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THE EFFECTS OF ACCOUNTING REPORTS ON LOAN OFFICERS:
AN EXPERIMENT

by

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(ABSTRACT)

This experiment examines the effects of financial reporting bases (GAAP and income tax) and service levels offered by external accountants (audits and reviews) on loan officers. The effects are measured using a loan approval decision and four perceptions: (1) appropriate interest premium, (2) likelihood of default, (3) confidence in the financial report, and (4) usefulness of the financial report.

Analysis of variance techniques are used to ascertain the effects of accounting reports on the perceptions of loan officers; logit model development is used to isolate the effects on loan approval decisions. Reviews result in higher interest premiums than audits. Loan officers also associate higher default risks with reviews and tax-basis financial reports. Loan officers are most confident with audited GAAP-basis financial reports and least confident with audited income tax basis financial reports. In addition, loan officers indicate that GAAP-basis financial reports are more useful than income-tax-basis financial reports. Neither reporting basis nor service level affected their loan-approval decisions, however.

Confirmatory and exploratory factor analyses are used to develop surrogates for decision usefulness using Statement of Financial Accounting Concepts (SFAC) Number 2. The most dependable surrogate for decision usefulness developed involves two characteristics that SFAC Number 2 suggests as being nonessential to accounting information: certainty and precision. The reporting basis affected this surrogate and decision usefulness itself in the same manner; in both cases, GAAP-basis financial reports are more useful than tax-basis financial reports.

Managers, accountants, and loan officers should be aware that using income-tax-basis financial reports can detrimentally affect loan officer perceptions of default risk, confidence, and decision usefulness. Further, using a review rather than an audit may affect loan officer perceptions of confidence and interest rates.

Future research could introduce additional independent variables. These variables include the effects of a statement of changes in financial position, financial ratios, industries, or differential reporting. Research using qualitative characteristics of accounting information could lead to strong measures of decision usefulness that would be beneficial in ascertaining effects on loan-officer perceptions and decisions.

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Chapter One: Genesis

One of the most important accounting responsibilities for small businesses is providing financial information to creditors. Financial information is provided to third-party users such as bank loan officers without cost to the users. Therefore, these third parties would tend to want as much information as possible.¹ Yet, it is inappropriate for loan officers to require more information than necessary to make a loan decision if that additional information is not cost-free to all parties involved.

In deciding how best to communicate financial information, accountants must consider the costs and benefits of alternative reporting bases (including generally accepted accounting principles) and the extent of external accountant involvement. Some accountants argue that (a) financial reports based upon GAAP are more costly than those prepared on an income tax basis,² and (b) audited financial reports are more costly than reports that are compiled or reviewed.³ One must be careful not to conclude, because income tax basis and reviewed or compiled financial reports cost less to

¹ Freidlob, G. Thomas and Franklin J. Plewa, Jr., "A Practical Solution To Standards Overload," in Small Business Section (Kathy Williams, Ed.), *Management Accounting*, October, 1984.

² Epaves, Richard A. "An Alternative To Little GAAP," *The Journal of Accountancy*, November, 1978, pp. 36-45.

³ Friedlob and Plewa, Jr., *op cit*, p. 92.

prepare than audited GAAP financial reports, that non-audited non-GAAP reports are the *best* possible for small businesses. A thorough analysis must consider all costs of the financial report to the issuing firm, including any additional cost of borrowing capital that might be incurred because of loan officers' perceptions of decision usefulness, confidence, and risk.

Loan officers may be confused by tax-basis financial reports, especially in conjunction with services from external accountants.⁴ In an effort to identify some of this confusion, it is appropriate to examine the effects of financial reporting bases **combined with** external accountant services. Because this confusion may impact not only the loan-approval decision, but also loan officer perceptions of confidence in and usefulness of the financial report, these perceptions are also studied. This research examines the effects of GAAP versus income tax basis accounting and audited versus reviewed reports on loan officer decision-making and perceptions of (a) appropriate interest rates for loans, (b) default risk as exemplified by the financial report, (c) confidence in the financial report, (d) and decision usefulness of the financial report. Professionals in accounting, banking, and management can learn more about the effects on loan officers of financial reporting and better understand the costs associated with various types of financial reporting by reviewing the results of this research.

Background

The financial report is only one of many information sets that loan officers might use to make loan decisions, but it is the most important element in evaluating the financial status of a company. Once the role of financial reports is examined, the discussion turns to the views and positions re-

⁴ Abdel-Khalik, A. Rashad, principal researcher, William A. Collins, P. David Shields, Douglas H. Snowball, Ray G. Stephens, and John H. Wragge, coauthors, *Financial Reporting By Private Companies: Analysis And Diagnosis* (Stamford, Connecticut: Financial Accounting Standards Board, 1983).

garding income tax basis financial reports held by the banking and accounting professions. The positions of Robert Morris Associates (RMA), the American Institute of Certified Public Accountants (AICPA), and the Financial Accounting Standards Board (FASB) are presented. In addition, an attempt at establishing Generally Accepted Tax Accounting Principles (GATAP) is presented and criticized.

Financial Reports In the Decision-Making Framework of Loan Officers

Financial reports are not the only sources of information used by commercial bank loan officers in the analysis of commercial loans, because some of the necessary information cannot be obtained from financial reports. The information needed is usually related to questions concerning the following general areas: the purpose of the loan, the nature of the borrower, the borrower's financial status, the industry and the economy, and the bank's philosophy and lending policies.⁵ What, then, is the role of financial statements in analysis of commercial loans? In order to answer this question, the sources of information available to loan officers are examined. (See Figure 1 on page 4).⁶ According to McNeil and O'Leary, the financial statements are the most important source of information about the *financial status* of the company.⁷ This is an extremely important area of analysis with regard to commercial loans, because the financial status of the company is the "primary source of support for all commercial loans."⁸

In spite of their importance, the precise role of financial statements in the decision-making framework of the commercial bank loan officer is not well understood. This lends support to Kennedy's

⁵ McNeil, Jane H. and Edward T. O'Leary, *Introduction To Commercial Lending* (Washington, D.C.: American Bankers Association, 1984), second printing, pp. 103-114.

⁶ *Ibid*, p. 116-118.

⁷ *Ibid*, p. 115.

⁸ *Ibid*, p. 93.

- Owners And/Or Management
- Company's Professional Associates
 - Accountants
 - Bankers
 - Consultants
 - Customers
 - Insurance Agents
 - Lawyers
 - Vendors
- Financial Statements
- Credit Reporting Agencies
- Trade Associations
- Governmental Agencies
- Public Records
- Publications

Figure 1. Sources of Information For Commercial Loan Analysis

suggestion that multiple measures of decision usefulness are necessary in order to ascertain the importance of financial statement information to loan officers for decision-making purposes. Examining the importance of various measures of decision usefulness will enhance understanding of how financial information is used in such decision-making.⁹ Therefore, this study generates multiple measures for testing the decision usefulness of various financial reporting types.

The A Priori Nature of Professional Positions

Much of the work on tax-basis financial reports has been of an *a priori* nature. Since 1976, when the income tax basis was defined as a comprehensive basis of accounting, several writers have discussed the preparation of financial statements on an income tax basis.¹⁰ Generally, these discussions have been optimistic about financial reports prepared on an income tax basis; yet, many of the writers express concerns about problems inherent in them.

Epaves is probably the first to suggest that financial reports prepared on an income tax basis may be alternatives to financial reports prepared on the basis of GAAP.¹¹ He argues that financial reports prepared on an income tax basis might also be an alternative to “little GAAP”, as if to suggest that income tax basis reports might provide certain small businesses with an economical and effective reporting format. He also points out that the nature of the external accountant’s report may inhibit the use of an income tax basis because it clearly states that tax basis statements are not in accordance with GAAP. To some users of financial statements this represents an inferior product. Further, the “third paragraph”, which reports the intention of management is to report on an income

⁹ Kennedy, Henry A., “A Behavioral Study of the Usefulness of Four Financial Ratios,” *The Journal of Accounting Research*, Spring, 1975, pp. 97-116.

¹⁰ American Institute of Certified Public Accountants, “Special Reports,” *Statements On Auditing Standards Number 14*, Auditing Standards Executive Committee (New York: AICPA, December, 1976).

¹¹ Epaves, Richard A. “An Alternative To Little GAAP,” *The Journal of Accountancy*, November, 1978. See also Epaves, Richard A., ed., *Accounting and Auditing Update*, “Standards Overload And Tax Basis Financials,” *The CPA Journal*, Summer, 1982, pp. 137-138.

tax basis rather than on the basis of GAAP, often results in a perceived lack of a “clean” opinion, which may or may not be the case.

Derieux suggests that financial reports that do not conform to GAAP, such as financial reports prepared on an income tax basis, may be negatively construed by commercial bank loan officers.¹² He insists that this need not be the case, because it is up to accountants to educate loan officers about non-GAAP financial reports. Derieux and others have suggested that some companies, especially those not highly dependent on external financing, should consider financial reports prepared on an income tax basis as a cost-effective alternative to financial reports prepared on the basis of GAAP.¹³ These writers do not, however, demonstrate the cost effectiveness of tax basis statements in comparison to GAAP.

Robbins states that there is a lack of guidance on the use of an income tax basis in preparing financial reports.¹⁴ He presents arguments concerning the problems of determining (1) when it is appropriate to use an income tax basis for preparing financial reports, (2) the level of uncertainty due to external accountants’ reports that accompany income tax basis financial statements, (3) materiality thresholds in preparing income tax basis financial reports, and (4) the effects of the absence of a statement of changes in financial position (SCFP) in financial reports prepared on an income tax basis. He argues that income tax basis statements are only necessary when more information (such as disclosures typically found in notes) is needed than is available on an income tax return, but the cost of preparing financial statements based on GAAP is greater than the potential benefit. In order to assess the costs and benefits, more knowledge is needed about the effects of service levels and reporting bases on loan officer perceptions and decisions.

¹² Derieux, Samuel A. “GAAP And the Privately Held Company,” *Corporate Accounting*, Summer, 1985, pp. 29-33.

¹³ See Friedlob and Plewa, Jr., *op cit.* Friedlob and Plewa divide financial statements into levels that are designed to segregate the needs of the company supplying the financial statements.

¹⁴ Robbins, Barry, “Perspectives On Tax Basis Financial Statements,” *The Journal of Accountancy*, August, 1985, pp. 89-100.

External accountants have difficulty in attesting to, or providing assurance for, financial statements prepared on an income tax basis. By definition, such financial statements are prepared based on the Internal Revenue Code. Robbins points out that the Internal Revenue Service, not external accountants, makes the final decision as to whether the information in financial statements prepared on an income tax basis is in violation of the Internal Revenue Code. He suggests that although a statement such as “subject to audit by the Internal Revenue Service” might be helpful, but such a statement is not permitted within review or compilation reports. The qualification might be appropriate in a separate paragraph, because external accountants should not be held liable for unforeseeable changes by IRS agents.¹⁵ Further, the problem would be compounded if external accountants are required to adopt different materiality thresholds when accounting under an income tax basis as opposed to accounting on the basis of GAAP. Robbins also points out that the Internal Revenue Code does not require an SCFP. It would therefore appear unnecessary to include the SCFP with the basic financial statements prepared on an income tax basis. Robbins suggests that such a statement might be included, but it is not clear what its title would be. These and other problems have affected the position of the lending profession regarding the usefulness of tax-basis financial statements as alternatives to GAAP.

Positions of the Commercial Lending Profession

The commercial lending profession has not supported the viewpoint that financial reports prepared on an income tax basis are acceptable for decision-making purposes. Robert Morris Associates, a professional organization of commercial bank loan officers, has taken a firm stand against financial reports prepared on a basis other than GAAP:

There should be only one set of generally accepted accounting principles applicable to basic financial statements for all business and nonbusiness enterprises, regardless of whether the entity is public or private, regulated or nonregulated, large or small. The use of alternative accounting principles under

¹⁵ For a discussion of some of the legal ramifications of alternatives to GAAP, see Stanger, Abraham M. and Samuel P. Gunther, “Big GAAP - Little GAAP: Should There Be Different Financial Reporting For Small Businesses?” *New York University Law Review*, November/December, 1981, pp. 1209-1235.

similar circumstances contributes to a loss in comparability and thus reduces the user's ability to judge relative tasks.¹⁶

Commercial bank loan officers agree with the position of Robert Morris Associates. For example, Abdel-Khalik, *et al.*, found that commercial bank loan officers "were not interested in the prospect of having financial statements that follow the income tax basis of accounting rather than GAAP."¹⁷ Further, the majority of those interviewed by Abdel-Khalik, *et al.*, agreed that "(t)ax basis financial statements lack credibility with lenders." Thus, there are sufficient arguments to conclude that many commercial bank loan officers prefer financial reports prepared on the basis of GAAP over those prepared on an income tax basis. The accounting profession has not yet taken such a firm stand regarding tax-basis financial statements. There is no evidence about the effects on loan officers of different financial reporting bases.

Positions of the Accounting Profession

Although accounting on an income tax basis is as old as the Internal Revenue Code, the American Institute of Certified Public Accountants (AICPA) did not present accounting on an income tax basis as a comprehensive basis of accounting until 1981. Statement on Auditing Standards (SAS) Number 14 describes an income tax basis as

A basis of accounting that the reporting entity uses or expects to use to file its income tax return for the period covered by the financial statements.¹⁸

The accounting profession, however, has considered income tax basis financial reports at various times when considering the financial reporting problems of small businesses.¹⁹

¹⁶ Robert Morris Associates, "RMA's Position On Accounting Principles And Auditing Procedures", *The Journal of Commercial Bank Lending*, August, 1985, pp. 27-31.

¹⁷ Financial Accounting Standards Board, *Financial Reporting By Privately Owned Companies: Summary of Responses To FASB Invitation To Comment*, *op cit*, p. 27. Note that subjects were 554 bankers supplied from 554 banks by RMA.

¹⁸ American Institute of Certified Public Accountants, *SAS Number 14*, *op cit*.

¹⁹ See American Institute of Certified Public Accountants, *Report of the Committee On Generally Accepted*

Positions of the American Institute of Certified Public Accountants (AICPA)

The AICPA has supplied much of the guidance available for the accounting profession with respect to income tax basis financial statements. The Special Committee on Accounting Standards Overload was charged by the AICPA to define the standards overload issue and to bring relief to small businesses in their financial reporting efforts. The report by the Committee (commonly referred to as the Scott Committee Report) provides the most detailed consideration available on financial reporting on an income tax basis.

The Scott Committee Report The Scott Committee devoted most of its report to a discussion of income tax basis financial statements. The Committee had undertaken the task of making recommendations regarding standards overload. Recommendations were concentrated in the following areas: (1) no change, retain status quo, (2) dual GAAP, (3) differential reporting requirements, (4) revised auditors' reporting standards, and (5) an alternative to GAAP.²⁰ The Committee found the possibility of an alternative to GAAP promising. After evaluating (1) a new basic accounting method, (2) the cash or modified cash basis, and (3) an income tax basis, the Committee concluded "the income tax basis could be used by many entities as a basis on which they may present financial statements."²¹ The Committee also pointed out that the use of an income tax basis would weaken neither the significance nor the authority of GAAP, nor support for the Financial Accounting Standards Board (FASB). Although the Committee indicated that users may attempt to estimate

Accounting Principles For Smaller And/Or Closely Held Businesses, issued by the Accounting Standards Division, (the Werner Committee Report) (New York: AICPA, August, 1976); American Institute of Certified Public Accountants, *Report of the Committee On Small And Medium Sized Firms*, issued by the Committee on Small And Medium Sized Firms, (the Derieux Committee Report) (New York: AICPA, 1980); American Institute of Certified Public Accountants, *Tentative Conclusions And Recommendations of the Special Committee On Accounting Standards Overload*, issued by the AICPA Special Committee On Accounting Standards Overload, a discussion paper (The Scott Committee Report) (New York: AICPA, December, 1981); and American Institute of Certified Public Accountants, *Report of the Special Committee On Accounting Standards Overload*, issued by the AICPA Special Committee On Accounting Standards Overload (New York: AICPA, February, 1983).

²⁰ American Institute of Certified Public Accountants, *The Scott Committee Report*, *op cit*, p. 10.

²¹ *Ibid*, p. 13.

any conservatism that may be inherent in income tax basis financial statements, it pointed out that “most users of financial statements recognize and understand, or should be expected to recognize and understand, the nature of the income tax basis of accounting.”²²

The majority of the members of the Scott Committee focused on guidelines for the preparation of financial statements prepared on an income tax basis. Guidance is concentrated in the areas of minimum disclosures, the measurement of assets, liabilities, revenues, and expenses that are to be presented, and sample financial statements.²³ Foremost in the area of minimum disclosure is the indication on each financial statement that the statement is prepared on an income tax basis. In addition to sample financial statements, the Committee provided sample notes to financial statements and sample reports by external accountants for audits, reviews, and compilations involving financial statements prepared on an income tax basis.

Other Actions By the AICPA The AICPA has created a limited array of generally accepted accounting principles for financial statements prepared on an income tax basis. Two elements that are often considered to be GAAP are particularly related to income tax basis financial statements: (1) Statement On Standards For Accounting And Review Services, Number 1, *Compilation And Review of Financial Statements*, and (2) an auditing interpretation, *Adequacy of Disclosure In Financial Statements Prepared On A Comprehensive Basis of Accounting Other Than GAAP*.²⁴ These two elements, combined with Statement On Auditing Standards Number 14 and the guidelines in the Scott Committee Report, compose essentially all of the guidance available for preparing financial statements on an income tax basis.

²² *Ibid.*

²³ *Ibid.*, p. 15.

²⁴ American Institute of Certified Public Accountants, “Compilation And Review of Financial Statements,” *Statements On Standards For Accounting And Review Services* (New York: AICPA, December, 1978) and American Institute of Certified Public Accountants, *Adequacy of Disclosure In Financial Statements Prepared On A Comprehensive Basis of Accounting Other Than GAAP* (New York: AICPA, 1981). See also *SAS Number 14*; *op cit.*

Position of the Financial Accounting Standards Board (FASB)

The closest the FASB has come to suggesting that financial statements prepared on an income tax basis might show promise as an alternative approach has been a call in 1983 for research regarding the possible use of alternatives to financial statements prepared on the basis of GAAP.²⁵ In 1984, Larson indicated that one proposal being considered by the FASB is the “possibility of issuing guidance on the income tax basis of accounting...(due to perceived immediate relief).”²⁶

Position of the National Society of Public Accountants (NSPA)

In August, 1984, the National Society of Public Accountants (NSPA) issued Generally Accepted Tax Accounting Principles (GATAP).²⁷ These principles are essentially citations of the Internal Revenue Code accompanied by recommendations for accounting procedures. Appendixes include sample financial statements and various transmittal letters. The chairman of the Tax Accounting Standards Committee of the NSPA calls the relationship between financial statements and the tax return the “gap in GAAP” and asserts that GATAP should provide financial statements in “a more clean and understandable manner”.²⁸

²⁵ Financial Accounting Standards Board, “Board Responds To Concerns About Standards Overload,” *Status Report Number 150* (Stamford, Connecticut: Financial Accounting Standards Board, November 22, 1983).

²⁶ Larson, Rholan E., as indicated within the report of the AICPA task force on accounting standards overload and reported in *The Journal of Accountancy*, (News Report), June, 1984, pp. 12-13.

²⁷ National Society of Public Accountants, “Standards of Generally Accepted Tax Accounting Principles For Preparation of Tax Basis Financial Statements,” *The National Public Accountant*, August, 1984, pp. 20-48.

²⁸ Cordano, D. L., “NSPA Fills the Gap In GAAP,” *The National Public Accountant*, September, 1985, pp. 18-24.

The Generally Accepted Tax Accounting Principles issued by the NSPA are not, in fact, “generally accepted.” In spite of claims by the NSPA that the principles are but a starting point,²⁹ the AICPA has pointed out several major problems induced by the principles:

1. It is difficult to distinguish the Internal Revenue Code from recommended accounting procedures.
2. Terms are poorly defined; the principles seem incomplete.
3. The NSPA appears to have created a set of financial statements other than those prepared on an income tax basis; one financial statement in the appendix reconciles net income per financial statements prepared on an income tax basis to net income per the income tax return.
4. Sample transmittal letters are unclear.
5. There are no links between levels of assurance via the transmittal letters and accounting procedures indicated.³⁰

The criticisms indicated by the AICPA are justified. One of the transmittal letters includes the expression of an **opinion** on financial statements prepared in accordance with “tax accounting principles of the Internal Revenue Code, Rules, and Regulations.”³¹ The AICPA also points out that “generally accepted” can hardly apply when certain state laws do not permit certain accounting practices by unlicensed accountants.³² Although Generally Accepted Tax Accounting Principles are not generally accepted, support for financial statements prepared on an income tax basis does exist. Much of the trouble involved with such financial statements, however, is based on determining the appropriate service levels from external accountants.

²⁹ National Society of Public Accountants, “NSPA Response To AICPA Criticism of GATAP,” *The National Public Accountant*, February, 1985, p.. 15-17.

³⁰ American Institute of Certified Public Accountants, in *The Journal of Accountancy*, October, 1984

³¹ “Standards of Generally Accepted Tax Accounting Principles For Preparation of Tax Basis Financial Statements,” *op cit.*

³² American Institute of Certified Public Accountants in *The Journal of Accountancy*, *op cit.*

Service Levels Offered by External Accountants

Statement On Standards For Accounting And Review Services (SSARS) Number 1, *Compilation And Review of Financial Statements*, was issued in December, 1978.³³ This statement created new levels of service that could be performed by external accountants in response to growing concerns about unaudited financial statements.

Criticism of Unaudited Financial Statements

Criticisms of unaudited financial statements were evident in late 1972, when most of one issue of *The Journal of Accountancy* was devoted to such problems.³⁴ It was obvious that “unaudited” was interpreted as “no audit” by external accountants,³⁵ but as a “limited” audit by the courts³⁶ or by users of financial reports.³⁷ Practitioners seldom made clear the meaning of “unaudited;” the problem was compounded by the fact that practitioners were trained in an “audit mode.”³⁸ An 85% majority of Texas CPAs who responded to a study in the early 1970’s thought that minimum review requirements should exist for unaudited engagements.³⁹ There was considerable variation in the minimum requirements, however.

³³ For a detailed history of the evolution of SSARS Number 1, see Rankin, Larry J., “The Development of Compilations And Reviews,” *The Accounting Historian’s Journal*, Spring, 1984, pp. 63-82.

³⁴ Doherty, William O., “Editor’s Notebook,” *The Journal of Accountancy*, December, 1972, p. 39.

³⁵ American Institute of Certified Public Accountants, “Unaudited Financial Statements,” *Statement On Auditing Procedure Number 38* (New York: AICPA, September, 1967).

³⁶ *1136 Tenants’ Corporation vs. Max Rothenberg & Company* Index 10575/1965, New York County, Trial Term, Pt. VII (1970).

³⁷ Block, Max, “Trend To Duality In Accounting Standards,” *The CPA Journal*, March, 1977, pp. 11-15.

³⁸ Chazen, Charles and Kenneth Solomon, “The ‘Unaudited’ State of Affairs,” *The Journal of Accountancy*, December, 1972, pp. 41-45.

³⁹ Guy, Dan M. and Alan J. Winters, “Unaudited Financial Statements: A Survey,” *The Journal of Accountancy*, December, 1972, pp. 46-53.

In addition, there was evidence that unaudited financial statements representing the financial conditions of small businesses consistently exhibit inadequate disclosure. A study by Ingram, Guy, Merei, and Justis indicates that in 169 reports to various government agencies, between four and eighty percent of disclosures for twenty-four items were not in accordance with GAAP.⁴⁰

Compilation And Review of Financial Statements

The Accounting and Review Services Committee of the AICPA realized that the services offered by external accountants were not defined in an articulate manner, and attempted to remedy some of the problems surrounding unaudited financial statements by issuing SSARS Number 1, *Compilation And Review of Financial Statements*. This statement applies to *nonpublic* enterprises whose securities do not trade now and are not being prepared to trade soon in the public market.⁴¹

SSARS Number 1 defines an audit as “an examination in accordance with generally accepted auditing standards.” On the other hand, a review is described as “performing inquiry and analytical procedures that provide the accountant with a reasonable basis for expressing limited assurance that there are no material modifications that should be made to the statements in order for them to be in conformity with generally accepted accounting principles or, if applicable, with another comprehensive basis of accounting.”⁴² The objective of an audit “is to provide a reasonable basis for expressing an opinion about the financial statements taken as a whole.”⁴³ A review does not, according to the authoritative position of SSARS Number 1, provide any basis for expressing such an opinion.

⁴⁰ Ingram, Robert W., Dan M. Guy, Issam J. Merei, and Robert T. Justis, “Disclosure Practices In Un-audited Financial Statements of Small Businesses,” *The Journal of Accountancy*, August, 1977.

⁴¹ *SSARS Number 1, op cit*, paragraph 4.

⁴² *Ibid.* Reviews and audits are both considered to examine loan officer confusion of the terms “audit” and “GAAP”. Such an examination did not require consideration of compilations. They are omitted in this study.

⁴³ *Ibid.*

The effects of audits and reviews in conjunction with various financial reporting bases is not well understood. No evidence was found to confirm or refute the conclusion by Abdel-Khalik, *et al.*, that the term "audit" may be confused with the term "GAAP." Further, there appears to be no experimental evidence about the effects on loan officers of financial reporting bases. This research examines the effects of accountant service levels and financial reporting bases on loan-officer decisions and perceptions.

Approach

Data for the research were obtained in an experiment administered May 16, 1986, at the National Commercial Lending School sponsored by the American Bankers Association in Oklahoma. Four versions of a single company's financial report were developed to provide a financial report of each of the following types:

1. An *audited* financial report prepared on a *GAAP* basis.
2. An *audited* financial report prepared on an *income tax* basis.
3. A *reviewed* financial report prepared on a *GAAP* basis.
4. A *reviewed* financial report prepared on an *income tax* basis.

Because all four reports represent the same company, the *actual* underlying economic conditions are the same for all four reporting types. The four types are used to determine the effects of (1) financial reporting basis (tax or GAAP), (2) service level (audit or review), and (3) interaction of reporting basis and service level on loan officer decisions and perceptions.

Part I of the experiment consisted of assigning one of the four types of financial reports and a loan request randomly to each loan officer. Other factors, such as relationship with the customer, type and amount of loan, and whether the loan was secured, were described in detail and held constant

to preclude such factors from confounding the experimental results. The loan officers were then asked questions designed to quantify their perceptions relating to the financial report.

Two independent variables were manipulated in the experiment: service level and reporting basis. The effects of these variables on five dependent variables are examined. These five variables include (1) the decision whether to approve a loan, and perceptions of (2) appropriate interest rate, (3) likelihood of default, (4) confidence in the financial report, and (5) decision usefulness of the financial report. The effects of service levels and reporting bases on the loan decision are examined using logit analysis. The multivariate combination of the four perceptions is analyzed using analysis of variance to ascertain the effects of the independent variables.

Kennedy indicates the importance of multiple measures of decision usefulness.⁴⁴ Because no known normative model exists to describe the use of financial information in banker decision-making,⁴⁵ generation of multiple measures of decision usefulness is important. Confirmatory factor analysis and exploratory factor analysis are used to develop multiple measures of decision usefulness using the qualitative characteristics of accounting information found in Statement of Financial Accounting Concepts (SFAC) Number 2.⁴⁶ The effects of the independent variables on these measures is examined using analysis of variance.

⁴⁴ Kennedy, *op cit.*

⁴⁵ Lev, Baruch, *Financial Statement Analysis: A New Approach* (Englewood Cliffs, New Jersey: Prentice-Hall, 1975), pp. 102-103.

⁴⁶ Financial Accounting Standards Board, "Qualitative Characteristics of Accounting Information," *Statement of Financial Accounting Concepts Number 2* (Stamford, Connecticut: Financial Accounting Standards Board, May, 1980)..

Overview

The remaining chapters describe the development of research questions and appropriate hypotheses, creation and administration of the experiment, analysis of the data, and results of the experiment. The following chapter (Chapter Two) reviews research relating to the use of financial information by loan officers, income tax basis financial statements, and service levels offered by external accountants. The review of this literature, when combined with the background information described in this chapter, provides the foundation to generate research questions.

The research questions are developed in Chapter Three; hypotheses are delineated to test these research questions. Descriptions of the variables used to test the hypotheses and the statistical methods used to analyze the data are presented. The materials, methods, and procedures used to develop and administer the experimental instrument are also described in Chapter Three. Demographic characteristics of the subjects are presented.

The statistical analyses of the data are presented in Chapter Four. Analysis of variance and logit analysis techniques are used to test the hypotheses. Multiple measures of decision usefulness are developed, and the hypotheses that are based upon the perception of decision usefulness are retested using analysis of variance. Chapter Five presents the conclusions that can be drawn from the study vis-a-vis the limitations of this experiment. The contributions of this research and implications for future research are also discussed in detail in Chapter Five.

Chapter Two: Review of Relevant Research

Although many of the writings discussed in Chapter One investigate commercial bank loan officers as users of financial information, research examining the ramifications of reporting on an income tax basis as the source of the information is limited. This is true in spite of the fact that professional bodies indicate a need for research involving such financial reporting. The first section of this chapter investigates research considering commercial bank loan officers as users of financial information. The next section involves research about financial reports prepared on an income tax basis. The final section reviews research on two service levels of external accountants: audits and reviews.

Loan Officers As Users of Financial Reports

The FASB, within the conceptual framework, indicates that creditors are primary users of the

general purpose external financial reports of business enterprises.⁴⁷ Further, the FASB reports that loan officers are the primary users of the financial reports of small business enterprises.⁴⁸ It is therefore important to investigate commercial bank loan officers as users of financial information.

Evidence That Loan Officers Use Financial Information

Experience and intuition play a major role in the decision-making process of commercial bank loan officers. According to Lev, there is no formal normative model that describes the decision-making process of commercial bank loan officers.⁴⁹ This does not mean that commercial bank loan officers make decisions in the absence of a bank lending decision model, but it does suggest that commercial bank loan officers do not use any generally available normative model (such as a commercial loan credit-scoring model).⁵⁰ Four empirical studies exist that provide evidence that commercial bank loan officers use accounting information in making decisions.

Libby compared the decisions of 43 commercial bank loan officers to the output from a linear discriminant function constructed from specific financial ratios.⁵¹ Assessments are made of the usefulness of information, the subjects' confidence in the information, and the likelihood of bankruptcy. The nonrandom sample consists of 16 commercial bank loan officers from small banks in Urbana, Illinois, and 27 loan officers from large banks in Philadelphia, Pennsylvania. The evidence

⁴⁷ Financial Accounting Standards Board, "Objectives of Financial Reporting By Business Enterprises," *Statement of Financial Accounting Concepts Number 1* (Stamford, Connecticut: Financial Accounting Standards board, November, 1978), paragraphs 24-33, and Financial Accounting Standards Board, "Qualitative Characteristics of Accounting Information," *op cit*.

⁴⁸ *Financial Reporting By Privately Owned Companies: Summary of Responses To FASB Invitation To Comment*, *op cit*, p. 3.

⁴⁹ Lev, Baruch, *op cit*.

⁵⁰ See Dietrich, J. Richard and Robert S. Kaplan, "Empirical Analysis of the Commercial Loan Decision," *The Accounting Review*, January, 1982, pp. 18-38.

⁵¹ Libby, Robert, "Accounting Ratios And the Prediction of Failure," *The Journal of Accounting Research*, Spring, 1975, pp. 150-161.

shows that all but three of the 43 loan officers performed significantly better than random in predicting bankruptcy, suggesting that the financial information is used.

Kennedy used a Bayesian model to explain human information processing.⁵² Twenty-four commercial bank loan officers from the Seattle, Washington, area were asked to make decisions using asset size and four financial ratios. Kennedy concluded that (1) there is a need for multiple measures of usefulness, (2) there is a need to assess the relative importance of financial information in the decision-making framework of the commercial bank loan officer, (3) there is a need to define such usage, and (4) financial information is used by commercial bank loan officers.

Casey also provided evidence that the information in financial reports is used by commercial bank loan officers.⁵³ With the assistance of Robert Morris Associates, he examined the effects of varying information sets. The respondents are presented with either high, medium, or low information loads. Casey found that (1) the information is used, (2) the subjects exposed to the high and medium information sets outperformed the subjects exposed to the low information set, and (3) the subjects exposed to the high information set did not outperform the subjects exposed to the medium information set.

Stephens provided evidence that financial information is used by commercial bank loan officers and attempted to delineate how the information is used.⁵⁴ He detected three stages of usage based upon Delphi techniques and confirmed his results with protocol analysis. He concluded that information is used in the following stages:

1. An *initiation stage* which involves a determination of whether information is adequate before beginning to process financial information.

⁵² Kennedy, *op cit*.

⁵³ Casey, Cornelius, Jr., "Variation In Accounting Information Load: The Effect On Loan Officers' Predictions of Bankruptcy," *The Accounting Review*, January, 1980.

⁵⁴ Stephens, Ray G., *Uses of Financial Information In Bank Lending Decisions*, (Ann Arbor, Michigan: University Microfilms International, 1980).

2. *Other stages* of the decision process where financial statement information was used to varying degrees due to various cues. This suggests that commercial bank loan officers use these various cues in systematic, yet poorly defined, alterations of information in decision-making processes.
3. A *final (decision only) stage* where financial statement information is used in hopes of measuring credit worthiness.⁵⁵

Stephens indicated that very little is understood about how information is used in these three stages or even what information is used.

It is important to understand what information is used in the decision-making framework of commercial bank loan officers. Accountants and small businesses are considering various types of financial reporting. As Bruns has noted,

If accounting information is not considered relevant by a decision-maker to a decision under consideration, a change in the accounting information will not affect his decision.⁵⁶

One must consider how important financial information is to loan officers. If such information is unimportant to loan officers, the effects of varying financial reporting types cannot be isolated.

Importance of Financial Reports To Loan Officers

Several empirical studies of the **opinions** of commercial bank loan officers have been conducted to determine the financial report items that are most important to loan officers. Usually, the studies are designed to rank, by group, the importance of items in financial reports.

Falk, Gobdel, and Naus surveyed the opinions of chief commercial bank loan officers; 25% of the 950 officers surveyed responded.⁵⁷ The researchers presented the subjects with 43 items and asked them to indicate the importance of each item in determining if their needs differ for unaudited and

⁵⁵ *Ibid*, p. 81.

⁵⁶ Bruns, William J., "Inventory Valuation And Management Decisions," *The Accounting Review*, April, 1965, pp. 345-357.

⁵⁷ Falk, Haim, Bruce Gobdel, and James Naus, "Disclosure For Closely Held Corporations," *The Journal of Accountancy*, October, 1976, pp. 85-89.

audited reports. Based on a correlation coefficient of .952, they concluded that the needs of loan officers with respect to unaudited financial statements are similar to their needs with audited financial statements.

Falk, *et al.*, thus concluded that the most important items in audited financial statements are not significantly different from those in unaudited financial statements. The researchers also found that accounting policy disclosures are extremely important to loan officers, and that the disclosure of *changes* in accounting policies is the most important item in financial statements. The statement of changes in financial position and disclosures of obligations such as contingent liabilities, long-term debt, and leases are also quite important. In general, they found that balance sheet items are the most important ones to loan officers. Earnings-per-share and price-level information were found to be relatively unimportant. Finally, they indicate that commercial bank loan officers tend to place more importance on items in audited financial statements than on items in unaudited financial statements, and commercial bank loan officers believe unaudited financial reports should include disclosures regarding all accounting policies, procedures, or methods that are not in accordance with GAAP.

Unlike Falk, *et al.*, Benjamin and Stanga surveyed the opinions of two *groups* of users of financial reports: financial analysts and commercial bank loan officers.⁵⁸ They mailed questionnaires to 600 members of each group, of which 207 financial analysts and 208 commercial bank loan officers responded. Their study measured 79 items. Loan officers responded to a term-loan decision, while financial analysts responded to a common stock investment decision. They studied differences in the responses of financial analysts and commercial bank loan officers and concluded that general-purpose financial statements may not serve the needs of such diverse user groups. The responses received from the loan officers support the results obtained by Falk, *et al.*, in that disclosures of long-term debt and changes in accounting policies were found to be the most important items by loan officers.

⁵⁸ Benjamin, James J. and Keith G. Stanga, "Differences In Disclosure Needs of Major Users of Financial Statements," *Accounting And Business Research*, Summer, 1977, p.. 187-192.

Stanga and Tiller surveyed commercial bank loan officers in a term-loan decision context.⁵⁹ This survey exposed the loan officers to 40 financial statements items of either a large company or a small company. Twenty-five of the forty items were consistent with GAAP, and twenty of the items had been suggested as inappropriate or unnecessary for financial reporting by small businesses.

Stanga and Tiller found substantially no differences in the needs of commercial bank loan officers for making term-loan decisions for the small company and the large company. They also found the needs of loan officers of smaller banks to be similar to those of loan officers of larger banks. Disclosures regarding changes in accounting methods were not found to be as important as in prior studies, especially to loan officers of smaller banks. Further, Stanga and Tiller reported that commercial bank loan officers typically found income statement items to be more important than balance sheet items. Net income is considered to be the most important item in financial reports.

Benson surveyed 176 commercial bank loan officers in North Dakota, Iowa, and Nebraska, from banks having from \$50,000,000 to \$100,000,000 in assets.⁶⁰ He concluded that financial statements prepared on the basis of GAAP are preferred although others are accepted, and that financial statements prepared for a small company are less useful. The second finding contradicts the findings of Stanga and Tiller.

Siebel and Dennis, like Stanga and Tiller, investigated proposed reporting changes for small businesses.⁶¹ In addition to providing more evidence that loan officers do indeed use financial statements, they reported on the opinions of commercial bank loan officers regarding fifteen proposed changes in reporting requirements for small businesses. With the assistance of Robert Morris As-

⁵⁹ Stanga, Keith G. and Mikel Tiller, "Needs of Loan Officers For Accounting Information From Large vs. Small Companies," *Accounting And Business Research*, Winter, 1983, pp. 63- 70. This research might be viewed as experimental.

⁶⁰ Benson, Vaughn Leon, *A Study of the Usefulness of Selected GAAP Basis Accounting Information And Its Actual Use In the Small Private Company Loan Decision Process*, Ph.D. Dissertation, The University of Nebraska - Lincoln, 1985.

⁶¹ Siebel, Jerry D. and David M. Dennis, "Attitudes of Commercial Bank Loan officers Regarding the Accounting Standards Overload Issue," *The Journal of Commercial Bank Lending*, April, 1983, pp. 22-31.

sociates, they mailed questionnaires to 552 commercial bank loan officers, of whom 223 (40%) responded. The least acceptable change is one consistent with opinions surveyed in prior studies. By a strong margin, loan officers are most opposed to a lack of disclosure of changes in accounting principles. The loan officers are also strongly opposed to allowing small businesses to omit disclosure of accounting policies and procedures.

The above studies assessed the needs of loan officers as users of financial reports. They provide evidence that disclosure of accounting policies and procedures, disclosure of changes in accounting policies and procedures, and disclosure of long-term obligations are very important to loan officers. Because of their importance to loan officers, one must consider the ramifications on loan officer decision-making of various accounting methods.

Effects of Accounting Methods On Loan Officers

Many studies suggest that users of financial reports “see through” and understand various accounting policies and procedures and changes in these policies and procedures. Bruns and Dyckman presented evidence of this effect more than twenty years ago.⁶² Their study, however, considered users other than loan officers.

Two studies have been conducted to determine the effects of accounting methods on the decisions of commercial bank loan officers. Oliver studied the effects of confidence-interval financial statements.⁶³ He found that such financial statements do not change loan-officer decisions. It is unclear, however, whether the lack of effect was due to confidence-level financial statements (a) being irrelevant to the decision-making framework of commercial bank loan officers, (b) being understood

⁶² Bruns, *op cit*, and Dyckman, Thomas R., “The Effects of Alternative Accounting Techniques On Certain Management Decisions,” *The Journal of Accounting Research*, Spring, 1964, pp. 91-107.

⁶³ Oliver, Bruce L., “A Study of Confidence Interval Financial Statements,” *The Journal of Accounting Research*, Spring, 1972, p.. 154-166.

by commercial bank loan officers and ignored, or (c) adding uncertainty to the decision-making framework that loan officers already understood and used.

Wilkins and Zimmer studied the responses of 52 commercial bank loan officers from 35 international banks.⁶⁴ The researchers found, as would be expected, that the commercial bank loan officers responded differently to various levels of financial leverage for profitable companies. More importantly, Wilkins and Zimmer reported no significant effects upon the perceptions of loan officers due to different methods of fixed asset financing or reporting of financial leases. Their evidence suggests that commercial bank loan officers can “see through” various accounting methods.

Empirical Research On Financial Reports Prepared On An Income Tax Basis

Empirical research regarding financial reports prepared on an income tax basis is limited. Only four studies were found on the topic, and all four encompass accounting problems in addition to those of tax-basis reporting. Three of the studies draw upon the opinions of loan officers, external accountants, and managers of small businesses. The studies have either been published in *The Journal of Commercial Bank Lending*, a publication of Robert Morris Associates, or sponsored by the Financial Accounting Standards Board.

⁶⁴ Wilkins, Trevor and Ian Zimmer, “The Effect of Leasing And Different Methods of Accounting For Leasing On Credit Evaluations,” *The Accounting Review*, October, 1983, pp. 749-764.

Research Reported In the Commercial Lending Literature

Two studies in *The Journal of Commercial Bank Lending* are based on empirical evidence about financial reports prepared on an income tax basis. Siebel and Dennis surveyed 557 commercial bank loan officers whose names were provided by Robert Morris Associates.⁶⁵ Only one question in the study pertains directly to income tax basis financial reports. Siebel and Dennis asked the commercial bank loan officers to evaluate the usefulness of financial statements prepared on an income tax basis. Of the 223 loan officers responding, 77.6% state that financial statements prepared on an income tax basis are less useful than GAAP, 16.1% report that such statements are just as useful as GAAP, and the remainder report that financial statements prepared on an income tax basis are more useful than GAAP.

Nair and Rittenberg surveyed 121 commercial bank loan officers, 99 business men and women, and 70 certified public accountants.⁶⁶ The loan officers worked at banks in Wisconsin. The only question relating to financial reporting on an income tax basis is one that asks whether the commercial bank loan officers are in favor of retaining accrual accounting. Of the 68 responding loan officers, 63.8% agree that they want to retain accrual accounting, and 14.4% disagree. The percentage of business men and women who agree is somewhat higher; the percentage of certified public accountants who agree is somewhat lower. Nair and Rittenberg conclude that there is no support in the study for accounting on an income tax basis, although it is unclear how this conclusion was drawn.

Nair and Rittenberg also asked the loan officers to indicate, based on their experience, the likelihood that financial statements accompanied by certain reports from external accountants would not comply with GAAP. Of the responding commercial bank loan officers, 3.4% estimate a moderate

⁶⁵ Siebel and Dennis, *op cit.*

⁶⁶ Nair, R. D. and Larry E. Rittenberg, "Alternative Accounting Principles For Smaller Businesses: Proposals And Analysis," *The Journal of Commercial Bank Lending*, April, 1983, pp. 2-21.

to significant likelihood that the statements would not comply with GAAP, whereas the percentage increases to 19.3% if the statements are reviewed by external accountants. It is apparent that loan officers may interpret some likelihood of non-compliance with GAAP from the report of the external accountant before examining the financial report.

Research Sponsored By the FASB

The Financial Accounting Standards Board has sponsored two studies that considered financial reporting on an income tax basis. The concentration in each study is on financial reports prepared on the basis of GAAP. Financial statements prepared on an income tax basis are considered only as an alternative to GAAP-based financial statements.

Research Reported In A Special Report

The FASB issued a *Special Report* in February, 1983, that was based on a summary of responses to an earlier invitation to comment.⁶⁷ The responses are from 283 managers (250 from private companies), 193 users of financial information (154 of the users were bank lenders), and 343 certified public accountants. According to 90% of the managers who responded, lenders are the primary users of financial statements. Users of financial statements indicate that 9% of the private companies with which they are involved report on an income tax basis. Certified public accountants indicate that the percentage is 12%, and the managers of private companies state that the percentage is 6%.

⁶⁷ *Financial Reporting By Privately Owned Companies: Summary of Responses To FASB Invitation To Comment, op cit*, and Financial Accounting Standards Board, *Financial Reporting By Private and Small Public Companies*, an Invitation to Comment (Stamford, Connecticut: FASB, November 20, 1981).

The *Special Report* indicates that lenders are more likely to require GAAP-based financial statements for unsecured loans than for secured loans. Lenders are also more likely to require audits for unsecured loans. Whether to require GAAP for preparation of financial statements also depends on the size of the loan requested. There did appear to be wide variation among users, especially bank lenders, in the propensity to accept financial statements prepared on an income tax basis. Users state that they prefer GAAP-based financial statements more often than managers and external accountants realize.

A Study of Financial Reporting By Private Companies

The FASB commissioned a study on financial reporting by private companies, with principal researcher A. Rashad Abdel-Khalik.⁶⁸ The research consisted of two phases: interviews and mail surveys. The interview phase involved 29 bankers, 18 managers, and 31 accounting practitioners. The interviews of bankers indicated that loan officers are not particularly interested in financial statements prepared on basis other than GAAP. Robert Morris Associates supplied the names of 554 commercial bank loan officers for the mail survey; of the 546 reached, 129 responded. There are two samples of managers; one was selected at random and the other was based upon a list of names supplied by the National Association of Accountants. There were also two samples of accounting practitioners: a small sample from “big eight” firms, and a larger sample from other firms.

Ninety percent of the responding loan officers agree that GAAP-basis statements are more reliable, more understandable for evaluating debt-paying ability, and more comparable with the financial statements of other companies. A majority of these loan officers further indicate that financial statements prepared on the basis of GAAP would not result in either a lower borrowing cost (interest rate) or less restrictive loan covenants. Finally, when evaluating the usefulness of ten items

⁶⁸ Abdel-Khalik, *et al.*, *op cit.*

that have been suggested as inappropriate or unnecessary for reporting by small businesses, loan officers are strongly in favor of continuing to require a statement of changes in financial position.

It is also important to note the conclusion “that some managers and bankers confuse GAAP with auditing requirements to the extent that at times they comment on auditing problems when they are asked to express judgments about a special set of GAAP.”⁶⁹ Empirical evidence of such a notion is provided by the responses of commercial bank loan officers. On average, they indicate a preference for GAAP statements “because they indicate a higher level of CPA involvement.”⁷⁰ In general summary comments, Abdel-Khalik, *et al.*, indicate the following:

Given their reliance on accountants as experts regarding financial information, bankers tend to associate GAAP financial statements of private companies with outside accountants. That is, they do not distinguish questions regarding accounting standards-setting from those involving the application of accounting standards. Consequently, their responses often reflected a mingling of the two functions.⁷¹

Research On Audited Versus Reviewed Reports

This section examines the literature associated with audits and reviews by external accountants. A review of the literature did not uncover any studies of the effects of audits and reviews *in conjunction with* the effects of various financial reporting bases. Statement on Standards for Accounting and Review Services (SSARS) Number 1 indicates that reviews may be conducted by external accountants in accordance with other comprehensive bases of accounting, but research reported thus far has considered only financial statements prepared on the basis of GAAP. This section is divided into two discussions of the effects of SSARS Number 1 on loan officers: the first part examines opinion-oriented research and the second examines experimental research.

⁶⁹ *Ibid*, p. 17

⁷⁰ *Ibid*, Table 6, p. 54.

⁷¹ *Ibid*, p. 2, emphasis added.

Opinion Research Involving the Effects On Loan Officers of Reviews And Audits

Much of the opinion-oriented research on SSARS Number 1 deals with the perceptions of commercial bank loan officers as to the purpose and meaning of reviews by external accountants as compared to audits. Other research examines the existence of policies regarding the requirement of certain reports by external accountants. For example, researchers suggest that 80% of commercial bank loan officers are at least “moderately satisfied” (50% “very satisfied”) that financial statements that are reviewed or audited by external accountants are understandable, helpful, and easy to use.⁷²

Diamond and Arnold studied the use of reports by external accountants involving SSARS Number 1 more closely. They report that 25% of those companies supplying audited financial statements to commercial bank loan officers have switched from audits to reviews or compilations. In addition, 28% of those previously supplying unaudited financial statements have switched to reviews, and 8% of those previously supplying unaudited financial statements have switched to supplying audited financial statements.⁷³

Diamond, *et al.*, subsequently surveyed 236 commercial bank loan officers, of whom 138 responded. Those responding indicated that decisions by small businesses to switch (or consider switching) levels of service from external accountants may prove costly to commercial bank loan

⁷² *Financial Reporting By Privately Owned Companies: Summary of Responses To FASB Invitation To Comment, op cit, p. 17*

⁷³ Diamond, Michael A. and Jerry L. Arnold, “Bank Lending officers React Positively To Compilation And Review, National Study Shows,” *The Journal of Accountancy*, October, 1980, pp. 7-8.

officers.⁷⁴ Loan officers, unlike financial analysts, can request additional information,⁷⁵ but they prefer to receive the information at the beginning of the loan process.⁷⁶ The loan officers surveyed expressed some concern that the new services made available by external accountants may subject them to cost pressure that could prove to be disastrous given competitive conditions. Diamond, *et al.*, disclose several important factors that may influence banker decisions as to what report (service level) is desired from external accountants. Whether a review or audit is required may be a function of loan size, interaction (relationship) with the customer, capital structure of the customer applying for credit, or the type of loan requested.⁷⁷

Strupeck and Figlewicz suggest that banks formulate policies delineating circumstances when audits or reviews are required.⁷⁸ Evidence indicates that although policies vary widely, they are clearly a function of the type and size of loan requested. They also report that larger banks and banks with greater numbers of commercial clients are generally more likely to implement and use specific policies regarding requirements for service from external accountants.

Edmonds, Potter, and Weiss performed a detailed examination of the views of commercial bank loan officers regarding audits and reviews.⁷⁹ They also surveyed certified public accountants (CPAs) to compare their views with those of loan officers. The survey questionnaire was mailed to 250 CPAs and 250 loan officers, of which 102 CPAs and 121 loan officers responded. The conclusion was that the perceptions of loan officers are similar to the positions indicated in the professional

⁷⁴ Diamond, Michael A. Arnold, and Earl C. Keller, "Loan Officers Experiences With And Reactions To Compilation And Review of Financial Statements," *The Journal of Commercial Bank Lending*, December, 1981, pp. 32-42.

⁷⁵ Chazen, Charles and Benjamin Benson, "Fitting GAAP To Smaller Businesses," *The Journal of Accountancy*, February, 1978, pp. 46-51.

⁷⁶ Abdel-Khalik, *et al.*, *op cit.*

⁷⁷ Diamond, Arnold, and Keller, *op cit.*

⁷⁸ Strupeck, C. David and Raymond Figlewicz, "Compilation And Review Services: Are They Accepted By Bankers For Loan Decisions?" *The Michigan CPA*, Spring, 1984, pp. 4- 8.

⁷⁹ Edmonds, Thomas P., Mattie C. Potter, and Ira R. Weiss, "Do Bankers And CPAs Have Different Views of Reports On Financial Statements?" *The Journal of Commercial Bank Lending*, June, 1981, pp. 52-62.

accounting standards. Loan officers are undoubtedly more comfortable with an audit than they are with a review because they believe they know more about the audit. They believe audited financial statements are more reliable, less likely to be biased by management, and a better check on the integrity of the financial statements in comparison to reviewed financial statements. Loan officers perceive audits to be stronger indicators that (a) the CPA is confident that the financial statements reflect the financial position of the company, (b) the financial statements are in conformity with GAAP, and (c) the financial statements present the financial position of the company fairly. Edmonds, *et al.*, also reported that loan officers believe that CPAs underestimate the importance of their certifications.

Although one of the objectives of SSARS Number 1 is to clarify the services provided by external accountants, and even though SSARS Number 1 suggests that audit procedures are not necessary in a review, audit procedures are often performed in reviews. Booker suggests that practitioners may be over-auditing and under-reviewing during review engagements.⁸⁰ This apparently coincides with the expectations of loan officers. Booker studied 101 commercial bank loan officers who indicate that they clearly expect reviews to include certain procedures normally performed in audits, *e.g.*, confirmation and verification.⁸¹ This occurs in spite of the fact that guidance offered within SSARS Number 1 suggests that such procedures need not be performed.

Rankin reported on a similar study involving 130 loan officers from large banks and 70 chief executive officers from small banks.⁸² He examined six measures of reliability and asked the subjects to indicate their confidence that the conditions presented are reliable. He discovered that the perceived assurance level and reliability indicated by the subjects varied between audits and reviews. Rankin also reported that the perceptions of these "users" differ from the perceptions of CPAs. He could

⁸⁰ Booker, Quinton, "Practitioners Respond: Survey On Review Procedures," *The National Public Accountant*, September, 1985, pp. 34-35, and 45.

⁸¹ Booker, Quinton, *An Empirical Investigation of the Attitudes of Mississippi CPAs And Bankers Concerning Selected Aspects of SSARS*, DBA dissertation, The Mississippi State University, 1984.

⁸² Rankin, Larry Joe, *A Study of the Effects of Compilation And Review Reports On CPAs' And Bankers' Perceptions of the Reliability of Financial Statements*, Ph.D. dissertation, Michigan State University, 1982.

not, however, find evidence that “users” attribute the traits associated with audits, such as verification procedures, to reviews. This lack of evidence appears to conflict with the findings of Booker. The effects of audits and reviews with respect to loan officers thus remain somewhat undefined.

Experimental Research Involving Effects On Loan Officers of Reviews And Audits

Two experiments examined the effects of SSARS Number 1 on commercial bank loan officers by exposing them to either a review or an audit and assessing the effects of the exposure. The approach taken is similar to that used by McKinley, Pany, and Reckers.⁸³ They examined the effects of management advisory services (MAS), CPA firm type, and CPA firm size on the perceptions and decisions of loan officers. The variables in question are manipulated as follows: MAS have either been performed by the CPA in the past or they have not, the type of CPA firm is either “big eight” or “local”, and the firm size is either “medium” or “large”. For none of these variables could they find an effect on the interest rate perceived appropriate for a given loan request or the decision to make a loan. CPA firm size and type have significant effects upon the perceptions of commercial bank loan officers regarding the likelihood that the statements are free from fraud, are in conformance with GAAP, and are prepared by an independent external accountant. The MAS variable affects the perceptions of the loan officers regarding fraud.

Johnson, Pany, and White experimented with only one independent variable, the service level provided by the external accountant.⁸⁴ They studied the effect of this variable upon what they describe as action variables and perception variables. The two dependent action variables are whether

⁸³ McKinley, Sue, Kurt Pany, and Philip M. J. Reckers, “An Examination of the Influence of CPA Firm Type, Size, and MAS Provision On Loan Officer Decisions And Perceptions,” *The Journal of Accounting Research*, Autumn, 1985, pp. 887- 896.

⁸⁴ Johnson, Douglas A., Kurt Pany, and Richard White, “Audit Reports And the Loan Decision,” *Auditing: A Journal of Practice And Theory*, Spring, 1983, pp. 38-51.

to accept a loan request (yes/no) and the appropriate interest rate. The perception variables involve the confidence of the commercial bank loan officers that (a) the financial statements are in conformance with GAAP, (b) the financial statements are free of fraud, and (c) the financial statements are free of material clerical errors.

Johnson, Pany, and White received responses from 98 subjects, representing a response rate of 16.3%. They found that the service level has a significant effect on the confidence of the commercial bank loan officers. For all three perceptual variables, loan officers are more confident with audits than they are with reviews. No such differences are significant, however, for the decision to make the loan or the decision regarding the appropriate interest rate. If the external accountants' report is based on a review, no significant differences in the actions of commercial bank loan officers could be detected.

Miller experimented with three independent variables: the effects of the level of accounting service, the size of the accounting firm, and the capital structure of the company requesting the loan.⁸⁵ He examined the effects of these three variables upon the perceptions of loan officers as to (a) the maximum line of credit that could be offered, and (b) the minimum interest rate to be charged.

The capital structure of the company requesting a commercial loan affects both the maximum line of credit and the minimum interest rate charge indicated by the commercial bank loan officers. The size of the accounting firm affects the maximum line of credit offered by the commercial bank loan officers. Although the service level, as manipulated by Miller, does affect the maximum line of credit, there is no difference between the effect of an audit and the effect of a review on either the maximum line of credit or the minimum interest rate charge. Miller also found that the reports of external accountants do not communicate the information that is intended by the Accounting and Review Services Committee in SSARS Number 1.

⁸⁵ Miller, Jeffrey Reed, *An Experimental Research Study On the Effects of the Type of Accounting Service On A Bank Lending Decision For Nonpublic Businesses*, Ph.D. dissertation, The Louisiana State University and Agricultural and Mechanical College, 1985.

Implications

Evidence indicates that loan officers use financial statements in their decision-making processes. It has also been suggested, and supported by empirical evidence, that commercial bank loan officers can “see through” and understand various accounting methods and principles. Yet, disclosure of changes in accounting methods and principles is considered very important to commercial bank loan officers. Even though this is the case, there is no suggestion that commercial bank loan officers prefer certain methods over others. They desire disclosure of changes in accounting methods because they know accounting standards allow for changes and disclosure enables them to adjust financial information for comparability and consistency. In fact, there is evidence that commercial bank loan officers do **not** prefer one method over another in accounting for inventories, depreciation, research and development and exploration, advertising and publicity, acquisition and mergers (purchase versus pooling), or long-term leases.⁸⁶

Nevertheless, opinion research suggests that loan officers prefer financial reports prepared on the basis of GAAP to those prepared on an income tax basis. Given this preference, is it acceptable to assume that commercial bank loan officers can “see through” and understand financial reports prepared on an income tax basis? The purpose of this research, therefore, is to ascertain the effects on commercial bank loan officers of financial reports prepared on an income tax basis, relative to the effects of financial reports prepared on the basis of GAAP.

Research on financial reports prepared on an income tax is limited to a few opinion surveys. There is no evidence of any experimentation with the effects of income tax basis financial reports on the perceptions of commercial bank loan officers. There is sufficient evidence, however, to warrant the inclusion of reports by external accountants in such an experiment, because loan officers evidently confuse the meanings of the terms “GAAP” and “audit.” These two external accountant service

⁸⁶ Stephens, *op cit*, p. 35 and 61.

levels are included in the study to identify any confusion on the part of commercial bank loan officers. The following chapter discusses the methods used to ascertain the effects of financial reporting bases in conjunction with various service levels on the perceptions and decisions of loan officers.

Chapter Three: Design of the Experiment

The preceding chapters identify a need for research related to financial reports prepared on an income tax basis versus those prepared on a GAAP basis, in conjunction with different service levels offered by external accountants. This chapter develops research questions and describes the methods, materials, and procedures used to obtain data for analysis. The first section of the chapter describes the development of research questions that are operationalized into 15 testable null hypotheses. Also, surrogates for decision usefulness are developed to generate data regarding both the usefulness of financial information in decision-making environments and the effects of issues raised in the research questions.

In the second section, the elements of the experimental instrument and the sources used in developing the instrument are described. The process used to obtain an experimental group is also discussed. In the third section, the variables used to address the research questions are discussed, defined, and operationalized. This discussion examines the variables manipulated in the experiment and the responses that are supplied by the loan officers participating in the experiment. The statistical analyses applied to these variables are also presented in this section.

Research Questions And Hypotheses

In this section, the research questions of the study are discussed, and testable hypotheses are developed to address those questions. Discussion concentrates on an experimental approach. Other hypotheses are developed to allow for covariates, and multiple measures are made of certain variables.

Research Questions

Financial reporting on an income tax basis has been suggested as being less costly than reporting on the basis of GAAP because small businesses can report information to creditors using the same methods that are already used for their income tax returns. Such reporting has therefore been described as a reporting option that offers “immediate relief” to small businesses that cannot afford to prepare financial reports on the basis of GAAP. One cannot assume, however, that commercial bank loan officers can understand and use financial reports prepared on an income tax basis as well as they can understand financial reports prepared on the basis of GAAP. This concern is especially relevant, considering that commercial bank loan officers have indicated a preference for financial reports prepared on the basis of GAAP. In light of this concern, the following research question is posed:

- Does the fact that financial reports are prepared on an income tax basis, rather than on the basis of generally accepted accounting principles, affect the perceptions of commercial bank loan officers or the decision by commercial bank loan officers to approve a particular loan request?

Research has indicated that commercial bank loan officers are more concerned with the reliability added to financial statements by an external accountant than with the reliability provided by the reporting standards applied to the statements.⁸⁷ Further, evidence suggests that commercial bank loan officers may be confused by the terms “audit” and “GAAP”.⁸⁸ These prior research findings suggest that the level of service offered by external accountants may influence the perceptions of commercial bank loan officers. Commercial bank loan officers may be interpreting “audit” as a surrogate for “GAAP”, or otherwise misunderstanding the relationship between the financial reporting basis used to prepare the financial report and the service level offered by the external accountant in association with the financial report. Therefore, an additional research question is

- Does the fact that external accountants report based upon a level of service other than an examination in accordance with generally accepted auditing standards (an audit), *e.g.*, a review, affect the perceptions of commercial bank loan officers or the decision by commercial bank loan officers to approve a particular loan request?

Considered simultaneously, these two research questions represent the fundamental inquiry of this study. Because the simultaneous effect of these research areas is of concern, it is also necessary to consider the *interaction* of these two areas. Interaction would exist if, for example, the perceptions of commercial bank loan officers tended to be more favorable with audits than reviews with respect to one financial reporting basis, while at the same time their perceptions tended to be more favorable with reviews than audits with respect to another financial reporting basis. The “favorable” effects of the service level of external accountants would thus be dependent upon, or **interacting with**, financial reporting bases. The effects of financial reporting bases and service levels offered by external accountants might depend upon each other. One would not know the effect of one type of financial reporting basis (or one service from external accountants) without knowing what service from external accountants (or financial reporting basis) is involved if interaction between the two

⁸⁷ Friedlob and Plewa, Jr., *op cit.*

⁸⁸ Abdel-Khalik, *et al*, *op cit.*

exists. Because some research into the opinions of loan officers suggests that commercial bank loan officers confuse the terms “audit” and “GAAP”,⁸⁹ it is important to consider the following additional research question:

- Does the interaction of financial reporting basis and service level offered by external accountants affect the perceptions of commercial bank loan officers or the decision by commercial bank loan officers to approve a particular commercial loan request?

The purpose of this study is to learn about the perceptions and decisions of commercial bank loan officers with respect to the three research questions indicated. In order to gain any such knowledge, it is necessary to better define the perceptions of commercial bank loan officers.

Perceptions of Commercial Bank Loan Officers

Four specific perceptions are used in this study, in addition to asking the loan officer whether the loan request would be granted. An attempt is made to isolate the interest rate considered appropriate by the loan officer for the particular loan. Then a perception concerning the likelihood of default on a particular loan is identified. Finally, perceptions of the confidence that loan officers have in the four reporting types and the decision usefulness of these reporting types are identified. How these perceptions and the decision to approve a particular loan request are measured are discussed later in the chapter.

⁸⁹ *Ibid.*

- Does the fact that financial reports are prepared on an income tax basis, rather than on the basis of generally accepted accounting principles, affect the perceptions of commercial bank loan officers or the decision by commercial bank loan officers to approve a particular loan request?
- Does the fact that external accountants report based upon a level of service other than an examination in accordance with generally accepted auditing standards (an audit), *e.g.*, a review, affect the perceptions of commercial bank loan officers or the decision by commercial bank loan officers to approve a particular loan request?
- Does the interaction of financial reporting basis and service level offered by external accountants affect the perceptions of commercial bank loan officers or the decision by commercial bank loan officers to approve a particular loan request?

Figure 2. Research Questions

- (H1): Loan officer perceptions of the appropriate interest rate for commercial loan requests are unaffected by the financial reporting basis (GAAP or income tax).
- (H2): Loan officer perceptions of the likelihood of default on commercial loans are unaffected by the financial reporting basis (GAAP or income tax).
- (H3): Loan officer perceptions of confidence in financial reports are unaffected by the financial reporting basis (GAAP or income tax).
- (H4): Loan officer perceptions of the decision usefulness of financial reports are unaffected by the financial reporting basis (GAAP or income tax).
- (H5): Loan officer decisions to approve commercial loan requests are unaffected by the financial reporting basis (GAAP or income tax).
- (H6): Loan officer perceptions of the appropriate interest rate for commercial loan requests are unaffected by the level of service (audit or review) provided by an external accountant.
- (H7): Loan officer perceptions of the likelihood of default on commercial loans are unaffected by the level of service (audit or review) provided by an external accountant.
- (H8): Loan officer perceptions of confidence in financial reports are unaffected by the level of service (audit or review) provided by an external accountant.
- (H9): Loan officer perceptions of the decision usefulness of financial reports are unaffected by the level of service (audit or review) provided by an external accountant.
- (H10): Loan officer decisions to approve commercial loan requests are unaffected by the level of service (audit or review) provided by an external accountant.
- (H11): Loan officer perceptions of the appropriate interest rate for commercial loan requests are unaffected by the interaction between the financial reporting basis (GAAP or income tax) and the level of service (audit or review) provided by an external accountant.
- (H12): Loan officer perceptions of the likelihood of default on commercial loans are unaffected by the interaction between the financial reporting basis (GAAP or income tax) and the level of service (audit or review) provided by an external accountant.
- (H13): Loan officer perceptions of confidence in financial reports are unaffected by the interaction between the financial reporting basis (GAAP or income tax) and the level of service (audit or review) provided by an external accountant.
- (H14): Loan officer perceptions of the decision usefulness of financial reports are unaffected by the interaction between the financial reporting basis (GAAP or income tax) and the level of service (audit or review) provided by an external accountant.
- (H15): Loan officer decisions to approve commercial loan requests are unaffected by the interaction between the financial reporting basis (GAAP or income tax) and the level of service (audit or review) provided by an external accountant.

Figure 3. Hypotheses Associated With Research Questions

Hypotheses

Null hypotheses are formulated to test the three research questions indicated in Figure 2 on page 41. The first five null hypotheses, H1 - H5, address the first research question. The next five null hypotheses, H6 - H10, are associated with the second research question, and the last five null hypotheses, H11 - H15, are associated with the third research question. For each research question, there is a null hypothesis associated with each of the four perceptions of commercial bank loan officers discussed earlier. In addition, for each research question, there is a null hypothesis regarding the decision by loan officers to approve a particular loan request. The 15 null hypotheses state, regardless of the financial reporting basis, the service level offered by external accountants, or the interaction between these two concerns; that the perceptions of bank loan officers and the decision by loan officers to approve a particular loan request are not affected. The null hypotheses can each be tested using alternative hypotheses that suggest the financial reporting basis, the service level offered by external accountants, or the interaction between the two, affects the perceptions or the decisions by commercial bank loan officers to approve a particular loan request.

Content And Administration of the Experimental

Instrument

The data necessary to test the above hypotheses were gathered in an experiment designed to control the *type* of financial report presented to each subject, based upon a specific service from an external accountant and a particular financial reporting basis. After exposure to a financial report, subjects were presented a loan request. Data representing the perceptions of the subjects, related to the loan request and the financial report, were then gathered.

Subjects

The American Bankers Association conducts the National Commercial Lending School twice annually, in May and November, in Norman, Oklahoma, on the campus of The University of Oklahoma. The experiment was administered on May 16, 1986, to loan officers from more than 40 states who were attending the school. Although the subjects were not required to take part in the study, the experiment was included in the program for the School and the loan officers in attendance were encouraged to take part by an official of the American Bankers Association. Of the 252 loan officers in attendance, 233 took part in the experiment. The administration was limited to thirty minutes.⁹⁰

Many of the loan officers taking part in the experiment had very little experience in commercial lending. This is not surprising, because many banks send their loan officers to the National Commercial Lending School because they are relatively inexperienced. A breakdown of the experience of the participants is presented in Table 1 on page 45. Because the fictitious company in the experimental instrument is a construction company, it is also important to note the experience of the subjects with respect to financial reports of construction companies. Table 2 on page 46 summarizes the percentage of financial reports of construction companies examined by the subjects of the total number of financial reports they had examined in the past two years. In Table 3 on page 47, the college-level accounting education of the loan officers taking part in the experiment is summarized. The education level is measured in years of accounting classes.

⁹⁰ Not all subjects responded to the four questions measuring perceptions. If a respondent omitted one of the four responses, the average value was substituted. If more than one perception was omitted, the responses of the subject were omitted. The responses of seven of the 233 subjects were omitted for this reason.

Table 1. Commercial Lending Experience of Participants

<i>Years of Experience</i>	<i>Number</i>	<i>Percentage</i>
One Or Fewer Years	75	32.5%
More Than One And Less Than Three Years	58	25.1%
Three to Five Years	78	33.7%
Six to Nineteen Years	20	8.7%
Total	231	100.0%

Table 2. Percentage of Financial Reports Examined Involving Construction Companies

<i>Construction Co. Fin. Repts. (%)</i>	<i>Number</i>	<i>Percent of Total</i>
None	54	24.5%
One to Four Percent	22	10.0%
Five Percent	44	20.0%
Ten Percent	33	15.0%
Fifteen to Twenty-five Percent	43	19.6%
Greater Than Twenty-five Percent	24	10.9%
Total	220	100.0%

Table 3. College-level Accounting Education of Participants

<i>Accounting Education</i>	<i>Number</i>	<i>Percentage</i>
Less Than One Year	28	12.1%
One Year	71	30.7%
More Than One Year - No Accounting Degree	81	35.0%
Bachelor's Degree - Accounting	40	17.3%
Higher Degree In Accounting	11	4.9%
Total	231	100.0%

Experimental Instrument

The experimental instrument contains four parts. The first is a financial report of a company requesting a loan that includes a report by an external accountant. The second part is a commercial loan request that also contains information about the company. The third and fourth parts are requests for responses from the subjects. Before the experimental instrument was completed, various drafts were tested during interviews with commercial bank loan officers.⁹¹

The Financial Report

The cooperation of a CPA firm was obtained in preparing a group of financial reports. The firm provided financial reports prepared both on an income tax basis and on the basis of GAAP for a specific company for the year ending December 31, 1985. The CPA firm also provided a reconciliation of the differences between the two reports. Because the loan officers contacted were familiar with the financial reports of construction companies, a construction company was selected. The CPA firm was, most appropriately, concerned for the confidentiality of the client whose financial reports were used in the experiment. This concern resulted in the following restrictions: (1) the name of the client company was not disclosed, and a fictitious name was used, (2) the elements of the financial reports were disguised, (3) the name of the CPA firm was not acknowledged in the experiment, and (4) the name of the CPA firm appearing in the instrument was fictitious.

The two types of financial reports, appropriately disguised, were combined with the two types of reports by external accountants (audits and reviews) that were considered in the experiment. Thus,

⁹¹ Pilot testing involved two commercial bank loan officers from Dominion Bank in Roanoke, Virginia; five commercial bank loan officers from Central Fidelity Bank in Lynchburg, Virginia; three commercial bank loan officers from Bank of Virginia in Roanoke, Virginia; three commercial bank loan officers from Wachovia Bank in Winston-Salem, North Carolina; two commercial bank loan officers from North Carolina National Bank in Charlotte, North Carolina; and five commercial bank loan officers from Valley Fidelity Bank in Knoxville, Tennessee. Four of the five commercial bank loan officers from Lynchburg, Virginia, were not interviewed; they responded by mail.

four versions of the same financial report were developed so that there would be a financial report of each of the following types:⁹²

1. An *audited* financial report prepared on a *GAAP* basis.
2. An *audited* financial report prepared on an *income tax* basis.
3. A *reviewed* financial report prepared on a *GAAP* basis.
4. A *reviewed* financial report prepared on an *income tax* basis.

One of the four types of financial reports was assigned, at random, to each of the commercial bank loan officers.⁹³ Because all four types represent the same company and the same time periods, the *actual* underlying financial position associated with each of the reports is the same. Any differences in the perceptions of commercial bank loan officers relative to specific reporting types can therefore be attributed to the financial reporting basis, the service level provided by the external accountant, a combination of both factors, or the loan officers themselves.

The Commercial Loan Request And Company Considerations

Three loan officers from two commercial banks in Virginia were most helpful in developing the loan request and identifying areas where loan officers might feel uncomfortable with respect to the experiment. The initial interview with each of the three was designed to ascertain the importance of financial reports **and other factors** in decisions by loan officers related to commercial loan requests. Additional interviews were scheduled with the loan officers to obtain evaluations and recommendations of various commercial loan requests and accompanying characteristics.

Company Characteristics And Considerations Characteristics of a company making a loan request may influence the perceptions of loan officers and their decision to approve the loan request. These

⁹² Each financial report includes a report from external accountants. Unless otherwise noted, references to the financial report include the report by external accountants.

⁹³ See Appendix A for the four reports prepared by external accountants and Appendix B for the two types of financial statements.

characteristics were presented to each subject in the same manner. In designing the experimental instrument, the goal was not only to identify these characteristics so that loan officers could respond to questions about perceptions and the decision to approve a loan request, but also to present the characteristics *in a neutral manner such that the perceptions and decisions of the loan officers taking part in the experiment would not be affected* by the characteristics.

The loan officers were told that the fictitious company, Griffin Construction Company, is a new loan customer at the bank with no deposit accounts in the bank. Because this was a new relationship, subjects were prevented from making responses based on prior relationships with the company. To help the loan officers feel at ease with Griffin Company as a new loan customer, other characteristics were also presented. The loan officers were told that they had developed an acceptable relationship with the management of Griffin Company. Because evidence suggests that the involvement of a CPA firm may influence the perceptions and decisions of loan officers, the subjects were also told that they had developed an acceptable relationship with the CPA firm of Thompson, Clark, and Banks. Through pilot-testing and discussions with other loan officers, it was discovered that loan officers require a job completion report from construction companies. Therefore, subjects were told that they had reviewed a job completion report; were satisfied with the performance, relative to cost and time expectations, of Griffin Company; and were satisfied with the future job opportunities of Griffin Company.

Loan Request Characteristics Much interviewing, discussion, and pilot-testing was necessary to decide how to describe the commercial loan request made by Griffin Company. The subjects were told that they had money to lend, and that Griffin Company was three years old on the date of the financial report, December 31, 1985.⁹⁴ The loan officers were also told that there would be no compensating balances associated with the loan. The loan request was for an unsecured \$100,000 line of credit.

⁹⁴ The dates within the financial reports were not changed.

Responses Requested

Two groups of responses were obtained from the participants in the study. The responses were solicited in two parts, labelled “Part I” and “Part II.”⁹⁵ It is important to note that the subjects supplied the responses to Part I after seeing the financial report assigned to them, but before knowing what other financial reporting types might be under examination in the experiment. The responses in Part II of the study were supplied when the subjects had knowledge about the four types of financial reports used in the experiment.

Part I of the Experiment Part I of the experiment included requests for responses regarding the decision to approve the loan request made by Griffin Construction Company, and subjects’ perceptions of the appropriate interest rate, the default risk of the loan, their confidence in the financial report, and the decision usefulness of the financial report. In addition, Part I of the study contains 16 variables that were designed to measure the decision usefulness of financial reports, and a question about how confident the subjects were of their responses to those additional measures of decision usefulness. These 16 variables were added in response to indications in the literature that additional measures of decision usefulness should be developed.

Part II of the Experiment Part II of the experiment began with an introduction to the four types of financial reports examined in the experiment. This was the first time that the subjects were made aware of the various types of financial reports considered in the experiment. The first three questions in Part II were designed to gather data related to three of the 16 variables used to measure decision usefulness. Subjects were asked to rank the four financial reporting types with respect to their relevance, reliability, and conservatism. The remainder of Part II of the instrument solicited

⁹⁵ Two versions of Part I exist. They differ in the order in which 16 adjective pairs are presented. In both versions, the order is randomized. Any differences in responses can only be identified as random differences. See Appendix C for the two versions.

responses to help explain the effects of various bases for financial reporting and various service levels on the perceptions and decisions of commercial bank loan officers.

Manipulation Checks

As the loan officers participating in the early testing of the instrument completed Part I of the experimental instrument, they were asked what type of report they had examined. They were asked that question again at the end of the interview. It is interesting that the loan officers who examined the audited income tax basis financial report had difficulty expressing what they had examined. Although it was apparent that the independent variables had been manipulated, it was also apparent that the loan officers were not familiar with audited reports prepared on an income tax basis; hence they were unfamiliar with this combination of the independent variables.

Physical Administration of the Experiment

The experiment was administered to all of the participants in the same room at the same time. The introduction of the experiment by an official of the American Bankers Association played a key role in securing participants. The official was careful not to divulge the content or intent of the experiment, but he pointed out that the American Bankers Association felt the topic being researched was quite important.

The official from the American Bankers Association and an assistant presented each participant with a large envelope that contained a financial report for Griffin Construction Company; a report from Thompson, Clark, and Banks, Certified Public Accountants; a loan request and pertinent characteristics; Part I of the experiment; and a white business envelope. The materials were distributed in a random order. The large envelope, Part I of the experiment (which included the loan

request and pertinent characteristics), and the financial report of Griffin Company (which included the report by Thompson, Clark, and Banks) were all numbered.

Two introductory paragraphs were discussed with the participants. The participants were told that (a) their responses would be confidential, (b) they could receive a summary of results if they would write their address on the white business envelope and put the envelope (or a business card) in a box when they turned in their experimental instrument, (c) they were not being tested on their ability, (d) the experiment consisted of two parts, and (e) they should replace the financial report and Part I in the large envelope before beginning Part II. The responses requested in Part I were discussed briefly, with the majority of this time being spent in explaining the requests for information using semantic differential scales.

When the vast majority of the participants had completed Part I and returned it to the envelope, Part II was distributed by the employees of the American Bankers Association. Participants were told not to look back at Part I. In Part II, the financial reporting types being considered were presented and questions were asked that measured demographic information. The participants were instructed to write the number appearing on the large envelope on Part II to facilitate proper collation with Part I. Upon completion of Part II, the participants placed Part II in the envelope, sealed it, turned it in, and turned in (separately) either a business card or the white envelope if they wanted a summary of the results. The data were collected at a central location as the subjects completed the experiment. The next section explains how the responses were used to operationalize and test the hypotheses listed in Figure 3 on page 42.

Operationalizing And Testing the Hypotheses

In this section, the variables addressed in this study are described and operationalized. Much of the discussion is focused on the research questions isolated earlier in the chapter. Independent and dependent variables are identified. Other variables are indicated that may help explain the effects on commercial bank loan officers of various financial reports. These variables are identified as possible covariate variables. In addition, this section includes a description of an attempt to better identify the perceptions of loan officers with respect to the usefulness of financial reports in a decision-making framework.

Independent Variables Manipulated In the Experiment

The research questions in this study focus upon the effects of bases of financial reporting and services offered by external accountants on the perceptions of commercial bank loan officers. (See Figure 2 on page 41). The basis for financial reporting purposes represents one independent variable and the service offered by external accountants represents a second independent variable. These two variables are manipulated so that the effects of bases of financial reporting and services offered by external accountants on the perceptions of commercial bank loan officers can be studied.

The basis for financial reporting is one of two types: the financial report is prepared on an income tax basis or on the basis of GAAP. Some of the numbers, accounts, and disclosures made in the notes to the financial statements are different, depending on the basis of financial reporting used. For each reporting basis, there is a reviewed financial report and an audited financial report. These variables were assigned randomly to the subjects in the experiment.

Dependent Variables Measured In the Experiment

The decision to approve the loan, and the four perceptions identified earlier, are the dependent variables for the experiment. Whether a particular loan request is approved can be decided by simply responding “yes” or “no”, but the perceptions of commercial bank loan officers are not measured as easily.

The Loan Approval Decision And the Appropriate Interest Rate

The subjects were asked to indicate whether they would approve the commercial loan request for Griffin Company under the terms indicated in the loan request. These responses were used to test hypotheses H5, H10, and H15. Because the prime rate varies from time to time and from bank to bank, the loan officers were asked to indicate the interest premium above the prime rate that would be appropriate for the loan. The response can be any number that is zero or higher. If the subjects were not willing to make the loan, they were told that one of their competitors will make the loan. The loan officers then identify the interest premium they believe the competitor would charge.⁹⁶ This interest rate information is used to test hypotheses H1, H6, and H11.

Measuring the Perception of Default Risk

The perceptions of loan officers about the default risk on a particular loan request are measured on a seven-point scale. These data are used to test hypotheses H2, H7, and H12. A loan officer taking part in the experiment would respond with a “1” if the default risk of a given loan is “extremely high,” a “4” if the default risk is “neither high nor low,” and a “7” if the default risk is

⁹⁶ A similar approach to this problem can be found in Libby, Robert, “The Impact of Uncertainty Reporting On the Loan Decision,” Supplement to *The Journal of Accounting Research*, 1979, pp. 35-57.

“extremely low.” The subjects are instructed to consider both the financial report of Griffin Company and the loan request in indicating a perception regarding default risk. (See Appendix C).

Perceptions of Confidence In And Usefulness of Financial Reports

The remaining perceptions of loan officers that are to be studied are those about their confidence in the financial report and the usefulness of the financial report. The responses regarding confidence are used to test hypotheses H3, H8, and H13. The loan officers are asked to indicate, on a seven-point scale, their confidence that the financial report of Griffin Company properly reflects the financial position of Griffin Company. A similar approach was used in gathering data about loan officer perceptions of the usefulness of financial reports. The subjects were told that the “usefulness” of the financial report refers to how useful the report is to them in making decisions. These data are used to test hypotheses H4, H9, and H14. Again, a seven-point scale is used.

Statistical Methods Used To Address the Research Questions

Given the exploratory nature of this study, a significance level of .10 (alpha) is used in formal hypothesis tests. Five dependent variables are associated with the testing of the 15 null hypotheses listed in Figure 2 on page 41. Four of the dependent variables, the four perceptions of loan officers, are appropriately included in a multivariate analysis of variance (MANOVA). The effects of service levels offered by external accountants and financial reporting bases on the decision by commercial bank loan officers to approve a particular commercial loan request are tested using a logit (log-linear) approach. This is necessary because the decision to approve the loan can only be “yes” or “no.” The responses of the loan officers cannot be defended as being from a normal distribution; the inclusion of the loan approval decision in the multivariate test involving the perceptions is

<i>Variable</i>	<i>Measurement</i>
Independent Variables:	
Financial Reporting Basis	GAAP or Income Tax
Accountant Service Level	Audit or Review
Dependent Variables:	
Loan Approval Decision	Yes or No
Interest Rate	Premium above prime rate
Default Risk	Seven-point scale
Confidence In Financial Report	Seven-point scale
Usefulness of Financial Report	Seven-point scale

Figure 4. Independent Variables, Dependent Variables, And Measurement

therefore inappropriate. The logit approach involves building log-linear models that control for (include) the main effects and interaction of the independent variables.⁹⁷ If the inclusion in the model of the interaction between either of the independent variables and the loan-decision (dependent) variable is significant, an effect upon the loan decision due to the independent variable(s) is involved. This logit approach can be used to test directly the null hypotheses involving the decision to approve the loan request.

Wilks' Criterion is used to test the statistical significance of the type of financial reporting basis, the service level offered by the external accountant, and the interaction between them on loan officer perceptions. Statistical significance implies that the treatment has a significant effect on the multivariate combination of the four perceptions. If a treatment, or the interaction of the two treatments, does not have a significant effect on the multivariate combination of the four perceptions, then it cannot be concluded that the treatment has a significant effect on *any* of the four perceptions. This would imply an inability to reject the null hypotheses associated with the independent variable, as indicated in Figure 3 on page 42.

If the comparison with the value obtained for Wilks' Criterion to the F-distribution, with the appropriate degrees of freedom, is significant, (in other words, if the probability of achieving a value for "F" greater than that observed, by chance, is less than .10), then additional testing is necessary. Such a result would imply that the treatment has a significant effect on the multivariate combination of the four dependent variables. The next step is to determine which of the four variables is affected. Univariate effects for the independent variable (or interaction), if determined to be significant in the multivariate case, must be investigated further. For example, assume that the effect of the independent variable described as "financial reporting basis" is determined to be significant in the multivariate case. If such significance is found, the univariate effects of financial reporting bases on loan officer perceptions of appropriate interest rate, default risk, confidence in, and use-

⁹⁷ Hinkle, Dennis E. and Gerald W. McLaughlin, "Selection of Models In Contingency Tables: A Reexamination," *Research In Higher Education*, Volume 21, Number 4, pp. 415-423.

fulness of the financial report **individually** must be tested to determine the perceptions that are affected. Such tests represent direct tests of the null hypotheses.

Variables That Explain the Effects of the Independent Variables (Covariates)

Eight exploratory variables are designed to be “covariates,” variables that are measured so that their effects on the dependent variables can be examined. These covariates are response variables that are supplied by the subjects in the experiment. Although the purpose is to study the effects of the covariates upon the dependent variables, covariates cannot be controlled and manipulated like financial reporting bases and service levels.

The first two covariates are easily understood. The subjects were asked to indicate (1) how many years of experience they have as commercial bank loan officers, and (2) how many years of college-level accounting education they have. Other covariates assess lines of credit and exposure to and understanding of various reporting types.

Measures of Maximum And Typical (Average) Lines of Credit

Subjects were asked to indicate (1) the maximum line of credit **they, personally,** can extend, (2) the maximum line of credit **their bank company** can extend, (3) the typical (average) line of credit **they, personally,** extend, and (4) the typical (average) line of credit **their bank company** extends.

The maximum line of credit a bank company can extend is a function of the amount of its assets. Thus this item is a surrogate for bank size. Because maximum lines of credit, or sheer asset size, may not fully describe a bank, the subjects were also asked the typical (average) line of credit offered by their bank company as another surrogate for bank size.

As indicated from interviews with loan officers and pilot-testing of the experimental instrument, loan officers have a ceiling above which line-of-credit decisions must be approved by someone “higher up” in the organization, such as a commercial loan committee. The maximum line of credit a loan officer would be allowed to offer might be \$10,000, but the typical (average) line of credit offered by the loan officer, with approval from someone else, might be much higher. The ceiling above which the loan officer must receive approval from someone else is a function of bank policy. Interviews and discussions with participants in the pilot-testing of the experimental instrument revealed that (a) the policies related to the ceiling for loan officers vary widely, (b) many loan officers are unwilling to discuss their ceilings, and (c) the policies of various banks may be difficult to identify. By comparing the maximum line of credit a loan officer can extend to the typical (average) line of credit extended by the loan officer, a portion of this policy can be isolated. Certainly, if the typical (average) line of credit extended by the loan officer is greater than the maximum line the loan officer can extend, this policy has, to some degree, been captured. The responses from loan officers regarding the maximum loans they can offer, less the corresponding responses for the typical loan amounts they offer, may further explain any variation among their perceptions. This difference is one of the covariates examined in the experiment.

Measures of the Exposure of Commercial Bank Loan Officers To Various Reporting Types

The subjects taking part in the experiment were asked to consider the financial reports they have examined over the past two years. They were then asked to indicate what percentage of the reports (a) were audited and prepared on the basis of GAAP, (b) were reviewed and prepared on the basis of GAAP, (c) were audited and prepared on an income tax basis, (d) were reviewed and prepared on an income tax basis, and (e) did not fall into one of the other four categories. The responses are used not only to develop a covariate (the percentage associated with the type of report to which the subject is exposed), but also to reflect the degree to which the subjects have examined the types

of financial reports included in the experiment. A second covariate was obtained by asking the loan officers to identify the percentage of the financial reports they examined in the past two years involved construction companies, because a construction company financial report is used in the experiment.

Measures of the Understanding of the Various Financial Reporting Types

The eighth covariate relates to the subjects' perceptions concerning their understanding of the particular type of financial report to which they were exposed. The subjects were asked to indicate their confidence that they understand each of the four types of financial reports examined in the experiment. The subjects were asked to indicate their confidence regarding each reporting type in general and not their understanding of the specific report used in the experiment. The four questions regarding confidence of understanding involved seven-point scales. (See Appendix C).

Statistical Methods Used To Address the Covariates

The purpose of this experiment was to determine whether the independent variables, or the interaction effect of the independent variables, can explain variation among the responses. In order to explain the variation, a multivariate test of covariance (MANCOVA) was performed with each of the eight covariates. If the effect of a particular covariate on the multivariate combination of the four perceptions was not significant, the covariate was eliminated from further analyses. If the effect of the covariate upon the multivariate combination of the four dependent variables was significant, further analysis was necessary.

In order to examine the effects of each covariate, the slopes of the linear effects of the covariate, when considering the two independent variables, must be equal. For example, the slope of the effect of a given covariate upon the perceptions of loan officers exposed to GAAP-basis financial re-

ports must be equal to the slope of the effect of loan officers exposed to tax-basis financial reports. Unequal slopes would imply that the linear effects intersect. This intersection is equivalent to interaction between the covariate and an independent variable. If these interactions are significant, they must be included in the model and interpreted. At the same time, interpretations of the effect of the covariate differ, depending on which side of the point of intersection is considered. If these interactions are not significant, they can be dropped from the model and the effects of the covariate upon the dependent variables can be examined. The effects of the covariate on each individual perception can be examined. In summary, the analyses in the univariate context are only appropriate if (a) the effect of the covariate upon the multivariate combination of the four perceptions is significant, and (b) the interactions between the covariates and the independent variables are not significant.

Variables Based Upon the Qualitative Characteristics of Accounting Information

Kennedy indicated (see Chapter One) that there is a need for multiple measures of usefulness.⁹⁸ One exploratory facet of this study is to develop additional measures of decision usefulness using SFAC Number 2 “The Qualitative Characteristics of Accounting Information.”⁹⁹ The measures are developed using semantic scales. The characteristics identified in SFAC Number 2 are associated with certain traits that are used as surrogates for decision usefulness in retesting hypotheses H4, H9, and H14.

The principal traits indicated in SFAC Number 2 are “relevance” and “reliability.” Another trait identified involves “user-specific” characteristics. In addition, certain “nonessential” characteristics

⁹⁸ Kennedy, *op cit.*

⁹⁹ Financial Accounting Standards Board, *Statement of Financial Accounting Concepts Number 2*, *op cit.*

are identified in SFAC Number 2, with the FASB noting that these characteristics **need not be** characteristics of accounting information. These nonessential characteristics were also included in this examination of decision usefulness because they might lead to dependable surrogates for decision usefulness. Thus four traits; “relevance,” “reliability,” “user specificity,” and “nonessential;” are used in the study.

Figure 5 on page 64 lists the four traits and 16 characteristics identified by SFAC Number 2. Even though these items are defined in SFAC Number 2, the definitions there are not pertinent. Instead, the subjects define the characteristics from their own points of reference. An analysis was made to see if these 16 characteristics measure the traits indicated in SFAC Number 2. If this could not be exhibited, the 16 characteristics were used in another analysis to develop measures of decision usefulness.

The development of semantic differential scales for the 16 characteristics involved the creation of an adjective that describes the characteristic, and an adjective that is an antonym. This resulted in 16 pairs of adjectives with each pair separated by a seven-point scale. An explanation of the scales was presented in the experimental instrument, using the relevant-irrelevant scale as an example. (See Figure 5 on page 64 for adjectives and their antonyms). If the commercial bank loan officers believed the Griffin Company financial report was **extremely relevant** for making default risk and interest rate judgments, they were to circle “1.” If the report was **neither relevant nor irrelevant** for making default risk and interest rate judgments, they were to circle “4,” and “7” if the report is **extremely irrelevant**. (See Appendix C).

- **Relevance**
 - Contradiction (Contradictory/Noncontradictory)
 - Predictive ability (Predictive/Nonpredictive)
 - Timeliness (Timely/Untimely)
 - Comparability (Comparable/Noncomparable)
 - Consistency (Consistent/Inconsistent)
 - Relevance (Relevant/Irrelevant)
- **Reliability**
 - Verifiability (Verifiable/Nonverifiable)
 - Faithful representation (Faithful Representation/Unfaithful Representation)
 - Bias (Biased/Unbiased)
 - Completeness (Complete/Incomplete)
 - Comparability (Comparable/Noncomparable)
 - Consistency (Consistent/Inconsistent)
 - Reliability (Reliable/Unreliable)
- **User Specificity**
 - Understandability (Understandable/Nonunderstandable)
 - Newness (Old/New)
- **Nonessential**
 - Precision (Precise/Imprecise)
 - Certainty (Certain/Uncertain)
 - Conservatism (Conservative/Nonconservative)

Figure 5. Traits, Characteristics, and Corresponding Adjective Pairs

Statistical Methods Assessing the Qualitative Characteristics of Accounting Information

Confirmatory factor analysis is used to develop unidimensional traits that are tested for their dependability as surrogates for decision usefulness. Exploratory factor analysis is used to develop traits if those identified using SFAC Number 2 are not dependable.

Tests For Unidimensionality

Confirmatory factor analysis is used to determine whether the traits are unidimensional.¹⁰⁰ There are three tests for unidimensionality: (1) the characteristics used to define a given trait must share a common meaning, (2) the characteristics must exhibit internal consistency, and (3) the traits must exhibit external consistency, or parallelism. The sharing of a common meaning is exemplified by SFAC Number 2. Tests for internal and external consistency assess whether the traits are unidimensional. The goal of confirmatory factor analysis is to identify (confirm) unidimensional traits.

Testing For Internal Consistency If characteristics sharing a common meaning do measure the same trait, the characteristics satisfy a "product rule for internal consistency."¹⁰¹ If this rule is satisfied, the correlation of any two characteristics in a trait is equal to the product of the correlation of each trait with a score for that trait. The score for the trait is the sum of the responses for the characteristics of the trait. This product rule can be tested by examining the correlation between each pair of characteristics, where the trait score has been partialled out of the correlation. If this partial corre-

¹⁰⁰ This discussion is based upon Hunter, John E. and David W. Gerbing, "Unidimensional Measurement, Second Order Factor Analysis, And Causal Models," *Research In Organizational Behavior*, Volume 4, pp. 267-320.

¹⁰¹ *Ibid*, p. 277.

lation is zero (within sampling error) for each pair of characteristics in the trait, the trait meets the second test for unidimensionality.

Testing For External Consistency The third test for unidimensionality is that of external consistency, or parallelism. While the criterion of internal consistency is concerned with how the characteristics in a trait that share the same meaning correlate with one another, external consistency is concerned with how these characteristics correlate with variables outside of the trait. If the trait is unidimensional, the characteristics within the trait should have similar correlation patterns with characteristics from other traits.¹⁰² The external consistency of a trait can be tested by examining the *similarity coefficients*¹⁰³ of each pair of characteristics in a given trait. If the similarity coefficients are, within sampling error, one or negative one, the characteristics involved are parallel. The tests for both internal consistency and external consistency are subjective, because the effect of sampling error is not known.

Consideration For Reliability

Assurance that the characteristics in a given trait exhibit unidimensionality does not necessarily indicate that the traits are helpful in determining the usefulness of financial information. Concern must also be expressed for the reliability of the information.¹⁰⁴ When the responses for a given set of characteristics are summed to obtain a trait score, there may be sufficient error in the responses to render the trait score useless. The reliability of a trait is concerned with the freedom of a trait from this error. An alpha coefficient can be examined to determine the reliability of a given trait.

¹⁰² *Ibid*, p. 279.

¹⁰³ Hunter, J. E., "Methods of Recording the Correlation Matrix To Facilitate Visual Inspection And Preliminary Cluster Analysis," *The Journal of Educational Measurement*, Volume 10, 1973, pp. 51-61. as indicated in Hunter and Gerbing, *op cit*, pp. 281 and 319.

¹⁰⁴ Hunter and Gerbing, *op cit*, p. 281.

The closer the value of alpha is to one, the more reliable the trait is. The alpha measurement is only reliable when the trait being considered has been demonstrated to be unidimensional.¹⁰⁵

Procedures For Testing the Traits Identified Within SFAC Number 2

If characteristics associated with the traits in SFAC Number 2 are not unidimensional, then other procedures are needed to find unidimensional traits of decision usefulness. The goal is to develop unidimensional traits using confirmatory factor analysis and the characteristics indicated in SFAC Number 2, not to confirm (or be unable to confirm) whether the characteristics indicated in SFAC Number 2 are indicative of the traits described. The characteristics in each trait simply provide a common meaning that can become the basis for searching out unidimensional traits. The traits identified in SFAC Number 2 might not be unidimensional unless one or more characteristics are dropped from consideration, after which tests for unidimensionality need to be reconsidered.

The “common meaning” being offered by SFAC Number 2 might lead to a “dead end,” such that the traits identified cannot in any way be demonstrated as unidimensional. Exploratory factor analysis could then be performed, and different traits identified. These new traits could then be checked for unidimensionality; such a check must then include an examination of the shared meaning of the traits involved. This examination of shared meaning is common in exploratory factor analysis. The purpose of such factor analysis is to learn more about certain characteristics.

The unidimensional traits identified using the qualitative characteristics of accounting information can be treated as dependent variables. The effects of service levels offered by external accountants and different financial reporting bases upon the traits can then be examined. The reliability of the traits may be important in such an analysis. If the traits are not reliable, it is unlikely that the effects

¹⁰⁵ “Dependability” may be used in place of “reliability” because of potential confusion from characteristics and traits named “reliability.”

of the independent variables can be discerned amidst the variation that exists in the traits themselves.

Chapter Summary

In this chapter, the methods, materials, and procedures used to create the experimental instrument are discussed. The methods used to analyze the responses relative to specific research questions regarding the perceptions and decisions of loan officers are also considered. The genesis and evolution of the experimental instrument are discussed, too.

The testing of 15 hypotheses is designed to ascertain the effects of financial reporting bases, services offered by external accountants, and interaction on the perceptions and decisions of commercial bank loan officers. The dependent variables operationalized to test the hypotheses involve a decision to approve a loan request and perceptions of (a) interest rate, (b) default risk, (c) confidence, and (d) decision usefulness. Because Kennedy has suggested a need for multiple measures of decision usefulness, sixteen characteristics of accounting information from SFAC Number 2 are used to develop surrogates for decision usefulness.

Statistical methods for addressing the research questions incorporate three goals. The first goal is to determine the effects of both the financial reporting basis and the service level offered by external accountants on loan officer perceptions. The effects of the financial reporting basis and the service level offered by external accountants on the decision to approve a particular loan request are also examined. MANOVA and Wilks' Criterion are used to test whether the financial reporting basis or the service level affects the perceptions of loan officers. If either affects the perceptions, or if the interaction of these variables affects the perceptions, then univariate (ANOVA) tests are conducted to clarify which perceptions are affected. Log-linear models, using a logit approach, are used to

assess the effects of the financial reporting basis and the service level offered by external accountants on the loan officer decisions to approve the loan request.

The second goal of the statistical analyses is to examine certain variables that may further explain the variations found in the perceptions of loan officers on an exploratory basis. The responses for these variables (covariates) are tabulated to provide demographic information about the subjects. In addition, each covariate is examined to see if it has a significant effect on the perceptions of loan officers. Any covariate that does have a significant effect on the perceptions is further examined to identify the effect. A multivariate approach similar to that used to address the research questions is implemented. Appropriate univariate tests follow for covariates displaying significant effects on the perceptions.

The third goal of the statistical analyses can be divided into two parts: (1) developing unidimensional measures of decision usefulness that involve several characteristics, and (2) determining the effects on these measures of financial reporting bases and service levels. SFAC Number 2 provides a starting point for developing enhanced measures of decision usefulness. The characteristics in SFAC Number 2 are divided into traits of decision usefulness. These traits are tested for unidimensionality using confirmatory factor analysis. If the traits indicated are not unidimensional, certain characteristics are removed from specific traits in order to provide unidimensional traits. If this does not result in unidimensional traits, or if the traits developed are not reliable, exploratory factor analysis is used to develop new traits. These new traits are then tested for unidimensionality, using confirmatory factor analysis. The effects of financial reporting bases and service levels offered by external accountants on these traits is then examined. Analyses of the responses are discussed in the following chapter.

Chapter Four: Analysis of the Data

This chapter presents analyses of the data obtained from the administration of the experiment. The presentation consists of two sections. In the first section, tests of the 15 null hypotheses associated with the three research questions (see Figure 2 on page 41) are discussed. In the second section, surrogate traits for decision usefulness and retests of hypotheses H4, H9, and H14 are presented.

Analysis With Respect To the Research Questions

In this section, the analyses of the tests of the 15 hypotheses associated with the research questions are presented (see Figure 3 on page 42). The three research questions are concerned with the effects on loan officer perceptions and decisions of (1) GAAP and income tax basis financial reports, (2) audit and review service levels, and (3) interaction between reporting bases and service levels.

Effects On the Perceptions of Loan Officers

A multivariate test using Wilks' Criterion is used to determine the effects of financial reporting basis, service level, and their interaction on the multivariate combination of loan officer perceptions. The interaction effect of the reporting basis and the service level on the multivariate combination of the four perceptions is significant ($F = 2.27, p = 0.0624$). (See Table 4 on page 72). In addition, the financial reporting basis (GAAP or income tax) significantly affects the perceptions of loan officers ($F = 3.09, p = 0.0167$). (See Table 4 on page 72). Also, the effect of the service level (audit versus review) on the multivariate combination of the four perceptions is significant ($F = 2.35, p = 0.0555$). In all cases, further analysis is necessary to explain the force of the independent variables and their interaction on the individual perceptions. The interaction effect, which can at times be so strong as to mask main effects, is examined first.

Effects of the Interaction On the Four Perceptions

The four null hypotheses that test interaction effects are concerned with interest rate (H11), default risk (H12), confidence (H13), and decision usefulness (H14). (See Figure 3 on page 42). Hypotheses H11, H12, and H14 cannot be rejected. Hypothesis H13 is rejected. As shown in Table 5 on page 73, the effect of the interaction on perceptions of confidence in the financial report is statistically significant ($F = 5.53, p = 0.0195$). There is no indication that the interaction affects the perceived usefulness of the financial report ($F = 0.06, p = 0.8093$), default risk ($F = 0.08, p = 0.7807$), or interest rate ($F = 0.00, p = 0.9491$). (See Table 5 on page 73). The p 's associated with the univariate ANOVAs used to test these hypotheses are so high as to dismiss concerns for the effects of interaction on these perceptions. If these interactions are dismissed, any effects on these perceptions can be analyzed by examining the financial reporting basis or the service level directly; there is no need to consider them simultaneously when making conclusions.

Table 4. Multivariate Analysis of Variance (For Perceptions)

<i>Effect</i>	<i>Wilks' Criterion</i>	<i>F</i>	<i>p</i>
Reporting Basis	0.94651535	3.09	0.0167
Service Level	0.95889040	2.35	0.0555
Interaction	0.96014045	2.27	0.0624

Table 5. Univariate Analyses of Variance, Interaction Effect on Subjects' Perceptions

<i>Dependent Variable</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>
Interest Rate	0.004	1	0.004	0.00	0.9491
Default Risk	0.069	1	0.069	0.08	0.7807
Confidence in Financial Report	10.787	1	10.787	5.53	0.0195
Usefulness of Financial Report	0.097	1	0.097	0.06	0.8093

Analysis thus indicates that the interaction effect is manifested in the perceived confidence that loan officers have in the financial report. As shown in Table 6 on page 75, subjects are most confident with audited GAAP-basis statements; their average confidence response is 3.618 for this type of report.¹⁰⁶ They are least confident with audited tax-basis financial statements (average score of 4.387). For reviewed GAAP-basis statements, the average is 4.158, and for reviewed tax-basis statements the average score is 4.053.

The average subject responses for perceived confidence in the financial report are plotted in Figure 6 on page 76. Notice that the lines for audit and review intersect. If one considers each side of the intersection, it is apparent that subjects are more confident with audited financial reports if GAAP are used, but they are more confident with reviewed financial reports if they are prepared on an income tax basis. Thus, subject confidence is dependent upon financial reporting basis as a function of service level. In order to explain the effects of the interaction between the reporting basis and the service level, it is necessary to compare the effects of financial reporting bases for each service level *individually* and compare the effects of service levels for each financial reporting basis *individually*. These simple effects are depicted in Table 7 on page 77.

The effects of the service level are not significant ($F = 1.633, p = 0.2026$) when the financial report is prepared on an income tax basis. (See Table 7 on page 77). The average response for confidence in financial reports prepared on an income tax basis is 4.387 if the financial report is audited and 4.053 if the financial report is reviewed. (See Table 6 on page 75). Because this difference is not statistically significant, no conclusions can be drawn about the significance of service level for financial reports prepared on an income tax basis. For GAAP-basis financial reports, subjects are more confident if the financial report was audited than if it was reviewed. The difference between the average responses regarding confidence (4.158 if the financial report is reviewed and 3.618 if the financial report is audited) is statistically significant ($F = 4.182, p = 0.0420$). (See Table 6 on page 75 and Table 7 on page 77).

¹⁰⁶ Note that the lower the confidence score, the more confident the subject is with the financial report.

Table 6. Mean Responses And Simple Effects (Confidence In Financial Report)

<i>Reporting Basis</i>	<i>Audit</i>	<i>(N)</i>	<i>Review</i>	<i>(N)</i>
<i>Income Tax</i>	4.387	(57)	4.053	(57)
<i>GAAP</i>	3.618	(55)	4.158	(57)

Audit —————

Review - - - - -

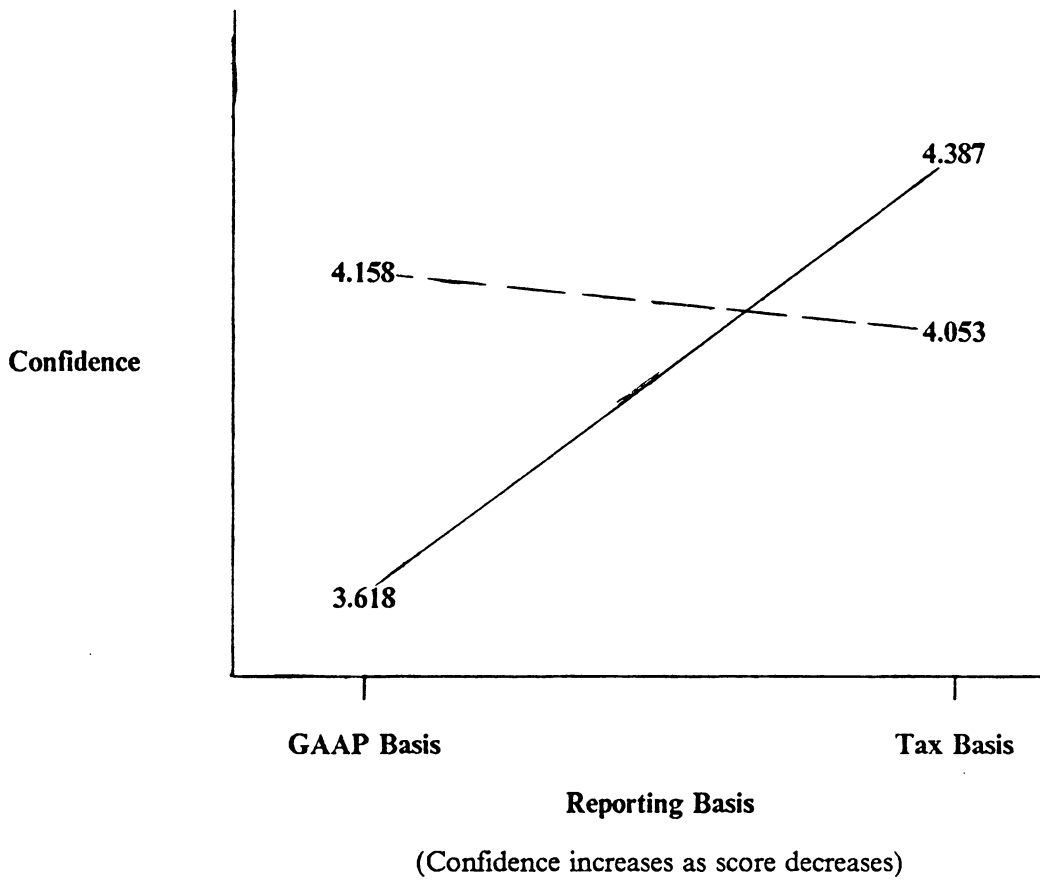


Figure 6. Plot of Service Level - Reporting Basis Interaction Effect on Confidence in Financial Report

Table 7. Effects of Interaction On Loan Officers' Confidence In Financial Report

<i>Main (Simple) Effect</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>
Reporting Basis	6.216	1	6.216	3.19	0.0756
(Reporting Basis with Audit)	16.541	1	16.541	8.4831	0.0040
(Reporting Basis with Review)	0.316	1	0.316	0.1621	0.6876
Service Level	0.596	1	0.596	0.31	0.5809
(Service Level with GAAP)	8.154	1	8.154	4.1818	0.0420
(Service Level with Income Tax Basis)	3.184	1	3.184	1.6329	0.2026
Interaction	10.787	1	10.787	5.53	0.0195
Error	432.873	222	1.950		

The remaining simple effects are those for each reporting basis in conjunction with each of the two service levels. Subjects respond similarly with respect to confidence in the financial report if it is reviewed, regardless of whether the report is prepared on an income tax basis (average response = 4.053) or on the basis of GAAP (average response = 4.158). (See Table 6 on page 75). This difference is not statistically significant ($F = 0.162, p = 0.6876$). (See Table 7 on page 77). Loan officers are much more confident with audited financial reports prepared on the basis of GAAP (average response = 3.618) than they are with audited financial reports prepared on an income tax basis (average response = 4.387). (See Table 6 on page 75). These average responses are significantly different ($F = 8.483, p = 0.0040$). (See Table 7 on page 77).

Effects of the Reporting Basis Main Effect Upon the Four Perceptions

Figure 3 on page 42 describes the four null hypotheses associated with the effects of GAAP basis and income tax basis financial reporting on subjects' perceptions of interest rate (H1), default risk (H2), confidence (H3), and decision usefulness (H4). Because no statistically significant effect of financial reporting basis on the perceived appropriate interest rate could be found, the first hypothesis (H1) cannot be rejected ($F = 0.49, p = 0.4838$). (See Table 8 on page 79). The average interest rate premium charged by subjects exposed to income tax basis financial reports (2.922) is not sufficiently different from that charged by subjects exposed to GAAP-basis financial reports (2.837) to warrant any conclusions. (See Table 9 on page 80).

The hypothesis (H2) covering the effect of the reporting basis on perceived default risk is rejected ($F = 4.88, p = 0.0283$). The average response by those exposed to financial reports prepared on an income tax basis is 2.660, whereas it is 2.935 for those exposed to financial reports prepared on the basis of GAAP. The fourth hypothesis (H4) is also rejected. The financial reporting basis affects the perceived usefulness of the financial report in making interest rate and default risk decisions ($F = 7.42, p = 0.0070$). The average response of loan officers exposed to tax-basis financial reports is 3.140, whereas it is 2.670 for those exposed to GAAP-basis financial reports (see Table 9

Table 8. Univariate Analyses of Variance, Reporting Basis Main Effect on Subjects' Perceptions

<i>Dependent Variable</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>
Interest Rate	0.424	1	0.424	0.49	0.4838
Default Risk	4.336	1	4.336	4.88	0.0283
Confidence in Financial Report	6.216	1	6.216	3.19	0.0756
Usefulness of Financial Report	12.336	1	12.336	7.42	0.0070

Table 9. Mean Responses, Reporting Basis Main Effect on Subjects' Perceptions

<i>Dependent Variable</i>	<i>Tax Basis</i>	<i>GAAP Basis</i>
Interest Rate	2.922	2.837
Default Risk	2.660	2.935
Confidence in Financial Report	4.220	3.893
Usefulness of Financial Report	3.140	2.670

Risk increases as average decreases

Rate is premium above prime rate

Usefulness increases as average decreases

Confidence increases as average decreases

on page 80). An examination of these averages indicates that the perceived decision usefulness of the financial report is higher for GAAP-basis than tax-basis financial reports.

The financial reporting basis also affects the perceived confidence in financial reports, and the third hypothesis (H3) is rejected ($F = 3.19, p = 0.0756$). The analysis of the effects of financial reporting basis on the confidence of subjects should be considered in conjunction with the earlier discussion of the effect of interaction on loan officer confidence. (See Table 6 on page 75 and Table 7 on page 77).

Effects of the Service Level Main Effect On the Four Perceptions

Figure 3 on page 42 presents the null hypotheses associated with the service level main effect. These hypotheses indicate that the service level offered by external accountants has no effect on subjects' perceptions of interest rate (H6), default risk (H7), confidence (H8), or decision usefulness (H9). Only two of the four hypotheses can be rejected. No conclusions can be made about the effect of audits and reviews on subjects' perceptions related to their confidence in, or the decision usefulness of, financial reports. Thus, neither the eighth (H8) ($F = 0.31, p = 0.5809$) nor the ninth (H9) ($F = 2.13, p = 0.1457$) hypotheses can be rejected. (See Table 10 on page 82).

The seventh null hypothesis (H7) is rejected. The perceived default risk associated with the loan request is affected by whether the financial report was reviewed or audited ($F = 4.12, p = 0.0436$). The perceived default risk is higher if the financial reports are reviewed. The average response for reviewed financial reports is 2.671, whereas it is 2.924 for audited financial reports. (See Table 11 on page 83). This implies that the average perceived default risk is approximately halfway between "high" and "somewhat high" for reviewed financial reports. The average perceived default risk for audited financial reports is essentially "somewhat high."

Table 10. Univariate Analyses of Variance, Service Level Main Effect on Subjects' Perceptions

<i>Dependent Variable</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>
Interest Rate	4.354	1	4.354	5.05	0.0256
Default Risk	3.662	1	3.662	4.12	0.0436
Confidence in Financial Report	0.596	1	0.596	0.31	0.5809
Usefulness of Financial Report	3.542	1	3.542	2.13	0.1457

Table 11. Mean Responses, Service Level Main Effect on Subjects' Perceptions

<i>Dependent Variable</i>	<i>Reviews</i>	<i>Audits</i>
Interest Rate	3.017	2.740
Default Risk	2.671	2.924
Confidence in Financial Report	4.105	4.009
Usefulness of Financial Report	2.781	3.035
Risk increases as average decreases		
Rate is premium above prime rate		
Usefulness increases as average decreases		
Confidence increases as average decreases		

The analysis also indicates that the interest premium perceived as appropriate by the subjects is one-fourth of a percentage point higher if the financial reports are reviewed rather than audited (3.017 versus 2.740). (See Table 11 on page 83). This leads to the rejection of the sixth hypothesis (H6); the service level provided by external accountants **does** affect the perceived appropriate interest rate ($F = 5.05, p = 0.0256$).

Effects On the Decision To Approve the Loan Request

Logit model analysis is used to test the effects of financial reporting basis, service level, and their interaction on the decision to approve the commercial loan request. The null hypotheses for these tests are (H5), (H10), and (H15), respectively. Because the independent variables are manipulated, the conditional proportions of all three variables and the marginal association between the reporting basis and the service level are included in a null model (See Table 12 on page 85 for development). The effects of reporting bases, service levels, and their interaction can then be added and the significance of these models can be tested.

As indicated in Table 12 on page 85, the null model (including the loan decision, service levels, reporting bases, and the association between service levels and reporting bases) is not significant. Table 13 on page 86 indicates that neither reporting basis, service level, nor interaction affect the loan decision.¹⁰⁷ Therefore, neither the fifth (H5), the tenth (H10), nor the fifteenth (H15) null hypothesis can be rejected. In fact, the p 's for these models are so high as to suggest that the manipulated variables have no effect on the loan decision, that some other variable(s) had overwhelming effects on the loan decision, or perhaps both suggestions are appropriate.

¹⁰⁷ For more information on logit model development, see Hinkle and McLaughlin, *op cit*.

Table 12. Models and Likelihood Ratio Chi Square Values for Logit Model Development

<i>Model</i>	<i>Residual</i>			<i>Component</i>		
	<i>Likelihood Ratio</i>	<i>df</i>	<i>p</i>	<i>Likelihood Ratio</i>	<i>df</i>	<i>p</i>
Null	131.20	7	< 0.0001			
D	0.44	6	0.9985	130.76	1	< 0.0001
B, D	0.44	5	0.9943	0.00	1	1.0000
S, B, D	0.43	4	0.9798	0.01	1	> 0.9000
SB, D (Logit Null)	0.39	3	0.9416	0.04	1	> 0.8000
DB, SB (with Reporting Basis)	0.10	2	0.9492	0.29	1	> 0.5000
DS, SB (with Service Level)	0.37	2	0.8323	0.02	1	> 0.8000
DS, DB, SB (after B is added)	0.08	1	0.7763	0.02	1	> 0.8000
DS, DB, SB (after S is added)	0.08	1	0.7763	0.29	1	> 0.5000
DSB (with interaction)	0.00	-	-	0.08	1	> 0.7000

(D = Decision, S = Service Level, B = Reporting Basis)

Table 13. Logit Testing of Effects on Loan Decision of Reporting Basis And Service Level

(a) Enter Reporting Basis (B), then Service Level (S)

(See Table 12 on page 85).

<i>Model</i>	<i>Likelihood Ratio</i>	<i>df</i>	<i>p</i>
D, SB (Null Logit)	0.39	3	0.94
DB, SB (Reporting Basis)	0.29	1	> 0.50
DB, DS, SB (Service Level Reporting Basis)	0.02	1	> 0.80
DSB (Interaction)	0.08	1	> 0.70

(b) Enter Service Level (S), then Reporting Basis (B)

(See Table 12 on page 85).

<i>Model</i>	<i>Likelihood Ratio</i>	<i>df</i>	<i>p</i>
D, SB (Null Logit)	0.39	3	0.94
DB, SB (Service Level)	0.02	1	> 0.80
DB, DS, SB (Reporting Basis Service Level)	0.29	1	> 0.50
DSB (Interaction)	0.08	1	> 0.70

(D = Decision, S = Service Level, B = Reporting Basis)

Use of Covariates To Explain the Effects

Eight covariates discussed in the previous chapter were considered in order to explain the effects of the manipulated variables on the perceptions of the subjects. Those covariates were years of loan-officer experience, years of college-level accounting education, maximum line of credit offered by bank company, typical line of credit offered by bank company, maximum less typical line of credit offered by loan officer, experience with type of report in experiment, experience with construction company financial reports, and loan-officer understanding of the reports to which they were exposed.¹⁰⁸ Of the eight covariates considered, only two are statistically significant. These two are (1) loan officer understanding of the report to which they were exposed ($F = 6.43, p = 0.0001$), and (2) the difference between the maximum and typical lines of credit the loan officer offers ($F = 2.92, p = 0.0226$). (See Table 14 on page 88). Interactions between these two covariates and the independent variables were tested and determined to be nonsignificant.

Although these covariates are statistically significant, and may be of importance in future research, they did little to explain the effects of the manipulated variables. The entire analysis changes very little. The covariates do explain the effect of the financial reporting basis on the loan officer confidence in the financial report. This effect is no longer significant if the covariates are included in the analysis ($F = 1.40, p = 0.2390$). One must remember, however, that this effect may be “masked” by the interaction of the main effects, and the interaction is still significant even in the presence of the covariates. Further, the inclusion of the covariates has changed the sums of squares for error in the analysis to the point that the service level has a statistically significant effect on the perceived decision usefulness of the financial report ($F = 3.11, p = 0.0798$). Therefore these covariates are of little, if any, value in explaining the effects of financial reporting bases, service levels, or their interaction on subjects’ perceptions.

¹⁰⁸ The effects of the covariates upon the approval decision were not considered because the independent variables had no effect on that decision.

Table 14. Covariate Analysis Using the Four Perceptions

<i>Covariate</i>	<i>Wilks' Criterion</i>	<i>F</i>	<i>p</i>
Loan Officer Experience	0.97550674	1.35	0.2527
Accounting Education	0.99300197	0.38	0.8236
Maximum Bank Line of Credit	0.99332354	0.33	0.8603
Typical Bank Line of Credit	0.98860933	0.56	0.6928
Maximum Less Typical Line Offered	0.93704453	2.92	0.0226
Experience with Type of Report	0.97982674	0.97	0.4265
Construction Companies	0.96831054	1.54	0.1928
Understanding	0.87122763	6.43	0.0001

Retesting Considering the Qualitative Characteristics of Accounting Information

The 16 characteristics listed in Figure 5 on page 64 were used to develop surrogate traits of decision usefulness. These traits were then used to re-test hypotheses H4, H9, and H14. These tests involve the effects of financial reporting basis, service level, and interaction upon the decision usefulness of the financial report. The measures developed using the qualitative characteristics of accounting information were implemented as surrogates for decision usefulness in testing these hypotheses.

SFAC Number 2 describes four traits of accounting information: relevance, reliability, user specificity, and nonessential characteristics. It is worthwhile to develop measures of decision usefulness using the qualitative characteristics of accounting information only if the traits developed from these characteristics are reliable (*i.e.*, dependable) measures. Testing a trait for dependability is possible only after it has been determined that the trait is unidimensional. The traits were therefore examined for unidimensionality with tests for (1) shared meaning, (2) internal consistency, and (3) external consistency. Once unidimensional traits were developed, tests for dependability were undertaken.

SFAC Number 2 supplies shared meaning by breaking traits down into specific characteristics. These characteristics were used to develop unidimensional traits. If the unidimensional traits developed from the characteristics discussed in SFAC Number 2 are tested and found not to be dependable, exploratory factor analysis is used to develop traits that are dependable. The tests for unidimensionality and dependability (confirmatory factor analysis) can then be applied to the traits obtained using exploratory factor analysis. These measures consisted of a summation of the scores for the characteristics in each trait.

Developing Unidimensional Traits Using Shared Meanings Indicated By SFAC Number 2

As indicated in Figure 5 on page 64, subjects responded to adjective pairs representing the 16 characteristics. A correlation matrix was developed for the responses regarding the sixteen adjective pairs. This matrix was used as the input to the PACKAGE program, which was used to develop the coefficients necessary to test for unidimensionality and dependability.¹⁰⁹

The Trait of Relevance

The “contradictory - noncontradictory” adjective pair was immediately eliminated from the relevance trait because the similarity coefficients (for examining external consistency) associated with “contradictory - noncontradictory” were too much less than 1.0 to warrant inclusion. The similarity coefficients for the characteristic ranged from 0.457 to 0.679 (see Appendix D). In this and subsequent examinations of the internal and external consistency of the characteristics identified for the relevance trait, no indications were found to suggest that additional characteristics be eliminated. The trait of relevance was therefore deemed unidimensional after the “contradictory - noncontradictory” adjective pair was eliminated. (See Figure 7 on page 93). The alpha-coefficient for this trait is 0.63.

The Trait of Reliability

Based upon their relatively high partial correlations, which were used in examining internal consistency, two adjective pairs were immediately eliminated from the trait of reliability. These two

¹⁰⁹ See Hunter and Gerbing, *op cit*, for information about PACKAGE.

adjective pairs were “reliable - unreliable” and “consistent - inconsistent.” Two other adjective pairs, “comparable - noncomparable” and “complete - incomplete,” were eliminated in subsequent examinations of the external consistency of the characteristics within the reliability trait. Three adjective pairs, “verifiability - nonverifiability”, “faithful representation - unfaithful representation,” and “unbiased - biased,” remain as the adjective pairs of a unidimensional trait.¹¹⁰ This trait has a dependability (alpha) coefficient of 0.51. (See Appendix D and Figure 7 on page 93). The definitions of reliability offered by SFAC Number 2 are evidently inappropriate when measuring decision usefulness for loan officers. SFAC Number 2 has defined some other trait. This conclusion is drawn because the unidimensional trait developed from SFAC Number 2’s definitions of reliability (a) is not dependable, (b) only includes three of the seven characteristics described by SFAC Number 2, and (c) does not even include the “reliable - unreliable” adjective pair.

The Trait of User Specificity

SFAC Number 2 describes understandability and newness as being dependent upon the user of accounting information. The user-specific trait composed of these two characteristics is unidimensional. It is difficult to test a trait for unidimensionality, however, when the trait is made up of but two characteristics. Further, the dependability of the trait is affected by the small number of characteristics. The alpha-coefficient associated with this trait is only 0.57. (See Appendix D and Figure 7 on page 93).

The Trait of Nonessential Characteristics

The fourth trait is defined by characteristics that SFAC Number 2 describes as being nonessential to the qualitative characteristics of accounting information. The three adjective pairs involved are

¹¹⁰ Although the name “reliability” was retained to describe this unidimensional trait, it is no longer a trait of reliability.

“conservative - nonconservative”, “certain - uncertain,” and “precise - imprecise.” The characteristics of the “nonessential” trait were tested and found to be unidimensional. The dependability of this trait was higher than that of the unidimensional traits of relevance, reliability, or user specificity described earlier. With an alpha-coefficient of 0.74, this nonessential trait was the most dependable measure obtained from the definitions supplied by SFAC Number 2. (See Appendix D and Figure 7 on page 93).

Discussion

Several assertions can be made about the analysis of the qualitative characteristics described in SFAC Number 2. First, none of the traits was a dependable measure of decision usefulness. Second, many of the characteristics were eliminated before unidimensional traits could be obtained. This was especially true in analyzing the “reliability” trait, where four of the seven characteristics, including reliability itself, were eliminated. Finally, characteristics described by SFAC Number 2 as nonessential compose the most dependable trait. All three of these points lead to the conclusion that the characteristics should be re-examined from an exploratory standpoint to isolate meaningful, dependable measures of decision usefulness. In the next section, more dependable measures are created.

Developing Traits Using Exploratory Factor Analysis

Exploratory factor analysis was performed to obtain more reliable traits. (See Appendix E). Four traits were developed using the exploratory analysis. Orthogonal rotation using the varimax method was used in developing the traits. Similar results were obtained with an oblique rotation.¹¹¹ The

¹¹¹ Because sixteen characteristics were used in the exploratory factor analysis, there were sixteen factors. Those used in the study each explained more than one-sixteenth of the variation. Four other factors that explained more than one-sixteenth of the variation that were essentially dependent on only one charac-

- Relevance (Alpha = 0.63)
 - Predictive ability (Predictive/Nonpredictive)
 - Timeliness (Timely/Untimely)
 - Comparability (Comparable/Noncomparable)
 - Consistency (Consistent/Inconsistent)
 - Relevance (Relevant/Irrelevant)
- Reliability (Alpha = 0.51)
 - Verifiability (Verifiable/Nonverifiable)
 - Faithful representation (Faithful Representation/Unfaithful Representation)
 - Bias (Biased/Unbiased)
- User Specificity (Alpha = 0.57)
 - Understandability (Understandable/Nonunderstandable)
 - Newness (Old/New)
- Nonessential (Alpha = 0.74)
 - Precision (Precise/Imprecise)
 - Certainty (Certain/Uncertain)
 - Conservatism (Conservative/Nonconservative)

Figure 7. A PRIORI Unidimensional Traits, Characteristics, and Corresponding Adjective Pairs

four traits each explain more variation than an average variable would explain.¹¹² Names that generally describe the the characteristics are created for each trait.

A Trait of Predictability

The first trait is composed of four adjective pairs: “complete - incomplete,” “predictive - nonpredictive,” “certain - uncertain,” and “precise - imprecise.” The factor from which the trait was developed explains 14.9% (2.377545/16) of the variation in the data (see Appendix E). Notice that the trait includes two of the three characteristics that SFAC Number 2 described as nonessential to the qualitative characteristics of accounting information. The fact that these characteristics were important does not necessarily imply that loan officers believe that such characteristics should be inherent in accounting information, but it does imply that these characteristics might be useful in assessing the decision usefulness of accounting information.

The trait of predictability was unidimensional as it existed and no deletion of characteristics was necessary. The trait of predictability has an alpha coefficient of 0.84, is the most reliable trait developed from exploratory analysis of the sixteen characteristics, and is more reliable than any trait developed using the discussions and definitions within SFAC Number 2.

A Trait of User Specificity

SFAC Number 2 describes user-specific qualities in terms of both the newness and the understandability of accounting information. These two characteristics together compose a

teristic were discarded from the analysis. Orthogonal rotation with the varimax method was used; comparisons to an oblique rotation using the promax method after the varimax method showed no significant differences. This lack of differences implies that the factors (traits) used are essentially independent of each other, and that they would be even if they were not forced to be by the orthogonal (independent) restriction.

¹¹² An average factor would explain 6.25% (1/16) of the variation.

unidimensional, albeit unreliable, trait for measuring decision usefulness. The second factor obtained using exploratory factor analysis was most heavily influenced by these two characteristics and by the following adjective pairs: “consistent - inconsistent,” “conservative - nonconservative,” “reliable - unreliable,” “noncontradictory - contradictory,” and “faithful representation - unfaithful representation.” These seven characteristics did not compose a unidimensional trait, however.

The factor used to obtain these adjective pairs as a possible trait explained 13.9% (2.226002/16) of the variation in the data. (See Appendix E). In order to obtain a unidimensional trait, three of these adjective pairs were deleted. The “consistent - inconsistent” adjective pair was deemed inappropriate based upon tests of both internal consistency and external consistency. “Faithful representation - unfaithful representation” and “reliable - unreliable” were eliminated due to problems concerning external consistency. This trait is not as dependable as the trait of predictability developed earlier. The alpha-coefficient for the user specificity trait is 0.72. (See Figure 8 on page 97).

A Trait of Reliability

The third factor explained 13.4% (2.141839/16) of the variation in the data. Four adjective pairs that load heavily upon this factor include: “verifiable - nonverifiable,” “conservative - nonconservative,” “reliable - unreliable,” and “faithful representation - unfaithful representation.” In developing a unidimensional trait using these adjective pairs, “conservative - nonconservative” was dropped due to a lack of external consistency. With an alpha coefficient of 0.75, this trait is more dependable than any of those developed in the analysis based upon the discussion in SFAC Number 2. (See Appendix E and Figure 8 on page 97).

- Predictability (Alpha = 0.84)
 - Completeness (Complete/Incomplete)
 - Predictive ability (Predictive/Nonpredictive)
 - Certainty (Certain/Uncertain)
 - Precision (Precise/Imprecise)
- User Specificity (Alpha = 0.72)
 - Understandability (Understandable/Nonunderstandable)
 - Newness (Old/New)
 - Conservatism (Conservative/Nonconservative)
 - Contradiction (Contradictory/Noncontradictory)
- Reliability (Alpha = 0.75)
 - Verifiability (Verifiable/Nonverifiable)
 - Faithful representation (Faithful Representation/Unfaithful Representation)
 - Reliability (Reliable/Unreliable)
- Reliability and Relevance (Alpha = 0.64)
 - Comparability (Comparable/Noncomparable)
 - Consistency (Consistent/Inconsistent)

Figure 8. Exploratory Unidimensional Traits, Characteristics, and Corresponding Adjective Pairs

A Trait of Reliability And Relevance

SFAC Number 2 includes a discussion of two characteristics that affect both reliability and relevance. Those characteristics, consistency and comparability, load heavily upon the fourth factor of the exploratory factor analysis. This factor explains 8.6% (1.37559/16) of the variation in the data. Though these two characteristics represent a unidimensional trait, it is difficult to test for unidimensionality when only two characteristics are involved. The dependability of this trait, based on the alpha-coefficient of 0.64, is lacking when compared to the previous three traits. (See Appendix E and Figure 8).

Effects Upon Measures of Decision Usefulness

Although alpha-coefficients can provide some measure of the dependability of the unidimensional traits developed, it is not clear whether these traits are good measures of decision usefulness. This final section of analysis involves the use of the traits developed to ascertain the effects of financial reporting basis, service level, and interaction on the decision usefulness of the financial report, where the traits developed serve as surrogates for decision usefulness.

Hypotheses (H4), (H9), and (H14) were tested again using two multivariate tests. In the first test, the effects of interaction, service level, and reporting basis on the four unidimensional traits of decision usefulness derived from SFAC Number 2 were examined. In the second test, the effects of interaction, service level, and reporting basis on the four unidimensional traits developed using exploratory analysis were examined. As was the case in earlier multivariate tests, if the multivariate test provides significant results, further analysis is undertaken to determine specifically which of the traits are affected.

Effects Upon the Traits Developed Using SFAC Number 2

For the four traits developed using the descriptions in SFAC Number 2, the multivariate tests for interaction ($F = 0.79$, $p = 0.5308$) and financial reporting basis ($F = 0.59$, $p = 0.6675$) were not significant. That is, neither the interaction nor the financial reporting basis had significant effects upon the traits developed using SFAC Number 2. On the other hand, the service level effect was significant ($F = 2.56$, $p = 0.0398$). (See Table 15 on page 99). Although the effect of the service level provided by external accountants was significant in the multivariate test, no significant effect can be identified relating to any of the four traits developed using SFAC Number 2.

Effects Upon the Traits Developed Using Exploratory Analysis

For the four traits developed using exploratory analysis, the multivariate tests were not statistically significant for interaction ($F = 1.00$, $p = 0.4103$) or service level ($F = 1.79$, $p = 0.1317$). The financial reporting basis had a significant effect on the multivariate combination of the four traits ($F = 2.00$, $p = 0.0965$). (See Table 16 on page 100). An analysis of the effects of the financial reporting basis upon each trait indicated that only the trait of predictability was significantly affected by the financial reporting basis ($F = 4.35$, $p = 0.0384$). No other trait was significantly affected. (See Table 17 on page 101).

It is difficult to assess the worthiness of the traits developed in this analysis as surrogates for decision usefulness. Further research is necessary. Loan officers can use some characteristics to distinguish among financial reporting bases. The trait where this is most obvious involves the completeness, predictive ability, certainty, and precision of the financial report with respect to making judgments. Accountants have long discussed the characteristic of predictive ability, but SFAC Number 2 has suggested that certainty and precision may be out of place in describing the quality of accounting information.

Table 15. Multivariate Effects on Four A PRIORI Analysis Traits of Decision Usefulness

<i>Independent Variable</i>	<i>Wilks' Criterion</i>	<i>F</i>	<i>p</i>
Financial Reporting Basis	0.98771712	0.59	0.6675
Service Level	0.94906245	2.56	0.0398
Interaction	0.98365642	0.79	0.5308

Table 16. Multivariate Effects on Four Exploratory Analysis Traits of Decision Usefulness

<i>Independent Variable</i>	<i>Wilks' Criterion</i>	<i>F</i>	<i>p</i>
Financial Reporting Basis	0.96142410	2.00	0.0965
Service Level	0.96521717	1.79	0.1317
Interaction	0.98035256	1.00	0.4103

Table 17. Effects of Financial Reporting Basis On Exploratory Traits of Decision Usefulness

<i>Dependent Variable</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>
Predictability	127.724	1	127.724	4.35	0.0384
User-Specificity	18.449	1	18.449	0.56	0.4555
Reliability	1.092	1	1.092	0.07	0.7968
Reliability/Relevance	0.874	1	0.874	0.12	0.7255

Even if commercial bank loan officers can use this predictability trait to distinguish among the levels of quality inherent in various financial reporting bases, it is not clear that the trait is a surrogate for decision usefulness. This, too, is a matter for future research. Evidence here is somewhat circumstantial; the effects of service level, reporting basis, and interaction upon perceptions of decision usefulness, the multivariate combination of the four traits developed using exploratory analysis, and the trait of predictability are congruent. In all three cases, only the effect of the financial reporting basis is significant.

Chapter Summary

This Chapter provided an analysis of data obtained to test the fifteen hypotheses listed in Figure 3 on page 42. The earlier portion of this Chapter included specific analyses of variance used to test the fifteen hypotheses involving the effects of financial reporting bases, service levels, and interaction on subjects' perceptions and decisions. The analyses were not significantly improved when covariates were introduced. The latter portion of the Chapter involved the generation of surrogate measures of decision usefulness using confirmatory factor analysis and exploratory factor analysis. These surrogates were used to re-test hypotheses H4, H9, and H14. Similar results were obtained from retesting. Again, only the financial reporting basis affected perceptions of decision usefulness. The following Chapter includes a summary of the results of the experiment and conclusions that follow from those results along with limitations of this study and implications for future research.

Chapter Five: Conclusions, Limitations, And Implications For Future Research

This chapter presents conclusions that can be drawn from analyses presented in Chapter Four. Afterwards, the contributions offered by this research are discussed, followed by the limitations of the study and implications for future research.

Results And Conclusions

The perceptions of subjects are affected by the financial reporting basis used in preparing financial statements. They perceive financial reports prepared on the basis of GAAP as being more useful than those prepared on an income tax basis. Similarly, the perceived likelihood of default on a loan is higher if the financial report is prepared on an income tax basis.

The perceptions of the subjects are also affected by the service levels offered by external accountants. The perceived likelihood of default associated with audited financial statements is much lower

than that associated with reviewed financial statements. The interest rate perceived to be appropriate is significantly higher if the financial report is reviewed rather than audited. For the loan request used in the experiment, the interest rate is one-fourth of a percent higher for reviewed statements than for audited statements. The service levels offered by external accountants did not significantly affect the perceptions of loan officers concerning the decision usefulness of the financial report or their confidence in the financial report.

Interaction between financial reporting basis and service level affects the subjects' perceptions of confidence. Indeed, subjects are more confident with audits than reviews when financial reports are prepared on the basis of GAAP. Their confidence is not significantly affected by service levels when the financial report is prepared on an income tax basis. Further, no significant difference in confidence is identifiable when reviewed financial statements are prepared on the basis of GAAP rather than an income-tax basis. A major result is that subjects have much less confidence in an audited financial report if it is prepared on an income tax basis. Perhaps the reason for this outcome is that loan officers are seldom exposed to, and thus not familiar with, audited tax-basis financial reports. If, in fact, loan officers are not familiar with audited statements *not* prepared on a GAAP basis, it is not surprising that Abdel-Khalik, *et al.*, found that loan officers confuse and mingle the terms "audit" and "GAAP."

The financial reporting basis did not significantly affect the subjects' perceptions of the appropriate interest rate to charge for a loan, even though the perceptions of default risk are affected by the financial reporting basis. Rather than conclude that the financial reporting basis does not affect the interest rate, one might consider the possibility that other variables affected the interest rate. Further research is necessary to identify those variables.

Neither financial reporting basis, service level, nor interaction had an effect on the loan approval decision. The lack of significance associated with these effects is so strong, and the proportion of subjects that did not approve the loan is so large, that it is likely that other factors are influencing the loan approval decision. The background information discussed in Chapter One indicates (see

Figure 1 on page 4) that financial reports are not the only information used when making a loan-approval decision. This outcome may have been influenced by the construction industry; further research is necessary to identify the effects of industries on loan-approval decisions.

Multiple measures of decision usefulness were developed using the qualitative characteristics of accounting information discussed in SFAC Number 2. Tests showed that measures developed on the basis of the descriptions of traits in SFAC Number 2 are not dependable. These measures, when used as surrogates for decision usefulness, exhibit no effect on financial reporting basis or interaction. The significant effect of service levels on the multivariate combination of the four perceptions cannot be traced to specific perceptions. More dependable proxies for decision usefulness were developed using exploratory factor analysis with the characteristics described in SFAC Number 2. Only the most reliable measure, the trait of predictability, is affected by any of the independent variables, and then only by the financial reporting basis, and not by the service level or interaction.

Two points can be made about the results of the multiple-measures analysis: (1) the trait that is affected might be a good proxy for decision usefulness, and (2) the characteristics that best define decision usefulness for the subjects may differ from those described in SFAC Number 2, and from those that might generally be associated with decision usefulness by accountants. This proxy for decision usefulness is appropriate because of the similarity of the results between the proxy and decision usefulness. Neither the proxy nor decision usefulness itself are affected by service level or interaction, but both are affected by financial reporting basis. In both cases, GAAP-based financial reports are seen as being more useful. The conclusion that loan officers view decision usefulness differently is drawn because two of the four characteristics in the proxy, certainty and precision, are referred to by SFAC Number 2 as nonessential qualitative characteristics of accounting information.

Contribution

The purpose of this research was to determine, in a controlled yet realistic environment, the effects of financial reporting bases and service levels on loan officer perceptions and decisions. No prior experimental research existed concerning the effects of GAAP versus tax basis financial reports. Arguments suggest that GAAP-basis reports are more costly than income tax basis reports and audited reports are more costly than reviewed reports. Yet research on the opinions of loan officers indicates that they prefer GAAP-basis financial reports and they are confused by the terms “audit” and “GAAP”. Another objective of this research was to develop multiple measures of decision usefulness to enhance identification of effects of reporting bases and service levels on perceptions of decision usefulness.

The major contribution of this research is evidence that loan officer perceptions are affected by financial reporting bases and service levels. Managers, management accountants, external accountants, and loan officers can use the results of this study as aids in assessing the benefits, information costs, and opportunity costs of using income tax basis or reviewed reports rather than GAAP-basis or audited reports. These professionals can benefit from the information contained in the results of this experiment because they can now better understand the effects on loan officers of various financial reporting types. They can now consider the effects of income tax basis financial reports and reviewed financial reports on loan officers, along with the reduction in cost associated with them, when performing cost-benefit analyses to decide upon reporting bases and service levels.

Researchers now have empirical evidence from a controlled environment that confusion exists between the terms “audit” and “GAAP”. Although loan officers were able to use audited tax basis reports, they did not feel confident using them. As might be expected, they were most confident with audited GAAP-basis reports, but they were least confident with audited tax-basis reports.

Finally, multiple measures of decision usefulness were developed using the characteristics discussed in SFAC Number 2. These characteristics are associated with specific traits in SFAC Number 2, but those traits are not dependable measures of decision usefulness. Results suggest that the descriptions of traits in SFAC Number 2 are incorrect or inappropriate as surrogates for decision usefulness. More dependable traits were developed using the same characteristics.

Limitations of the Experiment

This study suffers from several limitations. The most notable limitation is that loan officers are asked to make decisions and indicate perceptions in an artificial environment. Many variables that may affect perceptions and loan approval decisions were controlled in the experiment. A certain amount of realism was no doubt sacrificed to achieve this control. To alleviate a portion of this problem, actual financial statements were used. As is the case in many experiments, certain variables could not be controlled, and certain elements of the experimental task and description are unrealistic or unusual.

Only one company was used in this experiment. A construction company was chosen because loan officers seem to be familiar with the financial reports of construction companies, and because construction companies exist in all parts of the country. This means, however, that only the construction industry is examined.

The subjects were loan officers who attended a school of commercial lending. The results may thus not be generalizable to all loan officers, because the loan officers at the school were relatively inexperienced. Note, however, that the loan officers at the National Commercial Lending School represent a national sample. This should enhance the propensity to generalize the results of the

experiment to other loan officers. Nevertheless, some of the loan officers were inexperienced and perhaps unknowledgable about financial reports.

Finally, it is possible that variables not yet addressed could explain the effects of service levels and reporting bases on loan officer perceptions and decision making. This serves to indicate that further research in the areas covered by this study might prove beneficial.

Implications For Future Research

The methods and results obtained from this experiment serve as catalysts and generators for additional research. Replication using a different company in a different industry or different subjects is certainly a possibility. The following discussion describes ideas for which this research serves as a springboard.

One of the major differences between tax-basis and GAAP-basis financial reports is that tax-basis financial reports do not involve statements of changes in financial position. A research project could be designed that would involve tax-basis financial statements alone, tax-basis financial statements that include a statement of changes in financial position, and GAAP-basis financial statements. The results of such an experiment could then be compared to the results obtained in this study. One might even consider including in such an experiment a financial report that is prepared on the basis of GAAP, except that it does not contain a statement of changes in financial position.

A second possibility would be to introduce additional variables based upon financial ratios (e.g., a current ratio or a debt-to-equity ratio). These independent variables could be manipulated and analyses made at “poor,” “average,” and “strong” levels for the ratios. Such an experiment would

extend the experiment reported here. Similar approaches could study other independent variables, such as industry effect or differential financial reporting.

As research in this area progresses, two additional avenues could certainly be explored. Research using conjoint analysis might be used to develop precise cost-benefit analyses to enable bankers, accountants, and managers to determine what reporting bases and service levels are best for them. Such an analysis would only be possible after the effects of these variables on loan officer perceptions and decisions are pinpointed finitely. Similarly, once these effects are finitely identified, analysis from a positive approach might be used to determine *why* any differences exist. Again, additional research and replication is probably necessary before these projects can be undertaken.

This study used the qualitative characteristics of accounting information to develop tests of the effects of reporting bases and service levels on loan-officer perceptions of decision usefulness. Research using additional companies, additional variables, and additional subjects and subject groups might be used to develop strong measures of surrogates for decision usefulness. Such research might even lead to stronger tests of the effects of reporting bases and services from external accountants on decision usefulness.

Appendix A. External Accountant Reports

Thompson, Clark, & Banks

Certified Public Accountants

To the Stockholders
Griffin Construction Company

We have examined the accompanying balance sheets of Griffin Construction Company as of December 31, 1985 and 1984, and the related statements of income, retained earnings and changes in financial position for the years then ended. Our examination was made in accordance with generally accepted auditing standards and, accordingly, included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

In our opinion the financial statements referred to above present fairly the financial position of Griffin Construction Company as of December 31, 1985 and 1984, and the results of its operations and the changes in its financial position for the years then ended, in conformity with generally accepted accounting principles applied on a basis consistent with that of the preceding years.

Thompson, Clark, & Banks
Certified Public Accountants
February 26, 1986

Thompson, Clark, & Banks

Certified Public Accountants

To the Stockholders
Griffin Construction Company

We have examined the accompanying statements of assets, liabilities, and stockholders' equity - income tax basis of Griffin Construction Company as of December 31, 1985 and 1984, and the related statements of revenue, expenses, and retained earnings - income tax basis for the years then ended. Our examination was made in accordance with generally accepted auditing standards and, accordingly, included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

The accompanying financial statements have been prepared on the accounting basis used by the Company for federal income tax purposes and are not intended to be a presentation in conformity with generally accepted accounting principles.

In our opinion, the financial statements referred to above present fairly the assets, liabilities, and stockholders' equity of Griffin Construction Company as of December 31, 1985 and 1984, and its revenue and expenses and changes in retained earnings for the years then ended, on the income tax basis of accounting, which has been applied in a consistent manner.

Thompson, Clark, & Banks
Certified Public Accountants
February 26, 1986

Thompson, Clark, & Banks

Certified Public Accountants

To the Stockholders
Griffin Construction Company

We have reviewed the accompanying balance sheets of Griffin Construction Company as of December 31, 1985 and 1984, and the related statements of income and retained earnings and changes in financial position for the years then ended, in accordance with standards established by the American Institute of Certified Public Accountants. All information included in these financial statements is the representation of the management of Griffin Construction Company.

A review consists principally of inquiries of Company personnel and analytical procedures applied to financial data. It is substantially less in scope than an examination in accordance with generally accepted auditing standards, the objective of which is the expression of an opinion regarding the financial statements taken as a whole. Accordingly, we do not express such an opinion.

Based on our reviews, we are not aware of any material modifications that should be made to the accompanying financial statements in order for them to be in conformity with generally accepted accounting principles.

Thompson, Clark, & Banks
Certified Public Accountants
February 26, 1986

Thompson, Clark, & Banks

Certified Public Accountants

To the Stockholders
Griffin Construction Company

We have reviewed the accompanying statements of assets, liabilities, and stockholders' equity - income tax basis of Griffin Construction Company as of December 31, 1985 and 1984, and the related statements of revenue, expenses, and retained earnings - income tax basis for the years then ended, in accordance with standards established by the American Institute of Certified Public Accountants. All information included in these financial statements is the representation of the management of Griffin Construction Company.

A review consists principally of inquiries of Company personnel and analytical procedures applied to financial data. It is substantially less in scope than an examination in accordance with generally accepted auditing standards, the objective of which is the expression of an opinion regarding the financial statements taken as a whole. Accordingly, we do not express such an opinion.

Based on our reviews, we are not aware of any material modifications that should be made to the accompanying financial statements in order for them to be in conformity with the income tax basis of accounting, as described in Note A.

Thompson, Clark, & Banks
Certified Public Accountants
February 26, 1986

Appendix B. Financial Reports

GRIFFIN CONSTRUCTION COMPANY
BALANCE SHEETS
December 31, 1985 and 1984

	1985	1984
ASSETS		
CURRENT ASSETS		
Cash, including certificates of deposit of \$210,000 in 1985 and \$90,000 in 1984	\$ 231,670	\$ 102,015
Contract Receivables (Note A)	46,423	143,599
Retainage Receivables (Note A)	180,392	77,013
Costs and estimated earnings in excess of billings on uncompleted contracts (Note A)	209,273	0
Income tax refunds receivable	13,096	18,246
Accounts receivable, other	184,696	124,893
Other current assets	399	0
Total current assets	\$ 865,949	\$ 465,766
PROPERTY AND EQUIPMENT (NOTE A)		
Equipment	17,336	7,631
Less accumulated depreciation	(5,757)	(2,693)
	\$ 11,579	\$ 4,938
OTHER ASSETS		
Deposits	2,753	569
Organization costs, less accumulated amortization of \$548 in 1985 and \$364 in 1984 (Note A)	364	548
	\$ 3,117	\$ 1,117
	\$ 880,646	\$ 471,821

See notes to financial statements.

GRIFFIN CONSTRUCTION COMPANY
BALANCE SHEETS
(CONTINUED)
December 31, 1985 and 1984

	1985	1984
LIABILITIES AND STOCKHOLDERS' EQUITY		
CURRENT LIABILITIES		
Accounts payable	\$ 474,775	\$ 165,486
Billings in excess of costs and estimated earnings on uncompleted contracts (Note A)	48,266	285,883
Accrued compensation and other expenses	36,857	25,375
Accounts payable, other	15,701	13,603
Accrued income taxes		
Currently payable	33,643	0
Deferred (Note A)	83,136	0
Total current liabilities	\$ 692,378	\$ 490,347
 STOCKHOLDERS' EQUITY		
Common stock - authorized 100 shares of \$50 par value; issued and outstanding, 80 shares	4,000	4,000
Additional paid-in capital	14,246	14,246
Retained Earnings (deficit)	170,022	(36,772)
	\$ 188,268	\$ (18,526)
	\$ 880,646	\$ 471,821

See notes to financial statements.

GRIFFIN CONSTRUCTION COMPANY
STATEMENTS OF CHANGES IN FINANCIAL POSITION

Years Ended December 31, 1985 and 1984

	<u>1985</u>	<u>1984</u>
Sources of working capital from operations		
Net income (loss) before extraordinary item	\$ 189,915	\$ (105,831)
Charges to income not using working capital		
Depreciation and amortization	3,248	1,819
	<u> </u>	<u> </u>
Working capital provided from (used by) operations exclusive of extraordinary item	\$ 193,163	\$ (104,012)
Extraordinary item - tax benefit of operating loss carryforward	16,879	0
	<u> </u>	<u> </u>
Working capital provided from (used by) operations	\$ 210,042	\$ (104,012)
Decrease in deposits	0	440
	<u> </u>	<u> </u>
	\$ 210,042	\$ (103,572)
Applications of working capital		
Purchases of property and equipment	\$ 9,705	\$ 592
Increase in deposits	2,185	0
	<u> </u>	<u> </u>
	\$ 11,890	\$ 592
	<u> </u>	<u> </u>
INCREASE (DECREASE) IN WORKING CAPITAL	\$ 198,152	\$ (104,164)
	<u>=====</u>	<u>=====</u>

See notes to financial statements.

GRIFFIN CONSTRUCTION COMPANY
STATEMENTS OF CHANGES IN FINANCIAL POSITION
(CONTINUED)
Years Ended December 31, 1985 and 1984

	<u>1985</u>	<u>1984</u>
Changes in components of working capital		
Increase (decrease) in current assets		
Cash	\$ 129,655	\$ (9,598)
Contract receivables	(97,176)	143,599
Retainage receivable	103,379	26,835
Costs and estimated earnings in excess of billings on uncompleted contracts	209,273	(1,184)
Income tax refunds receivable	(5,150)	18,246
Accounts receivable, other	59,803	39,132
Other current assets	399	0
	<u>\$ 400,183</u>	<u>\$ 217,030</u>
 (Increase) decrease in current liabilities		
Accounts payable	\$ (309,289)	\$ (125,600)
Billings in excess of cost and estimated earnings on uncompleted contracts	237,617	(285,883)
Accrued compensation and other expenses	(11,482)	80,976
Accounts payable, other	(2,098)	(13,603)
Accrued income taxes		
Currently payable	(33,643)	5,252
Deferred	(83,136)	17,664
	<u>\$ (202,031)</u>	<u>\$ (321,194)</u>
 INCREASE (DECREASE) IN WORKING CAPITAL	 <u>\$ 198,152</u> =====	 <u>\$ (104,164)</u> =====

See notes to financial statements.

GRIFFIN CONSTRUCTION COMPANY
 STATEMENTS OF INCOME AND RETAINED EARNINGS
 Years Ended December 31, 1985 and 1984

	1985	1984
Contract revenues earned	\$4,668,923	\$ 749,312
Cost of revenues earned	3,821,210	631,201
Gross profit	\$ 847,713	\$ 118,111
Operating expenses		
General and administrative	523,735	252,572
Depreciation and amortization	2,003	182
	\$ 525,738	\$ 252,754
Income (loss) from operations	\$ 321,975	\$ (134,643)
Other income		
Interest income	1,598	2,064
Income (loss) before income taxes and extraordinary item	\$ 323,573	\$ (132,579)
Income taxes (Notes A and B)		
Current	33,757	(9,084)
Deferred	99,901	(17,664)
	\$ 133,658	\$ (26,748)
Net income (loss) before extraordinary item	\$189,915	\$ (105,831)
Extraordinary item - tax benefit arising from carryforward of net operating loss (Note C)	16,879	0
NET INCOME (LOSS)	\$ 206,794	\$ (105,831)
Retained earnings (deficit), beginning of year	(36,772)	69,059
Retained earnings (deficit), end of year	\$ 170,022	\$ (36,772)

See notes to financial statements.

GRIFFIN CONSTRUCTION COMPANY
NOTES TO FINANCIAL STATEMENTS
December 31, 1985 and 1984

Note A - SIGNIFICANT ACCOUNTING POLICIES

Revenue and Cost Recognition - The Company is engaged in the construction industry and performs work under fixed-price contracts. Contract revenues are recognized on the percentage-of-completion method measured by the percentage of total costs incurred to date to total estimated costs for each contract.

Contract costs include all direct subcontractor, material and labor costs and those indirect costs related to contract performance, such as indirect labor, supplies, repairs, utilities and depreciation. General and administrative costs are charged to expense as incurred.

Costs and estimated earnings in excess of billings on uncompleted contracts represent revenues recognized on contracts for which billings have not been presented to the contract owners. Billings in excess of costs and estimated earnings on uncompleted contracts represent billings presented to the contract owners in excess of revenues recognized.

Property and Equipment - Property and equipment are stated at cost. Normal maintenance and repairs are charged against income as incurred.

The Company provides for depreciation of property and equipment using methods and rates designed to depreciate the cost of the assets over their useful lives.

Allowance for Doubtful Accounts - In management's opinion, all receivables are fully collectible. Accordingly, no allowance for doubtful accounts has been reported.

Organization Costs - Organization costs incurred at the formation of the Company are stated at cost and are being amortized by the straight-line method over five years.

Income Taxes - Deferred income taxes are provided to report the income tax effects of timing differences in reporting income for financial statement and tax purposes. These timing differences result from the use of different methods of accounting for retainages.

GRIFFIN CONSTRUCTION COMPANY
 NOTES TO FINANCIAL STATEMENTS
 December 31, 1985 and 1984
 (CONTINUED)

Retainages are recognized based upon the percentage-of-completion method for financial statement purposes and when the retainage is collected for income tax purposes.

Deferred taxes relating to timing differences resulting from the difference in reporting retainages are classified on the balance sheet as a current liability.

Investment tax credits are accounted for on the flow-through method and, accordingly, are treated as a reduction in the current provision for income taxes in the year the credits are utilized.

NOTE B - INCOME TAXES

The following is a reconciliation of income taxes, reported on the financial statements, to the amount computed at the statutory rate:

	1985	1984
	-----	-----
Computed at statutory rate	\$ 148,843	\$ (42,698)
Tax effect of surtax exemption	(18,475)	18,019
Investment tax credit	(776)	(687)
State income tax, net of federal expense (benefit)	3,948	(1,382)
Other	118	-
	-----	-----
	\$ 133,658	\$ (26,748)
	=====	=====

NOTE C - EXTRAORDINARY ITEM

An extraordinary credit of \$16,879 has been reported on the statement of income and retained earnings to recognize the realized tax benefit of an operating loss carryforward.

GRIFFIN CONSTRUCTION COMPANY
 STATEMENTS OF ASSETS, LIABILITIES AND STOCKHOLDERS' EQUITY
 INCOME TAX BASIS
 December 31, 1985 and 1984

	1985	1984
ASSETS		
CURRENT ASSETS		
Cash, including certificates of deposit of \$210,000 in 1985 and \$90,000 in 1984	\$ 231,670	\$ 102,015
Contract Receivables (Note A)	46,423	143,599
Costs and estimated earnings in excess of billings on uncompleted contracts (Note A)	209,273	0
Income tax refunds receivable	13,096	18,246
Accounts receivable, other	184,696	124,893
Other current assets	399	0
Total current assets	\$ 685,557	\$ 388,753
PROPERTY AND EQUIPMENT (NOTE A)		
Equipment	17,336	7,631
Less accumulated depreciation	(5,757)	(2,693)
	\$ 11,579	\$ 4,938
OTHER ASSETS		
Deposits	2,753	569
Organization costs, less accumulated amortization of \$548 in 1985 and \$364 in 1984 (Note A)	364	548
	\$ 3,117	\$ 1,117
	\$ 700,253	\$ 394,808

See notes to financial statements.

GRIFFIN CONSTRUCTION COMPANY
STATEMENTS OF ASSETS, LIABILITIES AND STOCKHOLDERS' EQUITY
(CONTINUED)
INCOME TAX BASIS
December 31, 1985 and 1984

	1985	1984
LIABILITIES AND STOCKHOLDERS' EQUITY		
CURRENT LIABILITIES		
Accounts payable	\$ 474,775	\$ 165,486
Billings in excess of costs and estimated earnings on uncompleted contracts (Note A)	48,266	285,883
Accrued compensation and other expenses	36,857	25,375
Accounts payable, other	15,701	13,603
Accrued income taxes currently payable	15,326	0
Total current liabilities	\$ 590,925	\$ 490,347
 STOCKHOLDERS' EQUITY		
Common stock - authorized 100 shares of \$50 par value; issued and outstanding, 80 shares	4,000	4,000
Additional paid-in capital	14,246	14,246
Retained Earnings (deficit)	91,082	(113,785)
	\$ 109,328	\$ (95,539)
	\$ 700,253	\$ 394,808

See notes to financial statements.

GRIFFIN CONSTRUCTION COMPANY
 STATEMENTS OF REVENUE, EXPENSES, AND RETAINED EARNINGS
 INCOME TAX BASIS

Years Ended December 31, 1985 and 1984

	1985	1984
Contract revenues earned	\$4,565,544	\$ 722,477
Cost of revenues earned	3,821,210	631,201
Gross profit	\$ 744,334	\$ 91,276
Operating expenses		
General and administrative	523,735	252,572
Depreciation and amortization	2,003	182
	\$ 525,738	\$ 252,754
Income (loss) from operations	\$ 218,596	\$ (161,478)
Other income		
Interest income	1,598	2,064
Income (loss) before income taxes and extraordinary item	\$ 220,194	\$ (159,414)
Income taxes (Notes A and B)		
Current	66,783	- 0
Tax benefit of net operating loss carryback	0	(9,084)
	\$ 66,783	\$ (9,084)
Net income (loss) before extraordinary item	\$ 153,411	\$ (150,330)
Extraordinary item - tax benefit arising from carryforward of net operating loss (Note C)	51,456	0
NET INCOME (LOSS)	\$ 204,867	\$ (150,330)
Retained earnings (deficit), beginning of year	(113,785)	36,545
Retained earnings (deficit), end of year	\$ 91,082	\$ (113,785)

See notes to financial statements.

GRIFFIN CONSTRUCTION COMPANY
NOTES TO FINANCIAL STATEMENTS
December 31, 1985 and 1984

Note A - SIGNIFICANT ACCOUNTING POLICIES

Basis of Presentation - The Company has prepared its financial statements on the accounting basis used for income tax purposes. Accordingly, retainages receivable on construction contracts are not recognized as revenues until collected in accordance with applicable provisions of the Internal Revenue Code.

Revenue and Cost Recognition - The Company is engaged in the construction industry and performs work under fixed-price contracts. Contract revenues are recognized on the percentage-of-completion method measured by the percentage of total costs incurred to date to total estimated costs for each contract.

Contract costs include all direct subcontractor, material and labor costs and those indirect costs related to contract performance, such as indirect labor, supplies, repairs, utilities and depreciation. General and administrative costs are charged to expense as incurred.

Costs and estimated earnings in excess of billings on uncompleted contracts represent revenues recognized on contracts for which billings have not been presented to the contract owners. Billings in excess of costs and estimated earnings on uncompleted contracts represent billings presented to the contract owners in excess of revenues recognized.

Property and Equipment - Property and equipment are stated at cost. Normal maintenance and repairs are charged against income as incurred.

The Company provides for depreciation of property and equipment using methods and rates designed to depreciate the cost of the assets over their useful lives.

Allowance for Doubtful Accounts - In management's opinion, all receivables are fully collectible. Accordingly, no allowance for doubtful accounts has been reported.

Organization Costs - Organization costs incurred at the formation of the Company are stated at cost and are being amortized by the straight-line method over five years.

GRIFFIN CONSTRUCTION COMPANY
 NOTES TO FINANCIAL STATEMENTS
 December 31, 1985 and 1984
 (CONTINUED)

Income Taxes - Income taxes are provided for in accordance with the basis of accounting used for income tax purposes.

Investment tax credits are accounted for on the flow-through method and, accordingly, are treated as a reduction in the current provision for income taxes in the year the credits are utilized.

NOTE B - INCOME TAXES

The following is a reconciliation of income taxes, reported on the financial statements, to the amount computed at the statutory rate:

	1985	1984
	-----	-----
Computed at statutory rate	\$ 81,933	\$ (19,811)
Tax effect of surtax exemption	(18,475)	12,109
Investment tax credit	(776)	-
State income tax, net of federal expense (benefit)	3,948	(1,382)
Other	153	-
	-----	-----
	\$ 66,783	\$ (9,084)
	=====	=====

NOTE C - EXTRAORDINARY ITEM

An extraordinary credit of \$51,456 has been reported on the statement of revenues, expenses and retained earnings to recognize the realized tax benefit of an operating loss carryforward.

GRIFFIN CONSTRUCTION COMPANY
UNAUDITED BALANCE SHEETS

December 31, 1985 and 1984

	1985	1984
ASSETS		
CURRENT ASSETS		
Cash, including certificates of deposit of \$210,000 in 1985 and \$90,000 in 1984	\$ 231,670	\$ 102,015
Contract Receivables (Note A)	46,423	143,599
Retainage Receivables (Note A)	180,392	77,013
Costs and estimated earnings in excess of billings on uncompleted contracts (Note A)	209,273	0
Income tax refunds receivable	13,096	18,246
Accounts receivable, other	184,696	124,893
Other current assets	399	0
Total current assets	\$ 865,949	\$ 465,766
PROPERTY AND EQUIPMENT (NOTE A)		
Equipment	17,336	7,631
Less accumulated depreciation	(5,757)	(2,693)
	\$ 11,579	\$ 4,938
OTHER ASSETS		
Deposits	2,753	569
Organization costs, less accumulated amortization of \$548 in 1985 and \$364 in 1984 (Note A)	364	548
	\$ 3,117	\$ 1,117
	\$ 880,646	\$ 471,821

See accountants' review report and notes to financial statements

GRIFFIN CONSTRUCTION COMPANY
 UNAUDITED BALANCE SHEETS
 (CONTINUED)
 December 31, 1985 and 1984

	1985	1984
LIABILITIES AND STOCKHOLDERS' EQUITY		
CURRENT LIABILITIES		
Accounts payable	\$ 474,775	\$ 165,486
Billings in excess of costs and estimated earnings on uncompleted contracts (Note A)	48,266	285,883
Accrued compensation and other expenses	36,857	25,375
Accounts payable, other	15,701	13,603
Accrued income taxes		
Currently payable	33,643	0
Deferred (Note A)	83,136	0
Total current liabilities	\$ 692,378	\$ 490,347
 STOCKHOLDERS' EQUITY		
Common stock - authorized 100 shares of \$50 par value; issued and outstanding, 80 shares	4,000	4,000
Additional paid-in capital	14,246	14,246
Retained Earnings (deficit)	170,022	(36,772)
	\$ 188,268	\$ (18,526)
	\$ 880,646	\$ 471,821

See accountants' review report and notes to financial statements

GRIFFIN CONSTRUCTION COMPANY
UNAUDITED STATEMENTS OF CHANGES IN FINANCIAL POSITION

Years Ended December 31, 1985 and 1984

	<u>1985</u>	<u>1984</u>
Sources of working capital from operations		
Net income (loss) before extraordinary item	\$ 189,915	\$ (105,831)
Charges to income not using working capital		
Depreciation and amortization	3,248	1,819
	<u> </u>	<u> </u>
Working capital provided from (used by) operations exclusive of extraordinary item	\$ 193,163	\$ (104,012)
Extraordinary item - tax benefit of operating loss carryforward	16,879	0
	<u> </u>	<u> </u>
Working capital provided from (used by) operations	\$ 210,042	\$ (104,012)
Decrease in deposits	0	440
	<u> </u>	<u> </u>
	\$ 210,042	\$ (103,572)
Applications of working capital		
Purchases of property and equipment	\$ 9,705	\$ 592
Increase in deposits	2,185	0
	<u> </u>	<u> </u>
	\$ 11,890	\$ 592
	<u> </u>	<u> </u>
INCREASE (DECREASE) IN WORKING CAPITAL	\$ 198,152	\$ (104,164)
	=====	=====

See accountants' review report and notes to financial statements

GRIFFIN CONSTRUCTION COMPANY
 UNAUDITED STATEMENTS OF CHANGES IN FINANCIAL POSITION
 (CONTINUED)
 Years Ended December 31, 1985 and 1984

	<u>1985</u>	<u>1984</u>
Changes in components of working capital		
Increase (decrease) in current assets		
Cash	\$ 129,655	\$ (9,598)
Contract receivables	(97,176)	143,599
Retainage receivable	103,379	26,835
Costs and estimated earnings in excess of billings on uncompleted contracts	209,273	(1,184)
Income tax refunds receivable	(5,150)	18,246
Accounts receivable, other	59,803	39,132
Other current assets	399	0
	<u>\$ 400,183</u>	<u>\$ 217,030</u>
(Increase) decrease in current liabilities		
Accounts payable	\$ (309,289)	\$ (125,600)
Billings in excess of cost and estimated earnings on uncompleted contracts	237,617	(285,883)
Accrued compensation and other expenses	(11,482)	80,976
Accounts payable, other	(2,098)	(13,603)
Accrued income taxes		
Currently payable	(33,643)	5,252
Deferred	(83,136)	17,664
	<u>\$ (202,031)</u>	<u>\$ (321,194)</u>
INCREASE (DECREASE) IN WORKING CAPITAL	<u>\$ 198,152</u>	<u>\$ (104,164)</u>
	=====	=====

See accountants' review report and notes to financial statements

GRIFFIN CONSTRUCTION COMPANY
 UNAUDITED STATEMENTS OF INCOME AND RETAINED EARNINGS
 Years Ended December 31, 1985 and 1984

	1985	1984
Contract revenues earned	\$4,668,923	\$ 749,312
Cost of revenues earned	3,821,210	631,201
Gross profit	\$ 847,713	\$ 118,111
Operating expenses		
General and administrative	523,735	252,572
Depreciation and amortization	2,003	182
	\$ 525,738	\$ 252,754
Income (loss) from operations	\$ 321,975	\$ (134,643)
Other income		
Interest income	1,598	2,064
Income (loss) before income taxes and extraordinary item	\$ 323,573	\$ (132,579)
Income taxes (Notes A and B)		
Current	33,757	(9,084)
Deferred	99,901	(17,664)
	\$ 133,658	\$ (26,748)
Net income (loss) before extraordinary item	\$189,915	\$ (105,831)
Extraordinary item - tax benefit arising from carryforward of net operating loss (Note C)	16,879	0
NET INCOME (LOSS)	\$ 206,794	\$ (105,831)
Retained earnings (deficit), beginning of year	(36,772)	69,059
Retained earnings (deficit), end of year	\$ 170,022	\$ (36,772)

See accountants' review report and notes to financial statements

GRIFFIN CONSTRUCTION COMPANY
UNAUDITED NOTES TO FINANCIAL STATEMENTS
December 31, 1985 and 1984

Note A - SIGNIFICANT ACCOUNTING POLICIES

Revenue and Cost Recognition - The Company is engaged in the construction industry and performs work under fixed-price contracts. Contract revenues are recognized on the percentage-of-completion method measured by the percentage of total costs incurred to date to total estimated costs for each contract.

Contract costs include all direct subcontractor, material and labor costs and those indirect costs related to contract performance, such as indirect labor, supplies, repairs, utilities and depreciation. General and administrative costs are charged to expense as incurred.

Costs and estimated earnings in excess of billings on uncompleted contracts represent revenues recognized on contracts for which billings have not been presented to the contract owners. Billings in excess of costs and estimated earnings on uncompleted contracts represent billings presented to the contract owners in excess of revenues recognized.

Property and Equipment - Property and equipment are stated at cost. Normal maintenance and repairs are charged against income as incurred.

The Company provides for depreciation of property and equipment using methods and rates designed to depreciate the cost of the assets over their useful lives.

Allowance for Doubtful Accounts - In management's opinion, all receivables are fully collectible. Accordingly, no allowance for doubtful accounts has been reported.

Organization Costs - Organization costs incurred at the formation of the Company are stated at cost and are being amortized by the straight-line method over five years.

Income Taxes - Deferred income taxes are provided to report the income tax effects of timing differences in reporting income for financial statement and tax purposes. These timing differences result from the use of different methods of accounting for retainages.

GRIFFIN CONSTRUCTION COMPANY
 UNAUDITED NOTES TO FINANCIAL STATEMENTS
 December 31, 1985 and 1984
 (CONTINUED)

Retainages are recognized based upon the percentage-of-completion method for financial statement purposes and when the retainage is collected for income tax purposes.

Deferred taxes relating to timing differences resulting from the difference in reporting retainages are classified on the balance sheet as a current liability.

Investment tax credits are accounted for on the flow-through method and, accordingly, are treated as a reduction in the current provision for income taxes in the year the credits are utilized.

NOTE B - INCOME TAXES

The following is a reconciliation of income taxes, reported on the financial statements, to the amount computed at the statutory rate:

	1985	1984
	-----	-----
Computed at statutory rate	\$ 148,843	\$ (42,698)
Tax effect of surtax exemption	(18,475)	18,019
Investment tax credit	(776)	(687)
State income tax, net of federal expense (benefit)	3,948	(1,382)
Other	118	-
	-----	-----
	\$ 133,658	\$ (26,748)
	=====	=====

NOTE C - EXTRAORDINARY ITEM

An extraordinary credit of \$16,879 has been reported on the statement of income and retained earnings to recognize the realized tax benefit of an operating loss carryforward.

GRIFFIN CONSTRUCTION COMPANY
 UNAUDITED STATEMENTS OF ASSETS, LIABILITIES AND STOCKHOLDERS' EQUITY
 INCOME TAX BASIS
 December 31, 1985 and 1984

	1985	1984
ASSETS		
CURRENT ASSETS		
Cash, including certificates of deposit of \$210,000 in 1985 and \$90,000 in 1984	\$ 231,670	\$ 102,015
Contract Receivables (Note A)	46,423	143,599
Costs and estimated earnings in excess of billings on uncompleted contracts (Note A)	209,273	0
Income tax refunds receivable	13,096	18,246
Accounts receivable, other	184,696	124,893
Other current assets	399	0
Total current assets	\$ 685,557	\$ 388,753
PROPERTY AND EQUIPMENT (NOTE A)		
Equipment	17,336	7,631
Less accumulated depreciation	(5,757)	(2,693)
	\$ 11,579	\$ 4,938
OTHER ASSETS		
Deposits	2,753	569
Organization costs, less accumulated amortization of \$548 in 1985 and \$364 in 1984 (Note A)	364	548
	\$ 3,117	\$ 1,117
	\$ 700,253	\$ 394,808

See accountants' review report and notes to financial statements.

GRIFFIN CONSTRUCTION COMPANY
 UNAUDITED STATEMENTS OF ASSETS, LIABILITIES AND STOCKHOLDERS' EQUITY
 (CONTINUED)
 INCOME TAX BASIS
 December 31, 1985 and 1984

	1985	1984
LIABILITIES AND STOCKHOLDERS' EQUITY		
CURRENT LIABILITIES		
Accounts payable	\$ 474,775	\$ 165,486
Billings in excess of costs and estimated earnings on uncompleted contracts (Note A)	48,266	285,883
Accrued compensation and other expenses	36,857	25,375
Accounts payable, other	15,701	13,603
Accrued income taxes currently payable	15,326	0
Total current liabilities	\$ 590,925	\$ 490,347
STOCKHOLDERS' EQUITY		
Common stock - authorized 100 shares of \$50 par value; issued and outstanding, 80 shares	4,000	4,000
Additional paid-in capital	14,246	14,246
Retained Earnings (deficit)	91,082	(113,785)
	\$ 109,328	\$ (95,539)
	\$ 700,253	\$ 394,808
	=====	=====

See accountants' review report and notes to financial statements.

GRIFFIN CONSTRUCTION COMPANY
 UNAUDITED STATEMENTS OF REVENUE, EXPENSES, AND RETAINED EARNINGS
 INCOME TAX BASIS

Years Ended December 31, 1985 and 1984

	1985	1984
Contract revenues earned	\$4,565,544	\$ 722,477
Cost of revenues earned	3,821,210	631,201
Gross profit	\$ 744,334	\$ 91,276
Operating expenses		
General and administrative	523,735	252,572
Depreciation and amortization	2,003	182
	\$ 525,738	\$ 252,754
Income (loss) from operations	\$ 218,596	\$ (161,478)
Other income		
Interest income	1,598	2,064
Income (loss) before income taxes and extraordinary item	\$ 220,194	\$ (159,414)
Income taxes (Notes A and B)		
Current	66,783	0
Tax benefit of net operating loss carryback	0	(9,084)
	\$ 66,783	\$ (9,084)
Net income (loss) before extraordinary item	\$ 153,411	\$ (150,330)
Extraordinary item - tax benefit arising from carryforward of net operating loss (Note C)	51,456	0
NET INCOME (LOSS)	\$ 204,867	\$ (150,330)
Retained earnings (deficit), beginning of year	(113,785)	36,545
Retained earnings (deficit), end of year	\$ 91,082	\$ (113,785)

See accountants' review report and notes to financial statements.

GRIFFIN CONSTRUCTION COMPANY
UNAUDITED NOTES TO FINANCIAL STATEMENTS
December 31, 1985 and 1984

Note A - SIGNIFICANT ACCOUNTING POLICIES

Basis of Presentation - The Company has prepared its financial statements on the accounting basis used for income tax purposes. Accordingly, retainages receivable on construction contracts are not recognized as revenues until collected in accordance with applicable provisions of the Internal Revenue Code.

Revenue and Cost Recognition - The Company is engaged in the construction industry and performs work under fixed-price contracts. Contract revenues are recognized on the percentage-of-completion method measured by the percentage of total costs incurred to date to total estimated costs for each contract.

Contract costs include all direct subcontractor, material and labor costs and those indirect costs related to contract performance, such as indirect labor, supplies, repairs, utilities and depreciation. General and administrative costs are charged to expense as incurred.

Costs and estimated earnings in excess of billings on uncompleted contracts represent revenues recognized on contracts for which billings have not been presented to the contract owners. Billings in excess of costs and estimated earnings on uncompleted contracts represent billings presented to the contract owners in excess of revenues recognized.

Property and Equipment - Property and equipment are stated at cost. Normal maintenance and repairs are charged against income as incurred.

The Company provides for depreciation of property and equipment using methods and rates designed to depreciate the cost of the assets over their useful lives.

Allowance for Doubtful Accounts - In management's opinion, all receivables are fully collectible. Accordingly, no allowance for doubtful accounts has been reported.

Organization Costs - Organization costs incurred at the formation of the Company are stated at cost and are being amortized by the straight-line method over five years.

GRIFFIN CONSTRUCTION COMPANY
 UNAUDITED NOTES TO FINANCIAL STATEMENTS
 December 31, 1985 and 1984
 (CONTINUED)

Income Taxes - Income taxes are provided for in accordance with the basis of accounting used for income tax purposes.

Investment tax credits are accounted for on the flow-through method and, accordingly, are treated as a reduction in the current provision for income taxes in the year the credits are utilized.

NOTE B - INCOME TAXES

The following is a reconciliation of income taxes, reported on the financial statements, to the amount computed at the statutory rate:

	1985	1984
	-----	-----
Computed at statutory rate	\$ 81,933	\$ (19,811)
Tax effect of surtax exemption	(18,475)	12,109
Investment tax credit	(776)	-
State income tax, net of federal expense (benefit)	3,948	(1,382)
Other	153	-
	-----	-----
	\$ 66,783	\$ (9,084)
	=====	=====

NOTE C - EXTRAORDINARY ITEM

An extraordinary credit of \$51,456 has been reported on the statement of revenues, expenses and retained earnings to recognize the realized tax benefit of an operating loss carryforward.

Appendix C. Experimental Instrument

PART I

The purpose of this study is to examine the effects of various financial reporting bases on loan officer perceptions and decision-making. In taking part in this study, you will be playing the role of a commercial loan officer; this study is **not** designed to test your abilities. Further, you can be assured that your responses will be treated confidentially.

The results of this study should be beneficial to managers of small businesses, accountants, and commercial loan officers in making decisions regarding the communication and use of financial information. Therefore, a summary of the results will be made available to you upon request. To assure the confidentiality of your responses, an envelope is enclosed so that you can indicate your address. Please turn the envelope in separately from the study. Thank you very much for participating.

LOAN REQUEST CHARACTERISTICS AND CONSIDERATIONS

Following is a description of a loan request by Griffin Construction Company. Consider the request and the Griffin Company financial report in answering the six questions that follow.

- You, the loan officer, have developed an acceptable relationship with Griffin Company management
- You have an acceptable relationship with Thompson, Clark, & Banks, CPAs
- You have developed an acceptable relationship with Griffin Company's internal accountants
- Griffin Company is a new loan customer at your bank
- Griffin Company has no deposit accounts at your bank
- Griffin Company is requesting a \$100,000 line of credit
- The line of credit is unsecured
- There will be no compensating balances associated with the loan
- You have money to lend
- You have reviewed a job completion report for Griffin Construction Company. You are satisfied with Griffin Company's performance relative to cost and time expectations and you are satisfied with Griffin Company's future job opportunities.
- Griffin Company is three years old as of December 31, 1985.

1. Various points on the following scale indicate various levels of default risk. Please circle the number associated with the level of default risk you feel is most appropriate, considering the financial report of Griffin Company and its loan request.

extremely high	high	somewhat high	neither high nor low	somewhat low	low	extremely low
1	2	3	4	5	6	7

The commercial loan officer will decide (a) whether to grant the loan to the company and (b) what interest rate to charge if the loan is granted. Since the prime rate varies from time to time and, perhaps, from bank to bank, it is necessary that you answer the following question with regard to the prime rate at your bank today.

2. Would you grant the loan to Griffin Company under the above terms?

- YES or NO? _____
 - If your answer is YES, answer question a.
 - If your answer is NO, answer question b.
- a. What interest premium (Prime plus ?) would you charge for the loan?
- I WOULD CHARGE PRIME PLUS _____ PERCENT
- b. One of your competitors is going to make the loan. Given this information, what interest premium (Prime plus ?) do you believe your competitor would charge for the loan?
- MY COMPETITOR WOULD CHARGE PRIME PLUS _____ PERCENT

3. On this and the following page are sixteen pairs of adjectives. We are interested in your judgments regarding default risk and interest rates based upon the financial report you have just reviewed. We would like you to circle the number closest to the adjective that best reflects your judgment. For example, consider the following pair of adjectives:

relevant	1	2	3	4	5	6	7	irrelevant
----------	---	---	---	---	---	---	---	------------

- If you think that the Griffin Company financial report is **extremely relevant** for making default risk and interest rate judgments, you would circle "1".
- If you think the financial report is **relevant, but not extremely relevant**, you would circle "2".
- If the report is **somewhat relevant**, you would circle "3".
- If the report is **neither relevant nor irrelevant**, you would circle "4".
- If the report is **somewhat irrelevant**, you would circle "5".
- If the report is **irrelevant, but not extremely irrelevant**, you would circle "6".
- If you think the financial report is **extremely irrelevant** for making default risk and interest rate judgments, you would circle "7".

Please make each item a separate and independent judgment. The sixteen pairs of adjectives appear below and on the following page.

relevant	1	2	3	4	5	6	7	irrelevant
consistent	1	2	3	4	5	6	7	inconsistent
nonverifiable	1	2	3	4	5	6	7	verifiable
old	1	2	3	4	5	6	7	new
timely	1	2	3	4	5	6	7	untimely
nonconservative	1	2	3	4	5	6	7	conservative
unreliable	1	2	3	4	5	6	7	reliable
unbiased	1	2	3	4	5	6	7	biased
nonunderstandable	1	2	3	4	5	6	7	understandable
comparable	1	2	3	4	5	6	7	noncomparable
contradictory	1	2	3	4	5	6	7	noncontradictory
unfaithful representation	1	2	3	4	5	6	7	faithful representation

The remaining pairs of adjectives are on the next page.

complete	1	2	3	4	5	6	7	incomplete
predictive	1	2	3	4	5	6	7	nonpredictive
certain	1	2	3	4	5	6	7	uncertain
precise	1	2	3	4	5	6	7	imprecise

4. Please circle the number nearest the level that best describes the confidence you have in the sixteen judgments (regarding adjective pairs) that you just made.

extremely confident	confident	somewhat confident	neither confident nor unsure	somewhat unsure	unsure	extremely unsure
1	2	3	4	5	6	7

5. Please circle the number associated with the level which you think best describes how useful the Griffin Company financial report would be to you in making decisions.

extremely useful	useful	somewhat useful	neither useful nor useless	somewhat useless	useless	extremely useless
1	2	3	4	5	6	7

6. Please circle the number nearest the level that best describes the confidence you have that the Griffin Company financial report properly reflects Griffin Company's financial position.

extremely confident	confident	somewhat confident	neither confident nor unsure	somewhat unsure	unsure	extremely unsure
1	2	3	4	5	6	7

PART I

The purpose of this study is to examine the effects of various financial reporting bases on loan officer perceptions and decision-making. In taking part in this study, you will be playing the role of a commercial loan officer; this study is **not** designed to test your abilities. Further, you can be assured that your responses will be treated confidentially.

The results of this study should be beneficial to managers of small businesses, accountants, and commercial loan officers in making decisions regarding the communication and use of financial information. Therefore, a summary of the results will be made available to you upon request. To assure the confidentiality of your responses, an envelope is enclosed so that you can indicate your address. Please turn the envelope in separately from the study. Thank you very much for participating.

LOAN REQUEST CHARACTERISTICS AND CONSIDERATIONS

Following is a description of a loan request by Griffin Construction Company. Consider the request and the Griffin Company financial report in answering the six questions that follow.

- You, the loan officer, have developed an acceptable relationship with Griffin Company management
- You have an acceptable relationship with Thompson, Clark, & Banks, CPAs
- You have developed an acceptable relationship with Griffin Company's internal accountants
- Griffin Company is a new loan customer at your bank
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- Griffin Company is requesting a \$100,000 line of credit
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- There will be no compensating balances associated with the loan
- You have money to lend
- You have reviewed a job completion report for Griffin Construction Company. You are satisfied with Griffin Company's performance relative to cost and time expectations and you are satisfied with Griffin Company's future job opportunities.
- Griffin Company is three years old as of December 31, 1985.

1. Various points on the following scale indicate various levels of default risk. Please circle the number associated with the level of default risk you feel is most appropriate, considering the financial report of Griffin Company and its loan request.

extremely high	high	somewhat high	neither high nor low	somewhat low	low	extremely low
1	2	3	4	5	6	7

The commercial loan officer will decide (a) whether to grant the loan to the company and (b) what interest rate to charge if the loan is granted. Since the prime rate varies from time to time and, perhaps, from bank to bank, it is necessary that you answer the following question with regard to the prime rate at your bank today.

2. Would you grant the loan to Griffin Company under the above terms?

- YES or NO? _____

- If your answer is YES, answer question a.

- If your answer is NO, answer question b.

- a. What interest premium (Prime plus ?) would you charge for the loan?

- I WOULD CHARGE PRIME PLUS _____ PERCENT

- b. One of your competitors is going to make the loan. Given this information, what interest premium (Prime plus ?) do you believe your competitor would charge for the loan?

- MY COMPETITOR WOULD CHARGE PRIME PLUS _____ PERCENT

3. On this and the following page are sixteen pairs of adjectives. We are interested in your judgments regarding default risk and interest rates based upon the financial report you have just reviewed. We would like you to circle the number closest to the adjective that best reflects your judgment. For example, consider the following pair of adjectives:

relevant	1	2	3	4	5	6	7	irrelevant
----------	---	---	---	---	---	---	---	------------

- If you think that the Griffin Company financial report is **extremely relevant** for making default risk and interest rate judgments, you would circle "1".
- If you think the financial report is **relevant, but not extremely relevant**, you would circle "2".
- If the report is **somewhat relevant**, you would circle "3".
- If the report is **neither relevant nor irrelevant**, you would circle "4".
- If the report is **somewhat irrelevant**, you would circle "5".
- If the report is **irrelevant, but not extremely irrelevant**, you would circle "6".
- If you think the financial report is **extremely irrelevant** for making default risk and interest rate judgments, you would circle "7".

Please make each item a separate and independent judgment. The sixteen pairs of adjectives appear below and on the following page.

relevant	1	2	3	4	5	6	7	irrelevant
timely	1	2	3	4	5	6	7	untimely
unbiased	1	2	3	4	5	6	7	biased
unreliable	1	2	3	4	5	6	7	reliable
unfaithful representation	1	2	3	4	5	6	7	faithful representation
precise	1	2	3	4	5	6	7	imprecise
certain	1	2	3	4	5	6	7	uncertain
nonconservative	1	2	3	4	5	6	7	conservative
complete	1	2	3	4	5	6	7	incomplete
nonverifiable	1	2	3	4	5	6	7	verifiable
comparable	1	2	3	4	5	6	7	noncomparable
consistent	1	2	3	4	5	6	7	inconsistent

The remaining pairs of adjectives are on the next page.

nonunderstandable	1	2	3	4	5	6	7	understandable
old	1	2	3	4	5	6	7	new
contradictory	1	2	3	4	5	6	7	noncontradictory
predictive	1	2	3	4	5	6	7	nonpredictive

4. Please circle the number nearest the level that best describes the confidence you have in the sixteen judgments (regarding adjective pairs) that you just made.

extremely confident	confident	somewhat confident	neither confident nor unsure	somewhat unsure	unsure	extremely unsure
1	2	3	4	5	6	7

5. Please circle the number associated with the level which you think best describes how useful the Griffin Company financial report would be to you in making decisions.

extremely useful	useful	somewhat useful	neither useful nor useless	somewhat useless	useless	extremely useless
1	2	3	4	5	6	7

6. Please circle the number nearest the level that best describes the confidence you have that the Griffin Company financial report properly reflects Griffin Company's financial position.

extremely confident	confident	somewhat confident	neither confident nor unsure	somewhat unsure	unsure	extremely unsure
1	2	3	4	5	6	7

PART II

The remainder of the study requires you to make a few short rankings of financial reporting types and answer a few demographic questions. The reporting types considered are the following:

1. An **audited** financial report prepared on a **GAAP** basis.
2. An **audited** financial report prepared on an **income tax** basis.
3. A **reviewed** financial report prepared on a **GAAP** basis.
4. A **reviewed** financial report prepared on an **income tax** basis.

Please rank these financial reporting types from 1 (best or most) to 4 (worst or least) regarding the following considerations.

Rank the financial reporting types from "1", most relevant, to "4", least relevant.

- _____ An audited financial report presented on a GAAP basis
- _____ An audited financial report presented on an income tax basis
- _____ A reviewed financial report presented on a GAAP basis
- _____ A reviewed financial report presented on an income tax basis

Rank the financial reporting types from "1", most reliable, to "4", least reliable.

- _____ An audited financial report presented on a GAAP basis
- _____ An audited financial report presented on an income tax basis
- _____ A reviewed financial report presented on a GAAP basis
- _____ A reviewed financial report presented on an income tax basis

Rank the financial reporting types from "1", most conservative, to "4", least conservative.

- _____ An audited financial report presented on a GAAP basis
- _____ An audited financial report presented on an income tax basis
- _____ A reviewed financial report presented on a GAAP basis
- _____ A reviewed financial report presented on an income tax basis

How many years of experience do you have as a commercial loan officer?

_____ years

How many years of college-level accounting education have you had?

_____ years

What is the maximum line of credit YOU, PERSONALLY, can extend?

\$ _____

What is the maximum line of credit YOUR BANK COMPANY can extend?

\$ _____

What is the typical (average) line of credit YOU, PERSONALLY, extend?

\$ _____

What is the typical (average) line of credit YOUR BANK COMPANY extends?

\$ _____

Consider the financial reports you have examined with regard to commercial lending over the past two years. Please indicate the percentage of those reports that fit into each of the following categories.

- _____ % An AUDITED financial report prepared on a GAAP basis.
- _____ % A REVIEWED financial report prepared on a GAAP basis.
- _____ % An AUDITED financial report prepared on an INCOME TAX basis.
- _____ % A REVIEWED financial report prepared on an INCOME TAX basis.
- _____ % Some OTHER accountant involvement and/or some OTHER basis.

What portion (e.g., one-half, none, 30%) of the financial reports you have examined with regard to commercial lending over the past two years involved construction companies?

Please indicate how confident you are that you understand each of the following general types of financial reports.

1. An **audited** financial report prepared on a **GAAP** basis.

extremely confident	confident	somewhat confident	neither confident nor unsure	somewhat unsure	unsure	extremely unsure
1	2	3	4	5	6	7

2. An **audited** financial report prepared on an **income tax** basis.

extremely confident	confident	somewhat confident	neither confident nor unsure	somewhat unsure	unsure	extremely unsure
1	2	3	4	5	6	7

3. A **reviewed** financial report prepared on a **GAAP** basis.

extremely confident	confident	somewhat confident	neither confident nor unsure	somewhat unsure	unsure	extremely unsure
1	2	3	4	5	6	7

4. A **reviewed** financial report prepared on an **income tax** basis.

extremely confident	confident	somewhat confident	neither confident nor unsure	somewhat unsure	unsure	extremely unsure
1	2	3	4	5	6	7

Appendix D. A PRIORI Analysis

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 CONFIRMATORY FACTOR ANALYSIS
 AND CORRELATIONAL ANALYSIS PROGRAM

READR, LU=4, MV=16, NFC=1, LABELS, NOPRINT* <CONTROL CARD>

FORMAT CARD(S) READ=
 ((8F9.5/),8F9.5)

LABV(1-16)* <CONTROL CARD>

 CONFIRMATORY FACTOR ANALYSIS
 AND CORRELATIONAL ANALYSIS PROGRAM

MGRP, NG=4, COMM* <CONTROL CARD>

MULTIPLE GROUPS PROGRAM

RELEVANC(1,2,3,4,5,6)* <CONTROL CARD>

RELIABLE(5,6,7,8,9,10,11)* <CONTROL CARD>

USFRSPEC(12-13)* <CONTROL CARD>

OTHER(14,15,16)* <CONTROL CARD>

STANDARD SCORE COEFFICIENT ALPHAS
 61. 72. 57. 74.

1 FACTOR INTERCORRELATIONS AND LOADING MATRIX

COMMUNALITY IN THE DIAGONAL

	1	2	3	4	5	6	5	6	7	8	9	10	11	12	13	14	15	16	501	502	503	504
1	21	32	17	23	21	12	21	12	6	14	24	30	17	18	10	18	20	18	46	34	21	26
2	32	19	5	25	20	18	20	18	7	24	22	32	9	7	16	27	27	13	43	36	18	32
3	17	5	5	1	23	8	23	8	31	54	19	17	44	61	33	7	7	41	22	54	73	25
4	23	25	1	21	26	29	26	29	6	13	30	46	14	7	-12	50	59	23	45	45	-4	62
5	21	20	23	26	43	47	100	47	8	22	31	43	22	28	0	35	44	30	66	75	21	51
6	12	18	8	29	47	27	47	100	19	10	24	39	18	16	5	35	48	17	52	70	17	47
5	21	20	23	26	100	47	31	47	8	22	31	43	22	28	0	35	44	30	87	56	21	51
6	12	18	8	29	47	100	47	25	19	10	24	39	18	16	5	35	48	17	78	50	17	47
7	6	7	31	6	8	19	8	19	17	36	12	9	50	29	31	16	22	41	28	41	47	37
8	14	24	54	13	22	10	22	10	36	33	30	16	64	48	26	26	22	53	50	57	57	48
9	24	22	19	30	31	24	31	24	12	30	24	34	25	17	0	40	40	34	54	49	13	54
10	30	32	17	46	43	39	43	39	9	16	34	24	14	11	8	51	54	20	75	49	15	58
11	17	9	44	14	22	18	22	18	50	64	25	14	40	41	23	27	27	57	46	64	50	52

12	18	7	61	7	28	16	28	16	29	48	17	11	41	43	40	8	13	43	50	52	64	30
13	10	16	33	-12	0	5	0	5	31	26	0	8	23	40	43	4	-6	20	19	25	64	8
14	18	27	7	50	35	35	35	16	26	40	51	27	8	4	68	75	33	63	63	9	82	
15	20	27	7	59	44	48	44	48	22	22	40	54	27	13	-6	75	78	37	75	70	5	89
16	18	13	41	23	30	17	30	17	41	53	34	20	57	43	20	33	37	18	52	69	48	42
501	46	43	22	45	66	52	87	78	28	50	54	75	46	50	19	63	75	52	100	114	53	89
502	34	36	54	45	75	70	56	50	41	57	49	49	64	52	25	63	70	69	114	100	60	95
503	21	18	73	-4	21	17	21	17	47	57	13	15	50	64	64	9	5	48	53	60	100	29
504	26	32	25	62	51	47	51	47	37	48	54	58	52	30	8	82	89	42	89	95	29	100

SIMILIARITY COEFFICIENTS FOR THE INDICATORS WITH COMMONALITIES ON THE DIAGONAL

	1	2	3	4	5	6	5	6	7	8	9	10	11	12	13	14	15	16
1	0.214	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2	0.935	0.189	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
3	0.679	0.631	0.047	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4	0.855	0.897	0.457	0.208	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5	0.847	0.833	0.594	0.840	0.428	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
6	0.765	0.795	0.489	0.831	0.863	0.268	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5	0.843	0.830	0.590	0.838	0.850	0.856	0.314	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
6	0.764	0.794	0.490	0.830	0.861	0.764	0.853	0.246	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
7	0.718	0.662	0.870	0.555	0.619	0.571	0.623	0.570	0.170	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
8	0.803	0.681	0.864	0.587	0.662	0.562	0.662	0.562	0.945	0.329	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
9	0.940	0.942	0.681	0.931	0.891	0.827	0.887	0.826	0.759	0.796	0.240	0.000	0.000	0.000	0.000	0.000	0.000	0.000
10	0.903	0.929	0.516	0.929	0.899	0.875	0.892	0.873	0.618	0.656	0.946	0.242	0.000	0.000	0.000	0.000	0.000	0.000
11	0.761	0.723	0.894	0.610	0.679	0.598	0.678	0.597	0.933	0.942	0.821	0.674	0.404	0.000	0.000	0.000	0.000	0.000
12	0.734	0.653	0.879	0.474	0.658	0.545	0.653	0.545	0.931	0.940	0.731	0.602	0.942	0.434	0.000	0.000	0.000	0.000
13	0.504	0.408	0.809	0.180	0.318	0.266	0.324	0.266	0.803	0.798	0.424	0.279	0.777	0.852	0.434	0.000	0.000	0.000
14	0.880	0.925	0.535	0.971	0.843	0.836	0.842	0.835	0.649	0.668	0.958	0.955	0.695	0.565	0.264	0.675	0.000	0.000
15	0.867	0.907	0.515	0.970	0.868	0.867	0.865	0.866	0.623	0.649	0.955	0.963	0.679	0.550	0.233	0.992	0.777	0.000
16	0.835	0.795	0.854	0.697	0.753	0.676	0.750	0.676	0.894	0.931	0.868	0.771	0.937	0.898	0.697	0.780	0.763	0.184

TEST FOR INTERNAL CONSISTENCY FOR THE INDICATORS WITH COMMONALITIES ON THE DIAGONAL

LOCATIONS WITH A 9.999 INDICATES THAT THE COMMONALITY OF THE INDICATOR IS GREATER THAN ONE.

	1	2	3	4	5	6	5	6	7	8	9	10	11	12	13	14	15	16
1	0.214	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2	0.145	0.189	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
3	0.079	-0.050	0.047	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4	0.022	0.064	-0.100	0.208	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5	-0.134	-0.119	0.120	-0.061	0.428	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
6	-0.151	-0.061	-0.034	0.073	0.204	0.268	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5	-0.063	-0.053	0.134	0.002	1.011	0.255	0.314	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
6	-0.136	-0.048	-0.028	0.085	0.223	1.000	0.268	0.246	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
7	-0.164	-0.128	0.253	-0.158	-0.271	-0.035	-0.195	-0.023	0.170	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
8	-0.178	-0.014	0.519	-0.181	-0.258	-0.283	-0.156	-0.261	0.162	0.329	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
9	0.020	0.009	0.094	0.096	-0.019	-0.024	0.047	-0.009	-0.104	0.027	0.240	0.000	0.000	0.000	0.000	0.000	0.000	0.000
10	0.088	0.134	0.074	0.299	0.171	0.185	0.220	0.197	-0.142	-0.171	0.133	0.242	0.000	0.000	0.000	0.000	0.000	0.000
11	-0.188	-0.262	0.406	-0.220	-0.331	-0.222	-0.209	-0.198	0.338	0.432	-0.099	-0.262	0.404	0.000	0.000	0.000	0.000	0.000
12	-0.187	-0.322	0.639	-0.349	-0.272	-0.275	-0.149	-0.249	0.024	0.161	-0.235	-0.319	-0.011	0.434	0.000	0.000	0.000	0.000
13	-0.315	-0.183	0.261	-0.633	-0.767	-0.447	-0.600	-0.419	0.063	-0.193	-0.485	-0.380	-0.329	-0.067	0.434	0.000	0.000	0.000

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WATFIV, TIME=(10,0), PAGES=1000, NOWARN, NOLIST

CONFIRMATORY FACTOR ANALYSIS
AND CORRELATIONAL ANALYSIS PROGRAM

READR, IU=4, NV=16, NFC=1, LABELS, NOPRINT*

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FORMAT CARD(S) READ=
((8F9.5/),8F9.5)

LABV(1-16)*

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CONFIRMATORY FACTOR ANALYSIS
AND CORRELATIONAL ANALYSIS PROGRAM

MCRP, NC 5, COMM*

<CONTROL CARD>

MULTIPLE GROUPS PROGRAM

RELEVANC(1,2,4,5,6)*

<CONTROL CARD>

RELIABIL(7,8,9)*

<CONTROL CARD>

USIRSPIC(12-13)*

<CONTROL CARD>

OTHER(14,15,16)*

<CONTROL CARD>

GARBAGE(3,11)*

<CONTROL CARD>

STANDARD SCORE COEFFICIENT ALPHAS

63. 51. 57. 74. 61.

1 FACTOR INTERCORRELATIONS AND LOADING MATRIX

COMMUNALITY IN THE DIAGONAL

	1	2	4	5	6	7	8	9	12	13	14	15	16	3	11	501	502	503	504	505
1	18	32	23	21	12	6	14	24	18	10	18	20	18	17	17	42	28	21	26	25
2	32	21	25	20	18	7	24	22	7	16	27	27	13	5	9	46	34	18	32	11
4	23	25	26	26	29	6	13	30	7	-12	50	59	23	1	14	51	31	-4	62	11
5	21	20	26	35	47	8	22	31	28	0	35	44	30	23	22	59	39	21	51	33
6	12	18	29	47	29	19	10	24	16	5	35	48	17	8	18	54	33	17	47	20
7	6	7	6	8	19	20	36	12	29	31	16	22	41	31	50	18	43	47	37	60
8	14	24	13	22	10	36	57	30	48	26	26	22	53	54	64	32	78	57	48	87
9	24	22	30	31	24	12	30	14	17	0	40	40	34	19	25	52	36	13	54	32
12	18	7	7	28	16	29	48	17	43	40	8	13	43	61	41	30	60	64	30	75
13	10	16	-12	0	5	31	26	0	40	43	4	-6	20	33	23	7	37	64	8	41
14	18	27	50	35	35	16	26	40	8	4	68	75	33	7	27	66	53	9	82	25
15	20	27	59	44	48	22	22	40	13	-6	75	78	37	7	27	78	54	5	89	25

16	18	13	23	30	17	41	53	34	43	20	33	37	18	41	57	40	82	48	42	72
3	17	5	1	23	8	31	54	19	61	33	7	7	41	48	44	22	66	73	25	68
11	17	9	14	22	18	50	64	25	41	23	27	27	57	44	48	32	88	50	52	68
501	42	46	51	59	54	18	32	52	30	7	66	78	40	22	32	100	65	29	86	39
502	28	34	31	39	33	43	78	36	60	37	53	54	82	66	88	65	100	75	88	114
503	21	18	-4	21	17	47	57	13	64	64	9	5	48	73	50	29	75	100	29	91
504	26	32	62	51	47	37	48	54	30	8	82	89	42	25	52	86	88	29	100	57
505	25	11	11	33	20	60	87	32	75	41	25	25	72	68	68	39	114	91	57	100

SIMILIARITY COEFFICIENTS FOR THE INDICATORS WITH COMMONALITIES ON THE DIAGONAL

	1	2	4	5	6	7	8	9	12	13	14	15	16	3	11
1	0.179	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2	0.917	0.214	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4	0.825	0.873	0.262	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5	0.910	0.885	0.910	0.350	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
6	0.875	0.877	0.922	0.941	0.288	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
7	0.743	0.666	0.539	0.743	0.648	0.201	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
8	0.814	0.700	0.568	0.764	0.674	0.963	0.567	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
9	0.914	0.918	0.913	0.952	0.925	0.774	0.807	0.139	0.000	0.000	0.000	0.000	0.000	0.000	0.000
12	0.739	0.640	0.433	0.706	0.603	0.939	0.953	0.721	0.434	0.000	0.000	0.000	0.000	0.000	0.000
13	0.530	0.421	0.147	0.421	0.322	0.815	0.812	0.443	0.873	0.434	0.000	0.000	0.000	0.000	0.000
14	0.859	0.905	0.973	0.917	0.947	0.643	0.659	0.940	0.536	0.252	0.675	0.000	0.000	0.000	0.000
15	0.846	0.883	0.974	0.929	0.957	0.614	0.634	0.939	0.514	0.220	0.992	0.777	0.000	0.000	0.000
16	0.842	0.790	0.684	0.836	0.797	0.904	0.947	0.858	0.891	0.711	0.770	0.750	0.184	0.000	0.000
3	0.696	0.587	0.382	0.655	0.547	0.922	0.951	0.673	0.976	0.892	0.478	0.457	0.886	0.478	0.000
11	0.776	0.721	0.596	0.779	0.700	0.950	0.975	0.828	0.942	0.787	0.687	0.669	0.942	0.938	0.478

TEST FOR INTERNAL CONSISTENCY FOR THE INDICATORS WITH COMMONALITIES ON THE DIAGONAL

LOCATIONS WITH A 9.999 INDICATES THAT THE COMMONALITY OF THE INDICATOR IS GREATER THAN ONE.

	1	2	4	5	6	7	8	9	12	13	14	15	16	3	11
1	0.179	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2	0.151	0.214	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4	0.015	0.017	0.262	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5	-0.051	-0.098	-0.066	0.350	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
6	-0.134	-0.094	0.023	0.225	0.288	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
7	-0.162	-0.168	-0.222	-0.252	-0.073	0.201	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
8	-0.306	-0.187	-0.452	-0.433	-0.551	0.033	0.567	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
9	0.100	0.058	0.134	0.117	0.045	-0.058	0.032	0.139	0.000	0.000	0.000	0.000	0.000	0.000	0.000
12	-0.144	-0.355	-0.419	-0.187	-0.299	-0.011	-0.038	-0.110	0.434	0.000	0.000	0.000	0.000	0.000	0.000
13	-0.269	-0.213	-0.713	-0.651	-0.474	0.028	-0.479	-0.345	-0.067	0.434	0.000	0.000	0.000	0.000	0.000
14	-0.315	-0.215	0.163	-0.300	-0.196	-0.403	-0.946	0.184	-1.079	-1.164	0.675	0.000	0.000	0.000	0.000
15	-0.410	-0.331	0.352	-0.216	0.006	-0.418	-1.420	0.169	-1.282	-1.802	0.113	0.777	0.000	0.000	0.000
16	-0.002	-0.081	0.016	0.057	-0.073	0.273	0.344	0.215	0.213	-0.129	-0.048	-0.011	0.184	0.000	0.000
3	-0.189	-0.420	-0.552	-0.307	-0.472	0.006	0.039	-0.107	0.288	-0.224	-1.222	-1.587	0.168	0.478	0.000
11	-0.193	-0.352	-0.347	-0.320	-0.310	0.294	0.246	-0.019	-0.080	-0.419	-0.725	-0.982	0.425	-0.067	0.478

CONFIRMATORY FACTOR ANALYSIS

Appendix E. Exploratory Analysis

ROTATION METHOD: VARIMAX

ORTHOGONAL TRANSFORMATION MATRIX

	1	2	3	4	5	6	7	8	9
1	0.53298	0.46485	0.47435	0.28954	0.08473	0.27079	0.19841	0.19267	0.18443
2	-0.53405	0.54012	0.38799	-0.23456	0.32781	-0.09706	-0.09418	-0.05397	-0.29808
3	-0.10146	0.22267	-0.56229	0.19877	0.30530	-0.07257	0.42086	0.52835	-0.17232
4	0.02677	0.07391	-0.09073	0.76419	0.18394	-0.28750	-0.44792	-0.24832	-0.15108
5	0.02263	-0.50738	0.32536	0.01017	0.66658	-0.28627	0.26405	-0.00897	0.20003
6	0.23009	0.19396	-0.38074	-0.18451	0.40409	0.32424	0.13332	-0.66648	0.00620
7	-0.25772	-0.25579	0.21259	0.36635	-0.19865	0.36471	0.49540	-0.23452	-0.46460
8	0.01857	-0.27032	0.00386	-0.03859	0.33308	0.63167	-0.49101	0.34507	-0.23443
9	-0.54726	0.05982	-0.06346	0.26041	0.01734	0.33200	0.00222	-0.02823	0.71677

ROTATED FACTOR PATTERN

	FACTOR1	FACTOR2	FACTOR3	FACTOR4	FACTOR5	FACTOR6	FACTOR7	FACTOR8	FACTOR9	
A	0.12537	0.11633	0.09022	0.04578	0.03355	0.09133	0.15007	0.94180	0.07158	RELEVANT
B	0.19284	0.36428	0.05630	0.62104	-0.24439	0.05122	0.04073	0.15741	-0.20762	CONSISTENT
C	0.00502	-0.01073	0.79071	0.17174	0.34579	-0.07558	-0.02910	0.03561	0.13536	VERIFIABLE
D	0.02905	0.27970	0.16213	0.01031	0.87864	0.00345	0.08790	0.03581	-0.11515	NEW
E	0.15388	0.03516	0.03102	0.09588	0.08132	0.08069	0.93658	0.15792	0.08983	TIMELY
F	0.23101	0.38798	0.62211	0.02140	-0.07032	0.26408	-0.02873	0.08067	0.06749	CONSERVATIVE
G	0.11595	0.36649	0.79327	0.03858	-0.01512	0.07733	0.07001	0.06785	-0.06604	RELIABLE
H	0.25593	0.13723	0.11024	0.11130	0.00359	0.90639	0.09551	0.10139	0.05457	UNBIASED
I	-0.05315	0.80014	0.14788	0.18454	0.23971	0.09074	-0.01580	0.11029	0.19581	UNDERSTANDABLE
J	0.19063	0.00289	0.10640	0.87204	0.11136	0.08817	0.07875	-0.00438	0.15414	COMPARABLE
K	0.09626	0.81870	0.18847	0.03809	0.13855	0.01963	-0.00060	0.07498	-0.06328	NONCONTRADICTORY
L	0.10932	0.59537	0.50948	-0.11542	-0.05132	0.19064	0.30605	-0.06284	-0.06442	FATIGUE RESISTANT
M	0.19055	0.13738	-0.04572	0.20971	-0.11317	0.01972	0.13502	0.23620	0.00938	COMPLETE
N	0.46496	0.07729	0.04976	0.07783	-0.13455	0.05980	0.12543	0.10924	0.77875	PREDICTIVE
O	0.69743	0.01405	0.27686	0.26545	-0.10719	0.18337	0.05053	0.00459	0.37323	CERTAIN
P	0.80264	0.01187	0.22218	0.06995	0.00891	0.23966	0.06805	-0.03780	0.19749	PRECISE

VARIANCE EXPLAINED BY EACH FACTOR

FACTOR1	FACTOR2	FACTOR3	FACTOR4	FACTOR5	FACTOR6	FACTOR7	FACTOR8	FACTOR9
2.377545	2.226002	2.141839	1.375590	1.098446	1.068224	1.066049	1.051568	0.952707

FINAL COMMUNITY ESTIMATES: TOTAL = 11.357470

A	B	C	D	E	F	G	H
0.964534	0.807782	0.802573	0.893451	0.958383	0.677950	0.795430	0.952807
I	J	K	L	M	N	O	P
0.821845	0.858277	0.745711	0.788231	0.783544	0.886502	0.820710	0.801201

SCORING COEFFICIENTS ESTIMATED BY REGRESSION

SQUARED MULTIPLE CORRELATIONS OF THE VARIABLES WITH EACH FACTOR

FACTOR1	FACTOR2	FACTOR3	FACTOR4	FACTOR5	FACTOR6	FACTOR7	FACTOR8	FACTOR9
1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000

1 CSJOB WATFIV, TIME=(10,0), PAGES=1000, NOWARN, NOLIST
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 AND CORRELATIONAL ANALYSIS PROGRAM

READR, LU=4, NV=16, NFC=1, LABELS, NOPRINT* <CONTROL CARD>

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LABV(1-16)* <CONTROL CARD>

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MGRP, NG 4, COMM* <CONTROL CARD>

MULTIPLE GROUPS PROGRAM

FACTOR1(4,10,14,15)* <CONTROL CARD>

FACTOR2(3,5,8,11,12,13,16)* <CONTROL CARD>

FACTOR3(7,8,11,16)* <CONTROL CARD>

FACTOR4(5,6)* <CONTROL CARD>

STANDARD SCORE COEFFICIENT ALPHAS

84. 80. 80. 64.

1 FACTOR INTERCORRELATIONS AND LOADING MATRIX

COMMUNALITY IN THE DIAGONAL

	4	10	14	15	3	5	8	11	12	13	16	7	8	11	16	5	6	501	502	503	504
4	45	46	50	59	1	26	13	14	7	-12	23	6	13	14	23	26	29	67	17	20	39
10	46	41	51	54	17	43	16	14	11	8	20	9	16	14	20	43	39	64	30	21	59
14	50	51	64	75	7	35	26	27	8	4	33	16	26	27	33	35	35	80	33	36	50
15	59	54	75	79	7	44	22	27	13	-6	37	22	22	27	37	44	48	89	34	38	66
3	1	17	7	7	52	23	54	44	61	33	41	31	54	44	41	23	8	10	72	60	22
5	26	43	35	44	23	10	22	22	28	0	30	8	22	22	30	100	47	49	31	29	105
8	13	16	26	22	54	22	57	64	48	26	53	36	100	64	53	22	10	26	76	89	22
11	14	14	27	27	44	22	64	50	41	23	57	50	64	100	57	22	18	27	71	95	29
12	7	11	8	13	61	28	48	41	54	40	43	29	48	41	43	28	16	13	74	56	32
13	-12	8	4	-6	33	0	26	23	40	13	20	31	26	23	20	0	5	-2	36	35	3
16	23	20	33	37	41	30	53	57	43	20	46	41	53	57	100	30	17	38	68	88	34
7	6	9	16	22	31	8	36	50	29	31	41	32	36	50	41	8	19	18	53	56	19
8	13	16	26	22	54	22	100	64	48	26	53	36	52	64	53	22	10	26	86	72	22

1 CSJOB WATFIV, TIME=(10,0), PAGES=1000, NOWARN, NOLIST
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 CONFIRMATORY FACTOR ANALYSIS
 AND CORRELATIONAL ANALYSIS PROGRAM

MGRP, NG=4, COMM*

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MULTIPLE GROUPS PROGRAM

FACTOR1(4,10,14,15)*
 FACTOR2(3,12,13,16)*
 FACTOR3(7,8,11)*
 FACTOR4(5,6)*
 STANDARD SCORE COEFFICIENT ALPHAS
 84. 72. 75. 64.

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1 FACTOR INTERCORRELATIONS AND LOADING MATRIX

COMMUNITY IN THE DIAGONAL

	4	10	14	15	3	12	13	16	7	8	11	5	6	501	502	503	504
4	45	46	50	59	1	7	-12	23	6	13	14	26	29	67	7	15	39
10	46	41	51	54	17	11	8	20	9	16	14	43	39	64	22	18	59
14	50	51	64	75	7	8	4	33	16	26	27	35	35	80	20	33	50
15	59	54	75	79	7	13	-6	37	22	22	27	44	48	89	20	33	66
3	1	17	7	7	57	61	33	41	31	54	44	23	8	10	76	61	22
12	7	11	8	13	61	68	40	43	29	48	41	28	16	13	83	55	32
13	-12	8	4	-6	33	40	20	20	31	26	23	0	5	-2	44	38	3
16	23	20	33	37	41	43	20	27	41	53	57	30	17	38	51	71	34
7	6	9	16	22	31	29	31	41	32	36	50	8	19	18	52	55	19
8	13	16	26	22	54	48	26	53	36	49	64	22	10	26	71	70	22
11	14	14	27	27	44	41	23	57	50	64	77	22	18	27	65	89	29
5	26	43	35	44	23	28	0	30	8	22	22	50	47	49	31	24	70
6	29	39	35	48	8	16	5	17	19	10	18	47	50	50	19	22	70

501	67	64	80	89	10	13	-2	38	18	26	27	49	50	100	23	33	71
502	7	22	20	20	76	83	44	51	52	71	65	31	19	23	100	88	36
503	15	18	33	33	61	55	38	71	55	70	89	24	22	33	88	100	33
504	39	59	50	66	22	32	3	34	19	22	29	70	70	71	36	33	100

SIMILIARITY COEFFICIENTS FOR THE INDICATORS WITH COMMONALITIES ON THE DIAGONAL

	4	10	14	15	3	12	13	16	7	8	11	5	6
4	0.449	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
10	0.958	0.414	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
14	0.980	0.972	0.640	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
15	0.986	0.978	0.993	0.789	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
3	0.337	0.474	0.460	0.434	0.568	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
12	0.365	0.518	0.485	0.465	0.991	0.681	0.000	0.000	0.000	0.000	0.000	0.000	0.000
13	0.131	0.262	0.258	0.240	0.939	0.917	0.202	0.000	0.000	0.000	0.000	0.000	0.000
16	0.647	0.737	0.752	0.732	0.895	0.893	0.777	0.265	0.000	0.000	0.000	0.000	0.000
7	0.491	0.591	0.625	0.595	0.920	0.917	0.848	0.936	0.315	0.000	0.000	0.000	0.000
8	0.508	0.605	0.625	0.602	0.956	0.948	0.864	0.958	0.974	0.495	0.000	0.000	0.000
11	0.523	0.603	0.644	0.621	0.920	0.904	0.831	0.963	0.979	0.984	0.769	0.000	0.000
5	0.886	0.949	0.908	0.920	0.628	0.662	0.431	0.803	0.687	0.713	0.707	0.504	0.000
6	0.910	0.966	0.929	0.945	0.498	0.542	0.316	0.741	0.615	0.608	0.622	0.969	0.504

TEST FOR INTERNAL CONSISTENCY FOR THE INDICATORS WITH COMMONALITIES ON THE DIAGONAL

LOCATIONS WITH A 9.999 INDICATES THAT THE COMMONALITY OF THE INDICATOR IS GREATER THAN ONE.

	4	10	14	15	3	12	13	16	7	8	11	5	6
4	0.449	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
10	0.043	0.414	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
14	-0.080	-0.020	0.640	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
15	-0.003	-0.081	0.160	0.789	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
3	-1.012	-0.628	-1.364	-1.993	0.568	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
12	-1.159	-0.962	-1.715	-2.339	-0.026	0.681	0.000	0.000	0.000	0.000	0.000	0.000	0.000
13	-0.640	-0.312	-0.591	-1.117	-0.007	0.052	0.202	0.000	0.000	0.000	0.000	0.000	0.000
16	-0.177	-0.205	-0.163	-0.213	0.033	0.006	-0.047	0.265	0.000	0.000	0.000	0.000	0.000
7	-0.515	-0.428	-0.576	-0.735	-0.201	-0.374	0.085	0.174	0.315	0.000	0.000	0.000	0.000
8	-0.647	-0.537	-0.700	-1.232	0.019	-0.257	-0.089	0.272	-0.063	0.495	0.000	0.000	0.000
11	-1.260	-1.165	-1.499	-2.287	-0.690	-1.146	-0.386	0.298	0.020	0.061	0.769	0.000	0.000
5	-0.418	-0.042	-0.520	-0.591	-0.659	-0.776	-0.514	-0.116	-0.540	-0.566	-1.182	0.504	0.000
6	-0.352	-0.119	-0.522	-0.477	-0.975	-1.059	-0.422	-0.316	-0.364	-0.800	-1.301	-0.067	0.504

CONFIRMATORY FACTOR ANALYSIS
AND CORRELATIONAL ANALYSIS PROGRAM

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PROGRAM SQRR

Bibliography

- 1136 Tenants' Corporation vs. Max Rothenberg & Company* Index 10575/1965, New York County, Trial Term, Pt. VII (1970).
- Abdel-Khalik, A. Rashad (principal researcher), William A. Collins, P. David Shields, Douglas H. Snowball, Ray G. Stephens, and John H. Wragge, co-authors. *Financial Reporting By Private Companies: Analysis And Diagnosis*. (Stamford, Connecticut: FASB, 1983).
- American Institute of Accountants. *Changing Concepts of Business Income*. (New York: Macmillan Co., 1952).
- American Institute of Certified Public Accountants. *Adequacy of Disclosure In Financial Statements Prepared On A Comprehensive Basis of Accounting Other Than GAAP*. (New York: AICPA, 1981).
- _____. "Basic Concepts And Accounting Principles Underlying Financial Statements of Business Enterprises." *APB Statement No. 4*, (New York: AICPA, 1970).
- _____. "Compilation And Review of Financial Statements." *Statement On Standards For Accounting And Review Standards*, (New York: AICPA, 1981).
- _____. *CPA Letter, The*. May 13, 1985.
- _____. *Report of the Committee On Generally Accepted Accounting Principles For Smaller And/Or Closely Held Businesses* (Issued By the Accounting Standards Division). (New York: AICPA, August, 1976), (the Werner Committee Report).
- _____. *Report of the Committee On Small And Medium Sized Firms*. (Special Committee on Small And Medium Sized Firms), (New York: AICPA, 1980).
- _____. *Report of the Committee On Accounting Standards Overload*. (Special Committee on Accounting Standards Overload), (New York: AICPA, February, 1983).
- _____. "Special Reports." *Statement On Auditing Standards Number 14*, Issued by the Auditing Standards Executive Committee, (New York: AICPA, December, 1976).

- _____. *Sunset Review of Accounting Principles*, Private Companies Practice Section, Technical Issues Committee (New York: AICPA, 1982).
- _____. *Tentative Conclusions And Recommendations of the Special Committee On Accounting Standards Overload*, by (The AICPA Special Committee On Accounting Standards Overload), a discussion paper (New York: AICPA, December, 1981).
- _____. "Unaudited Financial Statements." *Statement On Auditing Procedure Number 38*, (New York: AICPA, September, 1967).
- Alderman, C. Wayne, Dan M. Guy, and Dennis R. Meals. "Other Comprehensive Bases of Accounting: Alternatives To GAAP." *The Journal of Accountancy*, August, 1982, pp. 52-62.
- Armstrong, Marshall. "The Impact of Financial Accounting Standards Board Statements On Small Business." *The Journal of Accountancy*, (Statements In Quotes), August, 1977, pp. 88-90.
- Backer, Martin. *Financial Reporting For Security Investment And Credit Decisions*. (New York: National Association of Accountants, 1970).
- Benis, M. "Rational Small Business Exceptions to FASB Rules." *The CPA Journal*, February, 1978, pp. 33-37.
- Benjamin, James J. and Keith G. Stanga. "Differences In Disclosure Needs of Major Users of Financial Statements." *Accounting And Business Research*, Summer, 1977, pp. 187-192.
- Benson, Vaughn Leon. *A Study of the Usefulness of Selected GAAP Basis Accounting Information And Its Actual Use In the Small Private Company Loan Decision Process*. Ph.D. dissertation, The University of Nebraska - Lincoln, 1985.
- Beresford, Dennis. *Financial Executive*, (comments), August, 1980, pp. 6-7.
- Block, Max. "Duality In the Accounting Profession." *The CPA Journal*, July, 1974, pp. 29-34.
- _____. "Trend To Duality In Accounting Standards." *The CPA Journal*, March, 1977, pp. 11-15.
- Bolton, John. "Report of the Committee of Inquiry On Small Firms." (The Bolton Report), Committee of Inquiry On Small Firms, 1971.
- Booker, Quinton. *An Empirical Investigation of the Attitudes of Mississippi CPAs And Bankers Concerning Selected Aspects of SSARS*. DBA dissertation, The Mississippi State University, 1984.
- _____. "Practitioners Respond: Survey On Review Procedures." *The National Public Accountant*, September, 1985, pp. 34-35, and 45.
- Bruns, William J. "Inventory Valuation And Management Decisions." *The Accounting Review*, April, 1965, pp. 345-357.
- Burton, John C.. "The Organization of the Public Accounting Profession." *The National Public Accountant*, November, 1974.
- Buzby, Stephen L. "Selected Items of Information And Their Disclosure In Annual Reports." *The Accounting Review*, April, 1974, pp. 423-435.
- Campbell, Jane E. "An Application of Protocol Analysis to the 'Little GAAP' Controversy." *Accounting, Organizations, And Society*, Volume 9, No. 3/4, 1984, pp. 329-342.

- Casey, Cornelius J. "Variation in Accounting Information Load: The Effect On Loan Officers' Predictions of Bankruptcy." *The Accounting Review*, January, 1980, pp. 36-49.
- Chandra, Gyan. "Information Needs of Security Analysts." *The Journal of Accountancy*, December, 1975, p. 67.
- Chazen, Charles and Benjamin Benson. "Fitting GAAP To Smaller Businesses." *The Journal of Accountancy*, February, 1978, pp. 46-51.
- Chazen, Charles and Kenneth Solomon. "The 'Unaudited' State of Affairs." *The Journal of Accountancy*, December, 1972, pp. 41-45.
- Cordano, D. L. "NSPA Fills the Gap in GAAP." *The National Public Accountant*, September, 1985, pp. 18-24.
- CPA Journal, The (Notes)*, August, 1983.
- _____. (Notes), September, 1983, pp. 70-72.
- Derieux, Samuel A. "GAAP And the Privately Held Company." *Corporate Accounting*, Summer, 1985, pp. 29-33.
- Diamond, Michael A. and Jerry L. Arnold. "Bank Lending Officers React Positively To Compilation And Review, National Study Shows." *The Journal of Accountancy*, October, 1980, pp. 7-8.
- Diamond, Michael A, Jerry L. Arnold, and Earl C. Keller. "Loan Officers' Experiences With And Reactions To Compilation And Review of Financial Statements." *The Journal of Commercial Bank Lending*, December, 1981, pp. 32-42.
- Dietrich, J. Richard and Robert S. Kaplan. "Empirical Analysis of the Commercial Loan Decision." *The Accounting Review*, January, 1982, pp. 18-38.
- Dietrick, James W. and Jennifer L. Stamps. "The Use of Accounting Information By Bank Loan Officers." *The Journal of Commercial Bank Lending*, November, 1981, pp. 51-62.
- Doherty, William O. "Editor's Notebook." *The Journal of Accountancy*, December, 1972, p. 39.
- Dyckman, Thomas R. "The Effects of Alternative Accounting Techniques On Certain Management Decisions." *The Journal of Accounting Research*, Spring, 1964, pp. 91-107.
- Edmonds, Thomas P., Mattie C. Porter, and Ira R. Weiss. "Do Bankers And CPAs Have Different Views of Reports On Financial Statements?" *The Journal of Commercial Bank Lending*, June, 1981, pp. 52-62.
- Epaves, Richard A. "An Alternative To Little GAAP." *The Journal of Accountancy*, November, 1978, pp. 36-45.
- _____. (Ed., Accounting and Auditing Update), "Standards Overload & Tax-Basis Financials." *The Ohio CPA Journal*, Summer, 1982, pp. 137-138.
- Falk, Haim, Bruce Gobel, and James Naus. "Disclosure For Closely Held Corporations." *The Journal of Accountancy*, October, 1976, pp. 85-89.
- Financial Accounting Standards Board. "Board Responds To Concerns About Standards Overload." *Status Report Number 150*, (Stamford, Connecticut: FASB, November 22, 1983).

- _____. "Elimination of Certain Disclosures For Business Combinations By Nonpublic Enterprises." *Financial Accounting Standards Board Statement Number 79*. (Stamford, Connecticut: FASB, February, 1984).
- _____. "Financial Reporting By Private And Small Public Companies." *Invitation to Comment*. (Stamford, Connecticut: FASB, November, 1981).
- _____. "Financial Statements & Other Means of Reporting" *Invitation to Comment*. (Stamford, Connecticut: FASB, 1980).
- _____. "Objectives of Financial Reporting By Business Enterprises." *Statement of Financial Accounting Concepts Number 1*. (Stamford, Connecticut: FASB, November, 1978).
- _____. "Qualitative Characteristics of Accounting Information." *FASB Statement of Financial Accounting Concepts No. 2*. (Stamford, Connecticut: FASB, May, 1980).
- _____. *Status Report*. August 20, 1984.
- _____. "Suspension of the Reporting of Earnings-Per-Share & Segment Information By Nonpublic Enterprises." *Financial Accounting Standards Board Statement Number 21*. (Stamford, Connecticut: FASB, April, 1978).
- Fitch, John H., Jr. "GAAP & GAAS For Small Business - Is There A Need?" *National Public Accountant*, April, 1978.
- Friedlob, G. Thomas and Franklin J. Plewa, Jr.. "A Practical Solution to Standards Overload." in Small Business Section (Kathy Williams, Ed.), *Management Accounting*, October, 1984.
- Gutberlet, Louis G. "An Opportunity - Differential Standards." *The Journal of Accounting, Auditing, And Finance*, Fall, 1983, pp. 16-28.
- Guy, Dan M. and Alan J. Winters. "Unaudited Financial Statements: A Survey." *The Journal of Accountancy*, December, 1972, pp. 46-53.
- Hertz, Ronald S. "Standards Overload - A Euphemism." *The CPA Journal*, October, 1983, pp. 22-33.
- Hildebrand, Glendon R. "Let's Look At Financial Reporting By Smaller Businesses." *Management Accounting*, April, 1982, pp. 42-47.
- Hinkle, Dennis E. and Gerald W. McLaughlin. "Selection of Models In Contingency Tables: A Reexamination." *Research In Higher Education*, Volume 21, Number 4, pp. 415-423.
- Hunter, John E. "Methods of Recording the Correlation Matrix to Facilitate Visual Inspection And Preliminary Cluster Analysis." *The Journal of Educational Measurement*, Volume 10, 1973, pp. 51-61.
- Hunter, John E. and David W. Gerbing. "Unidimensional Measurement, Second Order Factor Analysis, And Causal Models." *Research In Organizational Behavior*, Volume 4, pp. 267-320.
- Ingram, Robert W., Dan M. Guy, Issam J. Merai, and Robert T. Justis. "Disclosure Practices In Unaudited Financial Statements of Small Businesses." *The Journal of Accountancy*, August, 1977.

- Johnson, Douglas A., Kurt Pany, and Richard White. "Audit Reports And the Loan Decision." *Auditing: A Journal of Practice And Theory*, Spring, 1983, pp. 38-51.
- _____. (News Report), April, 1975, p. 10.
- _____. (News Report), May, 1983, pp. 18, 20, 22.
- Kelly, Thomas P. "Accounting Standards Overload - Time For Action?" *The CPA Journal*, May, 1982, pp. 10-17.
- Kennedy, Henry A. "A Behavioral Study of the Usefulness of Four Financial Ratios." *The Journal of Accounting Research*, Spring, 1975, pp. 97-116.
- Larson, Rholan E. (News Report), *The Journal of Accountancy*, June, 1984, pp. 12-13.
- Lev, Baruch. *Financial Statement Analysis: A New Approach*. (Englewood Cliffs, New Jersey: Prentice-Hall, 1975), pp. 102-103.
- Libby, Robert. "Accounting Ratios And the Prediction of Failure." *The Journal of Accounting Research*, Spring, 1975, pp. 150-161.
- _____. "The Impact of Uncertainty Reporting On the Loan Decision," "Selections From the Research Opportunities In Auditing Program." *The Journal of Accounting Research*, Supplement, 1979, pp. 35-57.
- Little, Arthur D., Inc. *Financial Reporting Requirements of Small Publicly Owned Companies*. (Morristown, N.J.: Financial Executives Research Foundation, November, 1983).
- Lund, Curtis M. "One View of the Effects of Recent Pronouncements On Small Business." *Footnote*, (Minnesota Society of CPA's, 1978).
- Main Hurdman. (Status Report: Developments, 1981), "Easing of Requirements For Private And Small Companies." *Selected 1981 Trends In Financial Accounting And Reporting*, 1981.
- McGill, Betty and Peter Arnstein. "Unaudited Financial Statements - A Cloud of Dissent." (Practitioners' Forum), *The Journal of Accountancy*, December, 1972, pp. 81-84.
- McKinley, Sue, Kurt Pany, and Philip M. J. Reckers "An Examination of the Influence of CPA Firm Type, Size, and MAS Provision On Loan Officer Decisions And Perceptions." *The Journal of Accounting Research*, Autumn, 1985, pp. 887-896.
- McNeil, Jane H. and Edward T. O'Leary. *Introduction to Commercial Lending*. (Washington, D.C.: American Bankers Association, 1984), second printing, pp. 103-114.
- Miller, Jeffrey Reed. *An Experimental Research Study On the Effects of the Type of Accounting Service On A Bank Lending Decision For Nonpublic Businesses*. Ph.D. dissertation, The Louisiana State University and Agricultural and Mechanical College, 1985.
- Mosso, David. "Accounting For Small Business - Bridging A Widening GAAP." *The Journal of Accountancy*, (Statements In Quotes), December, 1981, pp. 64-78.
- _____. "Standards Overload - No Simple Solution." *The CPA Journal*, October, 1983, pp. 12-22.
- Murray, Dennis and Raymond Johnson. "Differential GAAP And the FASB's Conceptual Framework." *The Journal of Accounting, Auditing, And Finance*, Fall, 1983, pp. 4-15.

- Nair, R. D. and Larry E. Rittenberg. "Alternative Accounting Principles for Smaller Businesses: Proposals And Analysis." *The Journal of Commercial Bank Lending*, April, 1983, pp. 2-21.
- National Association of Accountants. *Objectives of Management Accounting (SMA Number 1B)* (New York: National Association of Accountants, June 17, 1982), pp. 2-9.
- National Society of Public Accountants. "NSPA Response to AICPA Criticism of GATAP." *The National Public Accountant*, February, 1985, pp. 15-17.
- _____. "Standards of Generally Accepted Tax Accounting Principles For Preparation of Tax Basis Financial Statements." *The National Public Accountant*, August, 1984, pp. 20-48.
- Oliver, Bruce L. "A Study of Confidence Interval Financial Statements." *The Journal of Accounting Research*, Spring, 1972, pp. 154-166.
- Pace, Edmund A. and Frank Collins. "Bankers - Accountants - Financial Statements: Their Relationship To Small Business Loan Decisions." *The Journal of Small Business Management*, October, 1976, pp. 16-22.
- Pace, Edmund E. and Donald G. Simonson. "Guidelines For Small Borrower Financial Statements." *The Journal of Commercial Bank Lending*, October, 1977.
- Rankin, Larry Joe. "The Development of Compilations And Reviews." *The Accounting Historian's Journal*, Spring, 1984, pp. 63-82.
- _____. *A Study of the Effects of Compilation And Review Reports On CPAs' And Bankers' Perceptions of the Reliability of Financial Statements*. Ph.D. dissertation, Michigan State University, 1982.
- Robbins, Barry. "Perspectives On Tax Basis Financial Statements." *The Journal of Accountancy*, August, 1985, pp. 89-100.
- Robert Morris Associates. "Summary of Important Positions Relating to Accounting Principles and Auditing Procedures." (Robert Morris Associates Accounting Policy Committee), *The Journal of Commercial Bank Lending*, August, 1985, pp. 27-35.
- Salamon, Gerald L. and Dan S. Dhaliwal. "Company Size And Financial Disclosure Requirements With Evidence From the Segmental Reporting Issue." *The Journal of Business, Finance, And Accounting*, Winter, 1980, pp. 555-568.
- Securities Exchange Commission. "Do the SEC Disclosure Rules Have An Impact On Your Small Business?" *SEC Accounting Report*, May, 1978, pp. 5-7.
- Shelton, William F. "Small Business Needs Help." *The National Public Accountant*, September, 1971.
- _____. Testimony during hearings on Paperwork Burden Imposed On Small Business, before Senate Committee On Government Operations, September 12, 1973.
- Siebel, Jerry D. and David M. Dennis. "Attitudes of Commercial Loan Officers Regarding the Accounting Standards Overload Issue." *The Journal of Commercial Bank Lending*, April, 1983, pp. 22-31.
- Snider, James G. and Charles E. Osgood, editors. *Semantic Differential Technique*. (Chicago: Aldine Publishing Company, 1969).

- Stanga, Keith G. and Mikel Tiller. "Needs of Loan Officers For Accounting Information From Large vs. Small Companies." *Accounting And Business Research*, Winter, 1983, pp. 63-70.
- Stanger, Abraham M. and Samuel P. Gunther. "Big GAAP - Little GAAP: Should There Be Different Financial Reporting For Small Businesses?" *New York University Law Review*, November/December, 1981, pp. 1209-1235.
- Stephens, Ray G. *Uses of Financial Information In Bank Lending Decisions*. (Ann Arbor, Michigan: University Microfilms International, 1980).
- Struck, Peter L. and Cynthia A. Glassman. "Commercial Banking And the Small Business Sector: Observations From A Survey." *The Journal of Commercial Bank Lending*, February, 1983, pp. 21-31.
- Stuopeck, C. David and Raymond Figlewicz. "Compilation And Review Services: Are They Accepted By Bankers For Loan Decisions?" *The Michigan CPA*, Spring, 1984, pp. 4-8.
- Stuart, Milton P. (Comments in news report), *The Journal of Accountancy*, March, 1980, pp. 14-15.
- Wilkins, Trevor and Ian Zimmer. "The Effect of Leasing And Different Methods of Accounting For Leasing On Credit Evaluations." *The Accounting Review*, October, 1983, pp. 749-764.
- Wishon, Keith. "The FASB And Small Business." *FASB Viewpoints*, March 29, 1985 (reprinted from *FASB Status Report*).

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