the tasks of both payroll preparation and payment of employees adequately separated from the task of payroll bank account reconciliation? | Yes | |
| 4. Are the tasks of both timekeeping and payment of employees adequately separated from the task of payroll preparation? | | No |
| 5. Is the payroll audited periodically by internal auditors? | Yes | |
| 6. Was the internal control over payroll found to be satisfactory during the previous audit? | Yes | |
| 7. Are the duties of those preparing the payroll rotated? | Yes | |
| 8. In hiring new employees, is an inquiry made as to his/her background and former employers? | Yes | |

Based on this internal control questionnaire, what is your perception of the strength of this system in preventing and detecting misstatements to the accounts?

- _____ Low
- _____ Moderate
- _____ High

Note: "Low" indicates a weak system of internal control, while "High" indicates a strong system of internal control.

Case 7

You are auditing the internal controls of the payroll system. Following is a portion of the internal control questionnaire completed by an auditor on your staff:

| | | |
|--|-----|----|
| 1. Are the names on the payroll checked periodically against the active employee file of the personnel department? | Yes | |
| 2. Are formal procedures established for changing names on the payroll, pay rates, and deductions? | Yes | |
| 3. Are the tasks of both payroll preparation and payment of employees adequately separated from the task of payroll bank account reconciliation? | | No |
| 4. Are the tasks of both timekeeping and payment of employees adequately separated from the task of payroll preparation? | Yes | |
| 5. Is the payroll audited periodically by internal auditors? | Yes | |
| 6. Was the internal control over payroll found to be satisfactory during the previous audit? | Yes | |
| 7. Are the duties of those preparing the payroll rotated? | Yes | |
| 8. In hiring new employees, is an inquiry made as to his/her background and former employers? | Yes | |

Based on this internal control questionnaire, what is your perception of the strength of this system in preventing and detecting misstatements to the accounts?

| | | | | | |
|-------------------|--------------|-------------------------|------------------|-----------------------|-----------------------|
| Extremely Weak | Very Weak | Substantial Weakness | Some Weakness | Not Quite Adequate | Adequate to Strong |
| 1 | 2 | 3 | 4 | 5 | 6 |

Note: A low number indicates a weak system of internal control, while a high number indicates a strong system of internal control.

Case 7*

You are auditing the internal controls of the payroll system. Following is a portion of the internal control questionnaire completed by an auditor on your staff:

| | | |
|--|-----|----|
| 1. Are the names on the payroll checked periodically against the active employee file of the personnel department? | Yes | |
| 2. Are formal procedures established for changing names on the payroll, pay rates, and deductions? | Yes | |
| 3. Are the tasks of both payroll preparation and payment of employees adequately separated from the task of payroll bank account reconciliation? | | No |
| 4. Are the tasks of both timekeeping and payment of employees adequately separated from the task of payroll preparation? | Yes | |
| 5. Is the payroll audited periodically by internal auditors? | Yes | |
| 6. Was the internal control over payroll found to be satisfactory during the previous audit? | Yes | |
| 7. Are the duties of those preparing the payroll rotated? | Yes | |
| 8. In hiring new employees, is an inquiry made as to his/her background and former employers? | Yes | |

Based on this internal control questionnaire, what is your perception of the strength of this system in preventing and detecting misstatements to the accounts?

- _____ Low
- _____ Moderate
- _____ High

Note: "Low" indicates a weak system of internal control, while "High" indicates a strong system of internal control.

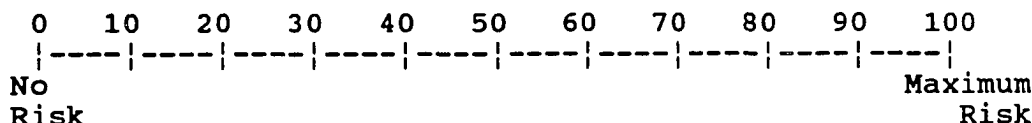
Case 8

Following is a portion of a cash disbursement internal control questionnaire completed by an auditor on your staff:

Internal Control Questionnaire

| | | |
|--|-----|----|
| A. Are protective writing devices used to inscribe amounts on checks? | Yes | |
| B. Are properly approved vouchers required for check preparation? | Yes | |
| C. Are all check signers designated by the Board of Directors? | Yes | |
| D. Are primary check signers independent of: | | |
| 1. Purchasing and those requesting expenditures? | Yes | |
| 2. Persons approving vouchers? | | No |
| 3. Persons processing and recording cash disbursements? | | No |
| E. Is an independent second check signer required who carefully scrutinizes the supporting documentation? | Yes | |
| F. Does internal audit investigate payments made to payees not on an independently approved payee listing? | Yes | |

Given the controls as represented above, assess the RISK that cash disbursements could be materially misstated AS A RESULT OF checks being written and/or disbursed for improper (unauthorized and/or invalid) purposes.



Note: A low number (i.e., 0 or 10) indicates a belief that the risk of material misstatements is zero or low, while a high number (i.e., 90 or 100) indicates a belief that the risk of material misstatements is high or at 100 percent.

Case 8*

Following is a portion of a cash disbursement internal control questionnaire completed by an auditor on your staff:

Internal Control Questionnaire

| | | |
|--|-----|----|
| A. Are protective writing devices used to inscribe amounts on checks? | Yes | |
| B. Are properly approved vouchers required for check preparation? | Yes | |
| C. Are all check signers designated by the Board of Directors? | Yes | |
| D. Are primary check signers independent of: | | |
| 1. Purchasing and those requesting expenditures? | Yes | |
| 2. Persons approving vouchers? | | No |
| 3. Persons processing and recording cash disbursements? | | No |
| E. Is an independent second check signer required who carefully scrutinizes the supporting documentation? | Yes | |
| F. Does internal audit investigate payments made to payees not on an independently approved payee listing? | Yes | |

Given the controls as represented above, assess the **RISK** that cash disbursements could be materially misstated **AS A RESULT OF** checks being written and/or disbursed for improper (unauthorized and/or invalid) purposes.

- _____ Low
- _____ Moderate
- _____ High

Note: "Low" indicates a weak system of internal control, while "High" indicates a strong system of internal control.

Case 9

A member of your staff performed Accounts Receivable confirmations for the fiscal year ending June 30, 1992. Based on preliminary estimates, you decided to examine a random sample of 150 receivables from a population of 3,000 accounts. In this setting, the population error can be estimated by multiplying the total sample error by 20 (i.e., $3,000/150$).

Two "errors," identified by the confirmation process, will be presented on the following pages. You may assume that each "error" affects both the subsidiary ledger and the general ledger. The follow-up procedures performed on each "error" are also identified. These "errors" may be indicative of control weaknesses and may imply the need for additional testing.

In responding to the two cases that follow, I am primarily interested in your views as to whether the "error" identified in the sample should be projected to estimate the population error. Based on your experience, you will be asked to assess the validity of projecting each error to the population by multiplying the error amount by 20. Alternatively, you may decide that the error should be "isolated" and not projected. You should consider each case independently and act as if each one was from a separate audit.

Case 9-A (Long)

The following error is discovered:

Account No. 8227 was overstated by \$1,456.72 due to a pricing error. The client apparently charged the price for an item located just below the correct item in the price book. The error was not detected by the normal review of invoice accuracy.

If the error is projected to the population by multiplying by 20, the estimated error (in conjunction with other sample errors, and allowing for sampling risk) will exceed tolerable error. If the error is "isolated" and not projected, the estimated error (allowing for sampling risk) will not exceed tolerable error.

Should the "error" be projected to the population?

Yes: _____

No: _____

Case 9-A (Short)

The following error is discovered:

Account No. 8227 was overstated by \$1,456.72 due to a pricing error. The client apparently charged the price for an item located just below the correct item in the price book. The error was not detected by the normal review of invoice accuracy.

Should the "error" be projected to the population?

Yes: _____

No: _____

Case 9-B (Long)

The following error is discovered:

On their confirmation response, one customer noted that the merchandise (totaling \$1,215.87) pertaining to this shipment had never been ordered or received. A check of the shipping documents indicates that the order was shipped by an independent carrier. This carrier has not responded to repeated requests for delivery information as of the end of the field work.

If the error is projected to the population by multiplying by 20, the estimated error (in conjunction with other sample errors, and allowing for sampling risk) will exceed tolerable error. If the error is "isolated" and not projected, the estimated error (allowing for sampling risk) will not exceed tolerable error.

Should the "error" be projected to the population?

Yes: _____

No: _____

Case 9-B (Short)

The following error is discovered:

On their confirmation response, one customer noted that the merchandise (totaling \$1,215.87) pertaining to this shipment had never been ordered or received. A check of the shipping documents indicates that the order was shipped by an independent carrier. This carrier has not responded to repeated requests for delivery information as of the end of the field work.

Should the "error" be projected to the population?

Yes: _____

No: _____

Case 10

The company operates retail stores in approximately 600 different locations throughout the United States. Each store has a standard operating manual which includes uniform controls to be implemented. Some of these controls are the following:

1. Cash registers are used to record sales, sales returns, and exchanges. All cash refunds and exchanges require supervisory approval.
2. Cash, personal checks, or major credit cards are accepted for payment by normal retail customers (individuals).
3. Subject to approval by the store manager, non-profit organizations and private businesses may establish credit (accounts receivable) for purchases made in the store.

Controls of five stores are being evaluated (as a representative sample) to determine if the prescribed controls are in place and working properly. A recent examination of store No. 14 (the first store to be visited this year) uncovered the following:

1. The standard operating manual could not be located by Store No. 14 management.
2. Based on further investigation, credit approvals for non-profit organizations and private businesses were made at Store No. 14 without adequate investigation or documentation.

Based on your experience, which of the following options would you perform?

- _____ a. Do not expand tests of credit approvals.
- _____ b. Expand tests of credit approvals at Store No. 14, but not at other stores.
- _____ c. Expand tests of credit approvals to the other four stores selected for examination this year.
- _____ d. Expand tests of credit approvals to an additional sample of stores. (For example, expand the number of stores to be examined from 5 to 10.)

Case 11

The company operates retail stores in various states. You performed a review of internal controls at several stores during interim testing. At this time, you are planning the year-end substantive tests of balances for the following accounts: sales, cash, accounts receivable, inventories, and fixed asset additions.

Preliminary analytical review procedures have identified the following stores as potential audit sites for these substantive tests. You have decided to audit one of these stores and must now decide which store will be audited this year.

The following table contains selected trial balance information comparing the year just ended (1992) to the prior year (1991):

| Account | Store A | Store B | Store C | Store D | Store E |
|---------------------|---------|---------|---------|---------|---------|
| Sales | +15.6% | +10.4% | -1.2% | +21.7% | -24.6% |
| Cash | +9.8% | +5.8% | -21.4% | +0.5% | -19.7% |
| Accounts Receivable | +8.3% | -1.3% | -1.7% | +26.4% | +18.7% |
| Inventories | +3.6% | +1.7% | -21.5% | -22.5% | +1.7% |
| Fixed Assets | +4.4% | -1.2% | +1.9% | +2.2% | -0.9% |

Which store will you visit? Store _____

Case 12

Various account titles or audit areas are listed below for a small, wholesale retailer. Based on your experience, indicate the risk of material misstatement (i.e., Low, Moderate, or High) within each of these accounts or audit areas:

| B A L A N C E S H E E T I T E M S | | | | |
|---------------------------------------|-----------------------------------|----------------------------------|----------|------|
| | Financial Statement Amounts | Risk of Material Misstatement | | |
| Cash | \$ 1,830,000 | Low | Moderate | High |
| Accounts Receivable | 2,627,000 | Low | Moderate | High |
| Inventory | 5,155,000 | Low | Moderate | High |
| Property, Plant, & Equip. | 4,573,000 | Low | Moderate | High |
| Other Assets | <u>205,000</u> | Low | Moderate | High |
| | \$14,390,000 | | | |
| Current Part of L-T Debt | \$ 257,000 | Low | Moderate | High |
| Accounts Payable | 1,419,000 | Low | Moderate | High |
| Accrued Liabilities | 1,996,000 | Low | Moderate | High |
| Long-Term Debt | 3,115,000 | Low | Moderate | High |
| Deferred Income Taxes | 755,000 | Low | Moderate | High |
| Common Stock | 1,679,000 | Low | Moderate | High |
| Retained Earnings | <u>5,169,000</u> | Low | Moderate | High |
| | \$14,390,000 | | | |

| I N C O M E S T A T E M E N T I T E M S | | | | |
|---|----------------|-----|----------|------|
| Sales | \$22,425,000 | Low | Moderate | High |
| Cost of Goods Sold | 18,407,000 | Low | Moderate | High |
| Selling and Admin. Exp. | 2,096,000 | Low | Moderate | High |
| Interest Expense | 254,000 | Low | Moderate | High |
| Provision for Taxes | <u>672,000</u> | Low | Moderate | High |
| Net Income | \$ 996,000 | | | |

[Demographic Pages for Internal Auditors]

Part Two

Please do not examine or answer the following questions until you have responded to the twelve cases presented on the previous pages.

Demographic Information

1. Please indicate the time when you completed this exercise: _____
2. Age: _____
3. Certifications: _____
4. Highest Degree Earned: _____
5. Year Earned: _____
6. Location: _____
7. Job Title (position): _____
8. Years in current position: _____ years
9. Number of employees you supervise: _____
10. Years in internal auditing: _____ years
11. Are you a member of the Institute of Internal Auditors? Yes No
12. Have you ever worked in public accounting? Yes No
 If Yes, the number of years worked in public accounting: _____ years
13. Years of business experience outside of auditing: _____ years

[Continued on next page]

14. In what area(s) do you individually perform most of your work?

| <u>Internal Audit Activity</u> | Percent of Time | |
|--------------------------------|------------------------|------------------------------|
| | <u>Last 12 Months</u> | <u>Internal Audit Career</u> |
| Financial Audits | _____ | _____ |
| Operational Audits | _____ | _____ |
| EDP (Computer) Audits | _____ | _____ |
| Compliance Audits | _____ | _____ |
| Other Audits (_____) | _____ | _____ |
| | 100 % | 100 % |

15. How long has it been since you performed or assisted with a financial audit? _____ months

16. How familiar are you with these types of audit procedures?

| | Not Very Familiar | 2 | Very Familiar |
|---------------------------------|-------------------|---|---------------|
| a. Compliance Tests | 1 | 2 | 3 |
| b. Substantive Tests | 1 | 2 | 3 |
| c. Analytical Review Procedures | 1 | 2 | 3 |

For each item below, circle the response which most nearly captures your feelings.

17. How **realistic** were the cases you analyzed in Part One?

| Not Realistic | Somewhat Realistic | Very Realistic |
|---------------|--------------------|----------------|
| 1 | 2 | 3 |
| | 4 | 5 |

18. How **interesting** were the cases you analyzed in Part One?

| Not Interesting | Somewhat Interesting | Very Interesting |
|-----------------|----------------------|------------------|
| 1 | 2 | 3 |
| | 4 | 5 |

[Demographic Page for External Auditors]

Part Two

Please do not examine or answer the following questions until you have responded to the twelve cases presented on the previous pages.

Demographic Information

1. Please indicate the time when you completed this exercise:_____
2. Age:_____
3. Certifications:_____
4. Highest Degree Earned:_____
5. Year Earned:_____
6. Location:_____
7. Job Title (position):_____
8. Years in current position:_____ years
9. Years in public accounting:_____ years
10. Are you a member of the American Institute of Certified Public Accountants? Yes No

For each item below, circle the response which most nearly captures your feelings.

11. How **realistic** were the cases you analyzed in Part One?

| | | | | |
|------------------|---|-----------------------|---|-------------------|
| Not Realistic | 2 | Somewhat Realistic | 4 | Very Realistic |
| 1 | | 3 | | 5 |

12. How **interesting** were the cases you analyzed in Part One?

| | | | | |
|--------------------|---|-------------------------|---|---------------------|
| Not Interesting | 2 | Somewhat Interesting | 4 | Very Interesting |
| 1 | | 3 | | 5 |

Suggested Cover Letter for Internal Audit Departments

October 5, 1992

Dear Staff Member:

I enclose a brief survey for a research study which is being conducted by Perry Moore, a Ph.D. student at the University of Georgia. Mr. Moore is investigating various aspects of auditor judgments and has requested our assistance in gathering his data.

Firm Name supports Mr. Moore in this research, which is designed to enable both him and us to better understand the audit judgment process. You have been selected by the firm to participate in this project. Please complete the attached instrument at your earliest convenience (which should take approximately 30 minutes).

Instructions for completing this instrument are attached. Mr. Moore has asked me to emphasize the following instructions:

Due to the nature of the exercise, you must work alone. **Please do not refer to any audit manuals, textbooks, or other aids as you complete the cases.**

A stamped envelope is enclosed for you to mail the completed instrument back to Mr. Moore. Thank you for your assistance in this matter.

Sincerely,

Internal Audit Director / Senior Manager

Suggested Cover Letter for Public Accounting Firms

October 5, 1992

Dear Staff Member:

I enclose a brief survey for a research study which is being conducted by Perry Moore, a Ph.D. student at the University of Georgia. Mr. Moore is investigating various aspects of auditor judgments and has requested our assistance in gathering his data.

Firm Name supports Mr. Moore in this research, which is designed to enable both him and us to better understand the audit judgment process. You have been selected by the firm to participate in this project. Please complete the attached instrument at your earliest convenience (which should take approximately 30 minutes).

Instructions for completing this instrument are attached. Mr. Moore has asked me to emphasize the following instructions:

Due to the nature of the exercise, you must work alone. **Please do not refer to any audit manuals, textbooks, or other aids as you complete the cases.**

A stamped envelope is enclosed for you to mail the completed instrument back to Mr. Moore. Thank you for your assistance in this matter.

Sincerely,

Partner / Senior Manager