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1977

NARRATIVE DISCLOSURES CONTAINED IN FINANCIAL REPORTS: AN EMPIRICAL EVALUATION OF THEIR UNDERSTANDABILITY

by

ARTHUR HARRIS ADELBERG

A dissertation submitted to the Graduate Faculty in Business in partial fulfillment of the requirements for the degree of Doctor of Philosophy, The City University of New York

1977

This manuscript has been read and accepted for the Graduate Faculty in Business in satisfaction of the dissertation requirement for the degree of Doctor of Philosophy.

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Chapter I

Introduction

INTRODUCTION

The large publicly-held corporations in the United States have gathered under their wings an immense amount of economic and social power. Johnson believes that this power "...based on control of resources, is the major source of the broad social responsibilities charged to the management of these corporations. Responsibility is inevitably accompanied by accountability..."[1] Speaking from the viewpoint of the financial analyst, Norby stated that "responsibility means primarily an obligation to make full disclosure of all material facts, to make statements fair and not misleading, and in general to tell the whole truth."[2] The fundamental means of external reporting on this responsibility/accountability is through the financial statements. Of secondary informational importance, however, are the narrative disclosures contained in financial reports (i.e., footnotes, managements' analyses of operations, and qualified auditors' reports).

Accountants have long recognized the salience of the concept of managerial stewardship. Professional managers, functioning as trustees of society's scarce resources, must periodically report on their performance with regard to the assets entrusted to them. Managers evidently concur, for a 1972 research project commissioned by the Financial Executives Foundation found that over 75% of the companies interviewed considered their overall purpose in the financial report to be accountability for performance or stewardship.[3]

Vickrey observed that "...accounting is often referred to as a measurement discipline."[4] Chambers,[5] Ijiri,[6] Larson,[7] and Mattessich[8] have all demonstrated the relationship between measurement theory and accounting. A more consummate view of accounting, however, reveals that it is, in reality, a complex, multi-dimensional social science. One of its more important functions is the communications function, second only in importance to the measurement function. All of its many functions must be adequately performed, if accounting is to be the vehicle through which management satisfies its external reporting responsibilities. Little or no research has been performed in the area of accounting as a communications discipline. The empirical results of this research study, which tests the understandability of narrative disclosures contained in financial reports, should have definite utility for reporting entities (i.e., management), the accounting profession (i.e., financial accountants and independent auditors), the regulatory agencies and stock exchanges, and, most importantly, users of accounting information.

ACCOUNTING IS A COMMUNICATION DISCIPLINE

In 1961, accounting was formally defined as the "art of recording, classifying, and summarizing in a significant manner and in terms of money, transactions and events which are, in part at least of a financial character, and interpreting the results thereof."[9] This narrow American Institute of Certified Public Accountants' definition emphasizes the traditional score-keeping or record-keeping functions of the accountant. However,

the discipline has since developed to such an extent that this circumscription is now unduly restrictive, if not misleading.

Another view of the function of accounting is that "the primary function of accounting is to accumulate and communicate information essential to an understanding of the activities of an enterprise, whether large or small, corporate or non-corporate, profit or non-profit, public or private"[10] Explicit in this "operational" definition of accounting is the importance of the communication aspect of the accounting information system.

Communication has long been recognized by academicians as a crucial function of accounting. Littleton and Zimmerman stated that "the tool of analysis we call accounting has always had communication as an objective"[11] Iselin raised the following issue: "...most accountants would agree that communication should be included in accounting objectives. Since information will not be useful to its recipients unless it is communicated to them, it seems only reasonable that this should be so."[12] Goldberg recognized the importance of communication for accounting. "So much of accounting activity is oriented, directly or indirectly towards the communication of information that it is scarcely an exaggeration to say that the problem of communication is the axial problem in accounting. The reporting function is obviously and directly one of communicating information by or on behalf of one party or body to another."[13]

The Long Range Objectives Committee of the American Institute of Certified Public Accountants emphasized that "a satisfactory system for communicating financial and other economic

data is an essential condition for the accumulation of capital from widespread sources in single enterprises--i.e., for a successful industrial economy."[14]

A sample of some of accounting's leading elementary textbooks reveals that introductory students are apprised at the very beginning of their accounting careers of the multidimensional nature of the accounting discipline and their communication responsibilities thereunder.

> Accounting may be regarded as a process of communication in a very real sense.[15]

> Accounting should be thought of as a communication process. Accounting is a dynamic communication process, faced with changing circumstances and changing needs on the part of those whom accounting serves. Since it is a communication device, there is an emphasis in accounting on the ability to express and convey information. Therefore, a mastery of ordinary tools of communication, speech and writing, is basic to a successful application of the accountant's art.[16]

> Accounting is basically a communication system which conveys information as much by language as by figures. A competent accountant must transmit his information almost as much orally as in a written form. The successful accountant is one who spends at least as much time explaining his measurements as he does in making them.[17]

Carmichael in Auditing Research Monograph No. 1, "The Auditor's Reporting Obligation," provided a direct link between the performance of the attest function and communication.

> The preparation of an audit report is essentially a communication process in which the auditor's conclusions about the financial statements are transmitted to the users of the statements. To convey an adequate understanding, the auditor must reduce a complex of judgments to a concise

> statement, in abstract form using highly descriptive words. Since users cannot be expected to understand a large number of technical nuances in report language, a high degree of uniformity in the meaning of words used in the report is desirable.[18]

Prior to the 1960's however, scant reference to the accounting communication function could be found in the accounting literature (including official pronouncements and scholarly research). Fortunately, the past fifteen years have witnessed a modest reversal and the importance of the accounting communication function has been stressed. The American Accounting Association and its academic members have devoted increasing attention in their empirical research to communication theory and its relationship to accounting and financial reporting.

For example, Haried[19] demonstrated that techniques for analyzing meanings associated with symbols used in communication can be refined and adapted to semantic problems in accounting. He used the "antecedent-consequent" technique which was originally developed by Triandis and Kilty[20] and relates primarily to the cognitive or denotative components of meaning.

Haried presented the following sentences to a random sample of certified public accountants, financial analysts, lawyers, investment-club participants, and students: "If you have _____, then you have NET INCOME" and "If you have NET INCOME, then you have_____." The first sentence requires an antecedent and the second sentence requires a consequent. By comparing the antecedents and consequents, Haried

determined which are common to all groups and which are relatively peculiar to a particular group. He found that the meanings associated by different groups with the same stimulus term differed between writer and reader and concluded that:

> The antecedent-consequent technique meets the general criteria of a measurement instrument and generates analytical results that are relatively easy to interpret and apply to the problem at hand. Moreover, it measures those aspects of meaning that appear to be most important in identifying differences between the meaning intended and that actually conveyed by the use of a word in financial reports.[21]

> My analysis of these problems in accounting leads me to the following conclusions: Potential semantic problems exist in external accounting communication, two of the major contributing factors being (1) attempts to assign technical meanings to words that convey different meanings in ordinary usage or in other fields, and (2) insufficient standardization of the terms used in financial reports.[22]

Obviously, the effective communication of financial report information to sophisticated users of that information should be the direct responsibility of the accounting profession. According to Iselin: "The reason is that even the best information will not be helpful to its users unless it conveys to them a meaning--a meaning which, ideally, would evoke in them the same responses as direct observation of the events reported upon by the information. Unless this meaning is transmitted, the accountant will have accomplished nothing useful; and all his other efforts (the selection, collection, and recording of the information) will have been wasted."[23]

STATEMENT OF THE PROBLEM

Since accounting is a communications discipline, its success is dependent on financial report users' assigning the exact meanings intended by financial report preparers.

One of the possible techniques for evaluating the success of the accounting communication function is to ask preparers whether they have been transmitting understandable messages or to ask users whether they have been receiving understandable messages. Unfortunately, despite the importance of the accounting communication function, the accounting and business literature abounds in books and articles censuring current accountants for failing to make their communications clear to users. For example, recent attitudinal surveys have shown that users expend a minimal amount of time superficially reading narrative disclosures contained in financial reports because of their unnecessary linguistic complexity.[24]

As a consequence, the following overall hypothesis will be tested: Narrative disclosures contained in financial reports do not communicate well to their sophisticated readers.

SIGNIFICANCE OF THE STUDY

A first step towards the eventual improvement in accounting communications is the development of an objective methodology for evaluating understandability (i.e., an index of intelligibility) that has never been applied to accounting before. If this research study has a single central focus, it is to demon-

strate that, by marshalling modern techniques of psycholinguistic measurement and statistics: 1. the comprehensibility level of financial reports can be impartially determined; and 2. the comprehension ability of the financial report's many and varied users can be impartially determined.

The Cloze Readability Procedure is an available technique for measuring the interaction of the reader with the printed material. Consequently, the accounting profession will have, for the first time, an objective evaluation of "what is." One could mistakenly argue that accounting practitioners and accounting scholars already "know" that narrative disclosures are not clear even to their sophisticated readers. However, "knowing" the current state of the art and "empirically demonstrating" the current state of the art are not synonomous. Only by "empirically demonstrating" the current state of the art vis-a-vis accounting communications can remedial procedures be recommended and subsequently undertaken by financial report preparers; then they can modify managements' analyses of operations, footnotes, and/or qualified auditors' reports where comprehension level has been empirically found to be unsuitable for users.

Since the 1930's, the principal attempts by the leaders of the accounting profession to improve external financial reporting have been directed toward narrowing alternative generally accepted accounting principles that underlie the preparation of the formal financial statements. An objective of this research

study is to apprize the accounting profession of (1) the critical importance of understandable communications, (2) those specific instances wherein their communications were understandable to sophisticated readers,[25] (3) those specific instances wherein their communications were not understandable to sophisticated readers,[26] and (4) the fact that incomprehensible communications can be made understandable (by an independent expert) to sophisticated readers.[27]

LIMITATIONS OF THE STUDY

Emphasis on Adequate Disclosure/Understandability

The Financial Accounting Standards Board's Discussion Memorandum, An Analysis of Issues Related to Conceptual Framework for Financial Accounting and Reporting: Elements Of Financial Statements and their Measurement, was concerned with a number of important issues; among them were the qualities of useful financial information. They stressed that "the primacy of relevance among the qualities of useful financial information is widely recognized."[28] Perhaps the most important issue for accountants to recognize is that relevant information will be useless unless it is made understandable to the target audience. For a message to be useful (to have meaning to users), it must be as understandable as it is relevant. Trade-offs between clarity and relevancy are counterproductive.

Despite the fact that relevance and understandability cannot be beneficially segregated in an overall evaluation of financial reporting, the primary objective of this research study

is to evaluate the achievement of communication in financial reporting. Since, by definition, "communication" specifically excludes the quality of relevance (called "utility" in communication theory), no attempt is made to evaluate the adequate disclosure/relevance of narrative disclosures: such an analysis is beyond the scope of this research study.

Limitation to Narrative Disclosures Contained in Financial Reports

None of the available techniques for evaluating understandability can be appropriately applied to the body of the financial statements. The techniques require that printed matter be in the form of sentences. Footnotes, managements' analyses of operations, and qualified auditors' reports are an integral part of financial reports and, since they are presented in sentence format,may be evaluated using the Cloze Readability Procedure.

The formal financial statements are, therefore, excluded from consideration in this research study because they represent the results of accounting measurements subject to direct, quantifiable expression.

Limitation to 1975 Financial Reports

At the time of the performance of the empirical part of this research study, the 1975 financial reports were the most current. Since the most current financial reports best portray the state of financial reporting, the narrative disclosures contained in the 1975 financial reports have been selected for evaluation of their adequate disclosure/understandability.

Nonuniversality of Survey Results

Certified public accountants, chartered financial analysts, and commercial bank loan officer trainees participated in this research study. Thus, the results cannot be generalizable to other sophisticated user groups (e.g., academic accountants, managerial accountants, etc.)

Certified public accountants and chartered financial analysts were randomly selected from the membership rosters of their respective professional organizations. Thus, the empirical results obtained are generalizable to all certified public accountants and to all chartered financial analysts. Commercial bank loan officer trainees, however, were not randomly selected; they were provided by the eight largest commercial banks in New York City. Because of the stringent educational requirements established by New York City banks, it is believed that these trainees are probably more sophisticated than other bank loan officer trainees throughout the United States. Emphasis here was purposely placed on the quality, as opposed to mere quantity, of the respondents.

By using a nonrandom selection technique, assurance is provided that the respondents (i.e., trainees) possess the defined characteristics of the desired respondents (i.e., sophistication). Nonetheless, the empirical results obtained can neither be generalized to all commercial bank loan officer trainees nor to actual commercial bank loan officers.

Corporations and the narrative disclosures contained in their 1975 financial reports were not randomly selected. Thus,

the empirical results obtained cannot be generalized to all corporations and to all narrative disclosures.

It should be noted that this research study is not intended to be the terminal research effort in the area of accounting communications. Instead, it is designed to be an exploratory study testing to learn whether hypotheses tentatively proposed and evaluated should be explored by future researchers in future research projects. Consequently, neither the nonuniversality of the commercial bank loan officer trainees nor the nonuniversality of the corporations' narrative disclosures should be construed as a serious weakness of this research effort; it is merely an acceptable limitation of an exploratory research study.

Limitation to Sophisticated Users of Financial Reports

The Financial Accounting Standards Board's Discussion Memorandum, An Analysis of Issues Related to Conceptual Framework for Financial Accounting and Reporting: Elements of Financial Statements and Their Measurement, stated that "Financial statements should be comprehensible to investors and creditors who have a reasonable understanding of business and economic activities and financial accounting, and who are willing to spend the time and effort needed to study financial statements."[29] While this represents the latest official pronouncement identifying the sophisticated user as the person to whom financial reports are directed, additional rationales will be offered in Part II of Chapter III.

DEFINITIONS OF TERMS

The following definitions are basic to this study:

1. Cloze Readability Procedure: The Cloze Readability Procedure is "a method of systematically deleting words from a prose selection and then evaluating the success a reader has in accurately supplying the words deleted."[30] In this study Cloze tests were constructed by the deletion of every fifth word, and substituting in its place a blank twelve typewriter spaces long. Each test begins and ends with an unmutilated sentence, and contains approximately fifty deletions. The first word deleted is in the second sentence. It is selected at random, and then every fifth work thereafter is deleted until there are approximately fifty deletions. The tests are administered to subjects who have not read the selection from which the Cloze test is constructed. The Cloze tests are scored by counting as correct only those responses which match the deleted words. Unambiguous misspellings which are otherwise correct are counted as correct.[31]
2. Criterion Levels: Levels which are a frame of reference for evaluating an acceptable performance on a Cloze test.[32] In this research study, the criterion levels were those discussed in detail in Chapter V. They were developed by Bormuth,[33] Rankin and Culhane.[34] Rankin, [35] and Peterson, Paradis, and Peters.[36]
3. Adequate Disclosure/Understandability: Generically defined by communication theorists as the "destination assigning the

proper meanings to the symbols transmitted by the source." Operationally defined for purposes of this study as "the sophisticated user of financial reports scoring 57% (the criterion level referred to above) or better on Cloze tests made over the narrative disclosures authored by management and the independent auditor."

4. Sophisticated User: The sophisticated user is one who possesses the requisite technical competence for understanding accounting communications. For purposes of this study, three groups satisfy this condition: chartered financial analysts (sophisticated investors), commercial bank loan officer trainees (moderately sophisticated creditors), and certified public accountants.[37]
5. Readability: Readability has been defined as "the relative difficulty of a piece of reading material that has been determined by the application of a widely used, reliable, and valid measuring instrument (e.g., the Cloze Readability Procedure)."[38]
6. Narrative Disclosures: Footnotes, managements' analyses of operations and qualified auditors' reports are qualitative messages designed to supplement and complement the financial statements in such a way as to provide sophisticated users with a more complete basis for the evaluation of the investment or credit extension potential of a company.
7. Financial Reporting: Financial reporting is the process of providing financial statements and selective narrative

disclosures to individuals and institutions external to the reporting entity.[39]

8. Flesch Reading Ease Formula: In 1948, Rudolph Flesch[40] developed a statistical formula for the objective measurement of readability (comprehension difficulty) based on a count of two language elements: average sentence length (in words) and average word length (in syllables).

METHODOLOGY OF THE STUDY

A literature search of accounting and auditing theory in combination with communication theory provided the foundation for the empirical evaluation of accounting communications. The primary research vehicles were sixty-four Cloze Readability Procedure tests which were based on footnotes, managements' analyses of operations, and qualified auditors' reports of sixteen publicly-held corporations. The tests were administered to a random sample of certified public accountants and chartered financial analysts and a non-random sample of commercial bank loan officer trainees.

If financial reports are to be effective transmitters of accounting information, an awareness of the existence of communication failures is not sufficient for recommendations to be postulated; there must also be an identification of the magnitude of the problem. That is, the consistency of adequate disclosure/understandability will be examined in several hypotheses to determine whether the level of understandability varies 1. among classes of sophisticated users, 2. among types of narrative disclosures, 3. among and within independent audit

firms, 4. among source corporations, 5. among industries, 6. between stock exchange listings (serving, in part, as surrogates for corporate size), and 7. between two diametrically opposite levels of performance, with interaction effects among the variables; thus those areas in need of immediate rectification will be demarcated.

SCOPE OF THE STUDY

Part II presents a conceptual foundation for the eventual evaluation of the understandability of narrative disclosures contained in financial reports. It is organised in the following manner:

1. Chapter II: The first part of Chapter II presents a theoretical discussion of various aspects of the concept of adequate disclosure/understandability. The second part of the chapter discusses the three prior readability studies in accounting. The third part of the chapter critically evaluates the methodologies employed by the three teams of researchers.
2. Chapter III: The first part of Chapter III identifies the principal users of financial reports. Different viewpoints, ranging from those of the layman investor and the layman creditor to those of the sophisticated chartered financial analyst and the sophisticated commercial bank loan officer, will be debated. The second part of the chapter discusses the importance of narrative disclosures in the investment and credit extension decision-making process.

3. Chapter IV: The first part of Chapter IV analyzes elements of communication theory to provide a basis for the evaluation of the understandability of narrative disclosures. The second part of the chapter dissusses 1. the accounting communication process, 2. the semantic, syntactic, and pragmatic rules that govern accounting language, and 3. the concept of source credibility--the final link.
4. Chapter V: The first part of Chapter V discusses the theoretical foundation of the methodology (i.e., the Cloze Readability Procedure) that was adapted from the Education/Psychology literature to objectively measure the understandability of narrative disclosures. The second part of the chapter surveys the Cloze Readability Procedure literature for its validity as a measure of reading comprehension. The third part of the chapter discusses the five definitive empirical studies that have contributed to the establishment of criterion levels.

Part III presents the design, results, discussion, implications, and recommendations of the study. It is organized in the following manner:

1. Chapter VI: After reviewing the literature discussed in Chapters I through V, and the conceptual framework which emerged, Chapter VI discusses the research

design that will be employed to test the research hypotheses.

2. Chapter VII: Chapter VII presents the empirical results associated with each of the research hypotheses outlined in Chapter VI.
3. Chapter VIII: Chapter VIII presents a discussion of the empirical results described in Chapter VII. Intertwined with the explication of the reasons underlying the results are the more important implications of the study for the accounting profession.
4. Chapter IX: The final chapter of this study presents the more important conclusions and tentatively submitted recommendations for the advancement of accounting and the accounting profession. A synthesis of the material discussed in the eight prior chapters will be interspersed throughout this chapter.

Part IV presents the reference materials that were used. It is organized in the following manner:

1. Appendix A through I: Various tables subsumed under several of the tables appearing in Chapter VII.
2. Appendix J: The sixty-four Cloze Readability Procedure tests that were mailed to a random sample of certified public accountants and chartered financial analysts and to a nonrandom sample of commercial bank loan officer trainees will be listed in rank order of their mean understandability scores by type of message.

That is, Part I lists those narrative disclosures whose Cloze Readability Procedure scores were below the criterion level of 57%. Part II lists those narrative disclosures whose Cloze Readability Procedure scores were above the criterion level of 57%.

3. Appendix K: The four Cloze Readability Procedure tests (based on narrative disclosures originally found to be incomprehensible by sophisticated users) that were rewritten by an independent expert and administered to the same sophisticated users.

4. Bibliography: The books and articles that served as a basis for much of the material presented in this research study will be listed in alphabetic order.

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[1]Charles E. Johnson, "Management's Role in External Accounting Measurements," Research in Accounting Measurement, edited by R. Jaedicke, Y. Ijiri, and O. Nelson (Evanston, Illinois: American Accounting Association, 1966), p. 88.

[2]William C. Norby, "Objectives of Financial Accounting and Reporting from the Viewpoint of the Financial Analyst," Financial Analysts' Journal, July-August 1972, p. 39.

[3]Booz, Allen, and Hamilton, A Businessman's View of Financial Statements (New York: Financial Executives Research Foundation, 1973), p. 15.

[4]Don W. Vickrey, "Is Accounting a Measurement Discipline?" The Accounting Review, October 1970, p. 731.

[5]Raymond J. Chambers, Accounting, Evaluation and Economic Behavior (Englewood Cliffs, New Jersey: Prentice-Hall, Inc.., 1966).

[6]Yuji Ijiri, The Foundations of Accounting Measurement (Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1967).

[7]Kermit D. Larson, "Implications of Measurement Theory on Accounting Concept Formation," The Accounting Review, January 1969, pp. 38-47.

[8]Richard Mattessich, Accounting and Analytical Methods Homewood, Illinois: Richard D. Irwin, Inc., 1964).

[9]Accounting Terminology Bulletin No. 1--Review and Resume (New York: American Institute of Certified Public Accountants, 1961), p. 9.

[10]Accounting and Reporting Standards for Corporate Financial Statements (Columbus, Ohio: American Accounting Association, 1957), p. 1.

[11]A.C. Littleton and V.K. Zimmerman, Accounting Theory: Continuity and Change (Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1962), p. 46.

[12]Errol R. Iselin, "Accounting and Communication Theory," Singapore Accountant, 1972, p. 31.

[13]Louis Goldberg, An Inquiry into the Nature of Accounting (Iowa City, Iowa: American Accounting Association, 1965), p. 348.

[14]John L. Carey (ed.), The Accounting Profession--Where is it Headed? (New York: American Institute of Certified Public Accountants, 1962), p. 53.

[15]James J. Benjamin, Arthur J. Francis, and Robert H. Strawser, Financial Accounting (Dallas, Texas: Business Publications, Inc., 1975), p. 2.

[16] Rudolph W. Shattke, Howard G. Jensen, and Virginia L. Bean, Financial Accounting Concepts and Uses (Boston, Massachusetts: Allyn and Bacon, Inc., 1969), pp. 6-7.

[17]Thomas J. Burns and Harvey S. Hendrickson, The Accounting Primer (New York: McGraw-Hill, Inc., 1972), pp. 15-16.

[18]Douglas R. Carmichael, Auditing Research Monograph No. 1, The Auditor's Reporting Obligation," (New York: American Institute of Certified Public Accountants, 1972), p. 50.

[19]Andrew A. Haried, "The Semantic Dimensions of Financial Statements," The Journal of Accounting Research, Autumn 1972, pp. 376-391.

[20]Harry C. Triandis and Keith M. Kilty, Cultural Influences upon the Perception of Implicative Relationship among Concepts and the Analysis of Values, Group Effectiveness Research Laboratory Technical Report No. 56 (Urbana, Illinois: Group Effectiveness Research Laboratory, 1968).

[21]Andrew A. Haried, "Measurement of Meaning in Financial Reports," The Journal of Accounting Research, Spring 1973, p. 143.

[22]Andrew A. Haried, "The Semantic...," op. cit., p. 376.

[23]Errol R. Iselin, op. cit., p. 32.

[24]Public Accounting in Transition (Chicago, Illinois: Arthur Anderson & Co., 1974).
Marc J. Epstein, The Usefulness of Annual Reports to Corporate Shareholders (Los Angeles, California: California State University, 1975).
New Trends in Annual Report Readership (New York: Georgeson & Co., 1972).
Vincent C. Brenner, "Statement Users' Views on Needed Changes in External Financial Reporting," The National Public Accountant, April 1971, pp. 27-32.

[25]Those narrative disclosures empirically confirmed to be the most intelligible to users (i.e., a Cloze Readability Procedure score above the criterion level of 57%) have been reproduced in Part II of Appendix J, to serve as models of adequate disclosure/understandability. Eight standard format footnotes, thirteen nonstandard format footnotes, five managements' analyses of operations, and twelve qualified auditors' reports out of sixty-four messages had scores greater than 57%.

[26]Those narrative disclosures empirically confirmed to be the least intelligible to users (i.e., a Cloze Readability Procedure score below the criterion level of 57%) have been reproduced in Part I of Appendix J to serve as examples of inadequate disclosure/understandability. Eight standard format footnotes, three nonstandard format footnotes, eleven managements' analyses of operations, and four qualified auditors' reports out of sixty-four messages had scores less than 57%.

[27]The four rewritten narrative disclosures empirically confirmed to be understandable to users (which were incomprehensible in their original form) have been reproduced in Appendix K to serve as models for the improvement of accounting communications. A discussion of the nature of the specific changes made by the independent expert appears in Chapter.

[28]Financial Accounting Standards Board, An Analysis of Issues Related to Conceptual Framework for Financial Accounting and Reporting: Elements of Financial Statements and their Measurement (Stamford, Connecticut: Financial Accounting Standards Board, 1976), p. 152.

[29]Ibid., p. 10.

[30]Richard Robinson, An Introduction to Cloze Procedure (Newark, Delaware: I. R.A., 1972), p. 2.

[31]John R. Bormuth, "Factor Validity of Cloze Tests as Measures of Reading Comprehension Ability," Reading Research Quarterly, Spring 1969, p. 360.

[32]Earl Rankin and Joseph Culhane, "Comparable Cloze and Multiple-Choice Comprehension Test Scores," Journal of Reading, December 1969, p. 198.

[33]John R. Bormuth, "Cloze Test Readability: Criterion Reference Scores," Journal of Educational Measurement, Fall 1968, pp. 189-196.

[34]Earl Rankin and Joseph Culhane, op. cit., pp. 193-198.

[35]Earl Rankin, "Grade Level Interpretation of Cloze Readability Scores," Reading: The Right to Read (Milwaukee, Wisconsin: National Reading Conference, 1971), pp. 30-37.

[36]Joseph Peterson, Edward Paradis, and Nathan Peters, "Revalidation of the Cloze Procedure as a Measure of Instructional Level for High School Students," (Milwaukee, Wisconsin: National Reading Conference, 1973), pp. 144-149.

[37]Certified public accountants are sophisticated users of financial reports, in the sense that they are required by generally accepted auditing prodedures to "read" the narrative disclosures that supplement and complement the formal financial statements.

[38]Peggy Ransom, "Determining Reading Levels of Elementary School Children by Cloze Testing," Forging Ahead in Reading (Newark, Delaware: International Reading Association, 1973), p. 478.

[39]Accounting Principles Board, Statement Number 4: Basic Concepts Underlying Financial Statements of Business Enterprises (New York: American Institute of Certified Public Accountants, 1970), p. 8.

[40]Rudolph Flesch, "A New Readability Yardstick," Journal of Applied Psychology, June 1948, pp. 221-233.

Chapter II

Review of the Related Literature:

1. The Concept of Adequate Disclosure/Understandability
2. Prior Readability Studies in Accounting
3. An Evaluation of the Methodologies Employed in Those Prior Readability Studies in Accounting.

INTRODUCTION

For the efficient allocation of society's scarce economic resources, companies must compete for capital in a fair and equitable manner, based on an information flow to investors or creditors. Such a flow must be adequate to enable informed appraisal of alternative investment or loan opportunities, and explicit and carefully designed disclosure requirements are necessary to ensure this.

> "Congress, in 1933, confronted with indisputable evidence of massive financial wrongdoing i the 1920's and convinced that much of it stemmed from the failure of promotors and entrepreneurs to fairly and candidly inform those whose resources they garnered and used in their endeavors, adopted the philosophy of the English Companies Act and mandated that those who sought money from the public through distributions of securities should, with narrow exceptions, make comprehensive disclosure in connection with the distribution. In 1934 Congress adopted the Securities Exchange Act of 1934, which provided the framework for a continuous disclosure system..."[1]

This chapter consists of three sections: The first section examines various aspects of the concept of adequate disclosure/understandability. The second section presents a detailed discussion of prior readability studies in accounting. Finally, the third section presents a critical evaluation of the methodologies employed in those studies.

Part I: THE CONCEPT OF ADEQUATE DISCLOSURE/UNDERSTANDABILITY A THEORETICAL FOUNDATION

The concept of adequate disclosure, the underlying rationale of the federal securities laws, plays a central role in both accounting theory and auditing practice. Accounting Principles Board Statement Number 4 states that:

> Financial information that meets the qualitative objectives of financial accounting also meets the reporting standard of adequate disclosure. Adequate disclosure relates particularly to objectives of relevance, neutrality, completeness, and understandability. Information should be presented in a way that facilitates understanding and avoids erroneous implications.[2]

Accounting is a service activity, the sole function of which is to provide primarily quantitative and selective qualitative, financial and nonfinancial information about economic entities to intended users. Hence, relevance was chosen as the underlying qualitative objective of financial accounting by the Committee to Prepare a Statement of Basic Accounting Theory.

> Relevance is the primary standard and requires that the information must bear upon or be usefully associated with actions it is designed to facilitate or results desired to be produced. Known or assumed informational needs of potential users are of paramount importance in applying this standard.[3]

According to Bedford, however, "the effectiveness of accounting disclosures depends as much on the means by which the disclosures are transmitted to users as on their substance."[4] The Committee, cognizant of this fact, stressed that:

> The development of accounting information is only part of the accounting function. A necessary companion aspect of the function is the development of the communication process so that information can be transmitted and so that those to whom information is provided understand it and its potential usefulness...Communication is a vital link in accounting activity. It is of no less importance than that of developing the information itself...[5]

Realizing this, the Accounting Principles Board in Statement Number 4 chose understandability as the second most important qualitative objective of financial accounting and defined it as follows:

> Understandable financial accounting information presents data that can be understood by users of the information and is expressed in a form and with terminology adapted to the users' range of understanding. Understandability is important because accounting information must be intelligible if it is to be useful.[6]

Recently, the Trueblood Study Group report clearly indicated the importance of understandability.

> Accounting information should be presented so that it can be understood by reasonably well-informed, as well as sophisticated users...Understandability requires that information be expressed as simply as permitted by the nature and circumstances of what is being communicated. No valid users' needs should be ignored. Information that can be understood, and is needed, by sophisticated users should not be diluted to eliminate what less able users cannot understand.[7]

A number of respected scholars have commented on understandability. Bernstein labelled clarity a basic objective of accounting. "This objective becomes even more obvious when we recognize that accounting is essentially a communication discipline and clarity...the absence of redundancy and ambiguity, can greatly facilitate the communication process."[8] Briloff stated that "understandability is, of course, the sine qua non of any effective communication process."[9]

Buzby emphasized that "adequate disclosure demands that the information be presented in a form which fosters understandability. Textual material, including footnotes, should be readable by the target audience."[10] More than two decades ago, Chetkovich asserted that "it is necessary to keep our objective of presenting informative data in mind at all times; it is pointless to write a disclosure which in reality discloses little or nothing because of inadequate detail or obscure wording."[11] Recently, Foster stated that:

> Today, there are several "disclosure problems" which merit further consideration...understanding. We should strive to eliminate barely intelligible footnotes. How many of us have had the unique experience of reading and re-reading a footnote, and still not understanding fully what it seeks to convey.[12]

Morton added that:

> "Since economic decisions must be made by people, any barriers to the understandability of financial disclosures, regardless of their relevance to the decision model, are irroncilable with the utilitarian purpose of financial reports identified in Statement Number 4, 'Accounting is a service activity."[13]

The consequences of having financial report users misunderstand the meanings intended by financial report preparers was aptly stated by Smith.

> "Without improvements in understandability, criticisms of financial reporting may increase in magnitude, potential government regulation may be forthcoming, and the accounting profession may lose its status as a profession. Since regulation may result in reduced communication and effective communication in financial reporting, the user may suffer."[14]

Buzby called for "an increase and improvement in research related to the factors which influence the adequacy of disclosure before the theoretically ideal level can be achieved."[15] Singhvi

and Dasai established a precedent for empirical research when they hypothesized that the qualities of completeness, accuracy, and reliability influence the quality of investment decisions made by investors. They applied an "index of disclosure"[16] to a random sample of one hundred listed corporations (found in the Fortune 500) and fifty-five unlisted corporations (found in the National Over-the-Counter quotations published in the New York Times). They found that certain characteristics of corporations such as asset size, number of stockholders, listing status, size of CPA firm, rate of return, and earnings margin are positively associated with the quality of financial disclosure. Singhvi and Dasai reached the following overall conclusion:

> ...inadequate corporate disclosure in annual reports is likely to widen fluctuations in the market price of a security since investment decisions, in the absence of adequate information, are based on less objective measures. These fluctuations, which affect the cost of capital and the corporate management's decision to invest funds, lead to inefficient allocation of capital resources in the economy. The market system, under these circumstances, becomes a less efficient allocator of the nation's resources. In brief, it can be said that the quality of disclosure is one of the variables which has effect on the price of a security.[17]

The Auditor's Current Responsibilities For Understandability

Gleim believes that "the accounting profession clearly has a responsibility for, and an interest in, shaping disclosure requirements for corporation financial and operating data."[18] Recognizing this, the accounting profession and the Securities and Exchange Commission have jointly made the certified public

accountant responsible in his independent examination and subsequent auditor's report for adequate disclosure/understandability.

The importance of adequate disclosure in auditing is evidenced by the third standard of reporting, which states: "Informative disclosures are to be regarded as reasonably adequate unless otherwise stated in the report."[19] Statement on Auditing Standards No. 1 explains that:

> "The fairness of presentation of financial statements in conformity with generally accepted accounting principles comprehends the adequacy of disclosures involving material matters. These matters relate to the form, arrangement, and content of the financial statements with their appended notes; the terminology used; the amount of detail given...Verbosity should not be mistaken for adequate disclosure."[20]

The ultimate responsibility for disclosure rests, of course, with the client, since the statements are his representations. However, if the auditor does not consider the informative disclosures made in the financial statements and appended notes to be adequate, he must make disclosure in his report or deny or qualify his opinion. Failure to do so constitutes a violation of the rules of professional conduct of the American Institute of Certified Public Accountants and Regulation S-X of the Securities and Exchange Commission, which requires that "the information required with respect to any statement shall be furnished as a minimum requirement, to which shall be added such further information as is necessary to make the required statements...not misleading."[21]

With respect to managements' analyses of operations, Statement on Auditing Standards No. 8 requires that the auditor:

> "...should read the other information and consider whether such information, or the manner of its presentation, is materially inconsistent with information, or the manner of its presentation, appearing in the financial statements. If the auditor concludes that there is a material inconsistency, he should determine whether the financial statements, his report, or both require revision. If he concludes that they do not require revision, he should request the client to revise the other information. If the other information is not revised to eliminate the material inconsistency, he should consider other actions such as revising his report to include an explanatory paragraph describing the material inconsistency, withholding the use of his report in the document, and withdrawing from the engagement. The action he takes will depend on the particular circumstances and the significance of the inconsistency in the other information."[22]

The information appearing in the financial statements and appended notes must meet the criterion of adequate disclosure/understandability. From a literal reading of the above statement by the Auditing Standards Executive Committee, managements' analyses of operations, if they are not to be materially inconsistent with respect to their "manner of presentation," must also meet the criterion of adequate disclosure/understandability. The Committee is also indicating that it is the responsibility of the auditor to ensure compliance by management. Furthermore, the Securities and Exchange Commission, in Accounting Series Release Number 159, indirectly addressed itself to the question of adequate disclosure/understandability when it stated that "the textual analysis should be presented in a manner that will best communicate the significant elements necessary to a clear understanding by the investor of the financial results. A mechanistic approach to this analysis which uses boiler plate or

compliance jargon should be avoided."[23] (emphasis added)

Chetkovich found a link between the concept of adequate disclosure and the auditor's legal liability.

> The question of legal liability is characteristically present, consciously or otherwise, in any serious consideration of disclosure requirements. While it is difficult to appraise the direct effect of court decisions on the development of standards of disclosure, there is little doubt that the mere possibility of legal liability for failure to disclose has resulted in insistence on fuller disclosure.[24]

In the 1969 landmark Continental Vending case, U.S. Court of Appeals Judge Henry J. Friendly affirmed a lower court's conviction of two partners and an audit manager of a major international accounting firm; they were accused of criminal liability under Section 32 of the Securities Exchange Act of 1934 for inadequate disclosure based partially on the wording of a footnote. Judge Friendly asserted that:

> The first law for accountants was not compliance with generally accepted accounting principles but, rather, full and fair disclosure, fair presentation and, if principles did not produce this brand of disclosure, accountants could not hide behind the principles but had to go behind them and make whatever disclosures were necessary for full disclosure. In a word, "present fairly" was a concept separate from "generally accepted accounting principles," and the latter did not necessarily result in the former.[25]

All the ramifications of the above decision are yet to be fully tested in the courts, but it is clear that the judiciary will not hesitate to intervene in the development of the auditor's responsibility for adequate disclosure. Sommer examined a number of recent litigations and concluded that the courts are demanding of auditors "...that the statements disclose and that this disclosure be intelligible and helpful to more than a handful in

understanding the financial condition and the operations of the company."[26]

Moonitz warned that the results of any purposive human activity such as accounting must eventually be judged by ethical standards like truth, fairness, justice, etc."[27] Is it truthful, fair, or just for financial report preparers to consciously or unconsciously transmit valuable and necessary "information" to financial report users who demand such information, in an incomprehensible form? Is that ethical?

The Understandability of the Auditor's Report

The Fourth standard of reporting is:

> The report shall either contain an expression of opinion regarding the financial statements, taken as a whole, or an assertion to the effect that an opinion cannot be expressed. When an overall opinion cannot be expressed, the reason should be stated. In all cases wherein an auditor's name is associated with financial statements, the report should contain a clear-cut indication of the character of the auditor's examination, if any, and the degree of responsibility he is taking.[28]

Statement on Auditing Standards Number 2 explained that "the objective of the fourth standard is to prevent misinterpretation of the degree of responsibility the auditor is assuming when his name is associated with financial statements."[29]

Inasmuch as the representations in the auditor's report are the certified public accountant's, the responsibility for adequate disclosure/understandability therein is his alone. The disclosures required in the auditor's report are relatively specific and are generally accepted. The auditor must disclose the scope of his examination in terms of having been made in accordance with generally accepted auditing standards, and he must give an

opinion as to the fairness of the three financial statements presented in conformity with generally accepted accounting principles applied on a consistent basis.

Statement on Auditing Standards Number 2 listed seven circumstances that result in a departure from the auditor's standard report and provided that "when the auditor intends to express a qualified opinion, he should disclose all the substantive reasons in a separate explanatory paragraph(s) of his report, and should include, in the opinion paragraph, the appropriate qualifying language and a reference to the explanatory paragraph(s)."[30]

The certified public accountant is a reporter and like all reporters he has the responsibility to ensure that his audience can comprehend what he attempts to communicate to them. Failing this, the accountant will forfeit his credibility. This notion was best expressed by the Committee on Basic Auditing Concepts:

> ...the audit is an integral part of the communication of economic information. The audit report, the end-product of the auditor's efforts, is intended to facilitate this communication by adding credibility to the information reported, to the extent it is believed to be justified. If the report does not communicate satisfactorily the findings of the audit, it may fail to fulfill the intent and thus render the auditor's preceding work of little worth. No matter how thorough and effective the auditor is, he labors in vain if he cannot clearly convey the results of his efforts in a useful form to those who need to know them.[31] (emphasis added)

Concerned with the understandability of the auditor's report, Mautz and Sharaf suggested that the auditor should:

1. Recognize that even professional readers may have difficulty in distinguishing niceties of expression which the auditor relies on to absolve himself of certain legal responsibilities.

2. State clearly and unequivocally, and in a style befitting the profession, the nature of the examination performed to provide a basis for the auditor's judgment.

3. Express the auditor's judgment in straightforward terms. [32]

If the auditor's report is found to be unintelligible by sophisticated readers, then the auditor has failed to satisfy his external reporting responsibilities. Additionally, he may be considered to have violated Rule 501 of the American Institute of Certified Public Accountants' 1972 Restatement of the Code of Professional Ethics provided, in part, that "...a member may be held guilty of an act discredible to the profession if...(c) he is materially negligent in the conduct of his examination or in making his report thereon."[33] (emphasis added)

In addition, there is the ever-present threat of legal liability based on the wording of the audit report. In the 1972 Rhode Island Hospital Trust National bank case,[34] the U.S. Court of Appeals reversed a lower-court decision and held that the auditors were guilty of negligence. Judge Winter concluded that the auditors had issued a faulty disclaimer of opinion that gave the plaintiff the mistaken impression that improvements to certain leasehold shipping facilities had been made with only their precise value undeterminable. Judge Winter quoted with emphasis this crucial item in the litigation:

> Additions to fixed assets in 1963 were found to include principally warehouse improvements and installation of machinery and equipment in Providence, Rhode Island, Brunswick, Georgia, and Palm Beach, Florida. Practically all of this work was done by company employees and materials and overhead were borne by the International Trading Corporation and its affiliates. Unfortunately,

> fully complete detailed records were not kept of these capital improvements and no exact determination could be made as to the actual cost of said improvements...Because of the limitations upon our examination expressed in the preceding paragraphs and the material nature of the items not confirmed directly to us, we are unable to express an opinion as to the fairness of the accompanying statements. (emphasis added by the Court)[35]

"The judge noted that, had the language in the disclaimer been clearer, the decision might very well have gone in favor of the accountant-defendants."[36]

Two recent events underscore the accounting profession's concern for the understandability of the auditor's report:

(1) In 1974, a Commission on Auditor's Responsibilities was established to determine whether gaps exist between what the public expects of auditors and what auditors can reasonably be expected to accomplish. If such gaps exist, the Commission will explore ways to close them. One of the areas to be explored concerns "Improving Communication in the Auditor's Standard Report."[37]

(2) In a 1976 publication, Research Opportunities in Auditing, Peat, Marwick, Mitchell & Co. stated that "the following anticipated developments suggest research opportunities having to do with auditing methods: Communication With Information Users--

> Auditors will probably be held to a stricter standard of accountability by the courts and SEC for the effectiveness of their communication of information to users. Report format and choice of language may be given almost as much attention as substantive content. In the future, the claim that, "It's all there," will probably not be an acceptable defense if the content is not understandable to information users that represent a broad range of skill and understanding. Thus, auditing research is needed that is directed to developing methods for more effectively communicating with various information users.[38] (emphasis added)

PART 2: PRIOR READABILITY STUDIES IN ACCOUNTING

An Introduction

In Horizons for a Profession, Roy and MacNeill[39] ranked the knowledge of written and oral English as the first prerequisite for the modern certified public accountant based on a sample of 1,890 prominent accountants. Recognition of the importance of these communication tools is indirect recognition of the auditor's responsibility for both the understandability of his client's disclosures and the understandability of the scope and opinion section of his report.

No discussion of "understandability" can be undertaken without reference to "readability." For the sake of clarity, the terms "understandable" and "readable" are used to mean the same thing.[40] That is, the ability of sophisticated financial report users to comprehend narrative disclosures and complete the act of communication initiated by managers and certified public accountants.

Periodically subjecting the accounting communication process, including the auditor's report, to various empirical tests becomes a necessity for any profession rendering service to society. It will serve to remind auditors of their reporting responsibilities. Having gone through an analysis on a periodic basis, the accounting profession has done all that it can to provide financial report users with the best product of the accounting communication process.

What is needed, however, is an instrument capable of objectively measuring the degree to which the intended meanings will be assigned to the selected financial report messages.

"The term 'readability' is used...as an objective and quantitative measure of the ease of comprehension and understanding of written matter. The principal purpose of readability is to enable an objective evaluation of 'what is.' By knowing the state of affairs that exists, steps can be taken to modify printed matter whose comprehension ease is unsuitable for the appropriate audience. Thus, readability provides a type of immediate feedback to the writer."[41]

Accountants and corporate managers have long been either unaware of or insensitive to the readability problem in financial reports. This was confirmed by a thorough and exhaustive search of the related literature which revealed that there have been just three research efforts in the past twenty-five years (none prior to 1950) applying the concept of readability to financial reports: (1) Pashalian and Crissy--1950;[42] (2) Soper and Dolphin, Jr.--1964;[43] and (3) Smith and Smith--1971.[44] Due to the critical importance of these pioneering efforts, considerable space is now devoted to a discussion of their hypotheses, methodologies, and conclusions.

It should be noted, however, that there have been several other research projects that have tangentially touched upon the question of adequate disclosure/understandability. For example, two recent surveys using questionnaires have indicated that financial report users do not understand financial statements, appended notes, and auditors' reports. Users consistently complain that the language employed by both mananagers and independent auditors is too technical or that explanations are too complicated.[45] Not wanting to minimize the contributions made by

these and other researchers, it is nonetheless necessary to delete their studies from inclusion in this study because of the overwhelming subjectivity inherent in the methodologies (i.e., questionnaires) they employed to indirectly assess readability.

Pashalian And Crissy--1950

Inspired by readership surveys showing considerable apathy on the part of shareholders, Pashalian and Crissy undertook the first empirical investigation of the "readability" of corporate financial reports by means of the Flesch Readability Formulas.[46] They examined all nonfinancial corporations having either assets or sales revenue exceeding $1 billion as of 1949. "Presumably then, these corporations have the largest number of stockholders, employees and other persons interested in their operations. In other words, there is substantial public interest in their operations; their annual reports are expected to reach a vast audience."[47]

One hundred word passages from every other page in the twenty-six financial reports were sampled. Table I[48] (see Table I) shows the readability scores ranging from 6 to 58, fairly difficult to very difficult. The average Reading Ease score was 34.37 for the entire set of twenty-six reports. This score falls in the difficult category. The measure of average sentence length ranged from 16 (fairly easy) to 53 (very difficult). The measure of the average number of syllables per 100 words ranged from 156 (fairly difficult) to 183 (difficult). "Flesch has advised that a comfortable text contains 1½ times as many syllables as words. The preponderance of reports in the difficult

TABLE 1

REPRODUCTION OF PASHALIAN AND CRISSY'S TABLE I

Table 1

Summary of Reading Ease and Human Interest Measures on the Twenty-six Annual Reports

Industry and Average R.E.	Corporate Annual Report	Average Sentence Length	Average Number Syllables	Reading Ease Score	Percentage of Personal Words	Percentage of Personal Sent.	Human Interest Score
Merchandise	Sears, Roebuck	22	162	47	2	0	7
44.50	Montgomery Ward	16	175	43	0	0	0
Communications	Bell Telephone	24	165	43	1	0	4
43.00							
Foods	Swift & Co.	17	156	58	5	2	19
43.00	Armour & Co.	21	168	43	4	0	15
	Safeway Stores	27	182	28	2	0	7
Autos & Accessories	General Motors	21	174	38	2	0	7
40.00	Chrysler Corp.	20	171	42	1	0	4
Oil	Standard Oil (N. J.)	21	179	34	0	0	0
33.50	Standard Oil (Ind.)	25	173	35	2	0	7
	Socony-Vacuum	21	180	33	2	0	7
	Texas Co.	23	182	32	1	0	4
	Gulf Oil	24	175	34	1	0	4
	Standard Oil (Cal.)	24	178	32	0	0	0
Utilities	Consolidated Edison	27	166	39	1	0	4
31.50	Commonwealth-Southern	31	183	24	0	0	0
Railroads	Pennsylvania	27	170	36	1	0	4
28.50	NY Central	25	174	34	1	0	4
	Southern Pacific	32	175	26	0	0	0
	Santa Fe	32	177	25	1	0	4
	Baltimore & Ohio	18	171	44	2	0	7
	Union Pacific	53	174	6	0	0	0
Machinery & Supplies	General Electric	30	178	26	0	0	0
26.00							
Metals & Chemicals	U. S. Steel	32	173	28	0	0	0
25.67	E. I. du Pont	31	176	26	1	0	4
	Bethlehem Steel	39	172	23	1	0	4

category on this measure (22 of the 26 reports) is indicative of the high level of abstraction in the language of these reports."[49]

Pashalian and Crissy suggested a "writing-down." However, they recognized that the challenge is one of presenting sufficient technical data and information for the financial expert, satisfying the requirements of the accounting profession (i.e., the American Institute of Certified Public Accountants' Committee on Accounting Procedure) and the law (i.e., the Securities and Exchange Commission, the stock exchanges, and the government regulatory agencies), and at the same time, being meaningful to those whose interests are of a more "general nature." "The present demand crystallizes as the need for writing an informative account of the year's operations, and for presenting the material in such a way that the report will be read.[50]

The researchers believe that managers and attesting auditors have incorrectly assumed that the financial report audience possesses a far greater language facility than it actually does. "The language of these reports, shown in terms of the education of the U.S. adult population, is too difficult for the great bulk of this diversified readership to comprehend. Corporate writers are over-estimating the language experience of their potential audience--stockholders, employees, and the general public."[51]

Soper And Dolphin, Jr.--1964

"A problem which has been of concern to the accountant and other interested people for a good number of years is the construction of the corporate annual report. It is generally conceded

that one of the objectives in constructing the annual report is to make it as readable and understandable as possible. Because of continuing interest through the years in improving the readability of corporate annual reports, it seems to be generally believed that corporate annual reports are improving over time and that they are currently easier to read and more understandable than they once were."[52] With these basic thoughts in mind, Soper and Dolphin, Jr. proceded to evaluate the improvement (over a thirteen-year period) in corporate financial reports by using the Flesch Readability Formulas to score twenty-five 1961 financial reports; the investigators then compared these scores with the Flesch scores obtained in 1950 by Pashalian and Crissy.

Schedule 2[53] (see Table 2) shows the comparative findings in the application of the Flesch Readability Formula for the twenty-five corporations for 1949 and 1961. Soper and Dolphin,Jr. found that the reading ease scores for 1961 ranged from 11 (very difficult) to 43 (difficult). As can be seen in Schedule 2, there has been no overall improvement in the reading ease scores for these twenty-five corporations between the years 1949 and 1961. The average reading ease score of the entire set of reports was 34.2 in 1949 and 28.76 in 1961. The decline in reading ease of 5.44 points on the Flesch scale was found to be statistically significant.[54]

Soper and Dolphin, Jr. had a second research objective: validate the applicability of the Flesch formula to financial reports based on the results of reading ease rankings by independent judges. Five one hundred word samples were selected

TABLE 2

REPRODUCTION OF SOPER AND DOLPHIN, JR.'S SCHEDULE 2, SCHEDULE 4 AND SCHEDULE 5

SCHEDULE 2
READING EASE RATINGS FOR 25 CORPORATE ANNUAL REPORTS FOR 1948 AND 1961 AS MEASURED BY THE NEW FLESCH READABILITY FORMULAS

Corporate Annual Report	Average Sentence Length			Average Number of Syllables			Reading Ease Rating		
	1948	1961	Increase (Decrease)	1948	1961	Increase (Decrease)	1948	1961	Increase (Decrease)
Armour & Company	21	24	3	169	181	13	43	29	(14)
Baltimore & Ohio R.R.	18	22	4	171	176	5	44	36	(8)
Bell Telephone	24	20	(4)	165	174	9	43	37	(6)
Bethlehem Steel	39	28	(11)	172	186	14	23	21	(2)
Chrysler Corporation	20	20	-0-	171	191	20	42	25	(17)
Consolidated Edison	27	25	(2)	166	179	13	39	30	(9)
E. I. duPont	31	21	(10)	176	190	14	26	25	(1)
General Electric	30	23	(7)	173	193	20	26	16	(10)
General Motors	21	26	5	174	183	9	38	26	(12)
Gulf Oil Company	24	24	-0-	175	181	6	34	29	(5)
Montgomery Ward	16	21	5	175	172	(3)	43	40	(3)
New York Central R.R.	25	21	(4)	174	182	8	34	32	(2)
Pennsylvania R.R.	27	22	(5)	170	184	14	35	29	(7)
Safeway Stores	27	20	(7)	182	176	(6)	28	38	10
Santa Fe R.R.	32	30	(2)	177	195	18	25	11	(14)
Sears, Roebuck & Co.	22	19	(3)	163	180	18	47	35	(12)
Socony-Mobil	21	17	(4)	180	190	10	33	29	(4)
Southern Pacific R.R.	32	24	(8)	175	197	22	26	16	(10)
Standard Oil (California)	24	22	(2)	178	187	9	32	26	(6)
Standard Oil (Indiana)	25	20	(5)	173	171	(2)	35	42	7
Standard Oil (New Jersey)	21	25	4	179	186	7	34	24	(10)
Swift & Company	17	13	(4)	156	178	22	58	43	(15)
Texas Company	23	21	(2)	132	192	10	32	23	(9)
Union Pacific R.R.	53	25	(28)	174	187	13	6	23	17
U. S. Steel	32	23	(9)	173	179	6	29	32	4
Average	26.08	22.24	(3.84)	173.04	183.80	10.76	34.2	28.76	(5.44)
Standard deviation	7.55	3.41		6.18	7.38		9.04	8.11	

SCHEDULE 4
COMPARISON OF FLESCH AND INDEPENDENT JUDGES' RANKINGS FOR FIVE 100-WORD SAMPLES

Flesch Ranking	Judges' Ranking	Flesch Reading Ease Rating
1	1	62
2	2	38
3	3	21
4	5	2
5	4	−14

SCHEDULE 5
RESULTS OF TRUE-FALSE TESTS GIVEN TO MEASURE COMPREHENSION OF TWO SECTIONS OF MATERIAL FROM CORPORATE ANNUAL REPORTS

	Percentage of Correct Answers		Percentage Decline in Comprehension Swift & Co. = 100%
	Swift & Co. Reading Ease Rating = 39	Santa Fe Reading Ease Rating = 16	
Group I—Finance training and stockholders	79.2%	69.2%	13%
Group II—Finance training and not stockholders	78.0%	61.0%	22%
Group III—No finance training but stockholders	65.0%	60.0%	8%
Group IV—No finance training and not stockholders	69.0%	58.0%	16%

from the financial reports and twenty-four judges were asked to read and rank the samples in order of reading difficulty. The rankings were then compared to the rankings obtained from the Flesch index. As shown in Schedule 4[55] (see Table 2), the judges' rankings agreed with the Flesch index rankings, except for samples four and five, which have extremely low reading ease scores and between which, according to Soper and Dolphin, Jr., it might thus be difficult to differentiate. "Although a reliability coefficient of .52 limits the amount of reliance that can be placed on the judges' rankings, the similarity of the judges' rankings with those of Flesch strongly supports the accuracy of the Flesch index in measuring the difficulty of reading material."[56]

Soper and Dolphin, Jr. had a third and final research objective: evaluate the correlation between reading ease scores and the level of comprehension of test material by independent judges. Sections from two financial reports (approximately one thousand words) were selected and rated for reading ease (Swift and Company--39 and Atchison, Topeka and Santa Fe Railway--16). It was thought by the researchers that the spread of twenty-three points on the Flesch scale would be sufficient to cause a noticeable difference in the comprehension of the material by the reader. A ten-question true-false comprehension test was prepared and administered to four different groups stratified as to differing levels of sophistication. The results appeared in Schedule 5[57] (see Table 2). Soper and Dolphin, Jr. incorrectly assumed that there would be a gradual falling off in comprehension of the

material in moving from Group I to Group IV. As can be seen in Schedule 5, (see Table 2) Groups II, III, and IV comprehended the material about equally well. Since all four groups showed a decline in comprehension as they moved from the Swift and Company report to the Santa Fe Railway report, it would appear that reading ease and comprehension are related. The investigators concluded "that no matter what other variables are involved, the higher the reading ease score the greater the level of comprehension will be for a given reader of a corporate annual report...and...that the Flesch readability formula gives a useful rating of reading ease for corporate annual reports."[58]

Smith And Smith--1971

Smith and Smith selected for their sample the top fifty corporations on the 1969 Fortune 500 and applied both the Flesch Reading Ease Formula and the Dale-Chall Formula[59] (as measures of reading comprehension) to the financial statement footnotes. "Primary among the factors responsible for the selection of the 2 formulas were: (a) the applicability of the formula (i.e., both formulas are applicable through the college graduate level), (b) the validity of the formulas, and (c) the belief that the use of both formulas, since each tests some different component of the written matter, would provide additional information and additional validity checks."[60]

Tables I and II[61] (see Table 3) present the results of the readability analysis to the footnotes. The mean score of 23.4949 (Table II) using the Flesch Formula is rated in the grade level

TABLE 3

REPRODUCTION OF SMITH AND SMITH'S TABLE I AND TABLE II

TABLE I

READABILITY SCORES OF NOTES TO FINANCIAL STATEMENTS

Corporation	*Score Results*	
	Flesch	*Dale-Chall*
General Motors	26.0250	10.4859
Standard Oil (N.J.)	17.9482	9.0994
Ford Motor	29.8140	9.5784
General Electric	29.8150	8.9624
International Business Machines	24.9079	9.5376
Chrysler	25.6390	10.5736
Mobil Oil	31.8023	9.8514
Texaco	(10.2994)	9.6434
International Telephone & Telegraph	25.9108	10.0584
Gulf Oil	11.6937	9.9136
Western Electric	33.5110	10.7199
U. S. Steel	8.7640	9.8911
Standard Oil of California	47.8339	8.1351
Ling-Temco-Vought	20.4463	10.1042
Du Pont (E. I.) de Nemours	27.9673	8.7617
Shell Oil	39.2812	8.8361
Westinghouse Electric	31.0976	9.2576
Standard Oil (Indiana)	21.2033	9.5711
Goodyear Tire & Rubber	21.0585	10.3188
RCA	8.6949	10.9986
Swift	27.1860	10.1646
McDonnell Douglas	14.7717	10.8680
Union Carbide	19.2843	10.2439
Bethlehem Steel	27.2057	9.9508
Boeing	42.9837	10.0286
Eastman Kodak	20.9735	9.9974
Proctor & Gamble	21.3830	9.9561
Atlantic Richfield	45.3380	9.8121
North American Rockwell	29.2990	9.3812
International Harvester	30.4488	9.1918
Kraftco	13.7743	9.8911
General Dynamics	24.2730	10.5120
Tenneco	32.5114	9.5727
Continental Oil	3.7098	9.7573
United Aircraft	43.1636	9.0092
Firestone Tire & Rubber	—	—
Phillips Petroleum	35.3558	9.7068
Litton Industries	18.0130	9.7252
Armour	4.2798	10.2125
Lockheed Aircraft	37.9019	9.8906
Caterpillar Tractor	20.4377	8.8171
Monsanto	23.2998	9.6032
Occidental Petroleum	10.9345	9.8512
Singer	8.2190	9.8553
General Foods	25.4570	9.4323
Sun Oil	14.2336	9.2731
Dow Chemical	5.8732	10.1744
Grace (W.R.)	23.6810	9.6028
Continental Can*	30.0630	8.5988
International Paper**	19.2320	8.7267

* Substituted for General Telephone and Electronics.
** Substituted for Rapid-American.

TABLE II

ANALYSIS OF READABILITY SCORES

	Flesch	*Dale-Chall*
Mean score	23.4949	9.7164
Standard deviation	11.9543	.7093
% of scores within:		
one standard deviation of mean	69%	74%
two standard deviations of mean	96%	98%
three standard deviations of mean	100%	100%

category as a college graduate and in the difficulty level category as very difficult. The mean score of 9.7164 (Table II) using the Dale-Chall formula is rated in the grade level category as Grades XIII through XV (college). "Thus, although the application of the two readability formulas results in the assignment of different grade levels to the mean scores, the overall results are similar."[62]

Tables III and IV[63] (see Table 4) present a summary analysis of the readability of the financial statements' footnotes. It should be noted that: (1) in Table III (Dale-Chall) 86% of the financial statements contain footnotes that have a reading ease level of college or higher. Only 14% of the financial statements contain footnotes that have a reading ease level of high school. (2) in Table IV (Flesch) 74% of the financial statements contain footnotes that have a reading ease grade level of college graduate and a reading ease difficulty level of very difficult. The remaining 26% of the financial statements contain footnotes that have a reading ease level of college and a reading ease difficulty level of difficult. "The following conclusion appears appropriate. The financial statement messages contained in notes are understandable to only a limited audience. Regardless of which formula is used, a reading grade level of XIII or above is required to comprehend the messages appearing in the notes to the financial statements of 86%, at a minimum, of the selected corporations...only 19.3% of the U.S. adult population has achieved this educational level."[64]

Tables VI and VII[65] (see Table 5) present data on the relationship between auditors and the reading ease level

TABLE 4

REPRODUCTION OF SMITH AND SMITH'S TABLE III AND TABLE IV

TABLE III

SUMMARY OF READING EASE OF FOOTNOTES TO CORPORATE FINANCIAL STATEMENTS: DALE-CHALL FORMULA

Formula Score	*Number of Corporations*	*%*	*Grade Level*
10.0 and above	14	28.6	XVI (College Graduate)
9.0 to 9.9	28	57.1	XIII through XV (College)
8.0 to 8.9	7	14.3	XI and XII
7.0 to 7.9	0	0.0	IX and X
6.0 to 6.9	0	0.0	VII and VIII
5.0 to 5.9	0	0.0	V and VI
4.9 and below	0	0.0	IV and below
	49	100%	

TABLE IV

SUMMARY OF READING EASE OF FOOTNOTES TO CORPORATE FINANCIAL STATEMENTS: FLESCH FORMULA

Formula Score	*Number of Corporations*	*%*	*Grade Level*	*Difficulty Level*
0– 30	36	73.5	College Graduate	Very Difficult*
30– 50	13	26.5	XIII to XVI	Difficult**
50– 60	0	0.0	X to XII	Fairly Difficult
60– 70	0	0.0	VIII to IX	Standard
70– 80	0	0.0	VII	Fairly Easy
80– 90	0	0.0	VI	Easy
90–100	0	0.0	V	Very Easy
	49	100%		

* Classified by Flesch as scientific writing.
** Classified by Flesch as academic writing.

TABLE 5

REPRODUCTION OF SMITH AND SMITH'S TABLE VI AND TABLE VII

TABLE VI

ANALYSIS OF READABILITY SCORES BY EXTERNAL AUDITORS

Auditor	*Mean Score*		*Standard Deviation*	
	Flesch	*Dale-Chall*	*Flesch*	*Dale-Chall*
Arthur Andersen & Co.	17.33	9.75	11.65	.47
Arthur Young & Co.	25.42	10.15	12.61	.43
Ernst and Ernst	17.61	10.48	2.83	.26
Hurdman & Cranstoun, Penney & Co.	19.28	10.25	—	—
Haskins & Sells	23.77	9.63	7.99	.42
Lybrand, Ross Bros. & Montgomery	29.79	9.55	12.70	.28
Peat, Marwick, Mitchell & Co.	19.02	9.12	10.81	.29
Price Waterhouse & Co.	24.52	9.43	11.03	.63
Touche Ross & Co.	28.87	10.11	10.43	.43

TABLE VII

EXTERNAL AUDITORS AND READING EASE

Auditor	*Flesch*		*Dale-Chall*		
	Very Difficult	*Difficult*	*College Graduate*	*College*	*XI & XII*
Arthur Andersen & Co.	6	1	2	4	1
Arthur Young & Company	3	4	3	4	0
Ernst and Ernst	2	0	2	0	0
Hurdman & Cranstoun, Penney & Co.	1	0	1	0	0
Haskins & Sells	5	2	2	4	1
Lybrand, Ross Bros. & Montgomery	2	1	0	3	0
Peat, Marwick, Mitchell & Co.	2	0	0	1	1
Price Waterhouse & Co.	13	4	2	11	4
Touche Ross & Co.	2	1	2	1	0
	36	13	14	28	7

CHI-SQUARE CALCULATIONS

Auditors	*Chi-Square Values*	
	Flesch	*Dale-Chall*
AA-AY	2.8	.3
AA-H & S	.4	0
AA-PW	.3	1.0
AY-H & S	1.2	.3
AY-PW	2.5	2.9
H & S-PW	.1	1.0

of the selected financial statement notes. "Thus, even though the two formulas do not produce identical results for the nine external auditors, the application of either readability formula indicates that all of the external auditors are associated with financial statement notes that are comprehensible to only a restricted audience."[66] When Smith and Smith attempted to test (using Chi Square) the null hypothesis that notes appearing in financial statements audited by different external auditors do not have different levels of reading ease, they found none of the values significant at the .05 level. "Since the null hypothesis cannot be rejected, the conclusion cannot be made that a relationship exists between the identity of external auditors and the comprehension ease level of notes to financial statements."[67]

PART 3: AN EVALUATION OF THE METHODOLOGIES EMPLOYED IN THE PRIOR READABILITY STUDIES IN ACCOUNTING

Limitations in the Measurement of Readability by the use of Established Readability Formulas

Early researchers had several focuses for experimentation in readability as they attempted to discover the factors that validly distinguished easy from hard materials, attempted to find reliable means of measuring these factors, and finally formulated an expression of some combination of these factors. Chall[68] found the major generalizations that came from the research in readability up until 1958:

-a variety of factors contributed to reading difficulty--stylistic elements, format, and organization.

-only the stylistic elements had been found reliable through techniques of quantitative measurement.

-of the diverse stylistic factors only four types were found to be reliably measured and significantly related to material difficulty: vocabulary load, sentence structure, idea density, and human interest.

-of these four stylistic elements, vocabulary load (measured by diversity and difficulty of terminology) was most significantly related to all criteria of difficulty.

-almost all studies that employed the estimation of sentence structure by measuring sentence length found significant relationship between sentence structure and comprehension difficulties.

-readability formulas measured idea density only indirectly.

-the attempts to measure the human interest factor had added little to readability measures.[69]

In summary, Chall found that subsequent research would need to "continue the present quantitative approach, with emphasis on objectivity and efficiency in application; and the study of these qualitative aspects of readability which so far had been elusive to objective measurement."[70]

Klare[71] pointed to four major limitations of readability formulas:

-Formulas measure only the aspect of the style of a piece of writing. They only approach the measurement of content indirectly and they do not concern themselves with organization, word order, format and imagery. They do not take into account different purposes for reading, the maturity of the reader, and the reader's intelligence.

-Formulas only measure the difficulty of style. They do not examine dramatic effectiveness, ability to create a mood, or the ability to persuade.

> -Formulas do not measure the aspect of difficulty perfectly. Formulas are seldom accurate, and often give readability levels that are more than one grade level in difference.
>
> -Formulas are not measures of good style. The substitution of easy words for hard ones, thus a lower readability level, often has the effect of making something more difficult to understand.[72]

Additionally, the formulas assume that the relationship between language variables and the difficulty of the language was linear. Bormuth's study of factors related to reading difficulty found that many of the relationships showed varying degrees of curvature.[73] As a consequence, most formulas are, at best, inaccurate and, at worst, misleading.

Weintraub's[74] review of the literature concluded with the following statement:

> Readability formulas have long been criticized as neither being accurate enough to determine the suitability of materials for students of a particular level of reading ability nor even especially valid measures of reading difficulty. In addition, they offer no help on difficulty of concept load and may well rate a given selection as easy because the words are simple and repeated frequently even though the ideas may be quite difficult.[75]

There has been great awareness that different readability formulas yield dissimilar results, and thus the validity of these measures can be questioned. Pauk's[76] study, which applied the Dale-Chall, Fry, and McLaughlin readability formulas meticulously to the same 44 articles, showed wide discrepancies (often as much as four grade levels apart) in the obtained readability levels. He concluded that "not all readability formulas yield similar results. Actually some results are so far apart that one begins to look about for a standard.[77]

Geyer's[78] evaluation of readability as a prediction of comprehension led him to find that a major limitation in the readability formulas again was their failure to measure the interaction between the reader and the material: "It became rather obvious that interaction of the individual with the printed page is non-existent."[79] Other limitations of the formulas that evolved from the quantitative-association studies were:

-failure to measure the conceptual difficulty of text material.

-lack of consideration for the organization and arrangement of material.

-no allowance for the existence of multiple-meaning words.

-invalid assumptions at times that short sentences were easier to comprehend, when idea clarity often necessitated lengthier discussion.

-ignored different interests for reading that occurred at different development levels.[80]

Rankin's research on the Flesch Reading Ease Formula and the Dale-Chall Formula led him to conclude that "both readability formulae can be fooled if a message contains short words which are highly abstract or unusual and/or short sentences written in a highly atypical style... In addition, neither formula is able to measure the reading difficulty of a message relative to a particular group of readers with particular backgrounds of experience or interests."[81]

The validity of a readability formula is indicated by the extent to which its prediction of the readability of a passage correlates with the comprehension scores of subjects who read

the passages. Most of the formulas were originally validated with the McCall-Crabbs Standard Test Lessons in Reading. As Marshall[82] suggested the passages in the test lessons are quite dissimilar from the textual materials subjects are expected to read in that they are very short, narrative in style, and contain only general information.

Pitcher[83] completed an extensive study of the validity of the Flesch Reading Ease Formula. He questioned the validity of the formula for high school and college adult students because the criterion passages used to validate the formula were standardized on elementary school children. He concluded that the Flesch formula loses its claim to validity when passages from different content areas are compared.

Lee and Belden[84] noted that the Dale-Chall formula had not been validated for use with psychology materials. They concluded that the Dale-Chall Formula could only be used with great caution in determining the comprehension difficulty of general psychology textbook materials.

Peterson[85] examined the validity of the Flesch Reading Ease Formula and concluded that the Flesch formula inadequately estimated the comparative difficulty of "popular" adult reading materials.

Marshall[86] noted that although Flesch's Reading Ease Formula had been used to estimate the readability of physics and other technical books, it had not been validated over such material. In his study, Marshall found no relationship between readability and comprehension, and concluded that the use of the Flesch

formula for technical materials was unjustified.

Limitations in the Measurement of Readability by the use of the Reading Comprehension Test

Researchers usually measured the comprehension difficulty of materials by making the conventional type of completion, true-false, or multiple-choice test for each of a set of passages, administering the passages and their corresponding tests to a single group of subjects, and then calculating the mean percentage of questions the subjects answered correctly on the test for each passage. The test means represented the difficulties of the passages. This procedure used by Soper and Dolphin, Jr.,[87] which is essentially measuring comprehension of content, has several limitations which restrict its utility.

Much of the problem which arose from measuring passage difficulty in this manner stems from the fact that writers of conventional tests follow no explicit rules in writing the test items. Thus, the writers may vary the difficulty of a test almost at will by the way they select and word the questions, thereby making it uncertain whether the mean scores on the tests really measure passage difficulty or merely measure the conscious or unconscious biases of the test writers. According to Bormuth "because the test itself was a reading task and the investigator was never quite certain whether his test mean measured the difficulty of the passage or just the difficulty of the test questions."[88] Cranney added that "traditional reading comprehension tests have been criticized because comprehension items are difficult to construct and may misrepresent the author's meaning."[89]

It is simply impossible to ascertain whether a given response is a reflection of the complexity of the passage or merely a reflection of the difficulty of the question. For example, the content of a question may be simple, but complex phrasing may interfere with the reader's ability to provide the correct answer. Alternatively, the phrasing may be simple, but it may call for a very sophisticated interpretation of the text. "Multiple-choice questions, while they have the advantage of being easily scored, are restricted in their use since the responses have been found to be affected by the range and type of alternatives offered to the reader. Furthermore, the proper preparation of multiple-choice items requires a detailed knowledge of test construction and this is rarely possessed by the people interested in assessing readability."[90]

Multiple-choice or true-false questions are also affected by the ability of the reader to make an inspired guess based upon an imperfect understanding of content and provide a somewhat inadequate measure, therefore, of readability. Additionally, Bormuth found that "these tests could tell the investigator nothing about how difficult each word, phrase, or sentence in the passage is."[91]

CONCLUSION

The need for effective communication is inherent in the practice of accounting. Striving for more understandable financial reports should therefore be a major objective of financial executives and independent public accountants. Much attention in the research literature has been given to the technical aspects of the financial statements (i.e., G.A.A.P.) with little, if any, attention to the understandability of the narrative disclosures. Without proper communication to the eventual user of the information, the effectiveness of accounting as an information system is negated.

The pioneering efforts of Pashalian and Crissy, Soper and Dolphins, Jr., and Smith and Smith, applying the concept of readability to accounting, were examined in great detail. However, in light of the extensive evidance of weaknesses inherent in the methodologies they employed, one can only infer that the conclusions they drew are suspect. Yet the necessity for evaluating the readability of narrative disclosures contained in financial reports appears obvious vis-a-vis adequate disclosure/understandability. There is a real and urgent need for a valid, reliable, and simple measure to enable the writer to determine the comprehensibility of footnotes, managements' analyses of operations, and qualified auditors' reports with respect to sophisticated readers.

Chapter V presents a discussion of just such a measuring instrument--the Cloze Readability Procedure. Bormuth pointed

to the impact of the Cloze Readability Procedure as providing the only solution to the "most urgent and important psychological measurement problem in readability"[92] by inclusion of the interaction between the reader and the material.

Obviously, the accounting profession is treading on dangerous grounds if disclosures do not measure up to minimum standards of readability (to be proposed in chapter 9). Numerous lawsuits have been based on the absence of disclosure (e.g., Continental Vending, Rhode Island Trust, etc.). It is not too difficult to foresee litigation based exclusively on the understandability of the disclosures made in financial reports. The courts could conceivably decide that the spirit of SEC Rule 10-5(b) (on publishing "untrue" statements, or on failing to publish "material" facts) is violated by providing relevant but incomprehensible information.

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[1]A. Sommer, Jr. "Differential Disclosure: To Each His Own," The Emanuel Saxe Distinguished Lectures in Accounting 1973-1974 (New York: Bernard M. Baruch College, 1975), p. 21.

[2]Accounting Principles Board, Statement Number 4: Basic Concepts Underlying Financial Statements of Business Enterprises (New York: American Institute of Certified Public Accountants, 1970), p. 19.

[3]Committee to Prepare a Statement of Basic Accounting Theory, A Statement of Basic Accounting Theory (Evanston, Illinois: American Accounting Association, 1966), p. 7.

[4]Norton M. Bedford, Extensions in Accounting Disclosure (Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1973) p. 44.

[5]Committee to Prepare a Statement of Basic Accounting Theory, op. cit., p. 13

[6]Accounting Principles Board, op. cit., p. 17

[7]Study Group on the Objectives of Financial Statements, Objectives of Financial Statements (New York: American Institute of Certified Public Accountants, 1973) p. 60.

[8]Leopold A. Bernstein, Financial Statement Analysis (Homewood, Illinois: Richard D. Irwin, Inc., 1974) p. 18.

[9]Abraham J. Briloff, Unaccountable Accounting (New York: Harper & Row, Publishers, 1972), p. 36.

[10]Stephen L. Buzby, "The Nature of Adequate Disclosure," The Journal of Accountancy, April 1974, p. 45.

[11]Michael N. Chetkovich, "Standards of Disclosure and Their Development," The Journal of Accountancy, December 1955, p. 42.

[12]William C. Foster, "The Current Financial Reporting Environment," The CPA Journal, March 1974, p. 35.

[13]James R. Morton, "Qualitative Objectives of Financial Accounting: A Comment on Relevance and Understandability," The Journal of Accounting Research, Autumn 1974, p. 297

[14]James E. Smith, "A Critical Analysis of the Application of Communication Theory to Accounting Communications via Published Financial Statements" (unpublished Doctor's dissertation, Arizona University, 1972), p. 219.

[15]Stephen L. Buzby, op. cit., p. 45.

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[22]Statement on Auditing Standards Number 8 (New York: American Institute of Certified Public Accountants, 1976), p. 2.

[23]Accounting Series Release Number 159 (Washington, D.C.: Securities and Exchange Commission, August 12, 1974), p. 2.

[24]Michael L. Chetkovich, op. cit., p. 51

[25]United States v. Simon, F.ed,CCH Fed. Sec. L. Rep. 92511 (2nd Cir. 1969).

[26]A. A. Sommer, Jr., "What are the Courts Saying to Auditors?" Perspectives in Auditing, ed. by Douglas R. Carmichael and John J. Willingham (New York: McGraw-Hill Book Company, 1975), p. 160.

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[45]Marc J. Epstein, The Usefulness of Annual Reports to Corporate Shareholders (Los Angeles, California: Bureau of Business and Economic Research, 1975). Public Accounting in Transition (Chicago, Illinois: Arthur Anderson & Co., 1974).

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[49]Ibid., p. 245.

[50]Ibid., p. 244.

[51]Ibid., p. 246

[52]Fred J. Soper and Robert Dolphin, Jr., op. cit., p. 358.

[53]Ibid., p. 359.

[54]Ibid., p. 360.

[55]Ibid.

[56]Ibid., p. 361.

[57]Ibid., p. 362.

[58]Ibid.,

[59]The Dale-Chall formula counts the words per sentence and the number of words not found on a list of commonly used words.

[60]James E. Smith and Nora P. Smith, op. cit., p. 555.

[61]Ibid., p. 556.

[62]Ibid., p. 557.

[63]Ibid.

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Chapter III

Review of the Related Literature:

The Importance of the:

(1) Identification of the principal user(s) of financial reports, and

(2) Narrative disclosures contained in financial reports.

INTRODUCTION

Moonitz, in Accounting Research Study No. 1, stated that "the concept of disclosure should be conceived of in the broadest possible terms. It should be discussed in terms of (a) what should be disclosed. (b) to whom, and (c) how disclosure should be made."[1]

Since the subject of accounting disclosure is too broad for adequate and meaningful study at this time, Moonitz's first query, "what should be disclosed?" will not be examined. Instead, it will be accepted as axiomatic that the data currently being disclosed is sufficient (i.e., relevant) to meet the informational needs of financial report users.

However, basic to an empirical evaluation of the understandability of narrative disclosures is agreement as to:

(1) the identification of the principal audience (i.e., financial analysts and bank loan officers) for whom the narrative disclosures are directed. (Moonitz's second query, "to whom?")

(2) the importance of narrative disclosures (i.e., managements' analyses of operations, footnotes, and qualified auditors' reports) (Moonitz's third query, "how should disclosure be made?")

PART I: IDENTIFICATION OF THE PRINCIPAL USERS OF FINANCIAL REPORTS

The problems associated with the adequate disclosure/understandability of narrative disclosures contained in financial reports can be solved only within the context of a specific identification of the users of financial reports. Devine concluded that the need to identify the group(s) for whom the information is being disclosed derives from the fact that different users have different purposes. By identifying user classes, we are lead to the identification of the purposes in using financial information.[2] Buzby added: "Of course, the need to identify user group(s) goes beyond the need to identify their purposes in using financial data. The identification of users also aids in defining group characteristics which impinge on the specific types of information to be presented as well as the manner of presentation."[3]

Corporate financial reports serve a variety of users and a variety of purposes. They are the primary means by which the management of a business enterprise communicates to interested individuals and organizations (public and private) information about the enterprise's past, present, and future social and economic events and activities. This vital information is utilized for decision-making purposes by a multiplicity of heterogeneous user classes. For example, a partial list of interested parties could include 1. present and prospective shareholders, 2. short-term and long-term creditors, 3. labor unions, 4. suppliers, 5. customers, 6. government

taxing and regulatory agencies, 7. pension plans, 8. insurance companies, 9. financial analysts, 10. bank loan officers, 11. investment counselors, 12. stock exchanges, 13. environmentalists, and 14. the general public.

As of this writing, the accounting profession has not yet fully resolved the question of specifying the target financial report user. The literature abounds with various suggestions as to the level of user competence that <u>should</u> serve as the basis for preparing financial reports.

Cowen selected the user with the least degree of technical comprehension--the average investor with limited skills. "In my view, the primary need is that of the primary addressee, the shareholder. To concentrate on his needs is more likely to lead to a clear statement of accounting objectives, and in turn to a clearer basis for the establishment of rules. The other groups... (are)... secondary beneficiaries."[4] Jones also prefers the lower end of the sophistication spectrum. He stated that the primary objective is "reporting so that the layman-investor can comprehend what management has done as the steward of his investment...the professionals, such as security analysts, constitute a secondary readership...(having)...access to supplemental sources of information---SEC filings, appearances of company executives before financial groups, and interviews--from which to draw additional data. Accordingly, while management should strive to do as complete a job in its annual report as possible, it should stress

the satisfaction of the average stockholder and need not be quite as concerned about its effectiveness in completely satisfying its more professional audience."[5]

By adopting a posture which favors meeting the informational needs of all users, Arthur Anderson and Co.'s viewpoint is tantamount to choosing the least sophisticated financial report user.

> An important consideration is that financial statements be understandable to those who may use them. The assertion is frequently made that business enterprises are enormously complex, that to provide financial information about them is therefore difficult, that financial reporting cannot be expected to be uncomplicated, and that the statement user should be expected to need sophisticated advice. Yet the essential function of accounting is to provide understandable financial information about complex business activity to a wide variety of users. Hence, to respond to criticisms of financial statements by citing, in defense, the complexities of business is really an attempt to excuse the accounting profession for a failure to meet its responsibilities...General purpose financial statements should be useful to as broad a group of users as is practical.[6]

Burton and Reiling stated their preference in a single sentence: "It is most unfair to inform analysts and not make understandable information available to the person who wishes to make his own investment decisions after consideration of relevant facts."[7] (emphasis added)

The positions of the American Institute of Certified Public Accountants, the courts, and the Securities and Exchange Commission are not very clear or useful. In its 1970 Statement No. 4, the Accounting Principles Board asserted that the financial statements are oriented, in practice, to both the stockholders and the creditors. "Financial accounting presents

general-purpose financial information that is designed to serve the common needs of owners, creditors, managers, and other users, with primary emphasis on the needs of present and potential owners and creditors."[8] Buzby was quick to criticize the Accounting Principles Board's position as being too nebulous. That is, a target group such as "present owners" is really made up of several subgroups which vary substantially in their abilities to interpret financial statements. "Thus, a given set of financial disclosures might be adequate for a highly sophisticated owner (e.g., a mutual fund) but inadequate for an average owner."[9] The accounting profession failed in 1973 to be more specific when the Trueblood Study Group defined the financial report user in the following terms: "An objective of financial statements is to serve primarily those users who have limited authority, ability, or resources to obtain information and who rely on financial statements as their principal source of information about an enterprise's economic activities."[10]

In a recent civil case, Herzfeld v. Laventhol, Krekstein, Horwath and Horwath, Judge MacMahon opined that "our inquiry is properly focused not on whether Laventhol's report satisfies esoteric accounting norms, comprehensible only to the initiate, but whether the report fairly presents the true financial position of Firestone, as of November 30, 1969, to the untutored eye of an ordinary investor...accountants, as well as insiders, must take great pains to lay bare all the facts needed by investors to interpret the financial statements accurately."[11]

The Securities and Exchange Commission's then Chief Accountant, Dr. John Burton, reviewed this case and commented that the test of "the untutored eye of an ordinary investor" appears to contradict the concept of "laying bare all the facts needed by investors to interpret the financial statements accurately." Burton stated that "at a minimum, the tests certainly suggest a dual approach, since the combination of 'all the facts' and the interpretive role implied by the second test may not be completely consistent with 'the untutored eye of an ordinary investor.' These are some of the problems which the Commission has attempted to solve by the development of its concept of differential disclosure, which suggests more detailed analytical disclosure for some and better summarization for the ordinary investor."[12]

The concept of differential disclosure is reiterated in subsequent Accounting Series Releases 148 (Compensating Balances) and 149 (Income Taxes); it appears to reflect a new Securities and Exchange Commission philosophy that the users of financial reports are to be stratified in terms of sophistication, with each group's informational needs being satisfied by separate disclosures tailored to its own unique interpretive capacities. "The Commission has concluded that the benefits of the disclosures are sufficient to require its presentation in financial statements filed with the Commission, but it recognizes that the detailed disclosures required herein will be primarily of interest to professional analysts...and may not be required in financial statements designed for the average investor..."[13]

While differential disclosure is not a new idea, it does represent the first time it has been implemented by an authoritative body.

Occupying an intermediate position, Chetkovich concluded that the financial statements should be directed to a "normal or standard reader." "Obviously we could not hope to present financial statements which would not be subject to misinterpretation by the completely uninformed reader. On the other hand, we cannot assume professional accountants as the norm in this respect. Our 'standard reader' lies somewhere in between. He should satisfy two criteria: he should be interested to the extent that he is willing to read carefully and he should be reasonably informed on financial matters, at least with respect to the commonly used terminology of accounting and finance."[14]

Moving up the sophistication hierarchy, we find the following two positions: Epstein mailed a detailed questionnaire to 1,766 shareholders in thirty-eight states across the country; he found that the majority of the respondents indicated that they normally make their investment decisions on the advice of their stockbroker. "Because of this influential position, the stockbroker must be well informed about the financial position of the companies he is recommending to his clients. This situation makes it vital for financial communications to be in a format that the average stockbroker can understand and use for his analysis of the company and his subsequent recommendation to his clients."[15]

Baker and Haslem conducted a survey of 1,623 common stock investors in Washington, D.C. and concluded that "accountants should be constantly aware that financial reports should be consistent with the needs of the various classes of investors. Further, the understanding of and requirements for financial information could well differ widely among the various classes of investors. Nevertheless, the content level of financial reports should not be brought down to the lowest common denominator. The modern corporation is too complex for this, and to do so would constitute a disservice to the information needs of certain classes of relatively sophisticated investors."[16]

Mautz and Sharaf argue a more extreme position in The Philosophy of Auditing; they say that the primary recipient of financial reports is the sophisticated financial analyst. "Auditing can no longer base its ideas of fair presentation on the concept of a reasonably informed investor who reads the published financial statements and makes his investment decision accordingly. Today, the investment market is a controlled market; further, it is one in which a number of skilled professionals all play highly integrated and highly important roles."[17] Norby agrees and states that "the understanding of and requirements for financial data differ widely between the average individual investor and the institutional investor with a staff of investment analysts. Accounting objectives must be geared to the trained investment professional.

The modern corporation is too complex to be reduced to overly simplified financial statements understandable by the average individual. Too much significant information is lost in the process."[18]

Finally, Buzby approached the resolution of this problem by first identifying the criteria for adequate disclosure and then selecting the target user group(s):

1. The reports should attempt to focus on those user groups and purposes which exhibit a need for and make the greatest use of accounting-oriented information.
2. Limited attention should be given to user groups who are able to acquire directly the information they desire.
3. The user groups and purposes should be as homogeneous as possible with respect to the types of information which they desire and need.
4. The user groups should have the requisite capabilities for utilizing accounting-oriented information.
5. Professional financial analysts engaged in the determination of the investment worth of corporate securities (both stock and debt) should provide the best compromise with respect to the above four points.[19]

Institutional investors, who hold less than one-third of the total market value of companies listed on the New York Stock Exchange, dominate stock trading activity. That is, they account for over 70% of the number of shares traded on a daily basis. The increasing importance of institutional investors enhances the status of security analysts as the principal consumer of financial report communications. Booz, Allen, and Hamilton pointed out that most of the financial executives interviewed in 1972 said they were sensitive to the needs of security analysts simply because they had to be, in the interests of existing shareholders. "Consequently, over-simplification in financial reporting would deprive the more

analytical members of information to which management feels they have a right."[20]

Fertakis, Foy, and others have also observed that, in practice, the sophisticated user has been unofficially chosen by management and the certified public accountant to be the primary target user group whose informational needs must be satisfied. "The needs of the investment analyst for information are much greater than the needs of the ordinary investor because of his training, analytical frame of reference, and familiarity with problem areas. We do in fact seem to be increasing the amount of data reported because of the extensive needs of security analysts."[21] Foy examined a large number of recent financial reports and concluded that "much, if not most of what's in them is there because market analysts, investment advisors, and professional investors have asked for the information."[22]

Securities and Exchange Commission Release No. 5427 may be interpreted as being the first official recognition (and pronouncement) that the unsophisticated user, untrained in financial statement analysis, in accounting or even in general economics, simply cannot comprehend the complexities inherent in financial reporting. Therefore, the adequacy of disclosure must be judged with respect to the technically competent.

> "The proposals set forth in this release are primarily designed to assist professional analysts who have the responsibility of developing an understanding in depth of corporate activity. They are not primarily intended to serve the direct needs of the 'average investor.' Such an investor does not usually have the time to study or the training necessary to fully understand the data

> which are called for herein. It is not appropriate, however, for such data to be unavailable to the average investor who does wish to devote the time necessary to consider it. By being included in financial statements filed with the Commission, therefore, data will become 'data of public record' and, hence, available to all. Disclosure will not be discriminatory even though usage will mostly be by professionals. Data of this kind would not be expected to be sent routinely to all shareholders, although it would be useful if its availability were mentioned in communications with shareholders and if management took steps to make it available on request."[23]

It would appear that there is a real difference of opinion as to the degree of sophistication needed to comprehend financial reports. The most appropriate way in which to settle this controversy (i.e., find <u>one</u> acceptable answer to Moonitz's second question) is to look to several of the more important empirical studies which have focused on the actual behavior of annual report users within the last ten years.

All of the recent surveys of the readership habits of unsophisticated users--Briloff (1967),[24] Georgeson & Co. (1972),[25] Baker & Haslem (1973),[26] and Epstein (1975),[27]--agree that:

(a) The unsophisticated user is interested in, and understands the importance of analyzing financial reports.

(b) The unsophisticated user does <u>not</u> read financial reports to any great extent (i.e., more than fifteen minutes).

(c) The unsophisticated user is <u>not</u> capable of comprehending and utilizing the information currently being disclosed in financial reports.

SUMMARY

Briloff stated that "it appears essential, urgently so, for the accounting profession to determine first for itself and then to make clear to the community, just who does comprise the audience to which it is presumed to be communicating."[28] This is crucial for without a consensus regarding the identity of the primary financial report user, the current debate concerning adequate disclosure is likely to continue indefinitely with limited probability of substantive progress.

As a consequence, the ordering of audience priorities was examined and seen to have important implications for the content and format of financial reports. First, those who favor existing or prospective shareholders and creditors seem to be justifying their position on an abstraction--"fairness" in financial reporting--without consideration of the complex realities of accounting communication. Second, the view that existing or prospective shareholders' and bondholders' needs should control must therefore be rejected, on the grounds that the layman investor and layman creditor simply cannot cope with the growing complexity of financial statements with their proliferation of footnotes and supplementary materials. Third, the only group of users deemed qualified through experience and education to (A) fully comprehend an entity's financial report and to (B) properly counsel the unsophisticated user is the professional financial analyst and professional bank loan officer. Fourth, any dilution of emphasis to meet the needs of other, less sophisticated, users may ultimately prove to be counterproductive to the efficacy of the capital and money markets as allocation mechanisms in our economy.

The Financial Accounting Standards Board's most recent declaration that "financial statements should be comprehensible to investors and creditors who have a reasonable understanding of business and economic activities and financial accounting and who are willing to spend the time and effort needed to study financial statements,"[29] would seem to present authoritative support for this view.

PART II: NARRATIVE DISCLOSURES CONTAINED IN FINANCIAL REPORTS

The investor or creditor voluntarily commits his funds to a corporation in the expectation that if he foregoes the current consumption of his economic resources, he will be compensated by enhanced future economic resources (and, therefore, enhanced future consumption). Being rational, an investor or creditor does not regard himself as being irrevocably committed to a particular investment or loan decision. Opportunities for alternative investments or credit extensions are continually arising in the economy. If these are objectively evaluated by him as being more advantageous in terms of risks and rewards than his present investment or loan, then he will elect to make a change. The change may involve the realization of either a gain or a loss on his previous investment or loan, but this is a consequence which is inherent, and accepted, in all economic behavior. However, the extent of the gain or loss is important in that it dictates the amount of resources available for alternative investments or loans. "Without knowledge as to the present condition of his resources, the economic actor cannot

evaluate new opportunities or reassess his present investment. Without such knowledge, neither adaptive behavior nor any investment at all would be possible. And our present type of economic system could not exist."[30]

If an investor or creditor wishes to preserve his ability to adapt, a minimum condition that he will impose upon corporate management is that he receive periodic accounting information about the condition of his resources. It is irrelevant to the investor or creditor whether this information indicates an accretion or diminution of his resources, so long as he does receive the relevant information and can understand it. If it is unfavorable to him, then that is one of the risks he accepted in making the original investment or loan. "This minimum, common-sense condition of investment is designated as accountability. The manager of an organization is accountable to the participants in that he must provide them with information about the resources they have invested."[31]

The primary means of reporting on accountability in published financial reports is through the financial statements. Nonetheless, a complete evaluation of the investment or credit extension potential of a company at a single point in time cannot be achieved by a review of the financial statements alone. It should be considered in light of the information provided by managements' analyses of operations, footnotes, and qualified auditors' reports. The critical confusion, however, is that accountants (practitioners and academicians), properly emphasizing the importance of financial statement information, have come to believe that the financial statements are all important

and to largely ignore the other narrative information provided in financial reports. Perhaps the most important issue for accountants to recognize is not the relative importance of the financial statements but that the other narrative information is absolutely essential to the totality of an investment or credit extension decision.

It is a well documented fact that narrative disclosures do affect the decisions of sophisticated users. For example, Neilson and Lind found that sophisticated users look to and rely upon narrative disclosures to a significant degree. "Most analysts start with the footnotes, then turn to the figures and, if available, the historical review."[32] In a behavioral field study, Barrett[33] sampled a group of financial analysts to see if they were affected in their decision making by footnotes. He concluded that both the quantity and quality of footnote disclosure included in financial reports may be a crucial decision variable.

The period since the early 1930s has seen a very significant improvement in the nature and scope of narrative disclosures. "In their attempt to increase the usefulness of annual reports and to meet the increasing demands for information, managers and accountants constantly add to the data being reported. A cursory examination of recent annual reports reveals a plethora of footnotes and other material intended to explain, supplement, clarify, and caution."[34]

Clarke found that:

> much of the additional information presented in the annual report is important for evaluating the status, progress, and future prospects of the corporation. It is presented in response to the needs of investors (both present and prospective) and their representatives (financial analysts and investment counselors) for relevant investment decision information. Some of this information may be as relevant if not more significant for decision-making purposes than the information covered by the certified public accountant's opinion.[35]

Narrative disclosures may serve the sophisticated user of financial reports by providing a more complete portrayal of the financial strength of an enterprise, its management, its products, and its potential for future increases in economic resources through periodic earnings. "Current events have shown that there is a widespread interest on the part...of the financial community in the problem of assessing the management of a firm within a broader framework than that offered by audited financial statements alone."[36] Bevis added that "the thought is advanced that society has a growing desire that there be an 'accounting' by these managements in nonfinancial as well as financial terms for the authority assumed and responsibilities undertaken and that enlightened managements themselves would welcome this means of discharging the obligations which they have assumed."[37]

Booz, Allen, and Hamilton found that the preparers of financial reports are not only sympathetic to the needs of users in this regard but are willing to implement some of their demands:

> Financial statements were viewed as less than adequate for assessing present financial condition. This is important, because many executives felt that stewardship accounting required an indication of present condition as well as past performance. The reporting implication is that supplemental...disclosures are required if management is to fully document the quality of its stewardship to date.[38]

This attitude reflects a new underlying management philosophy that published financial statements are only one part of an overall reporting environment, and that managements' responsibilities transcend the current capabilities of accounting. Evidently, business operations are thought to be too complex to be captured in any set of financial statements alone.

It is very easy to overlook one very crucial notion. That is, that the comments appearing in managements' analyses of operations, and auditors' qualified reports, and other narrative sections of financial reports, are based on accounting data (i.e., extracts, summaries, or presentations of data contained in the accounting records). "The nature of these data varies considerably. Though these data may provide some additional materials, they primarily summarize and simplify financial statement information, which is believed to be of special concern to report readers."[39]

For example, Accounting Series Release No. 159 was based on just such a notion. "In issuing the Guides..., the Commission pointed out that it has long recognized the need for narrative explanation of financial statements. Over the years the rules under the various securities acts have been amended a number of times to require additional narrative disclosure of complex financial statement transactions."[40] (emphasis added)

The Trueblood Study Group report clearly indicated the importance of narrative disclosures: "The basic objective of financial statements is to provide information useful for making economic decisions. Amplification in narrative form of data included in statements may be required."[41] (emphasis added) Arthur Anderson & Co. adopted a similar position when they stated that "some disclosure of information is often necessary in footnotes, beyond the information presented in the body of the financial statements, if readers of financial statements are to be adequately informed."[42]

Hendrikson is more cautious in his support of narrative disclosures:

> "Non-quantitative information is relevant and worthy of disclosure only if it is useful in the decision-making process. It is relevant only if it adds more to the total information than it detracts by making the statements overly detailed and difficult to analyze. The question should always be asked: Is the addition of the information likely to improve most decisions made on the basis of financial reports?"[43]

In the Booz, Allen & Hamilton survey: Management freely admitted that such disclosures are necessary to supplement (i.e., clarify) the financial statement messages because of the "fundamental unsolvable limitations of accounting."[44] A similarly reasoned argument was offered by Fertakis: "The process of abstraction which underlies accounting reporting suggests that the reader may not be able to picture adequately the phenomena which are being abstracted in financial form for him. Failing to achieve such a recognition, the report becomes a statistical abstraction to him. In this connection accounting reports might well include more of the non-quantitative attributes of the organization."[45]

To illustrate: financial statements are highly summarized and standardized; a change in the plant and equipment total does not tell the sophisticated investor or the sophisticated creditor that a new plant, with particular capabilities designed to serve a certain market segment, has been completed. Yet this kind of information is needed by the financial analyst or the bank loan officer to assess both the quality of stewardship and the quality of his investment or loan. Additionally, financial statements describe only the results of performance; they cannot identify the reasons for these results. "In our judgment, this supplementary relationship between text and statements is a valid one, because the statements discipline the text, and the text interprets the statements."[46]

According to Davidson, there is still another equally important justification for financial report users to initially demand, and then rely upon, narrative disclosures. "Investors' and creditors' needs encompass information that cannot readily be expressed in conventional double-entry form; some of it may be nonmonetary in nature. If accounting is concerned with the measurement and communication...of economic facts, there should be no hesitation in including such material in the annual report."[47] For example, narrative disclosures afford management and the certified public accountant with their only opportunity to report on the entity's responsiveness to the eradication of social disorders (e.g., air and water pollution, employment and training of minority groups, etc.).[48]

Goldberg also commented on narrative disclosures' being used to complement (i.e., complete) the financial statements. "Commentary on the data they contain may be truly explanatory in nature, but this is relatively rare, and more usually such commentary represents additional information rather than explanation in the sense in which these words are presently being used."[49]

SUMMARY

Historically, the main function of corporate external financial reporting was to provide sufficient quantitative information (in financial statement form) so that investors and creditors could judge the quality of management's stewardship of a firm's assets and the generation of net income on those assets. In recent years, however, the demand has grown for additional financial report disclosures to both supplement and complement the financial statements. Some of the new information is qualitative; and sometimes it is future-oriented, as investors and creditors attempt to more fully evaluate a firm's "quality of earnings" (i.e., repeatability of earnings, realization, risk, etc.).

CONCLUSION

It is logical to ask: What is the implication of a policy of disclosing increasingly greater amounts of valuable accounting information to report users in the form of narrative disclosures?

Fertakis answered that "in spite of the increases in the amount of data, the extent to which information is being conveyed to statement users through the accounting and reporting process has been open to question."[50] (emphasis added)

The controversial nature of "adequate disclosure" may be viewed normatively, as the study of the information management and the certified public accountant ought[51] to disclose to sophisticated users, or descriptively, as the study of the information management and the certified public accountant are currently disclosing to sophisticated users. Since this study is essentially concerned with evaluating the understandability (readability) of the narrative disclosures contained in financial reports (financial statements are ignored by choice) as they exist today, the latter approach will be adopted.

It is hoped that the application of the concepts of: (1) adequate disclosure/understandability (discussed in Chapter II) and (2) communication theory (to be discussed in Chapter IV) to financial reports will provide a theoretical foundation and suggest a methodology for investigating Narrative Disclosures Contained in Financial Reports: An Empirical Evaluation of Their Understandability.

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[6]Objectives of Financial Statements for Business Enterprises (Chicago, Illinois: Arthur Anderson & Co., 1972), p. 10.

[7]Henry B. Reiling and John C. Burton, "Financial Statements: Signposts as well as Milestones," Harvard Business Review, November-December 1972, p. 47.

[8]Accounting Principles Board, Statement No. 4: Basic Concepts Underlying Financial Statements of Business Enterprises (New York: American Institute of Certified Public Accountants, 1970, p. 47.

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[20]Booz, Allen and Hamilton, A Businessman's View of the Purposes of Financial Statements (New York: Financial Executives Research Foundation, 1973), p. 14.

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[25]New Trends in Annual Report Readership (New York, New York: Georgeson & Co., 1972).

[26]H. Kent Baker and John A. Haslem, op. cit., pp. 64-69.

[27]Marc J. Epstein, op. cit., pp. 1-118.

[28]Abraham J. Briloff, op. cit., p. 125.

[29]Financial Accounting Standards Board, An Analysis of Issues Related to Conceptual Framework for Financial Accounting and Reporting: Elements of Financial Statements and Their Measurement (Stamford, Connecticut: Financial Accounting Standards Board, 1976), p. 10.

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[37]Herman W. Bevis, "The CPA's Attest Function in Modern Society," The Journal of Accountancy, February 1962, p. 35.

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[39]Frederick L. Neumann, "The Independent Auditor's Concern with Unattested Data in Annual Reports," The New York Certified Public Accountant, July 1968, p. 485.

[40]Accounting Series Release No. 159 (Washington, D.C.: Securities and Exchange Commission, August 12, 1974), p. 2.

[41]Report of the Study Group on the Objectives of Financial Statements, op. cit., p. 13.

[42]Objectives of Financial Statements for Business Enterprises, op. cit., p. 85.

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[44]Booz, Allen, and Hamilton, op. cit., p. 17.

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[48]SEC Release Number 5569 on Environmental matters requires disclosure with respect to each major activity or product: (a) the nature and extent of resulting environmental pollution (b) the feasibility of reducing such pollution including alternatives and their costs, (c) prospects of improving

technology, (d) existing and projecting expenditures for pollution, (e) legal requirements, (f) pending or threatened judicial or agency precedings.

[49]Louis Goldberg, An Inquiry Into the Nature of Accounting (Iowa City, Iowa: American Accounting Association, 1965), p. 356.

[50]John B. Fertakis, op. cit., p. 680.

[51]This may imply either: (a) information currently available to management (e.g., internally prepared budgets) that they choose voluntarily not to disclose or are not required to disclose; or (b) information not currently available to management (e.g., human resources) that they could not disclose even if they wanted to or were required to.

Chapter IV

Review of the Related Literature:

(1) Communication Theory

(2) The Accounting Communication Process

INTRODUCTION

Since communication is accepted as a basic element of the accounting process, communication theory must be analyzed. In that way, one can provide a basis for the evaluation of the understandability of narrative disclosures contained in financial reports. To articulate a complete theory of communication, however, is beyond the scope of this research project.

PART I COMMUNICATION THEORY

The Communication Model

Various researchers have constructed models of the communication process. While these models have some differences, a close scrutiny reveals that the differences are superficial rather than fundamental.

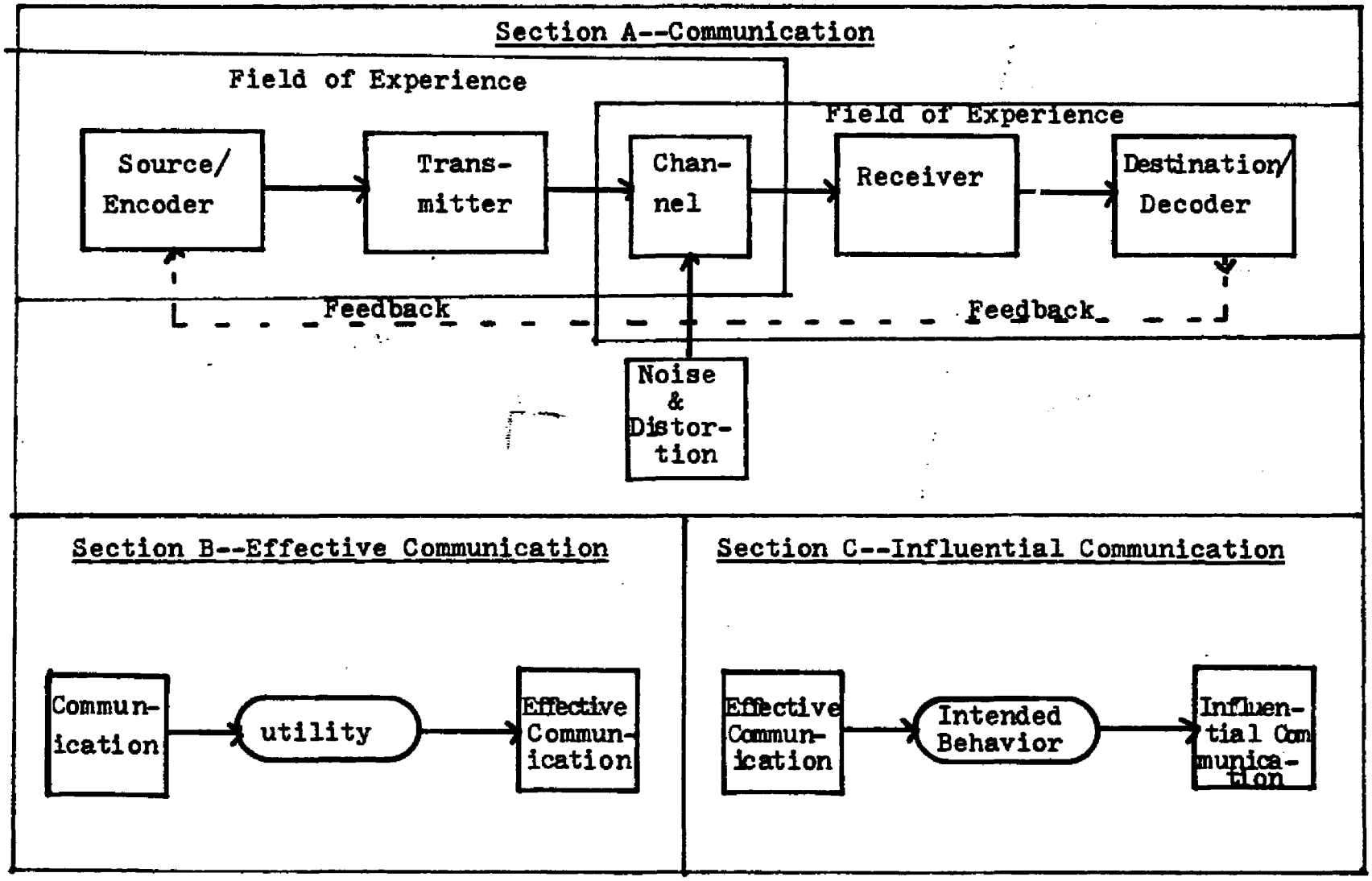
Shannon and Weaver[1] developed the classical model of the communication process which can be found in section A of Figure 1 on the following page.

The model has been slightly modified by what Schramm[2] calls the "field of experience." Very briefly, the components of the model may be described as follows:
The information source selects a desired message out of a set of possible messages. There is a transmitter which provides coded symbols sent through a channel to a receiver. The message which comes from a source to the transmitter is generally encoded by a transmitter before it can be sent through the communication channel and must be decoded by a receiver before it can be understood by the destination. The channel is not usually a perfect conduit for the coded message because of noise (random or unpredictable interference) and distortion (intentional interference). The purpose of a communicrtions system is to reproduce at the destination a message selected at the source.

Man as the source and man as the destination play the vital roles in the communication process. "The source can encode and the destination can decode only within the experiences each has had."[3] If the meaning is not inherent within the printed symbols, then it must be "projected" by the reader who must

FIGURE 1

THE COMMUNICATION MODEL



attach meaning to the symbols in relation to his own background of experience. It is axiomatic that the meaning which a reader "takes from" a printed page is a function of his previous familiarity with the vocabulary specialized concepts, and structural characteristics of the material.

Thus, if--and only if--the source and the destination share a common field of experience, communication will result (i.e., the symbols transmitted by the source will have the proper meaning assigned to them by the destination). With no common fields of experience, communication between the source and the destination is impossible. However, if the source and the destination have just a few common fields of experience, the source should not try to communicate with the destination outside their common fields of experience.

Section B of Figure 1 on page 89 indicates that for effective communication to occur, the selected messages should possess utility to the destination. Smith points out that "only data are received if there is no associated utility. With utility, information is received."[4] Consequently one can have "communication" without achieving "effective communication."

Section C of Figure 1 on page 89 indicates that for influential communication to occur, the destination should behave in the manner intended by the information source. If that intended behavior is not forthcoming, influential communication has not occurred. One can have "communication" or even "effective communication" without achieving "influential communication,"

The Communication Process

The communication process originates with a cerebration in the mind of a source, and a purpose for communicating that cerebration to a destination. But mere intellectualizations cannot be communicated--only messages can. "Therefore, before communication can occur, thoughts must be translated into, or coded in the form of, a message."[5] At this stage there is a process of filtration; since individual filters differ considerably, a great variation in messages may be developed by different individuals in response to a given event. That is, the perception and interpretation of events differ dramatically from source to source.

As a result of the process of screening, editing, and evaluating, the data describing the event is converted into information. The internal mechanism possessed by the source which performs this function is referred to as an encoder. "The encoding process involves the expression of the information in a language"[6] Li defined a language as "...any system that has a set of symbols (semantics) and a set of rules relating to the operations of these symbols (syntactics)."[7]

If the destination is to comprehend the message, it must be translated or decoded from the physical form in which it was transmitted (in the form of some linguistic code via some medium or channel) into a conceptual form, or in terms of the cerebrations of the destination. Thus, decoding is largely the opposite of encoding. Interpreting (decoding) a message simply means reconstructing the message that the source has encoded.

While the objective of the communication process is the conveyance of a particular meaning, it must be stressed that meaning does not exist in messages. "Meaning is something that is found within human organisms. By an unfortunate linguistic habit, people refer to the meaning of a statement or a message as something existing in it."[8] Accordingly, what the source is transmitting to the destination is not meaning, but rather messages. The internal mechanism possessed by the destination which performs this function is referred to as a decoder.

Hence, the essential elements of the communication process are: source/encoder, message, channel, destination/decoder.

At any stage of the communication process, interference, referred to as noise, can distort or negate the transmission of the message from source to destination.. Communication will not be successful for example, if either the source/encoder or the receiver/decoder is unfamiliar with the message code--either the individual symbols (i.e., semantics) or the structure or rules for relating these symbols to each other (i.e., syntactics)

The source, as the initiator of the communication process, must be held accountable for overcoming either potential or actual noise when constructing his message. He must encode his message so that the transmission to the receiver results in "communication," "effective communication," or "influential communication." Fortunately, he can turn to feedback. Feedback is extremely important in the whole communication process because it enables the source to appraise the extent to which his message is understood by the destination.

The source gets direct feedback from his own messages before they are released for transmission and indirect feedback from observing the behavior of the destination after they are transmitted. "The greater the sensitivity of the communicator to feedback and his skill in revising his message in light of it, the greater his chance of communicating effectively. (There are other courses of action besides revising his message that the communicator can take. For example, he may repeat his message or elaborate on it and/or may educate the recipient in the language he is using)."[9]

PART II THE ACCOUNTING COMMUNICATION PROCESS

An Introduction

The close interlink between the concept of adequate disclosure/understandability and the accounting communication process was noted by Arthur Anderson & Co.:

> Two overriding considerations need to be underscored if disclosures are to be helpful to the user of the financial statements. (1) Understandability--Determination of what is useful and understandable to a broad range of readers is necessarily a matter of judgement. Nevertheless, the goal should be to limit disclosures to those that are clearly significant and to keep them as understandable as possible. (2) Communication--The function of disclosure is communication of information for decision makers. Disclosure should not be used as a vehicle for the defense of those who prepare, issue and audit financial statements. If disclosures are used as defensive mechanisms they will become alibis for not improving financial statements, thereby creating a vicious circle of ever greater disclosure and more inadequate accounting.[10]

Accounting communication (like all communication) is essentially a social process; that is, management and their attesting auditors communicate to sophisticated investors and sophisticated creditors. Accounting is a service function

providing information for the benefit of intended users. On the other hand, there are many who would argue that the purpose of managers and auditors in originating their reports is to directly affect or "manipulate" the behavior of report users. As a consequence, practicing and academic accountants have become interested in studying the influential communication element of the Shannon and Weaver model (see section C of Figure 1 on page 89)

From a theoretical perspective, Jordon noted that "for purposes of external financial accounting communications, we are primarily interested in achieving understanding of the messages by the recipients; we are not trying to achieve a certain type of reaction."[11] Additionally, from an authoritative perspective, the accounting discipline is explicitly constrained by neutrality[12] and freedom from bias.[13] Thus, we can regard the "influential communication" sphere as not being within the legitimate purview of the accounting communication process.

We can also regard the "effective communication" sphere (see section B of Figure 1 on page 89) as not being within the legitimate purview of this specific research project since effective communication encompasses the qualitative accounting objective of adequate disclosure/relevance.

Smith and Smith stressed that "... the only requisite for communication is proper meaning assignment by the destination (i.e., the destination understands or comprehends the message selected by the information source). The nonutility of the

message to the intended user and the nonsecuring of the desired user behavior are both irrelevant to the performance of the communication function of financial reporting."[14] Therefore, Shannon and Weaver's communication model will be adapted for the purpose of examining the accounting discipline but only with respect to the "communication" sphere (see section A of Figure 1 on page 89). It should be noted, however, that this research project is not attributing a lack of importance for future researchers to test for influential and effective accounting communication.

The Accounting Communication Model

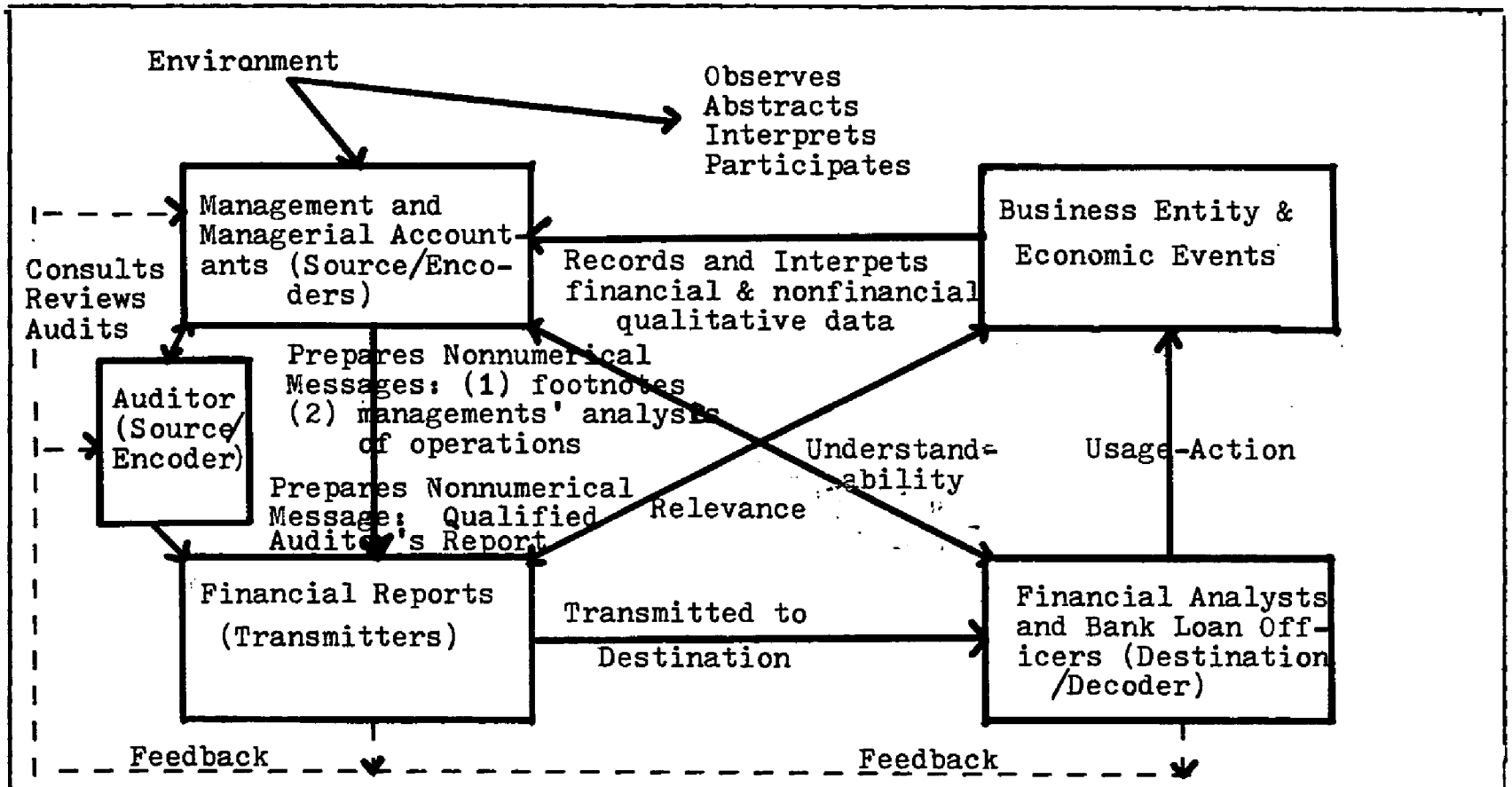
The accounting communication model appears in Figure 2 on the following page. A discussion of its elements vis-a-vis communication theory follows.

The environment includes all social, economic, and political forces that interact with the business entity and constitute the "general setting in which communication takes place and observations and interpretations are made."[15]

"Management is the communicator...(source)...It selects, records, and interprets the quantifiable economic data on which the messages are based; it observes the flow of business events, interprets them, and abstracts from them."[16] Management's sole function is decision-making. That is, planning and controlling the activities of the business entity as it interacts with its external environment for the purpose of maximizing shareholder wealth. Managerial accountants and financial accountants are engaged by management and charged with the responsibility of generating accounting information for (a) internal decision-making (e.g.., capital budgeting, variance analysis, etc.) and

FIGURE 2

SCHEMATIC REPRESENTATION OF THE ACCOUNTING COMMUNICATION PROCESS



Note: The basic framework from which the structure of this model is adapted was developed in "A Communication Theory Approach to Accountancy," by Norton Bedford and Vahe Baladouni, The Accounting Review, October 1962, pp. 650-659.

(b) the satisfaction of management's external accountability requirements (e.g., stewardship and Securities and Exchange Commission and New York Stock Exchange reporting regulations).

"The accountant encodes his messages in the accounting language which comprises technical terms, numerical figures, and rules for relating these to each other."[17] The manager encodes his messages in ordinary language in an attempt to interpret and amplify the accountant's messages and also to communicate additional information not encompassed by the accounting process. Jordan observed that:

> a manager is in a unique position to be able to distort the information he receives as it is collected by his employee--the accountant. The purpose of management communication is to induce the contribution of resources; the purpose of the participants in receiving the communication is to inform their economic decisions. And the difference of purpose is sufficient to cause a communication breakdown.[18]

In recognition of this, a verification of the reliability of the information communicated by management is undertaken by an objective third party--the independent auditor. The Committee on Basic Auditing Concepts defined auditing as "...a systematic process of objectively obtaining and evaluating evidence regarding assertions about economic actions and events to ascertain the degree of correspondence between those assertions and established criteria and communicating the results to interested users.[19] This definition links the attest function with the accounting communication process and, in fact, enhances the value of the information being communicated from the source to the destination.

If the auditor discovers that the financial statements or the narrative disclosures are unreliable, acting as an independent

source, he will communicate his qualified or adverse opinion, to the destination. "Thus, because of the ex-- pectations ofparticipants about the role of the auditor and his purpose for communicating, they are predisposed to regard audited financial reports as being reliable and neutral, and providing information which is relevant to their adaptive, economic behavior."[20]

The actual participation of management in report preparation can be either major or minor, depending upon the particular company's philosophy. "A company may choose to rely heavily on external writing talent so that the annual report takes on the aura of a public relations release in some respects."[21] On the other hand, when a company relies upon internal writing talent, it "can get bogged down in committee editing and produce language that is compromised to the point of obscurity or generalities."[22]

No one is quite certain as to the exact degree of the certified public accountant's unofficial involvement in the preparation of financial report messages. The auditor's involvement with management's communications may take one of two forms: (1) direct involvement--he may join with management in the actual encoding of the financial report messages or (2) indirect involvement--by the mere fact that his name is associated with the financial statements and footnotes, he may be perceived by the users as a co-source of all of the messages contained in the financial report. Thus, the auditor may, in reality, be a co-source or he may simply be perceived

as a co-source by the sophisticated users of the financial report. Regardless of which is the case, the users' acceptance of the messages being communicated depends equally on their acceptance of management and the certified public accountant as credible sources (see pages 107to 112).

The official position of the American Institute of Certified Public Accountants says that "the independent auditor may make suggestions as to the form or content of financial statements or he may draft them in whole or in part, based on management's accounts and records. However, his responsibility for the statements he has examined is confined to the expression of his opinion on them. The financial statements remain the representations of management."[23]

The conventional transmitter selected as the primary medium to channel the message from the source to some designated audience is the financial report.

The identification of the designated audience, called the destination, in many cases, is implied rather than explicit.

Chapter III weighed the evidence and concluded that the sophisticated user constitutes the only realistic destination in light of the inherent complexities of financial reporting. The homogeneity of this target audience, however, influences the information source's achievement of the communication objectives. For example, a company's financial report destination may be an individual (e.g., its local bank's loan officer), a specific group (e.g., financial analysts specializing in the industry), or a mass audience (e.g., all sophisticated users).

Generally, the larger the size of the target audience, the larger the probability for heterogeneity. The greater the heterogeneity of the audience, the more difficult for the information source to "know the audience" and to select and transmit a message that is understood and that secures the desired destination behavior.[24]

To perform properly his functions, the information source needs to possess an awareness not only of the identity of the destination, but also destination characteristics, such as fields of experience. The more homogeneous the selected destination, the easier it is for the source to secure the needed data to respond accordingly. Without the awareness, the source is unable to select and transmit the message so that the probability for communication is at a maximum.[25]

In financial reporting wherein the message is in the form of written English, the destination usually performs the function of receiver for himself. That is, the destination picks up the message through his eyes and his decoding apparatus-brain-interprets the actual visual signals received into a message; then he attaches meaning to the message.

The sophisticated user of the financial report must possess the necessary skills to be able to reconstruct and understand the messages contained in the report. Additionally, the destination's field of experience as he decodes the messages must be identical to the sources field of experience when he encodes the messages. This is necessary if the destination is to receive the information intended by the source and if the accounting communication process is to be a success. If the destination

cannot decode the message, the communication effort will have failed, and the image in the minds of management and the certified public accountant as to what has happened, is happening, or will happen to the enterprise cannot be transmitted to the financial report user.

Understanding is the key concept in the accounting communication process. "It reflects the extent to which there has been a 'meeting of the minds' between the communicator and the user. Since communication is not complete unless understanding is achieved, it measures the extent to which management and the statement users have communicated."[26]

Having attached meaning to the financial report messages, the sophisticated investor or creditor will generally respond in some way. (He will buy, sell, or retain equity securities if the user is an investor; or he will extend, constrict, or leave unchanged the amount of debt if the user is a creditor).

Since successful communication is the ultimate purpose of the accountant, we are very much interested in discovering impairments that occur between managers, certified public accountants, and sophisticated users of the financial report. An objective evaluation of the understandability of narrative disclosures contained in financial reports may (1) pinpoint where the failures lie and (2) suggest steps to be taken to ensure the future effectiveness of the accounting communication process.

As shown in Figure 2, on page 96 the behavioral response of the financial report user is available to the source in the form of feedback, and it completes the accounting communication

process--a closed-loop cycle. "Because statement users are diverse in their interests and interpretive capabilities, and only a few are likely to articulate any direct feedback, this source of feedback has some limitations."[27]

Since we are already aware that feedback is vital for successful communication, the financial report can be challenged as an effective transmitter because it does not permit a dialogue between preparers and users other than untimely and poorly attended annual stockholder meetings to clarify misunderstandings and misimpressions.

While not specifically shown in the model of the accounting communication process, noise (interference) can distort management's and the certified public accountant's messages. Managers and auditors as initiators of the accounting communication process, should in the design and operation of their information system, attempt to keep noise to a minimum. According to Iselin: "in order to do this,...(they)...must firstly appreciate that such a thing as noise exists, and secondly, be aware of where and how noise can arise in...(their)...communication system. Knowledge of these factors should enable...(them)...to build devices into the system to guard against, and thereby, minimize noise."[28] To do otherwise either deliberately or through insensitivity is clearly nonutilitarian.

The Accounting Language

From communication theory it can be seen that the function of language in this process is a crucial one. "Language is to be regarded as systematic verbal symbolism used as a means of

establishing and sustaining relations between two or more human beings since its signs have a common core of significance to members of a given linguistic community."[29]

Chambers stressed the obvious: that, since accounting is concerned with human communication, it does so with the aid of a language.[30] It has long been recognized that accounting, like all languages, makes use of a systematic verbal symbolism and a set of specific rules relating the symbols (i.e., the words and numbers) to each other. Narrative disclosures use predominantly words with few numbers while inancial statements and supporting schedules use predominantly numbers with few words. In fact, accounting has been characterized as the "language of business."

As a language, accounting can be evaluated only in terms of its effectiveness. To be effective, accounting requires a consensus on the part of both the source and destination about the semantic, syntactic, and pragmatic rules which are to govern its usage. Evidently that consensus is lacking as evidenced by a plethora of complaints by security analysts, investment and credit extension advisors, financial journalists, and other technically competent persons. For example, Greer, in an article appropriately entitled "How to Succeed in Confusing People Without Really Trying," stated that "confusion is intensified by elaborate explanatory 'notes,' couched in technical jargon unintelligible to the lay reader, and quite often to the technical expert as well."[31]

Semantic rules govern the use of symbols or signs employed in a language. Managements' and auditors' narrative disclosures

consist of a mixture of ordinary English, technical terms, and numbers, which constitute the signs and symbols of the accounting language. Iselin has isolated two important semantic rules with which the accounting language must comply if it is to communicate effectively: (1) "...terms used in the language should be defined. Definition facilitates effective communication because it makes explicit the meaning of terms."[32] (2)"...signs of the technical language should have unique referents. For example, if a term does not have a unique referent in the technical language, then a receiver, on receipt of a message containing the term, will not know precisely which referent is involved. Further, if the same term exists in the technical language and in the vernacular, it should have the same meaning in both languages."[33] The failure of accountants to communicate effectively, lies in the fact that many of the technical terms (e.g., capital, surplus, reserve, etc.) used in accounting do not have unique referents and the sophisticated users of financial reports interpret them in accordance with their meaning in the vernacular.

To resolve semantic problems calls for managers and certified public accountants to employ only those terms known to be understood by the readers of financial reports (i.e., standardize message format) or else to adopt the more unrealistic approach of trying to educate financial analysts and bank loan officers regarding the specific meanings of accounting words and abstractions within specific contexts.

Syntactic rules govern the structure of language (i.e., the manner in which the symbols and signs of a language may be related to each other in phrases, clauses, and sentences). When the vocabulary is properly manipulated by the syntactical rules, the result is message content.

Pragmatic rules govern the manner in which "meaning" is attached to the information communicated to the destination. Communication does not occur unless there is a transference of "meaning."[34] It must be stressed that the symbols that constitute a message have no intrinsic meaning. "Meaning exists only in the mind, in the association of the word symbols with something previously learned. Meanings are therefore personal.[35] This is the essence of the requirement for commonality of fields of experience that Schramm added to Shannon and Weaver's communication model.

The Committee on Basic Auditing Concepts explained that

> The message is the physical medium which attempts to evoke ideas in the receiver. Many communication problems arise because we forget that individual experiences, which provide meaning, are not identical... If the message symbols used to evoke specific ideas are outside the experience of the persons to whom they are presented, however, evoking the intended ideas is not possible because the basis for these ideas is not present. To permit communication, symbol systems must be employed which evoke similar meanings for both the sender and the receiver. Satisfactory communication can take place only in terms of these common frames of reference. A sender's effectiveness may be gauged by his ability to select symbols which evoke intended meanings in the receivers.[36]

Thus, the major problem associated with communication breakdowns in accounting arises because the individual experiences of managers and auditors are different from the

experiences of a great majority of financial report users. If we can assume, for the moment, that sophisticated users possess the necessary accounting or finance knowledge and the necessary communication skills, then ideally, the meaning conveyed to these particular users of financial reports should be the same as if they had observed the events reported upon by the information source. The evidence currently available would seem to contradict this notion. For example, commenting on financial reports in their entirety, a 1971 research study concluded that "unfortunately, for the average investor and financial community professional as well, they have been uniformly hard to read and understand."[37] (emphasis added)

How then can managers and certified public accountants communicate information to sophisticated users which will not be plagued with semantic, syntactic, and pragmatic problems? Iselin believes that "where it is possible to use a feedback mechanism these problems can be reduced. In other words, the probability of achieving successful communication is greater when feedback is used than when it is absent."[38] (emphasis added)

Since financial reports are utilized in external reporting by a widely dispersed and heterogeneous audience, it is generally conceded that feedback is impossible. Consequently, little if anything has been done to ensure that narrative disclosures are comprehensible. Instead, accounting communication has been and will continue to be unsuccessful to some segments of the sophisticated user group unless an objective measure of understandability can be found.

The Cloze Readability Procedure (see discussion, Chapter V) can be adapted by managers and certified public accountants to measure the interaction of the reader with the printed word; thus, it can provide the crucial element of feedback that has long been absent from the accounting communication process. A favorable demonstration of the Cloze Readability Procedure will improve financial report communications by ensuring proximity in meaning between the sender of the communication and the receiver of the communication.

However, the source must overcome one final barrier: "The attitude of the receiver toward the sender will also condition the effectiveness of the message. If the receiver is negative towards the sender, the communication is less likely to be effective than if the receiver perceives the sender in a more favorable light."[39] This concept is discussed in some detail in the next section.

Source Credibility--The Final Link

In order to complete the communication process, the message, once it has been successfully decoded by the receiver, must be accepted by the destination. At issue, then, is the credibility (believability) of the source.

Communication theorists subdivide credibility into two components--expertness and trustworthiness--and define them as follows:

> An individual's tendency to accept a conclusion advocated by a given communicator will depend in part upon how well informed and intelligent he believes the communicator to be. However, a recipient may believe that a communicator is capable of transmitting valid statements, but still reject the communication if he suspects the communicator is motivated to make invalid assertions It seems necessary, therefore, to make a distinction between (1) the extent to which a communicator is perceived to be a source of

> valid assertions (his 'expertness') and (2) the degree of confidence in the communicator's intent to communicate the assertions he considers most valid (his 'trustworthiness'). In any given case the weight given a communicator's assertions by his audience will depend upon both of these factors, and this resultant value can be referred to as the 'credibility' of the communicator.[40]

According to this comprehensive definition, the believability of the message depends, to a great extent, upon the credibility of the source. This, in turn, is dependent upon the destination's beliefs about the 1. expertness and 2. trustworthiness, of the source. "To third parties it takes both management and the auditor to establish a credible (expert and trustworthy) source for the financial representations."[41]

Financial report users, in all likelihood, perceive management and its attesting auditors as having the competency or expertness to generate messages which are significant (i.e., the message corresponds with economic reality). "Given the presence of a staff technically specialized in the field of accounting, third parties most likely acknowledge the existence of accounting competency within the business firm."[42] That being the case, it becomes a question of the destination's perception of the source's trustworthiness as the key credibility factor in the accounting communication process.

The source's trustworthiness, as perceived by the destination, directly influences the latter's reactions to a message. Research evidence indicates that messages with the same content tend to be considered fairer presentations when communicated by a trusted source than when communicated by a source of dubious reliability.[43] The chief component of trustworthiness is the

reader's perception of the writer's purpose in initiating the communication process. There are two possibilities: (1) An informative message is not intended by the source (writer) to produce any particular response from the destination. The source's purpose is merely to set forth the facts of a situation. (2) A persuasive message is designed to influence the destination's actions or attitudes in some fashion. There is a definite intent to elicit a particular response desired by the source.[44]

Communication theorists have demonstrated that when a source is perceived to have a persuasive intent, he is less likely to be perceived as worthy of trust; and a decrease in trust leads to a decreased likelihood of message acceptance by the destination.[45] In fact, research has shown that the destination will reject the message when its purpose is considered to be persuasive or manipulative rather than informative.[46]

The source's occupational role frequently provides the destination with the only evidence as to the purpose (or intent) of the communication.[47] As a consequence, we will briefly explore the roles of management and the certified public accountant as they are perceived by the users of financial reports.

Management represents a group of professional decision-makers engaged by stockholders to operate the business for the benefit of, and to be accountable to, the absentee owners. Financial reports represent the primary means by which management accounts for its past and present performance and indicates

clues as to its future performance to the sophisticated investor and the sophisticated creditor. Financial reports are prepared by and contain the representations of management. Obviously, management has a self-interest in the content of these reports. "A judgement of this sort is predicated solely on the occupational role of the communicator, management, as it relates to the nature of the message--a managerial report card. Given management's position in conducting the affairs of a business, its interest in convincing the owners and other parties that the business is being properly managed is deemed apparent. Thus, statement recipients may well expect management to have a persuasive purpose."[48]

If sophisticated users perceive management's intent as persuasive, then their judgment of management's trustworthiness will be adversely affected. "It underlies the belief that management may be motivated to influence or 'manipulate' the reported financial data in some way if possible."[49] Management alone, therefore, cannot generate a credible financial report.

The certified public accountant is engaged by management to perform the attest function. "Attestation is a communicated statement of opinion (judgment), based upon convincing evidence, by an independent, competent, authoritative person, concerning the degree of correspondence in all material respects of accounting information communicated by an entity (individual, firm, or governmental unit) with established criteria."[50] The sophisticated user has come to expect that the auditor, not motivated by self-interest, will merely issue a professional opinion

that the statements contained in the report either "present fairly" in total, in part, or not at all. Thus, the perceived occupational role of the auditor lends credibility to financial report messages because the attest function meets the test of an informative purpose and the auditor is deemed worthy of trust.

Both management and the certified public accountant are considered experts by the users of financial reports; so the pivotal question becomes one of balancing the decreased trustworthiness of management (because their occupational role dictates a persuasive intent) with the increased trustworthiness of the auditor (because his occupational role dictates an informative intent). The ultimate disposition of this trade-off as perceived by the users determines the credibility of the source's messages.

"Communication theorists recognize there are limitations to the impact of communicator credibility on the effectiveness of a communication. One limiting condition is the case where a credible source renders a message which, based solely on its content, is clearly unacceptable or objectionable to the recipient."[51] An unacceptable message content may take one of two forms: (1) it may fail to satisfy the qualitative accounting objective of relevancy (i.e., it does not meet the informational needs of the users) or (2) it may fail to satisfy the qualitative accounting objective of understandability (i.e., the relevant messages are incomprehensible to the users). The consequences of either of these two possibilities bear directly

on source credibility. When an expert source communicates an irrelevant message, the destination's perception of the source's expertness suffers. When a trusted source communicates an incomprehensible message, the destination's perception of the source's trustworthiness suffers.

Since an attitude of credibility--expertness and trustworthiness--is fundamental to their role in the accounting communication process, management and the certified public accountant must avoid, at all cost, unacceptable message content. Unfortunately, at present, there is a vast body of criticism in the literature and in the courts with respect to financial report messages which are clearly not relevant and clearly not understandable.

CONCLUSION

Financial reports are prepared for the purpose of communicating selected financial and nonfinancial, quantitative and qualitative, information from management and its independent auditors to financial analysts and bank loan officers as well as government regulatory and taxing agencies and other interested third parties. "If this communication function is not performed, then financial reporting is nonutilitarian."[52]

It is well to remember that what is transmitted is a codified message (not a meaning), which is contained in some linguistic code and is waiting for accurate interpretation by its destination. For successful accounting communication, therefore, the sophisticated user is the most important link in the process; if the message is not received, the accounting communication was wasted.

It is the users' performance of the decoding function that results in meaning. If properly performed, assuming a commonality of fields of experience and the perception of the source as a credible communicator, the meaning intended by the source will coincide with the meaning ascribed to the messages by the destination. On the basis of the meaning received, the sophisticated user proceeds to make important investment or credit extension decisions which ultimately affect the health and vitality of our free enterprise economy. The only justification for the occurrence of accounting communication should be the desire of the source (i.e., management and the certified public accountant) to inform the destination (i.e, sophisticated investors and creditors).

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Chapter V

Review of the Related Literature:

The Measurement of Readability Using the Cloze Readability Procedure

INTRODUCTION

Chapter II's review of the literature on readability formulas and conventional reading comprehension tests seems to suggest that if progress is to be made in evaluating and improving the understandability of narrative disclosures, a more reliable and more valid measuring instrument must be used.

This chapter provides an extensive review of the Cloze Readability Procedure, including its theoretical foundation, its validity as a measure of reading comprehension, and its criterion levels.

THEORETICAL FOUNDATION

In 1953, Wilson Taylor introduced the Cloze Readability Procedure as a new tool for measuring readability. He reasoned that a passage of high entropy, or conversely low redundancy, would be more difficult for the reader to reconstruct if parts of it were missing.[1] The idea of having the reader reconstruct a passage by filling-in missing words was theoretically based on Gestalt Psychology. Taylor made the relationship between cloze and gestalt psychology clear by stating:

> Cloze procedure derives its name from 'closure' a term that expresses the gestalt-psychology notion that a person presented with a not-quite-finished circle, for example, tends to make a 'good figure' out of it by mentally closing up the gap. Although part of the figure is missing, he is said to perceive the almost-circle as a whole one, and thus assigns it to a form class with which he is already familiar. In a similar way, one listening to a broadcast on a static-filled evening might hear 'President Abraham_____once told a story about a slave owner who..." and almost instantaneously and quite unconsciously close the gap by filling in 'Lincoln.'"[2]

Thus,[3] if one finds the statement, "The use of _____ accounting is required in a business combination between unrelated parties affected by the exchange of common shares" or "The use of pooling-of-interests accounting is required in a business combination _____ unrelated parties affected by the exchange of common shares," he could, in each case, form a structured whole by inserting a word which would make the statement meaningful.

It should be noted that the correct response in each of the previous examples would indicate the respondent's grasp of a different aspect of meaning. In the first example, the ability

to predict the word "pooling-of-interests" depends primarily upon knowledge of generally accepted accounting principles and procedures and its specific name. The respondent must, of course, understand the word meanings and interrelationships involved in the context in order to understand what information is desired. In addition, however, he must possess specific information in order to respond correctly. A complete understanding of the form and content of the context would not be sufficient to provide clues for the correct response.

In the second example, the correct response "between" would indicate primarily the understanding of an interrelationship between the words "pooling-of-interests," "business combination," and "unrelated parties" as they are used in the context. In this case, an understanding of word meanings in the context is involved in the process of making the correct response: Unless the abstract pattern were grasped, however, the correct response could not be made even if the respondent understood each of the individual words.

These two components of meaning (lexical and structural) are closely related and are involved in all reading. Yet as demonstrated in the two examples, the Cloze Readability Procedure seems to allow the measurement of one or the other, depending upon the type of words selected for deletion. The selection of words to be deleted by either a random or "every nth' method, the technique to be used in this research project, will provide a score that would indicate comprehension of both aspects of meaning. According to Taylor, "if enough words are struck at random, the blanks will come to represent proportionally all kinds of words to the extent that they occur."[4]

There are essentially two competing types of possible deletions: An every nth word system referred to as structural deletions vs the deletion of every word of a particular type, usually nouns and verbs, referred to as lexical deletions. While the former is far and away the most popular, there has been some research, principally by Weaver and Kingston[5] which used both. They concluded that "structural deletions correlate significantly more highly with vocabulary and reading comprehension sections of the Diagnostic Reading Test than do lexical deletions."[6] Taylor[7] noted that deletions made every fifth word were statistically independent. Bormuth[8] added that the every "fifth" word deletion system fits no known language pattern, and therefore, provides the same result as a purely random deletion system. Thus, selecting every fifth word gets us close to the maximum efficiency per item and permits using a short, economical passage that produces reliable test scores.

Bormuth also attempted in the same study to discover the most valid system of scoring cloze tests. Cloze tests of fifty-two items were constructed with every fifth word deleted: they were administered to fifty subjects. Every cloze test response was classified into one of seven categories: (Spelling errors did not count as errors unless ambiguous or unrecognizable).

-exact word, grammatically correct
-exact word, grammatically incorrect
-synonym, grammatically correct
-synonym, grammatically incorrect
-unrelated semantically, grammatically correct
-unrelated semantically, grammatically incorrect
-unclassifiable response.

Multiple regression analysis was performed on each category for a subject's responses and the subject's reading achievement score

was used as the criterion variable.

Only the three grammatically correct responses had significant correlations (at the .05 level) with the criterion of comprehension ability (Stanford Achievement Test: Reading). When the scores based on the responses exactly matching the deleted words were held constant, all the other correlations dropped to zero. Bormuth then reached the following two conclusions: "(1) When cloze tests are used as measures of individual differences in reading ability, scores obtained by counting responses exactly matching the deleted words seem to yield the most valid scores; (2) When the cloze tests are used in readability studies as measures of the comprehension difficulties of passages, scores obtained by counting responses exactly matching the deleted words seem to yield the greatest amount of discrimination among passage difficulties."[9]

Taylor formally defined cloze as "a method of intercepting a message from a transmitter (writer or speaker), mutilating its language patterns by deleting parts, and so administering it to receivers (readers or listeners) that their attempts to make patterns whole again potentially yield a considerable number of cloze units."[10] Thus a "cloze unit" came to be "any single occurrence of a successful attempt to reproduce accurately a part deleted from a 'message' (any language product) deciding from the context that remains, what the missing part should be."[11]

The Cloze Readability Procedure reflects the degree of similarity between the language habits of the encoder and the decoder. The probability that certain words and certain verbal

patterns will be used in a given communication varies with the writer's style, his topic, his purpose, and the audience he is writing for. The reader's sensitivity to all of these factors will influence his ability to predict in advance precisely what word the author would use at various choice points within a message.

The Cloze Readability Procedure is not a readability formula, in that no elements are counted and weighed to predict readability. Rather, the cloze score is determined directly from the interaction of the reader with the printed material. The comparative readability of materials is determined by the number or percentage of cloze units successfully completed.

Taylor[12] felt that his contribution of the Cloze Readability Procedure was not another form of conventional sentence-completion reading comprehension test. One of the primary theoretical considerations was that this procedure measured the "total language context" of a message and the complex verbal skill patterns, that are used in learning to "think in" a language. In addition, the procedure was based upon the statistical principle of random sampling. If enough words were deleted at random, the blanks would stand proportionally for a large variety of syntactic and semantic word choices.

From his experiments, Taylor concluded that cloze scores "...appear to be a measure of the aggregate influences of all factors which interact to affect the degree of correspondence between the language patterns of transmitter and receiver."[13]

Subsequently in 1956, Taylor[14] reported that the cloze procedure while initially reported as a means of testing the readability of English prose, was found to have additional uses. Taylor found that the procedure also worked with a foreign language, Korean, and with spoken materials. Furthermore, the researcher felt that the procedure could be used to evaluate individual differences in comprehension, intelligence, and knowledge.

> If the statement that a passage is 'readable' means that it is 'understandable,' then the scores that measure readability should measure comprehension too...The better the subject understands the meaning--despite mutilation of the form in which the meaning is expressed-- the better should be the subject's chance of guessing what words would completely restore the passage to its original form.
>
> Further because learning depends on the comprehension and retention of new information, and because comprehension itself depends both on native intelligence and how much one already knows, it seems that cloze scores might quantify more than just comprehension; they might also measure intelligence, existing knowledge, and success in learning and remembering.[15]

In 1959 Rankin[16] found that using cloze procedure to measure readability eliminated some of the limitations that had been found with the readability formulas. Specifically, the most commonly used Flesch and Dale-Chall formulas were based on the principle of counting elements in a message and were both based upon the premise that messages with polysyllabic words, unusual words, and long sentences are the most difficult to understand. The Cloze Readability Procedure to Rankin was based upon the more valid assumption that the degree of redundancy, or ease of predictability, of a message is determined by the interaction of all semantical, grammatical, and

stylistic characteristics of language. The cloze test was then actually a sample of message redundancy, as it measured the reader's ability to predict what word comes next at randomly chosen points within a selection.

Weaver[17] asserted that an advantage of the cloze procedure is that it disrupts the decoding process because a decision is required if the closure is to be made. The subject is engaged in a search procedure as he shifts from the normal matching procedure (symbol/meaning) to a search process (blank/insertion of symbol/meaning). "The cloze procedure enlists the subject in an hierarchical process which goes beyond the ordinary demands of reading."[18]

A large number of studies attempted to measure the methodological considerations employed with cloze testing. It had been determined that the cloze procedure could be employed with subjects from upper elementary school age through adult. In summary, there seems to be "abundant evidence pointing to the validity and usefulness of this technique as a measuring instrument."[19]

CLOZE READABILITY PROCEDURE TESTS AS MEASURES OF READING COMPREHENSION

The ultimate measure of a passage's level of readability can be ascertained by the degree of the subject's comprehension. If cloze tests are to be used as measures of the understandability of financial report disclosures, they must be shown empirically to be measures of reading comprehension ability. Since this research project is basically interested in comparing reading

difficulty through direct reader action, the approach utilized by the cloze procedure, the validity of the cloze procedure must be established.

Validity data concerns the ability of cloze scores to predict an "outside criterion" of readability. This usually means, in practice, the degree of relationship between cloze scores and estimates of readability arrived at in some other way. The studies to be considered have in common the use of an outside (external or independent) criterion of readability against which cloze scores are compared.

The following is a chronological listing of the major studies in this area:

Taylor[20] reported an experiment aimed at testing the validity of cloze indices of readability by determining the degree to which cloze scores of 152 Air Force Trainees correspond to independent measures of comprehension. The correlations were highly significant (all Ps less than .001) and ranged from .70 to .80 for any word deletion.

Sukiori[21] found a correlation of .83 between the cloze readability of passages and the combined subjective ratings of the passages by a panel of three reading experts.

Rankin[22] attempted to evaluate the validity, performance, and utility of cloze tests. He found that the cloze test was a reliable measure of general reading skill, of pre-reading and post-reading knowledge of the content of a specific article, and of specific reading comprehension. He obtained a correlation

of .78 (corrected for attenuation) between a post-cloze, noun-verb deletion test and a criteria test.

Jenkinson[23] obtained a coefficient of correlation of .82 between scores obtained on cloze tests and comprehension questions scores. She also found that the correlation between cloze tests and a standardized reading inventory test was .78 for cloze and comprehension.

Fletcher[24] also correlated cloze scores with the same reading inventory test to get correlations of .63 with vocabulary, .55 with level of comprehension, and .57 with speed of comprehension.

Bormuth[25] tested the hypothesis that scores on cloze tests were measures of the readability of the passages from which they were constructed. He correlated nine cloze passages and a 31-item multiple-choice comprehension test measuring comprehension of vocabulary, fact sequence, causal relationships, the main idea, inferences, and the author's purpose. Using 150 subjects, he found correlations ranging from .73 to .84 (significant at the .01 level) and a correlation of .93 between the total scores of the cloze test and the total scores of the comprehension test. In addition, he found the cloze test to be influenced by the same variables (i.e., educational level of readers, difficulty of materials, and subject matter) as the criterion tests. He also found substantial correlations between cloze test results and each of nine different aspects of comprehension measured by his criterion tests.

Ruddell[26] reported correlations ranging from .61 to .74

between cloze scores and the Stanford Achievement Test.

Correlating the Michigan Vocabulary Profile Test with a cloze test, Hafner[27] obtained a coefficient of .56.

Friedman,[28] correlating 20 cloze tests with the Metropolitan Achievement Test, Reading Section, obtained coefficients ranging from .63 to .85 with Vocabulary and from .71 to .87 with total score.

Gallant[29] administered standardized reading tests and cloze tests to 273 subjects. The correlations ranged from .65 to .81 and were significant at the .01 level. He concluded that the cloze tests were both valid and reliable measures of reading comprehension. Heitzman and Bloomer[30] attempted to measure the effects of different types of cloze exercises upon the reading comprehension of subjects. Twenty-four short texts, 600 words in length, were mutilated according to the following scheme:

-0% deletions (control group)
-10% random deletions
-10% noun deletions
-10% verb deletions
-10% modifier deletions
-10% preposition and conjunction deletions
-10% noun determiner deletions

The every tenth word deletion system was used, where the appropriate syntax closest to the tenth word was deleted. The data demonstrated that the ability to make closures was related to the reading ability of the subject.

Bormuth[31] found correlations ranging from .90 to .96 between the cloze and word recognition difficulties of the paragraphs and correlations also ranging from .90 to .96 between

the cloze and the comprehension difficulties of the paragraph.

Rankin and Culhane[32] found a correlation of .68 which was significant at the .01 level between the cloze test results and the corresponding objective comprehension test results for 105 subjects.

Bormuth[33] attempted to examine the factor validity of cloze tests. He constructed multiple-choice and cloze tests from the same nine passages and administered them to 150 subjects in a randomly sampled population. He found that one factor labelled "reading comprehension ability" accounted for the preponderance of the variance on both types of comprehension measures and he concluded that "it appears...that cloze tests made by deleting every 5th word measure skills closely related or identical to those measured by conventionsl multiple-choice reading comprehension tests. Little or no evidence was found to suggest that the two types of tests might measure different skills."[34]

The evidence seems to support strongly Taylor's contention that responses to items on cloze tests seem to be psychologically indistinguishable from responses to items normally used to measure comprehension and also his contention that the tests provide valid measures of the comprehension difficulties of passages. Bormuth stated that:

> "In general, the studies of the validity of tests made by the cloze procedure seem to justify four assertions. First, cloze readability tests provide a valid measure of a subject's reading comprehension ability. Second, the cloze readability procedure provides a valid method of measuring the comprehension difficulties of passages.

> Third, the procedure itself seems to incorporate both the most valid and the most economical of the possible alternatives for designing a cloze readability procedure. Fourth, cloze readability scores can be used to judge the suitability of materials."[35]

CRITERION LEVELS

There is some value in knowing that one type of message (e.g., a footnote) is more difficult for bank loan officers to understand than another type of message (e.g., a management's analysis of operations). There is also some value in knowing that one group of sophisticated users (e.g., certified public accountants) find qualified auditors' reports to be easier to understand than another group (e.g., chartered financial analysts). However, a cloze readability score (by user group or by type of message) has maximum value when we can say that the score does or does not, in and of itself, represent a satisfactory level of performance on the materials from which the test was made. Such reading experts as Thorndike (1917), Betts (1954), Harris(1962), and Bond and Tinker (1967) have advocated the proposition that in order for materials to be suitable for use in a person's"supervised instruction," he should be able to answer at least 75% of the questions asked in a conventional comprehension test about the materials. In order for the materials to be suitable for use in a person's "independent study," he should be able to answer 90% of the questions asked on a conventional comprehension test about the material. When a person can answer fewer than 75% of the questions, study of the material is thought to result in frustration.

Researchers have attempted to correlate cloze scores with scores obtained on multiple-choice comprehension tests, so that

correspondent levels of proficiency might be ascertained.

Bormuth[36] was the first to provide a frame of reference by which the size of the cloze score could be interpreted. By determing comparable cloze and multiple-choice test scores, the researcher intended to facilitate the use of cloze-testing to measure material difficulty.

One hundred and twenty subjects were given two cloze tests and two comprehension tests on comparable forms of a standardized reading test. The passages were compared for cloze test score and multiple-choice test score. The cloze scores comparable to the comprehension scores of 75% and 90% were 44% and 57%, respectively.

Rankin and Culhane[37] replicated Bormuth's 1967 study. Five fifty-item cloze tests based on 275 word articles were made by deleting every fifth word. The multiple-choice tests followed the format of Bormuth's study conducted in 1963. Comparison was made of the equivalent scores found in this study and in Bormuth's 1968 study. The average differences between Bormuth's results and the results of this study were minor (i.e., 3 percentage points).

Rankin[38] again studied scores for cloze tests in 1971. By averaging the reading grade level scores of subjects after administration of cloze tests and multiple-choice tests on the same passages, it was determined that the cloze scores comparable to 65%, 75%, and 90% on multiple-choice tests were 38%, 44%, and 58%, respectively. The development of these criterion levels greatly enhanced the usefulness of the cloze tests as

measures of material suitability.

Peterson, Paradis, and Peters[39] attempted to determine if the criterion levels which Bormuth had identified as corresponding to the instructional level for his subjects were applicable to high school, vocational high school, adult vocational-technical, and university students. They found that the general high school and vocational high school students scored 56.69 and 56.68%, respectively, whereas the adult vocational-technical and university student scored 43.05 and 44.41%, respectively. The latter two groups agree with Bormuth's (1968) and Rankin and Culhane's (1969) equivalent cloze and multiple-choice scores for instructional level. However, for the first two groups Peterson and associates hypothesized that "the data from high school students was spurious instead of reflecting a superior cloze ability on their part."[40] Because of this discrepancy, the suggestion was made that a portion of the 1972 study be replicated. Results from the second study (1973) were as follows: The cloze percentage level which was found to be equivalent to 75% accuracy in answering multiple-choice comprehension questions was approximately 42% with high school students. Once the inconsistency in their data was eliminated, the three researchers were able to state that "it does seem appropriate to concludethat it is possible to use Bormuth's criterion for determining the instructional level with adults."[41]

In view of the research findings, it will now be possible to interpret cloze readability for narrative disclosures con-

tained in financial reports by using the following specific percentage score as the criterion of acceptable performance: a cloze readability procedure score of 57% may satisfy the qualitative accounting standard of adequate disclosure/understandability. That is, the independent reading comprehension level which is equivalent to a score of 90% on a conventional reading comprehension test.

CONCLUSION

Because Cloze Readability Procedure tests are made entirely from a set of standard mechanical operations, they are not subject to the unintentional biases that test writers impose during the writing of conventional tests or the intrinsic shortcomings of readability formulas. This chapter has cited a number of research studies that have clearly demonstrated the validity of the Cloze Readability Procedure.

A cloze test is made by deleting every "nth (fifth, sixth, etc.) word" from a passage. The deleted word is replaced with a blank line and the reader is asked to fill-in the exact word he believes the author would have used. If the language of both the reader and the writer correspond (i.e., if both use the same semantic and syntactic rules to arrive at meaning), the assumption is that there will be a large number of correct fill-ins. "The meaningfulness of the material to the reader is inferred from the number of instances of language correspondence between the reader and the writer."[42] Accordingly, a criterion

level of 57% will be used as representing the minimum number of correct responses needed to indicate managements' and independent auditors' satisfaction of their adequate disclosure/understandability responsibilities.

The only variable intervening in the measure of comprehension with cloze tests is the process of deleting words. The every-fifth-word deletion system will be used, since it insures that this process will randomly sample all the elements within footnotes, managements' analyses of operations, and qualified auditors' reports in approximately the proportions in which they appear.

In summary, there are two major advantages of the cloze procedure: Firstly, it appears to reflect the sumtotal of all influences which interact to affect readability. Secondly, the performance of the reader is being measured on samples of the message to be read. Few other measures involve the juxtaposition of the destination and the message. When the cloze test is applied, both the destination and the financial report are assessed simultaneously by the use of the one measure. This undoubtedly gives the procedure a greater face validity than the other procedures (i.e., formulas and conventional reading comprehension tests) referred to.

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[1]Wilson Taylor, "Cloze Procedure: A New Tool for Measuring Readability," Journalism Quarterly, Fall 1953, pp. 415-433.

[2]Wilson Taylor, "Application of 'Cloze' and Entropy Measures to the Study of Contextual Constraint in Samples of Continuous Prose," (unpublixhed Doctor's dissertation, University of Illinois, 1954), p. 21.

[3]This illustration and subsequent discussion was adopted almost verbatim from a similar illustration and discussion presented in: Technique for Measuring Reading Comprehension," (unpublished Doctor's dissertation, University of Michigan, 1957), pp. 3-4.

[4]Wilson Taylor, "Cloze Procedure:...," op. cit., p. 415.

[5]Wendell Weaver and Albert Kingston, "A Factor Analysis of the Cloze Procedure and Other Measures of Reading and Language Ability," Journal of Communication, December 1963, pp. 252-261.

[6]Ibid., p. 253.

[7]Wilson Taylor, "Recent Developments in the Use of 'Cloze Procedure,'" Journalism Quarterly, Winter 1956, p. 46.

[8]John Bormuth, "Validities of Grammatical and Semantic Classifications of Cloze Test Scores," Reading and Inquiry, (Newark, Delaware: I. R. A., 1965), pp. 283-286.

[9]Ibid., p. 285.

[10]Wilson Taylor, "Cloze Procedure...," op. cit., p. 416.

[11]Ibid.

[12]Ibid., p. 417.

[13]Ibid., p. 432.

[14]Wilson Taylor, op. cit., pp. 42-43, 99.

[15]Ibid., p. 44.

[16]Earl Rankin, "The Cloze Procedure--Its Validity and Utility," Starting and Improving College Reading Programs (Milwaukee, Wisconsin: National Reading Conference, 1959), pp. 131-144.

[17]Wendell Weaver, "Theoretical Aspects of the Cloze Procedure," The Philosophical and Sociological Bases of Reading (Milwaukee, Wisconsin: National Reading Conference, 1962), pp. 115-132.

[18]Ibid., p. 117.

[19]Earl Rankin, "The Cloze Procedure--A Survey of Research," The Philosophical and Sociological Bases of Reading (Milwaukee, Wisconsin: National Reading Conference, 1965), p. 147.

[20]Wilson Taylor, "Cloze Readability Scores as Indices of Individual Differences in Comprehension and Aptitude," Journal of Applied Psychology, February 1957, pp. 19-26.

[21]S. Sukiori, "A Study of Readability Measurement-Application of Cloze Procedure to Japanese Language (English Abstract)," Japanese Journal of Psychology, 1957, p. 28.

[22]Earl Rankin, "An Evaluation of...," op. cit.

[23]Marion Jenkinson, "Selected Processes and Difficulties of Reading Comprehension," (unpublished Doctor's dissertation, University of Chicago, 1957).

[24]J. E. Fletcher, "A Study of the Relationships between Ability to use Context as an Aid in Reading and Other Verbal Abilities," (unpublished Doctor's dissertation, University of Washington, 1959).

[25]John R. Bormuth, "Cloze Tests as a Measure of Readability and Comprehension Ability," (unpublished Doctor's dissertation, Indiana University, 1962).

[26]R. B. Ruddell, "An Investigation of the Effect of the Similarity of Oral and Written Patterns of Language Structure on Reading Comprehension," (unpublished Doctor's dissertation, Indiana University, 1963).

[27]L. E. Hafner, "Relationship of Various Measures to the Cloze," (Milwaukee, Wisconsin: National Reading Conference, 1963), pp. 135-145.

[28]M. Friedman, "The Use of the Cloze Procedure for Improving the Reading Comprehension of Foreign Students at the University of Florida," (unpublished Doctor's dissertation, University of Florida, 1964).

[29]Ruth Gallant, "Use of the Cloze Tests as a Measure of Readability in the Primary Grades," Reading and Inquiry, (Newardk, Delaware: I. R. A., 1965), pp. 286-287.

[30]Andrew Heitzman and Richard Bloomer, "The Effects of Non-Overt Reinforced Cloze Procedure Upon Reading Comprehension," Journal of Reading, December 1967, pp. 213-223.

[31]John Bormuth, The Implication and Use of Cloze Procedure in the Evaluation of Instructional Programs. Center for the Study of Evaluation of Instructional Programs, University of California, Los Angeles, Report No. 3, 1967.

[32]Earl Rankin and Joseph Culhane, "Comparable Cloze and Multiple-Choice Comprehension Tests," Journal of Reading, December 1969, pp. 193-198.

[33]John Bormuth, "Factor Validity of Cloze Tests as Measures of Reading Comprehension Ability," Reading Research Quarterly, Spring 1969, pp. 358-365.

[34]Ibid., p. 365.

[35]John Bormuth, "The Cloze Readability Procedure," Elementary English, April 1968, p. 433.

[36]John Bormuth, "Cloze Test Readability: Criterion Reference Scores," Journal of Educational Measurement, Fall 1968, pp. 189-196.

[37]Early Rankin and Joseph Culhane, op. cit., pp. 193-198.

[38]Earl Rankin, "Grade Level Interpretation of Cloze Readability Scores," Reading: The Right to Participate, (Milwaukee, Wisconsin: National Reading Conference, 1971), pp. 30-37.

[39]Joseph Peterson, Edward Paradis, and Nathan Peters, "Validation of the Cloze Procedure as a Measure of Readability with High School, Trade School, and College Populations," Investigations Relating to Mature Reading, (Milwaukee, Wisconsin: The National Reading Conference, 1972), pp. 45-50.

[40]Joseph Peterson, Edward Paradis, and Nathan Peters, "Revalidation of the Cloze Procedure as a Measure of Instructional Level for High School Students," (Milwaukee, Wisconsin: The National Reading Conference, 1973), p. 145.

[41]Joseph Peterson, Edward Paradis, and Nathan Peters, "Validation of the...," op. cit., p. 50.

[42]Earl Rankin, "An Evaluation...," op. cit., p. 5.

Chapter VI

Design of the Study

INTRODUCTION

The aim of this chapter is to present the methodology which was employed to test the following overall hypothesis: Narrative disclosures contained in financial reports do not communicate well to their sophisticated readers. (See pages 152 to 158 for statements of all of the specific research hypotheses.) That is, sophisticated users of financial reports do not assign the meanings intended by the preparers of narrative disclosures. As more fully described in Chapter III, (1) footnotes supplement and complement the financial statements, (2) managements' analyses of operations explain the underlying reasons for significant changes in income statement items, and (3) qualified auditors' reports present independent auditors' professional judgments as to why certain aspects of their clients' financial statements do not "present fairly."

The primary evaluation was based on an analysis of Cloze Readability Procedure tests made over the narrative disclosures contained therein and administered to certified public accountants, chartered financial analysts, and commercial bank loan officer trainees.

The secondary evaluation was based on an analysis of the Flesch Reading Ease formula made over the same narrative disclosures to partially replicate the three prior readability studies in accounting by Pashalian and Crissy,[1] Soper and Dolphin, Jr., [2] and Smith and Smith.[3]

THE MESSAGES TESTED

Four different types of financial report messages were tested for adequate disclosure/understandability, using both the Cloze Readability Procedure and the Flesch Reading Ease Formula.

The first type of message, designated "A," was a footnote whose format has become standardized (i.e., the footnote required by Accounting Principles Board Opinion No. 22 "Accounting Policies").

The second type of message, designated "B," was a footnote whose format has not become standardized (i.e., the footnote required by Financial Accounting Standards Board Statement of Financial Accounting Standards No. 5 "Accounting for Contingencies," and the footnote with respect to long-term debt required by various authoritative pronouncements such as Accounting Principles Board Opinion No. 21 "Interest on Receivables and Payables" and Financial Accounting Standards Board Statement of Financial Accounting Standards No. 6 "Classification of Short-Term Obligations Expected to be Refinanced").

The third type of message, designated "C," was a management's analysis of operations required by the Securities and Exchange Commission in Accounting Series Release No. 159; its format has become standardized.

The fourth type of message, designated "D," was a qualified auditor's report required by the American Institute of Certified Public Accountants' fourth standard of reporting; its format has not become standardized.

The following criteria were used to distinguish between standardized format messages and nonstandardized format messages: (1) The content and form of the message did not vary significantly within a source corporation over time. (2) The content and form of the message did not vary significantly among source corporations.

An explanation of how the messages were distributed may be found in the section entitled "the subjects to be selected."

THE CORPORATIONS TESTED

A nonrandom[4] sampling plan was employed to select a total of eight New York Stock Exchange listed corporations and eight other Exchange (i.e., American, Pacific, and Over-the-Counter) listed corporations in order to test the understandability of standard format footnotes, nonstandard format footnotes, managements' analyses of operations, and qualified auditors' reports. (See Figure 3). The criteria for inclusion in the study was as follows:

(1) Three broad industry categories were chosen: 1. manufacturing; 2. transportation, communication, electric, gas, and sanitary services; and 3. finance, insurance, and real estate.

(2) Four independent audit firms were chosen from the "big eight." They were Price Waterhouse & Co., Ernst & Ernst, Arthur Anderson & Co., and Peat, Marwick, Mitchell & Co.

(3) Two New York Stock Exchange listed corporations and two other Stock Exchange listed corporations per independent audit firm were chosen.

(4) Seven corporations who experienced increased earnings per share from 1974 to 1975, and nine corporations who experienced decreased earnings per share from 1974 to 1975, were chosen. It would have been preferable to have eight corporations with increased earnings per share and eight corporations with decreased earnings per share, but this was not possible within the bounds set by these criteria.

FIGURE 3 -

DISTRIBUTION OF SOURCE CORPORATIONS BY INDEPENDENT AUDIT FIRMS, BY INDUSTRY, BY STOCK EXCHANGE LISTING, AND BY THE DIRECTION OF THE CHANGE IN EARNINGS PER SHARE FROM 1974-1975

Number	Name of Corporation	Audit Firm	Industry	Stock Exchange	EPS Change
1	Bangor Punta Corporation	PM&M	I	New York	Inc
2	Wachovia Realty Investment	PM&M	III	New York	Dec
3	The Anaconda Company	PW	I	New York	Dec
4	Allegheny Power Systems,	PW	II	New York	Inc
5	McDonnell Douglas Corp.	EE	I	New York	Dec
6	U. S. Realty Investments	EE	III	New York	Dec
7	United Gas Pipe Line Co.	AA	II	New York	Inc
8	Cousins Mortgage & Equity	AA	III	New York	Dec
9	Bourns, Inc.	PM&M	I	Pacific	Dec
10	Kaneb Services, Inc.	PM&M	II	American	Inc
11	Recognition Equipment Corp	PW	I	Over the Counter	Inc
12	Viking General Corporation	PW	III	American	Dec
13	1st of Denver Mortgage	EE	III	American	Dec
14	Harman International Indus.	EE	I	American	Inc

FIGURE 3--Continued

15	Security Mortgage Investors	AA	III	American	Dec
16	Banner Industries, Inc.	AA	II	American	Inc

Industry Code: I = Sic Code 201-399 (Manufacturing)

II = Sic Code 400-499 (Transportation, Communication, Electric, Gas, and Sanitary Services)

III = Sic Code 601-679 (Finance, Insurance, and Real Estate)

(5) For each corporation selected, the narrative disclosures in each financial report had to be approximately 250 or 300 words in length in order to provide fifty word deletions as suggested by Cloze Readability Procedure researchers (see discussion, Chapter V).

THE SUBJECTS SELECTED

Since it was not economically feasible[5] to administer Cloze Readability Procedure tests to the entire population of sophisticated financial report users, it was necessary to sample people who were truly representative of that population. Consequently, a random sampling approach was used to select names from various professional membership rosters for inclusion in this study so that the results would be generalizable to the entire population of certified public accountants, chartered financial analysts, and bankers.

A total of 1,536 certified public accountants was randomly selected from the membership roster of the American Institute of Certified Public Accountants, which totals 118,601 as of 1976. The Rand Corporation's A Million Random Digits with One Hundred Thousand Normal Deviates[6] was used to determine a random start which was followed by the systematic selection of every 76th name (118,601/1,536).

A total of 1,536 chartered financial analysts was randomly selected from the membership directory of the Financial Analysts Federation which totals 14,500 as of 1976. The Rand Corporation's A Million Random Digits with One Hundred Thousand Normal Deviates[6] was used to determine a random start, which was followed by the systematic selection of every 9th name (14,500/1,536).

The original design called for the random selection of a total of 1,536 bankers from Polks' Directory of Domestic Banks, which totals 43,561 as of 1976. The Rand Corporation's A Million Random Digits with One Hundred Thousand Normal Deviates[6]

was used to determine a random start, which was followed by the systematic selection of every 28th name (43,561/1,536). Unfortunately, the response rate of bankers was virtually nonexistent probably due to the fact that the mail survey was addressed "attention chief loan officer"; and it has been repeatedly demonstrated that if requests are not personalized, the likelihood of response is extremely low. As a consequence, the research design had to be modified as follows: The eight largest New York City commercial banks were contacted and asked if they would permit their most sophisticated bank loan officer trainees and recent graduates to serve as subjects.[7] All of the banks solicited were willing to cooperate, provided anonymity was maintained, and they made available a total of 175 trainees and graduates. Obviously, the results of the study with respect to the commercial bank loan officer trainees are generalizable neither to the entire population of bank loan officers throughout the United States nor to the entire population of loan officer trainees throughout the United States. This methodological change seemed to be justified in an exploratory study seeking to establish hypotheses to be tested in future research projects.

The mailing of 3,072 Cloze Readability Procedure tests to 1,536 certified public accountants and 1,536 chartered financial analysts was decided upon as follows:

(1) Each sophisticated user was to receive two messages chosen at random from the total of sixty-four messages (i.e,, sixteen corporations x four messages per corporation).[8] No pair was to consist

of two messages of the same type, although they might, by chance, stem from the same corporation.

(2) Sixteen corporations were available from which to select the first message of each pair.

(3) Sixteen corporations were available from which to select the second message of each pair.

(4) There are six possible combinations of four messages taken two at a time (i.e., $_4C_2 = 6$).

(5) Multiplying the results of steps (2), (3), and (4) yield 1,536 possible treatment combinations.

(6) Multiplying 1,536 treatment combinations by two messages per user yields 3,072 Cloze Readability Procedure tests.

(7) Dividing 3,072 Cloze Readability Procedure tests by the sixty-four messages available, yields forty-eight potential respondents per cell (see Table 6., on page 160).

(8) Anticipating a minimum response rate of 10%, considered good in a mail survey, yields approximately five respondents per cell (i.e., 48 x .10).

The mailing of 350 Cloze Readability Procedure tests to 175 commercial bank loan officer trainees was arrived at as follows:

(1) As in the prior discussion, each commercial bank loan officer trainee was to receive two messages chosen at random from the total of sixty-four messages.

(2) A minimum response rate of 90%, based on assurances of cooperation from the training program directors, was needed. This would approximate five respondents per cell, yielding a total of approximately 350 Cloze Readability Procedure tests (i.e., (350/64) x 90%).

It should be noted that since all three user groups received pairs of messages randomly distributed from the same message/corporation combinations, the requirements for a crossed design have been satisfied. Additionally, since each of the 1,536 possible combinations was randomly assigned to the randomly selected subjects, it is reasonable to assume independence between subjects selected and message/corporation combinations. However, it is not likely that each cell would have an equal number of observations, because of a varying response rate (i.e., an unequal distribution of observations). This assumption was borneout by the actual number of responses obtained (see chapter VII).

THE METHODOLOGIES EMPLOYED--CLOZE READABILITY PROCEDURE

Because the Cloze Readability Procedure was used as the measurement instrument in this study, its adequacy in sampling the comprehension responses to financial report messages must be considered. In order to assess the potential of any instrument, we need to know to what extent it is valid (i.e., to what extent it is measuring what we want it to measure). Numerous validation studies involving the Cloze Readability Procedure were reviewed in Chapter V.

Since Cloze Readability Procedure tests are thought to be measures of the comprehension with which passages are read, they should be affected by the same variables which affect conventional measures of the comprehension of a passage. The variables to be considered are: (1) the subject matter of the financial report messages over which comprehension is measured, (2) the difficulty of the language used by the author in writing the financial report messages, and (3) the amount of accounting and finance education and work-related experience of the financial report users.

The difficulty of words and language patterns is usually taken to mean the likelihood that individuals will be able to respond correctly to them. Chall[9] points out that the subject matter and the difficulty of the language in passages seem to produce a combined effect on the comprehension with which the passages are read. This suggests that when comprehension is measured over a set of four different types of narrative disclosures some variation in the scores will be observed due to differences in the difficulty of the languages in messages, some due to differences in the subject matter of the messages, and some due to the interaction of both.

Cloze Readability Procedure scores <u>should discriminate</u> (a) among groups of sophisticated users having different amounts of accounting and finance education and work-related experience (that is, the chartered financial analyst may be less technically competent than the certified public accountant) and (b) among narrative disclosures relating to different subject matters

having correspondingly different levels of difficulty (that is, the contingencies footnote whose format is not standard may be inherently more difficult to understand than an accounting policies footnote whose format is standard.

In constructing the Cloze Readability Procedure tests, the words to be deleted had to be selected by a mechanical procedure. The author chose that of deleting every 5th word, with the first word to be deleted chosen from a table of random numbers. In this procedure, a word was defined by the white spaces with which the author had separated it from other words in the passage. The first and last sentences were not mutilated.

Each test contained approximately fifty items.[10] Thus, each financial report message was between 250 and 300 words in length. This length was necessary in order to provide the fifty words recommended for the cloze tests. Word deletions were made without reference to the type of word selected. Therefore, they were not restricted to certain grammatical forms, such as nouns or verbs, as is sometimes the case. The only restriction was that the method used be both mechanical and objective. The test was scored simply by counting the number of blanks correctly filled in. The tests were typed and xeroxed, allowing margins of at least one inch on all sides. All blanks were twelve spaces in length. The instructions which were placed on the cover sheet of each Cloze Readability Procedure test, and which appear in Appendix A, were adapted from various sources in the Education/Psychology literature.

Interpretation of the Data

The data were interpreted as follows: The arithmetic mean of percentage scores was computed to summarize the responses to the cloze tests for each group of sophisticated users. It also served as a basis for comparing the degree of understandability that each user group attributed to each of the four different types of financial report messages tested.

Variances of scores on Cloze Readability Procedure tests discriminate among (a) groups of financial report users differing in finance and accounting sophistication, (b) narrative disclosures differing in subject matter, and (c) narrative disclosures differing in language difficulty (i.e, standard format footnotes vs. nonstandard format footnotes); and they also differ as a result of the interaction between the subject matter classes of messages and the levels of difficulty of the language in the messages.

Using the Cloze Readability Procedure, how do we determine whether financial report messages are suitable for a virtually homogeneous group of sophisticated users such as financial analysts? Certainly, messages chosen to be communicated by managers and auditors should best represent a compromise between content (i.e., relevance) and readability (i.e., understandability). However, both content and readability values have minimum limits of acceptability. In readability, as was discussed in Chapter V, we might place this lower limit as a cloze score of 57%.

An implicit assumption of this research project is that the information contained in the financial report is of high value and would in some way affect the investment or credit granting function if it were understood by the reader. A fruitful area for future research lies in attempting to value the information content (i.e., adequate disclosure/relevance) of the narrative disclosures contained in financial reports.

THE METHODOLOGIES EMPLOYED--FLESCH READING EASE FORMULA

To measure the readability of a passage using the Flesch Reading Ease formula, the following steps must be taken:

(1) systematically select by some random procedure 100-word samples of continuous prose from financial reports.[11]

(2) determine the average number of syllables per 100 words.

(3) determine the average number of words per sentence.

(4) solve the following equation: Reading Ease = 206.835 - .846wl - 1.o15sl[12] wherein wl represents "word length"[13] and sl represents "sentence length."[14]

(5) reading ease represents the grade level at which the passages are understood.

The factors measured reflect aspects of the difficulty of reading single words and sentences. The word factor may be seen as a measure of semantic difficulty, since syllable counts are a reflection of word length. Syllable counts will tend to measure difficulty of meaning. The sentence measure is used as a reflection of memory span, since the longer a sentence is, the more difficult it will be to remember the parts and so the more difficult it will be to understand.

Nevertheless, it is hypothesized (see Hypothesis XIII on page 157) that the use of the Flesch Reading Ease formula in the three prior readability studies[15] was not appropriate because of the technical nature of accounting communications. Consequently, the conclusions derived therefrom may be considered questionable. For example, Marshall's research previously cited in Chapter V found that "the one major conclusion to be drawn from this study is that the use of the Flesch Reading Ease formula for physics is unjustified."[16] By comparing (i.e., correlating) the results of the Cloze Readability Procedure tests and the Flesch Reading Ease formula made over the same narrative disclosures, we will have empirical evidence of the applicability of the Flesch Reading Ease formula as a measuring instrument with technical accounting communications.

LIST OF HYPOTHESES AND UNDERLYING RATIONALES

I. Narrative disclosures are not understood well by sophisticated users. A pilot study was conducted in February 1976 using Bernard M. Baruch College MBA candidates as surrogates for sophisticated financial report users. Based on the data obtained and the interpretations thereon, narrative disclosures were not understood well.

II. The level of understandability of narrative disclosures varies significantly among classes of sophisticated users, so that certified public accountants understand them better than chartered financial analysts who, in turn, understand them better than commercial bank loan officer trainees do.

IIA. The above order of comprehension also pertains specifically to qualified auditors' reports for each independent audit firm. It is expected that the different classes of sophisticated users will differ with respect to technical competence. That is, the educational and work-related experiences of the certified public accountant are of a higher "quality" than those of the chartered financial analyst; the educational and work related experiences of the chartered financial analyst are of a higher "quality" than those of the commercial bank loan officer trainee. Moreover, certified public accountants should understand the middle paragraph required in a qualified auditor's report better than the other two classes of sophisticated users, since they are responsible under Generally Accepted Auditing Standards for authoring this specific narrative disclosure.

III. Standard format footnotes and managements' analyses of operations are significantly more understandable than are nonstandard format footnotes and qualified auditors' reports. It is expected that messages whose format has become standardized will be easier to understand than are messages whose format has not become standardized because the former's language structure usually does not vary significantly among source corporations over time and is, therefore, "familiar" to sophisticated users.

IV. The level of understandability of narrative disclosures varies significantly among source corporations. In the pilot study noted in the rationale underlying Hypothesis I, there was a significant difference in the level of understandability among source corporations.

V. There is a significant interaction effect between types of messages and classes of sophisticated users, so that certified public accountants understand qualified auditors' reports better than do chartered financial analysts and commercial bank loan officer trainees. It is expected that certified public accountants will understand qualified auditors' reports significantly better than the other two classes of sophisticated users, since, as mentioned in the rationale underlying Hypotheses IIA, they are responsible under Generally Accepted Auditing Standards for authoring this particular narrative disclosure.

VI. The level of understandability of narrative disclosures does not vary significantly among independent audit firms.

VIA. There is no significant interaction effect between audit firms and any of the other independent variables in the study (i.e., subject group and type of message). In a research study by Smith and Smith,[17] it was empirically demonstrated that "since the null hypothesis cannot be rejected, the conclusion cannot be made that a relationship exists between the identity of external auditors and the comprehension ease of notes to financial statements."[18] It is expected that there

should not be a significant difference in understandability for managements' analyses of operations or qualified auditors' reports either.

VII. Within a single independent audit firm, the level of understandability does not vary significantly for qualified auditors' reports among source corporations. It is expected that since the middle paragraph required in a qualified auditor's report is written by a virtually homogeneous group of certified public accountants, the level of understandability should be uniform among source corporations.

VIII. The level of understandability of narrative disclosures varies significantly among industries. It is expected that the industry classification in which a source corporation can be found might explain any variations in the level of understandability among source corporations (see Hypotheses VII). For example, those subject to government regulation such as public utilities, railroads, banks, and insurance companies tend to have special characteristics that make their financial reports somewhat unique and, therefore, more difficult to understand. In addition, accounting practices and complexities do vary among unregulated industries, as well, and may affect both managements' and auditors' representations.

IX. Narrative disclosures of New York Stock Exchange listed corporations are easier to understand than are narrative disclosures of other exchange listed corporations. It

is expected that the stock exchange listing for source corporations might explain any variation in the level of understandability among source corporations (see Hypotheses VII). That is, corporations listed on the New York Stock Exchange are usually more attractive to investors, enjoy a broader international exposure, and command a higher price/earnings multiple than do corporations listed on the other exchanges; and that may have a positive effect on both their managements' and their auditors' representations.

X. Narrative disclosures of "large" corporations are easier to understand than are narrative disclosures of "small" corporations.[19] Singhvi and Dasai[20] empirically demonstrated that a positive relationship exists between corporate size and the quality of disclosure (i.e., completeness, accuracy, and reliability). It is expected that the following reasons offered by the authors apply as well to adequate disclosure/understandability, and might explain any variation in the level of understandability among source corporations (see Hypotheses VII):

> First, the cost of accumulating detailed information is relatively high for smaller corporations. In larger corporations, such information is accumulated for internal reporting to top executives and, therefore, disclosure of such information is not a costly affair for them. Second, the management of larger corporations is likely to realize the possible benefits of better disclosure, such as easier marketability of securities and greater ease in financing. Smaller corporations usually do not raise funds in the securities market and, therefore, cannot realize the possible benefits of

better disclosure. Last, smaller corporations are likely to feel more than larger corporations that the full disclosure of information could endanger their competitive position.[21]

XI. <u>There is a significant interaction effect between the type of message contained in financial reports and source corporations</u>. It is expected that the level of understandability is a function of the type of message (see Hypotheses III) and the identity of the source corporation (see Hypotheses VII). Consequently, it is logical to assume that a particular type of message for a particular source corporation will be either more or less understandable than expected.

XII. <u>The level of understandability of the type of message varies directly with the change in earnings per share from 1974 to 1975 of the source corporations to a statistically significant degree</u>. Morton[22] empirically demonstrated that "footnote disclosures perceived as being favorable to the reporting entity were rated more understandable than were less favorable disclosures. A corollary to this finding is that disclosures perceived as being unfavorable to the reporting entity were considered less understandable than those favorable to the entity."[23] It is expected that this relationship would also apply to managements' analyses of operations and qualified auditors' reports.

XIII. <u>There is no statistically significant direct relationship between the understandability of narrative</u>

disclosures as measured by the Cloze Readability Procedure and reading difficulty as measured by the Flesch Reading Ease Formula. Chapter II presented a detailed discussion of the major limitations associated with the Flesch Reading Ease Formula. As a consequence, it is expected that the application of the Formula to technical accounting communications will not bear any relationship to the more valid understandability scores obtained through the application of the Cloze Readability Procedure.

DATA ANALYSIS

In evaluating the acceptance or rejection of Hypothesis I, a t-test was performed to test the significance of the difference between the observed mean understandability score of sophisticated users and the criterion level of 57%, on the Cloze Readability Procedure.[24]

In evaluating the acceptance or rejection of Hypotheses II, through IX, and XI, a four-factor analysis of variance design was used consisting of independent audit firms, source corporations (nested within independent audit firms), type of message, and classes of sophisticated users--with unequal N's (see Table 6).

In evaluating the acceptance or rejection of Hypotheses X, XII, and XIII, the Pearson Product-Momment correlation coefficients were calculated for each of the four types of messages. Thus, the sales variable (see Hypotheses X) and the earnings per share variable (see Hypotheses XII) with which the individual Cloze Readability Procedure scores were correlated consisted of many tie scores ($n = 16$); the Flesch Reading Ease Formula scores (see Hypotheses XIII) with which the individual Cloze Readability Procedure scores were correlated also consisted of many tie scores ($n = 64$).

Three separate data analyses were performed. The first analysis was based on the Cloze Readability Procedure scores of certified public accountants, chartered financial analysts, and commercial bank loan officer trainees taken together.

TABLE 6

FOUR-FACTOR ANALYSIS OF VARIANCE DESIGN INDICATING OBTAINED CELL FREQUENCIES

			Message A			Message B			Message C			Message D		
			Subjects			Subjects			Subjects			Subjects		
			CPA	CFA	ABA	CPA	CFA	ABA	CPA	CFA	ABA	CPA	CFA	ABA
Independent Audit Firms	PM&M	Corporations 16	6	5	4	5	4	4	7	8	4	6	5	6
		Corporations 15	6	4	4	7	4	4	7	4	4	8	7	7
		Corporations 14	5	4	5	5	4	4	6	5	4	5	4	7
		Corporations 13	6	5	4	5	5	5	5	8	8	4	5	7
	AA	Corporations 12	6	5	5	6	5	5	5	5	4	4	5	4
		Corporations 11	5	8	5	4	5	6	6	7	8	6	5	5
		Corporations 10	5	4	5	6	7	4	5	6	6	5	5	4
		Corporations 9	5	5	7	5	4	4	5	5	4	5	4	7
	EE	Corporations 8	5	5	5	6	5	4	7	6	4	7	5	5
		Corporations 7	5	9	5	4	8	5	6	4	5	4	7	5
		Corporations 6	5	4	5	5	4	4	5	5	5	8	4	5
		Corporations 5	5	5	6	4	4	4	4	4	7	4	5	7
	PW	Corporations 4	5	4	6	7	4	4	6	4	5	5	4	5
		Corporations 3	5	6	5	5	5	8	6	4	4	7	5	6
		Corporations 2	5	4	5	7	4	4	5	7	6	6	5	4
		Corporations 1	6	5	7	5	7	6	5	6	4	8	5	4

TABLE 6--Continued

Code	Explanation
Message A	Footnotes whose format has become standardized.
Message B	Footnotes whose format has not become standardized.
Message C	Managements' analyses of operations whose format has become standardized.
Message D	Qualified auditors' reports whose format has not become standardized.
PW	Price Waterhouse & Co.
EE	Ernst & Ernst
AA	Arthur Anderson & Co.
PM&M	Peat, Marwick, Mitchell & Co.
CPA	Certified public accountant
CFA	Chartered financial analyst
ABA	Commercial bank loan officer trainee

The second analysis was based only on the Cloze Readability Procedure scores of certified public accountants and chartered financial analysts. Finally, the third analysis was based only on the Cloze Readability Procedure scores of commercial bank loan officer trainees.

CONCLUSION

The investigation of the effectiveness of the accounting communication process will be approached from only one side of the communication model described in Chapter IV. Using the Cloze Readability Procedure, 64 understandability tests were made over 16 corporations' narrative disclosures; they were administered to sophisticated users who are, by definition, competent and skilled individuals in the assessment of investment or credit-extension opportunities. The results obtained demonstrate whether in their 1975 financial reports, the various sources have encoded their messages in a comprehensible or in an incomprehensible form as decoded by the various destinations.

Our concern in this research study is with the linguistic code used by the source/encoder. Is the linguistic code shared by the destination/decoder? To answer this question, Bormuth's criterion level of 57% will be used to measure the level of comprehension actually achieved by the sophisticated users (which will measure, at the same time, the degree of difficulty of the narrative disclosures).

[1]Siroon Pashalian and William J. E. Crissy, "How Readable are Corporate Annual Reports," Journal of Applied Psychology, August 1950, pp. 244-248.

[2]Fred J. Soper and Robert Dolphin, Jr., "Readability and Corporate Annual Reports," The Accounting Review, April 1964, pp. 358-362.

[3]James E. Smith and Nora P. Smith, "Readability: A Measure of the Performance of the Communication Function of Financial Reporting," The Accounting Review, July 1971, pp. 552-561.

[4]The selection of the sixteen corporations was not random within the bounds set by these criteria. Only seventeen corporations were available for inclusion in the study, and the first sixteen were chosen.

[5]The cost of test booklet reproduction and mailing would be prohibitive for a total population of approximately 176,662 certified public accountants, chartered financial analysts, and commercial bank loan officers.

[6]Rand Corporation, A Million Random Digits with One Hundred Thousand Normal Deviates (Glencoe, Illinois: Free Press, 1955).

[7]As is often the case with rigorous training programs, there is a continuous process of attrition wherein those trainees whose performance was judged to be unacceptable to the banks were weeded out. Those that remained may be deemed to be the most sophisticated by virtue of their longevity in the training program and the high grades they received when they were periodically evaluated.

[8]Two messages per sophisticated user were deemed to be the optimum number of Cloze Readability Procedure tests, since each test requires approximately fifteen minutes to complete. One message per user would require a sample size twice as large as the one used (with its corresponding costs) while more than two messages per user would probably result in a response rate significantly lower than the projected 10%.

[9]Jeanne S. Chall, Readability: An Appraisal of Research and Application (Columbus, Ohio: Ohio State University, 1958), p. 33.

[10]Understandability scores on messages can be compared to each other even if the number of deletions varies, because they are expressed as the percentage of correctly filled-in blanks (i.e., correct words/number of deletions).

[11]This sampling procedure was not necessary, since the passages tested with the Flesch Reading Ease formula were the same as those already selected to be tested with the Cloze Readability Procedure. That is, the entire 250-350 word passages were subjected to the Flesch Reading Ease Formula.

[12]Rudolph Flesch, "A New Readability Yardstick," Journal of Applied Psychology, June 1948, pp. 221-233.

[13]"Word length" is defined as the average number of syllables per 100 words.

[14]"Sentence length" is defined as the average number of sentences per 100 words. It should be noted that Flesch defined a sentence as a unit of thought rather than being a function of the punctuation.

[15]Siroon Pashalian and William J. E. Crissy, op. cit., pp. 244-248. Fred J. Soper and Robert Dolphin, Jr., op cit., pp. 552-561.

[16]J. Stanley Marshall, "Comprehension and Alleged Readability of High School Physics Textbooks," Science Education, October 1962, p. 345.

[17]James E. Smith and Nora P. Smith, op. cit., pp. 552-561.

[18]Ibid., p. 560.

[19]The size of a corporation is measured in this study by the absolute dollar value of its 1975 sales.

[20]Surendra S. Singhvi and Harsha B. Dasai, "An Empirical Analysis of the Quality of Corporate Financial Disclosure," The Accounting Review, January 1971, pp. 129-138.

[21]Ibid., p. 131.

[22]James R. Morton, "Qualitative Objectives of Financial Accounting: A Comment on Relevance and Understandability," Journal of Accounting Research, Autumn 1974, pp. 288-298.

[23]Ibid., p. 295.

[24]Chapter V's discussion of criterion levels indicated that recognized authorities in the field of reading tend to agree on a score of 90% on a conventional reading comprehension test as representing the independent reading level. Researchers have attempted to correlate cloze scores with scores obtained on multiple-choice comprehension tests, so that correspondent levels of proficiency might be ascertained. Bormuth (1967, 1968), Rankin and Culhane (1969), Rankin (1971), and Peterson, Paradis, and Peters (1973) concur on a criterion level of approximately 57%.

Chapter VII

Results of the Study

INTRODUCTION

Table 7 shows that 11.46% of the certified public accountants, 10.67% of the chartered financial analysts, and 93.71% of the commercial bank loan officer trainees returned usable Cloze Readability Procedure tests. (Refer back to Table 6 on page160 for a description of sample sizes stratified by all independent variables.)

The response rate for certified public accountants and chartered financial analysts was low; nevertheless, it was considered excellent for a mail survey. The results obtained technically represent only the understandability scores of the actual respondents. Although tests were mailed to randomly-selected groups of certified public accountants and chartered financial analysts, we do not know to what extent these (approximately 11% respondents are representative of their respective entire populations).

Since the commercial bank loan officer trainees were not randomly selected from the entire population of trainees throughout the United States, their responses can be applied only to the actual population from which they were chosen (i.e., the eight largest commercial banks domiciled in New York City).

While the response rate for the first two groups of sophisticated users was low, and the third group of sophisticated users was not randomly chosen to make statistically valid conclusions concerning their total populations, nonetheless, this exploratory study does set forth areas in the

TABLE 7

NUMBER OF CLOZE READABILITY PROCEDURE TESTS MAILED AND RESPONSES BY SOPHISTICATED USER GROUP

Sophisticated User Group	Number of Cloze Test Mailed[1]	Number of Tests Returned	Response Within Group
Certified Public Accountants	3,072	352	11.46%
Chartered Financial Analysts	3,072	328	10.67%
Commercial Bank Loan Officer Trainees	350	328	93.71%[2]

Note 1: 3,072 Cloze Readability Procedure tests were mailed, as indicated in Chapter VI , to 1,536 certified public accountants and 1,536 chartered financial analysts. Each individual subject was mailed a total of two Cloze Readability Procedure tests. Thus, the total number of tests mailed is twice the total number of subjects solicited. 350 Cloze Readability Procedure tests were mailed, as indicated in Chapter VI, to 175 commercial bank loan officer trainees. Each individual subject was mailed a total of two Cloze Readability Procedure tests. Thus, the total number of tests mailed is twice the total number of subjects solicited.

Note 2: The unusually high response rate of 93.71% for commercial bank loan officer trainees was due to the willingness of the eight largest commercial banks in New York City to participate in this research project. When the training directors distributed the Cloze Readability Procedure tests to their trainees, they encouraged, but did not require, then to respond. Thus, the response rate was close to 100%.

adequate disclosure/understandability of narrative disclosures which are in need of future research.

Appendix B. contains the Cloze Readability Procedure scores by 1. source corporation, 2. type of narrative disclosure, and 3. sophisticated user group, on which all data analyses are based. Appendix C. presents the Flesch Reading Ease Formula scores by 1. source corporation and 2. type of narrative disclosure. It is the manipulation of the data contained in these two appendices that gave rise to Tables 8 through 30 and Appendices D through I.

THE EMPIRICAL RESULTS

Hypothesis I stated that narrative disclosures are not understood well by sophisticated users. As shown in Table 8, the research hypothesis is rejected for all users ($t = 4.42$, $p < .01$), and for certified public accountants and chartered financial analysts ($t = 7.38$, $p < .01$). The overall average understandability score was significantly higher than the criterion level of 57%. The research hypothesis is accepted for commercial bank loan officer trainees ($t = -2.81$, $p < .01$). The overall average understandability score was significantly lower than the criterion level of 57%.

Hypothesis II stated that the level of understandability of narrative disclosures varies significantly among classes of sophisticated users, so that certified public accountants understand them better than chartered financial analysts who, in turn, understand them better than commercial bank loan officer trainees. The three-way F-test (Table 9) and a one-way F-test (Appendix D) show that there is a statistically significant difference in the understandability of narrative disclosures among classes of sophisticated users ($p < .0001$).

An a posteriori contrast (the Scheffe Procedure[1]) (see Table 10) was then performed at the .05 level and showed that there was no statistically significant difference between the understanding of certified public accountants and chartered financial analysts. Thus, the first part of the null hypothesis is not rejected.

TABLE 8

TESTING THE HYPOTHESIS THAT SOPHISTICATED USERS DO NOT UNDERSTAND WELL THE NARRATIVE DISCLOSURES CONTAINED IN FINANCIAL REPORTS

CPA/CFA/ABA	CPA/CFA	ABA
$t = \frac{58.5582 - 57.00}{.352254} = +4.42$	$t = \frac{60.1210 - 57.00}{.422685} = +7.38$	$t = \frac{55.3186 - 57.00}{.597889} = -2.81$
$+4.42 \geq +2.57$ reject Ho	$+7.38 \geq +2.57$ reject Ho	$-2.81 < +2.57$ accept Ho

General Form of the Hypothesis: Ho: 57.00

H_1: -57.00

Decision Rule: If $t \geq +2.57$, reject Ho
If $t < +2.57$, accept Ho
} with a = .01

t-statistic: $t = \frac{\bar{X} - U_x}{S_{\bar{x}}}$

$S_{\bar{x}} = \frac{S_x}{\sqrt{n}}$

$S_x = \sqrt{\frac{\Sigma(X - \bar{X})^2}{n - 1}}$

TABLE 9

ANALYSIS OF VARIANCE: CLOZE SCORES OF SOPHISTICATED USER GROUPS BY MESSAGES BY INDEPENDENT AUDIT FIRMS

CPA/CFA/ABA					
Source	D.F.	Sum-of-Squares	Mean-Squares	F-Ratio	F-Prob
Main Effects	8	14272.113	1784.0142	16.324	.00001
Users	2	5481.801	2740.9004	25.080	.00001
Messages	3	8847.180	2949.0598	26.985	.00001
Audit Firms	3	275.346	91.7821	.840	.47213
2-Way Interactions	21	4201.824	200.0868	1.831	.01265
Users/Messages	6	428.939	71.4899	.654	.68681
Users/Auditors	6	436.514	72.7524	.666	.67745
Messages/Auditors	9	3263.606	362.6228	3.318	.00053
3-Way Interactions	18	2484.941	138.0523	1.263	.20401
Users/Messages/ Audit Firms	18	2484.940	138.0522	1.263	.20401
Explained	47	20958.938	445.9348	4.080	.00100
Residual	960	104913.380	109.2848		
Total	1007	125872.310	124.9973		

TABLE 9--Continued

CPA/CFA					
Source	D.F.	Sum-of-Squares	Mean-Squares	F-Ratio	F-Prob
Main Effects	7	6335.203	905.0288	8.273	.00001
Users	1	37.160	37.1596	.340	.56021
Messages	3	5849.266	1949.7551	17.824	.00001
Audit Firms	3	377.383	125.7943	1.150	.32818
2-Way Interactions	15	3816.879	254.4586	2.326	.00307
Users/Messages	3	255.902	85.3008	.780	.50548
Users/Auditors	3	194.189	64.7297	.592	.62058
Messages/Auditors	9	3313.318	368.1462	3.365	.00048
3-Way Interactions	9	1394.840	154.9822	1.417	.17689
Users/Messages/ Audit Firms	9	1394.840	154.9822	1.417	.17689
Explained	31	11546.938	372.4817	3.405	.00100
Residual	648	70884.563	109.3898		
Total	679	82431.500	121.4013		

TABLE 10

SUMMARY OF A POSTERIORI CONTRASTS (SCHEFFE PROCEDURE)

Cloze Scores by Sophisticated User Groups (Appendix D.)				
		CPA/CFA/ABA	CPA/CFA	ABA
Subset 1:	ABA trainees	55.3177		
Subset 2:	CPA	60.4098 } 60.1210		
	CFA	59.8111 }		
Cloze Scores by Messages (Appendix E.)				
Subset 1:	Std Format Footnote	57.1026 } 55.9050	58.4163 } 57.4686	54.4606 } 52.5562
	Mgts' Anal. of Ops.	54.7355 }	56.5794 }	50.5289 }
Subset 2:	Nonstd Format Foot.	60.0798 } 61.2325	61.3841 } 62.8532	57.2115 } 57.9821
	Qual. Auditor's Rep	62.2884 }	64.2792 }	58.6103 }

The Scheffe Procedure did show, however, that there was a statistically significant difference between these two groups of sophisticated users (combined average understandability score of 60.1210) and commercial bank loan officer trainees with a mean understandability score of 55.3177. Thus, the second part of the null hypothesis is rejected at the .05 level.

Hypotheses IIA stated that within each independent audit firm, the level of understandability varies significantly for qualified auditors' reports among classes of users, so that certified public accountants understand them better than chartered financial analysts who, in turn, understand them better than commercial bank loan officer trainees. Using a one-way F-test, Tables 11 and 12 show that the level of understandability does not vary significantly for qualified auditors' reports among classes of sophisticated users for Price Waterhouse & Co. and for Ernst & Ernst. Thus, the null hypothesis is accepted for Price Waterhouse & Co., and for Ernst & Ernst.

However, Tables 13 and 14 show that the level of understandability does vary significantly for qualified auditors' reports among classes of sophisticated users for Arthur Anderson & Co. ($p < .001$) and for Peat, Marwick, Mitchell & Co. ($p < .05$).

Two a posteriori contrasts (the Scheffe Procedure) (see Tables 13 and 14) were then performed at the .05 level and showed that there was no statistically significant difference

TABLE 11

ANALYSIS OF VARIANCE: CLOZE SCORES BY SOPHISTICATED USER GROUPS FOR PRICE WATERHOUSE & CO.'S QUALIFIED AUDITORS' REPORTS

Source	D.F.	Sum-of-Squares	Mean-Squares	F-Ratio	F-Prob.
Between Groups	2	348.000	174.000	1.73278	.1855
Within Groups	60	6025.000	100.417		
Total	62	6373.000			

Groups	Count	Mean	Std. Dev.	Std. Err.	Min	Max	95% Confidence Interval
C. P. A.	21	57.0175	11.85140	2.58619	31.58	70.00	51.6228 to 62.4122
C. F. A.	18	62.8250	9.08072	2.14035	46.43	90.00	58.3092 to 67.3407
A. B. A./Trainee	24	58.5054	8.88100	1.81283	42.00	76.00	54.7552 to 62.2555
Total	63	59.2436	10.13869	1.27734	31.58	90.00	56.6902 to 61.7969

TABLE 12

ANALYSIS OF VARIANCE: CLOZE SCORES BY SOPHISTICATED USER GROUPS FOR ERNST & ERNST'S QUALIFIED AUDITORS' REPORTS

Source	D.F.	Sum-of Squares	Mean-Squares	F-Ratio	F-Prob.
Between Groups	2	246.0625	123.031	1.33126	.2716
Within Groups	62	5729.8755	92.417		
Total	64	5975.9380			

Groups	Count	Mean	Std. Dev.	Std. Err.	Min	Max	95% Confidence Interval
C. P. A.	21	62.6037	9.59150	2.09304	45.28	79.59	58.2377 to 66.9697
C. F. A.	18	60.8555	11.02250	2.59804	41.51	81.63	55.3741 to 66.3368
A. B. A./Trainee	26	58.0710	8.54283	1.67539	43.39	75.51	54.6205 to 61.5216
Total	65	60.3065	9.66302	1.19855	41.51	81.63	57.9121 to 62.7009

TABLE 13

ANALYSIS OF VARIANCE: CLOZE SCORES BY SOPHISTICATED USER GROUPS FOR ARTHUR ANDERSON & CO.'S QUALIFIED AUDITORS' REPORTS

Source	D.F.	Sum-of Squares	Mean Squares	F-Ratio	F-Prob.
Between Groups	2	1377.250	688.625	8.61435	.0005
Within Groups	69	5515.813	79.939		
Total	71	6893.063			

Groups	Count	Mean	Std. Dev.	Std. Err.	Min	Max	95% Confidence Interval
C. P. A.	25	69.3584	9.56488	1.91298	49.02	84.00	65.4102 to 73.3065
C. F. A.	24	65.7679	9.28109	1.89449	50.98	82.35	61.8488 to 69.6869
A. B. A./Trainee	23	58.7743	7.80133	1.62669	47.06	74.00	55.4008 to 62.1478
Total	72	64.7805	9.85319	1.16121	47.06	84.00	62.4651 to 67.0959

Scheffe Procedure

Subset 1:	A. B. A./Trainee	58.7743	
Subset 2:	C. P. A.	69.3584	67.60
	C. F. A.	65.7679	

TABLE 14

ANALYSIS OF VARIANCE: CLOZE SCORES BY SOPHISTICATED USER GROUPS FOR PEAT, MARWICK, MITCHELL & CO.'S QUALIFIED AUDITORS' REPORTS

Source	D.F.	Sum-of Squares	Mean-Squares	F-Ratio	F-Prob.
Between Groups	2	774.000	387.000	3.27050	.0450
Within Groups	59	6981.500	118.331		
Total	61	7755.500			

Groups	Count	Mean	Std. Dev.	Std. Err.	Min	Max	95% Confidence Interval
C. P. A.	24	67.3037	11.98950	2.44734	40.35	84.00	62.2410 to 72.3664
C. F. A.	19	66.4005	11.06810	2.53920	45.65	88.00	61.0658 to 71.7351
A. B. A./Trainee	19	59.2831	9.03773	2.07340	45.65	80.00	54.9270 to 63.6391
Total	62	64.5690	11.27560	1.43200	40.35	88.00	61.7055 to 67.4324

Scheffe Procedure

Subset 1:	A. B. A./Trainee	59.2831	
Subset 2:	C. P. A.	67.3037	} 66.90
	C. F. A.	66.4005	}

between the abilities of certified public accountants and chartered financial analysts to understand narrative disclosures, as hypothesized, for either Arthur Anderson & Co. or Peat, Marwick, Mitchell & Co. The Scheffe Procedures did show, however, that for both Arthur Anderson & Co. and Peat, Marwick, Mitchell & Co., these two groups of sophisticated users understood auditors' qualified reports better than commercial bank loan officer trainees did. Thus, the second part of the null hypothesis is rejected at the .05 level.

Hypothesis III stated that standard format footnotes and managements' analyses of operations are significantly more understandable than are nonstandard format footnotes and qualified auditors' reports. The three-way F-test (Table 9) as well as a one-way F-test (Appendix E) show that there is a statistically significant difference in the understandability level among the four types of narrative disclosures for all users ($p < .0001$), for certified public accountants and chartered financial analysts ($p < .0001$), and for commerical bank loan officer trainees ($p < .0001$).

Three a posteriori contrasts (the Scheffe Procedure) (see Table 10) were then performed at the .05 level and showed that there was no statistically significant difference within subset (a) between standard format footnotes and managements' analyses of operations, nor within subset (b) between nonstandard format footnotes and qualified auditors' reports for all users, for certified public accountants and chartered financial analysts, and for commercial bank loan officer trainees. However,

subset (a) differed significantly from subset (b) indicating, contrary to expectations, that managements' analyses of operations and standard format footnotes were both significantly less understandable than the other two messages.

Hypothesis IV stated that the level of understandability of narrative disclosures varies significantly among source corporations. Using a one-way F-test, Table 15 shows that there is a statistically significant difference in the level of understandability of narrative disclosures among source corporations ($p < .0001$), confirming hypothesis IV for all users, for certified public accountants and chartered financial analysts, and for commercial bank loan officer trainees.

Three a posteriori contrasts (the Scheffe Procedure) were then performed at the .05 level and showed that there were four categories of source corporations whose mean understandability scores differed significantly for all users, three categories where they differed for certified public accountants and chartered financial analysts, and two categories where they differed for commercial bank loan officer trainees (see Table 15).

Hypothesis V stated that there is a significant interaction[2] effect between types of messages contained in financial reports and classes of sophisticated users, so that certified public accountants understand qualified auditors' reports better than do chartered financial analysts and commercial bank loan officer trainees. The three-way F-test (Table 9), as well as a two-way F-test (Appendix F), show that there is no significant interaction effect between types of messages contained in financial

TABLE 15

ANALYSIS OF VARIANCE: CLOZE SCORES BY SOURCE CORPORATIONS

CPA/CFA/ABA					
Source	D.F.	Sum-of Squares	Mean-Squares	F-Ratio	F-Prob.
Between Groups	15	15018	1001.200	8.95920	.0000
Within Groups	992	110857	111.751		
Total	1007	125875			
CPA/CFA					
Between Groups	15	9898	659.866	6.04047	.0000
Within Groups	664	72536	109.241		
Total	679	82434			
ABA					
Between Groups	15	8858	590.542	6.24884	.0000
Within Groups	312	29485	94.504		
Total	327	38343			

CPA/CFA/ABA							
Corporations	Count	Mean	Std. Dev.	Std. Err.	Min	Max	95% Confidence Interval

TABLE 15--Continued

Bangor Punta	68	58.4167	12.80220	1.55250	30.00	88.00	55.3179 to 61.5155
Wachovia Realty	62	56.3788	9.67309	1.22848	34.62	79.24	53.9223 to 58.8353
Anaconda	66	57.2131	11.70300	1.44054	30.61	90.00	54.3362 to 60.0901
Allegheny Power	59	54.2712	10.55990	1.37478	32.00	76.00	51.5192 to 57.0231
McDonnell Douglas	59	50.4299	11.89700	1.54886	33.33	92.45	47.3295 to 53.5303
U. S. Realty	59	62.3119	8.10595	1.05519	41.67	76.92	60.1997 to 64.4241
United Gas Pipe.	67	55.0430	11.73680	1.43388	23.08	82.35	52.1802 to 57.9059
Cousins Mortgage	64	55.2838	9.23578	1.15447	36.54	76.00	52.9768 to 57.5908
Bourns	60	59.3557	8.31421	1.07336	40.35	82.46	57.2079 to 61.5035
Kaneb Services	62	60.5817	12.12600	1.54000	34.00	85.71	57.5023 to 63.6611
Recognition Equip	68	58.5149	12.15720	1.47428	30.77	88.89	55.5722 to 61.4576
Viking General	59	60.5158	9.75966	1.27060	38.46	80.36	57.9724 to 63.0592
First of Denver	67	56.4390	11.12360	1.35897	31.58	80.00	53.7257 to 59.1523
Harman Indus.	58	66.3343	8.40184	1.10322	48.98	82.00	64.1251 to 68.5434
Security Mort.	66	61.8485	9.67992	1.19152	40.00	82.00	59.4689 to 64.2281
Banner Indus.	64	64.4687	9.39261	1.17408	40.00	84.00	62.1225 to 66.8140
Total	1008	58.5589	11.18030	.35215	23.08	92.45	57.8678 to 59.2499

TABLE 15--Continued

CPA/CFA							
Bangor Punta	47	61.6130	11.75380	1.71446	34.00	88.00	58.1619 to 65.0640
Wachovia Realty	43	57.7273	9.80152	1.49472	34.62	79.24	54.7109 to 60.7438
Anaconda	43	60.7355	11.27290	1.71909	36.73	90.00	57.2663 to 64.2048
Allegheny Power	39	56.1538	9.85570	1.57817	34.00	76.00	52.9590 to 59.3487
McDonnell Douglas	35	52.5345	13.64530	2.30648	33.33	92.45	47.8472 to 57.2218
U. S. Realty	40	63.2554	8.14295	1.28751	41.67	75.00	60.6512 to 65.8596
United Gas Pipe.	47	57.4027	11.07700	1.61574	32.69	82.35	54.1503 to 60.6550
Cousins Mortgage	46	55.5762	9.00401	1.32757	36.54	76.00	52.9023 to 58.2501
Bourns	38	58.7988	9.21743	1.49527	40.35	82.46	55.7691 to 61.8285
Kaneb Services	43	64.9497	10.70740	1.63287	42.00	85.71	61.6544 to 68.2449
Recognition Equip	44	57.8399	12.21730	1.84183	30.77	83.33	54.1255 to 61.5543
Viking General	41	60.2721	10.07880	1.57404	38.46	80.36	57.0908 to 63.4533
First of Denver	43	58.4146	11.3253	1.72710	31.58	80.00	54.9291 to 61.9000
Harman Indus.	38	67.5960	7.95341	1.29021	53.06	82.00	64.9818 to 70.2102
Security Mort.	47	62.4681	9.62983	1.40465	44.00	82.00	59.6407 to 65.2955
Banner Indus.	46	65.6522	9.97162	1.47024	40.00	84.00	62.6909 to 68.6134
Total	680	60.1218	11.01840	.42254	30.77	92.45	59.2922 to 60.9514

TABLE 15--Continued

ABA							
Bangor Punta	21	51.2633	12.39240	2.70424	30.00	80.00	45.6224 to 56.9043
Wachovia Realty	19	53.3267	8.87533	2.03614	36.54	67.92	49.0490 to 57.6045
Anaconda	23	50.6278	9.61597	2.00507	30.61	64.00	46.4695 to 54.7860
Allegheny Power	20	50.6000	11.16580	2.49674	32.00	76.00	45.3743 to 55.8257
McDonnell Douglas	24	47.3607	8.07024	1.64733	35.85	67.86	43.9530 to 50.7685
U. S. Realty	19	60.3257	7.86695	1.80480	50.00	76.92	56.5339 to 64.1174
United Gas Pipe.	20	49.4979	11.63300	2.60122	23.08	66.67	44.0535 to 54.9423
Cousins Mort.	18	54.5366	10.03470	2.36520	40.38	74.07	49.5465 to 59.5267
Bourns	22	60.3176	6.55835	1.39824	50.88	70.37	57.4098 to 63.2254
Kaneb Services	19	50.6963	9.05876	2.07822	34.00	67.35	46.3301 to 55.0625
Recognition Equip	24	59.7524	12.20870	2.49208	44.23	88.89	54.5971 to 64.9077
Viking General	18	61.0710	9.24741	2.17964	42.31	75.00	56.4724 to 65.6696
First of Denver	24	52.8995	10.02560	2.04625	34.62	66,67	48.6665 to 57.1325
Harman Indus.	20	63.9370	8.90815	1.99192	48.98	78.00	59.7678 to 68.1061
Security Mort.	19	60.3158	9.89423	2.26989	40.00	74.00	55.5469 to 65.0846
Banner Indus.	18	61.4444	7.08976	1.67107	50.00	70.00	57.9188 to 64.9701
Total	328	55.3186	10.82860	.59791	23.08	88.89	54.1423 to 56.4948

TABLE 15--Continued

CPA/CFA/ABA							
Subset 1:	1	Bangor Punta	58.4167	Subset 2:	1	Bangor Punta	58.4167
	2	Wachovia Realty	56.3788		2	Wachovia Realty	56.3788
	3	Anaconda	57.2131		3	Anaconda	57.2131
	4.	Allegheny Power	54.2712		4	Allegheny Power	54.2712
	5	McDonnell Douglas	50.4299		6	U. S. Realty	62.3119
	7	United Gas Pipe Line	55.0430		7	United Gas Pipe Line	55.0430
	8	Cousins Mortgage	55.2838		8	Cousins Mortgage	55.2838
	9	Bourns	59.3557		9	Bourns	59.3557
	11	Recognition Equipment	58.5149		10	Kaneb Services	60.5817
	13	First of Denver	56.4390		11	Recognition Equip.	58.5149
Subset 3:	1	Bangor Punta	58.4167		12	Viking General	60.5158
	2	Wachovia Realty	56.3788		13	First of Denver	56.4390
	3	Anaconda	57.2131		15	Security Mortgage	61.8485
	6	U. S. Realty	62.3119	Subset 4:	1	Bangor Punta	58.4167
	8	Cousins Mortgage	55.0430		3	Anaconda	57.2131
	9	Bourns	59.3557		6	U. S. Realty	62.3119

TABLE 15--Continued

10	Kaneb Services	60.5817	9	Bourns	59.3557
11	Recognition Equip.	58.5149	10	Kaneb Services	60.5817
12	Viking General	60.5158	11	Recognition Equip.	58.5149
13	First of Denver	56.4390	12	Viking General	60.5158
15	Security Mortgage	61.8485	14	Harman Indus.	66.3343
16	Banner Industries	64.4687	15	Security Mortgage	61.8485
			16	Banner Industries	64.4687

	Corporations
Subset 1:	1 2 3 4 5 7 8 9 11 13
Subset 2:	1 2 3 4 6 7 8 9 10 11 12 13 15
Subset 3:	1 2 3 6 8 9 10 11 12 13 15 16
Subset 4:	1 3 6 9 10 11 12 14 15 16

TABLE 15--Continued

CPA/CFA							
Subset 1:	1	Bangor Punta	61.6130	Subset 2:	1	Bangor Punta	61.6130
	2	Wachovia Realty	57.7273		2	Wachovia Realty	57.7273
	3	Anaconda	60.7355		3	Anaconda	60.7355
	4	Allegheny Power	56.1538		4	Allegheny Power	56.1538
	5	McDonnell Douglas	52.5345		6	U. S. Realty	63.2554
	6	U. S. Realty	63.2554		7	United Gas Pipe Line	57.4027
	7	United Gas Pipe Line	57.4027		8	Cousins Mortgage	55.5762
	8	Cousins Mortgage	55.5762		9	Bourns	58.7988
	9	Bourns	58.7988		10	Kaneb Services	64.9497
	12	Viking General	60.2721		11	Recognition Equip.	57.8399
	13	First of Denver	58.4146		12	Viking General	60.2721
Subset 3:	1	Bangor Punta	61.6130		13	First of Denver	58.4146
	2	Wachovia Realty	57.7273		15	Security Mortgage	62.6522
	3	Anaconda	60.7355		16	Banner Industries	60.1218
	4	Allegheny Power	56.1538	Subset 3:	12	Viking General	60.2721
	6	U. S. Realty	63.2554		13	First of Denver	58.4146

TABLE 15--Continued

7	United Gas Pipe Line	57.4027	14	Harman Industries	67.5960
9	Bourns	58.7988	15	Security Mortgage	62.6522
10	Kaneb Services	64.9497	16	Banner Industries	60.1218
11	Recognition Equip.	57.8399			

	Corporations
Subset 1:	1 2 3 4 5 6 7 8 9 12 13
Subset 2:	1 2 3 4 6 7 8 9 10 11 12 13 15 16
Subset 3:	1 2 3 4 6 7 9 10 11 12 13 14 15 16

ABA

Subset 1:	1	Bangor Punta	51.2633	Subset 1:	9	Bourns	60.3176
	2	Wachovia Realty	53.3267		10	Kaneb Services	50.6963
	3	Anaconda	50.6278		11	Recognition Equip.	59.7524
	4	Allegheny Power	50.6000		12	Viking General	61.0710
	5	McDonnell Douglas	47.3607		13	First of Denver	52.8995

TABLE 15--Continued

	6	U. S. Realty	60.3257		15	Security Mortgage	60.3158
	7	United Gas Pipe Line	49.4979		16	Banner Industries	61.4444
	8	Cousins Mortgage	54.5366				
Subset 2:	1	Bangor Punta	51.2633	Subset 2:	10	Kaneb Services	60.3176
	2	Wachovia Realty	53.3267		11	Recognition Equip.	59.7524
	3	Anaconda	50.6278		12	Viking General	61.0710
	4	Allegheny Power	50.6000		13	First of Denver	52.8995
	6	U. S. Realty	60.3257		14	Harman Industries	63.9370
	7	United Gas Pipe Line	49.4979		15	Security Mortgage	60.3158
	8	Cousins Mortgage	54.5366		16	Banner Industries	61.4444
	9	Bourns	60.3176				

	Corporations
Subset 1:	1 2 3 4 5 6 7 8 9 10 11 12 13 15 16
Subset 2:	1 2 3 4 6 7 8 9 10 11 12 13 14 15 16

reports and classes of sophisticated users. The null hypothesis is accepted, thus failing to confirm hypothesis V.

Table 9 and Appendix G indicate that there is no statistically significant difference in the level of understandability of narrative disclosures among independent audit firms, thus confirming Hypothesis VI for all users, for certified public accountants and chartered financial analysts, and for commercial bank loan officer trainees. That is, Price Waterhouse & Co., with a mean understandability score of 57.6482, Ernst & Ernst, with a mean understandability score of 58.7670, Arthur Anderson & Co., with a mean understandability score of 59.1338, and Peat, Marwick, Mitchell & Co., with a mean understandability score of 58.6707, associate their names with narrative disclosures that do not differ significantly in their understandability levels for all users. The mean understandability scores of certified public accountants and chartered financial analysts were 58.7882, 60.5725, 60.2708, and 60.8488, respectively. Commercial bank loan officer trainees' mean understandability scores were 55.4090, 55.5306, 56.3148, and 54.0735, respectively.

Hypothesis VIA stated that there are no significant interaction effects between audit firms and any of the other two independent variables. Two-way (Appendix H) and three-way (Table 9) F-tests show that there is no significant interaction effect between audit firms and users. However, Table 9 and Appendix I show that there is a significant interaction effect

between audit firms and types of messages for all users ($p < .001$), and for certified public accountants and chartered financial analysts ($p < .001$), but not for commercial bank loan officer trainees.

Table 16 presents a comparison of the actual mean understandability scores for narrative disclosures by independent audit firms, with the expected mean understandability scores derived from the grand mean of 58.5580 for all users, and 60.1210 for certified public accountants and chartered financial analysts, and the unadjusted deviations of the multiple classification analysis found at the bottom of Appendix I. While a definitive statement cannot be made as to which of the sixteen narrative disclosure/independent audit firm combinations were responsible for the significant interaction effect for all users, the managements' analyses of operations audited by Peat, Marwick, Mitchell & Co., with the largest difference (-2.92) between the actual mean understandability score (51.93) and the expected mean understandability score (54.85), were largely responsible. For certified public accountants and chartered financial analysts, the managements' analyses of operations audited by Ernst & Ernst, with the largest difference (3.60) between the actual mean understandability score (60.63) and the expected mean understandability score (57.03), were largely responsible.

In addition, there is no significant three-way interaction effect among classes of sophisticated users, narrative disclosures contained in financial reports, and independent

TABLE 16

A COMPARISON OF ACTUAL MEAN UNDERSTANDABILITY SCORES FOR NARRATIVE DISCLOSURES BY INDEPENDENT AUDIT FIRMS WITH EXPECTED MEAN UNDERSTANDABILITY SCORES DERIVED FROM THE GRAND MEAN AND THE UNADJUSTED DEVIATIONS OF THE MULTIPLE CLASSIFICATION ANALYSIS

CPA/CFA/ABA								
Audit Firms		Narrative disclosures						
		Standard Format Footnote		Nonstandard Format Footnote		Managements' Analyses of Operations		Qualified Auditors' Reports
		Mean	Difference	Mean	Difference	Mean	Difference	Mean	Difference
PW	A	56.13	- .06	59.52	.35	55.63	1.80	59.24	-2.14
	E	56.19		59.17		53.83		61.38	
EE	A	60.14	2.83	57.69	-2.60	56.89	1.94	60.31	-2.19
	E	57.31		60.29		54.95		62.50	
AA	A	55.75	-1.93	61.02	.36	54.49	- .83	64.78	1.91
	E	57.68		60.66		55.32		62.87	
PMM	A	56.62	- .59	61.77	1.58	51.93	-2.92	64.57	2.17
	E	57.21		60.19		54.85		62.40	

Code: PW = Price Waterhouse & Co. EE = Ernst & Ernst AA = Arthur Anderson & Co. PMM = Peat, Marwick, Mitchell & Co. A = Actual mean understandability score obtained for narrative disclosures by audit firm. E = Expected mean understandability score derived from the Grand Mean of 58.56 and the unadjusted deviations of the multiple classification analysis.

TABLE 16--Continued

CPA/CFA								
Audit Firms		Narrative Disclosures						
		Standard Format Footnote		Nonstandard format Footnote		Managements' Analyses of Operations		Qualified Auditors' Reports	
		Mean	Difference	Mean	Difference	Mean	Difference	Mean	Difference
PW	A	58.06	:98	60.96	.91	56.64	1.39	59.70	-3.25
	E	57.08		60.05		55.25		62.95	
EE	A	60.73	1.87	59.01	-2.82	60.63	3.60	61.80	-2.93
	E	58.86		61.83		57.03		64.73	
AA	A	56.59	-1.97	61.42	- .11	55.32	-1.41	67.70	3.17
	E	58.56		61.53		56.73		64.43	
PMM	A	58.62	- .52	63.63	1.52	54.06	-1.25	66.90	1.89
	E	59.14		62.11		57.31		65.01	

audit firms (see Table 9)

Hypothesis VII stated that within a single independent audit firm, the level of understandability does not vary significantly for qualified auditors' reports among source corporations. Using a one-way F-test, Tables 17 and 18 show that the level of understandability does not vary significantly for qualified auditors' reports among source corporations for Price Waterhouse & Co. and for Arthur Anderson & Co. for all users, for certified public accountants and chartered financial analysts, and for commercial bank loan officer trainees. Tables 19 and 20 also show that the level of understandability does not vary significantly for qualified auditors' reports among source corporations for Ernst & Ernst and for Peat, Marwick, Mitchell & Co. for commercial bank loan officer trainees.

Using a one-way F-test, Tables 19 and 20, show that the level of understandability does vary significantly for qualified auditors' reports among source corporations for Ernst & Ernst and for Peat, Marwick, Mitchell & Co. for all users, and for certified public accountants and chartered financial analysts.

Two a posteriori contrasts (the Scheffe Procedure) were then performed at the .05 level and showed that, for Ernst & Ernst's clients, there was a statistically significant difference among (1) McDonnell Douglas Corporation, with a mean understandability score of 52.2393 for all users, and 52.1999 for certified public accountants and chartered financial analysts, (2) United States Realty Investors, Inc., with a mean understandability score of 59.5576 for all users, and 59.8949 for certified public account-

TABLE 17

ANALYSIS OF VARIANCE: CLOZE SCORES BY CORPORATIONS FOR PRICE WATERHOUSE & CO.'S QUALIFIED AUDITORS' REPORTS

Source	D.F.	Sum-of Squares	Mean-Squares	F-Ratio	F-Prob.
CPA/CFA/ABA					
Between Groups	9	814.7500	90.5278	.863207	.5631
Within Groups	53	5558.3130	104.8740		
Total	62	6373.0630			
CPA/CFA					
Between Groups	9	873.5625	97.0625	.768196	.6460
Within Groups	29	3664.1880	126.3510		
Total	38	4537.7505			
ABA					
Between Groups	9	335.5000	37.2778	.352970	.9396
Within Groups	14	1478.5630	105.6120		
Total	23	1814.0630			

TABLE 17--Continued

CPA/CFA/ABA							
Corporations	Count	Mean	Std. Dev.	Std. Err.	Min	Max	95% Confidence Interval
Anaconda	18	61.4444	8.53539	2.01181	48.00	90.00	57.1999 to 65.6890
Allegheny Power	14	56.8571	11.19660	2.99241	34.00	76.00	50.3924 to 63.3218
Recognition Equip	14	54.0106	11.72220	3.13288	31.58	66.67	47.2424 to 60.7788
Viking General	17	63.1882	7.51561	1.82280	46.43	75.00	59.3240 to 67.0523
Total	63	59.2436	10.13860	1.27734	31.58	90.00	56.6902 to 61.7970
CPA/CFA							
Anaconda	12	64.5000	8.36116	2.41366	58.00	90.00	59.1876 to 69.8124
Allegheny Power	9	57.5555	10.89860	3.63286	34.00	70.00	49.1782 to 65.9329
Recognition Equip	9	52.4366	13.22870	4.40957	31.58	66.67	42.2681 to 62.6051
Viking General	9	62.6988	8.25305	2.75102	46.43	69.64	56.3550 to 69.0427
Total	39	59.6979	10.92770	1.74983	31.58	90.00	56.1556 to 63.2403

TABLE 17--Continued

ABA							
Anaconda	6	55.3333	5.16403	2.10820	48.00	64.00	49.9141 to 60.7525
Allegheny Power	5	55.6000	12.91510	5.77583	42.00	76.00	39.5640 to 71.6360
Recognition Equip	5	56.8440	8.99756	4.02383	47.37	66.67	45.6722 to 68.0157
Viking General	8	63.7387	7.11304	2.51484	53.06	75.00	57.7921 to 69.6854
Total	24	58.5054	8.88100	1.81283	42.00	76.00	54.7553 to 62.2555

TABLE 18

ANALYSIS OF VARIANCE: CLOZE SCORES BY CORPORATIONS FOR ARTHUR ANDERSON & CO.'S QUALIFIED AUDITORS' REPORTS

Source	D.F.	Sum-of Squares	Mean-Squares	F-Ratio	F-Prob.
CPA/CFA/ABA					
Between Groups	9	615.4375	68.3819	.67537	.7280
Within Groups	62	6277.6880	101.2530		
Total	71	6893.1255			
CPA/CFA					
Between Groups	9	616.1875	68.4653	.718059	.6892
Within Groups	39	3718.5630	95.3477		
Total	48	4334.7505			
ABA					
Between Groups	9	276.4375	30.7153	.375832	.9268
Within Groups	13	1062.4380	81.7260		
Total	22	1338.8755			

TABLE 18--Continued

CPA/CFA/ABA							
Corporations	Count	Mean	Std. Dev.	Std. Err.	Min	Max	95% Confidence Interval
United Gas Pipe.	16	62.8024	10.93680	2.73420	49.02	82.35	56.9746 to 68.6302
Cousins Mortgage	17	60.6681	7.18871	1.74352	47.06	70.59	56.9720 to 64.3642
Security Mortgage	22	67.2727	9.33088	1.98935	50.00	82.00	63.1356 to 71.4098
Banner Industries	17	67.5294	10.68950	2.59259	50.00	84.00	62.0334 to 73.0254
Total	72	64.7805	9.85324	1.16121	47.06	84.00	62.4651 to 67.0959
CPA/CFA							
United Gas Pipe.	11	66.3109	10.76880	3.24691	49.02	82.35	59.0763 to 73.5454
Cousins Mortgage	12	62.5807	6.86947	1.98304	52.94	70.59	58.2161 to 66.9454
Security Mortgage	15	68.9333	9.67692	2.49857	54.00	82.00	63.5744 to 74.2922
Banner Industries	11	72.5454	8.53664	2.57389	56.00	84.00	66.8104 to 78.2804
Total	49	67.5998	9.50301	1.35757	49.02	84.00	64.8702 to 70.3293

TABLE 18--Continued

ABA							
United Gas Pipe.	5	55.0840	7.09230	3.17177	49.02	66.67	46.2779 to 63.8901
Cousins Mortgage	5	56.0780	6.29391	2.81472	47.06	64.71	48.2632 to 63.8928
Security Mortgage	7	63.7143	8.03569	3.03720	50.00	74.00	56.2825 to 71.1460
Banner Industries	6	58.3333	7.94149	3.24210	50.00	70.00	49.9994 to 66.6673
Total	23	58.7743	7.80115	1.62665	47.06	74.00	55.4009 to 62.1478

TABLE 19

ANALYSIS OF VARIANCE: CLOZE SCORES BY CORPORATIONS FOR ERNST & ERNST'S QUALIFIED AUDITORS' REPORTS

Source	D.F.	Sum-of Squares	Mean-Squares	F-Ratio	F-Prob.
CPA/CFA/ABA					
Between Groups	9	1820.188	202.243	2.67650	.0118
Within Groups	55	4155.938	75.562		
Total	64	5976.125			
CPA/CFA					
Between Groups	9	1641.063	182.340	2.30515	.0428
Within Groups	29	2293.938	79.101		
Total	38	3935.001			
ABA					
Between Groups	9	373.562	41.507	.45773	.8821
Within Groups	16	1450.875	90.680		
Total	25	1824.437			

TABLE 19--Continued

CPA/CFA/ABA							
Corporations	Count	Mean	Std. Dev.	Std. Err.	Min	Max	95% Confidence Interval
McDonnell Doug.	16	52.2393	7.69530	1.92383	41.51	64.15	48.1387 to 56.3398
U. S. Realty	17	59.5576	8.46385	2.05278	41.67	75.00	55.2059 to 63.9093
First of Denver	16	62.6393	6.50340	1.62585	51.11	73.33	59.1739 to 66.1047
Harman Indus.	16	66.8367	9.95678	2.48919	48.98	81.63	61.5311 to 72.1423
Total	65	60.3065	9.66317	1.19857	41.51	81.63	57.9121 to 62.7009
CPA/CFA							
McDonnell Doug.	9	52.1999	7.48925	2.49642	41.51	64.15	46.4432 to 57.9566
U. S. Realty	12	59.8949	9.19378	2.65401	41.67	75.00	54.0535 to 65.7364
First of Denver	9	65.4322	5.56763	1.85588	57.78	73.33	61.1525 to 69.7118
Harman Indus.	9	70.2943	9.13380	3.04460	53.06	81.63	63.2735 to 77.3152
Total	39	61.7938	10.17610	1.62948	41.51	81.63	58.4981 to 65.0955

TABLE 19--Continued

ABA							
McDonnell Doug.	7	52.2900	8.55839	3.23477	43.39	64.15	44.3748 to 60.2051
U. S. Realty	5	58.7480	7.27575	3.25381	52.08	70.83	49.7141 to 67.7819
First of Denver	7	59.0485	6.13615	2.31925	51.11	66.67	53.3735 to 64.7235
Harman Indus.	7	62.3918	9.77853	3.69594	48.98	75.51	53.3478 to 71.4349
Total	26	58.0711	8.54269	1.67536	43.39	75.51	54.6206 to 61.5216

CPA/CFA/ABA		Scheffe Procedure		CPA/CFA	
Subset 1:	McDonnell Douglas	52.2393	Subset 1:	McDonnell Douglas	52.1999
Subset 2:	U. S. Realty	59.5576	Subset 2:	U. S. Realty	59.8949
Subset 3:	First of Denver	62.6393	Subset 3:	First of Denver	65.4322
	Harman Industries	66.8367		Harman Industries	70.2943

TABLE 20

ANALYSIS OF VARIANCE: CLOZE SCORES BY CORPORATIONS FOR PEAT, MARWICK, MITCHELL & CO.'S QUALIFIED AUDITORS' REPORTS

Source	D.F.	Sum-of Squares	Mean-Squares	F-Ratio	F-Prob.
CPA/CFA/ABA					
Between Groups	9	2116.938	235.215	2.16916	.0395
Within Groups	52	5638.688	108.436		
Total	61	7755.625			
CPA/CFA					
Between Groups	9	1965.563	218.396	2.02766	.0675
Within Groups	33	3554.375	107.708		
Total	42	5519.938			
ABA					
Between Groups	9	416.375	46.264	.39511	.9086
Within Groups	9	1053.813	117.090		
Total	18	1470.188			

TABLE 20--Continued

CPA/CFA/ABA							
Corporations	Count	Mean	Std. Dev.	Std. Err.	Min	Max	95% Confidence Interval
Bangor Punta	17	71.1765	9.02946	2.18997	56.00	88.00	66.5339 to 75.8190
Wachovia Realty	15	56.6699	10.01620	2.58616	41.30	76.09	51.1232 to 62.2167
Bourns	16	61.2018	10.64570	2.66142	40.35	82.46	55.5291 to 66.8745
Kaneb Services	14	68.8571	9.72605	2.59940	46.00	80.00	63.2415 to 74.4728
Total	62	64.5690	11.27570	1.43201	40.35	88.00	61.7055 to 67.4325
CPA/CFA							
Bangor Punta	13	72.4615	8.13044	2.25498	64.00	88.00	67.5484 to 77.3747
Wachovia Realty	11	57.9054	10.61870	3.20166	41.30	76.09	50.7716 to 65.0391
Bourns	9	62.2155	13.36960	4.45652	40.35	82.46	51.9387 to 72.4922
Kaneb Services	10	73.8000	4.75639	1.50410	64.00	80.00	70.3975 to 77.2025
Total	43	66.9046	11.46420	1.74827	40.35	88.00	63.3765 to 70.4328

TABLE 20--Continued

ABA							
Bangor Punta	4	67.0000	11.83220	5.91608	56.00	80.00	48.1727 to 85.8273
Wachovia Realty	4	53.2725	8.44529	4.22264	45.65	65.27	39.8344 to 66.7106
Bourns	7	59.8985	6.43998	2.43408	50.88	68.42	53.9426 to 65.8545
Kaneb Services	4	56.5000	7.54983	3.77492	46.00	64.00	44.4867 to 68.5133
Total	19	59.2831	9.03754	2.07335	45.65	80.00	54.9272 to 63.6391

CPA/CFA/ABA			CPA/CFA		
Scheffe Procedure					
Subset 1:	Wachovia Realty	56.6699	Subset 1:	Wachovia Realty	57.9054
	Bourns	61.2018		Bourns	62.2155
Subset 2:	Bangor Punta	71.1765	Subset 2:	Bangor Punta	72.4615
	Kaneb Services	68.8571		Kaneb Services	73.8000

ants and chartered financial analysts, (3) First of Denver Mortgage Investors, Inc., with a mean understandability score of 62.6393 for all users, and 65.4322 for certified public accountants and chartered financial analysts, and (4) Harman Industries, Inc., with a mean understandability score of 66.8367 for all users, and 70.2943 for certified public accountants and chartered financial analysts.

The Scheffe Procedure also showed that, for Peat, Marwick, Mitchell & Co., a statistically significant difference among (1) Wachovia Realty Investments, Inc., with a mean understandability score of 56.6699 for all users, and 57.9054 for certified public accountants and chartered financial analysts, (2) Bourns, Inc., with a mean understandability score of 61.2018 for all users, and 62.2155 for certified public accountants and chartered financial analysts, (3) Bangor Punta Corporation, with a mean understandability score of 71.1765 for all users, and 72.4615 for certified public accountants and chartered financial analysts, and (4) Kaneb Services, Inc., with a mean understandability score of 68.8571 for all users, and 73.8000 for certified public accountants and chartered financial analysts.

Thus, the null hypothesis is rejected at the .05 level for Ernst & Ernst and Peat, Marwick, Mitchell, & Co.

Hypothesis VIII stated that the level of understandability of narrative disclosures varies significantly among industries. Using a one-way F-test, Table 21 shows that there is no statistically significant difference in the level of understandability

TABLE 21

ANALYSIS OF VARIANCE: CLOZE SCORES BY INDUSTRY CLASSIFICATION

Source	D.F.	Sum-of Squares	Mean-Squares	F-Ratio	F-Prob.
CPA/CFA/ABA					
Between Groups	2	29.00	14.500	.115765	.8907
Within Groups	1005	125880.00	125.254		
Total	1007	125909.00			
CPA/CFA					
Between Groups	2	268.00	134.000	1.103380	.3323
Within Groups	677	82218.00	121.445		
Total	679	82486.00			
ABA					
Between Groups	2	749.38	374.688	3.238510	.0405
Within Groups	325	37601.69	115.697		
Total	327	38351.07			

TABLE 21--Continued

CPA/CFA/ABA							
Industry Group	Count	Mean	Std. Dev.	Std. Err.	Min	Max	95% Confidence Interval
Manufacturing	379	58.3408	11.9139	.611978	30.00	92.45	57.1375 to 59.5441
Transportation/ Communication/ Electric/Gas & Sanitary Service	252	58.6184	11.7238	.738530	23.08	85.71	57.1639 to 60.0729
Finance/Insurance/Real Estate	377	58.7363	10.0169	.515895	31.58	82.00	57.7219 to 59.7507
Total	1008	58.5581	11.1818	.352195	23.08	92.45	57.8670 to 59.2492
CPA/CFA							
Manufacturing	245	59.9751	11.8905	.759655	30.77	92.45	58.4787 to 61.4714
Transportation/ Communication/ Electric/Gas & Sanitary Service	175	61.1469	11.1979	.846480	32.69	85.71	59.4762 to 62.8176
Finance/Insurance/Real Estate	260	59.5684	10.0004	.620201	31.58	82.00	58.3471 to 60.7897
Total	680	60.1211	11.0219	.422670	30.77	92.45	59.2912 to 60.9510

TABLE 21--Continued

ABA							
Manufacturing	134	55.3532	11.4142	.986038	30.00	88.89	53.4029 to 57.3035
Transportation/ Communication/ Electric/Gas & Sanitary Service	77	52.8726	10.8910	1.241150	23.08	76.00	50.4006 to 55.3445
Finance/Insurance/Real Estate	117	56.8878	9.8520	.910818	34.62	76.92	55.0838 to 58.6918
Total	328	55.3183	10.8297	.597968	23.08	88.89	54.1419 to 56.4946

Scheffe Procedure

Subset 1:	Manufacturing	55.3532	56.0685
	Finance/Insurance/Real Estate	56.8878	
Subset 2:	Transportation/Communication/Electric/Gas/Sanitary Services	52.8726	

of narrative disclosures among industries for all users, and for certified public accountants and chartered financial analysts. That is, 1. manufacturing with mean understandability scores of 58.3408 and 59.9751, respectively, 2. transportation, communication, electric, gas, and sanitary services with mean understandability scores of 58.6184 and 61.1469, respectively, and 3. finance, insurance, and real estate with mean understandability scores of 58.7363 and 59.5684, respectively, do not contain corporations whose financial reports include narrative disclosures that differ significantly in their understandability levels. Thus, the null hypothesis is accepted for all users, and for certified public accountants and chartered financial analysts.

Table 21, however, shows that there is a statistically significant difference in the level of understandability of narrative disclosures among industries for commercial bank loan officer trainees. The Scheffe Procedure showed a statistically significant difference between subset (1) manufacturing and finance, insurance, and real estate with mean understandability scores of 55.3532 and 56.8878, respectively, and subset (2) transportation, communication, electric, gas, and sanitary services with a mean understandability score of 52.8726. Thus, the null hypothesis is rejected for commercial bank loan officer trainees ($p < .05$).

Hypothesis IX stated that narrative disclosures of New York Stock Exchange listed corporations would be easier to understand than those from corporations listed on other exchanges. Using

a one-way F-test, Table 22 confirms that there is a statistically significant difference in the understandability of narrative disclosures between stock exchange listings for all users ($p < .001$), for certified public accountants and chartered financial analysts ($p < .001$), and for commercial bank loan officer trainees ($p < .001$).

Three a posteriori contrasts (the Scheffe Procedure) were then performed at the .05 level and showed that in direct opposition to what was predicted, narrative disclosures of corporations listed on other exchanges (with mean understandability scores of 60.9192 for all users, 61.9987 for certified public accountants and chartered financial analysts, and 58.6818 for commercial bank loan officer trainees) were easier to understand than narrative disclosures of corporations listed on the New York Stock Exchange (with mean understandability scores of 56.1969 for all users, 58.2435 for certified public accountants and chartered financial analysts, and 51.9544 for commerical bank loan officer trainees).

Hypothesis X stated that narrative disclosures of "large" corporations are easier to understand than are narrative disclosures of "small" corporations. Using a Pearson Product-Moment correlation, Table 23 shows that there is a statistically significant inverse relationship between corporate size and the understandability of narrative disclosures taken together and separately (except for managements' analyses of operations) for all users, for certified public accountants and chartered financial analysts, and for commercial bank loan

TABLE 22

ANALYSIS OF VARIANCE: CLOZE SCORES BY STOCK EXCHANGE LISTING

Source	D.F.	Sum-of Squares	Mean Squares	F-Ratio	F-Prob.
CPA/CFA/ABA					
Between Groups	1	5618.00	5618.00	46.9996	.0000
Within Groups	1006	120250.00	119.533		
Total	1007	125868.00			
CPA/CFA					
Between Groups	1	2396.00	2396.00	20.2883	.0000
Within Groups	678	80070.00	118.10		
Total	679	82466.00			
ABA					
Between Groups	1	3710.94	3710.94	34.9170	.0000
Within Groups	326	34646.88	106.28		
Total	327	38357.82			

TABLE 22--Continued

Stock Exchange	Count	Mean	Std. Dev.	Std. Err.	Min	Max	95% Confidence Interval
CPA/CFA/ABA							
NYSE	504	56.1969	11.2334	.500375	23.08	92.45	55.2138 to 57.1800
Other	504	60.9192	10.6243	.473246	30.77	88.89	59.9894 to 61.8489
Total	1008	58.5580	11.1800	.352138	23.08	92.45	57.8670 to 59.2490
CPA/CFA							
NYSE	340	58.2435	11.0149	.597365	32.69	92.45	57.0685 to 59.4185
Other	340	61.9987	10.7176	.581244	30.77	85.71	60.8554 to 63.1420
Total	680	60.1211	11.0205	.422618	30.77	92.45	59.2913 to 60.9509
ABA							
NYSE	164	51.9544	10.5083	.820558	23.08	80.00	50.3341 to 53.5747
Other	164	58.6818	10.1061	.789156	34.00	88.89	57.1235 to 60.2401
Total	328	55.3181	10.8306	.598021	23.08	88.89	54.1416 to 56.4945

TABLE 22--Continued

	Scheffe Procedure		
	CPA/CFA/ABA	CPA/CFA	ABA
Subset 1: NYSE	56.1969	58.2435	51.9544
Subset 2: Other	60.9192	61.9987	58.6818

TABLE 23

PEARSON PRODUCT-MOMENT CORRELATION COEFFICIENTS

Messages	Individual Cloze Readability Procedure Scores With:	CPA/CFA/ABA		CPA/CFA		ABA	
		Coef.	Sig.	Coef.	Sig.	Coef.	Sig.
All	Dollar Change in Earnings Per Share	.0745	.009	.1180	.001	-.0149	.394
A		-.0119	.426	.0371	.317	-.0944	.198
B		.1183	.034	.2221	.002	-.0851	.234
C		.0364	.281	.0512	.249	.0000	.500
D		.1515	.007	.1597	.019	.1240	.119
All	Percentage Change in Earnings Per Share	.0257	.208	.0465	.113	-.0158	.388
A		-.0688	.139	-.0396	.306	-.1206	.139
B		.1125	.041	.2005	.005	-.0584	.309
C		.0095	.440	-.0320	.336	.0713	.268
D		.0474	.222	.0712	.178	-.0035	.487

TABLE 23--Continued

Messages	Individual Cloze Readability Procedure Scores With:	CPA/CFA/ABA		CPA/CFA		ABA	
		Coef.	Sig.	Coef.	Sig.	Coef.	Sig.
All	Flesch Reading Ease Formula Scores	-.0588	.031	-.1405	.001	.1038	.030
A		.0789	.107	.0120	.439	.1952	.038
B		-.113	.043	-.1362	.041	-.0294	.401
C		-.0271	.333	-.1354	.036	.1446	.103
D		-.2207	.001	-.3112	.001	-.0117	.456
All	Corporate Size as Measured by Sales	-.2169	.001	-.1834	.001	-.2697	.001
A		-.3169	.001	-.3221	.001	-.3105	.002
B		-.2296	.001	-.1340	.043	-.4267	.001
C		-.1051	.047	-.0504	.252	-.1420	.107
D		-.2425	.001	-.2444	.001	-.2490	.008

officer trainees. For managements' analyses of operations, there was no statistically significant relationship between corporate size and understandability for certified public accountants and chartered financial analysts, and for commercial bank loan officer trainees. Thus, the null hypothesis is rejected, except for managements' analyses of operations, at the .05 level.

Hypothesis XI stated that there is a significant interaction effect between the type of message contained in financial reports and source corporations. Using a two-way F-test, Table 24 shows that there is a significant interaction effect between type of message and source corporations, thus confirming hypothesis XI for all users ($p < .0001$), for certified public accountants and chartered financial analysts ($p < .0001$), and for commercial bank loan officer trainees ($p < .0001$). Table 25 presents a comparison of the actual mean understandability scores for narrative disclosures by source corporations with the expected mean understandability scores derived from the grand mean of 58.5580 for all users, 60.1210 for certified public accountants and chartered financial analysts, and 55.3186 for commercial bank loan officer trainees and the unadjusted deviations of the multiple classification analysis found at the bottom of Table 24. While a definitive statement cannot be made as to which of the sixty-four narrative disclosure/source corporation combinations were responsible for the significant interaction effect for all users, and for certified public accountants and chartered financial analysts,

TABLE 24

ANALYSIS OF VARIANCE: CLOZE SCORES BY MESSAGES AND BY CORPORATIONS

CPA/CFA/ABA					
Source	D.F.	Sum-of Squares	Mean-Squares	F-Ratio	F-Prob.
Main Effects	18	23295.934	1289.21850	15.217	.00001
Messages	3	8185.992	2728.66410	32.207	.00001
Corporations	15	14733.363	982.22410	11.594	.00001
2-Way Interactions	45	22689.121	504.20264	5.951	.00001
Messages/Corps	45	22689.121	504.20264	5.951	.00001
Explained	63	45895.063	728.49292	8.599	.00100
Residual	944	79977.250	84.72165		
Total	1007	125872.314	124.99733		
CPA/CFA					
Main Effects	18	15781.707	876.76147	10.527	.00001
Messages	3	5884.035	1961.34500	23.549	.00001
Corporations	15	9860.078	657.33838	7.893	.00001
2-Way Interactions	45	15345.488	341.01074	4.094	.00001

TABLE 24--Continued

Messages/Corps	45	15345.484	341.01074	4.094	.00001
Explained	63	31127.195	494.08228	5.932	.00100
Residual	616	51304.305	83.28619		
Total	679	82431.500	121.40132		
		ABA			
Main Effects	18	11310.531	628.36279	9.724	.00001
Messages	3	2452.029	817.34302	12.648	.00001
Corporations	15	8193.953	546.26343	8.453	.00001
2-Way Interactions	44	9905.711	225.12979	3.484	.00001
Messages/Corps	44	9905.711	225.12979	3.484	.00001
Explained	62	21216.242	342.19727	5.295	.00100
Residual	265	17124.977	64.62254		
Total	327	38341.219	117.25142		

TABLE 24--Continued

Variable	Unadjusted Deviations		
	CPA/CFA/ABA	CPA/CFA	ABA
Bangor Punta	- .155929	1.478485	-4.069920
Wachovia Realty	-2.179153	-2.393570	-1.990982
Anaconda	-1.344788	.614639	-4.689941
Allegheny Power	-4.286743	-3.967072	-4.717728
McDonnell Douglas	-8.128036	-7.586426	-7.956985
U. S. Realty	3.753998	3.134491	5.007965
United Gas Pipe Line	-3.514893	-2.718246	-5.819794
Cousins Mortgage	-3.274109	-4.544708	- .781113
Bourns	.797790	-1.322083	4.999893
Kaneb Services	2.023788	4.828796	-4.621429
Recognition Equipment	- .430297	-2.281021	4.434692
Viking General	1.957901	.151169	5.753311
First of Denver	-2.118912	-1.706345	-2.418213
Harman Industries	7.776337	7.475098	8.619232
Security Mortgage	3.290558	2.347168	4.998062
Banner Industries	5.910828	5.531250	6.126724
Std. Format Footnote	-1.456421	-1.706299	- .860550
Nonstd. Format Footnote	1.521866	1.263199	1.893784
Mgts' Analysis of Ops	-3.822372	-3.541519	-4.788818
Qualified Auditor's Rep.	3.730484	4.158325	3.292587

TABLE 25

A COMPARISON OF ACTUAL MEAN UNDERSTANDABILITY SCORES FOR NARRATIVE DISCLOSURES BY SOURCE CORPORATIONS WITH EXPECTED MEAN UNDERSTANDABILITY SCORES DERIVED FROM THE GRAND MEAN AND THE UNADJUSTED DEVIATIONS OF THE MULTIPLE CLASSIFICATION ANALYSIS

CPA/CFA/ABA								
Corporation	Narrative Disclosures							
	Standard Format Footnote		Nonstandard Format Footnote		Managements' Analyses of Operations		Qualified Auditors' Reports	
	Mean	Difference	Mean	Difference	Mean	Difference	Mean	Difference
Bangor A	51.02	-5.52	60.78	.86	50.00	-4.58	71.18	9.05
Punta E	56.54		59.92		54.58		62.13	
NachoviaA	60.71	5.79	59.31	2.03	50.32	-2.24	56.67	-3.44
Realty E	54.92		57.28		52.56		60.11	
AnacondaA	62.88	7.12	44.67	-14.07	61.43	8.03	61.44	.49
E	55.76		58.74		53.40		60.95	
Allegh. A	44.53	-8.28	60.80	5.01	55.07	4.62	56.86	-1.14
Power E	52.81		55.79		50.45		58.00	
McDonn. A	45.64	-3.33	50.63	-1.32	53.45	6.84	52.24	-1.93
Doug. E	48.97		51.95		46.61		54.17	

TABLE 25--Continued

U. S. Realty	A	65.45	4.60	63.39	-.44	61.57	3.80	59.56	-6.48
	E	60.85		63.83		58.49		66.04	
United Gas	A	56.82	1.23	59.14	2.57	39.87	-11.36	62.80	4.02
	E	55.59		56.57		51.23		58.78	
Cousins Mortgage	A	49.36	-4.47	59.47	2.66	51.44	- .03	60.67	1.65
	E	53.83		56.81		51.47		59.02	
Bourns	A	59.83	1.93	60.42	- .46	55.68	.14	61.20	-1.89
	E	57.90		60.88		55.54		63.09	
Kaneb Service	A	55.83	-3.29	66.03	3.93	52.23	-4.53	68.86	4.55
	E	59.12		62.10		56.76		64.31	
Recog. Equip.	A	61.07	4.40	69.13	9.48	51.74	-2.57	54.01	-7.85
	E	56.67		59.65		54.31		61.86	
Viking General	A	54.69	-4.37	66.00	3.96	56.53	- .17	63.19	-1.06
	E	59.06		62.04		56.70		64.25	

TABLE 25--Continued

First of Denver	A	59.33	4.35	53.45	-4.51	51.78	- .84	62.64	2.47
	E	54.98		57.96		52.62		60.17	
Harman Indust.	A	72.29	7.41	63.38	-4.48	62.80	.28	66.84	-3.23
	E	64.88		67.86		62.52		70.07	
Security Mortgage	A	54.57	-5.82	63.87	.50	58.67	.64	67.27	1.69
	E	60.39		63.37		58.03		65.58	
Banner Indus.	A	61.87	-1.14	62.00	-3.99	65.47	4.82	67.53	- .67
	E	63.01		65.99		60.65		68.20	
					CPA/CFA				
Bangor Punta	A	53.80	-6.09	63.83	.97	54.18	-3.88	72.46	6.70
	E	59.89		62.86		58.06		65.76	
Wachovia Realty	A	64.44	8.42	59.61	.62	50.80	-3.39	57.91	-3.98
	E	56.02		58.99		54.19		61.89	
Anaconda	A	66.36	7.34	48.16	-13.83	62.60	5.40	64.50	- .39
	E	59.02		61.99		57.20		64.89	

TABLE 29--Continued

Allegh. Power	A	48.44	-6.00	62.18	4.77	55.20	2.59	57.56	-2.75
	E	54.44		57.41		52.61		60.31	
McDonn. Doug.	A	45.57	-5.25	55.90	2.11	58.26	9.27	52.20	-4.49
	E	50.82		53.79		48.99		56.69	
U. S. Realty	A	66.98	5.44	65.23	.72	62.16	2.45	59.89	-7.52
	E	61.54		64.51		59.71		67.41	
United Gas	A	58.46	2.77	60.42	1.76	42.50	-11.36	66.31	4.75
	E	55.69		58.66		53.86		61.56	
Cousins Mortgage	A	49.81	-4.06	58.73	1.90	50.88	-1.15	62.58	2.85
	E	53.87		56.83		52.03		59.73	
Bourns	A	57.96	.87	59.29	- .77	56.12	.86	62.22	- .74
	E	57.09		60.06		55.26		62.96	
Kaneb Service	A	59.41	-3.83	69.86	3.65	55.64	-5.76	73.80	4.70
	E	63.24		66.21		61.40		69.10	
Recog. Equip.	A	60.06	3.93	66.66	7.56	53.25	-1.05	54.44	-7.56
	E	56.13		59.10		54.30		62.00	

TABLE 25--Continued

Viking A General E	55.24 58.92	-3.68	66.72 61.53	5.19	56.53 56.73	- .20	62.70 64.43	-1.73
First of A Denver E	59.45 56.70	2.75	51.23 59.67	-8.44	58.21 54.87	3.34	65.43 62.57	2.86
Harman A Indus. E	72.89 65.89	7.00	64.22 68.86	-4.64	63.82 64.06	--.24	70.29 71.75	-1.46
Security A Mortgage E	55.60 60.76	-5.16	64.73 63.73	1.00	57.64 58.96	-1.32	68.93 66.63	2.30
Banner A Indus. E	61.27 63.94	-2.67	62.00 66.91	-4.91	66.00 62.11	3.89	72.54 69.81	2.73
ABA								
Bangor A Punta E	46.65 50.39	-3.74	54.67 53.14	1.53	38.50 46.46	-7.96	67.00 54.54	12.46
Wachovia A Realty E	54.00 52.47	1.53	58.49 55.22	3.27	49.36 48.54	.82	53.27 56.62	-3.35

TABLE 25--Continued

Anaconda	A	55.20	5.43	40.31	-12.21	58.50	12.66	55.33	1.41
	E	49.77		52.52		45.84		53.92	
Allegh. Power	A	38.67	-11.07	57.00	4.51	54.80	8.99	55.60	1.71
	E	49.74		52.49		45.81		53.89	
McDonn. Doug.	A	45.75	- .75	40.10	-9.15	47.96	5.39	52.29	1.64
	E	46.50		49.25		42.57		50.65	
U. S. Realty	A	62.69	3.22	59.26	-2.95	60.39	4.86	58.75	-4.87
	E	59.47		62.21		55.53		63.62	
United Gas	A	52.22	3.58	56.07	4.68	34.62	-10.09	55.08	2.29
	E	48.64		51.39		44.71		52.79	
Cousins Mortgage	A	48.46	-5.22	61.50	5.07	53.24	3.49	56.08	-1.75
	E	53.68		56.43		49.75		57.83	
Bourns	A	62.50	3.04	62.96	.75	54.59	- .94	59.90	-3.71
	E	59.46		62.21		55.53		63.61	
Kaneb Service	A	49.39	- .45	53.57	-8.26	46.00	.09	56.50	2.51
	E	49.84		61.83		45.91		53.99	

TABLE 25--Continued

Recog. Eqwip.	A E	63.71 58.89	4.82	72.84 61.64	11.20	49.28 46.10	3.18	56.84 63.94	-6.20
Viking General	A E	53.46 60.21	-6.75	64.41 62.96	1.45	59.18 56.28	2.90	63.74 64.36	- .62
First of Denver	A E	59.00 52.04	6.96	57.89 54.79	3.10	41.35 48.11	-6.76	59.05 56.20	2.85
Harman Indus.	A E	71.20 63.08	8.12	61.50 65.83	-4.33	60.00 59.15	.85	62.39 67.23	-4.84
Security Mortgage	A E	52.00 59.46	-7.46	61.50 62.21	- .71	61.50 55.53	5.97	63.71 63.61	.10
Banner Indus.	A E	63.50 60.59	2.91	62.00 63.34	-1.34	63.50 56.65	6.85	58.33 64.74	-6.41

Code: A = Actual mean understandability score obtained for by source corporations.

E = Expected mean understandability score derived from the Grand Mean and the unadjusted deviations of the multiple classification analysis.

the nonstandard format footnote written by The Anaconda Company with the largest differences (-14.07 and -13.83, respectively) between the actual mean understandability scores of 44.67 and 48.16, respectively, and the expected mean understandability scores of 58.74 and 61.99, respectively, was largely responsible.

For commercial bank loan officer trainees, the management's analysis of operations also written by The Anaconda Company with the largest difference (12.66) between the actual mean understandability score (58.50) and the expected mean understandability score (45.84) was largely responsible.

Hypothesis XII stated that the level of understandability of the type of message varies directly with the change in earnings per share from 1974 to 1975 of the source corporations to a statistically significant degree. Using a Pearson Product-Moment correlation, Table 23 shows that there is a statistically significant direct relationship for absolute dollar changes in earnings per share for nonstandard format footnotes (i.e., correlation coefficient of .1183 and $p < .04$), and for qualified auditors' reports (i.e., correlation coefficient of .1515 and $p < .01$), for all users. For certified public accountants and chartered financial analysts, there is also a statistically significant direct relationship for absolute dollar changes in earnings per share for nonstandard format footnotes (i.e., correlation coefficient of .2221 and $p < .002$), and for qualified auditors' reports (i.e., correlation coefficient of .1597 and $p < .02$). There is neither a statistically significant

relationship for absolute dollar changes in earnings per share for standard format footnotes nor for managements' analyses of operations for all users, and for certified public accountants and chartered financial analysts. Thus, the null hypothesis is accepted at the .05 level for standard format footnotes and managements' analyses of operations; it is rejected at the .05 level for nonstandard format footnotes and qualified auditors' reports.

For commercial bank loan officer trainees, there is no statistically significant relationship for absolute dollar changes in earnings per share for any of the four types of messages. Thus, the null hypothesis is accepted at the .05 level.

Table 23 shows that there is a statistically significant direct relationship for percentage changes in earnings per share for nonstandard format footnotes (i.e., correlation coefficient of .1125 and $p < .05$) for all users. For certified public accountants and chartered financial analysts, there is also a statistically significant direct relationship for percentage changes in earnings per share for nonstandard format footnotes (i.e., correlation coefficient of .2005 and $p < .01$). There is no statistically significant relationship for percentage changes in earnings per share for the remaining three types of messages for all users, and for certified public accountants and chartered financial analysts. Thus, the null hypothesis is rejected at the .05 level for nonstandard format footnotes; it is accepted at the .05 level for the other types of messages.

For commercial bank loan officer trainees, there is no statistically significant relationship for percentage changes in earnings per share for any of the four types of messages. Thus, the null hypothesis is accepted at the .05 level.

Hypothesis XIII stated that there is no statistically significant direct relationship between the understandability of narrative disclosures as measured by the Cloze Readability Procedure (see Appendix B) and reading difficulty as measured by the Flesch Reading Ease Formula (see Appendix C). Using a Pearson Product-Moment correlation, Table 23 confirms Hypothesis XIII for all users. That is, there is a statistically significant inverse relationship between these two measures of message understandability, for 1. all messages taken together, 2. nonstandard format footnotes, and 3. qualified auditors' reports. For the remaining two types of messages, there is no statistically significant relationship.

Table 23 also confirms Hypothesis XIII for certified public accountants and chartered financial analysts. That is, there is a statistically significant inverse relationship between these two measures of message understandability, for 1. all messages taken together, 2. nonstandard format footnotes, 3. managements' analyses of operations, and 4. qualified auditors' reports. For standard format footnotes, there is no statistically significant relationship.

However, contrary to expectations, Table 23 shows that for commercial bank loan officer trainees there is a statistically significant direct relationship between these two measures of

message understandability, for 1. all messages taken together and 2. standard format footnotes. For the remaining three types of messages, as expected, there is no statistically significant relationship.

Additional findings indicate that there is a significant interaction effect between classes of sophisticated users and source corporations. Using a two-way F-test, Table 26 shows that there is a significant interaction effect between classes of sophisticated users and source corporations ($p < .002$). Table 27 presents a comparison of the actual mean understandability scores derived from the grand mean of 58.5580 and the unadjusted deviations of the multiple classification analysis found at the bottom of Table 26. While a definitive statement cannot be made as to which of the forty-eight sophisticated user/source corporation combinations were responsible for the significant interaction effect, the narrative disclosures of Kaneb Services, Inc., which were read by commercial bank loan officer trainees, with the largest difference (-6.64) between the actual mean understandability score (50.70) and the expected mean understandability score (57.34), was largely responsible.

It may also be noted that there is a significant interaction effect among classes of sophisticated users, types of messages, and source corporation. Using a three-way F-test, Table 28 shows that there is a significant three-way interaction effect ($p < .028$).

TABLE 26

ANALYSIS OF VARIANCE: CLOZE SCORES BY SOPHISTICATED USER GROUP AND BY CORPORATIONS

CPA/CFA/ABA					
Source	D.F.	Sum-of Squares	Mean-Squares	F-Ratio	F-Prob.
Main Effects	17	19695.965	1158.5859	11.111	.00001
Users	2	4676.023	2338.0117	22.421	.00001
Corporations	15	14530.457	968.6970	9.290	.00001
2-Way Interactions	30	6071.129	202.3710	1.941	.00191
Users/Corps	30	6071.129	202.3710	1.941	.00191
Explained	47	25767.125	548.2366	5.258	.00100
Residual	960	100105.190	104.2762		
Total	1007	125872.310	124.99733		
CPA/CFA					
Main Effects	16	9924.0664	620.2542	5.691	.00001
Users	1	26.3922	26.3922	.242	.62283
Corporations	15	9863.2266	657.5483	6.033	.00001
2-Way Interactions	15	1880.0664	125.3378	1.150	.30741

TABLE 26--Continued

Users/Corps	15	1880.0664	125.3378	1.150	.30741
Explained	31	11804.1880	380.7800	3.494	.00100
Residual	648	70627.3130	108.9928		
Total	679	82431.5000	121.4013		

Variable	Unadjusted Deviations	Variable	Unadjusted Deviations
Bangor Punta	- .155929	Recognition Equipment	- .430297
Wachovia Realty	-2.189153	Viking General	1.957901
Anaconda	-1.244788	First of Denver	-2.118912
Allegheny Power	-4.286743	Harman Industries	7.776337
McDonnell Douglas	-8.128036	Security Mortgage	3.290558
U. S. Realty	3.753998	Banner Industries	5.910828
United Gas Pipe Line	-3.514893	C. P. A.	1.851593
Cousins Mortgage	-3.274109	C. F. A.	1.253128
Bourns	.797791	A. B. A./Trainee	-3.240204
Kaneb Services	2.023788		

TABLE 27

A COMPARISON OF ACTUAL MEAN UNDERSTANDABILITY SCORES FOR SOPHISTICATED USER GROUPS BY SOURCE CORPORATIONS WITH EXPECTED MEAN UNDERSTANDABILITY SCORES DERIVED FROM THE GRAND MEAN AND THE UNADJUSTED DEVIATIONS OF THE MULTIPLE CLASSIFICATION ANALYSIS

Source Corporations		Sophisticated User Groups					
		C. P. A.		C. F. A.		A. B. A./Trainee	
		Mean	Difference	Mean	Difference	Mean	Difference
Bangor Punta	A	63.20	2.95	59.95	.30	51.26	-3.91
	E	60.25		59.65		55.17	
Wachovia Realty	A	58.78	.55	56.52	-1.11	53.33	.19
	E	58.13		57.63		53.14	
Anaconda	A	60.64	1.57	60.84	2.19	50.63	-3.35
	E	59.07		58.65		53.98	
Allegheny Power	A	58.09	1.97	53.38	-2.14	50.60	- .43
	E	56.12		55.52		51.03	
McDonnell Douglas	A	48.13	-4.15	56.70	5.02	47.36	.17
	E	52.28		51.68		47.19	
U. S. Realty	A	63.83	- .33	62.48	-1.09	60.33	1.25
	E	64.16		63.57		59.98	
United Gas Pipe Line	A	55.98	- .92	58.37	2.07	49.50	-2.31
	E	56.90		56.30		51.81	

TABLE 27--Continued

Cousins Mortgage	A E	56.53 57.14	-..61	54.44 57.79	-3.35	54.54 52.05	2.49
Kaneb Services	A E	65.75 62.43	3.32	64.19 62.01	2.18	50.70 57.34	-6.64
Recognition Equipment	A E	55.03 59.98	-4.95	60.19 59.38	.81	59.75 54.89	4.86
Viking General	A E	61.81 62.37	- .56	58.66 61.77	-3.11	61.07 57.28	3.79
First of Denver	A E	57.03 58.83	-1.80	59.62 59.43	.19	52.90 53.20	- .30
Harman Industries	A E	68.04 68.19	- .15	67.04 67.59	- .55	63.94 63.10	.84
Security Mortgage	A E	64.29 63.70	.59	59.79 63.10	-3.31	60.32 58.61	1.71
Banner Industries	A E	65.33 66.32	- .99	66.00 65.72	.28	61.44 61.23	.21
Bourns	A E	59.26 61.21	1.95	58.29 60.61	-2.32	60.32 56.12	4.20

TABLE 28

ANALYSIS OF VARIANCE: CLOZE SCORES BY SOPHISTICATED USER GROUPS AND BY MESSAGES AND BY CORPORATIONS

Source	D.F.	Sum-of Squares	Mean-Squares	F-Ratio	F-Prob.
Main Effects	20	28251.227	1412.561	18.780	.001
Users	2	5045.262	2522.631	33.539	.001
Messages	3	8555.266	2851.755	37.915	.001
Corporations	15	14254.457	950.297	12.634	.001
2-Way Interactions	81	27270.211	336.669	4.476	.001
Users/Messages	6	566.997	94.500	1.256	.275
Users/Corporations	30	4758.812	158.627	2.109	.001
Messages/Corps	45	21195.238	471.005	6.262	.001
3-Way Interactions	89	8899.918	99.999	1.330	.028
Users/Messages/ Corporations	89	8899.918	99.999	1.330	.028
Explained	190	64421.355	339.060	4.508	.001
Residual	817	61450.770	75.215		
Total	1007	125872.130	124.997		

Table 29 presents a summary analysis of the understandability of the narrative disclosures as measured by the Cloze Readability Procedure. All users found 50% of the standard format footnotes contained in the sample of financial reports understandable at the independent reading level. Certified public accountants and chartered financial analysts found 62% of them understandable, while commercial bank loan officer trainees found only 38% of them understandable.

All users found 81% of the nonstandard format footnotes contained in the sample of financial reports understandable at the independent reading level. Certified public accountants and chartered financial analysts also found 81% of them understandable, while commercial bank loan officer trainees found only 69% of them understandable.

All users found 31% of the managements' analyses of operations contained in the sample of financial reports understandable at the independent reading level. Certified public accountants and chartered financial analysts found 43% of them understandable, while commercial bank loan officer trainees found only 38% of them understandable. All users found 75% of the qualified auditors' reports contained in the sample of financial reports understandable at the independent reading level. Certified public accountants and chartered financial analysts found 88% of them understandable, while commercial bank loan officer trainees found only 50% of them understandable.

TABLE 29

SUMMARY OF THE ADEQUATE DISCLOSURE/UNDERSTANDABILITY OF THE FOUR TYPES OF NARRATIVE DISCLOSURES OF THE SIXTEEN SOURCE CORPORATIONS AS MEASURED BY THE CLOZE READABILITY PROCEDURE

	CPA/CFA/ABA		CPA/CFA		ABA	
	57% or Higher	Lower than 57%	57% or Higher	Lower than 57%	57% or Higher	Lower than 57%
Standard Format Footnote	8 50%	8 50%	10 62%	6 38%	6 38%	10 62%
Nonstandard Format Footnote	13 81%	3 19%	13 81%	3 19%	11 69%	5 31%
Mgts' Analyses of Operations	5 31%	11 69%	7 43%	9 57%	6 38%	10 62%
Qualified Auditors' Report	12 75%	4 25%	14 88%	2 12%	8 50%	8 50%
All Messages	38 59%	26 41%	44 69%	20 31%	31 48%	33 52%

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[1]An a posteriori contrast test, such as the Scheffe Procedure, is a systematic procedure for comparing all possible pairs of group means. The groups are divided into homogeneous subsets, where the difference in the means of any two groups in a subset is not significant at some prescribed level (e.g., 05). A significance level, alpha, may be considered as an error rate--the acceptable rate of type 1 error (declaring two means to be unequal when they are in fact equal).

[2]In a factorial design (i.e., two or more independent variables), the experimenter can evaluate the effect (i.e., interdependence) of the variables when used simultaneously. An interaction effect is an effect attributable to the combination of variables above and beyond that which can be predicted from the variables considered singly (i. e., a main effect).

Chapter VIII

Discussion and Implications of the Results

INTRODUCTION

This chapter presents a discussion of the empirical results described in Chapter VII. Intertwined with the explication of the reasons underlying the results are the more important implications of the study for the accounting profession.

DISCUSSION AND IMPLICATIONS OF THE RESULTS

To achieve communication in financial reporting necessitates that the target audience assign the meanings intended by the preparers to the narrative disclosures contained therein. The average understandability score of 60.1210, for certified public accountants and chartered financial analysts, which is greater than the 57% criterion level, may indicate that, on average, financial reports do communicate to these two groups of sophisticated users. They are designed to do so because management and their independent auditors evidently consider this aspect of communication to be part of their role behavior. The results obtained further imply that the object language in which management and accountants encode their messages is in the vernacular of the certified public accountant and the chartered financial analyst. That is, the semantic, syntactic, and pragmatic rules which govern the message are within the fields of experience of both the source and the destination. However, the standard deviation of 11.0232 indicates that a percentage of certified public accountants and chartered financial analysts scored below 57%.

The average understandability score of 55.3186, which is less than the 57% criterion level, may indicate that, on average, financial reports do not communicate to commercial bank loan officer trainees. Evidently, the semantic, syntactic, and pragmatic rules which govern the accounting language are not within the fields of experience of either financial report

preparers or commercial bank loan officer trainees. Nevertheless, the standard deviation of 10.8324 indicates that a percentage of commercial bank loan officer trainees scored above 57%.

The results obtained in the February 1976 pilot study using Bernard M. Baruch College MBA candidates as surrogates for sophisticated users resulted in the acceptance of the null hypothesis at the .01 level. Evidently, students--even at the graduate school level--do not possess the technical competence acquired through on-the-job experience that is necessary to understand well narrative disclosures as they currently appear in financial reports.

In addition, actual sophisticated users such as certified public accountants have to successfully pass a rigorous four-part examination (with the fourth part following either one or two years of auditing experience) that is formulated by the American Institute of Certified Public Accountants. Chartered financial analysts have to successfully pass a rigorous three-part examination administered by the Institute of Chartered Financial Analysts. Commercial bank loan officer trainees are usually required by the New York City banks participating in this study to have an MBA degree in finance and to have graduated in the top one-third of their class from one of the top ten schools in the United States. However, because of labor force supply-and-demand conditions at the time this study was conducted, several of the banks had been forced to relax some of these requirements (e.g., candidates holding bachelors

degrees in accounting or finance had been accepted into the training programs).

This latter fact would explain the results obtained in testing Hypotheses II. As expected, commercial bank loan officer trainees who possess the educational background but lack the depth of knowledge that can be acquired only through work related experience, do not understand financial report messages as well as the two more sophisticated user groups do. Additionally, the absence of a professional licensing procedure (e.g., certified public accountant's certificate) would tend to make the loan officer trainees more heterogenous than either certified public accountants or chartered financial analysts. Furthermore, the training period represents a time for the commercial banks to weed out the less competent.

However, certified public accountants and chartered financial analysts, despite the fact that their occupational roles in financial reporting are so different (i.e., attestor vs. investment advisor), do have the educational background and work-related experience required to be deemed equally technically competent.

Chapter IV's discussion of the accounting communication process stressed that successful financial reporting is dependent upon (1) identifying the intended users and (2) ascertaining the users' interpretive capacity. An assiduous perusal of the accounting literature revealed that these two vital elements are still not fully known to financial report preparers.

Various levels of user competence have been suggested over the years as a basis for preparing financial reports. Because of the obvious complexity of footnotes, managements' analyses of operations, and qualified auditors' reports, sophisticated users are the only reasonable target audience (see discussion, Chapter III).

To perform the functions of the information source properly, the financial report preparer still needs to possess an awareness, not only of the identity of the readers, but also of reader characteristics such as technical competence and fields of experience. Without this awareness, the preparer is unable to select and transmit messages so that the probability for successful communication is at a maximum.[1]

Based on the results obtained from testing Hypothesis II, management and the accounting profession now have empirical evidence as to the actual degree of comparability of the target audience (i.e., certified public accountants[2] and chartered financial analysts understand equally well the narrative disclosures, with both classes of sophisticated users understanding significantly better than commerical bank loan officer trainees). This is an important implication for the advancement of the financial report communication process, because the greater the heterogeneity of the target audience, the more difficult it is for the source to "know the audience" and to select and transmit a message that meets the test of adequate disclosure/understandability.

Preparers of financial reports have never voluntarily felt the need to adapt their reports to the individual differences among their readership. Even if they had wanted to, their efforts would have been hampered by the absence of practical procedures for attaining this objective. The Securities and Exchange Commission's concept of differential disclosure, implemented in Accounting Series Releases 148 (Compensating Balances) and 149 (Income Taxes), is based on the premise that users of financial reports are to be stratified in terms of sophistication, with each group's informational needs satisfied by disclosures tailored to their own unique interpretive capacities. Hypothesis II has identified commercial bank loan officer trainees as that subgroup of the target audience that demonstrated the least degree of sophistication.[3]

Nonetheless, Accounting Principles Board Statement Number 4 and Financial Accounting Standards Board An Analysis of Issues Related to Conceptual Framework for Financial Accounting and Reporting: Elements of Financial Statements and Their Measurement implied that the qualitative objective of adequate disclosure/understandability is a two-way street. That is, corporate managers and their independent attestors are responsible for insuring that users can understand the narrative disclosures contained in financial reports; and users are responsible for having the requisite education and experience to understand them. "Understandability also requires that the users have some understanding of the complex economic activities of enterprises, the

financial accounting process, and the technical terminology used in financial reporting."[4]

As a result of testing Hypothesis IIA, it was empirically demonstrated that certified public accountants and chartered financial analysts understood Arthur Anderson & Co.'s and Peat, Marwick, Mitchel & Co.'s qualified auditors' reports equally well. Both classes of sophisticated users did understand the qualified auditors' reports significantly better than commercial bank loan officer trainees did. This result is consistent with the results obtained from testing Hypothesis II, and implies that these two "Big Eight" accounting firms do not structure their qualified auditors' reports so that all sophisticated users can equally comprehend the messages they wish to communicate. Evidently, they employ some technical accounting terms and discuss concepts and problems that require a certain degree of sophistication which certified public accountants and chartered financial analysts possess to a greater degree than commercial bank loan officer trainees.

Certified public accountants, chartered financial analysts, and commercial bank loan officer trainees understood Price Waterhouse & Co.'s and Ernst & Ernst's qualified auditors' reports equally well. This result is not consistent with Hypothesis II and implies that these two "Big Eight" accounting firms <u>do</u> structure their qualified auditors' reports, at least for the eight clients that were sampled in this study, so that all sophisticated users can comprehend equally the messages they

wish to communicate. The degree of technical competence required for sophisticated users to understand their messages is apparently possessed equally by certified public accountants, chartered financial analysts, and commercial bank loan officer trainees.

As a result of testing Hypothesis III, no statistically significant difference in understandability was found between standard format footnotes and managements' analyses of operations, and these two messages were significantly more difficult for certified public accountants, chartered financial analysts, and commercial bank loan officer trainees to understand than were nonstandard format footnotes and qualified auditors' reports. These two types of messages were the most technical of those tested, contained the most numbers, and made references to specific financial statement items and amounts. Sophisticated users evidently have the most difficulty understanding a message when its language structure and content take this form. It was expected that standard format footnotes and managements' analyses of operations would be easier to understand than the other two types of messages, since their language structure and general content do not vary among source corporations over time and should be, therefore, "familiar" to sophisticated users. Presumably, the technical nature of these two types of messages outweigh their "familiarity" when sophisticated users attempt to understand the information contained therein.

Managements' analyses of operations proved to be the most difficult of the four types of messages to understand for all

users (with a mean understandability score of 54.7355), for certified public accountants and chartered financial analysts (with a mean understandability score of 56.5794), and for commercial bank loan officer trainees (with a mean understandability score of 50.5289). As noted in Chapter II, the Securities and Exchange Commission tangentially addressed itself to the adequate disclosure/understandability of this narrative disclosure in Accounting Series Release Number 159. The Commission expressed extreme reservations about the use of "boiler plate or compliance jargon."[5] Richard H. Rowe, associate director of the Securities and Exchange Commission's Division of Corporation Finance, was more specific when he stated that "... its going to take accountants and whoever else is working on this to sit down and explain what happened in simple English."[6] (emphasis added) Commissioner A. A. Sommer Jr., however, expressed a concern that was borne out by the empirical results obtained in testing Hypothesis III: "The damn thing may read like a footnote. That's the worst of all possible worlds."[7]

Narrative disclosures can only be supplied to sophisticated users at a cost to financial report preparers. An implication of testing hypotheses III suggests that serious consideration should be given to providing narrative disclosures only in those instances where the net benefit derived by sophisticated users, as a result of providing the information, exceeds the cost of providing it. Analyzing this in terms of adequate disclosure/understandability, one can see that incomprehensible financial report messages, regardless of their relevancy, provide no

benefit to sophisticated users. A strict application of the cost/benefit test could mean that in those instances where managements' analyses of operations, for example, could not be made more understandable, they should not be presented in financial reports.

No statistically significant difference in understandability was found between nonstandard format footnotes and qualified auditors' reports. These two types of messages tend to be descriptions of situations (e.g., a lawsuit) rather than verbal representations of the accounting calculus; and that would explain why they were easier for sophisticated users to understand than either standard format footnotes or managements' analyses of operations.

Since the level of understandability varies among sophisticated users (Hypotheses II and IIA) and among types of messages (Hypothesis III), Hypothesis V expected a significant interaction effect between the types of messages contained in financial reports and the classes of sophisticated users.

It seemed logical to hypothesize that certified public accountants, required by Generally Accepted Auditing Standards to express their opinions on the financial statements they examine, would be better able to understand the messages they themselves write. The qualified auditors' reports examined in this study were the easiest of the four types of messages to understand for any of the three classes of sophisticated users. Further study of the sixteen auditors' reports included in this study revealed that they were highly descriptive narratives and, for the most part, void of accounting complexities.

As for footnotes and managements' analyses of operations, there was no reason to assume that any one class of sophisticated user would have a particular expertise (through education or experience) and, therefore, facility in understanding these types of messages.

As a result of testing Hypothesis IV, a statistically significant difference in the level of message understandability was found among source corporations. This result was not unexpected, given the fact discussed in Chapter IV that the actual participation of management in the preparation of narrative disclosures can be major or minor depending upon the particular company's philosophy. Singhvi and Desai's empirical study support this notion: "In a free enterprise system, variations in corporate disclosure practices are likely to result, since corporations are managed by groups which have varying managerial philosophies and wide discretion in connection with disclosing information to the investing public."[8] In addition, corporations are unique entities with inherent operating complexities that could well explain the empirical results that were obtained in testing this hypothesis. Looking for other possible causes led to the testing of Hypotheses VIII, IX, X, and XII.

Hypothesis VIII was based on the premise that the industry classification in which a source corporation can be found might explain any variations in the level of understandability among source corporations. Three completely different industries were chosen for examination--(1) manufacturing, (2) transpor-

tation, communication, electric, gas, and sanitary services, and (3) finance, insurance, and real estate. Corporations falling into these three categories were believed to have different operating characteristics and complexities and, consequently, accounting practices and procedures unique to their industry classification. Managements' and auditors' representations in financial reports would, therefore, be embodied with technical and nontechnical terms also unique to their industry classification. Given the empirical results obtained, these conditions of uniqueness might very well still be true; but they have no overall effect on understandability. That is a random sample of sophisticated users would probably include those with an expertise in a particualr industry (who would score relatively high) and those without an expertise in a particular industry (who would score relatively low). The high scorers and the low scorers in each of the three industry categories could have been approximately the same and resulted in no significant difference in the level of understandability among industries.

Commercial bank loan officer trainees, as previously mentioned, lack work-related experience and, therefore, an expertise in any particular industry. Consequently, they found the narrative disclosures of transportation, communication, electric, gas, and sanitary services significantly more difficult to understand than either 1. manufacturing or 2. finance, insurance, and real estate, which might help to explain the empirical results of testing Hypotheses IV.

Hypothesis IX was based on the premise that the stock exchange on which a source corporation is listed might explain any variations in the level of understandability among source corporations. Reporting requirements are regulated by the accounting profession (i.e., American Institute of Certified Public Accountants and Financial Accounting Standards Board), the Securities and Exchange Commission, and finally the individual stock exchanges. Singhvi and Desai found that "the quality of disclosure in annual reports is influenced to a great extent by the listing requirements of a stock exchange."[9]

It was assumed that reporting requirements on the New York Stock Exchange, a pioneer in setting external reporting standards who as early as 1869 adopted a policy that companies listed on the Exchange agree to publish an annual financial report, would be of a higher quality than reporting requirements on the other exchanges (i.e., American Stock Exchange, Pacific Stock Exchange, and Over-the-Counter) where the listing requirements are less demanding and, therefore, the level of understandability would be higher. Contrary to expectations, the findings indicated just the opposite--significantly lower comprehension among all three subject groups for the eight source corporations listed on the New York Stock Exchange as compared to the eight corporations listed on the other exchanges.

Corporations listed on other exchanges, as a rule, differ from New York Stock Exchange listed corporations as follows:

(1) Other exchange listed corporations have a lower mean on any financial report variable (e.g., earnings, market share, etc.).

(2) Other exchange listed corporations lack wide international exposure.

(3) Other exchange listed corporations do not enjoy the same level of financial community recognition.

(4) Other exchange listed corporations are smaller in size (see Hypotheses X.).

(5) Other exchange listed corporations lack the prestige associated with "Big Board" listing.

(6) Other exchange listed corporations do not have the reputation among customers that New York Stock Exchange listed corporations flaunt through advertising.

(7) Other exchange listed corporations do not attract as large a number of shareholders.

Given these important competitive disadvantages (for equity capital), other exchange listed corporations may attempt to make their narrative disclosures as understandable as possible in order to promote the marketability of their securities.

Hypotheses X was based on the premise that the understandability of narrative disclosures would be significantly higher for "large" corporations than for "small" corporations. Using net sales as the size criterion, a statistically significant inverse relationship was found between corporate size and the understandability of standard format footnotes, nonstandard format footnotes, qualified auditors' reports, and managements' analyses of operations for the combined subject groups.[10]

Large corporations find it inherently easier to attract equity or debt capital than smaller corporations do for the seven reasons offered in the previous discussion. Conceivably, they do not have to be as concerned with their financial reporting practices as their smaller rivals for external financing. That is, small corporations cannot afford misunderstandings in their financial reports; and, therefore, their messages are more comprehensible than the messages of large corporations.

On the other hand, large corporations or New York Stock Exchange listed corporations tend to be more complex (e.g., more diversified) than small corporations or other exchange-listed corporations. Consequently, their messages, may of necessity, be more complex and, therefore, more difficult to understand. This fact should be seriously considered in evaluating the inferences drawn from testing hypotheses IX and X.

Hypotheses XII was based on the premise that variability among source corporations in the understandability of their narrative disclosures can be explained to some extent, by differences in operating performance. From a theoretical perspective, external financial reporting in the United States has long been viewed as <u>user-oriented</u> reporting. Unfortunately, there is a wealth of empirical evidence[11] supporting what Standish termed <u>"management-oriented</u> reporting:" "Corporate reporting is a variable, to be adjusted or manipulated by management in support of its strategies and goals, subject to whatever statutory disclosure constraints exists. The operational

objective in regard to reporting is, presumably, to influence or manipulate investor reactions, sustain a satisfactory share price, and raise capital on the cheapest and most advantageous terms."[12]

The rationale underlying hypotheses XII (put forth in Chapter VI) concerned a research study by Morton, who sent a questionnaire to 128 security analysts, credit analysts, public accountants, and management. Morton found a significant positive correlation between perceived understandability of financial statement footnote disclosures and the extent to which the disclosures are perceived as having a positive (favorable) or negative (unfavorable) bearing on the investment or credit extension decision. He offered several possible interpretations for the results obtained:

> First, unfavorable disclosures may be inherently more difficult to understand. For example, the issuing company may intentionally present unfavorable disclosures in a manner that is difficult to understand. Or, as disclosures become more unfavorable to the company, conflicts may arise between management and the auditor concerning their possible disclosure, resulting in vague and verbose disclosures which are difficult to understand. In contrast, unfavorable disclosures may be more difficult to understand than favorable disclosures, but because the reader expects negative disclosures to present an incomplete or biased picture of the true situation, greater complexity and meaning may be attributed to such disclosures than is warranted.[13]

In this critical research effort, Morton has raised an issue that has ramifications spanning the entire financial report communication process, not just adequate disclosure/understandability. That is, management and the certified public accountant are being explicitly charged with <u>manipulating the level of understandability</u> of the financial statement

footnotes based on the subjective perceptions of questionnaire respondents. The twin disciplines of accounting and management, therefore, are in urgent need of a research project that will (1) objectively measure the actual understandability level of a sample of narrative disclosures contained in financial reports and (2) correlate the results obtained with an objective measure of performance.

Using earnings per share (i.e., the absolute dollar and then the percentage change from 1974 to 1975) as the performance criterion, a statistically significant direct relationship was found between corporate performance and the understandability of nonstandard format footnotes and qualified auditors' reports[14] for absolute dollar changes and between corporate performance and the understandability of nonstandard format footnotes for percentage changes. These results were obtained for all users, and for certified public accountants and chartered financial analysts.[15] No statistically significant relationship was found between performance and the understandability of narrative disclosures for commercial bank loan officer trainees who, as Hypothesis I has shown, had difficulty comprehending narrative disclosures.

The fact that standard format footnotes and managements' analyses of operations demonstrated no relationship between understandability and performance is not surprising in light of the previous discussion with respect to Hypothesis III. Standardized messages are not a function of current operating levels, since their semantic, syntactic, and pragmatic structure

and overall informational content do not vary among source corporations over time.

On the other hand, nonstandardized messages appear to be a function of current operating levels. The correlation coefficients obtained support the management-oriented approach to external financial reporting and imply that managements are influenced by a "good" year or a "bad" year when they write their nonstandardized financial report communications.

In a related study that looked at adequate disclosure/completeness, accuracy, and reliability, Singhvi and Desai used both the rate of return (net profit/net worth) and the earnings margin (net profit/net sales) as objective measures of managerial performance. They found a statistically significant positive relationship between the quality of disclosure (using the "index of disclosure")[16] and these two performance measures. They rationalized that:

> When the rate of return is high in a corporation, the management may disclose detailed information in order to support the continuance of its positions and compensations. On the other hand, when the rate of return is low, the management may disclose less information in order to cover up the reasons for losses or declining profits...The corporation may disclose more information when its earnings margin is above the average for the industry because it is not afraid of being squeezed out in the price competition, and also it wants to assure its stockholders about the corporation's strong position to survive.[17]

Arguments similar to the ones presented by Morton and Singhvi and Desai can be offered to explain the empirical results obtained in testing Hypotheses XII. That is, management consciously or unconsciously introduces an interpretive bias into its nonstandardized messages. They obfuscate the

failures; and they clearly communicate only the successes. This would imply that influential communication deemed an inappropriate dimension of financial reporting in Chapter IV exists both within the body of the financial statements (see footnote 11) and within the body of the narrative disclosures.

The notion of management manipulation might help to explain the results obtained from testing Hypothesis XI, where a significant interaction effect was found between types of messages and source corporations. Hypothesis III indicated that types of messages differed significantly in their understandability levels, and Hypothesis IV indicated that the level of understandability varied significantly among source corporations. Thus, it would be logical to assume that a particular type of message of a particular source corporation would be more or less understandable than another source corporation. The understandability level of the nonstandard format footnote written by The Anaconda Company was significantly below expectation for all users as well as for certified public accountants and chartered financial analysts. This footnote discussed several major litigations confronting Anaconda. We might presume, given the results obtained from testing Hypothesis XII, that it was written by management (who had just experienced a "bad" year) in such a fashion as to obscure the serious adverse implications of the multiple lawsuits on current and on future operating performance.

A significant interaction effect was found between classes of sophisticated users and source corporations. Hypothesis II

indicated that the three different classes of sophisticated users differed in their ability to understand narrative disclosures; and hypotheses IV indicated that the level of understandability varied significantly among source corporations. Thus, it would be logical to assume that a particular class of sophisticated user would find narrative disclosures of a particular corporation more or less understandable than another corporation would. Commercial bank loan officer trainees found the messages written by Kaneb Services, Inc. more difficult to understand than was expected. These particular messages may have contained an unusually large number of technical accounting terms and abstract concepts that were capable of being understood only by the more experienced certified public accountants and chartered financial analysts.

Hypothesis VI which stated that the level of understandability of narrative disclosures does not vary significantly among independent audit firms was accepted at the .05 level. The four independent audit firms included in this study are members of the elite, so-called "Big Eight" representing the eight largest international accounting firms in the world. They provide audit, tax, and management advisory services to the vast majority of multinational and domestic corporations. Historically, these firms have been able to attract and retain the "best" auditors in the profession (i.e., graduating accounting majors with the highest academic credentials). Over time, these firms continuously weed out the less competent at all staff levels, while providing those who remain with a multi-

plicity of in-house training courses. Thus, one would expect that the narrative disclosures contained in the financial reports they associate their names with would be of the highest quality and would tend to be virtually identical across independent audit firms, since the messages are "audited" in accordance with the same Generally Accepted Auditing Standards and procedures.

No significant interaction effect was found between classes of sophisticated users and independent audit firms. While the three different classes of sophisticated users differed in their ability to understand narrative disclosures (see hypothesis II), independent audit firms were found to be associated with narrative disclosures of a uniform level of understandability (see hypothesis VI). Thus, it would be illogical to assume that a particular class of sophisticated users could find narrative disclosures of a particular independent audit firm more or less understandable than those of another independent audit firm.

A significant interaction effect, however, was found between types of messages and independent audit firms. While types of messages differed in their understandability levels (see Hypothesis III), independent audit firms, as previously mentioned, were found to be associated with narrative disclosures of a uniform level of understandability (see Hypothesis VI). For some inexplicable reason, Peat, Marwick, Mitchell & Co.'s managements' analyses of operations were more difficult

for all users to understand than expected. No one knows for sure who the actual author of this type of message, or any other type of message, really is--management or the certified public accountant. Accounting Series Release No. 126 states that "the financial statements are the responsibility of the client and all decisions with respect to them must ultimately be assumed by the client."[18] Statement on Auditing Standards No. 1 states that "the financial statements...(are) the representations of management."[19] Nevertheless, The Commission on Auditor's Responsibilities concluded that

> The auditor may furnish advice on accounting methods applicable to transactions that management is planning. His assistance is often needed in the difficult process of wording narrative disclosures to accompany and explain financial statement amounts...Developing an appropriate standardized format will require considerable work. Substantial cooperation will be required between auditors and management (similar to the cooperation now devoted to wording notes to financial statements) to prepare reports that indicate management's responsibilities and to which the auditor can refer in his report. (emphasis added)[20]

Therefore, it is possible that Peat, Marwick, Mitchell & Co. authored this type of message while Price Waterhouse & Co., Ernst & Ernst, and Arthur Anderson & Co. did not. On the other hand, Peat, Marwick, Mitchell, & Co. might not have authored this type of message while the other three independent audit firms did. A third and more likely possibility concerns the nature of this type of message itself. Being relatively new, and difficult to write (see hypothesis III), managements' analyses of operations presented a greater encoding problem for Peat, Marwick, Mitchell & Co. and the four corporations it

associated its name with, than for either of the other three independent audit firms and their twelve clients.

For some inexplicable reason, Ernst & Ernst's managements' analyses of operations was easier for certified public accountants and chartered financial analysts to understand than expected. Here again, this relatively new and difficult to write type of message presented an easier problem for Ernst & Ernst and the four corporations it associated its name with than for either of the other three independent audit firms and their twelve clients.

No significant interaction effect was found among classes of sophisticated users, types of messages, and independent audit firms. While the three different classes of sophisticated users differed in their ability to understand narrative disclosures (see Hypothesis II) and the types of messages differed in their understandability levels (see Hypothesis III), independent audit firms were once again found to be associated with messages of a uniform level of understandability. (see Hypothesis VI). Thus, it would be illogical to assume that a particular class of sophisticated users could find a particular type of message of a particular independent audit firm more or less understandable than that of another independent audit firm. This result is not inconsistent with the previous discussion, where all three classes of sophisticated users found Peat, Marwick, Mitchell & Co.'s managements' analyses of operations more difficult to understand than expected; and certified public accountants and chartered financial analysts found Ernst & Ernst's managements' analyses of operations easier to

understand than expected.

Hypothesis VII, which stated that within a single independent audit firm, the level of understandability does not vary significantly for qualified auditors' reports among source corporations, was accepted at the .05 level for Price Waterhouse & Co. and Arthur Anderson & Co., and was rejected at the .05 level for Ernst & Ernst and Peat, Marwick, Mitchell, & Co.

Within an independent audit firm, qualified auditors' reports are written by auditors at the partner level, since only partners can sign their firm's name. One would expect that auditors who have moved up within the ranks of their firms are a rather homogeneous group whose auditors' reports would reflect similarities of semantic, syntactic, and pragmatic structures. The results obtained for Price Waterhouse & Co. and Arthur Anderson & Co. probably reflect this notion.

The qualified auditors' reports for Ernst & Ernst and Peat, Marwick, Mitchell & Co. contradict this notion. One plausible explanation for this reflects the fact that the reports tested in this study refer to a footnote supposedly authored by management. Hypothesis IV revealed that the level of understandability varies among source corporations. It is not surprising, therefore, that the auditors' reports also varied significantly. One can only speculate that Price Waterhouse & Co. and Arthur Anderson & Co. took an active part in the writing of the footnotes they referred to in their qualifications while Ernst & Ernst and Peat, Marwick, Mitchell & Co. did not.

It should be stressed, however, that when an auditor chooses to refer to managements' footnotes as part of his qualification (as opposed to including the information contained therein directly in his report), the auditor is implying by his actions that he would have structured his message in an identical fashion and it was unnecessary for the auditor to repeat the information in his qualification.

Other plausible explanations include the following:

(1) Each qualification refers to the unique circumstances surrounding the client's financial position, changes in financial position, and results of operations. Possibly the circumstances were more complex for Ernst & Ernst and Peat, Marwick, Mitchell & Co. than for Price Waterhouse & Co. and Arthur Anderson & Co.

(2) Figure 4 was prepared based on the premise that the office originating the qualification might provide a clue as to the cause of the significant variability in message understandability for Ernst & Ernst and for Peat, Marwick, Mitchell & Co. Four out of the eight offices were not located in major cities for the eight clients of these two independent audit firms. On the other hand, eight out of the eight offices were located in major cities for the eight clients of Arthur Anderson & Co. and Price Waterhouse & Co. Conceivably, partners in smaller offices are not as proficient a group as partners in larger offices; and this may cause dissimilarities in the semantic, syntactic, and pragmatic structure of their qualifications. Singhvi and Desai arrived at a similar finding. That is, they found "a positive relationship between the type of

FIGURE 4.

INDEPENDENT AUDIT FIRMS BY SOURCE CORPORATIONS INDICATING ORIGINATING OFFICE

Name of Corporation	Audit Firm	Originating Office	Audit Firms whose Qualified Auditor's Reports Varied in their Understandability among their Clients
Harman International Indus	Ernst & Ernst	Huntington, New York	
First of Denver Mortgage	Ernst & Ernst	Denver, Colorado	
U. S. Realty Investments	Ernst & Ernst	Cleveland, Ohio	
McDonnell Douglas, Corp.	Ernst & Ernst	St. Louis, Missouri	
Kaneb Services, Inc.	P. M. & M.	Houston, Texas	
Bourns, Inc.	P. M. & M.	Newport Beach, California	
Wachovia Realty Investments	P. M. & M.	Greensboro, North Carolina	
Bangor Punta Corporation	P. M. & M.	White Plains, New York	
Banner Industries, Inc.	Arthur Anderson	Cleveland, Ohio	Audit Firms whose Qualified Auditor's Reports did not Vary in their Understandability among their Clients
Security Mortgage Investors	Arthur Anderson	New York, New York	
Cousins Mortgage	Arthur Anderson	Atlanta, Georgia	
United Gas Pipe Line	Arthur Anderson	Houston, Texas	
Viking General Corporation	Price Waterhouse	Miami, Florida	
Recognition Equipment	Price Waterhouse	Dallas, Texas	
Allegheny Power Systems	Price Waterhouse	New York, New York	
The Anaconda Company	Price Waterhouse	New York, New York	

CPA firm and the quality of corporate disclosure."[21] Their categorization of independent audit firms into large firms and small firms is somewhat similar to the categorization of "Big Eight" firms into large offices and small offices.

As a result of testing Hypothesis XIII, no statistically significant relationship was found between the understandability of narrative disclosures as measured by the Cloze Readability Procedure and reading difficulty as measured by the Flesch Reading Ease Formula for standard format footnotes and managements' analyses of operations. A statistically significant inverse relationship was found for qualified auditors' reports and nonstandard format footnotes. The three prior readability studies in accounting--Pashalian and Crissy,[22] Soper and Dolphin, Jr.,[23] and Smith and Smith[24]--relied upon the Flesch Reading Ease Formula as their criterion measuring instrument. Chapter II presented a discussion of the weaknesses inherent in readability formulas. Chapter V presented a discussion of the validity of the Cloze Readability Procedure. Thus, the lack of a significant correlation for standard format footnotes and managements' analyses of operations and the significant inverse correlation for qualified auditors' reports and nonstandard format footnotes between these two measures of message understandability was expected and implies that the conclusions drawn by these researchers are suspect.

Furthermore, the future advancement of the accounting discipline with respect to adequate disclosure/understandability can procede only on the basis of techniques developed in other

disciplines that can be appropriately adapted to cope with the technical complexities inherent in accounting communications. As noted in Chapter IV, other empiricists like Haried[25] have adopted a similar approach.

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[1]Wilbur Schramm, "How Communication Works," The Process and Effects of Mass Communication, ed. by Wilbur Schramm (Urbana Illinois: University of Illinois Press, 1954), pp.6, 13.

[2]The certified public accountant was portrayed in Chapter IV as a direct or indirect cosource of narrative disclosures (depending upon his actual degree of participation in the encoding process). The certified public accountant is also a destination, for Generally Accepted Auditing Standards require his reading the narrative disclosures contained in financial reports as part of his overall assessment of the "fairness" of the financial statements.

[3]Commercial bank loan officer trainees were selected for inclusion in this study in an attempt to identify the lowest stratum of the sophisticated user category. Future research should be directed towards identifying other subgroups--if they exist--that are less sophisticated than commercial bank loan officer trainees (e.g., junior accountants) but still fall within the Financial Accounting Standards Board's tentative conclusion as to the target audience.

[4]Accounting Principles Board, Statement Number 4: Basic Concepts Underlying Financial Statements of Business Enterprises (New York: American Institute of Certified Public Accountants, 1970), p. 20.

[5]Accounting Series Release Number 159 (Washington, D.C.: Securities and Exchange Commission, August 12, 1974), p. 2.

[6]Richard A. Lewis, The Corporation Communications Report (New York: Corpcom Services, Inc., 1974), p. 4.

[7]Ibid.

[8]Surrendra S. Singhvi and Harsha B. Desai, "An Empirical Analysis of the Quality of Corporate Financial Disclosure," The Accounting Review, January 1971, p. 129.

[9]Ibid., p. 132.

[10]A Pearson Product-Moment correlation was used to test this hypothesis. The Coefficients of correlation were low but statistically significant because there was a very restricted range of scores (i.e., only sixteen different levels of sales for the sample size of 1,008). Consequently, the correlations obtained probably understate reality.

[11]Michael Schiff, "Accounting Tactics and the Theory of the Firm," The Journal of Accounting Research, Spring 1966,

—John Myers, "Depreciation Manipulation for Fund Profits," Financial Analysts Journal, November-December 1967, pp. 117-123.

—R. Simpson, "An Empirical Study of Possible Income Manipulation," The Accounting Review, October 1969, pp. 806-17.

—D. Graber, "Real and Illusory Earnings Growth," Financial Analysts Journal, April 1969, pp. 52-54.

—J. Ratliff, "An Investigation into the Use of Alternative Accounting Principles and Procedures to Smooth Reported Earnings Per Share of Corporations," (unpublished PH.D. dissertation, New York University, 1970.)

—R. Boggs, "The Effect of Accounting Policy Decisions on Reported Earnings Per Share," (unpublished D.B.A. dissertation, Indiana University, 1966).

—B. Cushing, "An Empirical Study of Changes in Accounting Policy," The Journal of Accounting Research, Autumn 1969, pp. 196-203.

—R. Seglund, "An Analysis of the Impact of Selected Accounting Procedures on Reported Financial Results," (unpublished D.B.A. dissertation, University of Colorado, 1971).

—E. Summers, "Observation of Effects of Using Alternative Reporting Practices," The Accounting Review, April 1968, pp. 257-65.

—C. Copeland, "Income Smoothing," Empirical Research in Accounting: Selected Studies, 1968, Supplement to The Journal of Accounting Research (1968), pp. 101-16.

—E. Comiskey, "Market Response to Changes in Depreciation Accounting," The Accounting Review, April 1971, p. 279-85.

—T. Archibald, "The Return to straight-Line Depreciation: An Analysis of a Change in Accounting Methods," Empirical Research in Accounting: Selected Studies (1967) Supplement to The Journal of Accounting Research (1967) pp. 164-80.

—T. Dyckman, "On the Investment Decision," The Accounting Review, April 1964, pp. 285-95.

—M. Gordon, B. Horwitz, and P. Myers, "Accounting Measurements and Normal Growth of the Firm," in Research in Accounting Measurement, ed. by R. Jaedicke, Y. Ijiri, and O. Nelson (Evanston Illinois: American Accounting Association, 1966) pp. 221-31.

—F. Mlynarczyk, "An Empirical Study of Accounting Methods and Stock Prices," Empirical Research in Accounting: Selected Studies 1969, Supplement to The Journal of Accounting Research (1969), pp. 63-81.

[12]P. E. M. Standish, "Company Financial Reporting--Communication or Mystification," The Chartered Accountant in Australia, May 1970, p. 4.

[13]James R. Morton, "Qualitative Objectives of Financial Accounting: A Comment on Relevance and Understandability," Journal of Accounting Research, Autumn 1974, pp. 295-296.

[14]The auditor's qualified report referred to a footnote, in the majority of cases, presumably authored by management; and it was this footnote that was tested. It is reasonable to assume that the auditor, having read the footnote and accepted the content and language structure therein, was tacitly asserting that he would have written the footnote in the same manner.

[15]A Pearson Product-Moment correlation was used to test this hypothesis. The Coefficients of correlation were low but statistically significant because there was a very restricted range of scores (i.e., only sixteen different levels of earnings per share for the sample size of 1,008). Consequently, the correlations obtained probably understate reality.

[16]According to Singhvi & Desai the index of disclosure is an approximate model of adequate corporate disclosure. Thirty-four items were selected on the basis of a study of the investment decision process, a review of the literature on how the decisions should be made, interviews with security analysts, and an examination of analysts' reports. Weights were assigned to the items in order to note distinction in their relative importance as indicated by the various subcommittees of the Committee on Corporate Information, and also indicated by the security analysts who were interviewed.

[17]Surrendra S. Singhvi and Harsha B. Desai, op. cit., pp. 134-135.

[18]Accounting Series Release No. 126 (Washington, D.C.: Securities and Exchange Commission, July 5, 1972).

[19]Statement on Auditing Standards No. 1 (New York: American Institute of Certified Public Accountants, 1973), p. 1.

[20]The Commission on Auditor's Responsibilities, Report of Tentative Conclusions (New York: American Institute of Certified Public Accountants, 1977), pp. 8, 80.

[21] Surendra S. Singhvi and Harsha B. Desai, op. cit., p. 133.

[22]Siroon Pashalian and William J.E. Crissy, "How Readable are Corporate Annual Reports," Journal of Applied Psychology, August 1950, pp. 244-248.

[23]Fred J. Soper and Robert Dolphin jr., "Readability and Corporate Annual Reports," The Accounting Review, April 1964, pp. 358-362.

[24]James E. Smith and Nora P. Smith, "Readability: A Measure of the Performance of the Communication Function of Financial Reporting," The Accounting Review, July 1971, pp. 552-561.

[25]Andrew A. Haried, "The Semantic Dimensions of Financial Statements," Journal of Accounting Research, Autumn 1972, pp. 376-391.
Andrew A. Haried, "Measurement of Meaning in Financial Reports," Journal of Accounting Research, Spring 1973, pp. 117-145.

Chapter IX

Conclusions and Recommendations

INTRODUCTION

The important conclusions of this research study for the advancement of accounting and the accounting profession are discussed in this final chapter. It also contains a series of recommendations based on the philosophy premises, and empirical results discussed in the prior eight chapters.

Based on the foundation established in the first five chapters of this study plus the empirical results of the adequate disclosure/understandability tests, recommendations are made for preparers to improve the effectiveness of external financial reporting.[1]

The Financial Accounting Standards Board has tentatively designated "investors and creditors who have a reasonable understanding of business and economic activities and financial accounting and who are willing to spend the time and effort needed to study financial statements"[2] as the target audience for accounting communications. Certified public accountants, chartered financial analysts, and commercial bank loan officer trainees fall within this broad definition. However, as a result of testing Hypotheses II and IIA, commercial bank loan officer trainees were identified as that subgroup of the target audience that had the greatest difficulty in understanding narrative disclosures. It was reasoned in Chapter VIII that this particular class of sophisticated user possesses the requisite accounting or finance educational background but lacks the depth of knowledge that can only be acquired through on-the-job experience.

Based on the theory of communication (see discussion, Chapter IV), the material in financial reports must be geared to the lowest common denominator among the report's sophisticated readership. One could regard the commercial bank loan officer trainee as falling within a larger subgroup of sophisticated users, as that term is implied by the Financial Accounting Standards Board, who do not, as yet, possess the same level

of expertise as the certified public accountant and the chartered financial analyst. Nevertheless, the commercial bank loan officer trainee may not be truly representative of that subgroup. Future researchers will have to determine whether there are any other subgroups less sophisticated than the commercial bank loan officer trainee (e.g., investment club members) that fall with the Financial Accounting Standards Board's tentative conclusion as to the identity of the target audience.

Until such research becomes available, however, it is recommended that management and independent auditors 1. reorient their narrative disclosures to the least technically competent stratum of the target user group (i.e., commercial bank loan officer trainees) but only on a temporary basis and 2. use the Cloze Readability Procedure to achieve this objective. This may insure that all acknowledged bonafide sophisticated users comprehend managements' analyses of operations, footnotes, and qualified auditors' reports; and no one subgroup will have an unfair advantage over the other subgroups.

This recommendation, however, is not to be confused with the Securities and Exchange Commission's concept of "differential disclosure." As discussed in Chapter III, Release No. 5427 was the first official indication by the Commission that financial reports might be something other than unitary.[3] That is, there might be a given set of narrative disclosures for sophisticated users and a different set of narrative disclosures for unsophisticated users. Our recommendation calls

for the preparation of a single set of narrative disclosures that "should be comprehensible to investors and creditors who have a reasonable understanding of business and economic activities and the financial accounting process and who are willing to spend the time and effort needed to study financial statements."[4]

As a result of testing Hypothesis III, managements' analyses of operations and standard format footnotes were identified as the most difficult types of messages for sophisticated users to comprehend.

A management's analysis of operations that properly achieves its purpose of identifying and discussing material elements of corporate performance in language the sophisticated user can understand discharges the fiduciary responsibility of management in reporting on its stewardship. Income statements describe only the results of past managerial performance in a summarized and abstract form. According to Foy, "what they do not tell is what caused changes and why. Here only words can do the job."[5]

Prior to Accounting Series Release Number 159, most corporations included a financial review section which was used to: (1) provide a succinct description of the company and its products, markets, and goals and (2) explain in simple terms the significance of tax rates, debt levels, currency revaluations, pre-tax margins, and other aspects of the company's financial condition and operations. According to Lewis, "if its good--which is seldom--it will give a more detailed description of the year's events, or highlight particularly interesting aspects of the company's business, such as new products, promising

research, etc. If it is bad--which is often--it will be filled with operational details of little interest to anyone except the division managers who often have had free reign."[6] The Securities and Exchange Commission recognized this problem and tried to increase the amount of information available to financial report users. It stated that:

> we have tried to increase the analytical content of filings both in textual sections and in the financial statements reported on by the certified public accountant. A reader must be able to discern how a business operates, not just net results. If past data are to serve as a predictor, users must have a reasonably valid comprehension of how and why prior results were obtained.7

Accounting Series Release Number 159 was designed to elicit narrative information not otherwise available and was meant to help both sophisticated and unsophisticated financial report users.

The standard format footnote on accounting policies is designed to identify and discuss the accounting methods used in the preparation of the financial statements, and the effect of a change in methods used, in language the sophisticated user can understand. It also discharges the fiduciary responsibility of management in reporting on its stewardship. Backer commented on the importance to the sophisticated user of more fully disclosing information relevant to the interpretation of the statements of financial position, changes in financial position, and results of operations:

> Analysts' comments on the quality of earnings tend to be subjective because they are concerned with factors which cannot be reduced to precise expression. Often they reflect uncertainty about the possible effects of financial policies and accounting methods which the analyst lacks sufficient information to appraise, or inability to evaluate apparent earnings differences between companies which employ different accounting

> methods. The desire to reduce this uncertainty is the source of widespread and strong demand for fuller and clearer disclosure of the accounting methods underlying financial reports. (emphasis added)[8]

The accounting policies footnote usually includes the important valuation and allocation techniques elected by the corporation; and since alternative generally accepted accounting principles exist, the financial report reader must be apprised of those used for three reasons: (1) to evaluate the quality of the accounting numbers (i.e., liberal principles vs. conservative principles), (2) to insure that intercompany comparability exists, and (3) to insure that intracompany comparability exists. If either of the two latter conditions is not present, the investor or creditor should be in a position, if properly informed of the fact, to make whatever analytical adjustments are deemed appropriate. Thus, the disclosure of accounting policies is not a panacea for the problem of achieving comparability; but it does represent a positive and practical approach. It is not a technique, however, for justifying the use of inappropriate accounting practices; improper accounting methods cannot be corrected by disclosure.

By more precisely and clearly describing the major accounting policies used in the preparation of the three financial statements, management will be successfully communicating to investors and creditors; for example, the (1) capitalization policy for current and past period costs. (2) recognition of revenue policy (i.e., early recognition vs. point of sale vs. delayed recognition until cash is collected, and (3) the choice of methods to apply Generally Accepted Accounting Principles (i.e., lifo vs. fifo, straight-line vs. sum-of-the-years digits, etc.).

Chapter VI pointed out that these two standard format messages were the most technical and nondescriptive of the messages tested. The Commission on Auditors' Responsibilities noted that "the use of technical terms reflects the technical nature of accounting and auditing. Most disciplines involve complicated concepts for which practitioners develop terms that are often obscure to the unitiated."[9] There is enough evidence indicating that even sophisticated users find some of the technical terms such as "present fairly" vague and ambiguous. Consequently, it is recommended that financial report preparers seek alternative forms of message presentation (e.g., emphasize descriptive, nontechnical data and deemphasize nondescriptive, technical data). The Securities and Exchange Commission in Accounting Series Release Number 159 anticipated the communication problems associated with standardized formats when they urged financial report preparers to avoid "boiler plate or compliance jargon" in managements' analyses of operations.[10] Where technical terms cannot be avoided, it is recommended that a brief definition be supplied. "Definition facilitates effective communication because it makes explicit the meaning of terms."[11]

In addition, adding appropriate amounts of redundancy to managements' analyses of operations and standard format footnotes may make them easier to comprehend. Since these two types of messages appear to be terse and plagued with problems of concept density, it is recommended that report writers try to strike a balance between terseness and redundancy. Furthermore, shorter sentences and fewer polysyllabic words usually make for

a more understandable communication. (See discussion on page 298).

Nonstandard format footnotes and qualified auditors' reports were identified as the easiest types of messages for sophisticated users to comprehend. Chapter VI pointed out that these two types of messages tend to be descriptive of a situation (e.g., a material contingency such as a lawsuit) rather than verbal representations of the accounting calculus. This result serves as reinforcement for the recommendation made above with respect to standard format footnotes and managements' analyses of operations. More importantly, however, the results of testing Hypothesis III suggest that the accounting profession and the Securities and Exchange Commission should limit, within reasonable bounds, any emphasis on standardizing the language and format of narrative disclosures. In its place, management should have <u>flexibility</u> in drafting the language and format of narrative disclosures subject to an acceptable level of understandability (i.e, the criterion level of 57%). That is, there should be a strict enforcement of <u>Accounting Series Release No. 159's</u> communication recommendation. It should be noted, however, that the standardized messages tested in this research study may be inherently more complex because they call for a greater knowledge of the accounting model than the nonstandardized messages that were tested. Thus, their understandability is not solely a function of language structure, but of content as well; and this fact should be considered a factor for future research.

The results obtained from testing Hypotheses III and VI point out another problem area in accounting communication. As discussed in Chapter IV, the actual participation of the certified public accountant in the preparation of managements' narrative disclosures is not fully known. User acceptance of messages, the final link in the accounting communication process, depends upon user acceptance of financial report preparers as credible sources. That is, users need to know the identity of the authors of narrative disclosures in order to judge their expertness and their trustworthiness.

Smith initially found that "based on the literature survey, a consensus does not exist in the financial community on the identity of the information source in financial reporting."[12] He sent a questionnaire to certified public accountants and professional users and found that while official pronouncements of the American Institute of Certified Public Accountants and the Securities and Exchange Commission indicate that management should be the source, 12½% of the certified public accountants and 62.2% of the professional users indicate that certified public accountants and management are joint sources.[13] (Smith defined a source as having the final influence in deciding on the financial report messages and their manner of presentation.) When Smith asked his respondents to indicate whom they preferred as the source, 29.2% of the certified public accountants and 75.5% of the professional users selected certified public accountants and managers as joint sources. The remaining 24.3% of the professional users selected certified public accountants as the

desired source.[14] Thus, acting on the recommendation that independent auditors participate in the drafting of narrative disclosures as either sources or joint sources with management would probably improve the understandability of managements' representations in standard format footnotes and managements' analyses of operations. Georgeson & Co. reached a similar conclusion when they made the following suggestion to financial executives:

> Don't be afraid to suggest to your auditors that they make...[managements']... financial notes readable. A small number of companies are doing this now. Everyone who reads the notes appreciates it..., especially since the SEC is putting more stress on better communication.[15]

It is also recommended that financial reports indicate the extent of the certified public accountant's involvement in the encoding of managements' representations. With such an awareness, sophisticated users could better assess source credibility; and communication breakdowns, if they occur, would be more readily susceptible to identification and solution. Chapter VIII suggested that qualified auditors' reports are usually written by a homogeneous group of partners and should reflect similarities of semantic, syntactic, and pragmatic structure. Ernst & Ernst and Peat, Marwick, Mitchell & Co. contradict this notion, because their qualifications referred the reader to a footnote supposedly authored by management, for which they probably did not take an active part in its authorship. As a consequence, it is recommended that the independent auditor directly involve himself in the preparation of the footnote referred to in the qualified auditor's report and indicate

the extent of his involvement therein. Otherwise, the independent audit firm is implying by its actions that it would have structured this message in a virtually identical fashion and should be held accountable for inadequate disclosure/understandability if sophisticated users cannot comprehend the information contained therein.

As for the other plausible causes for the empirical results obtained, the following two recommendations are offered: 1. If the circumstances surrounding the client's financial statements are unusually complex, the independent audit firm should seek alternative forms of message presentation that emphasize descriptive, nontechnical data. 2. If partners in independent audit firms are not as proficient as believed, because of geographical location (i.e., size of office), the American Institute of Certified Public Accountants' program of firm-wide "quality control" should be extended to encompass adequate disclosure/understandability. That is, report writing within "Big Eight" firms should be made uniform across offices, regardless of location, size, clientele, or any other factor.

As a result of testing Hypothesis IV, the level of understandability of narrative disclosures was shown to vary significantly among source corporations. Chapter VIII noted that the actual participation of management in the preparation of messages can be major or minor, depending upon the particular company's practices (i.e., ranging from internal committee editing to external authorship). Consequently, it is recommended that management, held accountable for adequate disclosure/understandability, concentrate its efforts exclusively on making

their financial reports vehicles for successful communication to sophisticated users, despite inherent operating complexities.

The industry in which the corporation operates was not found to be a factor in message understandability except for the inexperienced commercial bank loan officer trainees. However, the stock exchange listing and the size of the corporation were found to be significant factors. Perhaps, companies listed on the New York Stock Exchange and "large" corporations do not have to be as concerned with their financial reporting practices, to attract equity and debt capital, as do companies listed on other exchanges and "small" corporations. On the other hand, it may well be that the inherent operating complexities of the former adversely affects the understandability of their narrative disclosures. The Financial Accounting Standards Board could serve as a vehicle for improved understandability. Inasmuch as the Board was created to establish greater uniformity (e.g., eliminate inconsistent accounting principles) and more intercompany comparability for the financial statement messages irrespective of company size, listing, or any other factor, a similar objective could be established for the narrative disclosures as well (e.g., a uniform level of understandability among all reporting entities irrespective of company size, listing, or any other factor).

As sophisticated investors and sophisticated creditors seek more information about corporations and their economic and social activities from sources outside the formal financial

statements (e.g., managements' analyses of operations), the body of predominately narrative disclosures relied upon for external decision-making grows.

The Securities and Exchange Commission has publicly committed itself to requiring more descriptive material in financial reports. Recent Accounting Series Releases like Number 159 have called for additional disclosures to supplement and complement the formal financial statements. The President of the American Institute of Certified Public Accountants "suggested that investors would be better served with an interpretation and analysis of what the financial data means. Investors must be told what the information means in terms of business operations, financial conditions, and future prospects."[16]

While many accountants believe that the Securities and Exchange Commissions' current practice and Olson's suggestion are questionable, they represent a fact of life that the accounting profession must cope with. Since the extent of such additional information in financial reports has been proliferating, the sophisticated user has the right to be assured of the understandability of managements' representations. Furthermore, management has the responsibility (i.e., stewardship) to assure that its informational disclosures can be understood and, therefore, relied upon. The results of this research study can serve as a platform for the Financial Accounting Standards Board to develop objective adequate disclosure/understandability standards. Initiation of such standards appears to be within the charge of the Financial Accounting Standards Board to "establish stand-

ards of financial accounting and reporting."[17]

Ideally, the financial report preparer should objectively measure the degree to which the intended meanings will be assigned by sophisticated users to managements' analyses of operations and footnotes before dissemination. The recommendation that managers and their independent auditors pretest their narrative disclosures may be justified on the grounds of communication theory. That is, Chapter IV's discussion of the accounting communication process stressed the fact that feedback to the financial report preparer is exceedingly important in the whole process, because it enables the preparer to appraise the extent to which the narrative disclosures are understood. It is only through the feedback mechanism, (as depicted in Figure II on page) that the source can assess the success of the communication effort. Unfortunately, efforts to secure feedback in mass communication are not normally possible. "In external reporting there are often large numbers of receivers, and because they are often not closely associated with the entity, feedback of their response to the accountant is generally impossible.[18]

An objective of this recommendation is to make operational the feedback element long absent from the accounting communication process to ensure the proximity in meaning between that intended by the sender of the communication and that interpreted by the receiver of the communication. No longer should financial reports be challenged as effective transmitters because they do not permit a dialogue between preparers (source) and sophisticated

users (destination) other than untimely and poorly attended annual stockholder meetings to clarify misunderstandings and misimpressions. A major supposition of this research effort was to demonstrate that an effective and efficient methodology (i.e., the Cloze Readability Procedure) is finally available to accounting communicators to try to help accomplish this goal. That is, the Cloze Readability Procedure could be initially applied to a set of proposed messages. By comparing the understandability level with the predetermined standard (i.e., the criterion level), the financial report preparer would be able to determine whether the messages would be comprehensible (i.e., the proper meanings would be assigned) to sophisticated users.

If the results compared unfavorably with the criterion level, the preparer would be aware of the unfavorable variance (i.e., inadequate disclosure/understandability) and hopefully initiate corrective steps so that the results of a subsequent Cloze Readability Procedure analysis would compare favorably with the criterion level. Since the Cloze Readability Procedure has apparently been validated and is readily available to financial report preparers, there seems to be no excuse for issuing messages that are not understandable to sophisticated investors and sophisticated creditors.

Jordan stated that "what is importnat about feedback is not that it exists, but what the communicator does in light of it. The greater the sensitivity of the communicator to feedback and his skill in revising his message in light of it, the greater

his chance of communicating effectively."[19] Accounting is an art. Thus, a set of guidelines for preparers to ensure adequate disclosure/understandability cannot be recommended. The improvement in message comprehension by managers and accountants can result only from trial and error revisions.

The Commission on Auditors' Responsibilities concluded that "specific steps to improve communication with users will have to be accomplished through appropriate standard-setting bodies."[20] It is recommended that the Financial Accounting Standards Board enact a requirement that narrative disclosures contained in financial reports must tentatively score 57% or better if subjected to a Cloze Readability Procedure test. Future research will have to define the criterion level applicable to technical accounting communications. That is, after more groups of sophisticated users are tested, an appropriate level equivalent to the independent reading level (i.e., 90% on a conventional multiple-choice reading comprehension test) should be established.

In the interim, however, the research reviewed in Chapter V suggests a temporary criterion level of 57%. Since this level was arrived at by using different populations and different materials, a 10% materiality range (i.e., 51.30%-62.70%) for the criterion level would seem to be a good beginning. Compliance by management with this adequate disclosure/understandability standard through the use of a valid measuring instrument should result in the uniform communication of footnotes and managements' analyses of operations among publicly-held corporations.

If this recommendation fails to insure the future success of accounting communications, it is conceivable that an interdisciplinary approach to report writing might be the only feasible solution to the complex problems associated with external financial reporting. It is further recommended that publicly-held corporations and independent audit firms give serious consideration to employing linguistic advisors (who have business backgrounds) to help them to properly structure their narrative disclosures.

The role delegated by society to the accounting profession encompasses communicating meaningfully to sophisticated users. Information output is the major basis for decision making in the United States' freely-competitive economy. The independent auditor must always keep in mind that his qualified auditor's report is a one-way communication which must always judiciously transmit both the scope of his examination and his opinion thereon. He has a clear responsibility to guard against misleading financial report users as to the audit procedures used and the degree of "fairness" of the financial statements.

The Commission on Auditor's Responsibilities asserted that "evidence abounds that communication between the auditor and users of his work--especially through the auditor's standard report--is unsatisfactory."[21] One of the underlying questions answered in the affirmative by this research study was: "Are qualified auditors' reports understood by professional investors and creditors?" With the empirical results obtained, the accounting profession will be alerted to the fact that their qualifications, on average, do satisfy the qualitative standard of

adequate disclosure/understandability. However, because of the fairly large standard deviation that was obtained (indicating that some qualified auditors' reports scored below acceptable levels), it is recommended that an adequate disclosure/understandability standard for the auditor's report that parallels the one just recommended for managements' analyses of operations and footnotes be established.[22]

The Auditing Standards Executive Committee of the American Institute of Certified Public Accountants should promulgate a generally accepted auditing standard that would require auditors to pretest the financial report messages they are required to author, using the Cloze Readability Procedure. If the tentative criterion level range were not achieved on the first go-round, revisions of the auditors' report would be indicated until an acceptable Cloze Readability Procedure score could be achieved.

The Committee on Basic Auditing Concepts suggested a good starting point:

> In phrasing his report, the auditor must be wary of employing words at a high level of abstraction and must avoid general and ambiguous terminology. The amount of the message left to inference should be minimum, and the degree of reader sophistication and understanding assumed should not exceed its actual level.[23]

There is no logical reason to hold the independent auditor less accountable for the successful communication of his representations in financial reports than management is for its representations.

In addition to insuring the understandability of qualified auditors reports', certified public accountants through the

vehicle of the attest function should be required to insure the understandability of footnotes and managements' analyses of operations.

> The attest function results in the expression of an opinion by an independent expert that a communication of economic data by one party to another is fairly presented. Discharge of the function lends credibility to the representation and increases reliance upon it. The opinion implies (if it does not so state) that the data presented are appropriate for the purpose of the representation, that there is objective evidence underlying the data, and that the judgements exercised in interpreting the data are such as to justify the opinion.[24]

The performance of the attest function by an independent auditor is justified solely on the grounds that the user of financial reports cannot satisfy himself directly as to the quality of the information being communicated by management and it is critically important to him that such satisfaction be achieved. "When the user of information perceives an actual or potential conflict of interest between himself and the preparer/source of the information, he will be concerned about the possibility of bias (both deliberate and unintentional) in information received."[25] The auditor's role is to check the view taken by management with his essential independence of judgment.

It is therefore recommended that an independent "audit" of the understandability of managements' representations would provide this assurance since such an attestation would promote user confidence in the financial report communication process. Chetkovich made a similar recommendation over twenty years ago, but lacked the techniques to make it efficacious:

> We should recognize that the presentation of more information in or supplemental to the financial statements may tend to increase the area of accountant's responsibility. However, no profession can hope to grow in stature and usefulness by narrowing its proper and legitimate responsibilities. The public accountant is well qualified to determine the form and content of financial information which will be most useful to the investor. Rather than waiting for pressures from various sources to force more complete reporting, we should here take the lead for which our training and experiences so ably qualify us.[26]

Recently, Peat, Marwick, Mitchell & Co. in Research Opportunities in Auditing recommended that auditors"...need reporting standards to assist them in determining whether information is effectively communicated to the information user."[27]

To implement this recommendation, the Auditing Standards Executive Committee of the American Institute of Certified Public Accountants would need to enact a generally accepted auditing standard, requiring the certified public accountant to extend the scope of his examination and his opinion beyond what is now covered to more fully embrace adequate disclosure/understandability. That is, the auditor will then be able to look at a narrative disclosure contained in a financial report he associates his name with, not just for accounting "correctness" but also for comprehensibility.

By way of illustration: the auditor of a publicly-held corporation could be charged, as part of his examination, with randomly selecting a small sample of passages contained in managements' analyses of operations and footnotes, construct Cloze Readability Procedure tests based upon them, and then administer them to audit staff members serving as surrogates for chartered financial analysts and commercial bank loan

officers. Based on a comparison of the test results obtained with the tentative criterion level range, the auditor would then either (1) permit the issuance of the financial report with a favorable comment in his opinion paragraph or (2) insist that the unintelligible message(s) be revised until it (they) can successfully pass a subsequent Cloze Readability Procedure test.

This recommendation is not just a theoretical nicety but a practical solution of the adequate disclosure/understandability problem of some, but not all, of the sixty-four narrative disclosures examined in this research study. This additional audit step would neither be overly expensive nor time consuming to either the issuing corporation or the independent audit firm; and, more importantly, it would promote future successful communication between financial report preparer and financial report user.

This recommendation is believed to be a natural extension of the auditor's role.

> As a profession, auditing has duties to all those who rely upon its work. As a profession, it cannot wait until it is forced by such pressures as the market can bring to bear to expand its understanding and practice with respect to adequacy of disclosure. Without promptings from the market, there should be a continuing effort by auditing to improve and extend its services, to keep up to date with the realities of the environment in which it operates. As a profession, auditing has significant social responsibilities; unless it accepts these social responsibilities it will not long merit the status of a profession.[28]

Once again, it is surmised that the accounting profession is threatened by events that should have been foreseen and either

prevented from happening or, at least, their consequences mitigated. The alternative to expanding the role of the auditor to more fully encompass adequate disclosure/understandability will, no doubt, be a series of costly litigations with their attendant negative connotations for the credibility of the formal financial statements as well as the credibility of the certified public accountant as society's principal attestor. With the pace of business activity quickening in tandem with a rapidly changing and complex environment, the accounting profession can no longer afford the luxury of time and resources to rectify misunderstandings and erroneous investment or loan decisions that may result from incomprehensible financial report messages.

Narrative disclosures should be developed by management to objectively communicate to sophisticated users the best available economic and social information about the events and conditions that have affected, are currently affecting, and will affect the business entity in the immediate future. The question of management manipulation (i.e., influential communication) is by no means a new problem. It has been debated both within and without the accounting profession for too many years with respect to the financial statement messages contained in annual reports. However, with the publication of Morton's[29] research findings (which led to the formulation and testing of Hypothesis XII), the problem has been extended to the understandability level of the narrative disclosures as well.

Craswell observed that "...the accountant in presenting financial information is in a position to manipulate the users of the accounting reports...All information has the power to do this and for this reason the accountant should exercise care in the presentation of financial information."[30]

Those who assert manipulation, real or imaginary, have long argued that having a situation where management is in complete control, not only of the assets of the business entity, but also of the system that reports on their use or misuse, is clearly unsatisfactory. For example Archibald stated that;

"an examination of the accounting literature reveals a dominant theme which strongly suggests that management will select and change accounting methods so as to create the statements they believe the owners want to see regardless of the underlying circumstances. In other words, when operating results are something less than ideal, the managers who are in effective control of the external reporting system will manipulate accounting methods so as to convey the illusion of satisfactory performance."[31]

Brenner reported the results of a questionnaire sent to stockholders, bankers, and financial analysts and found that the three groups expressed a general distrust of management and accountants. "The general attitude in the responses seems to be that management and accountants work together to give the corporation the best report possible. Some believe this is done within legal bounds but not moral bounds, while others believe some practices go beyond both."[32] Miller added that "to satisfy the requirements of objective and impartial reporting on the performance of management, financial statements must be as free as possible from the influence of management. It would be unnatural to expect a group of human beings to be completely unbiased in the assessment of its attainments and

failures."[33] Perhaps the most succinct statement on the matter was made by Davidson when he stated that "published financial statements are reports on management; they can be meaningful only if management is unable to control their contents."[34]

Based on these comments and the results obtained in Morton's study, it was hypothesized that the encoding stage of the accounting communication process would be subject to unethical manipulations of understandability as a function of managerial performance. The underlying rationale of Hypothesis XII was that given human behavior with its weaknesses and frailties, the placement of managers in control of the accounting communication process which monitors their performance breeds a situation wherein it is perfectly natural to expect that some misguided managers would deliberately obfuscate the failures and only communicate the successes.

As reported in Chapter VII and discussed in Chapter VIII, there was no evidence of management manipulation of the qualitative accounting standard of adequate disclosure/understandability for standard format footnotes and managements' analyses of operations. That is, there was no cause/effect relationship between performance (as measured by the change in earnings per share) and understandability (as measured by the Cloze Readability Procedure). There was evidence, however, of management manipulation for nonstandard format footnotes and footnotes referred to in auditors' qualified reports. Because of the demonstrated manipulation of understandability, the result may

be confused or partial understanding, or complete misunderstanding of nonstandard format footnotes and qualified auditors' reports.

It should be noted that where a message was standardized, there was no manipulation. Where a message was not standardized, there was manipulation. Nevertheless, the obvious approach--standardize messages to preclude manipulation--is not viable since Hypothesis III has shown that standardized messages were the most difficult for sophisticated users to comprehend. Therefore, the previously offered recommendations that (1) management be granted flexibility in drafting the language and format of narrative disclosures subject to an acceptable level of understandability (i.e., the criterion level range and (2) the accounting profession establish a "readability" standard and auditors, through their power of persuasion see, that the standard has been observed, should lessen the likelihood that in future years corporate managers would embark on a policy of mixing the purportedly objective explanation of the prior year's results of operations, however unfavorable, with incomprehensible messages.

In this manner, the accounting profession will be demonstrating to sophisticated users that it wants to maintain an acceptable level of <u>credibility</u> for managers' and auditors' financial report representations. If manipulation were to go undetected, there would undoubtedly be an erosion of confidence in the other parts of financial reports (i.e., financial statements) as well as in managers and accountants as

perceived by sophisticated users. Since the empirical tests confirm manipulation, it is strongly suggested that a management unwilling or incapable of making its narrative disclosures understandable at all times and under all conditions would give investors and creditors a basis for legal action for breach of fiduciary relationship.

As a result of testing hypothesis XIII, the inability of readability formulas to accurately measure the comprehensibility of narrative disclosures was confirmed. It was reasoned in Chapter VIII that formulas are not sophisticated enough to cope with the complexities inherent in accounting communications. An important objective of this research study was to add a measurability dimension to the difficult problems accountants face in financial reporting. The accounting profession now has an instrument (i.e., the Cloze Readability Procedure) to objectively measure the current and future status of adequate disclosure/understandability. Future researchers, periodically assessing the understandability of narrative disclosures, will continually be adding to the accounting profession's knowledge base with respect to the effectiveness of financial reporting. This research study is important to the accounting profession for without (1) an awareness of, and sensitivity to, the importance of adequate disclosure/understandability and (2) the measurability dimension added to help both managers and accountants to solve the difficult communication issues faced in external financial reporting, the accounting profession will have failed to render the service to society it has contracted to render. It may forfeit its credibility as society's principal attestor.

Restructuring Messages for Maximum Understandability

Before concluding this research study, an independent accounting communications expert, Richard Lewis, president and founder of Corporate Annual Reports, Inc., rewrote one of each of the four types of messages that were found to be incomprehensible to sophisticated users (scored below the criterion level of 57%). An analysis of the changes made and Mr. Lewis' comments thereon should provide an insight as to how financial report preparers should structure their messages for maximum understandability.

Bangor Punta Corporation's original standard format footnote appears in Figure 5. The rewritten standard format footnote appears in Figure 6. The numbers in brackets in both figures are keyed to the analysis that follows:

(1) The rewrite attempts to put in logical order and simplify a particularly ponderous series of statements that, perhaps unintentionally, serve to obscure some dismal operating results in the Company's domestic operations. The fact that "goodwill" is synonymous with "excess cost" is now clarified. Moreover, the term "goodwill" is explained in relation to Bangor's past acquisition activities.

(2) The original paragraph is separated at this point because the note now discusses foreign subsidiaries. The original footnote tells us what "value" does not mean, but not what it does mean--apparently "viability" in this case.

BANGOR PUNTA CORPORATION"S ORIGINAL STANDARD FORMAT FOOTNOTE

FIGURE 5

(1) In the aggregate, $30,303,000 of excess cost was charged to income in fiscal 1974 of which $10,556,000 related to operating units disposed during the year and $19,747,000 related primarily to the domestic recreational and leisure time product companies. The prevailing and forseeable economic conditions, the cautious attitude of consumers and the consequences of the energy crisis were the principal factors influencing the Board of Directors' determination that the latter amount should be written-off. (2) The amounts in the accompanying balance sheet principally relate to foreign subsidiaries and are considered to have continuing value over an indefinite period. Costs applicable to acquisitions prior to October 31, 1970 are not being amortized; costs incurred subsequent to that date are being amortized over a forty-year period. "Value," as used herein, is not intended to represent an evaluation of net realizable value upon disposition of any entity, if such disposition should occur.

The tax effects of timing differences between financial statement and taxable income are provided (credited) as deferred income taxes.

Investment tax credits are treated as a reduction of income taxes in the year earned.

(3) Consolidated federal income tax returns have been filed for prior years and are expected to be filed in the future. Accordingly, dividends from all includable companies are nontaxable to the parent. Earnings of foreign sub-

FIGURE 5--- Continued

sidiaries are generally reinvested. Undistributed earnings from date of acquisition of foreign subsidiaries through September 30, 1975, on which no U.S. income taxes has been provided, amount to approximately $5,000,000.

Several retirement plans are maintained for the benefit of employees who meet eligibility requirements. The Company funds pension costs accrued. Where appropriate, sufficient provision has been made to cover normal cost which includes past service cost. Charges to continuing operations for deferred profit sharing, union retirement and insured pension plans amounted to $2,177,000 and $1,867,000 in the years ended September 30, 1975 and 1974, respectively.

BANGOR PUNTA CORPORATION'S REWRITTEN STANDARD FORMAT FOOTNOTE

FIGURE 6

(1) The Company's Board of Directors decided, in view of poor financial conditions, to charge to income a total of $30,303,000 of cost in excess of net assets (i.e., goodwill) of certain subsidiaries in fiscal 1974. Of that amount, $10,556,000 applied to write-offs of units disposed of, and $19,747,000 to reduced goodwill values in our domestic recreational and leisure-time-product companies, which have been hard hit by the current recession and the energy crisis. (Most of the goodwill on Bangor Punta's balance sheet stems from the Company's acquisition program. When Bangor acquired an acquisition for a price higher than the acquisition's net asset value, the difference was placed on the balance sheet as goodwill value.) (2) The amounts in the accompanying balance sheet relate mainly to foreign subsidiaries that are considered to have continuing value over an indefinite period. ("Value," as meant here, applies to our estimation of continued viability rather than net realizable value upon the sale of any unit, if that should occur.) Costs applicable to acquisitions made before October 31, 1970, are not being amortized, but costs incurred after that date are being amortized over a forty-year period.

The tax effects of timing differences between the preparation of the financial statements and actual payment of taxes are treated as deferred income taxes. Investment tax credits are treated as a reduction of income taxes in the year earned.

FIGURE 6-- Continued

(3) The Company expects to continue filing consolidated federal income tax returns. This practice provides the benefit of excluding from taxation dividends from certain subsidiaries to the parent company. Undistributed earnings of foreign subsidiaries from dates of acquisition through September 30, 1975, amount to approximately $5,000,000. Because these earnings are reinvested overseas, they are not taxable in the United States.

The Company maintains several retirement plans for eligible employees. These pension costs are funded as accrued. Where appropriate, we have made sufficient provision to cover normal cost, including past service cost. Charges to continuing operations for deferred profit sharing, union retirement and insured pension plans amounted to $2,177,000 in the year ended September 30, 1975, and $1,867,000 in the year ended September 30, 1974.

(3) The rewording attempts to explain why the company files consolidated tax returns and explains the benefits to the sophisticated reader. The reason that no United States income tax is provided for on foreign reinvested earnings, which is not at all clear in the original footnote, is explained.

The Anaconda Company's original nonstandard format footnote appears in Figure 7. The rewritten nonstandard format footnote appears in Figure 8. The numbers in brackets in both figures are keyed to the analysis that follows:

(1) This sentence lays out the fact that three court cases are pending. On first reading of the original footnote, it is not readily apparent how many actions are involved, especially in the last two paragraphs.

(2) These sentences have been rewritten to simplify the messages.

(3) The legalistic phrase "defend vigorously on the merits" makes clearer the statement that the Company denies the claim and intends to defend itself with vigor.

(4) "Pre-trial discovery" is meaningless to most non-lawyers--the term is now defined.

(5) What the plaintiffs are seeking in their "relief" (which becomes "punishment" to Anaconda in actuality) is put into one sentence, including the information that there is no price tag as yet on the treble damages sought.

THE ANACONDA COMPANY'S ORIGINAL NONSTANDARD FORMAT FOOTNOTE

FIGURE 7

The civil actions commenced (1) in 1970 against Anaconda and two of its subsidiaries, now divisions, among others, by two private companies charging violations of the antitrust laws remain pending in the United States District Court for the Southern District of New York. (2) The complaints in both actions ask treble damages, divesture of the defendants' copper fabricating facilities, and other relief. The company has denied all liability and intends to defend vigorously on the merits. (3) These actions are still in pre-trial discovery. (4) Plaintiffs have not specified the amount of damages sought by them. (5) Counsel for the company do not believe, on the basis of the information thus far developed, that the actions should have a material effect on the company's financial position. (6)

In 1972 the U. S. Department of Justice commenced a grand jury investigation with respect to the pricing of refined copper and the exploration, mine development, mine production, smelting and refining of such copper. Subpoenas calling for the production of documents were served upon Anaconda, other major copper producers in the United States, and certain trade associations. In response to these subpoenas, Anaconda made a submission of material. The Justice Department has commenced the taking of testimony of witnesses. Several present and former employees of the company have been tentatively scheduled to appear before the grand jury. (7)

FIGURE 7--- Continued

The suit commenced in 1969 by an agricultural corporation against the company and other mining companies with operations in the area south of Tucson, Arizona, remains pending. Plaintiff seeks an injunction to prohibit the pumping and transportation of underground water by the mining companies from wells located within the Santa Cruz River Basin and includes in its complaint a claim for damages in the amount of $70 million. Although trial has not yet taken place, the basic legal issue in the suit is now before the Supreme Court of Arizona for decision, following a ruling favorable to defendants on this point by the lower court. (8)

THE ANACONDA COMPANY'S REWRITTEN NONSTANDARD FORMAT FOOTNOTE

FIGURE 8

The company is currently involved in three major legal proceedings. (1)

Two privately owned companies filed civil actions in 1970 against Anaconda and two of its subsidiaries charging violation of the antitrust laws (other companies also were named in the actions). (2) These actions are still in pre-trial discovery, (3) a legal term meaning that the plaintiffs and defendants are exchanging information, documents, etc., to bolster their cases, and await trial in the U. S. District Court for the Southern District of New York. The plaintiffs seek treble damages of an unspecified dollar amount, (4) divestiture of our copper fabricating facilities, and other punishment. Anaconda has denied all the charges and intends to defend itself vigorously. (5) The company's attorneys believe, based on the information assembled so far, that the actions should not have a material effect on our financial position in the unlikely event that we lose in court. (6)

Another legal matter still pending is a grand jury investigation, initiated by the U. S. Department of Justice in 1972, of the production and pricing of copper by the major American producers. As the case now stands, Anaconda has supplied documents subpoenaed by the grand jury, and several present and former employees of the company are expected to testify before the jury. (7)

FIGURE 8--- Continued

The remaining pending action is a suit brought in 1969 by an agricultural corporation. The suit is against Anaconda and several other mining companies operating in the Santa Cruz River Basin south of Tuscon, Arizona. The plaintiff seeks to prohibit the mining companies from pumping and transporting water from underground wells in the basin. The plaintiff claims damages of $70 million. The case now awaits a hearing before the Arizona Supreme Court on the Plaintiff's appeal from a lower court decision in favor of Anaconda. (8)

(6) In the original footnote, the lawyers are hedging a bit, but do not include the unthinkable "if we lose in court," as in the rewrite. The actions could not have a material effect on the Company's financial position, anyway, without a judgement rendered against it.

(7) This paragraph has been reworked to straighten out the elements and chronology involved. Anaconda is now simply supplying the documents that the grand jury has subpoenaed, rather than making a "submission of material" in response.

(8) The beginning of this paragraph in the original footnote could easily mislead the reader into thinking that it is a continuation of discussing the case in the previous paragraph. The rewrite makes it clear that it is an entirely different matter, and spells out what is going on in simpler terms and in a more logical order.

(9) Additional comment--The rewrite contains five sentences versus three sentences in the original footnote. The paragraphs could be made even clearer by replacing the word "plaintiff" with the actual names of the companies suing Anaconda.

The McDonnell Douglas Corporation's original management's analysis of operations appears in Figure 9. The rewritten

McDONNELL DOUGLAS CORPORATION'S ORIGINAL MANAGEMENT'S ANALYSIS OF OPERATIONS

FIGURE 9

Commercial aircraft and spare parts sales have remained relatively (1) stable for the past four years, with the DC-10 sales declining some $166.5 million in 1974 and then remaining level in 1975 and the DC-9 sales increasing $182.7 million in 1974 but decreasing $42.4 million in 1975. (2) Sales of military aircraft increased 18.7% in 1975, for an annual growth rate of 13.7% since 1971. This sales growth came from the F-15 Eagle air-superiority fighter program, which phased from development into initial production during the period, while sales of the more mature F-4 and A-4 combat aircraft and the C-9 transport aircraft programs held up well throughout the period, although fluctuating by years. Sales under the F-18 air combat fighter, the Harrier V/STOL aircraft and the YC-15 STOL transport programs have been relatively nominal to date. The recent decline in spacecraft and missile sales was halted in 1975, as sales of the Dragon and Harpoon tactical missiles offset further reductions in manned space vehicle programs.

(3) Costs of products and services increased 9.7% in 1975 and 3.8% in 1974, more than the increases in sales volumes so that the gross margin declined in 1975 to 16.4% from 19.3% in 1974 and 20.4% in 1973. The decline in gross margin can be attributed in its entirety to the reduction in the DC-10 accounting pool from 500 to 400 aircraft, effective

FIGURE 9--- Continued

1 October 1974 and related lower production rates. These changes in accounting estimates resulted in higher costs of sales for DC-10 aircraft delivered during the last quarter of 1974 and all of 1975.

(4) Expenditures for research and development (R&D) declined 5.2%, or $7.3 million, in 1975 and 2.4%, or $3.4 million, in 1974. While MDC has continued its expenditures for R & D to maintain its technological capabilities at approximately the same dollar level of prior years, the decrease has been in the continued development of commercial products, such as the DC-9 and DC-10 aircraft and the upgraded Delta launch vehicle. Similar development efforts for military products is performed under contract, and is not reflected as R & D.

management's analysis of operations appears in Figure 10. The numbers in brackets in both figures are keyed to the analysis that follows:

(1) It is slightly amazing that management could maintain that sales of commercial aircraft have "remained relatively stable" when they obviously have not, by the results presented. Perhaps they are talking about "stable" in terms of an up-and-down industry, which is assumed here.

(2) The paragraph has been separated into commercial sales and military sales. The second paragraph attempts to give the military results in terms of (a) the good news, (b) the bad news, and (c) possible good news, with transitional thoughts to guide the reader. The acronyms V/STOL and STOL are spelled out to help those who may be puzzled.

(3) In the original, this paragraph is a masterpiece of obscure prose, understandable only to accountants, and possibly not many of them. The rewrite is an attempt to set forth what actually happened to reduce the gross profit margin: a lower-than-projected production rate of DC-10's--ergo, higher unit costs for the airplanes.

(4) Another deceptive paragraph in the original. The company first says that R & D spending has been going down, and cites percentages and dollar amounts. The second sentence apparently says that R & D spending is at about the same dollar level of prior years

McDONNELL DOUGLAS CORPORATION'S REWRITTEN MANAGEMENT'S ANALYSIS OF OPERATIONS

FIGURE 10

The company's sales of commercial aircraft and related spare parts have followed a somewhat zig-zag pattern for the past four years. Considering the nature of our industry, however, the results may be considered relatively stable.
(1) DC-10 sales declined by some $166.5 million in 1974, then remained at about the same level in 1975. DC-9 sales increased by $182.7 million in 1974, but decreased by $42.4 million in 1975.
(2) Sales of MDC's military aircraft have remained on a steadier upward course. They increased 18.7% in 1975 and have shown an average annual growth rate of 13.7% since 1971. There were two chief contributors to the higher sales: the F-15 fighter program, which moved from development into initial production and the older combat aircraft (F-4 and A-4) and C-9 transport programs, which held up well on the average throughout the period. Only minimal sales have been generated from the company's programs to produce the F-18 combat fighter, the Harrier V/STOL (vertical/short take-off and landing) aircraft, and the YC-15 STOL (short take -off and landing) transport. On a brighter note, however, an upward trend in sales of Dragon and Harpoon tactical missiles, beginning in 1975, has offset further cutbacks in manned space vehicle programs.

FIGURE 10--- Continued

(3) The decline in our gross profit margin can be attributed entirely to a lower than projected rate of production of the DC-10. The low volume resulted in higher unit costs on DC-10's delivered during the last quarter of 1974 and all of 1975. Costs of products and services increased 9.7% in 1975 compared to only 3.8% in 1974. Increases in sales volumes have not been adequate to keep up with the rising costs. The effect has been a decline in gross profit margin to 16.4% in 1975 from 19.3% in 1974 and 20.4% in 1973.

(4) We reduced our spending for research and development by 5.2%, or $7.3 million, in 1975; and by 2.4%, or $3.4 million, in 1974. These decreases reflect less emphasis on the continued development of commercial products, such as the DC-9 and DC-10 airplanes, and the improved Delta Launch vehicle. Development efforts for military products is provided for in our contracts. Thus, such expenditures are not included in the company's R & D spending.

"to maintain technological capabilities," but that less of the spending is going to commercial programs. The rewording attempts to clarify what is apparently meant--namely, that the company is giving less emphasis to the development of new commercial aircraft.

(5) Additional comment--Throughout the rewrite, there has been an attempt to write shorter sentences and use active verbs.

The Allegheny Power System's original qualified auditor's report appears in Figure 11. The rewritten qualified auditor's report appears in Figure 12. The numbers in brackets in both figures are keyed to the analysis that follows:

(1) This paragraph has been rewritten to shorten sentences and to separate in numerical form what the auditors have examined.

(2) The auditors are now saying flat out that this is a qualified opinion and the reasons why.

(3) Additional sentences have been added to these four paragraphs, with the wording changed in order to make a clearer and more direct presentation.

(4) As in the first paragraph, some of the fuzziness has been eliminated through condensation and making two sentences out of the one that is much too long. However, the subtle meaning of this paragraph has been altered.

ALLEGHENY POWER SYSTEM'S ORIGINAL QUALIFIED AUDITOR'S REPORT

FIGURE 11

(1) We have examined the consolidated balance sheet and statement of capitalization of Allegheny Power System, Inc. and its subsidiaries as of December 31, 1975 and 1974, and the related consolidated 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.

(2) As described in Note B to the financial statements, electric operating revenues for 1975 and 1974 include $28,148,000 and $2,113,000, respectively arising from rate increases and subject to refund.

(3) On August 7, 1975, The Potomac Edison Company appealed to the courts the Maryland Public Service Commission's decision refusing to change its March 27, 1975, order shown in the rate table. On August 27, 1975, the Maryland Commission authorized Potomac Edison to add a surcharge to customer bills for one year, beginning in September 1975, to recoup about $2 million in unrecovered fuel costs resulting from a change in the application of that company's fuel cost adjustment clause in August 1974.

Potomac Edison is preparing to refile an application with the Federal Power Commission (FPC) for an increase in wholesale rates. FPC refused to accept Potomac Edison's original application for an increase of about $1.9 million on an annual

FIGURE 11--- Continued

basis because of alleged staleness of the test year.

Rates under which approximately 79% of the System's kwh sales are made have been designed to recover fuel cost increases for System companies and to pass fuel cost decreases on to their customers. In Ohio and Pennsylvania, there is about a two-month delay before fuel cost charges are reflected in customer bills.

In West Virginia, electric utilities can now recover a fuel cost increase from retail customers only after specific authorization by the Public Service Commission of the particular increase. This situation results from the termination, as of March 31, 1975, of the effectiveness of fuel cost adjustment clauses in retail rates in that state.

(4) In our opinion, subject to the effect of adjustments, if any, which may result from the final determination of the rate matters referred to in the preceding paragraph, the consolidated financial statements appearing on pages 12 to 17, inclusive, present fairly the financial position of Allegheny Power Systems, Inc., and its subsidiaries at December 31, 1975, 1974, and the results of their operations and changes in financial position for the years then ended in conformity with generally accepted accounting principles consistently applied.

ALLEGHENY POWER SYSTEM'S REWRITTEN QUALIFIED AUDITOR'S REPORT

FIGURE 12

(1) Our firm has audited the following documents and related material concerning the performance of Allegheny Power System, Inc., and its subsidiaries during the calendar years 1975 and 1974:

1. Consolidated balance sheet
2. Statement of capitalization
3. Consolidated statements of income and retained earnings
4. Changes in financial position.

Our examination, which followed generally accepted auditing standards, included tests of accounting records and other auditing procedures that we considered necessary for a thorough audit.

(2) We have found it necessary to qualify our opinion in the paragraph below. This is because of the possible negative effect on the Company's financial position if it should be forced to make rebate of more than $30,000,000 to its customers, as described in Note B to the financial statements. The reason for our qualified opinion is the fact that the Company includes in its electric operating revenues $28,148,000 in 1975 and $2,113,000 in 1974 from rate increases that are subject to dispute and may have to be refunded.

(3) The actions involved in the above matter are as follows:

On August 7, 1975, the Potomac Edison Company appealed to the courts a decision by the Maryland Public Service Commission refusing to change its order of March 27, 1975, as showr in

FIGURE 12--- Continued

the rate table. On August 27, 1975, the Commission authorized Potomac Edison to add a surcharge to customer bills for one year, beginning in September 1975, to recoup about $2 million in unrecovered fuel costs. This resulted from a change in the application of the company's fuel cost adjustment clause in August 1974.

Potomac Edison is preparing to refile an application with the Federal Power Commission for an increase in wholesale rates. The FPC refused to accept the company's original application for an increase of about $1.9 million annually because of the alleged staleness of the test year.

Rates under which the System sells approximately 79% of its power have been designed to recover fuel cost increases and to pass along fuel cost decreases to customers. In Ohio and Pennsylvania, there is a delay of about two months before fuel cost charges are reflected in customer bills.

In West Virginia, electric utilities can now recover fuel cost increases from retail customers only after specific approval by the Public Service Commission. This situation results from the termination, as of March 31, 1975, of fuel cost adjustment clauses in retail rates in that state.

(4) Subject to the adjustments to income that may be necessary as the result of the rate matters discussed in Note B, we believe that the consolidated financial statements in this report present fairly the financial position (including changes) and results of operations of Allegheny Power Systems, Inc., and its subsidiaries at year end 1975 and 1974. The presentation is in conformity with generally accepted accounting principles consistently applied.

To be certain that the rewritten messages are, in fact, more understandable, the following additional hypotheses was added to the research study: Narrative disclosures initially found to be incomprehensible by sophisticated users can be rewritten by an independent expert and made comprehensible to the same sophisticated users.

A prominent "Big Eight" accounting firm volunteered twenty senior auditors to participate in this final experiment. Each accountant was administered one of the four original messages followed by a rewritten message of a different company.[35] Table 30 presents the before and after Cloze Readability Scores for Bangor Punta Corporation's standard format footnote, The Anaconda Company's nonstandard format footnote, Allegheny Power System's qualified auditor's report, and McDonnell Douglas Corporation's management's analysis of operations. Table 31 tests the above hypothesis for each message separately. In each case, the null hypothesis is rejected at the .05 level, indicating a statistically significant improvement in message understandability between the original and the rewritten messages. If it is feasible, as demonstrated, to make narrative disclosures understandable to sophisticated users, there can be no justifiable reason for management or independent auditors to do otherwise, even it it means employing the services of an accounting communications expert (e.g., Mr. Richard Lewis).

TABLE 30

CLOZE READABILITY PROCEDURE SCORES FOR FOUR SELECTED NARRATIVE DISCLOSURES CONTAINED IN FINANCIAL REPORTS IN THEIR ORIGINAL AND IN THEIR REWRITTEN FORMS

Name of Corporation	1	2	3	4	5	Mean	σ
Bangor Punta Corporation							
Original Standard Format Footnote	51.02	55.10	48.98	53.06	53.06	52.24	2.32
Rewritten	57.90	56.14	54.39	61.40	59.64	57.89	2.77
The Anaconda Company							
Original Nonstd Format Footnote	46.94	51.02	55.10	51.02	57.14	52.24	3.98
Rewritten	64.71	68.63	58.82	56.86	62.75	62.35	4.68
Allegheny Power System							
Original Qualified Auditor's Rep.	52.00	62.00	64.00	58.00	56.00	58.40	4.77
Rewritten	67.90	79.01	86.42	71.60	60.49	73.08	10.01
McDonnell Douglas Corp.							
Original Mgt's Analysis of Oper.	51.79	64.29	57.14	53.57	51.79	55.72	5.27
Rewritten	59.70	67.16	64.18	73.13	61.19	65.07	5.34

TABLE 31

TESTING THE HYPOTHESIS THAT REWRITTEN NARRATIVE DISCLOSURES CONTAINED IN FINANCIAL REPORTS WILL BE UNDERSTOOD SIGNIFICANTLY BETTER BY SOPHISTICATED USERS

Bangor Punta Corporation (Standard Format Footnote)	The Anaconda Company (Nonstandard Format Footnote)
$t = \frac{57.89 - 52.24}{1.61} = 3.51$ $3.51 \geq 2.306$ reject Ho	$t = \frac{62.35 - 52.24}{2.74} = 3.69$ $3.69 \geq 2.306$ reject Ho
Allegheny Power Systems (Qualified Auditor's Report)	**McDonnell Douglas Corporation (Management's Analysis of Operations)**
$t = \frac{73.08 - 58.40}{4.94} = 2.97$ $2.97 \geq 2.306$ reject Ho	$t = \frac{65.07 - 55.72}{3.34} = 2.80$ $2.80 \geq 2.306$ reject Ho

General Form of the Hypothesis: $H_o: u_1 - u_2 = 0$

$H_1: u_1 - u_2 \neq 0$

Decision Rule: If $t \geq 2.306$, reject Ho; If $t < 2.306$, accept Ho } with $a = .05$

t-statistic: $t = \frac{(\bar{x}_1 - \bar{x}_2) - 0}{S\bar{x}_1 - S\bar{x}_2}$ $\quad S^2 = \frac{(n_1 - 1)S_1^2 + (n_2 - 1)S_2^2}{n_1 + n_2 - 2}$ $\quad S\bar{x}_1 - S\bar{x}_2 = s\sqrt{\frac{1}{n_1} + \frac{1}{n_2}}$

CONCLUSION

The penalty for ineffective communication of corporate performance is poor resource allocation in our economy. If financial reports do provide a large part of the significant information required by sophisticated users when deciding to invest in or loan funds to one corporation or another corporation or no corporation, there exists an imperative need for comprehensible narrative disclosures. Otherwise, we are going to continue to face potentially serious misallocations of scarce resources. Certainly, the qualitative standard of adequate disclosure/understandability is a valuable and basic concept in the accounting communication process.

Unfortunately, accounting communication via published financial reports is immensely complex and not subject to easy and simplistic solutions. There is a dangerous tendency to search for absolute answers. The conclusions and recommendations put forth in this final chapter present a realistic approach in light of the conceptual framework established in Chapters I through V and the empirical study described in Chapters VI through IX; they do not represent a panacea for the accounting profession but do contain elements upon which better financial reporting can be built.

Table 32 presents a summary of the 1. hypotheses tested, 2. empirical results, 3. discussion and implications, and 4. conclusions and recommendations.

TABLE 32

NARRATIVE DISCLOSURES CONTAINED IN ADEQUATE FINANCIAL REPORTS: AN EMPIRICAL EVALUATION OF THEIR DISCLOSURE/UNDERSTANDABILITY

HYPOTHESES	RESULTS	DISCUSSION AND IMPLICATIONS	CONCLUSIONS AND RECOMMENDATIONS
1. Narrative disclosures are not understood well by sophisticated users.	Narrative disclosures are understood well by certified public accountants (CPAs) and chartered financial analysts (CFAs) but not by commercial bank loan officer trainees (CBLOTs).	To achieve communication in financial reporting necessitates that the target audience assign the meanings intended by the preparers to the narrative disclosures. Financial reports do communicate to CPAs and CFAs but do not communicate to CBLOTs. Evidently, the semantic, syntactic, and pragmatic rules which govern the accounting language are within the fields of experience of both the financial report preparers and CPAs and CFAs, but not CBLOTs.	Communication theory suggests that successful communication in financial reports is dependent upon managers and their independent auditors gearing their messages to the lowest common denominator among the report's sophisticated readership (i.e., CBLOTs until a less sophisticated subgroup within the FASB's definition is identified by future researchers).
2. The level of understandability of narrative disclosures varies significantly, among classes of sophisticated users so that CPAs understand them better than CFAs who, in turn, understand them better than CBLOTS.	CPAs and CFAs understood narrative disclosures equally well and significantly better than CBLOTs.	CPAs, CFAs, and CBLOTS have the requisite technical education in accounting and/or finance. However, CBLOTs lack the additional factor of on-the-job experience needed to comprehend narrative disclosures at an acceptable level.	
2A. The above order of comprehension also pertains specifically to qualified auditors' reports for each independent audit firm.	The level of understandability of qualified auditors' reports did not vary significantly for Price Waterhouse & Co. and Ernst & Ernst. However, it did vary significantly for Arthur Anderson & Co. and Peat, Marwick, Mitchell & Co. That is, CPAs and CFAs understood the latters' reports equally well and significantly better than CBLOTs.	Arthur Anderson & Co. and Peat, Marwick, Mitchell & Co. probably employ technical accounting terms and discuss concepts and problems that require a certain degree of sophistication which CPAs and CFAs possess to a greater degree than CBLOTs. Price Waterhouse & Co. and Ernst & Ernst structure their qualified auditors' reports such that all sophisticated users can comprehend equally the messages they wish to communicate.	
3. Standard format footnotes and managements' analyses of operations are significantly more understandable than are nonstandard format footnotes and qualified auditors' reports.	There was no statistically significant difference between (a) standard format footnotes and managements' analyses of operations, nor between (b) non-standard format footnotes and qualified auditors' reports. However, contrary to expectations, subset (a) was significantly less understandable than subset (b).	Standard format footnotes and managements' analyses of operations were the most technical of the messages tested, contained the most numbers, and made references to specific financial statement items and amounts. Nonstandard format footnotes and qualified auditors' reports tend to be descriptive of a situation (e.g., a lawsuit) rather than verbal representations of the accounting calculus.	It is recommended that financial report preparers seek alternative forms of message presentation for standard format footnotes and managements' analyses of operations (i.e., emphasize descriptive, nontechnical data and deemphasize nondescriptive, technical data) and add appropriate amounts of redundancy, shorter sentences and fewer polysyllabic words. In addition, the AICPA, FASB, and

TABLE 32------ Continued

HYPOTHESES	RESULTS	DISCUSSION AND IMPLICATIONS	CONCLUSIONS AND RECOMMENDATIONS
		That would explain why they were easier for sophisticated users to understand.	SEC should limit, within reasonable bounds, any emphasis on standardizing the language and format of narrative disclosures. In its place, management should be granted flexibility in drafting the language and format of messages subject to an acceptable level of understandability (i.e., the criterion level of 57%).
4. The level of understandability of narrative disclosures varies significantly among source corporations.	The level of understandability varied significantly among source corporations.	Variability in message understandability among source corporations results from the fact that the participation of management in their preparation can be major or minor depending upon the company's philosophy. In addition, corporations are unique entities with inherent operating complexities that could well explain the empirical results that were obtained in testing this hypothesis.	It is recommended that management concentrate their efforts exclusively on making their financial reports vehicles for successful communication to sophisticated users despite inherent operating complexities. The FASB should serve as a vehicle for the improved understandability of messages inasmuch as the Board was created to establish greater uniformity (e.g., eliminate inconsistent GAAP) and more intercompany comparability for the financial statement messages irrespective of company size, stock exchange listing, or any other factor. Thus, it is suggested that a similar objective could be established for the narrative disclosures as well (e.g., a uniform level of understandability among all reporting entities irrespective of company size, stock exchange listing, or any other factor). Ideally, the financial report preparer should be required to objectively measure the degree to which the intended meanings will be assigned by sophisticated users to managements' analyses of operations and footnotes before dissemination (i.e., feedback) That is, the Cloze Readability Procedure could be initially applied to a set of proposed messages. By comparing the understandability level with the pre-
8. The level of understandability of narrative disclosures varies significantly among industries.	The level of understandability did not vary significantly among industries for all users CPAs, and CFAs. However, it did vary significantly for CBLOTs.	Corporations falling into different industry classifications were believed to have different operating characteristics and complexities and, consequently, accounting practices and procedures, unique to their industry classification. Managements' and auditors' representations in financial reports should, therefore, have been embodied with technical and nontechnical terms unique to their industry classification. Given the empirical results obtained, these conditions of uniqueness might very well still be true, but they have no overall effect on message understandability.	
9. Narrative disclosures of New York Stock Exchange listed corporations are easier to understand than are narrative disclosures of other exchange listed corporations.	The messages of New York Stock Exchange listed corporations were significantly more difficult to understand than the messages of other exchange listed corporations.	It was assumed that reporting requirements on the New York Stock Exchange would be of a higher quality than those on the other exchanges and, therefore, the level of understandability would be higher. Contrary to expectations, other exchange corporations had more un-	

TABLE 32----- Continued

HYPOTHESES	RESULTS	DISCUSSION AND IMPLICATIONS	CONCLUSIONS AND RECOMMENDATIONS
		derstandable messages probably because they are at a competitive disadvantage for equity capital (e.g., other exchange corporations have a lower mean on any financial report variable, do not enjoy the same financial community recognition, etc.) as compared to New York Stock Exchange listed corporations.	determined standard (i.e., the criterion level of 57.5), the financial report preparer would be able to determine if the messages would be comprehensible (i.e., the proper meanings would be assigned) to sophisticated users. If not, the preparer would be made aware of the unfavorable variance, and hopefully initiate corrective steps such that the results of a subsequent Cloze Readability Procedure analysis would compare favorably with the criterion level. CPAs through the vehicle of the attest function should be required to insure the adequate disclosure/understandability of footnotes and managements' analyses of operations. Thus, it is recommended that the Auditing Standards Executive Committee of the AICPA promulgate a GAAS requiring the CPA to extend the scope of his examination beyond what is now covered to more fully embrace adequate disclosure/understandability. By way of illustration, the auditor of a publicly-held corporation could be charged as part of his examination with randomly selecting a small sample of passages contained in managements' analyses of operations and footnotes, construct Cloze Readability Procedure tests based upon them, and then administer them to members of their audit staff serving as surrogates for sophisticated users.
10. Narrative disclosures of "large" corporations are easier to understand than are narrative disclosures of "small" corporations.	The messages of "large" corporations were significantly more difficult to understand than the messages of "small" corporations.	Large corporations, it was hypothesized, would have more understandable messages because of their ability to attract and retain quality managers and internal accountants. Contrary to expectations, the messages of small corporations were more comprehensible possibly because small corporations cannot afford any misunderstandings in their financial reports. On the other hand, both New York Stock Exchange Corporations and large corporations may be inherently more complex (e.g., diversification) leading to unavoidable complexities in their messages.	
12. The level of understandability of the type of message varies directly with the change in earnings per share from 1974 to 1975 of the source corporations to a statistically significant degree.	There was a statistically significant direct relationship between the change in earnings per share from 1974 to 1975 and the understandability of nonstandard format footnotes and qualified auditors' reports for CPAs and CFAs. For CBLOTs, there was no relationship.	Nonstandard messages appear to be a function of current operating levels supporting the management-oriented approach to external financial reporting (as opposed to the user-oriented approach) and imply that managers are influenced by a "good" year or a "bad" year when they write their nonstandardized financial report communications.	With respect to management manipulation of understandability, the previously offered recommendations that (1) management be granted flexibility in drafting the language and format of narrative disclosures subject to an acceptable level of understandability (i.e., the criterion level) and (2) the accounting profession establish a "readability" standard

TABLE 32------ Continued

HYPOTHESES	RESULTS	DISCUSSION AND IMPLICATIONS	CONCLUSIONS AND RECOMMENDATIONS
			and auditors through their power of persuasion see to it that the standard has been observed, should lessen the likelihood that in future years corporate managers would embark on a policy of mixing the purportedly objective explanation of the prior year's results of operations, however unfavorable, with incomprehensible messages.
11. There is a significant interaction effect between the type of message contained in financial reports and source corporations.	There was a significant interaction effect between type of message and source corporation (i.e., the nonstandard format footnote of Anaconda was significantly less understandable to CPAs and CFAs than expected.	Anaconda's nonstandard format footnote discussed several major litigations confronting the company. We might presume that it was written by management (who had just experienced a "bad" year) in such a fashion as to obscure the serious adverse implications of the multiple lawsuits on current and future operating performance.	Due to the serious potential negative impact management manipulation can have on the efficacy of the capital and money markets as allocation devices, the independent auditor, as part of his examination, must look for any evidence of manipulation. In this manner, the accounting profession will be demonstrating to sophisticated users that it wants to maintain an acceptable level of credibility for managements' and auditors' financial report representations.
5. There is a significant interaction effect between types of messages and classes of sophisticated users, so that CPAs understand qualified auditors' reports better than do CFAs and CBLOTs.	There was no significant interaction effect between type of message and classes of sophisticated users.	It seemed logical to hypothesize that CPAs, required by GAAS to express an opinion on the financial statements they examine, would be better able to understand the messages they themselves write. However, the qualified auditors' reports tested were highly descriptive and, for the most part, void of accounting complexities; thus, they presented no real problem for all sophisticated users to equally understand.	
6. The level of understandability of narrative disclosures does not vary significantly among independent audit firms.	There was no statistically significant difference in understandability among independent audit firms.	The lack of variability in message understandability among independent audit firms results from the fact that the "Big Eight" employs auditors of the highest quality and "audits"	The role delegated by society to the accounting profession encompasses communicating meaningfully to sophisticated users. The independent auditor must always keep in mind

TABLE 32 Continued

HYPOTHESES	RESULTS	DISCUSSION AND IMPLICATIONS	CONCLUSIONS AND RECOMMENDATIONS
		narrative disclosures in accordance with the same GAAS and procedures.	that his qualified auditors' report is a one-way communication which must always judiciously transmit both the scope of his examination and his opinion thereon. He has a clear responsibility to guard against misleading the financial report user as to the audit procedures used and the degree of "fairness" of the financial statements. Because of the fairly large standard deviation that was obtained (indicating that some qualified auditors' reports scored below acceptable levels), it is recommended that the Auditing Standards Executive Committee of the AICPA promulgate a GAAS that would require auditors to pretest their qualifications using the Cloze Readability Procedure. This recommendation parallels the one recommended for managements' analyses of operations and footnotes, since there is no logical reason to hold the independent auditor less accountable for the successful communication of his representations in financial reports than managers for their representations. It is further recommended that (a) the independent auditor directly involve himself in the actual writing of the footnote referred to in the qualified auditor's report and indicate the extent of his involvement therein; (b) if the circumstances surrounding the client's financial statements are unusually complex, the auditor should adopt the suggestions made with respect to Hypothesis III.; and (c) the AICPA's program of "quality control" should be extended to encompass firm-wide adequate disclosure/understandability.
6A. There is no significant interaction effect between audit firms and any of the other independent variables in the study (i.e., subject group and type of message).	There was no statistically significant interaction effect between independent audit firms and classes of sophisticated users. There was a statistically significant interaction effect between independent audit firms and type of message.	For some inexplicable reason, Peat, Marwick, Mitchell & Co. was associated with managements' analyses of operations that were more difficult for all sophisticated users to understand than expected. One possible cause for this empirical result may be that Peat, Marwick, Mitchell & Co. did not help management in the difficult task of wording this relatively new message while the other "Big Eight" auditing firms did participate with their clients.	
7. Within a single independent audit firm, the level of understandability does not vary significantly for qualified auditors' reports among source corporations.	The level of understandability did not vary significantly for qualified auditors' reports among source corporations for Price Waterhouse & Co. and Arthur Anderson & Co. However, it did vary significantly for Ernst & Ernst and Peat, Marwick, Mitchell & Co.	Variability in the understandability of qualified auditors' reports among source corporations for Ernst & Ernst and Peat, Marwick, Mitchell & Co. may be explained as follows: (a) these audit firms did not take an active part in the writing of the footnote referred to in the qualification, or (b) the circumstances surrounding the qualifications were unique and more complex than usual, or (c) four out of the eight qualifications originated in "small" city offices where the partners may not be as proficient a group as partners in "large" city offices. The lack of variability for Price Waterhouse & Co. and for Arthur Anderson & Co. may also be explained by these three reasons.	

TABLE 32----- Continued

HYPOTHESES	RESULTS	DISCUSSION AND IMPLICATIONS	CONCLUSIONS AND RECOMMENDATIONS
13. There is no statistically significant direct relationship between the understandability of narrative disclosures as measured by the Cloze Readability Procedure and reading difficulty as measured by the Flesch Reading Ease Formula.	There was a statistically significant inverse relationship between these two measures of message understandability for nonstandard format footnotes and qualified auditors' reports and no statistically significant relationship for the remaining two types of messages.	The three prior readability studies in accounting utilized the Flesch Reading Ease Formula with its inherent weaknesses and limitations and its inability to cope with technical communications. The lack of correlation for standard format footnotes and managements' analyses of operations and the inverse correlation for qualified auditor's reports and nonstandard format footnotes imply that the conclusions drawn by these pioneering researchers are questionable.	An important objective of this research study was to add a measurability dimension to the difficult problems accountants face in financial reporting. The accounting profession now has a reliable and valid instrument (i.e., the Cloze Readability Procedure) to objectively measure the current and future status of adequate disclosure/understandability. Periodically assessing the clarity of managements' analyses of operations, footnotes, and qualified auditors' reports will continually add to the accounting profession's knowledge base.
Additional Hypothesis: Narrative disclosures initially found to be incomprehensible by sophisticated users can be rewritten by an independent expert and made comprehensible to the same sophisticated users.	Bangor Punta's standard format footnote, Anaconda's nonstandard format footnote, McDonnell Douglas' management's analysis of operations, and Allegheny Power System's qualified auditor's report were significantly more understandable when rewritten by an independent expert.	Since this empirical test confirms the fact that narrative disclosures can be made understandable to sophisticated users, it is strongly suggested that a management or independent audit firm unwilling or incapable of making their communications understandable at all times and under all conditions would give sophisticated investors and sophisticated creditors a basis for legal action for breach of fiduciary relationship.	Accounting is an art. Thus, a set of guidelines for preparers to ensure adequate disclosure/understandability cannot be recommended. The improvement in message comprehension by managers and auditors can only result from trial and error revisions. It is conceivable that an interdisciplinary approach to report writing might be the only feasible solution to the complex problems associated with external financial reporting. That is, it is recommended that publicly-held corporations give serious consideration to employing linguistic advisors to help them to properly structure their narrative disclosures.

[1]While thirteen hypotheses were testes, not all of them revealed problem areas in need of solution. As a consequence, only selected hypotheses and recommendations will be presented in the pages to follow.

[2]An Analysis of Issues Related to Conceptual Framework for Financial Accounting and Reporting: Elements of Financial Statements and Their Measurement (Stamford, Connecticut: Financial Accounting Standards Board, 1977), p. 10.

[3]Release No. 5427, "Notice of Proposed Amendment to Regulation S-X Providing for Disclosure of Significant Accounting Policies," (Washington, D.C.: Securities and Exchange Commission, October 4, 1973)

[4]An Analysis of Issues..., op. cit., p. 10.

[5]Fred C. Foy, "Annual Reports Don't Have to be Dull," Harvard Business Review, January-February 1973, p. 51.

[6]Richard A. Lewis, "What Annual Reports Really Reveal," Investing, May 1974, p. 8.

[7]A. A. Sommer, Jr., "SEC's Inattention to Published Annual Reports," The CPA Journal, May 1974, p. 20.

[8]Morton Backer, Financial Reporting for Investment and Credit Decisions (New York: National Association of Accountants, 1970), p. 21.

[9]The Commission on Auditors' Responsibilities: Report of Tentative Conclusions (New York, New York: American Institute of Certified Public Accountants, 1977), p. 74.

[10]Accounting Series Release Number 159 (Washington, D.C.: Securities and Exchange Commission, August 12, 1974), p. 2.

[11]Errol R. Iselin, "Accounting and Communication Theory," Singapore Accountant, 1972, p. 35.

[12]James E. Smith, "A Critical Analysis of the Application of Communication Theory to Accounting Communications Via Published Financial Statements" (unpublished Doctor's dissertation, Arizona University, 1972), p. 103.

[13]Ibid., p. 105.

[14]Ibid., p. 106.

[15]New Trends in Annual Report Readership (New York, New York: Georgeson & Co., 1972), p. 14.

[16]Wallace E. Olson, "AICPA Head Urges More Financial Communication," The CPA Letter, April 12, 1976, p. 2.

[17]"Recommendations of the Study on Establishment of Accounting Principles," The Journal of Accountancy, May 1972, p. 66.

[18]Errol R. Iselin, op. cit., p. 36.

[19]John R. Jordan, "Financial Accounting and Communication," The Price Waterhouse Review, Spring 1969, pp. 15-16.

[20]The Commission on Auditor's Responsibilities: Report of Tentative Conclusions, op. cit., p. 77.

[21]Ibid., p. 71.

[22]It should be noted that independent audit firms, on average, were not found to be authoring incomprehensible qualified auditors' reports are equally comprehensible to sophisticated users.

[23]Committee on Basic Auditing Concepts, "Report of the Committee on Basic Auditing Concepts," Supplement to Volume XLVII of the Accounting Review, 1972, p. 64.

[24]Herman Bevis, "The CPA's ATTEST Function in Modern Society," The Journal of Accountancy, February 1962, p. 28.

[25]Committee on Basic Auditing Concepts, op. cit., p. 26.

[26]Michael N. Chetkovich, "Standards of Disclosure and Their Development," The Journal of Accountancy, December 1955, p. 52.

[27]Research Opportunities in Auditing (New York, New York: Peat, Marwick, Mitchell & Co., 1976), p. 9.

[28]Robert K. Mautz and Hussein A. Sharaf, The Philosophy of Auditing (Iowa City, Iowa: American Accounting Association, 1961), pp. 196-197.

[29]James R. Morton, "Qualitative Objectives of Financial Accounting: A Comment on Relevance and Understandability," Journal of Accounting Research, Autumn 1974, pp. 288-298.

[30]Allen T. Craswell, "Accounting Reports...Do They Communicate?" The Chartered Accountant in Australia, December 1969, p. 5.

[31]T. Ross Archibald, "A Shareholder's Perspective on External Accounting Reports," Canadian Chartered Accountant, February 1971, pp. 106-107.

[32]Vincent C. Brenner, "Needed Changes in External Financial Reporting," The National Public Accountant, April 1971, p. 30.

[33]Herbert Miller, "Audited Statements--Are They Really Management's?" The Journal of Accountancy, October 1964, p. 44.

[34]Sidney Davidson, "The Day of Reckoning--Managerial Analysis and Accounting Theory," The Journal of Accounting Research, Autumn 1963, p. 118.

[35]Each participant did not receive an original and a rewritten message from the same company. Had they been given two messages from the same company, it would not have been possible to know whether their improved Cloze Readability Scores were due to an improvement in the structure of the message or to having been exposed to the same message twice.(i.e., redundancy).

APPENDIX A

INSTRUCTION SHEET ACCOMPANYING EACH CLOZE READABILITY PROCEDURE TEST

This test consists of a series of passages taken from an annual report. A number of words have been taken out of each passage, and in the place of each word you will find a space which is underlined. Your task is to predict, for each blank space, the precise word which was taken out and to write this word in the space provided. In other words, you are to try to guess exactly what words the writer used in preparing this annual report. Your ability to make correct predictions should reflect your sensitivity to clues provided by the surrounding context of each word as well as your knowledge of accounting and/or finance.

Some words will be easier to guess than others. For example, if you were to find the following sentence, "The company used the straight-line method of _____ for its tangible fixed assets," you would probably have little difficulty in predicting "depreciation" as the word which has been taken out. On the other hand, if the sentence had been, "The company used the _____ method of depreciation for its tangible fixed assets," the correct prediction would have been more difficult. Whether the prediction is "easy" or "difficult," make the best guess you can in each case and please do <u>not</u> leave any blank unfilled.

APPENDIX A--Continued

You will find it helpful to go through each short passage twice. On the first time through, get a general idea of what the passage is about and fill in the "easier" blanks tentatively. On the second time through, correct the mistakes and misconceptions you may have held during the first reading.

For the purpose of this test, a "word" is defined as a symbol surrounded by two blank spaces: In terms of this definition, an abbreviation (e.g., C. P. A.), a number (e.g., $1.00), or a hyphenated construction (e.g., straight-line) would each be considered as one word.

APPENDIX B

CLOZE READABILITY PROCEDURE SCORES BY SOURCE CORPORATION, NARRATIVE DISCLOSURE, AND SOPHISTICATED USER GROUP

Corp.	Message	User	1	2	3	4	5	6	7	8	9	Total
1	A	CPA	61.22	55.10	57.14	53.06	57.14	61.22				6
		CFA	36.73	48.98	46.94	57.14	57.14					5
		ABA	55.10	34.69	42.86	44.90	40.82	61.22	46.94			7
1	B	CPA	62.00	64.00	72.00	82.00	66.00					5
		CFA	54.00	62.00	66.00	48.00	56.00	64.00	70.00			7
		ABA	54.00	56.00	52.00	62.00	52.00	52.00				6
1	C	CPA	34.00	56.00	34.00	60.00	56.00					5
		CFA	60.00	70.00	58.00	66.00	50.00	52.00				6
		ABA	48.00	44.00	30.00	32.00						4
1	D	CPA	84.00	68.00	76.00	68.00	64.00	72.00	70.00	84.00		8
		CFA	64.00	88.00	66.00	72.00	66.00					5
		ABA	58.00	80.00	74.00	56.00						4
2	A	CPA	74.00	68.00	76.00	58.00	56.00					5
		CFA	62.00	62.00	60.00	64.00						4
		ABA	66.00	50.00	48.00	60.00	46.00					5
2	B	CPA	52.83	51.92	56.60	47.17	60.38	60.38	64.15			7
		CFA	64.15	52.83	66.04	79.24						4
		ABA	60.38	67.92	60.38	45.28						4
2	C	CPA	59.62	50.00	53.85	57.69	42.31					5
		CFA	53.85	34.62	48.08	42.31	51.92	51.92	63.46			7
		ABA	36.54	57.69	50.00	42.31	48.08	61.54				6
2	D	CPA	76.09	41.30	58.70	69.56	58.70	58.70				6
		CFA	60.87	57.39	52.17	47.83	45.65					5
		ABA	52.17	45.65	65.27	50.00						4

APPENDIX B--Continued

Corp.	Message	User	1	2	3	4	5	6	7	8	9	Total
3	A	CPA	70.00	60.00	80.00	86.00	64.00					5
		CFA	58.00	64.00	66.00	62.00	54.00	66.00				6
		ABA	58.00	52.00	62.00	56.00	48.00					5
3	B	CPA	40.82	44.90	48.98	46.94	59.18					5
		CFA	42.86	55.10	51.02	36.73	55.10					5
		ABA	30.61	38.76	40.82	40.82	44.90	30.61	46.94	48.98		8
3	C	CPA	52.00	46.00	74.00	70.00	56.00	62.00				6
		CFA	58.00	60.00	64.00	84.00						4
		ABA	62.00	64.00	58.00	50.00						4
3	D	CPA	64.00	58.00	62.00	60.00	66.00	62.00	62.00			7
		CFA	66.00	62.00	90.00	60.00	62.00					5
		ABA	48.00	56.00	56.00	54.00	54.00	64.00				6
4	A	CPA	40.00	58.00	44.00	42.00	60.00					5
		CFA	40.00	54.00	48.00	50.00						4
		ABA	36.00	38.00	34.00	48.00	32.00	44.00				6
4	B	CPA	70.00	64.00	66.00	62.00	66.00	64.00	66.00			7
		CFA	64.00	56.00	46.00	60.00						4
		ABA	68.00	60.00	50.00	50.00						4
4	C	CPA	64.00	76.00	58.00	50.00	50.00	56.00				6
		CFA	54.00	50.00	38.00	56.00						4
		ABA	54.00	60.00	54.00	56.00	50.00					5
4	D	CPA	52.00	58.00	66.00	70.00	34.00					5
		CFA	62.00	50.00	62.00	64.00						4
		ABA	76.00	58.00	48.00	42.00	54.00					5

APPENDIX B--Continued

Corp.	Message	User	1	2	3	4	5	6	7	8	9	Total
5	A	CPA	33.33	39.22	47.06	43.14	47.06					5
		CFA	49.02	41.18	54.90	43.90	56.86					5
		ABA	45.10	47.06	49.02	41.18	45.10	47.06				6
5	B	CPA	50.94	58.49	43.40	33.96						4
		CFA	92.45	39.62	92.45	35.85						4
		ABA	39.62	49.06	35.85	35.85						4
5	C	CPA	50.00	67.86	58.93	42.86						4
		CFA	58.93	60.71	55.36	71.43						4
		ABA	50.00	67.86	46.43	42.86	42.86	42.86	42.86			7
5	D	CPA	45.28	60.38	50.94	45.28						4
		CFA	54.72	64.15	50.94	41.51	56.60					5
		ABA	64.15	52.83	47.17	47.17	43.39	47.17	64.15			7
6	A	CPA	59.62	69.23	75.00	59.62	56.00					5
		CFA	73.08	73.08	63.46	73.77						4
		ABA	63.46	76.92	61.54	57.69	53.85					5
6	B	CPA	70.37	59.26	66.67	55.56	70.37					5
		CFA	74.07	66.67	61.11	62.96						4
		ABA	64.81	61.11	61.11	50.00						4
6	C	CPA	64.71	64.71	56.86	74.51	50.98					5
		CFA	66.67	56.86	70.59	49.02	66.67					5
		ABA	72.55	70.59	54.90	52.94	50.98					5
6	D	CPA	64.58	68.75	66.67	64.58	58.33	54.17	62.50	75.00		8
		CFA	58.33	41.67	47.92	56.25						4
		ABA	58.33	54.17	70.83	52.08	58.33					5

APPENDIX B--Continued

Corp.	Message	User	1	2	3	4	5	6	7	8	9	Total
7	A	CPA	62.96	53.70	59.26	51.85	51.85					5
		CFA	61.11	51.85	64.81	68.52	59.26	61.11	55.56	50.00	66.67	9
		ABA	55.56	51.85	53.70	57.41	42.59					5
7	B	CPA	64.28	62.50	55.36	67.86						4
		CFA	60.71	67.86	62.50	51.79	58.93	64.29	50.00	58.93		8
		ABA	57.14	62.50	60.71	55.36	44.64					5
7	C	CPA	44.23	36.53	38.46	50.00	50.00	48.08				6
		CFA	48.08	44.23	32.69	32.69						4
		ABA	42.31	50.00	23.08	25.00	32.69					5
7	D	CPA	49.02	78.43	70.59	68.63						4
		CFA	82.35	64.71	76.47	66.67	56.86	50.98	64.71			7
		ABA	66.67	50.98	56.86	51.89	49.02					5
8	A	CPA	57.69	44.23	50.00	55.75	46.15					5
		CFA	42.31	36.54	55.77	55.77	53.85					5
		ABA	59.62	42.31	57.69	40.38	42.31					5
8	B	CPA	42.00	64.00	60.00	52.00	58.00	76.00				6
		CFA	54.00	74.00	58.00	52.00	56.00					5
		ABA	66.00	56.00	70.00	54.00						4
8	C	CPA	55.56	55.56	55.56	53.70	55.56	46.29	50.00			7
		CFA	57.41	53.70	50.00	57.41	40.74	46.30				6
		ABA	50.00	48.15	40.74	74.07						4
8	D	CPA	60.78	52.94	64.71	70.59	52.94	70.59	62.74			7
		CFA	60.78	56.86	56.86	70.59	70.59					5
		ABA	56.86	64.71	54.90	56.86	47.06					5

APPENDIX B--Continued

Corp.	Message	User	1	2	3	4	5	6	7	8	9	Total
9	A	CPA	57.14	66.07	57.14	82.14	57.14					5
		CFA	53.57	53.57	53.57	53.57	45.67					5
		ABA	66.07	69.64	67.86	66.07	51.78	55.36	60.71			7
9	B	CPA	57.41	61.11	46.30	48.45	70.37					5
		CFA	61.11	62.96	59.26	66.67						4
		ABA	64.81	70.37	61.11	55.56						4
9	C	CPA	53.06	55.10	55.10	63.26	57.14					5
		CFA	53.06	48.98	55.10	61.22	59.18					5
		ABA	55.10	61.22	51.02	51.02						4
9	D	CPA	64.91	82.46	52.63	57.89	40.35					5
		CFA	73.68	49.12	71.93	66.67						4
		ABA	59.65	68.42	57.89	50.88	57.89	56.14	68.42			7
10	A	CPA	51.02	77.55	77.55	48.98	61.22					5
		CFA	42.86	48.98	59.18	67.35						4
		ABA	61.22	46.94	55.10	44.90	38.78					5
10	B	CPA	63.27	59.18	73.47	63.26	73.47	85.71				6
		CFA	63.26	69.39	71.43	75.51	73.47	69.39	67.34			7
		ABA	67.35	53.06	46.94	46.94						4
10	C	CPA	64.00	62.00	42.00	48.00	62.00					5
		CFA	58.00	54.00	52.00	58.00	56.00	56.00				6
		ABA	34.00	54.00	48.00	42.00	40.00	58.00				6
10	D	CPA	80.00	70.00	74.00	80.00	64.00					5
		CFA	76.00	72.00	74.00	72.00	76.00					5
		ABA	58.00	64.00	58.00	46.00						4

APPENDIX B--Continued

Corp	Message	User	1	2	3	4	5	6	7	8	9	Total
11	A	CPA	61.54	57.69	65.38	69.23	67.31					5
		CFA	53.84	65.38	59.62	71.15	71.15	36.54	50.00	51.92		8
		ABA	71.15	70.50	67.31	57.69	51.92					5
11	B	CPA	62.96	68.51	83.33	42.59						4
		CFA	72.22	66.66	70.37	68.52	64.81					5
		ABA	66.67	88.89	70.37	85.18	61.11	64.82				6
11	C	CPA	69.23	34.62	30.77	44.23	59.62	51.92				6
		CFA	65.38	55.77	50.00	53.85	51.92	65.38	59.62			7
		ABA	48.08	51.92	46.15	44.23	53.85	44.23	50.00	55.77		8
11	D	CPA	40.35	35.09	31.58	64.91	59.65					5
		CFA	56.14	61.40	66.67	56.14						4
		ABA	66.67	63.16	47.37	47.37	59.65					5
12	A	CPA	40.38	50.00	59.62	57.69	71.15	65.38				6
		CFA	65.38	42.31	61.54	38.46	55.77					5
		ABA	69.23	42.31	59.62	50.00	46.15					5
12	B	CPA	80.36	57.14	69.64	73.21	69.64	64.28				6
		CFA	67.86	57.14	75.00	71.43	48.21					5
		ABA	57.14	75.00	64.28	57.78	67.86					5
12	C	CPA	59.18	57.14	61.22	63.26	46.94					5
		CFA	59.18	61.22	63.26	53.06	40.82					5
		ABA	57.14	61.22	65.31	53.06						4
12	D	CPA	51.79	67.86	64.28	67.86						4
		CFA	67.86	67.86	60.71	46.43	69.64					5
		ABA	62.50	71.43	75.00	64.25						4

APPENDIX B--Continued

Corp	Message	User	1	2	3	4	5	6	7	8	9	Total
13	A	CPA	56.00	58.00	78.00	44.00	50.00	60.00				6
		CFA	48.00	70.00	80.00	54.00	56.00					5
		ABA	58.00	60.00	62.00	56.00						4
13	B	CPA	59.65	63.16	45.61	59.65	52.63					5
		CFA	31.58	61.40	45.61	42.10	50.88					5
		ABA	50.88	52.63	64.91	64.91	56.14					5
13	C	CPA	38.46	71.15	63.46	42.31	44.23					5
		CFA	61.54	73.08	65.00	42.31	65.38	61.54	61.54	55.77		8
		ABA	34.62	34.62	44.23	42.31	38.46	38.46	53.85	44.23		8
13	D	CPA	73.33	60.00	57.78	62.22						4
		CFA	68.89	60.00	66.67	68.89	71.11					5
		ABA	60.00	66.67	60.00	51.11	53.33	66.67	55.56			7
14	A	CPA	72.00	76.00	82.00	76.00	66.00					5
		CFA	74.00	80,00	66.00	64.00						4
		ABA	74.00	76.00	78.00	72.00	56.00					5
14	B	CPA	66.00	68.00	56.00	68.00	56.00					5
		CFA	64.00	66.00	58.00	76.00						4
		ABA	60.00	64.00	68.00	54.00						4
14	C	CPA	66.00	70.00	72.00	74.00	60.00	56.00				6
		CFA	56.00	58.00	60.00	68.00	62.00					5
		ABA	68.00	54.00	64.00	54.00						4
14	D	CPA	77.55	79.59	67.35	67.35	53.06					5
		CFA	75.51	81.63	63.26	67.35						4
		ABA	69.39	48.98	59.18	51.02	67.35	65.31	75.51			7

APPENDIX B--Continued

Corp	Message	User	1	2	3	4	5	6	7	8	9	Total
15	A	CPA	60.00	64.00	58.00	62.00	48.00	52.00				6
		CFA	60.00	48.00	44.00	60.00						4
		ABA	50.00	40.00	74.00	44.00						4
15	B	CPA	60.00	78.00	66.00	72.00	66.00	66.00	68.00			7
		CFA	62.00	60.00	48.00	66.00						4
		ABA	72.00	64.00	56.00	54.00						4
15	C	CPA	46.00	52.00	64.00	62.00	62.00	56.00	54.00			7
		CFA	54.00	70.00	50.00	64.00						4
		ABA	56.00	70.00	60.00	60.00						4
15	D	CPA	76.00	74.00	76.00	72.00	74.00	78.00	80.00	54.00		8
		CFA	70.00	54.00	82.00	56.00	68.00	60.00	60.00			7
		ABA	72.00	62.00	50.00	62.00	60.00	66.00	74.00			7
16	A	CPA	70.00	48.00	64.00	40.00	64.00	72.00				6
		CFA	56.00	68.00	54.00	68.00	70.00					5
		ABA	66.00	54.00	70.00	64.00						4
16	B	CPA	56.00	62.00	58.00	70.00	60.00					5
		CFA	60.00	68.00	66.00	58.00						4
		ABA	50.00	70.00	70.00	58.00						4
16	C	CPA	70.00	60.00	74.00	70.00	62.00	76.00	44.00			7
		CFA	60.00	76.00	76.00	76.00	54.00	74.00	70.00	48.00		8
		ABA	66.00	60.00	64.00	64.00						4
16	D	CPA	82.00	84.00	78.00	68.00	68.00	68.00				6
		CFA	80.00	64.00	74.00	76.00	56.00					5
		ABA	70.00	50.00	56.00	60.00	50.00	64.00				6

APPENDIX C

COMPUTATION OF THE FLESCH READING EASE SCORE FOR THE FOUR TYPES OF NARRATIVE DISCLOSURES OF THE SIXTEEN SOURCE CORPORATIONS

Message	# of sentences	# of words	# of syllables	Aver Sentence length per 100 words	Syllables per 100 words	Reading Ease Score
1A	15	305	627	20.33	205.57	12.28
B	9	303	546	33.67	180.20	20.21
C	11	306	654	27.82	213.72	(2.21)
D	8	320	626	40.00	195.63	.73
2A	11	275	513	25.00	186.54	23.65
B	11	327	621	29.73	189.91	16.44
C	13	320	595	24.62	185.94	24.55
D	7	292	548	41.71	187.67	5.73
3A	11	305	616	27.73	201.97	7.83
B	14	322	591	23.00	183.54	28.22
C	15	309	696	20.60	225.24	(4.63)
D	10	348	695	34.80	199.71	2.56
4A	8	324	614	40.50	189.51	5.40
B	16	309	692	19.31	223.95	(2.23)
C	13	298	543	22.92	182.21	29.43
D	11	337	669	30.64	198.52	7.80
5A	12	307	576	25.58	187.62	22.14
B	12	285	533	23.75	187.01	24.52
C	11	336	710	30.54	211.31	(2.93)
D	10	348	682	34.80	195.97	5.72
6A	11	304	625	27.64	205.59	4.86
B	12	249	604	29.08	173.06	30.90
C	14	276	571	19.71	206.88	11.81
D	10	311	577	31.10	185.53	18.31
7A	13	290	591	22.31	203.79	11.79
B	11	342	642	31.09	187.72	16.47
C	14	365	658	26.07	180.27	27.87
D	10	307	587	30.70	191.21	13.91
8A	10	295	571	29.50	193.56	13.14
B	14	338	636	24.14	188.16	23.15
C	13	326	625	25.07	191.72	19.19
D	8	298	515	37.25	172.82	22.82
9A	14	332	672	23.71	202.41	11.53
B	10	326	602	32.60	184.66	17.52
C	13	277	397	21.30	215.52	2.88
D	14	349	664	24.93	190.26	20.57

APPENDIX C--Continued

10A	15	288	591	19.20	205.21	13.73
B	9	304	650	33.78	207.01	(2.57)
C	10	315	707	31.50	225.16	(15.62)
D	9	314	641	34.89	204.14	(1.28)
11A	10	313	564	31.30	180.19	22.63
B	15	348	637	23.20	183.04	28.44
C	12	293	585	24.41	199.66	13.14
D	13	369	658	28.38	178.32	27.16
12A	10	294	518	29.40	176.19	27.94
B	13	361	657	27.76	181.99	24.70
C	12	307	549	25.58	194.79	16.07
D	12	317	598	26.42	188.64	20.43
13A	13	294	550	22.62	187.07	25.62
B	14	325	640	23.21	196.92	16.68
C	10	299	634	29.90	212.04	(2.89)
D	10	276	532	27.60	192.75	15.75
14A	15	311	589	20.73	189.39	25.57
B	14	338	740	24.14	218.93	(2.88)
C	15	274	508	18.27	185.40	31.44
D	8	324	644	40.50	198.76	(2.42)
15A	13	298	556	22.92	186.58	25.72
B	12	324	563	27.00	173.76	32.43
C	13	330	670	25.38	203.03	9.31
D	10	376	724	37.60	192.55	5.77
16A	13	321	639	24.69	199.06	13.37
B	13	308	601	23.69	195.13	17.71
C	11	372	715	33.82	192.20	9.91
D	12	363	723	30.25	199.17	7.63

Code:
1 = Bangor Punta
2 = Wachovia Realty
3 = Anaconda
4 = Allegheny Power
5 = McDonnell Douglas
6 = U. S. Realty
7 = United Gas Pipe Line
8 = Cousins Mortgage
9 = Bourns
10 = Kaneb Services
11 = Recognition Equipment
12 = Viking General
13 = First of Denver
14 = Harman Industries
15 = Security Mortgage
16 = Banner Industries
A = Standard Format Footnote
B = Nonstandard Format Footnote
C = Management's Analysis of Operations
D = Qualified Auditor's Report

Flesch Reading Ease Formula:

206.835 - .846wl (col6) - 1.015sl (col 5)

APPENDIX D -

ANALYSIS OF VARIANCE: CLOZE SCORES BY SOPHISTICATED USER GROUPS

Source	D.F.	Sum-of Squares	Mean-Squares	F-Ratio	F-Prob.
Between Groups	2	5165	2582.500	21.4848	.0000
Within Groups	1005	120802	120.201		
Total	1007	125967			

Groups	Count	Mean	Std. Dev.	Std. Err.	Min	Max	95% Confidence Interval
C. P. A.	352	60.4098	11.2761	.601020	30.77	86.00	59.2277 to 61.5918
C. F. A.	328	59.8111	10.7519	.593672	31.58	92.45	58.6431 to 60.9789
A. B. A./trainee	328	55.3177	10.8324	.598118	23.08	88.89	54.1411 to 56.4944
Total	1008	58.5580	11.1844	.352276	23.08	92.45	57.8667 to 59.2493

APPENDIX E

ANALYSIS OF VARIANCE: CLOZE SCORES BY MESSAGES

CPA/CFA/ABA

Source	D.F.	Sum-of Squares	Mean-Squares	F-Ratio	F-Prob.
Between Groups	3	8470	2823.330	24.1284	.0000
Within Groups	1004	117481	117.013		
Total	1007	125951			

CPA/CFA

Between Groups	3	5919	1973.000	17.4228	.0000
Within Groups	676	76552	113.243		
Total	679	82471			

ABA

Between Groups	3	3116	1038.730	9.55458	.0000
Within Groups	324	35224	108.715		
Total	327	38340			

CPA/CFA/ABA

Messages	Count	Mean	Std. Dev.	Std. Err.	Min	Max	95% Confidence Interval

APPENDIX E--Continued

Std Footnote	250	57.1026	11.0508	.698917	32.00	86.00	55.7261 to 58.4792
Nonstd Footnote	240	60.0798	10.8934	.703163	30.61	92.45	58.6946 to 61.4650
Mgts' Analysis	256	54.7355	10.8620	.678876	23.08	84.00	53.3986 to 56.0725
Auditor's Rep.	262	62.2884	10.4728	.647009	31.58	90.00	61.0144 to 63.5624
Total	1008	58.5582	11.1837	.352254	23.08	92.45	57.8670 to 59.2494
CPA/CFA							
Std Footnote	167	58.4163	10.7918	.835096	33.33	86.00	56.7675 to 60.0650
Nonstd Footnote	165	61.3841	10.5147	.818570	31.58	92.45	59.7678 to 63.0004
Mgts' Analysis	178	56.5794	10.3201	.773527	30.77	84.00	55.0529 to 58.1059
Auditor's Rep.	170	64.2792	10.9423	.839237	31.58	90.00	62.6225 to 65.9360
Total	680	60.1213	11.0209	.422631	30.77	92.45	59.2915 to 60.9511
ABA							
Std Footnote	83	54.4606	11.1517	1.224060	32.00	78.00	52.0256 to 56.8957
Nonstd Footnote	75	57.2115	11.2232	1.295940	30.61	88.89	54.6293 to 59.7937
Mgts' Analysis	78	50.5289	10.9542	1.240320	23.08	74.07	48.0591 to 52.99[illegible]
Auditor's Rep.	92	58.6103	8.4291	.878797	42.00	80.00	56.8647 to 60.3559
Total	328	55.3186	10.8281	.597881	23.08	88.89	54.1425 to 56.4948

APPENDIX F

ANALYSIS OF VARIANCE: CLOZE SCORES BY SOPHISTICATED USER GROUPS AND BY MESSAGES

GPA/CFA/ABA					
Source	D.F.	Sum-of Squares	Mean-Squares	F-Ratio	F-Prob.
Main Effects	5	13996.766	2799.3530	25.025	.00001
Users	2	5524.195	2762.0977	24.692	.00001
Messages	3	8831.262	2943.7539	26.316	.00001
2-Way Interactions	6	461.230	76.8717	.687	.66004
Users/Messages	6	461.229	76.8715	.687	.66004
Explained	11	14458.000	1314.3635	11.750	.00100
Residual	996	111414.310	111.8618		
Total	1007	125872.310	124.9973		

APPENDIX F--Continued

CPA/CFA					
Main Effects	4	5957.8203	1489.4551	13.136	.00001
Users	1	36.1886	36.1886	.319	.57230
Messages	3	5896.9805	1965.6602	17.336	.00001
2-Way Interactions	3	279.1562	93.0521	.821	.48268
Users/Messages	3	279.1575	93.0545	.821	.48268
Explained	7	6237.0000	891.0000	7.858	.00100
Residual	672	76194.5000	113.3847		
Total	679	82431.5000	121.4013		

APPENDIX G

ANALYSIS OF VARIANCE: CLOZE SCORES BY INDEPENDENT AUDIT FIRMS

CPA/CFA/ABA					
Source	D.F.	Sum-of Squares	Mean-Squares	F-Ratio	F-Prob.
Between Groups	3	380	102.667	.820385	.4827
Within Groups	1004	125645	125.144		
Total	1007	125953			
CPA/CFA					
Between Groups	3	423	423.000	1.16164	.3236
Within Groups	676	82053	121.380		
Total	679	82467			
ABA					
Between Groups	3	204	68.125	.578775	.6293
Within Groups	324	38137	117.705		
Total	327	38341			

CPA/CFA/ABA						
Audit Firms	Count	Mean	Std. Dev.	Std. Err.	Min	Max	95% Confidence Interval

APPENDIX G--Continued

PW	252	57.6482	11.2978	.711692	30.61	90.00	56.2465 to 59.0498
EE	243	58.7670	11.6346	.746361	31.58	92.45	57.2968 to 60.2372
AA	261	59.1338	10.8317	.670468	23.08	84.00	57.8136 to 60.4541
PM&M	252	58.6707	10.9953	.692637	30.00	88.00	57.3066 to 60.0348
Total	1008	58.5582	11.1838	.352257	23.08	92.45	57.8669 to 59.2494
			CPA/CFA				
PW	167	58.7882	10.9997	.851179	30.77	90.00	57.1077 to 60.4687
EE	156	60.5725	11.7166	.938078	31.58	92.45	58.7194 to 62.4255
AA	186	60.2708	10.6540	.781192	32.69	84.00	58.7296 to 61.8120
PM&M	171	60.8488	10.7628	.823050	34.00	88.00	59.2241 to 62.4735
Total	690	60.1213	11.0212	.422644	30.77	92.45	59.2914 to 60.9511
			ABA				
PW	85	55.4090	11.6002	1.25821	30.61	88.89	52.9069 to 57.9111
EE	87	55.5306	10.8101	1.15897	34.62	78.00	53.2266 to 57.8345
AA	75	56.3148	10.8203	1.24942	23.08	74.07	53.8253 to 58.8044
PM&M	81	54.0735	10.0744	1.11937	30.00	80.00	51.8459 to 56.3011
Total	328	55.3186	10.8282	.59789	23.08	88.89	54.1424 to 56.4989

APPENDIX H

ANALYSIS OF VARIANCE: CLOZE SCORES BY SOPHISTICATED USER GROUPS AND BY INDEPENDENT AUDIT FIRMS

CPA/CFA/ABA					
Source	D.F.	Sum-of Squares	Mean-Squares	F-Ratio	F-Prob.
Main Effects	5	5424.9375	1084.9873	9.017	.00001
Users	2	5115.4766	2557.7383	21.257	.00001
Audit Frims	3	259.4287	86.4762	.719	.54091
2-Way Interactions	6	602.9609	100.4935	.835	.54272
Users/Auditors	6	602.9648	100.4941	.835	.54271
Explained	11	6027.9375	547.9941	4.554	.00100
Residual	996	119844.3800	120.3257		
Total	1007	125872.3100	124.9973		

APPENDIX H--Continued

CPA/CFA					
Main Effects	4	485.93799	121.48450	.999	.40730
Users	1	62.09782	62.09782	.511	.47509
Audit Firms	3	425.09961	141.69986	1.165	.32212
2-Way Interactions	3	233.45337	77.81778	.640	.58947
Users/Auditors	3	233.45331	77.81776	.640	.58947
Explained	7	719.43750	102.77678	.845	.54999
Residual	672	81712.06300	121.59532		
Total	679	82431.50000	212.40132		

APPENDIX I

ANALYSIS OF VARIANCE: CLOZE SCORES BY MESSAGES AND BY INDEPENDENT AUDIT FIRMS

CPA/CFA/ABA					
Source	D.F.	Sum-of Squares	Mean-Squares	F-Ratio	F-Prob.
Main Effects	6	8790.3125	1465.0520	12.790	.00001
Messages	3	8480.8555	2826.9517	24.679	.00001
Audit Firms	3	317.7441	105.9147	.925	.42823
2-Way Interactions	9	3450.5547	383.3948	3.347	.00048
Messages/Auditors	9	3450.5547	383.3948	3.347	.00048
Explained	15	12240.8750	816.0581	7.124	.00100
Residual	992	113631.4400	114.5478		
Total	1007	125872.3100	124.9973		
CPA/CFA					
Main Effects	6	6298.0430	1049.6738	9.579	.00001
Messages	3	5874.2031	1958.0676	17.868	.00001
Audit Firms	3	376.4119	125.4706	1.145	.33014
2-Way Interactions	9	3368.4141	374.2681	3.415	.00040

APPENDIX I--Continued

Messages/Auditors	9	3368.4141	374.2681	3.415	.00040
Explained	15	9666.5000	644.4331	5.881	.00100
Residual	664	72765.000	109.5858		
Total	679	82431.500	121.4013		
		ABA			
Main Effects	6	3267.7791	544.6296	4.993	.00007
Messages	3	3063.2139	1021.0713	9.360	.00001
Audit Firms	3	151.2031	50.4010	.462	.70900
2-Way Interactions	9	1038.4319	115.3813	1.058	.39405
Messages/Auditors	9	1038.4321	115.3814	1.058	.39405
Explained	15	4306.2109	287.0806	2.632	.00100
Residual	312	34035.0080	109.0806		
Total	327	38341.2190	117.2514		

APPENDIX I--Continued

CPA/CFA/ABA			
Standard Format Footnote	-1.456421	Price Waterhouse & Co.	- .9108429
Nonstandard Format Footnote	1.521866	Ernst & Ernst	.2090454
Mgts' Analysis of Operations	-3.822372	Arthur Anderson & Co.	.5759125
Qualified Auditor's Reports	3.730484	Peat, Marwick, Mitchell & Co.	.1127777
CPA/CFA			
Standard Format Footnote	-1.706299	Price Waterhouse & Co.	-1.3341220
Nonstandard Format Footnote	1.263199	Ernst & Ernst	.4515686
Mgts' Analysis of Operations	-3.541519	Arthur Anderson & Co.	.1498871
Qualified Auditor's Reports	4.158325	Peat, Marwick, Mitchell & Co.	.7279205

APPENDIX J

The Sixty-Four Narrative Disclosures Contained in Financial Reports Ranked in Order of Their Mean Understandability Scores

PART I

Eight standard format footnotes, three nonstandard format footnotes, eleven managements' analyses of operations, and four qualified auditors' reports are listed in rank order as examples of inadequate disclosure/understandability.

Allegheny Power Systems, Inc.--Standard Format Footnote (44.53)

Property, plant and equipment are stated at original cost, less contributions in aid of construction. Cost includes (direct) labor and material, allowance (for) funds used during construction ((AFDC)) and such indirect costs (as) administration, maintenance and depreciation (of) transportation and construction equipment, (pensions), taxes, and other benefits (related) to employees engaged in (construction).

AFDC, a non-operating income (item), is defined in the (applicable) regulatory systems of accounts (as) including "the net cost (for) the period of construction (of) borrowed funds used for (construction) purposes and a reasonable (rate) on other funds when (so) used." In 1975 and (1974), 7½% was used for (AFDC). No separate rates for (the) cost of common equity, (preferred) stock or debt funds (devoted) to construction have been (identified) because such identification requires (arbitrary) assumptions and cost allocations. (It) has been assumed for (the) purpose of determining a (component) of AFDC for common (equity) that the sources of (funds) used to finance construction (in) any year are generally (supplied) in the same proportion (as) the operating subsidiaries' average (capitalization) ratios during the three (years) ending with that year (and) that the cost of (other) than common equity funds (equals) the cost of long-term (debt) (Net of income tax (benefits) and preferred stock issued (in) such years. On May

(20), 1975, the FPC issued (for) comment a notice of (a) proposed revision of its (system) of accounts which, if (adopted), would specify a procedure (for) the determination of the (rate) for computing AFDC which (could) require a revision in (the) rate currently used by (the) operating subsidiaries, would provide (for) a credit to interest expense of the portion of the allowance attributable to borrowed funds, and would limit credits to other income and deductions to the portion of the allowance attributable to other funds used in construction. The Company is unable to predict the ultimate outcome of the proposed revision or its effect, if any, on the Company and its operating subsidiaries.

McDonnell Douglas Corporation--Standard Format Footnote (45.64)

Long-term notes receivable,,acquired by MDC primarily from sales of commercial aircraft, are recorded at their fair market value. Most notes (are) transferred to MDFC or (its) export finance subsidary at (that) value.

In accordance with (industry) practice, substantial amounts applicable (to) long-term Government contracts and (commercial) aircraft programs are classified (as) current assets or liabilities (in) the balance sheet, even (though) some portion is not (expected) to be realized within (one) year.

Adjustments of costs (and) earnings may be made (during) and after completion of (such) long-term contracts; therefore, earnings (recorded) in the current year

(may) include adjustments applicable to (sales) recorded in prior years.

(Government) contracts in process are (primarily) accounted for on a (percentage-of-completion) method wherein all costs ((including) general and administrative expenses) (are) expensed as incurred and (the) estimated sales values are (recorded) as the work is (performed). The amount stated for (each) contract represents the estimated (sales) value of work performed (less) amounts billed to the (customers).

Certain contracts contain incentive (provisions) which provide increased or (decreased) earnings based upon performance (in) relation to established targets. (Incentives) based upon cost performance (are) recorded currently and other (incentives) are recorded when the (amounts) can reasonably be determined.

(Title) to certain items, included (in) the captions of materials (and) progress payments to subcontractors, (is) vested in the U.S. (Government) by reason of progress (payment) provisions of related contracts.

(Commercial) products in process (including (military) versions of commercial aircraft) (are) stated on the basis (of) production and tooling costs (incurred) less cost allocated to (delivered) items, reduced (where applicable) (to) realizable market after giving (effect) to the estimated costs (of) completion.

Cost of sales for the DC-9 commercial aircraft program is determined on a specific-unit cost method, while the cost of

sales of the DC-10 commercial aircraft program is determined on a program-average cost method.

Cousins Mortgage and Equity Investments--Std Format Footnote (49.36)

Operating properties include apartments and motels which are substantially completed and producing cash flows. Nonoperating properties (include) land, residential units (primarily (condominiums)) held for sale and (operating) properties not yet completed ((some) of which are producing (revenues)). The cost of real (estate) acquired through foreclosure or (deed) in lieu of foreclosure (includes) the unpaid principal amount (of) the loan plus accrued (interest) taken into income to (the) date of foreclosure, costs (incurred) in securing title to (the) property and required expenditures (to) complete the project.

In (June), 1975, the Accounting Standards (Division) of the American Institute (of) Certified Public Accountants issued (a) "Statement of Position on (Accounting) Practices of Real Estate (Investment) Trusts" (statement) requiring REITS (to) provide, among other things, (future) interest carrying costs on (foreclosed) and nonearning investments and (include) these estimates in the (reserve) for possible losses. The (reserve) for possible losses for (the) year ended August 31, (1975), has been determined in (accordance) with the method suggested (in) the Statement (see Note (3)). It is not practical (to) compute the amount of (additional) reserve for interest carrying (costs) which would have been

(provided) as of August 31, (1974), under similar requirements. Therefore, (any) increase in the reserve (which) would have resulted from (the) application of the revised (method) to prior periods is (included) with the provision for (possible) losses for the year (ended) August 31, 1975.

In (determining) loss reserve requirements, future (positive) cash flows or deficits (on) properties were taken into (consideration) in determining net realizable (values) (see Note 3). Accordingly, (the) future cash flows/deficits (from) these properties will be (charged)/credited to the reserve (as) incurred. Any additional changes in the reserve requirements resulting from changes in estimates will be reflected as changes in the reserve requirements in future periods.

Bangor Punta Corporation--Standard Format Footnote (51.02)

In the aggregate, $30,303,000 of excess cost was charged to income in fiscal 1974 of which $10,556,000 related to operating units disposed during the year and $19,747,000 related primarily to the domestic recreational and leisure time product companies. The prevailing (and) forseeable economic conditions, the (cautious) attitude of consumers and (the) consequences of the energy (crisis) were the principal factors (influencing) the Board of Directors' (determination) that the latter amount (should) be written-off. The amounts (in) the accompanying balance sheet (principally) relate to foreign subsidiaries

(and) are considered to have (continuing) value over an indefinite (period). Costs applicable to acquisitions (prior) to October 31, 1970 (are) not being amortized; costs (incurred) subsequent to that date (are) being amortized over a (forty-year) period. "Value," as used (herein), is not intended to (represent) an evaluation of net (realizable) value upon disposition of (any) entity, if such disposition (should) occur.

The tax effects (of) timing differences between financial (statement) and taxable income are (provided) (credited) as deferred income (taxes).

Investment tax credits are (treated) as a reduction of (income) taxes in the year (earned).

Consolidated federal income tax (returns) have been filed for (prior) years and are expected (to) be filed in the (future). Accordingly, dividends from all (includable) companies are nontaxable to (the) parent. Earnings of foreign (subsidiaries) are generally reinvested. Undistributed (earnings) from date of acquisition (of) foreign subsidiaries through September (30), 1975, on which no (U.S.) income tax has been (provided), amount to approximately $5,000,000.

(Several) retirement plans are maintained (for) the benefit of employees (who) meet eligibility requirements. The (Company) funds pension costs accrued. (Where) appropriate, sufficient provision has (been) made to cover normal (cost) which includes past service (cost). Charges to continuing operations for deferred

profit sharing, union retirement and insured pension plans amounted to $2,177,000 and $1,867,000 in the years ended September 30, 1975 and 1974, respectively.

Security Mortgage Investors--Standard Format Footnote (54.57)

Interest on loans is accrued monthly based on outstanding loan balances. Discount on (mortgage) loans purchased at a (price) less than the principal (amount) is taken into income (on) a basis which results (in) a yield as provided (under) the terms of the (purchase) agreements. Prepayments made prior (to) maturity affect the estimated (yield).

Discontinuation of interest accruals (on) mortgage loans occurs when (principal) or interest remains unpaid (for) a period in excess (of) three months or when (management) believes that the collectibility (of) principal and/or interest becomes (doubtful), whichever occurs first. See (Note) 3 for explanation of (discontinuance) of interest accrual on (the) portfolio services by North (American) Acceptance Corporation (NAAC).

Mortgage (loans) and properties acquired by (or) in process of foreclosure (are) carried at SMI's cost (which) generally includes the unpaid (loan) balance plus related interest (which) has been recognized as (income) and all costs relating (to) the protection of the (loan's) priority and maintenance of (the) security. The excess of (the) carrying amount of these

(investments) over the estimated net (realizable) value of the underlying (properties) is provided for in (the) allowance for possible investment (losses).

Real estate equities includes (purchase) leasebacks and property acquired (by) foreclosure in which SMI (earns) a satisfactory yield. These (properties) are carried at the (lower) of cost or net (realizable) value.

SMI maintains an (allowance) for possible investment losses (applicable) to mortgage loans and (properties) acquired by or in (process) of foreclosure. The adequacy (of) the allowance is evaluated (by) management by means of (periodic) reviews. SMI values individual (investments) at the lower of cost or net realizable value, in accordance with the AICPA "Statement of Position on Accounting Practices of Real Estate Investment Trusts" issued in June, 1975. For further details regarding the allowance, see Note 4.

Viking General Corporation--Standard Format Footnote (54.69)

Accounting policies for land sales operations are in accordance with an industry guide adopted in 1973 by the American Institute of Certified Public Accountants.

The Company's (financial) statements are presented on (the) accrual method for those (projects) which meet certain criteria (under) the guidelines and the (installment) method for projects which (do) not meet the criterion (of) use for residential or recreational

purposes, i. e., no improvements (are) planned.

The Company records (contracts) as sales (under both (the) accrual and installment methods) (at) the time aggregate payments ((principal) and interest) amount to (at) least 10% of the (contract) sales price and any (refund) period has expired. Until (a) contract qualifies as a (sale), all payments received (including (interest)) are recorded as deposits, (the) related selling costs are (deferred) and the real estate (tract) cost is segregated in (inventory). At the time a (contract) is either recorded as (a) sale or cancelled, deferred (selling) costs are charged to (expense) and deposits forfeited are (credited) to income.

When a (sale) is recorded under the (accrual) method, the sales price (is) discounted (contract valuation discount) (so) that the contract balance (will) yield approximately 12% over (the) life of the contract. (The) sales price is further (reduced) to provide for deferral (of) sales revenue applicable to (required) improvements which have not (yet) been completed. This amount (is) determined by the ratio (of) the improvement costs to (the) total of land, improvement (and) selling costs and is (recognized) with related costs as (improvements) are made.

Costs and (expenses) relating to recorded sales, (consisting) of the average cost (of) real estate tracts (including (capitalized) property taxes and interest (costs)) and marketing costs, are (charged) to income as sales (are)

recorded. General and administrative expenses are charged to expense as incurred.

Kaneb Services, Inc.--Standard Format Footnote (55.83)

The following significant accounting policies are followed by Kaneb Services, Inc. and its subsidiaries in the preparation of financial statements.

The consolidated (financial) statements include the assets, (liabilities), and operations of Kaneb (Services), Inc. and its wholly-owned (subsidiaries). The operations of companies (purchased) during the years are (included) in the consolidated statements (of) income from the dates (of) acquisition. Material intercompany balances, (transactions) and profits are eliminated (in) consolidation. The excess of (costs) over the equity in (net) assets of subsidiaries at (dates) of acquisition is being (amortized) over 40 years.

The (accounts) of foreign subsidiaries are (translated) into U.S. dollars as (follows): cash, receivables, and payables--(at) exchange rates current at (the) end of the period; (other) assets and liabilities at (rates) current on the dates (of) acquisition or incurrence; depreciation, (amortization) and related provisions against (income)--on the basis of (historical) dollar value of the (related) assets; operating revenues and (other) expenses--at average rates (through-out) the year. Gains and (losses) resulting from foreign currency (translation) are included in consolidated (income) in the

period incurred.

(Foreign) subsidiaries included in the (consolidated) financial statements had total (assets) of approximately $4,766,000 and ($4,252,000) at December 31, 1975 (and) 1974, respectively. These subsidiaries (also) had revenues of approximately ($6,229,000) and $3,906,000 and net (income) of approximately $669,000 and ($529,000) for the two respective (years) then ended.

Additions, betterments, (and) major renewals are capitalized (and) maintenance, repairs, and minor (renewals) are charged against income. (When) pipeline assets are sold (or) retired, the cost thereof (less) applicable salvage or proceeds (form) sale is charged or (credited) to accumulated depreciation. When nonpipeline assets are sold or retired, the cost and related accumulated depreciation are netted and the resulting gains or losses are included in the statement of income.

United Gas Pipeline Company--Standard Format Footnote (56.82)

The financial statements for 1974 have been restated to give effect to the settlement agreement as described in Note 2.

The accompanying (consolidated) financial statements include the (statements) of United Gas Pipe (Line) Company (United) and its (presently) operating wholly-owned subsidiaries, (United) Texas Transmission Company (United Texas), Wewoka Exploration Company and (South) Gulf Management, Inc.

United, (through) a wholly owned subsidiary, (owns) a 50% interest in (Sea) Robin Pipeline Company (Sea Robin), an unincorporated joint venture. (United's) investment in Sea Robin (accounted) for on the equity (basis), amounted to $33,437,000 at (December) 31, 1975 and represents (United's) half of Sea Robin's (venture) capital net of certain (amounts) recorded in the accounts (of) the wholly owned subsidiary (applicable) to Sea Robin, including (deferred) Federal income tax, United's (purchased) gas costs include purchases (from) Sea Robin in the (amount) of $91,015,000 and $54,177,000 (for) 1975 and 1974, respectively. (Reference) is made to Note (9) for additional information.

United, (through) a wholly owned subsidiary, (owns) a 20% interest in (High) Island Offshore System (HIOS), (a) partnership organized in 1975. (United's) investment in HIOS, accounted (for) on the equity basis, (amounted) to $2,828,000 at December (31), 1975. See Note 9 (for) additional information.

In accordance (with) a Federal Power Commission (FPC) order, United defers the (difference) between its actual cost (of) purchased gas and the (gas) cost provided for in (its) rate schedules applicable to (jurisdictional) customers. These deferred amounts (are) to be recovered or (refunded) through rates during future (periods) not to exceed twelve (months). Reference is made to (Note) 10 for additional information.

(Gas) transmission plant is being (depreciated) on

a straight-line basis (at) annual rates of 5% (for) United and 3% for (United) Texas, an intrastate pipeline (subsidiary). See Note 10 for additional information.

The Anaconda Company--Nonstandard Format Footnote (44.67)

The civil actions commenced in 1970 against Anaconda and two of its subsidiaries, now divisions, among others, by two private companies charging violations of the antitrust laws remain pending in the United States District Court for the Southern District of New York. The complaints (in) both actions ask treble (damages), divestiture of the defendants' (copper) fabricating facilities, and other (relief). The company has denied (all) liability and intends to (defend) vigorously on the merits. (These) actions are still in (pre-trial) discovery. Plaintiffs have not (specified) the amount of damages (sought) by them. Counsel for (the) company do not believe, (on) the basis of the (information) thus far developed, that (the) actions should have a (material) effect on the company's (financial) position.

In 1972 the (U.S.) Department of Justice commenced (a) grand jury investigation with (respect) to the pricing of (refined) copper and the exploration, (mine) development, mine production, smelting (and) refining of such copper. (Subpoenas) calling for the production (of) documents were served upon (Anaconda), other major copper producers (in) the United States, and (certain) trade associations. In response (to) these subpoenas,

Anaconda made (a) submission of material. The (Justice) Department has commenced the (taking) of testimony of witnesses. (Several) present and former employees (of) the company have been (tentatively) scheduled to appear before (the) grand jury.

The suit (commenced) in 1969 by an (agricultural) corporation against the company (and) other mining companies with (operations) in the area south (of) Tucson, Arizona, remains pending. (Plaintiff) seeks an injunction to (prohibit) the pumping and transportation (of) underground water by the (mining) companies from wells located (within) the Santa Cruz River (Basin) and includes in its (complaint) a claim for damages (in) the amount of $70 (million). Although trial has not yet taken place, the basic legal issue in the suit is now before the Supreme Court of Arizona for decision, following a ruling favorable to defendants on this point by the lower court.

McDonnell Douglas Corporation--Nonstd Format Footnote (50.63)

At 31 December 1975, $71,500,000 of such guarantees were outstanding. Commitments of ($65,500,000) were also outstanding to (accept) notes in payment for (aircraft) or to guarantee financing (for) customers, related to ordered (but) undelivered aircraft.

MDC is (a) defendant in 16 lawsuits, (including) five determined to be (class) actions and two brought (derivatively) on behalf of MDC, (arising) out of sales of

(common) stock and debentures of (Douglas) Aircraft Company, Inc. in (1966) before its merger into (MDC). MDC and lead counsel (for) plaintiffs have submitted an (agreement) to the trial judge (in) New York City to (terminate) the litigation by MDC's (paying) $5,000,000 into a fund (to) settle all claims including (plaintiff's) attorneys fees and other (expenses). Other defendants and an (insurance) company have agreed to (reimburse) MDC for $1,550,000 of (the) settlement payment. Counsel for (MDC) are of the opinion (that) the proposed settlement will (be) approved by the judge (and) consummated. The amount of (the) settlement has been provided (in) prior years' financial statements.

(MDC) and Eastern Air Lines, (Inc.) have both appealed a ($24,500,000) judgement against MDC for (alleged) inexcusable delays in the (delivery) of DC-8s and DC-9s (ordered) prior to the April (1967) merger of Douglas into (McDonnell). Provisions have been made (in) the financial statements for (the) potential liability.

MDC is (also) a defendant in a (number) of product liability cases, (including) actions alleging substantial compensatory (and) punitive damages as a (result) of the crash of (a) DC-10 aircraft operated by (Turkish) Airlines on 3 March (1974). Insurance coverage is believed (to) be adequate to cover (such) damages as may reasonably (be) assessed in all of (these) actions.

MDC is also defendant in other civil actions, some of

which are covered by insurance.

1st of Denver Mortgage Investors--Nonstd Format Footnote (53.45)

Notes payable to banks at September 30, 1975 consisted of $102,370,000 in borrowings under the Agreement and $2,172,115 in non-interest bearing senior notes described above. In addition, (the) "contingent interest," which is (not) recorded in the financial (statements), amounted to $796,930 at (September) 30, 1975.

The banks (have) exercised their rights under (the) Agreement to obtain a (security) interest in the Trust's (assets) to secure their loans (to) the Trust. Substantially all of the Trust's investment portfolio (is) pledged as collateral under (the) Agreement at September 30, (1975).

As of September 30, (1975), the Trust had failed (to) comply with several of (its) convenants under the Agreement (and), as a result, was (in) default. The Trust is (negotiating) with the lenders for (an) extension and further amendment (to) the Agreement. The Trust's (continuing) operations could be adversely (affected) if such negotiations are (unsuccessful), since the Trust could (be) forced to liquidate certain (investments) under unfavorable conditions or (the) banks could exercise their (collateral) rights as secured lenders (to) take possession of or (dispose) of Trust investments.

At (September) 30, 1975, the First (National) Bank of

Denver had (extended) a $3,000,000 revolving credit (facility) in addition to that (bank's) participation in the Master (Revolving) Credit Agreement discussed above. (Advances) under this additional facility (cannot) be made unless all (funds) available under the Master (Revolving) Credit Agreement are in (use). Further, any such advances (must) be repaid before payments (would) be applied to borrowings (under) the Agreement. The commitment (for) the $3,000,000 facility expires (at) the earlier of January (31), 1976 or the date (on) which the principal outstanding (under) the Agreement is reduced (to) $97,170,000. The Trust has (not) borrowed under this additional (facility) and does not anticipate (any) such borrowings.

The note (payable) to others, amounting to ($1,710,000) at September 30, 1975 (and) 1974, was outstanding under (a) loan agreement with a (major) nonaffiliated lender. The note is collateralized by a pledge of $1,710,000 of the Trust's mortgage loan portfolio.

United Gas Pipeline--Mgts' Analysis of Operations (39.87)

Because of United's present and past position as part of the dynamic interface between producers and consumers of natural gas, and because contracts both for the purchase and sale of this commodity have tended to be long-term in nature, it is necessary to look well back into the decade of the 1960's to understand the forces which have affected United's performance in the first half of the 1970's.

In the (early) and middle 1960's, supplies (of) gas in the field (were) more than ample, both (in) the interstate and intrastate (markets). This fact, plus very (stringent) regulation of producer prices (in) the interstate market, resulted (in) very stable field prices (of) gas. It also had (another) important effect: it caused (producers) to compete vigorously with (United) and other pipelines for (sales) to consumers, especially large (volume) consumers such as power (plants), in the producing states (in) United's service area.

This (intrusion) of producers into the (market) for sales directly to (large) volume consumers had, in (its) turn, a dramatic effect (upon) United: the large volume (consumers) being very sophisticated buyers (with) great leverage, insisted upon (contracts) with little or no (price) flexibility, with the period (covered) by these fixed prices (spanning) anywhere from five to (twenty) years. The following table (shows) on a volumetric basis (the) percentage of United's direct (industrial) (including power plant sales (under) fixed price contracts from (1960) through 1970.

As this (table) shows, United entered the (1970's) with a very large (portion) of its direct industrial (sales) at locked-in prices. The (significance) of this situation is (heightened) by the fact that (United's) direct industrial sales represented (38%) of United's total interstate (sales) in 1970. (Because of (curtailments) industrial sales have represented (successively) lower

percentages of total (sales) in recent years. In (1975) they were 16% of (total) interstate sales.)

As a (further) result of the forces (described) above, the margins on (fixed) price direct industrial sales (contracts) were pared to the (bone). This trend was enhanced by the FPC's encouragement of marginal pricing of direct industrial sales in an effort to encourage such sales and thereby to reduce, to the greatest extent possible, the fixed transportation charges borne by resale customers.

Bangor Punta Corporation--Mgts' Analysis of Operations (50.00)

The strong comeback in the economy after the 1970-71 recession had a favorable impact on the Recreational and Lesiure Time Products' markets. The demand (for) better and more luxurious (items) caused Bangor Punta to (enter) the motor home market (and) expand production in the (travel) trailer market, the then (fastest-growing) segments of the recreational (vehicle) business. Sales increased sharply (in) 1972 and 1973, but (declined) in 1974 and 1975, (reflecting) the decrease in demand (caused) by the energy crisis, (the) weakness in consumer spending, (and) the generally deteriorating state (of) the economy. In 1974, (motor) home and European travel (trailer) production were terminated, and (in) 1975, an agriproducts equipment (operation) and a motorcycle distribution (business) were sold.

The growth (in) sales of the Sporting (and) Law Enforcement Products Group (during) the five year period

(reflects) the continuing worldwide demand (for) handguns and law enforcement (products). The sharp increase in (1973) and 1974 sales partially (results) from the inclusion of (revenues) from an ammunition manufacturing (business); a portion of this (business), shotgun ammunition, was discontinued (at) the end of 1974.

(Higher) revenues in the Agricultural (Products) Group from 1973 through (1975) reflect larger crops, which (resulted) in increased ginning and (processing) volume, as well as (increases) in agricultural prices which (continued) into the 1974 crop (year). The growth in the (Industrial) Products Group's sales after (1973) results largely from increasing (demand) from the petroleum industry.

(Other) revenues in fiscal 1973 (increased) over the prior year (principally) as a result of (gains) arising from the repurchase (on) the open market at (less) than par of the (Company's) 5 3/4% subordinated bonds due (1992). The decrease in 1974, as compared to 1973, reflects lower purchases of such bonds, while in 1975 gains resulted from the repurchase of both 5 3/4% subordinated bonds due 1992 and 5½% guaranteed convertible debentures due 1988.

Wachovia Realty Investments--Mgts' Analysis of Operations (50.32)

1975 has been a year in which the Trust has had to continually add loans to a non-accrual status, so that by the end of the fiscal year, approximately $84,million or 54% of the investment portfolio was in this category.

Interest on (mortgage) loans decreased from $22,552,430 (to) $14,117,832 in 1975. Because (a) large percentage of the (Trust's) loans are tied to (the) prime rate, the interest (received) in 1975 would have (declined) from 1974 due to (the) lower average prime rate (for) the year, but the (decline) in yield from 13.04% (in) 1974 to 8.23% in (1975) was due primarily to (the) interest of approximately $7,200,000 (not) recognized as income on (the) Trust's books in 1975, (compared) to $1,500,000 in 1974.

(A) few of the loans (which) have been placed in (a) non-earning status are producing (some) cash flow to the (Trust) which is being recognized (as) income on the books (as) received. A loan will (continue) in a non-earning category (until) it appears that the (principal) and interest will be (collected).

Of the $84 million (in) a non-accrual status, $16,982,528 (have) been acquired by the (Trust) through foreclosure action or (some) other legal action in (lieu) of foreclosure. This was (done) to protect the interest (of) the Trust and its (shareholders). During 1975 revenue of $459,157 was received from these (properties). There was no such (income) received in 1974.

During (the) past year the Trust (has) directed its effort toward (reducing) the portfolio and resolving (the) problem loan situations. The (Trust) ceased making new loan (commitments) during the previous year, (except) as required in connection (with) problem loans,

so that (fee) income in 1975 was (due) to the extension of (existing) commitments. Consequently, fees and (other) income declined from $421,149 (in) 1974 to $249,922 during (1975).

In 1975 the Trust received no prepayment penalties due to the voluntary early pay off of mortgage loans by borrowers, while in 1974 there was $423,439 of such payments received.

Cousins Mortgage & Equity Investments--Mgts' Anal. of Ops (51,44)

The real estate industry has experienced an unprecedented rate of inflation and other adverse factors since the inception of many of the projects to which the Trust had committed funds. Resultant cost (overruns) and other adverse economic (factors) such as scarce and (expensive) energy, reduced absorption rates (and) scarce permanent mortgage financing (have) continued to make it (difficult) for many of the (Trust's) borrowers to complete and (sell) projects or obtain permanent (financing) to meet repayment commitments (to) the Trust at scheduled (maturity) dates. In certain cases, (these) conditions have caused severe (liquidity) problems, resulting in near (or) actual bankruptcy for many (of) the Trust's borrowers. In (order) to protect its investments, (the) Trust has, in many (cases), foreclosed on properties or (released) borrowers' guarantees and other (additional) collateral to facilitate obtaining (title) to the property. In (addition), the Trust's strategy has (been) to work out the (most) favorable arrangements possible for (each) of its projects or

(borrowers), including extension of maturity (dates); substitution of other borrowers (to) complete, market or operate (a) project; reduction of interest (rates); cross-collateralization of various projects (of) a borrower; and providing (financing) for the purchasers of (residential) units in projects.

The (marked) increase in income, advisory (fees), interest expense, and net (income) from the Trust's inception, (May) 18, 1970, through 1973, (was) attributable to two major (factors): (1) the rapid growth (in) the Trust's portfolio during (a) prosperous economic period and (2) the increasing use of (financial) leverage, achieved on terms (favorable) to the Trust and (its) shareholders, to fund asset (growth).

The major factors contributing (to) the net loss experienced (in) 1975 of $60,741,000 as (compared) to net income of ($4,937,000) in 1974 were the (increase) in non-earning assets from (23%) in 1974 to 72% (in) 1975 and the provision (of) $55,450,000 for possible losses. The decline of $1,622,000 in net income in 1974 when compared to 1973 was primarily due to increases in non-earning assets and the provisions for possible losses.

Recognition Equipment Inc.--Mgts' Anal. of Ops. (51.74)

Revenues from sale of equipment increased in excess of $3,000,000 between 1973 and 1974, primarily because of increased shipments of newer products, particularly the European version of the TRACE system. A further (increase)

of more than $14,000,000 _____ between 1974 and 1975. _____ $7,000,000 of this increase _____ due to the final _____ of our initial TRACE _____ contract, first units of _____ were shipped to the _____ in 1973. A further _____ was recorded because of _____ favorable reaction of our _____ to the TRACE equipment, _____ resulted in a higher _____ of equipment being purchased (_____ opposed to leased) than _____ traditionally been the case. _____ contributing to the increase _____ the first shipments of _____ OCR Wand and about _____ due to the recording _____ the revenues from a _____ contract accounted for on _____ percentage-of-completion basis.

Postal revenues _____ a $4,000,000 decline between _____ and 1974 due to _____ winding down of a _____ cost-reimbursable contract with the _____ States Postal Service. The _____ has continued to do _____ work the U.S.P.S., but _____ a lower level, which _____ for a further decrease _____ $2,100,000 between 1974 and _____.

Lease rentals increased $1,600,000 _____ 1974 to 1975, due _____ to an increase in _____ installed. Other operating revenues _____ $2,800,000 in the same _____ because of added equipment _____ maintenance, an increase in _____ shift usage charges due _____ heavy utilization of equipment _____ selective increases in maintenance _____ when warranted by cost _____.

Cost of sales increased _____ $8,000,000 between

(occurred) (About) (was) (acceptance) (system) (which) (customers) (gain) (the) (customers) (which) (proportion) (as) (has) (Also) (were) (our) ($2,600,000) (of) (long-term) (the) (showed) (1973) (a) (large) (United) (company) (development) (at) (accounts) (of) (1975) (from) (primarily) (equipment) (increased) (period) (under) (extra) (to) (and) (prices) (increases) (approximately)

1974 and (1975) in line with increased (revenues). A significant portion of (the) increase was due to (the) cost of our initial (TRACE) system, on which we (recorded) essentially no profit in (1975). (Cost overruns on this program were expensed in prior periods.)

First of Denver Mortage Investors--Mgts' Anal. of Ops. (51.78)

On September 30, 1974, non-earning real estate loans totaled $15,951,822, compared to $78,277,260 on that date in 1975, 13% and 76%, respectively, of total loans outstanding.

Contributing factors (were) the recession and building (materials) shortages, deterioration of long-term (capital) markets, energy crisis, zoning (and) other complex regulations growing (out) of environmental considerations, inflation, (1974) historically high interest rates (and) the general lack of (consumer) confidence. The inability of (borrowers) to pay their interest (reduced) the interest income and (fee) by 50% even though (the) average level of real (estate) loans did not change (significantly) during the two years. (That) level during 1975 and (1974) was approximately $117.6 and ($1[illegible].9) million respectively, reflecting a (management) decision in 1974 to (cease) any new investment production. (Additionally), the master revolving credit (agreement) between the Trust and (its) lending banks, executed in (1975), restricts any new investment (production).

The average level of (real) estate loans in 1974 (was) 82% higher than in (1973), thus increasing

interest and (fees) from that category for (1974) over 1973. Also, the (prime) rate reached record high (levels) in 1974, which di ectly (affected) interest and fees from (real) estate loans since the (interest) rates on a substantial (portion) of the Trust's real (estate) loan portfolio fluctuated with (the) prime rate.

Rental income (from) properties held for investment (increased) as a result of (a) higher average level of (Trust) investment in this category (in) 1975 than in 1974 (although) no additional properties were (purchased) for investment during 1975.

(Rental) income from properties held (for) resale increased substantially in (1975), compared to 1974, as (a) direct result of the (additions) to the Trust's portfolio (of) investments acquired through foreclosure (or) deeds in lieu of (foreclosure). Only one property, obtained in this fashion was included in the portfolio at the end of fiscal 1974.

Kaneb Services, Inc.--Mgts' Analysis of Operations (52.23)

Consolidated revenues of the Company for 1975 totaled $98,485,000 representing a decrease of 2% from revenues of $100,361,000 recorded in 1974. During 1975, (petroleum) transportation and storage revenues (increased) 21% to $13,590,000, reversing (a) 3% decrease that occurred (in) 1974 from 1973 revenues. (The) 1975 increase was primarily (the) result of an 8% (pipeline) tariff increase and increased (demand) (approximately 12% on a

(barrel-mile) basis) for petroleum product (pipeline) transportation to northern terminals (of) Kaneb Pipe Line Company, (the) Company's wholly owned pipeline (subsidiary). Since 1971, petroleum transportation (and) storage revenues have increased (an) average of approximately 7% (per) year as a result (of) tariff and volume increases.

(Since) its acquisition in 1972, (the) Company's professional pipeline engineering (subsidiary) has recorded revenue increases (averaging) 9% per year with (a) slight revenue decrease in (1975) to $10,205,000 compared to ($10,789,000) in 1974.

Coal production (and) marketing revenues represent the (most) significant growth from a (1971) level of $2,050,000 to ($52,014,000) in 1975. The 1975 (level) of revenues closely matches (the) $53,589,000 in coal revenues (recorded) in 1974, reflecting sales (of) the Company's own production ((64%) of coal revenues in (1975), 59% in 1974) as (well) as sales of coal (from) other producers for whom (the) Company served as broker. (The) Company's greatest annual increase ((440%)) in coal revenues occurred (in) 1974, when sharply inflated (coal) prices and substantial increases (in) demand were satisfied by (the) production from the Company's (newly) acquired properties and subsidiaries ((Leeco), Inc., Mountain Clay, Inc., (and) Interstate Coal Company, Inc.) (and) from third party producers.

(Operating) revenues of the Company's (land) clearing subsidiary have varied (over) the five-year period ranging from a low of $4,782,000 in 1972 to a high of $9,947,000 in 1974, reflecting the cyclical nature of construction programs of public utility companies, the Company's primary land clearing clients. Annual revenues have averaged $7.6 million over the five-year period and 1975 revenues of $6,344,000 were down 36% from the 1974 peak.

McDonnell Douglas Corp--Mgts' Analysis of Operations (53.45)

Commercial aircraft and spare parts sales have remained relatively stable for the past four years, with the DC-10 sales declining some $166.5 million in 1974 and then remaining level in 1975 and the DC-9 sales increasing $182.7 million in 1974 but decreasing $42.4 million in 1975. Sales of (military) aircraft increased 18.7% in (1975), for an annual growth (rate) of 13.7% since 1971. (This) sales growth came from (the) F-15 Eagle air-superiority fighter (program), which phased from development (into) initial production during the (period), while sales of the (more) mature F-4 and A-4 (combat) aircraft and the C-9 (transport) aircraft programs held up (well) throughout the period, although (fluctuating) by years. Sales under (the) F-18 air combat fighter, (the) Marrier V/STOL aircraft and (the) YC-15 STOL transport programs (have) been relatively nominal to (date).

The recent decline in (spacecraft) and missile sales was (halted) in 1975, as sales (of) the Dragon and Harpoon (tactical) missiles offset further reductions (in) manned space vehicle programs.

(Costs) of products and services (increased) 9.7% in 1975 and (3.8%) in 1974, more than (the) increases in sales volumes (so) that the gross margin (declined) in 1975 to 16.4% (from) 19.3% in 1974 and (20.4%) in 1973. The decline (in) gross margin can be (attributed) in its entirety to (the) reduction in the DC-10 (accounting) pool from 500 to (400) aircraft, effective 1 October (1974) and related lower production (rates). These changes in accounting (estimates) resulted in higher costs (of) sales for DC-10 aircraft (delivered) during the last quarter (of) 1974 and all of (1975).

Expenditures for research and (development) (R & D) declined 5.2%, or ($7.3) million, 1975 and 2.4%, (or) $3.4 million, in 1974. (While) MDC has continued its (expenditures) for R & D to maintain (its) technological capabilities at approximately (the) same dollar level of (prior) years, the decrease has (been) in the continued development (of) commercial products, such as (the) DC-9 and DC-10 aircraft (and) the upgraded Delta Launch (vehicle). Similar development efforts for military products is performed under contract, and is not reflected as R & D.

Allegheny Power Systems, Inc.--Mgts' Anal. of Ops (55.07)

System companys' operations are subject to regulations as to air and water quality and other environmental matters by various federal, state, and local authorities.

Our plans (for) meeting environmental standards at (our) existing stations were described (in) our 1973 annual report. (Pursuant) to them, we have (retired) some older generating units; (we) have converted 486,000kw (of) coal-fired generation to oil; (we) have made arrangements to (obtain) low-sulfur coal and to (have) some of the higher-sulfur (coal) we buy cleaned; and (we) have upgraded or replaced (precipitators) for the removal of (fly) ash.

The dismissal of (West) Penn's suit against the (Federal) Environmental Protection Agency (EPA) (and) the Pennyslvania Department of (Environmental) Resources (DER) in connection (with) the 291,000-kw Mitchell Unit (No.) 3, which was discussed (in) our annual report for (1974), was affirmed by the (Circuit) Court of Appeals for (the) Third Circuit, and West (Penn) has asked the Supreme (Court) of the United States (to) review the matter.

On (February) 18, 1975, EPA issued (an) order requiring the filing (of) a compliance plan to (reduce) sulfur emissions from Mitchell (Unit) No. 3 and increments (of) progress. The Third Circuit (has) stayed this order and (any) enforcement thereunder. On March (20), 1975, West Penn filed (a) petition with

the Third (Circuit) to review EPA's approval (of) the Pennsylvania Clean Air (Act) implementation plan as it (applies) to the Mitchell Station. (Arguments) of the petition was (held) on October 2, 1975, (and) disposition of it is (being) withheld pursuant to a (Court-approved) stipulation to permit settlement (negotiations). In an effort to (resolve) the matter, West Penn (has) proposed a new plan (for) bringing the Mitchell unit into compliance by use of a regenerative srubber on a research an development basis. This proposal is still being considered by EPA and DER.

Bourns, Inc--Managements' Analysis of Operations (55.68)

Net sales for 1975 exceeded the 1974 total by 1.4%. However, increased (labor), material, and overhead costs (in) 1975 resulted in a (lower) gross profit, both in (dollar) amount and as a (percentage) of sales. Engineering, research (and) development program reductions in (1975) resulted in a 9% (decrease) in costs in these (areas) compared to the 1974 (level). Selling expenses increased by (6.5%) in 1975, due primarily (to) higher salary and travel (costs). Administrative costs increased by (over) 7.5%, due primarily to (higher) salary and legal expenses. (Interest) income increased in 1975 (by) nearly 12%, as a (result) of the continuing investment (of) undistributed earnings of the (Company's) Puerto Rican subsidiaries. The (major) item which contributed to (the) increase in other expense

(in) 1975 was a $339,000 (provision) for settlement of damages (awarded) to Tenchant Electronique, S. A., (a) former distributor of the (Company's) products in France. Interest (expense) was $113,755 lower than (the) 1974 level, principally due (to) a $5.9 million reduction (in) the average short-term debt (outstanding) during the year. The (1975) effective income tax rate (was) approximately 34.5% of pre-tax (earnings), excluding the non-deductible intangible (asset) write-off, compared to approximately (22%) in 1974. See note (11) of Notes to Consolidated (Financial) Statements for detailed information (concerning) income taxes for the (two) years. In 1975, the (Company) changed its inventory valuation (method) to more fully absorb (manufacturing) overhead costs and provide (an) improved matching of costs (with) revenue. See note 2 (of) Notes to Consolidated Financial (Statements) for a more detailed (explanation) of the change.

The intangible asset write-off of $3,537,682 in 1975 represents the excess cost of investment in Ohmic, S. A., over equity in net assets at acquisition.

Viking General Corp--Managements' Analysis of Operations (56.53)

The Company experienced a decline in net income for the year ended August 31, 1975, as compared with the prior year. This decline (is) a continuation of the (trend) of the Company's results (of) operations since the second (quarter) of fiscal 1974.

The (decline) in net income for (the) year ended August 31, (1975) from the previous year (can) be attributed to a (number) of factors, including the (following):

1. The loss from (operations) and the loss on (disposal) of Dixie Picture Frame (Company). The Company is treating (the) results of operations and (the) loss on disposal as (a) discontinued operation in accordance (with) Opinion No. 30 of (the) Accounting Principles Board of (the) American Institute of Certified (Public) Accountants. The aggregate loss (from) this discontinued operation was ($401,000), or $.30 for the (current) year as compared to ($39,000), or $.03 for the (previous) year.

2. The curtailment (of) the Company's retail land (sales) operations in October, 1974, (in) order to strengthen its (cash) position and to improve (cash) flow. This reduction in (activity) has had a negative (effect) on recorded real estate (tract) sales and net income (for) the current year. It (can) be expected that recorded (real) estate tract sales will (be) considerably less during the (next) fiscal year than the (current) year and net income (from) this line of business (will) be adversely affected.

3. (A) continued decline in sales (at) the Company's urban community (developments). This decline has had (an) impact on reported results (of) operations for fiscal 1975 (and) can be expected to

(continue) to depress net income (during) the next fiscal year. Revenues from condominium sales increased during the current year over revenues reported for the previous year; however, this is attributable to closed transactions on sales made prior to the economic downturn in 1974 and the related sharp decline in the rate of new sales.

McDonnell Douglas Corporation--Qualified Auditor's Report (52.24)

Our examinations were 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.

As more (fully) described in Note B (to) the consolidated financial statements, (DC-10) tooling and production costs (are) charged to cost of (sales) on program averages, resulting (in) the deferral of costs (to) be recovered over future (sales). The realization of the (deferred) costs is dependent upon (receipt) of future orders significantly (in) excess of those received (to) date.

DC-10 tooling and (production) costs are charged to (cost) of sales on program-averages, (which) are based upon cost (estimates) of a 400 aircraft (accounting) pool (500 aircraft accounting (pool) prior to 1 October (1974)). Because the cost of (early) production units (as compared (to) sales prices) were higher (than) program-average, a portion of (the) costs of such units (has) remained in inventory to (be) recouped by

production and (sale) of lower-than-average cost units. (The) 43 DC-10 aircraft delivered (during) 1975 were produced at ($40,704,000) less than program-average, and (absorbed) $21,840,000 more of tooling (cost) than was expended during (the) year. However, as the (lower) production schedules implemented in (1975) will result in increased (unit) costs of aircraft to (be) delivered in the near-term, (less) recoupment of deferred production (costs) and unamortized tooling can (be) expected when the aircraft (now) in production are delivered. (Should) the present rate of (production) continue longer than anticipated (or) be further reduced, or (additional) versions of the DC-10 (be) introduced, unit costs may (again) exceed program-average and cause (deferred) costs to increase. The (recoupment) of any significant portion (of) these deferred costs is (dependent) upon receipt of sufficient (additional) orders to warrant a (return) to a more efficient (production) rate.

The 400 aircraft accounting pool is in excess of the 230 DC-10 aircraft ordered plus 34 DC-10s contingently ordered or under option at 31 December 1975 (216 ordered plus 38 contingently ordered or under option at 31 December 1974), of which 212 had been delivered at 31 December 1975 (169 at 31 December 1974).

Recognition Equipment Inc.--Qualified Auditor's Report (54.01)

Our examinations were made in accordance with generally accepted auditing standards and accordingly included such tests of the accounting records and wuch other auditing procedures as we considered necessary in the circumstances.

As described (in) Note 14, the company (and) others are defendants in (a) lawsuit seeking damages as (a) result of alleged violations (of) the Securities Exchange Act (of) 1934 and also had (certain) patent matters under evaluation.

(On) Oct. 9, 1975, the (United) States District Court for (the) Northern District of Texas, (Dallas) Division, entered its order (in) connection with a suit (previously) filed against the company, (certain) officers and directors and (Price) Waterhouse & Co., denying (the) plaintiff's motion that the (action) be maintained as a (class) action, denying the plaintiff's (motion) for summary judgement against (defendants) and granting the company's (and) other defendants' motion for (summary) judgement against the plaintiff. (The) plaintiff alleges that the (company) violated Section 10(b) of (the) Securities Exchange Act of (1934) by overstating its sales, (profits) and net assets in (financial) statements and other reports (issued) during the period from (Oct.) 31, 1969 to July (1), 1971. The Court's order has (been) appealed by the plaintiff, (and) the appeal is pending. (Although) no specific amount of

(damages) is alleged in this (suit), if the plaintiff's appeal (is) sustained and if the (company) should be held liable (in) the suit, substantial damages (may) be awarded.

The company (continues) to consider certain patent (matters) called to its attention. (Among) these matters are the (following): a patent relative to (ink-jet) printers, under which a (license) has been offered by (the) holder of the patent, (a) claim by the same (party) that it is entitled, (as) the owner of another (patent), to a higher royalty (under) a license to the (company) relative to ink-jet printing (and) a patent owned by (another) party which may be (relative) to optical and magnetic (reading) used in concert. With regard to the claim for a higher royalty, special outside counsel has advised that the potential financial exposure in this area increases as additional ink-jet printers are used in products sold or leased by the company and could become material if such claim were to be sustained in the future.

Wachovia Realty Investments--Qual. Auditor's Report (56.67)

As explained in notes 1 and 4 to the financial statements, the Trust periodically performs an in-depth review of its investment portfolio and adjusts the allowance for possible losses based on its best estimate of exposure to loss of principal and accrued interest. While we (consider) that

the Trust used (reasonable) assumptions as to future (conditions) in estimating the net (realizable) value of its investments (and) the related allowance for (possible) losses at August 31, (1975), significant adjustments may be (required) in the future to (the) allowance for possible losses (if) actual conditions differ from (those) assumed by the Trust (in) estimating the net realizable (value) of its investments. In (addition) to the considerations described (in) notes 1 and 4 ((non-income) producing loans and real (estate) obtained through foreclosure approximated (54%) of the Trust's total (investments) at August 31, 1975), (other) factors which could affect (the) assumptions as to future (conditions) used by the Trust (include) as explained in notes (8) and 9 to the (financial) statements, various legal proceedings, (the) outcome of which is (not) presently determinable, and borrower (bankruptcy) proceedings.

(a) The Trust (has) undertaken on a periodic (basis) an in-depth review of (its) portfolio on an investment (by) investment basis in order (to) provide for possible losses (on) the basis set forth (in) note 1. In assessing (exposure) to loss of accrued (interest) and principal, Management has (considered) numerous indicators of value, (including) independent appraisals and economic (analysis). The evaluation of the (adequacy) of the allowance for (possible) losses is

predicated on (the) assumption that the Trust (will) be able to dispose (of) its investments in the (ordinary) course of business. See note 9 for a discussion of uncertainties relating to the establishment of the allowance for possible losses.

Allegheny Power Systems, Inc.--Qual. Auditor's Report (56.86)

We have examined the consolidated balance sheet and statement of capitalization of Allegheny Power System, Inc., and its subsidiaries as of December 31, 1975 and 1974, and the related consolidated statements of income, retained earnings and changes in financial position for the years then ended.

Our examinations (were) 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.

(As) described in Note B (to) the financial statements, electric (operating) revenues for 1975 and (1974) include $28,148,000 and $2,113,000, (respectively) arising from rate increases (and) subject to refund.

On (August) 7, 1975, The Potomac (Edison) Company appealed to the (Courts) the Maryland Public Service (Commission's) decision refusing to change (its) March 27, 1975, order (shown) in the rate table.

(On) August 27, 1975, the (Maryland) Commission authorized Potomac Edison (to) add a surcharge to (customer) bills for one year, (beginning) in September 1975, to (recoup) about $2 million in (unrecovered) fuel costs resulting from (a) change in the application (of) that company's fuel cost (adjustment) clause in August 1974.

(Potomac) Edison is preparing to (refile) an application with the (Federal) Power Commission (FPC) for (an) increase in wholesale rates. (FPC) refused to accept Potomac (Edison's) original application for an (increase) of about $1.9 million (on) an annual basis because (of) alleged staleness of the (test) year.

Rates under which (approximately) 79% of the System's (kwh) sales are made have (been) designed to recover fuel (cost) increases for System companies (and) to pass fuel cost (decreases) on to their customers. (In) Ohio and Pennsylvania, there (is) about a two-month delay (before) fuel cost charges are (reflected) in customer bills.

In (West) Virginia, electric utilities can (now) recover a fuel cost increase from retail customers only after specific authorization by the Public Service Commission of the particular increase. This situation results from the termination, as of March 31, 1975, of the effectiveness of fuel cost adjustment clauses in retail rates in that state.

PART II

Eight standard format footnotes, thirteen nonstandard format footnotes, five managements' analyses of operations, and twelve qualified auditors' reports are listed in rank order as examples of adequate disclosure/understandability.

1st of Denver Mortgage Investors--Std Format Footnote (59.33)

Interest on each loan is recognized in income as it accrues during the period the loan is outstanding. Rental from (leases) of real estate is (recognized) as it accrues in (accordance) with lease terms. The (Trust) considers a loan or (lease) to be delinquent if (required) payments of interest or (rents) are 60 days or (more) past due, and, at (that) point, ceases income recognition.

(Property) held for resale is (carried) at cost (unpaid principal, (accrued) but unpaid interest, and (costs) of obtaining title). The (allowance) for possible losses includes (amounts) necessary to adjust these (investments) to estimated net realizable (value) (see Note C). Operating (results) of these properties are (included) in the statement of (operations).

The partnership investment is (accounted) for using the equity (method); consequently, partnership gains and (losses) allocable to the Trust (are) recorded as adjustments to (the) Trust's investment and are (included) in the Trust's statement (of) operations.

Through September 30, (1974), the provision for possible (losses) was determined as a (percentage) of net income, plus (additional) amounts deemed necessary by (the) Trustees as a result (of) their evaluation of the (investment) portfolio. In 1975, the (Trust) adopted the accounting policies (recommended) by the American Institute (of) Certified Public Accountants in (its) June, 1975 Statement of (Position) on Accounting Practices of

(Real) Estate Investment Trusts. As (a) result of this change, (the) provision for possible losses (for) 1975 is based on (the) Trustees' evaluation of the (estimated) net realizable value of (each) investment as compared to (carrying) amount. The estimation of (net) realizable values considers many (factors) including current appraisal values, (estimates) of cost to complete, market trends, availability of long-term financing, and the cost, including interest, required to hold investments to the estimated point of sale. See Note C.

Bourns, Inc.--Standard Format Footnote (59.83)

The consolidated financial statements include the accounts of the Company, its wholly-owned subsidiaries and a 75% owned subsidiary of which a majority interest was acquired during 1974. All significant (intercompany) accounts and transactions have (been) eliminated in consolidation. The (equity) method of accounting is (used) for investments in companies (which) are not majority-owned.

Certain (reclassifications) of information for 1974 (have) been made to conform (to) the presentation for 1975.

(Statements) of financial condition of (subsidiaries) outside the United States (are) generally translated at approximately (year-end) rates for working capital (accounts) and long-term liabilities and (at) historical rates for all (other) accounts. Income and expenses (are) translated at approximate average

(exchange) rates except for depreciation (and) amortization which are at (historical) rates. Unrealized translation gains (are) generally deferred as a (reserve) for future currency fluctuations (to) the extent they are (not) offset by current unrealized (losses). Deferred translation gains are (classified) as Deferred Credits in (the) Consolidated Statements of Financial (Condition). Unrealized losses in excess (of) deferred unrealized gains are (charged) to income currently. Exchange (gains) and losses are included (in) income currently.

Inventories are (stated) at cost (principally standard (cost) currently adjusted for accumulated (cost) less estimated cost of (partial) shipments) not in excess (of) current replacement or realizable (value) (see note 2).

A (division) of the Company, engaged (principally) in government contract work, (accumulates) actual costs by job (which) includes factory overhead, initial (tooling) and other related non-recurring (costs) and relieves inventories for (costs) of partial shipments accounted (for) by the percentage of (completion) contract method of accounting. (The) cost attributable to completed (units) under long-term contracts and (programs) is based on the (estimated) cost of all units (expected) to be produced and (is) determined under the learning (curve) concept which antiticipates a (predictable) decrease in unit costs (as) tasks and production

techniques (become) more efficient through repetition. In accordance with terms of the particular contracts, progress billings are made to customers and are recognized as a reduction to total division inventory.

Wachovia Realty Investments--Standard Format Footnote (60,71)

It is the Trust's policy to accrue interest monthly based on the outstanding balances. Income recognition (is) discontinued whenever foreclosure proceedings (are) initiated on a loan (or) when, in the opinion (of) Management, the economic situation (concerning) any investment indicates that (collectibility) of further interest is (doubtful). The recognition of income (is) resumed when it appears (that) the principal and interest (will) be collected.

The Trust (records) interest received in advance (in) an unearned interest account (with) subsequent credits to interest (ratably) over the terms of (the) related notes.

Commitment fees (have) been recorded as income (when) the commitment was accepted (by) the borrower from the (inception) of the Trust through (August) 31, 1975. On June (27), 1975, the American Institute (of) Certified Public Accountants issued (its) Statement of Position on (accounting) Practices of Real Estate (Investment) Trusts which provided that (commitment) fees should be recognized (as) income on a straight-line (basis) over the related commitment (and) loan

periods. The application (of) the method prescribed by (the) Statement of Position would (have) the effect of deferring (to) future years a portion (of) the amounts previously recognized (as) income. The amount of (this) deferral is not significant (and) no adjustment has been (recorded). Commitment fees received in (the) future will be recognized (as) income in accordance with (the) Statement of Position.

Real (estate) acquired by foreclosure also (includes) properties acquired by acceptance (of) a deed in lieu (of) foreclosure and is initially (recorded) at the principal balance (of) the former mortgage loan, (plus) recognized but uncollected interest (and) costs of obtaining title (and) possession. Capital improvements made subsequent to acquisition are added to the Trust's investment.

Recognition Equipment Inc.--Standard Format Footnote (61.07)

The consolidated financial statements include those of Recognition Equipment Incorporated and its subsidiaries, all wholly owned. The assets (and) liabilities of foreign subsidiaries (are) translated into United States (dollars) on the following basis:

(Balances) that represent cash and (amounts) receivable or payable that (are) denominated in the foreign (currency) are translated at the (year-end) exchange rates.

Other assets (and) liabilities, which comprise principally (inventories) and systems on and (for)

lease and their related (depreciation), are translated at the (rates) of exchange in effect (when) originally recorded.

Revenue and (expense) accounts are translated at (a) weighted average of exchange (rates) that were in effect (during) the year, except for (sales) of equipment, which are (translated) at the average rates (of) exchange in effect during (the) month of sale, and (depreciation) and amortization, which are (translated) at the rates of (exchange) that were in effect (when) the assets to which (they) relate were acquired. The (net) gain or loss on (translation) is taken into income (currently).

It is the company's (policy) to reinvest a portion (of) the net earnings of (foreign) subsidiaries for an indefinite (period) of time and to (provide) for additional income taxes, (if) required, on the cumulative (undistributed) earnings of foreign subsidiaries (which) are not intended to (be) so reinvested.

Inventories, other (than) inventoried costs relating to (a) long-term commercial contract, are (stated) at the lower of (cost) or market, cost being (determined) on the first-in, first-out (basis). Inventoried costs relating to (a) long-term commercial contract are (stated) at actual production costs (incurred) to date plus accrued (profit) based on percentage-of-completion, reduced (by) progress payments received to (date). Provision is made for (obsolete) or slow-moving inventory.

The company accounts for the revenues and cost of revenues associated with a long-term contract using the percentage-of-completion method based on the ratio of direct labor hours incurred to total direct labor hours estimated at completion.

Banner Industries, Inc.--Standard Format Footnote (61.87)

The accompanying consolidated financial statements include the accounts of the Company and its subsidiaries, all of which are wholly owned. All significant (intercompany) accounts and transactions have (been) eliminated.

The policy of (the) Company and its subsidiaries (is) to provide for depreciation (and) amortization of property, plant (and) equipment, principally by the (straight-line) method, at annual rates (sufficient) to amortize the cost (of) the assets during their (estimated) useful lives.

The amounts (included) in the accompanying consolidated (balance) sheets as "Transportation operating (rights)" and "Cost in excess (of) net assets of purchased (businesses)" recorded prior to November, (1970), are not being amortized (since), in the opinion of (management) there has been no (diminution) in the value of (these) assets. "Costs in excess (of) net assets of purchased (businesses)" recorded subsequent to November, (1970), is being amortized over (a) 40-year period.

Research and (development) expenditures, including development costs (of) products, processes and product

(applications), are expensed in the (year) incurred rather than deferred.

(The) Company has pension plans (covering) the majority of its (employees). Total pension expense, which (includes) generally, amortization of prior (year) service costs over thirty (to) forty years, was approximately ($2,001,000) in 1975 and $1,829,000 (in) 1974. The Company's general (policy) is to fund pension (costs) accrued. At June 30, (1975), for the plans in (which) the actuarial value of (vested) benefits exceeded the assets (of) pension funds and amounts (accrued), such excess amounted to (approximately) $1,400,000. The estimated unfunded (prior) service cost not accrued (in) the accompanying consolidated balance (sheet) was approximately $2,359,000 as (of) June 30, 1975.

The (Pension) Reform Act of 1974 (requires) the Company to amend its pension plans to conform with certain provisions of the Act, which will become effective in 1976. The Company believes that the effect on annual pension costs and the funding of such costs for 1976 and subsequent years and the effect on unfunded vested benefits resulting from this amendment will not be significant.

The Anaconda Company--Standard Format Footnote (62.88)

Net current assets (except inventories) and long-term debt recorded in foreign currencies are translated at current exchange rates. Inventories and (other) foreign nonmonetary assets and (liabilities) are generally translated

at (rates) prevailing when acquired or (incurred). Revenues and expenses recorded (in) foreign currencies are translated (at) the average rates of (exchange) prevailing during the year (or) at historical rates, as (appropriate). Gains and losses resulting (from) the translation of foreign (currencies). This translation policy complies (with) the recommendations recently promulgated (by) the Financial Accounting Standards (Board) and is consistent in (all) material respects with the (Company's) previously existing translation practices.

(Under) a ruling published by (the) Internal Revenue Service, the (Company) is permitted to carry (forward) the significant loss resulting (from) the expropriation of its (Chilean) investments in 1971 as (an) ordinary loss for a (period) of ten years. In (addition), the Company's major Canadian (subsidiary) has available future tax (benefits) arising from the write-off (of) depreciation, mine development, and (exploration) costs for financial accounting (purposes); the related tax benefits (were) not recorded previously as (their) realization was not assured. (Until) such time as U.S. (loss) carry-forwards and available Canadian (tax) benefits are utilized, the "(provision) for income taxes" will (include) a charge in lieu (of) income taxes, representing the (additional) United States and Canadian (income) taxes that otherwise would (have) been provided, with an (equal) and offsetting extraordinary credit (reflecting) the utilization of the (loss)

carryforwards. United States investment (tax) credits and foreign tax (credits) that would otherwise reduce (the) Company's U. S. taxes are (applied) as a reduction of (this) charge.

The provision for income taxes is based on income reported for financial purposes, although certain items of income and expense, principally mine development expenditures and income from affiliates, may be reported in different periods for tax purposes.

U. S. Realty Investments--Standard Format Footnote (65.45)

U. S. Realty Investments, an unincorporated association in business trust form was created in 1961 in Ohio pursuant to a Declaration of Trust last amended on March 23, 1971. In years (prior) to 1975, the Trust (elected) to be qualified as (a) real estate investment trust. (However), during 1975 the Trust (transferred) the Puritas Plaza Shopping (Center) to a wholly-owned corporation, (disqualifying) the Trust as a (real) estate investment trust for (that) year. Should the trustees (decide) in future years that (it) would be in the (best) interests of the Trust (and) its shareholders, and should (circumstances) otherwise permit, the Trust (could) requalify itself by meeting (the) qualification tests.

All properties (of) the Trust are depreciated (on) the straight-line basis for (both) financial reporting and federal (income) tax purposes. Prior to (1973), for federal income tax (purposes) both straight-

line and accelerated (methods) were utilized. Since different (rates) were used in prior (years) the depreciation expense for (financial) reporting purposes exceeded the (depreciation) deduction used for federal (income) tax calculations by $265,291 (in) 1975 and $148,705 in (1974). From the inception of (the) Trust, the depreciation deductions (for) federal income tax purposes (have) exceeded straight-line depreciation, net (of) retirements by $1,375,000 as (of) December 31, 1975, and ($1,768,000) at the previous year (end). Should the Trust decide (to) qualify as a real (estate) investment trust in future (years), this difference in accumulated (depreciation) could cause the Trust (to) make distributions to shareholders (in) excess of reported net (income).

The Trust's method of (determining) the allowance for possible (losses) on mortgage loans was (changed) during 1975 to that (prescribed) by the AICPA's Statement (of) Position of Accounting Practices (for) Real Estate Investment Trusts (which) became effective in June (1975). Trust management evaluates the recoverability of each individual investment in the portfolio by comparing the carrying amount with estimated net realizable value.

Harman International Industries--Standard Format Footnote (72.29)

The consolidated financial statements include the accounts of the Company and its subsidiaries. All significant (intercompany) accounts and transactions have (been)

eliminated.

Excess of cost (over) equity in net assets (of) businesses purchased prior to (August) 31, 1970 ($6,536,000) is (not) being amortized since, in (the) opinion of management, there (has) been no diminution in (value). As required under generally (accepted) accounting principles, the excess (of) cost over equity in (net) assets of businesses purchased (subsequent) to August 31, 1970 (is) being amortized (forty years).

(The) inventories are stated at (the) lower of cost (first-in, (first-out) method) or market.

The (provision) for depreciation and amortization (of) property and property rights (is) computed principally by the (straight-line) method for financial reporting (purposes). Leasehold improvements are amortized (over) the term of the (lease) or their estimated useful (lives), whichever is shorter.

Research (and) development costs are expensed (in) the year in which (such) costs are incurred.

Deferred (income) taxes result from timing (differences) between book and tax (treatment) of certain items of (income) and expense.

Investment tax (credits) are recorded on the (flow-through) method, thereby reducing the (income) tax provision in the (year) in which the credits (are) available to offset income (taxes) payable.

The Company and (certain) subsidiaries have plans to (provide) retirement benefits for substantially (all)

employees.

The Company's policy (is) to fund pension cost (accrued) annually which includes amortization (of) prior service cost over (varying) periods up to 40 (years).

Primary earnings per share (is) computed using the average (number) of common and common (equivalent) shares outstanding. The average (number) of common and common equivalent shares outstanding assumes the exercise of outstanding stock options and gives effect to applying the proceeds to the purchase of Common Stock at the average market price during the year. The average number of common and common equivalent shares outstanding is also adjusted for stock dividends.

United Gas Pipe Line Co.--Nonstd.Format Footnote (59.14)

United Gas Pipe Line Company (United) has been curtailing deliveries of gas to customers on its interstate system since November 1970 in accordance with priorities generally favoring nonindustrial consumers. In this (connection) United has filed curtailment (plans) with the Federal Power (Commission) (FPC), whose jurisdiction to (order) curtailments, notwithstanding direct sale (contract) commitments, has been sustained (by) the United States Supreme (Court).

Seven separate lawsuits filed (by) industrial customers for damages (allegedly) caused by curtailments are (currently) pending against United and ((in) four of the lawsuits) (Penzoil) Company (penzoil). These

lawsuits (claim) damages totaling approximately $1,141,000,000, (including) treble damage claims under (antitrust) laws for approximately $692,000,000. (The) claims made against United (are) based on allegations of, (among) other things, breach of (contract) for failure to deliver (the) maximum quantity of gas (provided) for in the contract (and) violations of Federal and (State) antitrust laws. Certain plaintiffs (contend) that United's own actions (created) or contributed to its (systemwide) gas shortage and need (to) curtail. The claims made (against) Pennzoil are based on (allegations) of, among other things, (tortious) interferences with contract and (violations) of the same antitrust (laws). The lawsuits present, with (some) variations, the same factual (and) legal issues. United's position (in) all seven lawsuits is (that) its curtailment of natural (gas) to the complaining customers (was) necessitated by the nationwide (natural) gas shortage, a phenomenon (beyond) the control of United (or) any other pipeline, and (that) such curtailments were made (in) accordance with United's tariff (as) modified by FPC orders. (United's) defenses are, among others, (that) the express and implied (provisions) of its FPC tariffs (relieve) it of all liability (for) damages arising from its (curtailments), that its contracts with (the) complaining customers were expressly (made) subject to valid regulatory (action), and that the awarding (of) the damages sought would (violate) provisions of the Natural

(Gas) Act. United also contends that its contracts authorize the curtailments complained of and that, in any event, it is excused from any failure to deliver full contractural quantities as a result of the circumstances of its shortage.

Wachovia Realty Investments--Nonstd Format Footnote (59.31)

The Trust is presently a defendant in several legal proceedings, principally arising from counterclaims of borrowers, wherein claimed punitive and compensatory damages in the aggregate exceed $20 million. While in (the) opinion of Management and (Counsel) such claims are greatly (exaggerated) or there is no (basis) upon which there may (be) recovery from the Trust, (due) to the preliminary status (of) the litigation, legal counsel (are) unable to express opinions (as) to the ultimate outcome. (Further), the Trust is involved (in) various other legal proceedings (arising) primarily from foreclosure actions (in) which discovery or other (legal) actions have not reached (a) sufficient stage to allow (the) Trust's legal counsel to (express) opinions on the expected (outcome).

Because of the complex (nature) and preliminary stage of (various) litigation, it is not (presently) possible to determine the (effect), if any, of such (litigation) on the accompanying financial (statements).

(a) At August 31, (1975), the Trust had unfunded (loan) commitments in the approximate (amount) of

$4,900,000. In addition, (the) Trust, in order to (protect) its investments, may be (required) to furnish additional amounts (in) excess of its contractural (commitments). The Trust has also (issued) standby and gap commitments (which) have been accepted at (August) 31, 1975 in the (aggregate) amount of approximately $13,400,000, (at) interest rates from 10.5% (to) 14.0%. In certain instances, (such) standby and gap commitments ($7,099,000) relate to projects on (which) the Trust presently has (the) construction or development loans. (Generally), the Trust does not (expect) to be called upon (to) fund significant portions of (its) gap and standby commitments.

(b) During fiscal 1974, the (Trust) entered into a commitment (agreement) with an unrelated mortgage (company) whereby the company would (provide) mortgage financing to individual (purchasers) of condominium units from (one) of the Trust's borrowers. Under the terms of the agreement, the Trust may be required to purchase the mortgages at their face amount of $2,500,000 and to reimburse the mortgage company for specified costs incurred in connection with the mortgages.

Cousins Mortgage & Equity Investments--Nonstd Format Footnote (59.47

As of August 31, 1975 and 1974, the Trust had outstanding commitments totaling $363,164,000 and $388,290,000, respectively, of which $349,216,000 and $316,036,000, respectively, had been advanced. The Trustees, (on) October 9, 1974, adopted (a) resolution which provided that (the) Trust would not enter (into) any new mortgage or

(equity) commitments. However, this policy (does) not prohibit the Trust (from) providing or committing to (provide) additional funds in connection (with) projects being financed, including (refinancings), or projects committed as (of) August 31, 1974, but (not) then funded. Although this (policy) is subject to change (at) the Trustees' discretion, the (Senior) Credit Agreement provides that (a) change in this policy (would) constitute an event of (default) (see Note 4). Further (advances) may be required in (addition) to the original commitment (on) certain properties to which (the) Trust has acquired title (and) on existing loans and (commitments).

The real estate industry (has) experienced an unprecedented rate (of) inflation and other adverse (factors) since the inception of (many) of the projects to (which) the Trust had committed (construction) funds. Resultant cost overruns (and) other adverse economic factors (such) as scarce and expensive (energy), reduced absorption rates and (scarce) permanent mortgage financing have (continued) to make it difficult (for) many of the Trust's (borrowers) to complete and sell (projects) or obtain permanent financing (to) meet repayment commitments to (the) Trust at scheduled maturity (dates). In certain cases, these (conditions) have caused severe liquidity (problems), resulting in near or (actual) bankruptcy for many of (the) Trust's

borrowers. In order (to) protect its investments, the (Trust) has, in many cases, (foreclosed) on properties or released (borrowers') guarantees and other additional (collateral) to facilitate obtaining title (to) the property. In addition, the Trust's strategy has been to work out the most favorable arrangements possible for each of its projects or borrowers, including extension of maturity dates; substitution of other borrowers to complete, market or operate a project; reduction of interest rates; cross-collateralization of various projects of a borrower; and providing financing for the purchasers of residential units in projects.

Bourns, Inc.--Nonstandard Format Footnote (60.42)

In October 1974, the Company made an offer ("Offer") to purchase its publicly held shares, at $11.50 per share, and pursuant to the Offer, purchased approximately 566,000 shares of its Common Stock (see Note 13 of Notes to Consolidated Financial Statements). In July (1975), the Company announced that (it) was proposing to merge (with) a corporation to be (formed) by principal shareholders, pursuant (to) which the Company's remaining (publicly) held shares would be (cancelled) in exchange for cash (at) an appraised price of ($10.00) per share. In 1974 (and) 1975 several class actions (and) a shareholders' derivative action (were) brought against the Company, (its) directors and others as (a) result of the Offer (and) the proposed

merger. In (general), the various plaintiffs have (charged) that the Company's actions (were) fraudulent and illegal and (violated) Federal securities laws and (State) common law duties owed (to) the Company's shareholders. They (seek), among other things, recovery (of) unspecified damages allegedly sustained (by) the various classes and (unspecified) profits allegedly obtained by (the) defendants. One of the (actions) has been dismissed and (the) others are pending in (the) Federal District Court (Central (District) of California) and California (Superior) Court for the counties (of) Los Angeles and Riverside. (Counsel) for the Company have (advised) that in their opinion, (the) Offer was not in (violation) of the antifraud provisions (of) the Federal securities laws (as) they were being interpreted (at) the time the Offer (was) made and at the (time) the share purchases were (consummated).

On March 4, 1976, (the) Company determined to abandon (the) proposed merger and therefore (counsel) believes the pending actions (essentially) have been rendered moot (insofar) as they relate to (the) proposed merger.

During 1974, (the) Company discovered deficiencies in (the) declarations used in connection (with) the importations of certain (of) its products from its (Mexican) subsidiary which resulted in (the) underpayment of customs duties. The Company disclosed these deficiencies to the U. S. Customs Service and paid additional

duties.

Bangor Punta Corporation--Nonstandard Format Footnote (60,78)

All persons found liable in the Chris-Craft litigation have petitioned the Supreme Court of the United States seeking a review of the decisions in the case. In November (1975) that Court invited the (United) States Solicitor General to (file) a brief with the (Court) making known the views (of) the United States. Pending (final) disposition by the Supreme (Court) (which is not expected (to) occur before early 1976), (the) United States Court of (Appeals) has stayed entry of (judgement) against the defendants. In (connection) with this stay, the (Court) of Appeals did not (require) the posting of a (bond). However, until final disposition (by) the Supreme Court, the (Court) did order compliance by (Bangor) Punta with the following (conditions):

(a) Bangor Punta may (not) increase the aggregate amount (of) its secured long-term debt (above) $71.1 million or the (aggregate) amount of its unsecured (long-term) debt above $25.1 million, (the) amounts reflected in its (September) 30, 1974 audited financial (statements), nor may it hypothecate (unencumbered) assets to secure presently (unsecured) long-term debt;

(b) Bangor (punta) may not incur short-term (debt) and other obligations or (hypothecate) assets to secure such (debt) and obligations except in (the) ordinary course of business;

(c) no assets or subsidiaries (may) be sold by Bangor (Punta), or on behalf of (its) lenders under applicable loan (agreements), unless the proceeds are (applied) in accordance with applicable (loan) agreements and any remainder (is) retained in Bangor Punta's (business) (if such proceeds are (applied) to reduce long-term debt, (the) amount so applied is (to) be subtracted from the (aggregate) limit on long-term debt (set) forth in (a) above);

(d) Bangor Punta may not (declare) or pay any cash dividends; and

(e) Bangor Punta may not purposefully reduce its net worth (shareholders' equity) below $92.5 million, the amount reflected in its September 30, 1974 audited balance sheet.

Allegheny Power Systems, Inc.--Nonstandard Format Footnote (60.80)

Total sales were 32.5 billion kilowatthours in 1975 compared with 27.2 billion in 1974. Kwh sales (to) customers, who numbered (1,019,031) at year-end, were 24 (billion), or 3.9% below those (for) 1974, and kwh sales (to) other utilities, including those (accounted) for as a reduction (of) expense in the category (of) "interchange and purchased power, (net)," were 8.5 billion, almost (a) four-fold increase over those (for) 1974 and a two-fold (increase) over those for 1973.

(Sales) of 7.2 billion kwh (to) residential customers, who numbered (907,884) at year-end, were up

(6.2%) and produced $243.7 million (in) revenues. Average use by (our) residential customers in 1975 (was) 8,044 kwh, 4% more (than) in 1974. Residential electric (space) heating installations increased 11.8% (in) 1975 compared with 18% (in) 1974. The average price (per) kwh to our residential (customers) was 3.37¢ compared with (2.74¢) in 1974, and the (average) monthly bill was $22.60, ($4.92) more than in 1974. (Of) this increase about 60% (was) caused by higher fuel (costs).

Kwh sales of 3.8 (billion) to our 95,111 commercial (customers) were 6.7% more than (in) 1974 and produced revenues (of) $116.9 million.

Sales of (12.1) billion kwh to our (14,948) industrial customers were down (12.2%) and produced $243.4 million (in) revenues. Among our major (classes) of industrial customers, kwh (sales) were off from 1974 (as) follows: aluminum and other (non-ferous) metals, 6.8%; cement and (clay) products, 14.7%; chemicals, 14.9%; (fabricated) metal products, 12%; and (iron) and steel, 24.8%. Kwh (sales) to Eastalco Aluminum Company (were) down 3.2% despite the (fact) that it is in (the) process of starting up a second aluminum reduction potline at its plant near Federick, Maryland, which will add approximately 130,000 kilowatts to the System's load in 1976.

Sales to other utility systems in 1975 produced a total of $128.2 million in revenues, $98.7 million of which are

accounted for as a reduction of operating expenses.

Banner Industries, Inc.--Nonstandard Format Footnote (62.00)

The loan agreement provides, among other things, for restrictions on borrowings and requires the maintenance of certain working capital and net worth levels.

In October, (1974), the Company finalized a (revolving) credit agreement with a (group) of banks which provides (for) initial credit availability of ($13,000,000) with semiannual reductions commencing (December) 31, 1975, through 1981. (Borrowings) under this agreement ($6,100,000 (at) June 30, 1975) will (bear) interest at ½% over (the) prime rate during the (first) three years and 3/4% (over) the prime rate thereafter. (In) addition, the Company has (agreed) to pay a commitment (fee) of ½ of 1% (on) the daily unused portion (of) the line. The Company, (at) its option, may make (prepayments) and reduce the loan (commitment) without penalty. A portion (of) the initial borrowings under (this) agreement was advanced by (the) Company to its subsidiary, (Commercial) Motor Freight ("CMF") and (applied) by CMF to all (remaining) borrowings under a 1972 (Credit) and Security Agreement; the (remainder) of the initial borrowings (was) used to reduce other (borrowings). The Agreement contains normal (covenants) for both Banner and (CMF), including those relating to (the) maintenance of working capital (and) net worth levels (and) provides restrictions on dividends (and)

additional borrowings.

Under the (most) restrictive loan agreement, consolidated (working) capital must not be (less) than $12,000,000; consolidated working (capital) ratio must be at (least) 1.45 to 1; and (the) ratio of total liabilities (to) tangible net worth, as (defined), must not exceed 2.75 (to) 1 through December 31, (1975), and 2.5 to 1 (through) June 30, 1976. In (addition), consolidated retained earnings of (the) Company available for capital (distribution) (cash dividends and purchase of its own shares) is limited to the sum of $250,000 plus 25% of consolidated net income since July 1, 1974. As of June 30, 1975, retained earnings of approximately $790,000 were not restricted as to capital distribution.

Harman International Industries--Nonstd Format Footnote (63.38)

As of August 29, 1975, the Company entered into a Credit Agreement (which includes revolving credit terms) with three banks which replaced a Term Loan Agreement. Under the (revolving) credit terms, the Company (may) borrow up to $10 (million) through August 31, 1976. (Thereafter), the maximum borrowings allowed (decrease) to $9 million through (August) 31, 1977 and to ($8) million through September 15, (1978). In addition, the Company (may) convert the revolving credit (to) a term credit at (August) 31, 1976, 1977 and (1978) in the amounts of ($9) million, $8 million and ($7) million,

resoectively. If converted, (the) principal matures in quarterly (installments) until August 31, 1982. (Under) the terms of the (prior) agreement the loan balance (at) August 31,.1975 of ($5.85) million would have been (payable) in quarterly installments of ($365,625). The interest rate under (the) Credit Agreement (8.15% at (August) 31, 1975) is variable, (computed) by adding 4/10% to (the) prime interest rate.

The (Credit) Agreement, among other things, (imposes) certain limitations with respect (to) indebtedness, the acquisition or (retirement) of capital stock and (the) payment of cash dividends. (At) August 31, 1975, $1 (million) was available for cash (dividends) and the acquisition or (retirement) of capital stock. In (addition) the Agreement provides that (the) Company will maintain consolidated (working) capital of at least ($18) million and a current (ratio) of 1.75 to 1 (through) August 31, 1976. Thereafter (the) Company must maintain consolidated (working) capital, as defined, of (at) least $20 million. At (August) 31, 1975 the consolidated (working) capital was $22.8 million (and) the current ratio was (2.2) to 1.

The note (payable) of the English subsidiary (to) a bank bears intereest at a variable rate (11 5/8% at August 31, 1975), matures in December 1976 and is collateralized with an approximate equivalent net carrying amount.

The promissory notes payable arising from the purchase of James B. Lansing Sound, Inc. were prepaid on October 15,

1975 (previously payable in equal monthly principal installments of $80,000 with a final payment of $122,000 in January, 1976).

U. S. Realty Investments--Nonstandard Format Footnote (63.39)

The Trust has been named a party to an action together with another defendant, Beneficial Mortgage Investors, regarding their respective rights and obligations as loan participants in a $13,500,000 loan for the construction of a notel-condominium project in Ocean City, Maryland. Alison Mortgage (Investment) Trust has alleged that ___(the)___ Trust failed to honor ___(its)___ obligations as a loan ___(participant)___ by refusing to fund ___(its)___ designated share of the ___(loan)___. Alison seeks to compel ___(the)___ Trust to fund approximately ___($1,775,000)___ as its alleged share ___(of)___ the loan and seeks ___(punitive)___ damages in the amount ___(of)___ $10,000,000. The Trust has ___(filed)___ a complaint against Alison ___(to)___ recover the amount, approximately ___($225,000)___, which the Trust disbursed ___(to)___ Alison in connection with ___(the)___ loan. In the opinion ___(of)___ the Trust's counsel, subject ___(to)___ the inherent uncertainties of ___(all)___ litigation, it appears unlikely ___(that)___ Alison will make a ___(recovery)___ from the Trust in ___(this)___ matter.

The Trust has ___(been)___ named in an action ___(filed)___ by two shareholders of ___(the)___ Trust, naming the Trust, ___(all)___ of the trustees, officers, ___(former)___ trustees and officers of ___(the)___ Trust, Mascom Co., the ___(Trust's)___ mortgage advisor, and others, ___(alleging)___ violations of the Securities ___(and)___ Exchange Act of 1934, ___(as)___

amended. The action alleges ___(a)___ plan among the named ___(defendants)___ to conceal from holders ___(and)___ purchasers of the Trust's ___(shares)___ and from the investing ___(public)___ the true picture of ___(the)___ Trust's financial condition and ___(operation)___. The complaint seeks (a) ___(determination)___ as a class action; ___(b)___ an accounting for all ___(damages)___ sustained by plaintiffs in ___(the)___ class action and for ___(all)___ profits earned by defendants ___(during)___ the years 1970 to ___(1974)___. Motions to dismiss the ___(complaint)___ have been filed on ___(behalf)___ of each of the ___(named)___ defendants. In the opinion ___(of)___ the Trust's counsel, these ___(motions)___ are proper and meritorious ___(and)___ based upon information available, ___(the)___ plaintiffs' prospects for recovery ___(are)___ remote.

Further, the Trust is involved in various legal proceedings arising from foreclosure actions, in the usual course of its business activities, none of which in the opinion of management is expected to have a material effect on the financial statements.

Security Mortgage Investors--Nonstandard Format Footnote (63.87)

In February, 1974, NAAC filed for protection under the bankruptcy laws and is operating under Chapter X of the Federal Bankruptcy Act.

Prior thereto, ___(SMI)___ had purchased notes secured ___(by)___ first and junior mortgages ___(and)___ land sales contracts from ___(NAAC)___. In addition, SMI had ___(sold)___ certain land sales contracts ___(back)___ to NAAC and at

(September) 30, 1975, NAAC was (indebted) to SMI for $5,918,735 (as) the principal balance due (on) the purchase price. This (receivable) is secured by, among (other) things, the land sales (contracts) sold back to NAAC, (and) is included in the (home) mortgage portfolio that is (serviced) by NAAC as indicated (in) Note 2. The development (and) sale of land is (subject) to various Federal, state (and) local regulations which affect (the) enforceability of land sales (contracts). A developer of a (project), such as NAAC, is (in) most instances obligated to (complete) development of the project (in) accordance with its agreements (with) the purchaser. As a (result), lot purchasers may have (rights) of rescission and refund (under) their contracts. In the (event) that NAAC defaults on (its) obligation to complete development, (SMI) might, in order to (protect) its investment, be required (to) complete or contribute to (the) completion of development.

NAAC (had) agreed to service all (of) the mortgage notes and (land) sales contracts and to (repurchase) delinquencies or defaults of (more) than 90 days, and (had) pledged $5 million of (SMI's) 6% debentures and a ($9) million senior note of (Omega-Alpha), Inc. (O-A) to secure (its) obligations to SMI. NAAC (is) not honoring its repurchase (obligations) in the Chapter X (proceedings). O-A is presently operating (under) Chapter X.. In the absence

of the repurchase agreement and the pledged collateral, it is estimated that a provision for possible investment losses of approximately $7 million, based on a five year holding period, would be required as of September 30, 1975, for the portfolio of mortgage notes and land sales contracts serviced by NAAC.

Kaneb Services, Inc.--Nonstandard Format Footnote (66.03)

During 1967, the Company purchased 884,645 shares (adjusted for stock dividends and a three-for-two stock split in October 1971) of Kansas-Nebraska Natural Gas Company, Inc. common stock which represents approximately 16% of the total common shares outstanding at December 31, 1975. At December (31), 1975, 785,758 shares were (held) by Kaneb Services, Inc. (and) pledged as collateral on (the) Company's long-term debt (see (note) 8). The remaining 98,886 (shares) were held by a (wholly-owned) subsidiary and were free (of) any encumbrances.

In connection (with) the acquisition, the Securities (and) Exchange Commission (SEC) has (granted) the Company permission to (not) be regulated under the (Public) Utility Holding Company Act (of) 1935. The action by (the) SEC is subject to (certain) conditions which include registration (as) a public utility holding (company) prior to any anticipated (merger) with Kansas-Nebraska, notification to (the) SEC prior to any (divesting) of Kansas-Nebraska stock and (notification) to and approval by (the) SEC before any acquisition

(of) additional shares of stock.

(Based) on a stock valuation (study) performed in 1974 by (a) prominent financial advisor, the (Company), at December 31, 1974, (wrote) down the original cost (of) its long-term investment in (Kansas-Nebraska) common stock to its (estimated) net realizable value. The (resulting) potential decline of $986,254 ($875,997) for Kaneb Services, Inc., ($110,257) for the wholly-owned subsidiary), (with) no tax effect, was (included) in the determination of (income) before extraordinary item in (accordance) with Opinion No. 30 (of) the Accounting Principles Board (of) the American Institute of (Certified) Public Accountants. Opinion No. (30), changed the criteria for (the) types of items to (be) included in determining income (before) extraordinary items for transactions (subsequent) to the effective date (of) the Opinion, September 30, (1973). In 1973 and 1971 the gains from the sales of similar long-term investment securities were presented as extraordinary items in conformity with accounting principles then generally accepted.

Viking General Corporation--Nonstd Format Footnote (66.00)

In december, 1973, the Company acquired from Somerset Development Corp. of America ("Somerset"), two condominium projects under construction now known as "Brookside" and "The Manor at Tamarac" and land adjacent to each of the projects. The purchase (price) paid by the Company

(for) both properties was $50,000 (in) cash and the execution (of) two Purchase Money Notes (by) the Company. Purchase Money (Note) #1 evidences a debt (in) the original amount of ($3.45) million and is secured (by) a mortgage on both (projects). Purchase Money Note #2 (evidences) a debt of $2 (million) and is secured by (a) pledge of 200,000 shares (of) the Company's common stock. (In) addition to Notes #1 (and) #2, the Company took (title) to the projects subject (to) numerous underlying mortgages.

Brookside (is) encumbered by a construction (note) and mortgage held by (City) National Bank of Miami (and) the mortgage originally given (to) Somerset securing Note #1. (City) National Bank of Miami (has) commenced a foreclosure proceeding (against) Brookside and has named (the) Company as a defendant (in) its capacity as owner (of) the buildings and the (land) on which the buildings (are) located.

In the month (of) November, 1975, a suit (was) commenced against the Company (by) Southeast First National Bank ((Southeast)), the current holder of (the) Note #1 above described. (Southeast) has accelerated Purchase Money (Note) #1 and is alleging (a) cause of action on (the) Note and demanding a (money) judgement against the Company (in) the amount of $3,062,500, (plus) interest, court costs and (attorneys') fees.

In the month (of) November, 1975, a suit (was) instituted by Somerset alleging (a) cause of action for (breach) of contract. Somerset has (demanded) damages in the amount (of) $20 million against the (company).

In the month of (November), 1975, the Company received (notice) that two of the (underlying) mortgages encumbering the land (adjacent) to both projects were (in) default.

As a result of the foregoing legal procedings initiated against the Company, management has determined that it will no longer continue to make any payments with regard to any of the mortgages encumbering Brookside and the property adjacent to the Manor at Tamarac and Purchase Money Note #2.

Recognition Equipment Inc.--Nonstd. Format Footnote (69.13)

The $2,000,000 note at Oct. 31, 1975, represents amounts due under a revolving line of credit negotiated in August, 1975, with two domestic banks, under which up to $10,000,000 may be borrowed at an interest rate of one per cent over the prime rate (8 3/4 per cent at Oct. 31, 1975). Borrowings, secured (by) equipment leased or sold (on) an installment basis to (customers), are based upon the (amount) of firm rentals and (installment) payments remaining under such (leases) and installment sales. Borrowings (can) be made until Dec. (31), 1976, after which repayment (of) the amount outstanding on (that) date will be amortized (over) a 36-month period. The (company) has agreed to pay (a) commitment

fee equal to (one-half) of one per cent (per) annum on the average (unused) portion of the commitment (and) a facility fee of (one-fourth) of one per cent (per) annum on the entire (amount) of the loan commitment. (In) addition, the company has (agreed) to maintain compensating balances (equal) to an annual average (of) 20 per cent of (average) loans outstanding and 10 (per) cent of average unused (commitment). At Oct. 31, 1975, (the) compensating balances aggregated $1,100,000.

(The) loan agreement contains provisions (which), among others, limit the (ratio) of debt to equity; (require) the maintenance of a (minimum) amount of tangible net (worth) and working capital; require (the) maintenance of a specified (current) ratio; restrict the amount (of) capital expenditures; and limit (the) incurrence of additional debt.

(In) addition, the company is (prohibited) from paying cash dividends (without) the consent of the (lenders).

The subordinated debentures due (in) 1981 bear interest at (5 3/4) per cent, are convertible (into) common stock of the (company) at $16.229 principal amount (per) share and are redeemable (in) whole or in part (at) 105 per cent of (principal) plus accrued interest. Principal (and) interest are subordinated to (the) prior payment in full (of) all senior indebtedness, as

(defined) in the indenture.

Under terms of both the above loan agreement and the indenture, there are restrictions relating to the redemption, purchase or other acquisition by the company of its stock.

Security Mortgage Investors--Mgts' Analysis of Operations (58.67)

Interest and other income increased between 1973 and 1974 because a higher average amount of invested assets was outstanding at generally higher interest rates in 1974. In addition, (depressed) conditions in the real (estate) industry, which were just (emerging) in late 1973, did (not) begin to adversely affect (SMI) until June of 1974 (when) non-accruing loans began to (increase). Moreover, late in May (of) 1974, accruals on the (portfolio) serviced by NAAC were (suspended) because the NAAC trustee (began) withholding collections on this (portfolio) from SMI. Consequently, the (substantial) decline in income in (1975) compared to 1974 was (caused) by the continuing increase (in) non-accruing loans because adverse (real) estate conditions worsened. In (addition), the non-accrual of income (on) the portfolio serviced by (NAAC) lasted for all of (fiscal) 1975.

Interest rates on (bank) borrowings, which reached an (all) time high during SMI's (1974) fiscal year, accounted for (the) sharp increase in interest (expense) in 1974 over 1973. (The) rates decreased somewhat in (the) 1975 fiscal year while (SMI) was simultaneously

reducing its (bank) borrowings which accounts for (the) decrease in interest expense (from) 1974 to 1975.

By (year-end) 1974, it became evident (that) SMI would incur losses (because) of depressed conditions in (the) real estate industry. Consequently, (SMI) raised its allowance for (possible) investment losses to $4,350,000 (by) providing an addition of ($4,170,000). With no improvement in (real) estate conditions in 1975, (a) further increase in the (allowance) to $7,750,000 was made (by) a net addition of ($3,400,000).

Investment advisory, servicing fees, (and) related expenses increased by ($553,784) in 1974 as compared (to) 1973. Fees paid to (the) management company accounted for (about) $137,000 of this increase because a higher average amount of invested assets was outstanding in fiscal 1974 and, beginning April 1, 1973, some of these assets were aubject to a higher fee. Most of the balance of the increase was the result of SMI payments to the NAAC trustee for servicing SMI's portfolio from February through May 1974 and certain related costs.

The Anaconda Company--Managements' Analysis of Operations (61.43)

Consolidated 1975 operating losses totaled $28.7 million, compared with operating income of $173.6 million in 1974 and 1973, respectively. Operating results (for) 1975 compared unfavorably with (those) of 1974 due to (the) abnormally low demand for (a) wide range of Anaconda's

(products), particularly in the automotive, (construction) and electrical markets, and (low) copper prices.

Fluctuating copper (deliveries) and sales prices were (the) principal reasons for the (changes) in sales and results (of) the copper mining divisions (for) the years 1975 and (1974). Copper deliveries declined 18 (percent) and 12 percent in (1975) and 1974, respectively, from (the) preceding years; in 1974 (this) decline was more than (offset) by higher sales prices (for) domestic copper cathodes, which (averaged) 75.5 cents a pound ((1973)-58.6 cents). In 1975 (prices) averaged 63.4 cents a (pound). Production costs increased in (both) years, reflecting labor settlements (concluded) in 1974; higher energy, (transportation) and supply costs; and (lower) ore grades encountered at (the) Berkeley Pit in Butte, (Montana). Also in 1974, the (change) in the method of (valuing) byproduct inventories, principally silver (and) gold, to market prices (determined) on a Lifo basis, (increased) costs by $7.4 million (over) 1973.

Sales declined in (the) Uranium Division, despite higher (prices), as 1975 deliveries were (reduced) by approximately one-third, due (to) ore amenability problems encountered (in) the concentrating process. Operating (costs) in 1975 increased due (to) higher costs for supplies, (services), and labor and substantially (higher) expenditures for exploration and (research) programs. While 1974 sales (were) at 1973 levels, profits (declined) due to rapidly escalating (costs).

Primary and fabricated Aluminum (Division) product shipments to customers (in) 1975 were at 69 percent of the 1974 levels, when demand reached an all-time high. Price increases, which in 1974 were a significant factor in the Division's improved results, only partially offset the higher costs of production in 1975.

U. S. Realty Investments--Mgts' Analysis of Operations (61.57)

Rental revenues declined 2.9% in 1975 and 3.7% in 1974 from the revenue levels of the previous year. While the (sale) of equity properties would (appear) to be the major (cause) of this decline, 1975 (should) have actually shown an (increase) due to the completion (of) the Cleveland Marriott expansion. (Expected) revenue levels were not (realized) in 1975 because motel (units) in Atlanta, Georgia, and (St.) Louis, Missouri, did not (meet) their rental obligation. The (dormitory) at Southern Illinois University (failed) to meet its rental (obligation) in both 1975 and (1974).

The Trust has a (policy) of selling properties that (no) longer meet its investment (criteria). This year the Trust's (motel) in Dallas, Texas, was (sold) for a capital gain. (In) 1974, the Trust disposed (of) a small retail property (and) a group of three (small) office buildings.

A decrease (of) 53.3% in interest revenues (resulted) from (1) an increase (in) non-accrual loans from $12,070,000 (in) 1974 to $44,526,000 in (1975),

and (2) a decrease (in) the prime interest rate (from) 10.5% at December 31, (1974) to 7.25% at December (31), 1975. In 1974 interest (revenues) increased 23.8% due to (the) increase in the prime (rate) above 1973 levels.

Other (interest) expense (principally interest paid (to) banks) increased 47.5% in (1974) due to the high (prime) rate charged by banks (and) then decreased $1,709,177 or (21.8%) reflecting the decrease in (the) prime interest rate in (1975). Mortgage interest expense increased ($350,277) or 12.9% over 1974 (after) decreasing 4.3% in the (previous) year. The primary reason (for) the increase was the ($8,500,000) loan which the Trust (was) able to negotiate on (the) Cleveland Marriott Inn.

Mortgage advisory service costs decreased in 1975 by $123,016 or 20.4%.

Harman International Industries--Mgts' Anal. of Ops (62.80)

Net sales increased by 14 percent in the 1975 fiscal year. The improvement (in) sales came from an (increase) in high fidelity sales, (especially) abroad, the contribution to (sales) volume by our new (acquisition) Tannoy, and a small (increase) in the sales of (our) Exotic Metals Division. Automotive (sales) declined approximately 8 percent, (the) result of decreases in (automobile) production.

Cost of sales (increased) in line with the (increase) in

sales volume. Interest (expense) incrreased, primarily as a (result) of the rise in (foreign) borrowings to service cash (flow) needs attributable to increased (foreign) sales and the operational (needs) of Tannoy. The decrease (in) the domestic interest rate (was) more than offset by (higher) foreign borrowing and higher (interest) rates abroad.

Payroll taxes (increased) by 14 percent, the (result) of higher wage rates (and) increases in social security (benefits).

Advertising expenses were 2.9 (percent) of total sales and (4.3) percent of consumer goods (sales) and represented an increase (of) 16 percent over the (prior) fiscal year. These figures (are) regarded as moderate in (the) consumer goods field.

Research (and) development expense increased by (approximately) 150,000 related to our (high) fidelity business.

Rent expense (increased) by approximately $350,000 primarily (attributable) to the Tannoy acquisition (and) the addition of warehousing (space) for the high fidelity (business).

Depreciation and amortization (increased) by approximately $340,000 which (relates) to the Tannoy acquisition (and) the expansion of facilities (at) all divisions.

In the (opinion) of Management, the historic (operations) as reported are indicative (of) current and future operation. (However), proposed legislation to change

(DISC) laws could have an impact on tax expense in future years. (See note L to the financial statements.)

Banner Industries, Inc.--Managements' Analysis of Operations (65.47)

Sales and revenues from continuing operations for the fiscal year ended June 30, 1975 represented a gain of eight per cent over those of fiscal 1974 which in turn were up 25 per cent over fiscal 1973. To a (great) extent, the increase in (both) years are attributable to (the) sales growth of our (aviation) after-market business and products (for) industry. In fact, as (noted) elsewhere in this report, (the) sales growth of these (two) categories in fiscal 1975 (more) than offset a 13 (per) cent decline in revenues (on) the part of Commercial (Motor) Freight which was penalized (by) the recessionary climate which (existed) throughout its service area. (It) should be noted that (the) fiscal 1975 revenue decline (of) Commercial Motor Freight contrasted (with) its recent historical pattern (of) revenue increases. Commercial Motor (Freight) revenues in fiscal 1974 (were) up 14 per cent (over) those of fiscal 1973 (which) in turn increased eight (per) cent over those of (1972).

Revenues of our Products (for) Industry Group, up 29 (per) cent over those of (fiscal) 1974, experienced a 29 (per) cent increase in fiscal (1974) over those of the (preceding) year. Aviation aftermarket product (sales) increased 34 per cent (in) fiscal 1975 from

those ___(of)___ fiscal 1974 which in ___(turn)___ were up 57 per ___(cent)___ over those of fiscal ___(1973)___.

The increase in revenues ___(of)___ our Products for Industry ___(Group)___ in both fiscal 1975 ___(and)___ fiscal 1974 reflected a ___(generally)___ strong and increased demand ___(for)___ the products of the ___(group)___, particularly locomotives and heavy ___(duty)___ industrial lift trucks, pumps, ___(turbines)___ and fasteners. The group ___(also)___ benefitted to a significant ___(degree)___ in both years from ___(the)___ sale of replacement parts.

___(A)___ principal factor in the ___(sales)___ growth of our Aviation Aftermarket Group was Burbank Aircraft, which we purchased in December, 1973, and which made a six-month contribution to fiscal 1974 sales and a full year contribution in fiscal 1975.

To a great extent, the increases in net income, up 19 per cent in fiscal 1975 and nine per cent in fiscal 1974, and income from continuing operations, up five per cent and 18 per cent respectively in fiscal 1975 and fiscal 1974, reflect the increases in revenues as well as implementation of operating efficiencies.

U. S. Realty Investments--Qualified Auditor's Report (59.65)

We have examined the balance sheet of U. S. Realty Investments as of December 31, 1975 and December 31, 1974, and the related statements of operations, beneficiaries' equity and changes in financial position for the years then ended. Our examinations ___(were)___ 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. (We) did not examine the (financial) statements of the joint (ventures) referred to in Note (A) to the financial statements. (The) Trust's equity in the (net) assets and the net (loss) of the joint ventures (represents) 3 percent in 1975 (and) in 1974, 3 percent (and) 38 percent, respecticely, of (the) Trust's total assets and (results) of operations. These statements (were) examined by other auditors (whose) report thereon has been (furnished) to us, and our (opinion) expressed herein, insofar as (it) relates to the amounts (included) for the joint ventures, (is) based solely upon the (report) of the other auditors.

(Our) opinion on the financial (statements) of the Trust at (December) 31, 1974, and for (the) year then ended was (qualified) subject to the realization (of) deferred costs in connection (with) the development of the (Tower) City project. During 1975, (these) costs were charged to (operations) resulting in the elimination (of) this uncertainty and the (removal) of such qualification.

As (explained) in Note D to (the) financial statements, the Trust's (short-term) credit agreement expires on (June) 1, 1976. In addition, (the) Trust was in default (under) the short-term credit and (interim-term) agreements and has requested (waivers) from the banks, as

(also) described in Note D (to) the financial statements. The Trust's ability to continue normal operations and to realize its assets in the normal course of business is dependent upon the continued availability of credit under these agreements or alternative credit arrangements.

Cousins Mortgage & Equity Investments--Qual. Auditor's Rep. (60.67)

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.

As discussed (in) Notes 2 and 3, (many) of the Trust's borrowers (are) presently experieincing difficulties and (are) unable to meet their (loan) repayment commitments to the (Trust) and in some cases (the) Trust has elected to (foreclose) on their loans (approximately (72) of investments made by (the) Trust are in a (nonearning) or foreclosed status at (October) 1, 1975). In many (cases) the Trust will have (to) complete, operate and market (the) projects. The Trust has (valued) its real estate investments (at) the lower of cost (or) estimated net realizable value (which) contemplates that the Trust's (investments) will be disposed of (in) the normal course of (business) over a period of (years) at which time the (real) estate markets are assumed (to) have been restpred to (more) normal conditions. The ultimate (realization) of the Trust's net (real) estate investments ($296,361,000

and ($315,388,000) as of August 31, (1975) and 1974, respectively) is (dependent) upon the realted real (estate) projects being completed and (sold) at an amount to (recover) the related net investment, (which) is dependent to a (large) extent upon future event. (and) contingencies, many of which (are) not subject to control (by) the Trust. Present economic (conditions) and the uncertainty of (future) conditions are such that (the) amounts and timing of (the) ultimate realization cannot be (reasonably) determined at this date.

(As) discussed in Note 10, (the) Trust and the collateral (underlying) its investments are subject (to) pending and potential claims (and) lawsuits resulting in large (part) from foreclosure actions by (the) Trust. The final outcome of these actions cannot be determined at this time.

Bourns, Inc.--Qualified Auditor's Report (61.20)

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.

As described (in) note 15 to the (accompanying) consolidated financial statements, Bourns, (Inc.), is a defendant in (a) number of legal actions (and) was contacted in 1974 (about) a potential claim involving (a) former division of the (Company). The Company is also (under) audit by the U. S. (Customs) Service and is

unable (to) assess its ultimate liability (for) underpqyment of customs duties ((see) note 15). The outcome (of) these matters is not (presently) determinable.

In 1970 the (Company) acquired for cash a (75%) interest in Ohmic, S. A., (a) French corporation. Shortly thereafter, (another) French corporation, Trenchant Electronique, (S. A.) ("Trenchant") filed a complaint (in) a Fench court in (Paris) against the Company and (two) of its foreign subsidiaries, (Bourns) AG and Ohmic, S. A., (alleging) that the plaintiff had (been) illegally terminated as a (distributor) of the Company's products; (that) defendants conspired to hire (away) the plaintiff's employees and (that) Ohmic, S. A. copied certain (of) the plaintiff's products and (confidential) know-how. Plaintiff claimed damages (of) (approximately 12,000,000 francs (approximately ($2,400,000). The Tribunal de Commerce (of) Paris issued a judgement (in) September, 1972, which declared (that) the Company abusively terminated (the) distributor agreement with Trenchant (and) that the Company, Bourns (AG) and Ohmic, S. A. were (jointly) and severally guilty of (acts) of unfair competition against (Trenchant). The decision, however, did (not) determine the amount of (damages). The Company appealed the (decision) in the Court of (Appeals) in Paris. Early in (1975), the Company lost the (appeal) and the Court appointed (an) expert to determine damages. (In) October, 1975, the expert (issued)

his report which concluded (that) the Company, Bourns AG (and) Ohmic, S. A. should jointly (and) severally be ordered to (pay) Trenchant 1,513,000 francs ((approximately) $339,000). Provision in the accounts has been made for the findings of the expert although the Court of Appeals is not necessarily bound by his report and the actual damage it awards may be higher or lower.

The Anaconda Company--Qualified Auditor's Report (61,44)

The status of the company's claims for indemnification by Overseas Private Investment Corporation (OPIC) for its Chilean investments which were expropriated in 1971 is explained on page 29 of this Annual Report. As indicated, (the) aggregate amount the company (may) ultimately receive in realization (of) its Chilean investments, which (are) reflected in the accompanying (consolidated) Balance Sheet under the (caption) "Chilean notes and OPIC (insurance) claims," cannot be determined (at) this time.

On July (17), 1975, a panel of (three) independent arbitrators held Overseas (Private) Investment Corporation (OPIC) liable (to) Anaconda under two contracts (insuring) against the expropriation of (Anaconda's) investments in the Chuquicamata (and) El Salvador Chilean mining (properties). The arbitrators' award did (not) specify the amount OPIC (must) pay Anaconda, but left (this) matter to be determined (by) further proceedings. OPIC has (since) moved in Federal court

(to) have the award set (aside), on the basis of (an) alleged appearance of partiality (in) the arbitration panel. In (September) 1975 one member of (the) three-man panel became associated (with) a law firm that (in) the previous winter had (assisted) Anaconda'a trial lawyers with (respect) to the preparation of (an) affidavit about foreign-law--(an) affidavit that ultimately was (not) used in presenting its (case). While the arbitrator in (question) has stated that he (had) no knowledge of these (circumstances) until after he became (associated) with the firm, OPIC (nevertheless) argues that the impartiality (of) the panel has been (placed) in question. In the (Company's) view, OPIC's contentions are (without) merit, and the company (has) moved to have the (award) confirmed.

The July 17, (1975), award was the outgrowth (of) the binding arbitration of (Anaconda's) 1972 claims against OPIC (for) $159 million. In connection with the ultimate recovery by Anaconda against OPIC, OPIC will have the right to succeed under the insurance contracts to a percentage of the proceeds of the 1974 settlement with the Government of Chile of approximately U. S. $253 million, of which $65 million was received in cash and $188 million in U. S. dollar promissory notes of Corporation del Cobre (Codelco), a Chilean public corporation.

1st of Denver Mortgage Investors--Qualified Auditor's Rep. (62,64)

Our examinations were 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.

As described (in) Note D to the (financial) statements, the Trust is (in) default under its Master (Revolving) Credit Agreement. Obligations under (the) Agreement become due on (January) 31, 1976, and the (Trust) is negotiating with the (lenders) for extension and amendment (of) the Agreement. The accompanying (financial) statements have been prepared (in) conformity with generally accepted (accounting) principles which assume continuation (of) the Trust as a (going) concern. This assumption is (dependent) upon the Trust's ability (to) effect the orderly collection (of) its mortgage loans and (disposition) of property ehld for (resale) which requires that the (Trust) negotiate and maintain satisfactory (credit) arrangements and operate without (incurring) significant future losses.

The (Trust) is a defendant in (certain) litigation as described in (Note) J to the financial (statements). The final outcome of (these) matters is not presently (determinable).

On April 3, 1975, (the) Trust, its advisor, and (certain) banks and corporations affiliated (with) the Advisor were named (defendants) in a lawsuit by (a) shareholder purporting to represent (all) shareholders and warrant holders (of) the Trust prior to (January)

1, 1975. The suit (alleges) vilation of certain provisions (of) the Securities Exchange Act (of) 1934, breach of fiduciary (duty), and common law fraud (and) deceit on the part (of) the Trust and the (other) defendants in connection with (various) disclosures made or not (made) by the Trust. The ultimate resolution of the suit cannot be determined at the present time, although it is management's opinion that the allegations are unfounded.

United Gas Pipe Line Co.--Qualified Auditor's Report (62.80)

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. We did (not) examine the financial statements (of) Sea Robin Pipeline Company, (the) investment in which is (reflected) in the accompanying financial (statements) on the equity method (of) accounting (see Note 9). (These) statements were examined by (other) auditors whose report thereon (has) been furnished to us (and) our opinion expressed herein, (insofar) as it relates to (the) amounts included for Sea (Robin) Pipeline Company, is based (solely) upon the report of (the) other auditors. The opinion (of) the other auditors was (qualified) as being subject to (the) outcome of regulatory matters (concerning) a rate increase application (discussed) in Note 9; However, (in) our opinion, this matter (is) not significant in relation

(to) the consolidated financial statements.

(As) discussed in Note 1, (the) Company is a defendant (in) several lawsuits alleging damages (resulting) from curtailment of natural (gas) deliveries and alleged violations (of) antitrust laws. Company management (believes), and its counsel in (the) lawsuits are of the (opinion), that applicable judicial decisions, (Federal) Power Commission orders, provisions (in) the Company's Federal Power (Commission) tariff and contracts and (industry) practice should furnish the (Company) with adequate defenses to (the) claims for damages, but (the) ultimate outcome of these (lawsuits) cannot presently be determined. (As) described in Note 10, (the) Company has several significant (rate) and other regulatory matters (and) litigation pending, the final (resolution) of which cannot presently (be) determined.

United has pending (before) the FPC in various (proceedings) applications to increase the (rates) for its natural gas (sales) and transportation subject to (FPC) jurisdiction. Pending final determination by the FPC in these proceedings, the rates applied for are collected subject to approval and possible refund.

Viking General Corp.--Qualified Auditor's Report (63.19)

Our examinations were 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.

Comparability of ___(the)___ financial statements has been ___(affected)___ by a change, with ___(which)___ we concur in the ___(estimated)___ costs of completing improvements ___(applicable)___ to real estate tracts ___(sold)___ or approved for sale ___(as)___ described in Note D.

___(At)___ August 31, 1975, the ___(estimated)___ costs of completing improvements ___(which)___ the Company is presently ___(obligated)___ to make with respect ___(to)___ real estate tracts sold ___(or)___ approved for sale are ___($1,494,000)___. These estimates, which include ___(anticipated)___ inflationary factors, are based ___(on)___ independent engineering surveys which ___(were)___ revised downward approximately $2,000,000 ___(during)___ fiscal 1975 as a ___(result)___ of changes in the ___(method)___ of providing drainage for ___(Okeechobee)___ County tracts. As a ___(result)___ of the change in ___(estimate)___, deferred improvement revenue recognized ___(during)___ the year was increased ___(by)___ $560,000.

As described more ___(fully)___ in Note M, there ___(are)___ significant uncertainties arising from ___(pending)___ litigation and other matters ___(regarding)___ certain condominiums and mobile ___(home)___ projects. The Company is ___(unable)___ to determine the effect, ___(if)___ any, of these matters ___(on)___ the financial statements at ___(August)___ 31, 1975.

The Company, ___(in)___ March, 1973, acquired a ___(mobile)___ home park located in ___(Fort)___ Myers, Florida, now known ___(as)___ Tamiami Village. At the ___(time)___ of the purchase, the ___(Company)___ assumed an existing mortgage ___(in)___

favor of HNC Mortgage (and) Realty Investors ("HNC"), in (the) amount of $1,750,000. In (addition), the Company delivered to (Motel) Enterprises, Inc. ("Motel"), the (seller), a purchase money note (and) mortgage in the amount (of) $450,000. Thereafter, the Company (entered) into a mortgage and (loan) agreement with Diversified Mortgage (Investors) ("DMI"), whereby, DMI agreed (to) set aside $2,250,000 for (the) purpose of either paying (the) installments due HNC and (Motel) or satisfying the two (mortgages) in full. DMI failed to perform pursuant to the terms of the agreements.

Harman International Industries--Qualified Auditor's Rep. (66.84)

We have examined the consolidated balance sheet of Harman International Industries, Inc. and subsidiaries as of August 31, 1975 and August 31, 1974, and the related consolidated statements of income, shareholders' equity, and changes in financial position for the years then ended. Our examinations (were) 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.

(As) discussed in Note L (to) the financial statements, the (Internal) Revenue Service is currently (examining) certain tax returns for (years) subsequent to 1966. The (Examination) includes a review of (the) Puerto Rican subsidiary, whose (tax) returns have not been (reviewed) for any year in (which) it had significant

operations. (No) adjustments have been proposed (to) data and management is (of) the opinion that adjustments (resulting), if any, would not (have) a material effect on (the) accompanying financial statements.

In (our) opinion, subject to the (effects), if any, on the (consolidated) financial statements of the (ultimate) resolution of the income (tax) matters discussed in the (preceding) paragraph, the financial statements (referred) to above present fairly (the) consolidated financial position of (Harman) International Industries, Inc. and (subsidiaries) at August 31, 1975 (and) August 31, 1974, and (the) consolidated results of their (operations) and changes in financial (position) for the years then (ended) in conformity with generally (accepted) accounting principles applied on (a) consistent basis, except for (the) change, with which we (concur), in the method for (translating) accounts measured in foreign (currency) as described in Note (A) to the financial statements.

(As) recommended by a recently (issued) Statement by the Financial (Accounting) Standards Board, the Company (adopted) the temporal method to (account) for foreign currency translation. Under this method, the Company's foreign subsidiaries' inventories are translated at the historical rate (formerly translated at the current rate) and long-term debt is translated at the current rate (formerly translated at the historical rate).

Security Mortgage Investors--Qual. Auditor's Report (67.27)

We have examined the statement of financial condition of Security Mortgage Investors (SMI) (a Massachusetts business trust) as of September 30, 1975 and 1974, and the related statement of operations, shareholders' equity and changes in financial condition 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.

(As) outlined in Note 3, (North) American Acceptance Corporation (NAAC), (an) organization from which SMI (purchased) mortgage notes and land (sales) contracts, is operating under (Chapter) X of the Federal (Bankruptcy) Act. As a consequence, (SMI) among other things, is (prevented) from realizing on its (collateral) and from obtaining the (cash) collections on this portion (of) its investments. In response, (SMI) initiated a series of (lawsuits) and as a result (a) number of counterclaims were (asserted). SMI is also a (party) to additional lawsuits as (a) result of its relationships (with) NAAC, as well as (lawsuits) unrelated to NAAC in (which) the underlying collateral of (its) Commercial portfolio is involved (in) foreclosure or other legal (proceedings). As described in Note (9), the continuing qualification of (SMI) as a real estate (investment) trust is dependent upon,

(among) other things, the outcome (of) the NAAC litigation referred (to) above. The ultimate outcome (of) the various lawsuits and (the) NAAC related reorganization proceedings (cannot) be determined at this (time), and no provision for (any) liability or impairment of (the) value of any asset (of) SMI that may result (therefrom) has been made in (the) financial statements.

As referred (to) in Notes 2 and (4), the uncertainties with respect (to) future economic conditions are (such) that the amounts and (timing) of SMI's ultimate realization of its Commercial portfolio investments and related carrying costs cannot be determined at this time.

In our opinion, subject to the effect of the matters discussed in the preceding two paragraphs, the financial statements referred to above present fairly the financial condition of Security Mortgage Investors as of September 30, 1975 and 1974, and the results of its operations and the changes in its financial condition for the years then ended, in conformity,with generally accepted accounting principles consistently applied during the periods.

Banner Indsutries--Qualified Auditor's Report (67.53)

We have examined the consolidated balance sheets of Banner Inudstries, Inc. (a Delaware corporation) and Subsidiaries as of June 30, 1975 and 1974, and the related consolidated statements of income, stockholders' equity, 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.

(As) discussed further in Note (8) of Notes to Consolidated (Financial) Statements, the Internal Revenue (Service) is contesting the use (of) the Company's net operating (loss) carry-forwards and deductions relating (to) certain subsidiaries which were (liquidated) after acquisition by the (Company). The Company has filed (a) protest with the Internal (Revenue) Service; however, the outcome (of) this matter is uncertain (at) this time and the (use) of all or any (portion) of the aforementioned operating (losses) and deductions may be (ultimately) denied to the Company (and) its subsidiaries.

In February, (1974), the Company filed a (protest) with the District Director (of) the Internal Revenue Service (in) response to a January, (1974), Revenue Agent's report proposing (additional) tax assessments for the (years) 1967 through 1971, of (approximately) $2,100,000. The proposed adjustments (result) principally from (1) denial (of) the use of the (Company's) net operating loss carry-forwards (and) (2) disallowance of deductions (related) to certain subsidiaries which (were) liquidated after acquisition by (the) Company.

The Company believes (that) its treatment of the (items) in question was proper (and) in accordance with the (Internal) Revenue Code. The Company (intends) to defend its position (at) all appropriate levels of (appeal), but cannot predict with (certainty) the outcome of this (matter). The use of all (or) any part of the (aforementioned) operating losses and deductions may be ultimately denied to the Company and its subsidiaries.

In the event any portion of the two principal changes proposed by the Internal Revenue Service are sustained after the Company has exercised its right of appropriate appeal, these taxes will be reflected in the consolidated financial statements as an adjustment to retained earnings and will be retroactively reflected in the appropriate consolidated statements of income for the years 1968 through 1971.

Kaneb Services,Inc.--Qualified Auditor's Report (68.38)

We have examined the financial statements and related schedules of Kaneb Services, Inc. and subsidiaries and Kaneb Services, Inc. as listed in the accompanying index. 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 aforementioned (financial) statements present fairly (1) (the) consolidated

financial position of (Kaneb) Services, Inc. and subsidiaries (at) December 31, 1975 and (1974), the results of their (operations) and changes in their (financial) position for the five (years) ended December 31, 1975 (and) (2) the financial position (of) Kaneb Services, Inc. at (December) 31, 1975 and 1974 (and) the results of its (operations) and changes in its (financial) position for the two (years) ended December 31, 1975, (all) in conformity with generally (accepted) accounting principles consistently applied (during) the period, except for (the) changes, with which we (concur), in the method of (accounting) for investments in marketable (equity) securities and the method (of) determining income before extraordinary (item) as discussed in note (4) to the financial statements, (Also), in our opinion, the (supporting) schedules present fairly the (information) set forth therein.

In (December) 1975, the Financial Accounting (Standards) Board issued Statement of (Financial) Accounting Standards No. 12, "(Accounting) for Certain Marketable Securities." (That) statement requires the Company (and) its subsidiaries to change (their) method of accounting for (long-term) investments in marketable equity (securities) from the cost basis (to) the basis of the (lower) of aggregate cost or (market) value at the balance (sheet) date. The excess of (cost) over market value of (the) Company's investment in Kansas-Nebraska stock is reflected as a valuation allowance in the accompanying December 31, 1975

balance sheets reducing both the investment and shareholders' equity. This amount represents the unrealized loss in market value of the investment at that date.

Bangor Punta Corporation--Qualified Auditor's Report (71.18)

We have examined the consolidated balance sheets of Bangor Punta Corporation and consolidated subsidiaries as of September 30, 1975 and 1974 and the related statements of income (loss), shareholders' equity 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. (The) consolidated financial statements of (Piper) Aircraft Corporation as of (September) 30, 1975 and 1974 (are) presented separately herein together (with) the report thereon of (other) certified public accountants, whose (opinion) in such report is (subject) to the resolution of (the) uncertainties referred to in (the) last paragraph of note (10) to the financial statements (of) Piper Aircraft Corporation.

On (April) 11, 1975, the United (States) Court of Appeals found (Bangor) Punta Corporation and other (defendants) jointly and severally liable (to) Chris-Craft Industries, Inc. for (damages), including prejudgement interest, of (approximately) $36,000,000. As more fully (described) in note 2 and (in) the section

entitled "Litigation (Relating) to Investment in Piper (Aircraft) Corporation" which appears elsewhere (in) this annual report, the (ultimate) effects of this decision (on) Bangor Punta's financial condition (are) presently not determinable; however, (if) Bangor Punta were required (to) pay all or a (substantial) portion of the judgement, (there) would be a substantial (adverse) effect on its financial (condition).

Also, until the uncertainties (described) in note 2 and (in) "Litigation Relating to Investment (in) Piper Aircraft Corporation" are (finally) resolved, Bangor Punta will (not) be in a position (to) determine the effect that (such) matters will have on (the) amount at which its (investment) in Piper Aircraft Corporation (is) carried in its balance (sheet).

When these matters are finally resolved, Bangor Punta expects that it will be in a position to reevaluate the amount at which its investment in Piper is carried in its balance sheet.

APPENDIX K

The Four Narrative Disclosures Contained in Financial Reports Originally Found to Be Incomprehensible to Sophisticated Users and Rewritten by an Independent Expert

Bangor Punta Corporation--Standard Format Footnote (57.90)

The Company's Board of Directors decided, in view of poor financial conditions, to charge to income a total of $30,303,000 of cost in excess of net assets (i.e., goodwill) of certain subsidiaries in fiscal 1974. Of the (amount), $10,556,000 applied to write-offs (of) units disposed of, and ($19,747,000) to reduced goodwill values (in) our domestic recreational and (leisure-time) product companies, which have (been) hard hit by the (current) recession and the energy (crisis). (Most of the goodwill (on) Bangor Punta's balance sheet (stems) from the Company's acquisition (program). When Bangor acquired an (acquisition) for a price higher (than) the acquisition's net asset (value), the difference was placed (on) the balance sheet as (goodwill) value.)

The amounts in (the) accompanying balance sheet relate (mainly) to foreign subsidiaries that (are) considered to have continuing (value) over an indefinite period. ("(value)", as meant here, applies (to) our estimation of continued (viability) rather than net realizable (value) upon the sale of (any) unit, if that should (occur).) Costs applicable to acquisitions (made) before October 31, 1970, (are) not being amortized, but (costs) incurred after that date (are) being amortized over a (40) -year period.

The tax (effects) of timing differences between (the) preparation of the financial (statements) and actual payment of (taxes) are treated as deferred (income) taxes.

Investment tax credits ___(are)___ treated as a reduction ___(of)___ income taxes in the ___(year)___ earned.

The Company expects ___(to)___ continue filing consolidated federal ___(income)___ tax returns. This practice ___(provides)___ the benefit of excluding ___(from)___ taxation dividends from certain ___(subsidiaries)___ to the parent company. ___(Undistributed)___ earnings of foreign subsidiaries ___(from)___ dates of acquisition through ___(September)___ 30, 1975, amount to ___(approximately)___ $5,000,000.. Because these earnings ___(are)___ reinvested overseas, they are ___(not)___ taxable in the United ___(States)___.

The Company maintains several ___(retirement)___ plans for eligible employees. ___(These)___ pension costs are funded ___(as)___ accrued. Where appropriate, we ___(have)___ made sufficient provision to ___(cover)___ normal cost, including past ___(service)___ cost. Charges to continuing operations for deferred profit sharing, union retirement and insured pension plans amounted to $2,177,000 in the year ended September 30, 1975, and $1,867,000 in the year ended September 30, 1974.

The Anaconda Company--Nonstandard Format Footnote (64.71)

The company is currently involved in three major legal proceedings. Two privately ___(owned)___ companies filed civil actions ___(in)___ 1970 against Anaconda and ___(two)___ of its subsidiaries charging ___(violation)___ of the antitrust laws (___(other)___ companies also were named ___(in)___ the actions). These actions ___(are)___ still in pre-trial discovery, ___(a)___ legal term meaning that ___(the)___ plaintiffs and defendants are ___(exchanging)___ information, documents, etc., to ___(bolster)___

their cases, and await (trial) in the U. S. District (Court) for the Southern District (of) New York. The plaintiffs (seek) treble damages of an (unspecified) dollar amount, divestiture of (our) copper fabricating facilities, and (other) punishment. Anaconda has denied (all) the charges and intends (to) defend itself vigorously. The (company's) attorneys believe, based on (the) information assembled so far, (that) the actions should not (have) a material effect on (our) financial position in the (unlikely) event that we lose (in) court.

Another legal matter (still) pending is a grand (jury) investigation, initiated by the (U.S.) Department of Justice in (1972), of the production and (pricing) of copper by the (major) American producers. As the (case) now stands, Anaconda has (supplied) documents subpoenaed by the (grand) jury, and several present (and) former employees of the (company) are expected to testify (before) the jury.

The remaining (pending) action is a suit (brought) in 1969 by an (agricultural) corporation. The suit is (against) Anaconda and several other (mining) companies operating in the (Santa) Cruz River Basin south (of) Tuscon, Arizona. The plaintiff (seeks) to prohibit the mining (companies) from pumping and transporting (water) from underground wells in (the) basin.. The plaintiff claims (damages) of $70 million. The case now awaits a hearing before the Arizona Supreme Court on the plaintiff's appeal from a

lower court dicision in favor of Anaconda.

McDonnell Douglas Corporation--Mgts' Analysis of Ops (59.70)

The company's sales of commercial aircraft and related spare parts have followed a somewhat zig-zag pattern for the past four years. Considering the ___(nature)___ of our industry, however, ___(the)___ results may be considered ___(relatively)___ stable. DC-10 sales declined ___(by)___ some $166.5 million in ___(1974)___, then remained at about ___(the)___ same level in 1975. ___(DC-9)___ sales increased by $182.7 ___(million)___ in 1974, but decreased ___(by)___ $42.4 million in 1975. ___(Sales)___ of MDC's military aircraft ___(have)___ remained on a steadier ___(upward)___ course. They increased 18.7% ___(in)___ 1975 and have shown ___(an)___ average annual growth rate ___(of)___ 13.7% since 1971. There ___(were)___ two chief contributors to ___(the)___ higher sales; the F-15 ___(fighter)___ program, which moved from ___(development)___ to initial production and ___(the)___ older combat aircraft (F-4 ___(and)___ A-4) and C-9 transport ___(programs)___ which held up well ___(on)___ the average throughout the ___(period)___. Only minimal sales have ___(been)___ generated from the company's ___(programs)___ to produce the F-18 ___(combat)___ fighter, the Harrier V/STOL (___(vertical)___/short take-off and landing) ___(transport)___, and the YC-15 STOL (___(short)___ take-off and landing, transport. ___(On)___ a brighter note, however, ___(an)___ upward trend in sales ___(of)___ Dragon and Harpoon tactical ___(missiles)___, beginning in 1975, has ___(offset)___ further cutbacks in manned ___(space)___ vehicle programs.

The decline (in) our gross profit margin (can) be attributed entirely to (a) lower than projected rate (of) production of the DC-10. (The) low volume resulted in (higher) unit costs on DC-10's (delivered) during the last quarter (of) 1974 and all of (1975). Costs of products and (services) increased 9.7% in 1975 (compared) to only 3.8% in (1974). Increases in sales volumes (have) not been adequate to (keep) up with the rising (costs). The effect has been (a) decline in gross profit (margin) to 16.4% in 1975 (from) 19.3% in 1974 and (20.4%) in 1973.

We reduced (our) spending for research and (development) by 5.2%, or $7.3 (million), in 1975; and by (2.4%), or $3.4 million, in (1974). These decreases reflect less (emphasis) on the continued development (of) commercial products, such as (the) DC-9 and DC-10 airplanes, (and) the improved Delta Launch (vehicle). Development efforts for military (products) is provided for in (our) contracts. Thus, such expenditures are not included in the company's R & D spending.

Allegheny Power Systems, Inc.--Qualified Auditor's Report (67.90)

Our firm has audited the following documents and related material concerning the performance of Allegheny Power Systems, Inc., and its subsidiaries during the calendar years 1975 and 1974: 1. Consolidated balance sheet 2. Statement of capitalization 3. Consolidated statements of income and retained earnings 4. Changes in financial position.

Our examination, _____(which)_____ followed generally accepted auditing _____(standards)_____, included tests of the _____(accounting)_____ records and other auditing _____(procedures)_____ that we considered necessary _____(for)_____ a thorough audit. We _____(have)_____ found it necessary to _____(qualify)_____ our opinion in the _____(paragraph)_____ below. This is because _____(of)_____ the possible negative effect _____(on)_____ the Company's financial position _____(if)_____ it should be forced _____(to)_____ make rebate of more _____(than)_____ $30,000,000 to its customers, _____(as)_____ described in Note B _____(to)_____ the financial statements. The _____(reason)_____ for our qualified opinion _____(is)_____ the fact that the _____(Company)_____ includes in its electric _____(operating)_____ revenues $28,148,000 in 1975 _____(and)_____ $2,113,000 in 1974 from _____(rate)_____ increases that are subject _____(to)_____ dispute and may have _____(to)_____ be refunded.

The actions _____(involved)_____ in the above matter _____(are)_____ as follows:

On August _____(7)_____, 1975, the Potomac Edison _____(Company)_____ appealed to the courts _____(a)_____ decision by the Maryland _____(Public)_____ Service Commission refusing to _____(change)_____ its order of March _____(27)_____, 1975, as shown in _____(the)_____ rate table. On August _____(27)_____, 1975, the Commission authorized _____(Potomac)_____ Edison to add a _____(surcharge)_____ to customer bills for _____(one)_____ year, beginning in September _____(1975)_____, to recoup about $2 _____(million)_____ in unrecovered fuel costs. _____(This)_____ resulted from a change _____(in)_____ the application of the _____(Company's)_____ fuel cost adjustment clause _____(in)_____ August 1974.

Potomac Edison ___(is)___ preparing to refile an ___(application)___ with the Federal Power ___(Commission)___ for an increase in ___(wholesale)___ rates. The FPC refused ___(to)___ accept the company's original ___(application)___ for an increase of ___(about)___ $1.9 million annually because ___(of)___ the alleged staleness of ___(the)___ test year.

Rates under ___(which)___ the System sells approximately ___(79%)___ of its power have ___(been)___ designed to recover fuel ___(cost)___ increases and to pass ___(along)___ fuel cost decreases to ___(customers)___. In Ohio and Pennsylvania, ___(there)___ is a delay of ___(about)___ two months before fuel ___(cost)___ charges are reflected in ___(customer)___ bills.

In West Virginia, ___(electric)___ utilities can now recover ___(fuel)___ cost increases from retail ___(customers)___ only after specific approval ___(by)___ the Public Service Commission. ___(This)___ situation results from the ___(termination)___, as of March 31, ___(1975)___, of fuel cost adjustment ___(cluases)___ in retail rates in ___(that)___ state.

Subject to the ___(adjustments)___ to income that may ___(be)___ necessary as the result ___(of)___ the rate matters discussed ___(in)___ Note B, we believe ___(that)___ the consolidated financial statements ___(in)___ this report present fairly ___(the)___ financial position (including changes) ___(and)___ results of operations of ___(Allegheny)___ Power Systems, Inc., and ___(its)___ subsidiaries at year end ___(1975)___ and 1974. The presentation is in conformity with generally accepted accounting principles consistently applied.

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