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Auditing Symposium VI: Proceedings of the 1982 Touche Ross/ University of Kansas Symposium on Auditing Problems

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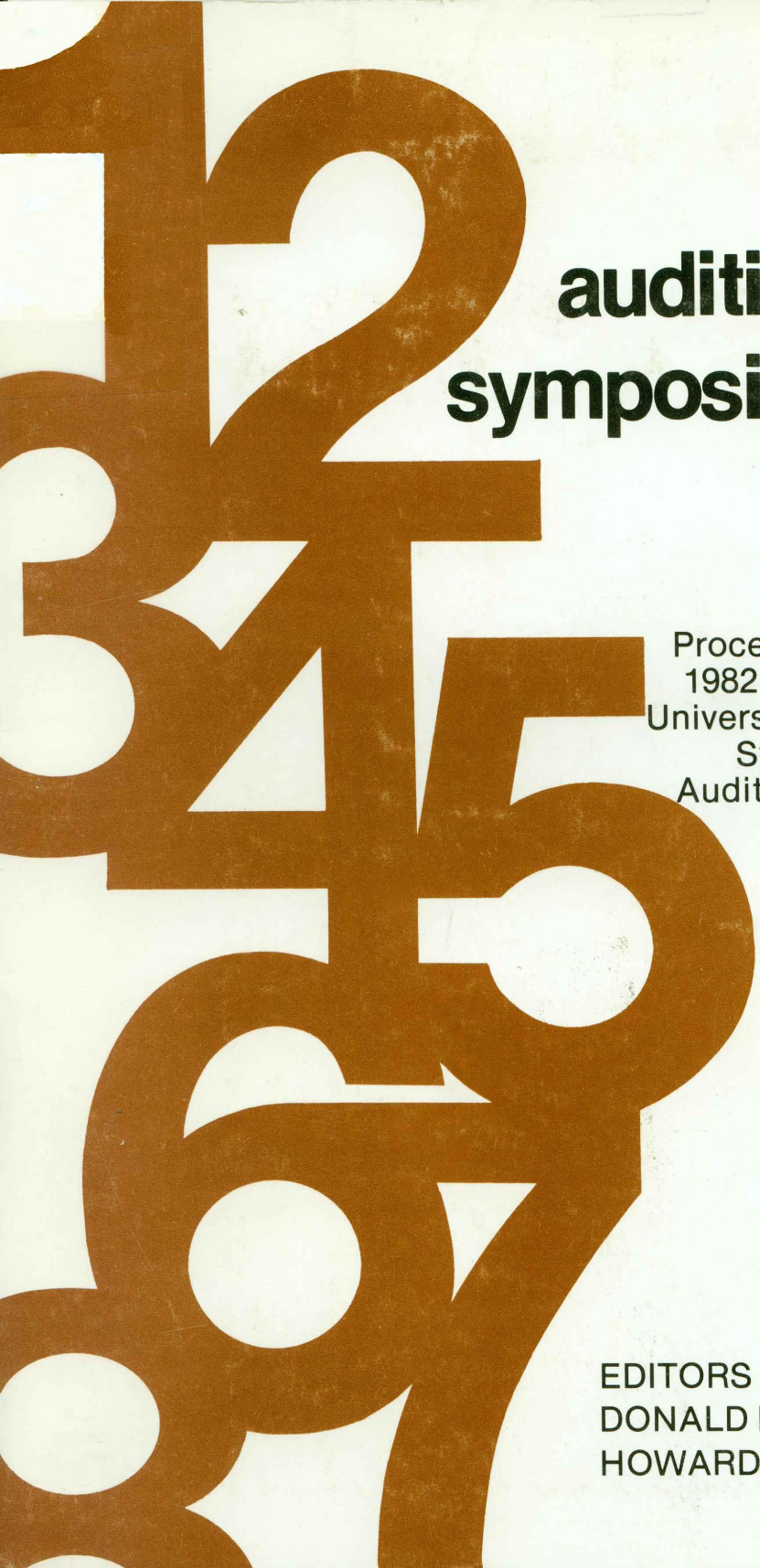

auditing symposium vi

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Preface

Once again it is a pleasure to acknowledge the financial support of Touche Ross Foundation that has made it possible to continue this series of biennial auditing symposia at the University of Kansas. The 1982 symposium was the sixth of the series, with about fifty invited practitioners and educators coming together for two days to consider the eight papers that were presented.

As co-chairmen of the symposium and editors of these Proceedings, we assume full responsibility for the selection of topics for both the invited papers and those selected from the papers submitted in response to the call for papers for the symposium.

With the exception of the paper on the evolution of audit reporting, which continues the historical coverage of auditing that has opened each of the symposia, the papers reflect no unifying theme or purpose, other than that the topics addressed or the research reported hold promise of being of interest to the invited participants from both practice and academe. All papers, except for the traditional evening address on a more general topic, were distributed in advance, making it possible for the preparer to limit comments to summary remarks or observations about the paper so that more than an hour was available for the prepared response of a selected discussant and the ensuing open discussion. Although these discussions invariably have been one of the highlights of the symposia, unfortunately it has not been feasible to attempt to capture and report these discussions for the benefit of the wider readership of the proceedings. For those who might like an opportunity to participate in the discussions at a future symposium, however, we would be pleased to receive an indication of your interest.

The proceedings of each of the six symposia are in print and may be purchased from:

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The title and prepaid price of each of the volumes is as follows:

1972 AUDITING LOOKS AHEAD	$5.00
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In conclusion, we should like to acknowledge the encouragement, advice, and personal support of the symposia so generously provided by Jerry Jackson, partner in charge of the Kansas City office of Touche Ross & Co.

Donald R. Nichols
Howard F. Stettler

September, 1982
University of Kansas
Lawrence

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The Evolution of Audit Reporting

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Words are, of course, the most powerful drug used by mankind.
—Rudyard Kipling

The words the auditor dispenses are a powerful drug. They influence resource allocation in our society. Thus, the auditor's report represents a drug that should be dispensed and used with great care. Its purpose and limitations should be understood by users and they should be made aware of undesirable side effects and the dangers of misuse.

Like all drugs the auditor's report should be subjected to continuous scrutiny to evaluate its effectiveness over time. Perhaps steady use creates a tolerance that reduces the report's potency. Perhaps it has uses beyond its primary purpose.

Indeed the auditor's report has been evaluated and revised. Since the first authoritative guidance for audit report wording was given in 1917, the report has been revised seven times. This represents, on the average, a revision every 10.6 years. Averages are deceiving, however. The last revision occurred 33 years ago in 1949. What this statistic tells us is the report revision occurred much more frequently in the early days of the profession and much less frequently as the profession matured. A crucial question is why.

The auditor's report also has been used for purposes other than to assist in the allocation of resources. The report has been used to stimulate change in professional practice and to influence the auditor's legal liability. A crucial question is how, if at all, these ancillary uses have affected the primary use.

This paper traces the evolution of audit reporting in the United States and identifies the major forms of the auditor's standard report and the pivotal events and circumstances leading to the development of those reports. It also explains the evolutionary process that has shaped present reporting practice, created reporting controversies, and that may influence future reporting developments. The paper is organized around what we consider to be the landmarks in audit report evolution, with discussion of what we consider to be the primary environmental influences leading to the landmarks.

Landmark I—1917 Federal Reserve Bulletin

Until 1917 there were no authoritative accounting or auditing standards established in the United States. In addition, no generally recognized standards

had evolved from professional organizations, statutory requirements, or litigation. The lack of defined responsibilities applicable to the American auditor resulted in a diversity of audit reporting practices.

Since the profession of accounting was introduced to the United States by British accountants, the report form used in England formed a basis for American auditors' reports. Although there was no predominant report form, an example of a typical "certificate" of the early days is one given by Price Waterhouse & Co. on St. Louis Breweries Ltd.

> We have examined the above accounts with the books and vouchers of the company, and find the same to be correct. We approve and certify that the above balance sheet correctly sets forth the position of the company.

The flexibility in reporting permitted by the lack of defined standards was accentuated by the service-to-the-client philosophy that pervaded early accounting practice. In the absence of statutory requirements for an audit, early practitioners of public accounting had to justify engagements on the basis of economic benefits to the client. Since clients did not have to have audits, an auditor was not in a position to dictate the extent of work that a client required. The scope of the examination was flexible, but the auditor would, accordingly, restrict the report wording to conclusions justified by the scope of the work performed.

Inadequate financial reports and unsatisfactory audits were not uncommon. Without authoritative guidelines, without control over the admission standards of its members, and without disciplinary authority there was little control over the quality of accounting or auditing. The financial panic of 1907 discredited big business in the eyes of the public and created a political environment favorable to government regulation.

The legislation that created the Federal Reserve Board (FRB) in 1913 and the Federal Trade Commission (FTC) in 1914 was of overriding importance to the profession. The formation of these regulatory agencies started a movement that fostered standardization of auditors' reports.

Both the FTC and the FRB shared a dissatisfaction with financial statements audited by public accountants. The chairman of the FTC suggested three steps to improve audited financial statements:

- The American Institute of Accountants (AIA) should formulate uniform guidelines expressing its judgment as to how alternative accounting principles should be handled.
- The FTC should develop a register of accountants acceptable to the FTC and the FRB.
- The AIA should exercise greater disciplinary control over public accountants.

To avoid political control of the profession, the AIA, through its committee on federal legislation, conferred with the FTC and the FRB. The committee successfully argued that it could provide guidelines for the conduct of independent audits that would overcome the FTC's concerns. The committee also persuaded the agencies that it could exercise control over its admission

requirements and the ethical conduct of its members, thus precluding the need for a federal register of accountants. Finally, the committee suggested that the FRB might recommend and give preference to commercial paper accompanied by balance sheets "certified" by professional accountants. As a result of these discussions came the first authoritative guide for the conduct of independent audits, the Federal Reserve Bulletin of 1917, "Uniform Accounting."[1]

The committee seems to have taken advantage of the confusion between uniform accounting and standard audit requirements. The Federal Reserve Bulletin mixed the two concepts. The preface said "The following tentative proposal for a uniform system of accounting to be adopted by manufacturing and merchandising concerns . . . . is now reprinted for more general distribution."[2] However, the text of the bulletin consisted mainly of recommended audit procedures. Literally, the publication had nothing to do with uniform accounting systems.

The bulletin concluded with a suggested form of auditor's report, marking the first way station in the evolution of auditors' standard reports.

> I have audited the accounts of Blank and Co. for the period from . . . to . . . and I certify that the above balance sheet and statement of profit and loss have been made in accordance with the plan suggested and advised by the Federal Reserve Board and in my opinion set forth the financial condition of the firm at . . . and the results of its operations for the period.[3]

The reference to "accounts" in the report and the term "certify" likely stemmed from the influence of the English report form. The term "opinion" was also used, however, suggesting that certify may not have been intended to connote as factual a representation as the literal meaning of the word suggests. The reference to the FRB plan communicates adherence to a set of specific guidelines and thus adds credibility to the statements.

This report was by no means in general use. Report wording varied and included as alternatives to "in my opinion" such phrases as "correctly set forth," "exhibit a true and correct view," "accurately record conditions," and "represent the true financial position."

Although the recommended report was not a "standard" report in the sense that it was required by an authoritative pronouncement, it was the first report to emerge from the deliberations of the AIA and be recommended in a widely circulated publication. Thus it marked the beginning of a series of recommended reports that would ultimately lead to a "standard" report.

Although it must be conceded that the initial effort to recommend a report form was partly in response to outside pressure, the Federal Reserve Bulletin of 1917 marked the beginning of the profession's exercise of self-discipline over the content of the auditor's report. The profession's initiative in response to outside pressure resulted in the first landmark in the evolution of the auditor's standard report.

Landmark II—1929 Revision of the Federal Reserve Bulletin

The march toward a standard report continued with the publication of a revised edition of the 1917 Federal Reserve Bulletin in 1929. The revision was

initiated by a special committee of the AIA in 1928, prior to the stock market crash, in recognition of the commercial growth and prosperity characterized by industrial expansion, issuance of new securities, purchases, mergers and the accompanying growth in the variety and complexity of financial reporting practices.

The 1929 revision, titled "Verification of Financial Statements,"[4] expressed concern that the 1917 bulletin might have failed to make clear that an audit was not a complete examination of the details underlying financial statements. Dispelling this notion was important to the profession. The increasing size of businesses and the growing volume of their transactions virtually demanded testing in an audit. The new bulletin stressed that the auditor used tests instead of detailed verification when reliable controls existed even though the link between control strengths and audit procedures was not well established in practice. The revision suggested a report form, still referred to as a certificate, that read as follows:

> I have examined the accounts of . . . company for the period from . . . to
>
> I certify that the accompanying balance sheet and statement of profit and loss, in my opinion, set forth the financial condition of the company at . . . and the results of operations for the period.[5]

Although the 1929 bulletin emphasized testing in an audit, the suggested report did not refer to testing or the use of auditor judgment. The major difference between the 1929 and 1917 reports was the deletion of the references to the "plan suggested and advised by the Federal Reserve Board" and the "correctness" of the financial statements. In addition, the suggested report was divided into two paragraphs that parallel the scope and opinion paragraphs of the current standard report.

Landmark III—The Ultramares Case

The Ultramares decision erased what accountants had previously considered to be a clean line between negligence and fraud.[6] In substance the decision held that accountants could be liable to third parties for gross negligence from which an inference of fraud could be drawn.

The Ultramares case caused the accounting profession to rethink its reporting practices. An editorial in the July, 1931 *Journal of Accountancy* offered recommendations for auditors' reports based on the Ultramares decision.

> Every accountant's report will be addressed to the client only . . . the accountant will divide his report into two sections, one dealing with fact (that is, scope of examination) and one with opinion.
>
> . . . The accountant perhaps should abandon certificates and merely make reports . . . The word "certify" which has been used for many years is quite inappropriate and should be abandoned . . . It is absurd to speak of certifying an opinion.[7]

Faced with the potential expansion of liability to third parties, accountants began to follow the suggestions in the editorial. The word "certify" began to

disappear from reports to make clear that the report was an opinion and not a guarantee. The typical report read:

> We have examined the accounts of . . . for the year ended . . . In our opinion the accompanying balance sheet and statement of profit and loss set forth the financial condition of the company at . . . and the results of its operations for the year then ended that date.

The suggested report revisions illustrate the use of the report as an instrument of change. Removal of the term "certify" and emphasis on the auditor's conclusion as an opinion preceded widespread acceptance of those practices. Thus, the report itself was used to introduce specific changes before those changes were readily accepted by practitioners, let alone the public.

Landmark IV—Correspondence with the Stock Exchange

The financial reporting abuses that led to the stock market crash in 1929 had not gone unrecognized by thoughtful members of the accounting profession. As early as 1927, the Institute attempted to establish cooperative relations with the New York Stock Exchange (NYSE) to improve financial reporting practices. However, it took the catastrophic market crash in the fall of 1929 to excite the exchange's interest in financial reporting reforms and cooperation with accountants.

Late in 1930 a special Institute committee on cooperation with stock exchanges was formed. The committee undertook two major tasks: (1) to educate the public in regard to the significance of financial statements, their value and unavoidable limitations, and (2) to make the financial statements published by corporations more informative and authoritative.

One of the committee's major recommendations aimed at achieving these objectives was to require listed companies to adhere to broad, generally accepted accounting principles within which they could select detailed methods of accounting best suited to their requirements. Companies would be required to disclose the methods employed to enable an investor to judge the degree of conformity to standard usage. The companies also would be required to consistently apply the adopted methods.

The committee also sought to define the auditor's responsibility for financial statements prepared under these new accounting guidelines. It recommended that the auditor's report specifically state whether the financial statements were prepared on the basis of the accounting methods adopted and disclosed by the company.

The committee's recommendations were approved by the NYSE with one critical exception. It was not considered necessary or feasible for companies to disclose the detailed accounting methods used so that users could judge the conformity of the company's accounting methods with the broad, generally accepted accounting principles the committee established. Instead, this responsibility was shifted from the user to the auditor by requiring the auditor's report to state whether the company was following these broad principles.

In January, 1934, the Institute published a pamphlet titled "Audits of Corporate Accounts" that contained the correspondence between the Institute's committee and the Committee on Stock List of the Exchange. This

pamphlet resulted in an evolutionary leap in audit report structure that distilled and introduced major reporting responsibilities that would not be formally recognized in auditing standards for another 15 years.

These responsibilities are highlighted in the recommended report form.

> We have made an examination of the balance sheet of the XYZ Company as at December 31, 1933, and of the statement of income and surplus for the year 1933. In connection therewith, we examined or tested accounting records of the Company and other supporting evidence and obtained information and explanations from officers and employees of the Company; we also made a general review of the accounting methods and of the operating and income accounts for the year, but we did not make a detailed audit of the transactions.
>
> In our opinion, based upon such examination, the accompanying balance sheet and related statements of income and surplus fairly present, in accordance with accepted principles of accounting consistently maintained by the company during the year under review, its position at December 31, 1933, and the results of its operations for the year.[8]

This report was in marked contrast to its predecessors. For the first time, the report referred to the financial statements as the object of examination rather than books or accounts. The concept of testing was explicitly mentioned in the report and additional detail concerning the scope of the audit was included.

The opinion paragraph continued to emphasize that an opinion rather than a guarantee was being given. This paragraph also introduced the concept of accepted accounting principles as a standard against which fair presentation could be measured. In fact, the report would seem to resolve the rather recent debate over the meaning of the phrase "present fairly in conformity with generally accepted accounting principles." In the above report it is clear that the phrase "in accordance with accepted principles of accounting" modifies the term "fairly present," indicating that the committee was unwilling to use the phrase "fairly present" alone. This lends historical legitimacy to the contention that the phrase "present fairly in conformity with generally accepted accounting principles" in the current standard report defines a single standard for judging accounting presentations.

The opinion paragraph also introduced a reference to consistency. Since the adopted accounting methods were to be consistently applied under the NYSE requirements, the auditor was given responsibility for reporting on adherence to this requirement.

Another significant accomplishment of the Institute's committee was the recommendation that the new form of report be adopted as a "standard" report. The committee recognized a need for uniformity in the language of the auditor's report. This uniformity was intended to accomplish two objectives: (1) give a definite form to audit report language among audit firms, making the reports comparable and reducing the possibility for misunderstanding arising from vagaries in report wording, and (2) make qualifications in audit reports more easily recognizable.

The publication of "Audits of Corporate Accounts" exemplified the profession's desire and ability to exercise initiative in improving financial

reporting and auditing. Although the pamphlet's requirements could only be enforced by the NYSE against listed companies and their auditors, it became apparent that the financial statements and auditors' reports of unlisted companies might be considered deficient unless the requirements had been met. Thus, the audit report continued to be used as a force for change in professional practice. The standard wording tended to be used in all audit engagements

Landmark V—The Securities Acts and McKesson & Robbins

The efforts of the AIA and the NYSE during the 1932-1934 correspondence occurred in an environment of severe public criticism of the financial community and corporate management. In response to this concern the Congress passed a series of securities acts and created the Securities and Exchange Commission (SEC) to administer them. The acts placed a new and substantial responsibility on the accounting profession from both the standpoint of increased legal liability and from the need to improve professional standards for both accounting and auditing.

Although the SEC was vested with the authority to prescribe accounting principles and the form and content of the auditor's report, it decided, partly due to the persuasiveness of Institute representatives, to leave the initiative to the profession. The SEC declined to prescribe the exact form of the auditor's report: "Instead we ask for a certificate that shall be illuminating both as to the scope of the audit and the quality of the accounting principles employed by the registrant."[9]

As part of its efforts to take the initiative in developing accounting and auditing standards, the Institute revised the Federal Reserve Bulletin in 1936. Although the bulletin expanded the discussion of internal control and its relation to audit tests, no revision in the suggested form of report was made.

Practicing accountants had just begun to implement the guidance in the revised bulletin when the McKesson & Robbins fraud surfaced. The SEC held hearings to (1) determine the detail and scope of the audit conducted, (2) the extent to which the prevailing standards of audit procedure had been followed, and (3) the adequacy of accepted auditing procedures. One outcome of this inquiry was an AIA requirement for confirmation of receivables and observation of physical inventory taking.

The SEC's report was not released until 1940 and by that time the AIA had adopted modifications of several positions taken in the 1936 bulletin. The modifications were published in a pamphlet titled "Extensions of Auditing Procedure" which was reissued as the first of a series of Statements on Auditing Procedure (SAP No. 1) to be issued by the Institute.

The new statement, recognizing the results of the SEC's investigation, modified the auditor's standard report as follows:

> We have examined the balance sheet of the ABC Company as of December 31, 1939, and the statements of income and surplus for the fiscal year then ended; have reviewed the system of internal control and the accounting procedures of the company, and, without making a detailed audit of the transactions, have examined or tested accounting

records of the company and other supporting evidence by methods and to the extent we deemed appropriate.

In our opinion, the accompanying balance sheet and related statements of income and surplus present fairly the position of ABC Company at December 31, 1939, and the results of its operations for the fiscal year, in conformity with generally accepted accounting principles applied on a basis consistent with that of the preceding year.[10]

The substantive changes in the new report were in the scope paragraph. However, what was intended as an editorial improvement in the opinion paragraph would later prove to be a major subject of debate within the profession.

The scope paragraph revision emphasized review of internal control as an essential element in the audit and implicitly justified the auditor's reliance on the system in lieu of detailed testing. This reference to internal control preceded any widespread use of control strengths to reduce the extent of testing. The new report wording acted as a catalyst to modify practice just as much as it informed readers about an audit characteristic. In addition, the concept of professional judgment was made explicit in the scope paragraph by reference to the gathering of evidence by the auditing "methods" and extent of testing deemed appropriate.

The opinion paragraph revision transposed the words "fairly" and "present" and separated "in conformity with GAAP" from "present fairly." The reason for repositioning the reference to GAAP was to clarify the meaning of the consistency reference. Some accountants apparently believed that "consistently maintained during the year," in the previous report, did not relate the principles for the current year to those for the prior year. The changed wording removed that confusion, but clouded the relationship between fair presentation and GAAP.

The issuance of SAP 1 also introduced a new report category: the withheld opinion. Prior to SAP 1 it was a common reporting practice to specify the accounting deficiencies, omission of audit procedures or other similar limitations in the auditor's report and then introduce the final expression of opinion with wording such as "subject to the foregoing." The report thus left to third parties the decision as to what extent they could rely on the financial statements as a whole.

With the issuance of SAP 1, accountants were prohibited from rendering an opinion on financial statements, taken as a whole, when the deficiencies in the statements or the limitations on the scope of their engagement would not warrant such an opinion. SAP 1 purged from practice the type of report in which the auditor expressed an opinion on the financial statements after stating all the exceptions and limitations under which the opinion was expressed by requiring the following:

> The independent certified public accountant should not express the opinion that financial statements present fairly the position of the company and the results of its operations, in conformity with generally accepted accounting principles, when his exceptions are such as to negative the opinion, or when his examination has been less in scope than he considered necessary.[11]

SAP 1 did not, however, preclude the type of report in which the CPA indicated the extent of work performed and the findings as a result of that work. In fact, the statement explicitly recognized this type of report by stating that under the circumstances of a limited scope engagement:

> . . . the independent certified public accountant should limit his report to a statement of his findings and, if appropriate, his reasons for omitting an expression of opinion.[12]

The phrase "if appropriate" permitted the auditor to issue a report that neither expressed an opinion nor disclaimed one.

Landmark VI—The Introduction of GAAS

The McKesson case had focused the attention of the SEC on auditing more sharply than before. In a 1939 speech before the Institute's annual meeting, William Werntz, the chief accountant, noted:

> In contrast to the time we have spent on accounting principles, there have been few cases before us involving the question of whether a reasonable audit was made.

He then went on to discuss the underlying concepts of independent auditing, including the qualifications of the auditor, such as independence, the relative responsibility of management and the auditor for financial statements, and reliance on internal control.

The Committee on Auditing Procedure consulted with the SEC and agreed that a distinction should be made between auditing standards and the procedures necessary to meet those standards. It was believed that SAPs contained both standards and procedures but that the distinction had not been clearly drawn.

The committee immediately began work on a statement of formal auditing standards. However, the committee's work was interrupted by the demands made on the profession by World War II and the effort to establish standards was not renewed until 1947.

Meanwhile, in 1941, the SEC amended Regulation S-X by requiring changes in the auditor's report, one of which was a statement as to whether "the audit was made in accordance with generally accepted auditing standards applicable in the circumstances." Consequently the Institute recommended adding the following words to the scope paragraph in the auditor's report:

> Our examination was made in accordance with generally accepted auditing standards applicable in the circumstances and included all procedures we considered necessary.

Thus, the reference to generally accepted auditing standards appeared in the auditor's report eight years before the Institute formally adopted them. Since the reference to GAAS preceded any extensive development of the written expression of these standards, the report wording served to spur that development.

Shortly after the addition was made to the report, it was recognized that, since auditing standards were of general application, the phrase "applicable in

the circumstances'' was inappropriate in this context. Accordingly, this sentence was changed to read:

> Our examination was made in accordance with generally accepted auditing standards and included all procedures which we considered necessary in the circumstances.

In 1948, after years of experience and after the Institute membership had formally adopted auditing standards, a further revision of the report was approved as follows:

> We have examined the balance sheet of ABC Company as of December 31, 1949, and the related statements of income and surplus for the year then ended. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.
>
> In our opinion, the accompanying balance sheet and statements of income and surplus present fairly the financial position of ABC Company at December 31, 1949, and the results of its operations for the year then ended, in conformity with generally accepted accounting principles applied on a basis consistent with that of the preceding year.[13]

The major distinction between this report and its predecessor was the omission of the reference to reliance on internal control and testing and sampling. Since these aspects of an audit were believed to be widely accepted, it was no longer considered necessary to explicitly refer to them in the report. The change in practice intended by the original wording had occurred.

During the ten years from 1939 to 1949, the profession's attention also focused on modifications of the ''standard'' report. Although SAP 1 made clear that the CPA should withhold an opinion in certain circumstances, a disclaimer of opinion was not explicitly required. Many CPAs issued reports that recited their procedures in considerable detail but did not say whether the audit described was sufficient to express an opinion. The mere absence of remarks concerning the statements presumably indicated that the auditor took no responsibility for them.

In recognition of the need to clarify reporting responsibilities, SAP 23 was adopted by the Institute in 1947. The statement modified SAP No. 1 as follows:

> The independent certified public accountant should not express the opinion that financial statements present fairly the position of the company and the results of its operations, in conformity with generally accepted accounting principles, when his exceptions are such as to negative the opinion, or when the examination has been less in scope than he considers necessary to express an opinion on the statements taken as a whole. In such circumstances, the independent certified public accountant should state that he is not in a position to express an opinion on the financial statements taken as a whole and should indicate clearly his reasons therefor.[14]

SAP 23 also specified the choices of report types available to the auditor: (1) an unqualified opinion, (2) a qualified opinion, of (3) a disclaimer of opinion. The statement indicated that the significance of the exceptions should be the criteria used to select the appropriate report type.

Although the primary focus of SAP 23 was the requirement that a disclaimer be expressly stated when no opinion could be rendered, the pronouncement also contained the first authoritative recognition of unaudited financial statements. The recognition was in the form of a dispensation to the CPA regarding the requirement that a written disclaimer accompany financial statements on which no opinion could be expressed. In setting forth the disclaimer requirement, the Committee on Auditing Procedure stated:

> However, when financial statements prepared without audit are presented on the accountant's stationery without comment by the accountant, a warning; such as "Prepared from the Books Without Audit," appearing prominently on each page of the financial statements is considered sufficient.[15]

This exemption was not contained in the exposure draft of SAP 23, but was added to the final statement based on practitioners' comments on the exposure draft. This exception pertained to unaudited financial statements only when they were presented on the accountant's stationery without his comments. Thus, the use of plain paper was tacitly permitted and a written disclaimer was required only if the CPA commented on the financial statements prepared without audit.

The evolution of a standard report had set the stage for the development of other report forms that could be considered as having special significance. In 1954, in the Institute pronouncement *Generally Accepted Auditing Standards*, the position set forth in SAP 23 was officially recognized as the fourth standard of reporting.

Landmark VII—The Adverse Opinion

In 1961, formal recognition was given to a distinct new modification of the standard report. SAP 31, "Consistency," created a new report category under the caption "change to a principle or practice which lacks general acceptance":

> Where the effect of a change to a principle or practice which is not generally accepted is material, the independent auditor should so state in his report. Such statement requires either a qualification of the independent auditor's opinion as to fair presentation in conformity with generally accepted accounting principles or, if the change is sufficiently material, an adverse opinion on the financial statements taken as a whole.[16]

A year later, 1962, SAP 32 was issued which contained the following definition of an adverse opinion and the criteria for when one should be issued:

> An adverse opinion is required in any report where the exceptions as to fairness of presentation are so material that in the independent auditor's judgment a qualified opinion is not justified. In such circumstances a disclaimer of opinion is not considered appropriate since the independent auditor has sufficient information to form an opinion that the financial statements are not fairly presented.[17]

This modification of reporting standards was aimed at prohibiting the auditor from disclaiming an opinion to avoid the more definitive and perhaps, from the client's viewpoint, more distasteful adverse opinion.

SAP 32 was not restricted to adverse opinions. It was a comprehensive statement that sharpened the auditor's reporting responsibilities under the fourth standard of reporting. In addition to defining the four types of audit reports the statement discussed unaudited statements, piecemeal opinions, negative assurance, reliance on other auditors and the distinction between the "except for" and the "subject to" forms of qualification.

The distinction between "except for" and "subject to" qualifications had particular significance. Prior to SAP 32, both types of reports were used interchangeably for *all* types of exceptions. The difficulty this practice posed for assessing the significance of qualifying phrases in the opinion paragraph was undoubtedly a critical consideration in the SEC's conclusions in ASR 90:

> A "subject to" or "except for" opinion paragraph in which these phrases refer to the scope of the audit, indicating that the accountant has not been able to satisfy himself on some significant element in the financial statements is not acceptable in certificates filed with theCommission in connection with the public offering of securities. The "subject to" qualification is appropriate when the reference is to a middle paragraph or to footnotes explaining the status of matters which cannot be resolved at statement date.

When the Committee on Auditing Procedure issued SAP No. 32, they adopted a similar position. However, the committee was not merely endorsing the SEC's view. Some time prior to the issuance of ASR No. 90, the committee had submitted a draft of SAP 32 to the SEC that contained this reporting guideline. Thus, the profession took the initiative in creating this reporting distinction.

SAP 32 also was the first official pronouncement to contain a section specifically devoted to unaudited statements. Although discussion of unaudited statements was brief, several new guidelines and requirements were advanced.

SAP 32 contained the first authoritative definition of unaudited financial statements. In addition, the pronouncement required that such financial statements with which the auditor is in any way associated be marked on each page as unaudited whether accompanied by the auditor's comments or not. The committee also expressed its preference that a disclaimer accompany all unaudited statements and required a disclaimer when such statements were accompanied by the CPA's comments.

These reporting requirements were virtually the same as those set forth in SAP 23. The term "in any way associated," however, appeared for the first time in SAP 32. Since association was not defined, many CPAs continued to follow plain paper reporting practices under the view that, since the accountant's name did not appear in connection with the statements, there was no association with them.

Two years after the release of SAP 32, the subject of unaudited statements was again on the agenda of the Committee on Auditing Procedure. Concern arose because SAP 32 left unresolved certain questions concerning the

term "association," the definition of unaudited statements, the propriety of plain paper, and the CPA's association with false or misleading statements. These concerns ultimately led to the publication of SAP 38 in 1967, the first statement devoted entirely to unaudited financial statements.

SAP 32 was the culmination of a trend in the increasing explicitness of reporting guidelines for audit reports that began with SAP 1. Specifying that an opinion should be withheld in certain circumstances was not enough (SAP 1). The need to disclaim also had to be specified (SAP 23). Requiring the auditor to disclose the reasons for a disclaimer was insufficient. An adverse category of reports had to be established to avoid concealment of important information (SAP 32). A distinction in the types of qualifications was articulated to clarify the category of exception being reported (SAP 32). This trend has continued to develop in the reporting guidelines for limited assurance engagements.[18]

Landmark VIII—The Seven-Year Scratch

Although the 1949 version of the standard report underwent minor modifications, such as substituting the term "retained earnings" for the word "surplus" and adding the statement of changes in financial position as a basic financial statement, no major efforts to revise the report occurred until 1965. In that year an itch developed to revise the report that was scratched for seven years.

The impetus for revision came from increased criticism of the accounting profession due to widely publicized audit failures and growing litigation against audit firms. Many accountants believed the criticism and litigation were based on misunderstanding of the auditor's function and the meaning of the auditor's report. In 1964, the AICPA's public relations counsel stated:

> Too many stockholders haven't the foggiest idea what your certificate means, and, if I may say so, I think the time is ripe for its revision in layman's language and in the light of changed circumstances in the past 30 years—particularly that of wide stock ownership.*

The Committee on Auditing Procedure focused on four major areas for potential revision:

- The inherent limitations of financial statements and the nature of generally accepted accounting principles.
- The description of audit scope.
- The distinction between the responsibilities of management and the auditor.
- The meaning of "present fairly . . . in conformity with GAAP."

Financial Statement Limitations and the Nature of GAAP. The committee was concerned that the auditor's report did not adequately describe the judgments required by GAAP and the resulting limitations on financial statements. Through a series of successive proposed SAPs, the committee attempted to create standard report wording to capture these concepts.

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* Note that over thirty years after "certificate" was taken out of the report, the AICPA public relations staff still used the term.

Ultimately, the committee abandoned the effort to describe GAAP and the limitations of financial statements in the auditor's report. This decision was rationalized on the basis of *APB Statement No. 4* and *APB Opinion No. 22.* Statement No. 4 presented the basic concepts and accounting principles underlying financial statements. Opinion No. 22 required disclosure of significant accounting policies. The committee believed that these pronouncements might be relied on to communicate the nature of GAAP and financial statement limitations. However, this judgment was undoubtedly colored by the difficulty experienced by the committee in trying to agree on a concise description of these matters in the auditor's report.

Description of Audit Scope. The committee was concerned with whether the nature and limitations of an audit were adequately described in the auditor's report. It proposed revisions in the scope paragraph in three major areas:

1. The phrase "We have examined" was believed to lack precision. The committee recommended the phrase "We have audited."
2. The term "generally accepted auditing standards" did not, in the committee's judgment, specify the particular standards being referred to or their source. The committee suggested that the phrase "of the American Institute of Certified Public Accountants" be added immediately following the term "generally accepted auditing standards."
3. The committee believed that the phrase ". . . and accordingly, included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances" was too ambiguous. It felt the concepts of testing, evidence and auditor judgment needed greater emphasis in the report. The committee proposed the alternative phrase "Accordingly, we applied auditing procedures to the financial statements and to the underlying data and transactions selected by us from the company's records; we consider the auditing procedures to be of the nature and to the extent sufficient to provide a basis for our opinion expressed below."

Distinction Between Management and Auditor Responsibilities. In the committee's judgment, the scope paragraph did not adequately convey the distinction between management's responsibility for the financial statements and the auditor's responsibility for the conduct of the audit and expression of an opinion. To overcome this defect, the committee recommended that the phrase "these statements are based on the Company's records and other representations of the Company's management" be inserted in the scope paragraph.

"Present Fairly . . . In Conformity with GAAP." The repositioning of the terms "present fairly" and "in conformity with GAAP," created an unfortunate legacy for the accounting profession. The committee believed that the term "present fairly" was open to too many interpretations as reflected in legal decisions and critical articles. The committee recommended the phrase be deleted and replaced with "present in all material respects."

The culmination of the seven-year deliberation over the standard report resulted in the following recommended report:

> We have audited the accompanying balance sheet of XYZ Company as of December 31, 1972, and the related statements of income,

shareholders' equity, and changes in financial position for the years then ended. These statements are based on the Company's records and other representations of the Company's management. Our audit was made in accordance with the generally accepted auditing standards of the American Institute of Certified Public Accountants. Accordingly, we applied auditing procedures to the financial statements and to the underlying data and transactions selected by us from the Company's records; we consider the auditing procedures to be of the nature and to the extent sufficient to provide a basis for our opinion expressed below.

In our opinion, the financial statements mentioned above present in all material respects the financial position of XYZ Company at December 31, 1972, and the results of its operations and the changes in its financial position for the years then ended in accordance with generally accepted accounting principles applied on a consistent basis.[19]

Although a substantial consensus existed within the committee that a revised report would better communicate the auditor's responsibilities, the efforts to arrive at a solution failed. Many committee members, based on the advice of the AICPA's public relations division, believed that:

- Proposed revisions, while technically correct, had unacceptable public relations implications for the public and regulatory agencies.
- Legal interpretations of the auditor's function, role and responsibilities would probably not be altered by a more precise description of those attributes in the auditor's report.
- The increasing effect of "consumerism" presented an unacceptable environment in which to attempt to describe limitations of the auditor's responsibilities in a revised report.

The belief that the report needed revision to improve its communicative abilities was overshadowed by concern that various segments of the public might view the revision as an attempt by the profession to dilute its responsibilities. The increased visibility of the auditor's report raised a new obstacle to its revision. Proposed changes in the report, unlike those of previous revisions, were beginning to fall under the scrutiny of financial statement preparers and users. The profession now had to consider how these parties might perceive not only the new wording but also the motives underlying the proposed changes.

Landmark IX—SAS 5

In 1975, the auditing standard setting body took a somewhat different approach to clarifying the auditor's standard report. Instead of changing the wording in the report, an SAS was issued to deal with the persistent problem of what was meant by "present fairly . . . in conformity with GAAP." Since previous attempts to find substitute wording for this phrase were unsuccessful, the issuance of an SAS in effect interpreted the meaning of the phrase while leaving it intact in the report.

SAS 5 was intended to accomplish several objectives. First, it gave guidance to the auditor in fulfilling the responsibility for forming an opinion as to whether financial statements present fairly in conformity with GAAP. Second,

a formal statement on auditing standards elaborating on this concept made explicit what the accounting profession believed the auditor's responsibility was. Finally, publication of a standard dealing with the concept provided a limited means of informing other third parties, such as report users, what the auditor intended in this part of the report.

Although SAS 5 defined generally accepted accounting principles, the substantive guidance concerned how the auditor was to judge the "fairness" of the overall financial statements. The SAS specified that fairness should be judged within the framework of GAAP and that this judgment involved determining that:

- The accounting principles used have general acceptance.
- The accounting principles applied are appropriate in the circumstances.
- The financial statements contain the appropriate disclosure.
- The financial statements present the substance of the events and transactions within an acceptable range of approximation.

Although SAS 5 likely accomplished the objectives of providing guidance to auditors about the meaning of "present fairly in conformity with GAAP" and establishing the profession's interpretation of the phrase, it is doubtful if the SAS contributed much toward educating report readers. The technical orientation of an SAS and its limited distribution make it an ineffective tool for communicating with report users.

Landmark X—Reports on Comparative Statements

SAS 15, issued in 1977, redefined the meaning of the reference in the fourth standard of reporting to financial statements "taken as a whole." The SAS concluded that the phrase should be considered to apply not only to the current period financial statements but also to the statements of one or more prior periods presented on a comparative basis with those of the current period.

This clarification introduced the concepts of "continuing auditor" and "updating a report." The significance of this SAS was to require an auditor who had examined the financial statements of the current period and one or more consecutive periods immediately prior to the current period to re-express a previous opinion or, if circumstances warranted, to express a different opinion from that previously expressed on the prior year statements. In effect, the auditor was explicitly required to consider information obtained during the examination of the current-period statements as that information might relate to prior-period comparative statements.

The resulting standard report was:

> We have examined the balance sheets of ABC Company as of December 31, 19X2 and 19X1, and the related 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.

In our opinion, the financial statements referred to above present fairly the financial position of ABC Company as of December 31, 19X2 and 19X1, and the results of its operations and the changes in its financial position for the years then ended, in conformity with generally accepted accounting principles applied on a consistent basis.[20]

The report change reflected the auditor's new reporting responsibilities for comparative statements. However, the major revision in report wording was to put appropriate phrases in the plural form. The basic wording of the report remained unchanged.

Landmark XI—Another Seven-Year Itch

Seven years after the 1972 proposed revision, the Auditing Standards Board (ASB) again began considering a revised standard report. The impetus for this consideration stemmed from the recommendations of the Cohen Commission. The commission, relying partly on research and partly on congressional and regulatory studies, stated:

> Evidence abounds that communication between the auditor and users of his work—especially the auditor's standard report—is unsatisfactory . . . Recent research suggests that many users misunderstand the auditor's role and responsibility, and the present standard report only adds to the confusion.

Thus, it was largely the same reasons that caused the 1972 revision to be considered that gave rise to the ASB's new deliberations.

After extensive research, public hearings and deliberation, the ASB issued an exposure draft of a revised report. The recommended report was:

> Independent Auditor's Report
>
> The accompanying balance sheet of X Company as of December 31, 19XX, and the related statements of income, retained earnings, and changes in financial position for the year then ended are management's representations. An audit is intended to provide reasonable, but not absolute, assurance as to whether financial statements taken as a whole are free of material misstatements. We have audited the financial statements referred to above in accordance with generally accepted auditing standards. Application of those standards requires judgment in determining the nature, timing and extent of tests and other procedures and in evaluating the results of those procedures.
>
> In our opinion, the financial statements referred to above present the financial position of X Company as of December 31, 19XX, and the results of its operations and the changes in its financial position for the year then ended in conformity with generally accepted accounting principles.[21]

The major changes from the existing form of report were:

- Add a title containing the word independent.
- Add an assertion that the financial stateents are the representations of management.
- Add a statement that "an audit is intended to provide reasonable but not absolute, assurance as to whether the financial statements taken as a whole are free of material misstatements."

- Replace the word "examined" with the word "audited."
- Include in the scope paragraph a statement that "Application of [generally accepted auditing standards] requires judgment in determining the nature, timing and extent of tests and other procedures and in evaluating the results of those procedures."
- Delete the word "fairly" from the opinion paragraph.
- Delete the reference to the consistency of application of accounting principles.

Since several of these proposed revisions were the same ones considered in 1972, there seems to be agreement that these aspects of the report should be changed. The disagreement concerns how the changes should be made. The ASB was no more successful than the Committee on Auditing Procedure in reaching a consensus on the form of revision.

The board received an unprecedented number of comment letters on the exposure draft. Although each of the proposed changes had merit for some people, the total effect of the changes was apparently not seen as an improvement. While the exposure draft stressed that the proposed report would not change the auditor's responsibilities in conducting an audit nor alter the basis for forming an opinion, many commentators and, ultimately, board members decided that the proposed report would be seen as an effort to reduce the auditor's responsibility. The overall reaction to the report was that it was too negative.

Although many of the suggested changes faced opposition, the controversy boiled down to deletion of the word "fairly" in the opinion paragraph. One of the most frequent comments given in support of retaining "fairly" was that it provided a good way to convey the notions of GAAP's inexactitude and the auditor's judgment. Others opposed deletion because they believed it would make the auditor's report seem less like an endorsement of the financial statements. Still others believed that "fairly" was meaningful both to the public and to the courts and that its deletion would result in confusion rather than clarification.

Those who favored deleting "fairly" believed it was the primary source of confusion in the report. They felt the term implied that the auditor was taking more responsibility than intended. That is, that the term suggested the auditor was, in effect, forming two opinions: one as to fairness and another as to conformity with GAAP. Others who favored deletion felt the term was either redundant or so nebulous as to be meaningless.

The pivotal factor in the proposed revision was whether the lack of precision in the term "fairly" was a fatal fault or an irreplaceable virtue. Ultimately, a majority of the board preferred to retain "fairly." In view of that preference, the board decided that it would not be worthwhile to consider revising the scope paragraph if the opinion paragraph would retain "fairly." The board believed that it was unlikely that further deliberations would result in significant enough improvement of the report to warrant the cost of change.

Landmark ??

The auditor's standard report has remained essentially unchanged for the last 33 years. The status quo has persisted in spite of what appears to be

widespread agreement that the standard report is not understood by users and could be improved to better communicate the role and responsibilities of the auditor. Why?

One reason is the vehement disagreement over how the report should be worded to achieve better understanding and communication. This is apparent from the last two major efforts to revise the report.

Another perhaps less apparent reason might be that there is disagreement over whether the major objective of the report is to communicate to users the role and responsibilities of the auditor. Auditors may be more concerned with the protective qualities of the report than with its communicative qualities. The language in the current report has been interpreted in court decisions and has a known effect. Readers, although they may not fully understand the significance of the report, are at least accustomed to the wording. There may be little direct value to auditors from better comunication, but a great deal of exposure to unknown consequences if the report is changed.

There are no major calls for report revision from parties outside the profession. The dormant nature of the report over the past three decades has caused readers to view it as a symbol. Proposals to alter that symbol receive a careful scrutiny from parties outside the profession who are concerned that auditors may be redefining their responsibilities and shifting some of them to others. The report is much more visible than it was in the early days of the profession. Changes in the report no longer lie solely within the profession's domain.

The next landmark in audit reporting probably will not focus on revising the auditor's report on financial statements. Instead, it is likely that the report will be expanded to cover financial information not currently included. Areas such as supplementary information and current value financial presentations represent possibilities. The only safe bet is that the evolution will continue.

Footnotes

1. "Uniform Accounting," *Federal Reserve Bulletin.* Federal Reserve Board, 1917.
2. *Ibid.*, p. 3.
3. *Ibid.*, p. 24.
4. "Verification of Financial Statements," *Federal Reserve Bulletin.* Federal Reserve Board, 1929.
5. *Ibid.*, p. 24.
6. *Ultramares Corporation v. Touche* (255 N.Y. 170, 174, N.E. 441, 1931).
7. "Editorial," *Journal of Accountancy,* July, 1931.
8. *Audits of Corporate Accounts,* "Correspondence Between the Special Committee on Cooperation With Stock Exchanges of the American Institute of Accountants and the Committee on Stock List of the New York Stock Exchange," AICPA, 1934, pp. 30-31.
9. Speech by James M. Landis, commissioner, Securities and Exchange Commission before the New York State Society of Certified Public Accountants, January, 1935.
10. *Statements on Auditing Procedure No. 1,* "Extensions of Auditing Procedure," Committee on Auditing Procedure, AIA, September, 1939, p. 4.
11. *Ibid.*, p. 5.
12. *Ibid.*, p. 5.
13. *Statements on Auditing Procedure No. 24,* "Revision in Short-Form Accountant's Report or Certificate," Committee on Auditing Procedure, AIA, October, 1948.
14. *Statements on Auditing Procedure No. 23,* "Clarification of Accountant's report When Opinion Is Omitted," Committee on Auditing Procedure, AIA, December 1947).
15. *Ibid.*

16. *Statements on Auditing Procedure No. 31,* "Consistency," Committee on Auditing Procedure, AIA, October, 1961.

17. *Statements on Auditing Procedures No. 32,* "Qualifications and Disclaimers," Committee on Auditing Procedure, AIA, September, 1962.

18. Existing professional standards recognize 19 different limited assurance engagements and provide specific reporting guidance for each engagement. See "An Analysis of Professional Standards for Limited Assurance Engagements," Alan J. Winters (an unpublished paper) and *Limited Audit Engagements and the Expression of Negative Assurance,* J. Alex Milburn (CICA), 1980. With the formation of the Accounting and Review Services Committee in 1977, the responsibility for setting standards for unaudited financial statements of nonpublic companies was separated from the responsibility for setting auditing standards.

19. "Proposed Statement on Auditing Procedure, The Independent Auditor's Short-Form Report," March 2, 1979 draft, p. 3. (Note that in 1974 with the issuance of SAS2 the phrase "short form" was replaced by "standard.")

20. *Statement on Auditing Standards No. 15,* "Reports on Comparative Financial Statements," AICPA, December, 1976, p. 3.

21. "Proposed Statement on Auditing Standards, The Auditor's Standard Report," September 10, 1980 draft, p. 11.

Discussant's Response to The Evolution of Audit Reporting

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I read this paper, and then sat back and thought about how to go about commenting on it. I had to recognize that I faced some formidable disadvantages. First, the subject of the paper is the evolution of audit reporting in the United States—and I am an accountant from a remote foreign land. Second, the authors could not be more knowledgeable on the subject. Doug Carmichael, in particular, has been part of this evolution for quite some time. Who could know better than the authors how the audit report has evolved? I can hardly challenge their facts and they are clearly in a much better position than I to interpret these facts.

Buoyed up by these thoughts, I began by asking myself some basic first principle kinds of questions—like what am I doing here? I thought about questioning the purposes of tracing this evolution in the first place. What is the interest in it? What good can come of it? Perhaps I can set up some ideal purposes that the paper cannot meet. Certainly, I need some basis for judging whether this is a good evolution evaluation or not. Otherwise it is like trying to judge "presents fairly" without "GAAP."

Naturally, I turned to the FASB conceptual framework. (This is the beauty of this developing framework—everything can be explained by it.) I think there is some application of the FASB framework to this paper. In particular, I presume that the paper attempts to present historical information in a way that will help us evaluate the profession's past performance and future prospects. Perhaps the paper's usefulness should be judged in terms of whether it helps us to see what audit reporting may be evolving towards, and in terms of whether it improves our basis for making decisions as to desirable future efforts towards improving reporting standards. So we might ask whether this paper is useful in this sense.

As I thought more about this, another basic question occurred to me—what are the authors really trying to demonstrate here? Is there a hidden agenda? I get the impression of a feeling of a little frustration, and perhaps a touch of bewilderment, on the part of the authors. A basic message in the paper is that there have been no significant improvement changes in the audit report in 33 years and that to them "a crucial question is why" (p. 1). They cite significant evidence of misunderstanding of the audit report going back to the mid 1960's—and they describe two major attempts at revision since then that have failed. Thus, they raise some serious concerns.

Focus of the Paper

I think it very important to identify the focus of this paper because I am going to argue that it is too narrow. The authors have concentrated on the

annual financial statement audit report. Their primary measure of progress seems to be improvement changes in the wording of this audit report. They trace the evolution from the undefined, diverse practices of the early 1900's through various stages, which might be summed up as follows:

- Progress in defining and developing audit standards for an engagement—which came to be symbolized by the phrase "generally accepted auditing standards" (GAAS).
- Steps towards trying to clarify the accounting basis for the financial statements within the evolving concept of "generally accepted accounting principles" (GAAP).
- Gradual specification of distinguishable reporting sub-types to cover all possible signals that the auditor should give with respect to an engagement—the unqualified opinion, types of qualified opinions, the disclaimer of opinion and the adverse opinion.

In other words, the authors trace a process of definition, improvement of concepts, standardization, solidification.

To me it is not too surprising to find that changes in the audit report took place more quickly in earlier years, as the engagement itself was in the process of being developed, and that increasing resistance to change arose as auditing matured—became set in terms of legal requirements, precedents and professional rules.

Within the framework chosen (the annual financial statement audit engagement) I find the paper well done and interesting. I think it instructive and most useful to have the knowledgeable and experienced perspective on events that Doug Carmichael and Alan Winters bring to it.

A Broader Perspective

However, I suggest that the authors take too narrow a perspective of "audit reporting." I will try to demonstrate that, had they taken a broader view of audit reporting and its evolution, they would have ended up with a very different and, I think, a more useful perspective on past events and future prospects and opportunities.

When I saw the title "The Evolution of Audit Reporting," I expected the paper would deal with all forms of attest reporting, rather than only the financial statement audit. I presume, though, that the authors' orientation was valid in the beginning—that the audit of annual financial statements was, in the early stages of this evolution, the basic, if not sole, mission of the auditor. But audit reporting began to evolve beyond this one engagement some time ago.

In fact, the paper does mention some evidence of this broadening. In my view a key point in their analysis is Landmark VII. Its primary focus is the 1961-2 defining of the adverse opinion in SAP 32. The authors note in passing, though, that the SAP also discussed unaudited statements, piecemeal opinions and negative assurance. They end up their discussion of this Landmark by pointing out that a "trend has continued to develop in the reporting guidelines for limited assurance engagements." But they relegated this to a passing reference and did not follow it up.

I suggest that in passing by this area they have ignored evidence of the formal beginnings of a major development in audit reporting. Some important things began to come together in the early to mid 1960's. Perhaps the impetus was the growing consumerism which was becoming evident then—and that this resulted in pressures for increased accountability by corporate entities to a wider public. In any event, there began to be pressures for public companies to provide information beyond annual financial statements for various user purposes. With this came commensurate pressures upon the public accounting profession to provide some degree of independent assurance on certain of this information. As pointed out by the Cohen Commission Report, the profession first reacted cautiously and negatively to any expansion of the auditor's role—viewing any association with other than a GAAS financial statement audit as fraught with dangers for user misunderstanding and legal liability. (This negativism is in contrast with the authors' general finding that the profession's financial statement audit reporting tended to lead practice developments.) The profession had good reason for concern in the US, as these were litigious times. But despite this negative professional reaction, important changes began to take place. At first these took ad hoc, diverse and somewhat inconsistent forms, just as with the early editions of the financial statement audit report. But this evolution has recently been taking a more comprehensive general shape.

Some Evolutionary Developments

Let me cite some evidence of this wider evolution by reference to the then emerging reporting approach referred to as "negative assurance." As far as I can see, the concept of "negative assurance" reporting was first given official recognition in the early to mid 1960's in the narrowly defined context of the "comfort letter" for underwriters on unaudited financial information and statistical data in prospectuses. This, and similar reporting forms, soon began to spread to other areas. Three examples:

- Published interim financial information. (The evolution of professional reporting in this area is a particularly interesting one. It first emerged as a public issue in 1974 when Coopers & Lybrand stepped forward and proposed that auditors should be willing, subject to certain conditions, to provide limited assurance to shareholders on published interim statements. The reactions throughout the rest of the profession were so adverse that Coopers & Lybrand had to withdraw their proposal, but look where we have evolved to since then!*)
- So-called "special reports" providing limited assurance on specified items of financial information, and on compliance with contractual, statutory or regulatory requirements (given recognition by SAS 14).
- Most recently, the development of a "review" engagement to provide limited assurance on the financial statements of nonpublic entities (in *Statement on Standards for Accounting and Review Services No. 1,* December 1978).

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* I traced the evolution of this, and other limited assurance reporting practices, to 1980 in Canada and the US in *Limited Audit Engagements and the Expression of Negative Assurance* (Toronto: The Canadian Institute of Chartered Accountants), Chapters 2-7.

What were expressions of negative assurance trying to accomplish? I suggest that they were the results of a groping by public accountants in practice for a reporting response to situations where there seemed to be a legitimate need for some useful degree of assurance, but where a full GAAS audit was just not possible or was not practicable from a reasonable cost/benefit viewpoint.

There are many examples of continuing pressures to broaden the audit function beyond GAAP financial statements and a full GAAS audit—including reports on internal control systems, assurance on the whole published annual report, on forecasts, on supplementary oil reserve information, current cost data, etc., etc.

I suggest that this broader perspective has some potentially interesting implications for the evolution of audit reporting:

- I suggest that these developments expose a broader attest function than the traditional financial statement GAAS perspective has allowed us to see. Attest assurance may be defined in terms of adding a degree of confidence that there are no material errors in a specified representation (whether it be financial statements, or whatever). This suggests that, conceptually, there is a continuum of possible degrees of audit confidence ranging between one extreme of no confidence whatsoever, to the other theoretical extreme of 100% confidence that the particular representation is what it purports to be. The traditional GAAS financial statement audit is a section of this continuum, somewhere towards the upper end of the scale. In one sense what has been evolving is the whole area below this GAAS audit—the reporting of limited attest assurance. Underlying concepts and standards in evolution deal with (1) appropriate minimum attest effort for different types of situations, (2) user acceptance of the risks of undetected errors in those efforts, and (3) effective communication of the assurance which results.
- From this perspective, I think it becomes apparent that "generally accepted auditing standards"—which had been developed as the basic *general* attest standards—are incomplete and inadequate.*

In short, I suggest that this broader perspective strongly points to the need to broaden our attest standards—that the so-called "generally accepted auditing standards" are really a subset representing only one, albeit important, type of attest engagement.

I introduce all this to try to support a basic point—that when the authors implicitly assume audit reporting to be the GAAS audits of annual financial statements, they lose, in my opinion, a significant aspect of the recent evolution of audit reporting. They end up seeing a world in which there is little apparent change, because they are focusing on one fairly mature engagement.

Words and Communication

But suppose we accept the approach of this paper—and it is certainly legitimate, and potentially very useful, to trace the evolution of the audit report

* For one suggestion as to the direction in which attest standards should be evolving, see the aforementioned CICA Research Study *Limited Audit Assurance and the Expression of Negative Assurance.*

on the GAAS audit of annual financial statements. I still have some concern with the narrowness of their perspective within this approach. There would seem to be some belief, not only by the authors but by the auditing profession in general, that the auditor's report is the sole medium of communication with financial statement users. If one believes this, it would seem to follow that it is essential to try to perfect the words in that report, and that progress in audit reporting lies in improving that wording. On the other hand, if one accepts that the report is basically a symbol (a symbol of a GAAS level of auditor involvement to arrive at a "positive opinion" level of assurance that the information accords with GAAP), then one might be less concerned with the exact wording of the report. Certainly it would be nice to get rid of words that may have different layman's usage than the meaning intended by the profession—for example, the word "fairly." Also, it would be nice if we could make more explicit the independence of the auditor, the pervasiveness of judgment, and the responsibilities of management for the reported information. However, it may be argued that the words themselves become less important if

1. The reporting symbol is recognizable as representing a particular (GAAS) level of audit effort and auditor standards, and a particular financial statement representation based on GAAP; and
2. The underlying standards are defensible and defined in a form that reasonable users have access to and can be expected to be able to understand.

(Perhaps some might even argue that these objectives could be met with the reporting symbol being a number or a colour, i.e., without any words.) If one accepts this reasoning, then the prime responsibilities of the auditing profession become more oriented towards ensuring that:

- Attest standards are defensible and adequately defined, and
- Reasonable steps have been taken to ensure that adequate information is available to users on these standards and underlying concepts.

What I am suggesting then is that perhaps the authors are too preoccupied with the wording changes in the report. I say "perhaps," because, in fact, the paper is not solely preoccupied with report wording. It notes, for example, as Landmark IX, that in 1975 standard setters took the step of clarifying "presents fairly in accordance with GAAP" in SAS No. 5 instead of trying to change the words in the report.

The authors note the resistance to changing the standard form of wording of the auditor's report, and speculate as to what the reasons may be for this resistance. I suspect that they are right in suggesting that once the reporting form became reasonably set (i.e. became a symbol), attempts to change it have tended to be viewed as attempts to change the meaning of the symbol (what it is signalling), even if this was not intended.

We cannot ignore some very important concerns that the authors raise about the understandability of the standard financial statement audit report. They point to the Cohen Commission and other sources of evidence that the standard financial statement audit report is misunderstood. But I think there are at least three possible reasons for this misunderstanding that report wording is not going to help.

1. Users may not have done their homework.
2. The standards underlying the engagement may be uncertain, illogical or contradictory.
3. The profession may not have taken adequate steps to educate its public.

To the extent that the latter is the case, I suggest that it is unrealistic for the profession to try to educate the public basically by making changes in the short form report. In my view, there is just no way that a two-paragraph report can serve as the sole means of communication with users—that it can adequately portray such subtleties as judgment in the auditing process, the concept of "fairness" within GAAP, or the responsibility of management for financial information. One must look to the underlying body of standards and practices underlying an engagement to understand these things.

In short, I suggest that we need to have a wider view of audit reporting communication. Further, I suggest that the paper evidences some significant developments within the past 33 years, basically in the area of improving and codifying auditing standards and generally accepted accounting principles. But I also suggest that a broader analysis that gets away from preoccupation with the wording exposes deficiencies on the part of the profession in communicating its standards to its user public, and in educating the public to understand its reporting symbols.

Summary

In summary, the paper seems to this Canadian to do a good job of tracing the evolution of the annual financial statement audit report within the parameters that the authors have assumed. But I think that this is too narrow a focus within which to view the evolution of audit reporting generally—that we need to stand back and look at audit reporting within a larger system that includes other degrees of assurance and other representations, or we miss much of what has been happening, and the broader implications of this for the future.

2

How Not to Communicate Material and Immaterial Weaknesses in Accounting Controls*

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In the Securities and Exchange Commission (SEC) "Statement on Withdrawal of Proposal to Require Reports on Internal Accounting Controls" (June 6, 1980) the SEC stated its desire that

> . . . the action announced today will encourage further voluntary initiatives and permit public companies a maximum of flexibility in experimenting with various approaches to public reporting on internal accounting control (and) . . . auditor association with such statements. (p. H-1)

The Commission pointed out that the proposed Statement on Auditing Standards (SAS) on "Reporting on Internal Accounting Control" (issued December 31, 1979 and adopted as SAS 30 in 1980) provides a framework for such public reporting. However, while SAS 30 does outline the possible report forms related to internal accounting control which can be prepared by the CPA, including the necessity of disclosing material weaknesses and permission to disclose immaterial weaknesses, if desired, it does not provide any directions or illustrations of how these disclosures can be communicated in a meaningful form—particularly to the general public. While experimentation may be desirable as a means of improving disclosure practices, problems can be created for companies and auditors alike if the results of these experiments are misinterpreted.

This paper presents survey evidence which supports the likely diversity in financial statement users' interpretation of the effect of internal control points (possible disclosures of material or immaterial weaknesses) on report users' assessment of management. This evidence, as well as the ranking of the various possible report forms on internal accounting control which have been discussed in the literature, provide some direction as to the preferred form and content of future control disclosures. An analysis is given of the extent to which prior beliefs may have influenced survey responses with respect to

(1) Auditors' present responsibilities.
(2) The limitations of internal control and audit procedures.

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(3) The state of the art in the evaluation of internal accounting control.
(4) The expected costs of expanded study and evaluation of controls.

In addition, the content of disclosure in management reports regarding internal control and related auditors' responsibilities is analyzed. The results are then assimilated to draw policy implications for the profession.

Survey Methodology

Before the SEC withdrew its proposal to require reports on internal accounting control, a survey was conducted of the primary "stakeholder groups" with regard to internal control disclosure policies. Table 1 summarizes the basis of selection, demographic characteristics of the groups sampled, and the response rates. The selected sample is drawn from a number of different stakeholder groups and different criteria of selection are applied within each sample group to avoid the selection bias which is possible when only one group is tested or when asset size of the respondent is the sole criterion of selection. The demographics of the samples selected were investigated and found to be similar to publicly reported data available through Heidrick & Struggles, Inc. (1974 to 1980), other survey data, and casual empiricism regarding the characteristics of the more general populations from which each sample was drawn.[1]

Table 2 reports significant differences of opinion across groups regarding how internal control points which commonly appear in management letters affect the evaluation of management.

Interpretation of Internal Control Points

Specifically, it is of interest that CPAs do not perceive the lack of internal auditors to be as negative an influence on their assessment of management as the other respondents. Similarly, CPAs' interpretation of how important the presence of an audit committee is in evaluating management differs substantially from the other respondents. Government respondents are, in combination with the pilot sample respondents, the most willing to accept a periodic inventory system without penalizing management. Government is harsher in its evaluation of the significance of all of the internal control points being cited than all other groups. The repetition of the points between years is considered a rather severe flaw by mutual fund, government, and management respondents. In assessing the effect the size of a company has in evaluating management, in view of the listed internal control points, the common stock insurance investment officers, CFAs, and private placement groups give least attention to the size factor in evaluating a firm's control adequacy. In general, the "yes" respondents' comments indicated that expectations for smaller companies' controls are lower than for larger companies, e.g.,

> Small companies, particularly privately-held firms may frequently be managed effectively without many of the formal procedures and practices described above. (private placement)

However, incomplete consensus on the rationale underlying the response is indicated by the following marginal comment:

TABLE 1

SAMPLE SUMMARY STATISTICS

	Board of Directors & Audit Committee Members	Common Stock Investment Officers (Insurance)	Certified Financial Analyst	Mutual Fund Analyst	GAO Employees	Commercial Lending Officers	Certified Public Accountants	Controllers for DJIA Companies	Private Placement Investment Officers (Insurance)	Total Sample	Pilot Interview
RESPONSES: Questionnaires Included in Frequency Table	12	29	9	4	4	13	14	12	35	132	15
ADJUSTED SAMPLE:	44	56	19	9	5	20	34	25	57	269	15
RESPONSE PERCENTAGE = $100\left(\frac{\text{Responses}}{\text{Adjusted Sample}}\right)$	27.3%	51.8%	47.4%	44.4%	80%	65%	41.2%	48%	61.4%	49.1%	N/A
Age (years) μ (δ)	58.2 (10.6)	38.2 (6.5)	40.14 (7.11)	39.0 (5.48)	47.3 (10.3)	46.0 (11.4)	47.75 (9.401)	45.1 (7.92)	39.4 (7.34)	42.94* (9.89)	32.7 (11.9)
Experience (years)	32.3 (7.63)	12.33 (5.7)	17.9 (9.5)	16.3 (3.86)	23.5 (9.11)	17.8 (9.53)	22.46 (9.68)	23.5 (10.61)	13.6 (6.6)	18.0 (9.68)	20.2 (16.5)
CPA Experience (1 = yes)	.17 (.39)	.069 (.258)	0.0 (0.0)	.25 (.50)	.75 (.50)	0.0 (0.0)	1.0 (0.0)	.33 (1.63)	.114 (.323)	.23 (.424)	.50 (.52)
# Board of Directors** (Range = 1 to 8)	3.42 (2.54)	--	--	--	--	--	--	--	--	3.42 (2.54)	7.0 (1.41)
# Audit Committees** (Range = 0 to 5)	1.7 (1.92)	--	--	--	--	--	--	--	--	1.7 (1.9)	3.0 (2.83)

*These demographic statistics relate to the Total Mail Sample plus the Pilot Sample.
**Numbers correspond to the quantity of different companies on whose board (or audit committee) the respondent currently serves.

NOTE: The basis of selection of the adjusted samples follows:

- Board of Director and Audit Committee members for the Dow Jones Industrial Average (DJIA) companies and a random sample from the Directory of Directors
- 56 Common Stock Investment Officers representing life insurance companies holding 80% of all U.S. Life Insurance Companies' assets
- All Certified Financial Analyst members of The Rochester Society of Security Analysts Inc.
- 9 representatives of the six largest mutual fund companies
- 5 professional staff members of the General Accounting Office (GAO), who were knowledgeable concerning internal control and current SEC activities, as identified by a GAO staff member
- Senior Commercial Lending Officer of the ten largest banks in the United States based on permanent capital funds, and ten officers utilized in a prior experimental study who were identified as representative of sophisticated accounting information users by the Robert Morris Associates (the author is indebted to Professor Casey of Harvard University for this sample)
- A representative of the largest 37 CPA firms as identified by the AICPA (less 3 firms who indicated time constraints would preclude their participation)
- Controllers of the DJIA companies (30 less 5 firms that responded their comments would be submitted directly to the SEC)
- 57 active participants in direct placement activities, also representing those life insurance companies holding 80% of U.S. Life Insurance Companies' assets (the author is indebted to Professors Benston and Krasney of the University of Rochester for this sample)
- The pilot sample included two common stock investment officers of a mutual fund, six managers and partners of a CPA firm, three commercial lending officers, two controllers, and two audit committee/board of director members--these respondents were observed during completion of the test instrument and then interviewed regarding problems in completing the questionnaire and suggestions as to possible revisions; some adjustments resulted

TABLE 2

EVALUATION OF MANAGEMENT (A PERCENTAGE DISTRIBUTION OF RESPONSES)

INSTRUCTIONS: The following is a list of internal control points that might appear in a management letter issued by an external auditor to a medium-sized client (i.e., total sales of the client are approximately $50 million). Please indicate whether any of these points would affect your view of the quality of management--i.e., the degree to which management is fulfilling its responsibilities to stockholders and creditors.

INTERNAL CONTROL POINTS

Consider each statement independently; circle your response.

Don't know	(?)
None	(N)
Slightly negative	(S-)
Negative	(-)
Extremely negative	(E-)
If it is not implemented, management should be subject to discipline (e.g., fined under the Foreign Corrupt Practices Act)	(D)

Key

Board of Directors & Audit Committee Members	(BD)
Common Stock Investment Officers (Insurance)	(CS)
Certified Financial Analysts	(CFA)
Mutual Fund Analysts	(MUT)
Government Employees	(GOV)
Pilot Sample	(PI)
Commercial Lending Officers	(CL)
Certified Public Accountants	(CPAs)
Controllers for DJIA Companies	(MGMT)
Private Placement Investment Officers	(PP)
TOTAL SAMPLE (Mail)	(T)
Average	(μ)
Standard Deviation	(δ)

$\chi^2 = 96.5_{60}$ @ .002*

The client does not have an audit committee.

EFFECT ON YOUR ASSESSMENT OF MANAGEMENT:

	?**	N	S-	-	E-	D	μ	δ	No Response
BD	8.3	8.3	25	8.3	33.3	16.7	4.0	1.6	-
CS	3.4	6.9	20.7	41.4	24.1	3.4	3.9	1.1	-
CFA	-	-	44.4	33.3	-	11.1	3.8	1.0	11.1
MUT	-	-	-	50	25	25	4.8	.96	-
GOV	-	-	50	25	25	-	3.8	.96	-
PI	-	-	44.4	33.3	-	11.1	3.8	1.0	11.1
CL	-	-	53.8	23.1	-	-	3.3	.48	23.1
CPAs	14.3	35.7	28.6	21.4	-	-	2.6	1.0	-
MGMT	-	-	25	50	16.7	-	3.9	.7	8.3
PP	2.9	5.7	22.9	40	25.7	2.9	3.9	1.1	-
T	3.8	7.6	28	34.1	18.2	4.5	3.7	1.13	3.8

*χ^2 (chi-square) with its significance level is interpreted as the probability of observing the sample responses from the nine groups surveyed by mail given they all come from a population with homogeneous attitudes about internal control information. This χ^2 statistic was computed based on frequency statistics, although percentages are presented here for ease-of interpretation. The degrees of freedom reflect the fact that BD had two subgroups: those directors who were audit committee members and those who were not.

**Due to rounding, the percentages may sum to slightly more or less than 100.

Although all officers and employees take vacations, control duties and functions are not performed by other persons during their absence, i.e., work is delayed for the week.

$\chi^2 = 113.7_{60}$ @ .0000

	?	N	S-	-	E-	D	μ	δ	No Response
BD	-	8.3	8.3	25	33.3	25	4.6	1.24	-
CS	3.4	13.8	27.6	27.6	27.6	-	3.6	1.15	-
CFA	-	22.2	22.2	22.2	22.2	-	3.5	1.2	11.1
MUT	-	-	25	25	50	-	4.3	.96	-
GOV	-	-	-	50	50	-	4.5	.58	-
PI	-	7.7	53.8	30.8	7.7	-	3.4	.77	-
CL	-	7.7	46.2	15.4	-	-	3.1	.60	30.8
CPAs	14.3	-	35.7	42.9	7.1	-	3.3	1.14	-
MGMT	-	-	41.7	25.0	25.0	-	3.8	.87	8.3
PP	2.9	14.3	25.7	28.6	25.7	-	3.6	1.13	2.9
T	3.0	9.8	28.0	28.0	23.5	2.3	3.7	1.12	5.3

Employees are not adequately bonded.

$\chi^2 = 76.2_{60}$ @ .08

BD	-	-	-	33.3	41.7	25	4.9	.79	-
CS	6.9	13.8	20.7	44.8	13.8	-	3.5	1.12	-
CFA	-	11.1	22.2	33.3	22.2	-	3.8	1.04	11.1
MUT	-	-	25	25	50	-	4.3	.96	-
GOV	-	-	-	50	50	-	4.5	.58	-
PI	-	7.7	46.2	23.1	23.1	-	3.6	.96	-
CL	-	-	7.7	53.8	7.7	-	4.0	.50	30.8
CPAs	7.1	-	28.6	35.7	14.3	7.1	3.8	1.24	7.1
MGMT	-	8.3	25.0	41.7	16.7	-	3.7	.91	8.3
PP	2.9	11.4	22.9	42.9	20.0	-	3.7	1.03	-
T	3.0	7.6	18.9	41.7	20.5	3.0	3.8	1.06	5.3

There is no internal auditor or audit staff.

$\chi^2 = 133.2_{60}$ @ .000

	?	N	S-	-	E-	D	μ	δ	No Response
BD	-	8.3	8.3	16.7	41.7	25	4.7	1.2	-
CS	-	3.4	6.9	44.8	41.4	3.4	4.4	.8	-
CFA	-	11.1	-	33.3	44.4	-	4.3	1.0	11.1
MUT	-	25	-	75	-	-	3.5	1.0	-
GOV	-	-	-	25	75	-	4.8	.5	-
PI	7.7	7.7	38.5	30.8	7.7	-	3.3	1.1	7.7
CL	-	-	23.1	23.1	15.4	7.7	4.1	1.1	30.8
CPAs	28.6	14.3	21.4	21.4	7.1	-	2.6	1.4	7.1
MGMT	-	8.3	16.7	25.0	41.7	-	4.1	1.0	8.3
PP	-	2.9	14.3	34.3	45.7	2.9	4.3	.87	-
T	3.0	6.1	12.1	32.6	36.4	4.5	4.1	1.1	5.3

No authorization procedures exist for the purchase or sale of investments.

$\chi^2 = 82.7_{60}$ @ .03

BD	-	8.3	8.3	25	41.7	16.7	4.5	1.17	-
CS	3.4	3.4	6.9	37.9	48.3	-	4.2	.99	-
CFA	11.1	-	11.1	11.1	44.4	11.1	4.3	1.6	11.1
MUT	-	-	-	75	-	25	4.5	1.0	-
GOV	-	-	-	50	50	-	4.5	.58	-
PI	-	7.7	7.7	38.5	46.2	-	4.2	.93	-
CL	-	-	15.4	38.5	15.4	-	4.0	.71	30.8
CPAs	7.1	-	21.4	21.4	35.7	7.1	4.1	1.3	7.1
MGMT	-	-	-	33.3	58.3	-	4.6	.51	8.3
PP	2.9	2.9	11.4	31.4	51.4	-	4.3	.98	-
T	3.0	2.3	9.8	32.6	43.2	3.8	4.3	1.0	5.3

The firm has no manual of operating procedures.

$\chi^2 = 100_{60}$ @ .0009

	?	N	S-	-	E-	D	μ	δ	No Response
BD	8.3	8.3	8.3	16.7	41.7	16.7	4.3	1.6	-
CS	3.4	-	24.1	44.8	27.6	-	3.9	.9	-
CFA	11.1	11.1	-	33.3	33.3	-	3.8	1.5	11.1
MUT	-	25	25	25	25	-	3.5	1.3	-
GOV	-	-	-	75	25	-	4.3	.5	-
PI	-	7.7	46.2	15.4	30.8	-	3.7	1.0	-
CL	-	-	30.8	30.8	7.7	-	3.7	.7	30.8
CPAs	21.4	-	28.6	35.7	14.3	-	3.2	1.4	-
MGMT	-	-	25	33.3	33.3	-	4.1	.8	8.3
PP	2.9	-	22.9	40.0	34.3	-	4.0	.9	-
T	5.3	2.3	21.2	37.1	28.0	1.5	3.9	1.1	4.5

Access to computer facilities is not limited.

$\chi^2 = 72.93_{60}$ @ .12

BD	16.7	-	-	8.3	58.3	16.7	4.4	1.68	-
CS	3.4	3.4	17.2	48.3	27.6	-	3.9	.96	-
CFA	-	11.1	11.1	11.1	55.6	-	4.3	1.2	11.1
MUT	-	-	-	50	50	-	4.5	.58	-
GOV	-	-	-	-	100	-	5.0	0.0	-
PI	7.7	-	46.2	38.5	7.7	-	3.4	.96	-
CL	-	-	15.4	23.1	30.8	-	4.2	.83	30.8
CPAs	7.1	-	7.1	28.6	42.9	7.1	4.3	1.25	7.1
MGMT	-	-	16.7	33.3	41.7	-	4.3	.79	8.3
PP	2.9	2.9	14.3	48.6	31.4	-	4.0	.92	-
T	3.8	2.3	12.1	34.8	39.4	2.3	4.2	1.04	5.3

A perpetual inventory system that continually records purchases and costs of sales throughout the year is not used; instead, the company uses a periodic system, updating its inventory records once a year.

$\chi^2 = 95.5_{60}$ @ .002

	?	N	S-	-	E-	D	μ	δ	No Response
BD	8.3	25	25	33.3	-	8.3	3.2	1.3	-
CS	3.4	10.3	27.6	34.5	24.1	-	3.7	1.1	-
CFA	11.1	22.2	11.1	11.1	33.3	-	3.4	1.6	11.1
MUT	25	-	-	50	25	-	3.5	1.7	-
GOV	-	50	25	25	-	-	2.8	.96	-
PI	15.4	23.1	23.1	15.4	7.7	-	2.7	1.3	15.4
CL	-	-	46.2	15.4	7.7	7.7	3.7	1.1	23.1
CPAs	21.4	14.3	7.1	42.9	7.1	-	3.0	1.4	7.1
MGMT	-	8.3	58.3	16.7	8.3	-	3.3	.79	8.3
PP	2.9	-	34.3	31.4	31.4	-	3.9	.96	-
T	6.1	9.8	29.5	29.5	18.9	1.5	3.5	1.16	4.5

All records maintained in the branches are under the supervision of the branch managers.

$\chi^2 = 81.7_{60}$ @ .033

BD	16.7	8.3	25.0	33.3	8.3	8.3	3.3	1.5	-
CS	13.8	27.6	24.1	13.8	17.2	-	2.9	1.3	3.4
CFA	-	22.2	22.2	11.1	22.2	-	3.4	1.3	22.2
MUT	-	25	-	75	-	-	3.5	1.0	-
GOV	25	-	25	50	-	-	3.0	1.4	-
PI	-	38.5	38.5	15.4	7.7	-	2.9	.95	-
CL	7.7	23.1	30.8	-	15.4	-	2.9	1.3	23.1
CPAs	21.4	14.3	7.1	50.0	7.1	-	3.1	1.4	-
MGMT	-	25	33.3	25	8.3	-	3.2	.98	8.3
PP	5.7	11.4	31.4	20.0	28.6	-	3.6	1.21	2.9
T	9.8	18.2	25	23.5	16.7	.8	3.2	1.3	6.1

How would a management letter issued by an external auditor containing all of the above internal control points affect your assessment of management? ***

$\chi^2 = 81.4_{60}$ @ .03

	?	N	S-	-	E-	D	μ	δ	No Response
BD	-	16.7	8.3	16.7	33.3	8.3	4.1	1.37	16.7
CS	6.9	3.4	6.9	31.0	41.4	6.9	4.2	1.26	3.4
CFA	11.1	22.2	-	22.2	22.2	11.1	3.6	1.8	11.1
MUT	-	-	-	50	25	25	4.8	.96	-
GOV	-	-	-	25	50	25	5.0	.82	-
PI	-	23.1	23.1	30.8	15.4	-	3.4	1.08	7.7
CL	-	-	23.1	23.1	30.8	-	4.1	.88	23.1
CPAs	14.3	-	14.3	21.4	42.9	-	3.85	1.46	7.1
MGMT	-	-	16.7	25	50	8.3	4.5	.26	-
PP	5.7	-	2.9	28.6	57.1	2.9	4.4	1.05	2.9
T	5.3	3.8	8.3	26.5	43.2	6.1	4.3	1.2	6.8

How would a management letter containing all of the above internal control points affect your assessment of management, if you knew that each of the points were also noted in the management letter issued last year?

$\chi^2 = 52.6_{60}$ @ .74

BD	-	8.3	16.7	8.3	33.3	16.7	4.4	1.4	16.7
CS	3.4	6.9	6.9	17.2	48.3	17.2	4.5	1.3	-
CFA	11.1	11.1	11.1	11.1	33.3	11.1	3.9	1.7	11.1
MUT	-	-	-	-	75	25	5.3	.5	-
GOV	-	-	-	-	50	50	5.5	.58	-
PI	-	23.1	7.7	15.4	53.8	-	4.0	1.29	-
CL	-	7.7	15.4	7.7	38.5	7.7	4.3	1.3	23.1
CPAs	14.3	-	7.1	7.1	57.1	7.1	4.2	1.6	7.1
MGMT	-	-	8.3	8.3	58.3	25	5.0	.85	-
PP	2.9	2.9	5.7	14.3	60.0	14.3	4.7	1.08	-
T	3.8	4.5	8.3	11.4	50.8	15.9	4.6	1.24	5.3

Would any of your responses change if the company involved was small (as opposed to a medium-sized or large company)?

$\chi^2 = 20.3_{12}$ @ .06

	Yes	No	μ	δ	No Response
BD	58.3	25	.70	.48	16.7
CS	44.8	41.7	.46	.51	3.4
CFA	11.1	55.6	.17	.41	33.3
MUT	75	25	.75	.50	-
GOV	100	-	1.0	0.0	-
PI	84.6	15.4	.85	.38	-
CL	53.8	30.8	.64	.51	15.4
CPAs	71.4	14.3	.83	.39	14.3
MGMT	58.3	33.3	.64	.51	8.3
PP	42.9	48.6	.47	.51	8.6
T	50.8	38.6	.57	.50	10.6

***The respondents were not consistent in their responses in the sense that some individual comments were deemed to have more of a negative effect on how management's evaluated than all of the comments combined.

> It could even be worse for a smaller company that is not as financially sound and a mere marginal participant in an industry. (private placement)

The observed diversity in the interpretation of internal control points suggests that the report form of a management letter or a listing of material weaknesses alone is inadequate to provide a basis for evaluation of a company's management. In fact, several of the CPA respondents noted that it was impossible to evaluate the points without knowing more about the company and the context of the control suggestion, e.g.,

> It is really impossible to answer these questions without some specific context. (CPAs)

This requirement of more information is not as broadly recognized by other respondent groups. However, the evidence is clear that uniform interpretation of an internal control point will not occur. While uniform interpretation may not be desirable, if the basis of any interpretation is less than full understanding or knowledge, problems with such disclosures arise.

The accounting literature states

> Informative disclosure to prudent investors presumes statement content which is explicit, complete, and unequivocal. (Griffin and Williams, 1960, p. 46)

The SEC advises

> A disclosure which makes the facts available in such form that their significance is apparent only upon searching analysis by experts does not meet the standards imposed by the Securities Act of 1933 as we understand that Act. (SEC, 1948, p. 133)

The survey evidence on interpretations of internal control points suggests that neither of these standards for disclosure would be met by such a listing of material or immaterial weaknesses. The points listed in Table 2 demonstrate how not to communicate weaknesses in accounting controls.

A Closer Look at the Disparity Between Users' and Producers' Responses

If the CS, CFA, MUT, GOV, CL, and PP subgroups from Table 2 are combined as users of control disclosures and BD, CPAs, and Mgmt. are combined as producers of such disclosures, a test of the significance of the differences in responses between these two principal groups can be performed. Such a comparison indicates that at a .05 level of significance:

- the producer group considers the absence of adequate bonding to be much more negative than the user group (4.1 versus 3.7, where 1 = ? and 6 = D from Table 2),
- the user group considers the lack of an internal audit staff to be much more negative than the producer group (4.3 versus 3.8),
- the user group considers the periodic inventory system to be less desirable (3.7 versus 3.1), and

- the producer group considers responses to be more dependent on the size of the company than the user group (.73 versus .51, where 1 = yes).

For all other items in Table 2, the differences of opinion across the user and producer groups as to the effect of the control points on the evaluation of management are observed to be insignificant.

Within the producer group, it is desirable to separately consider the BD group, since the audit committee members act not only as reviewers of external reporting issues on behalf of the company, but also act as users of internal control disclosures by CPAs. A review of Table 2 suggests that, in general, the BD group is harsher on management when reviewing the individual control points, other than the two points concerning periodic inventory and the maintenance of branch records. However, the combination of the control points or the repetition of control points across years is not evaluated as severely by the BD group as by other respondent groups. Some additional insight regarding these differences in opinion is gained by reviewing written comments received on the questionnaire instrument from BD respondents.

- RE: Periodic Inventory

  Depends on monetary size and quantity of inventory

- RE: Branch's Records

  Not if properly audited

- RE: Combined Points

  I don't see external auditors as experts in control.

  Depends on what the letter said.

  As we have those controls as a matter of course, the lack of them would have to cause a negative assessment of management—but it could be misleading. Management may be maximizing return to investors in terms of company growth and making efficient and profitable use of resources.

- RE: Repetitive Points

  This case would still have to be judged on its merits. The company view is more meaningful than that of the auditor.

  Would have negative assessment if management was aware of these weaknesses but no attempt was made to correct them.

Overall, it appears that the BD group, many of whom are audit committee members, are reasonably astute as to materiality considerations, substantive testing alternatives, the absence of cost/benefit analyses by CPAs, the importance of the context of internal control points, the central role of cost/benefit evaluations, and the critical aspect of whether attempts have been made or plans formulated to respond to past years' control suggestions. How might control disclosures be structured to provide similar insight to other respondent groups?

Preference for Report Forms

Some direction on how disclosures concerning accounting controls should be made can be provided from survey evidence that asks the stakeholder groups to rank possible report forms. However, when focusing on the preferences summarized in Table 3, it is necessary to qualify the results. Several respondents indicated in marginal comments a preference for no ranking, and in fact, no report on controls. It should also be noted that despite directions to use each rank number 1 through 8 once only, some respondents listed repeats, e.g., all 8's. The reason for emphasizing such comments and responses is to remind the reader that a preference of 1 does not constitute demand for internal control reporting; it simply represents that if reports are going to be made available, this is the preferred form.

An evaluation of the underlying group responses indicates that commercial lending officers prefer an audit opinion with materiality limits more than other respondent groups; similarly, CPAs are most opposed to the auditor's report without materiality limitations. Mutual fund and commercial lending officers are proponents of the management letter provision while the Board of Director members, CPAs, and controllers are opposed to this form of report (again, relative to other respondents). Management is clearly a strong proponent of providing its opinion on controls to the public. If the groups were combined despite their significant differences, a general preference would be observed for a summary opinion on control systems by the auditor relative to a detailed listing of either controls or internal control points (the relative average rankings are 3.1, 5.2, and 4.3 respectively). This preference for fewer "details," as well as some question as to whether any such report should be made available, were further emphasized in written comments on this section of the questionnaire, as exemplified by the following quotes:

> None of these reports would be particularly useful to the public. In fact, they could be misleading in that the public might view them as an auditor's assurance that fraud cannot take place within the firm.
>
> Too much information is worse than not enough. (private placement)
>
> I cannot rate these. And do not wish to. Most stockholders and probably most investors would not read a report including so much additional and technical comment and could easily misinterpret them. (common stock investment officer)
>
> The whole concept of 'a report' is foolish and the concept of trying to synthesize the conditions prevailing in our 1,500 legal entities produces an exercise in madness.
>
> Please, SIRS, SUMMARIZE *THE ENCYCLOPEDIA BRITTANICA* IN ONE SENTENCE. (Board of Directors and Audit Committee Member)

These comments combined with those reported at the end of Table 3 suggest a general attitude that reports concerning internal controls should not be made available. The responses to the questions regarding the potential harm and perceived value of control reports reinforce this interpretation.

TABLE 3

PREFERENCE FOR REPORT FORMS (A FREQUENCY DISTRIBUTION OF RESPONSES)

INSTRUCTIONS:

Listed below are eight possible report forms related to internal control which have been proposed for public dissemination. Please rank these in order of preference (1 = most preferred, ..., 8 = least preferred); costs related to each report should be considered in your ranking. Use each of the rank numbers 1, 2, ..., 8 one time only per column. The reporting alternatives are listed in alphabetical order.

Key

Board of Directors & Audit Committee Members	(BD)
Common Stock Investment Officers (Insurance)	(CS)
Certified Financial Analysts	(CFA)
Mutual Fund Analysts	(MUT)
Government Employees	(GOV)
Pilot Sample	(PI)
Commercial Lending Officers	(CL)
Certified Public Accountants	(CPAs)
Controllers for DJIA Companies	(MGMT)
Private Placement Investment Officers	(PP)
TOTAL SAMPLE (Mail)	(T)
Average	(μ)
Standard Deviation	(δ)

A. Auditor's opinion that a company's internal accounting control system adequately provides reasonable assurance that there is control over errors or irregularities that could be material to the financial statements.

$\chi^2 = 92.2_{84}$ @ .26*

	1**	2	3	4	5	6	7	8	μ	δ	No Response
BD	16.7	41.7	8.3	16.7	8.3	-	-	8.3	3.0	2.0	-
CS	37.9	10.3	6.9	17.2	10.3	6.9	3.4	3.4	3.0	2.1	3.4
CFA	33.3	22.2	-	-	-	-	-	11.1	2.5	2.7	33.3
MUT	25	25	-	-	-	-	-	25	3.7	3.8	25
GOV	-	-	25	25	-	25	-	-	4.3	1.1	25
PI	30.8	15.4	15.4	7.7	15.4	7.7	-	-	2.8	1.8	7.7
CL	38.5	15.4	15.4	7.7	7.7	-	-	-	2.2	1.4	15.4
CPAs	-	14.3	21.4	21.4	7.1	7.1	-	14.3	4.3	2.1	14.3
MGMT	8.3	-	33.3	8.3	25.0	-	-	-	3.6	1.3	25.0
PP	40	14.3	5.7	11.4	11.4	2.9	5.7	-	2.7	2.0	8.6
T	28.0	15.2	11.4	12.9	9.8	3.8	2.3	4.5	3.1	2.0	12.1

* χ^2 (chi-square) with its significance level is interpreted as the probability of observing the sample responses from the nine groups surveyed by mail given they all come from a population with homogeneous attitudes about internal control information. Note that the underlying assumption of χ^2 is independence and that these responses are expected to be intercorrelated due to the fact that they represent ranking statistics. Therefore, the mean values for the 8 responses (A through H) for the 9 groups surveyed by mail were analyzed by calculating the Kendall Coefficient of Concordance. The results are reported below:

W value	.379
χ^2_{df} value	23.856_7
Probability of exceeding this χ^2 value if the null hypothesis of independance is correct	.001
Kendall S--sums of squares of deviations from expected sums of ranks	1,278

The conclusion is that significant differences do exist among the groups' rankings. As noted in Table 2, the reported χ^2 statistics were generated from frequency data, although percentages are reported herein for ease of interpretation. The board of directors were again subdivided into two groups for the χ^2 computation.

**Due to rounding, the percentages may sum to slightly more or less than 100.

B. Auditor's opinion that a company's internal accounting control system adequately provides reasonable assurances of achievement of each of the objectives of internal accounting control (i.e., cost-benefit considerations are not limited to amounts material to the financial statements).

$\chi^2 = 98.7_{84}$ @ .13

	1	2	3	4	5	6	7	8	μ	δ	No Response
BD	25	8.3	25	8.3	16.7	-	-	16.7	3.7	2.5	-
CS	6.9	20.7	17.2	27.6	6.9	10.3	-	3.4	3.6	1.7	6.9
CFA	22.2	22.2	11.1	-	-	-	-	11.1	2.8	2.6	33.3
MUT	-	25	-	-	25	25	-	-	4.3	2.1	25
GOV	-	25	-	25	-	-	-	25	4.7	6.2	25
PI	-	15.4	-	15.4	23.1	7.7	7.7	7.7	4.8	1.9	23.1
CL	-	-	23.1	23.1	15.4	7.7	-	15.4	4.8	1.8	15.4
CPAS	-	-	-	14.3	14.3	14.3	7.1	35.7	6.4	1.6	14.3
MGMT	-	-	-	16.7	33.3	8.3	-	16.7	5.6	1.5	25
PP	2.9	17.1	25.7	17.1	8.6	14.3	-	2.9	3.8	1.6	11.4
T	6.1	12.9	15.9	17.4	12.1	9.8	.8	11.4	4.2	2.0	13.6

C. Description of the existing internal accounting controls by management (assume the length is constrained to five pages of an annual report).

$\chi^2 = 73.6_{84}$ @ .79

BD	-	-	8.3	8.3	-	16.7	25	41.7	6.7	1.7	-
CS	6.9	13.8	6.9	13.8	20.7	-	10.3	24.1	5.0	2.4	3.4
CFA	22.2	-	-	11.1	11.1	-	11.1	11.1	4.3	2.9	33.3
MUT	-	-	25	-	-	25	25	-	5.3	2.1	25
GOV	-	25	-	-	-	-	25	25	5.7	6.9	25
PI	-	-	-	7.7	-	23.1	15.4	38.5	6.9	1.3	15.4
CL	-	-	-	7.7	23.1	15.4	7.7	30.8	6.4	1.5	15.4
CPAs	7.1	14.3	7.1	14.3	7.1	-	21.4	14.3	4.8	2.5	14.3
MGMT	8.3	8.3	-	8.3	-	8.3	33.3	8.3	5.4	2.5	25.0
PP	8.6	8.6	11.4	5.7	28.6	5.7	8.6	14.3	4.8	2.2	8.6
T	6.8	8.3	6.8	9.1	15.9	6.1	15.2	19.7	5.2	2.3	12.1

$\chi^2 = 85.9_{84}$ @ .43

D. External Auditor's Letter of Recommendations (i.e., Management Letter).

	1	2	3	4	5	6	7	8	μ	δ	No Response
BD	-	-	8.3	8.3	8.3	25	8.3	33.3	6.3	1.7	8.3
CS	20.7	10.3	20.7	6.9	6.9	10.3	10.3	6.9	3.8	2.4	6.9
CFA	11.1	-	22.2	22.2	-	-	-	11.1	3.8	2.3	33.3
MUT	25	25	-	25	-	-	-	-	2.3	1.5	25
GOV	-	-	25	-	-	50	-	-	5.0	1.9	25
PI	23.1	15.4	15.4	15.4	15.4	-	-	15.4	3.6	2.4	-
CL	15.4	23.1	30.8	-	-	-	7.7	7.7	3.2	2.3	15.4
CPAs	-	-	21.4	-	-	42.9	-	21.4	5.8	1.9	14.3
MGMT	-	8.3	-	25.0	-	25.0	-	16.7	5.3	2.0	25.0
PP	20	14.3	14.3	11.4	8.6	5.7	11.4	5.7	3.7	2.3	8.6
T	12.9	9.8	16.7	9.8	4.5	14.4	6.8	11.4	4.3	2.3	13.6

E. Listing of primary strengths and weaknesses of the internal accounting control system by the auditor (assume the length is constrained to five pages of an annual report).

$\chi^2 = 78.6_{84}$ @ .65

BD	-	-	-	-	16.7	16.7	33.3	33.3	6.8	1.1	-
CS	3.4	20.7	10.3	3.4	10.3	24.1	13.8	6.9	4.7	2.2	6.9
CFA	11.1	-	11.1	11.1	22.2	-	-	11.1	4.3	2.3	33.3
MUT	-	25	25	-	-	-	-	25	4.3	3.2	25
GOV	-	-	-	25	-	-	25	25	6.3	3.3	25
PI	-	-	7.7	7.7	7.7	23.1	30.8	7.7	6.0	1.5	15.4
CL	7.7	7.7	15.4	7.7	15.4	15.4	15.4	-	4.5	2.0	15.4
CPAs	-	-	-	14.3	28.6	7.1	14.3	21.4	6.0	.4	14.3
MGMT	-	-	8.3	-	8.3	16.7	16.7	25.0	6.4	1.7	25.0
PP	2.9	25.7	11.4	5.7	8.6	17.1	14.3	5.7	4.4	2.2	8.6
T	3.0	12.9	9.1	6.1	12.9	15.2	15.2	12.9	5.1	2.1	12.9

$\chi^2 = 143.8_{84}$ @ .0000

F. Management's opinion on the adequacy of the internal accounting control system.

	1	2	3	4	5	6	7	8	u	δ	No Response
BD	25	16.7	8.3	-	25.0	8.3	-	16.7	3.9	2.6	-
CS	6.9	-	3.4	3.4	13.8	3.4	10.3	51.7	6.5	2.2	6.9
CFA	11.1	-	-	-	-	22.2	-	33.3	6.2	2.7	33.3
MUT	-	-	-	25	-	-	-	50	6.7	2.3	25
GOV	25	-	-	-	50	-	-	-	3.7	4.1	25
PI	23.1	7.7	7.7	15.4	-	-	23.1	7.7	4.1	2.7	15.4
CL	7.7	-	-	15.4	7.7	15.4	15.4	23.1	5.8	2.2	15.4
CPAs	50	7.1	14.3	-	7.1	-	-	7.1	2.3	2.2	14.3
MGMT	50	33.3	8.3	-	-	-	-	-	1.6	.7	8.3
PP	-	-	2.9	11.4	11.4	5.7	8.6	51.4	6.8	1.7	8.6
T	15.9	5.3	4.5	6.1	11.4	6.1	6.1	33.3	5.3	2.7	11.4

G. Management's opinion, attested to by an independent auditor, that a company's internal accounting control system adequately provides reasonable assurance that there is control over errors or irregularities that could be material to the financial statements.

$\chi^2 = 68.6_{72}$ @ .60

BD	16.7	33.3	8.3	8.3	16.7	8.3	8.3	-	3.3	2.0	-
CS	3.4	13.8	17.2	10.3	13.8	24.1	10.3	-	4.4	1.8	6.9
CFA	22.2	-	-	-	11.1	-	33.3	-	4.7	2.9	33.3
MUT	25	-	-	-	25	-	25	-	4.3	3.1	25
GOV	25	-	25	-	25	-	-	-	3.0	2.7	25
PI	23.1	30.8	23.1	7.7	7.7	-	-	-	2.4	1.2	7.7
CL	15.4	30.8	7.7	7.7	15.4	7.7	-	-	3.0	1.7	15.4
CPAs	21.4	35.7	7.1	7.1	7.1	14.3	-	-	2.9	1.8	7.1
MGMT	16.7	25.0	16.7	8.3	-	-	8.3	-	2.8	1.9	25
PP	5.7	14.3	20.0	11.4	8.6	22.9	11.4	-	4.2	1.9	5.7
T	12.1	18.9	13.6	8.3	11.4	14.4	9.8	-	3.8	2.0	11.4

H. Management's opinion, attested to by an independent auditor, that a company's internal accounting control system adequately provides reasonable assurances of achievement of each of the objectives of internal accounting control (i.e., cost-benefit considerations are not limited to amounts material to the financial statements).

$\chi^2 = 77.3_{84}$ @ .69

	1	2	3	4	5	6	7	8	u	δ	No Response
BD	16.7	-	25	25	-	8.3	8.3	16.7	4.3	2.4	-
CS	17.2	-	6.9	13.8	6.9	13.8	31	3.4	4.9	2.3	6.9
CFA	11.1	11.1	-	-	-	22.2	-	22.2	5.2	3.0	33.3
MUT	25	-	-	-	25	25	-	-	4.0	2.6	25
GOV	25	25	-	-	-	-	25	-	3.3	6.9	25
PI	7.7	7.7	23.1	15.4	7.7	7.7	7.7	7.7	4.2	2.1	15.4
CL	7.7	-	7.7	7.7	7.7	15.4	30.8	7.7	5.5	2.1	15.4
CPAs	7.1	7.1	14.3	7.1	7.1	-	35.7	7.1	5.1	2.4	14.3
MGMT	8.3	-	8.3	8.3	8.3	16.7	8.3	16.7	5.3	2.3	25.0
PP	11.4	2.9	8.6	17.1	2.9	14.3	28.6	8.6	5.1	2.3	5.7
T	12.9	3.0	9.1	12.1	5.3	12.9	23.5	9.1	5.0	2.3	12.1

21. If you could select some combination of the above report forms, you would prefer***

$\chi^2 = 476.2_{480}$ @ .54

	A	B	C	D	E	F	G	H
BD	25	25	8.3	-	8.3	16.7	25	25
CS	51.7	34.5	37.9	44.8	24.1	6.9	6.9	6.9
CFA	44.4	33.3	22.2	22.2	22.2	-	22.2	11.1
MUT	25	25	-	25	50	25	25	25
GOV	25	-	25	-	-	-	-	-
PI	38.5	30.8	-	7.7	-	38.5	23.1	7.7
CL	30.8	15.4	30.8	38.5	7.7	15.4	23.1	-
CPAS	14.3	7.1	7.1	7.1	7.1	21.4	7.1	-
MGMT	16.7	8.3	8.3	-	-	25	8.3	-
PP	54.3	31.4	48.6	40.0	28.6	5.7	8.6	5.7
T	38.6	24.2	28.8	27.3	18.2	11.4	12.1	6.8

***Percentages indicate how many respondents mentioned a given report within the combination listed on the questionnaire; since a number of combinations were indicated, the sum of the percentages is not equal to 100%.

22. Would you consider public dissemination of any of the above report forms to be: Of little or no value?

$\chi^2 = 467.7_{360}$ @ .0001

	A	B	C	D	E	F	G	H
BD	8.3	8.3	66.7	33.3	41.7	33.3	16.7	25
CS	10.3	10.3	31.0	17.2	24.1	37.9	17.2	31
CFA	22.2	22.2	33.3	33.3	11.1	33.3	22.2	22.2
MUT	25	25	25	-	25	25	25	-
GOV	-	25	25	-	25	-	-	-
PI	23.1	38.5	61.5	38.5	76.9	46.2	46.2	38.5
CL	23.1	30.8	46.2	46.2	38.5	53.8	30.8	38.5
CPAS	35.7	35.7	71.4	57.1	64.3	28.6	35.7	50
MGMT	41.7	58.3	83.3	50.0	83.3	33.3	41.7	58.3
PP	11.4	11.4	37.1	17.1	20	45.7	25.7	34.3
T	18.2	21.2	46.2	28.8	34.8	37.9	25	34.1

Harmful?

$\chi^2 = 329.8_{240}$ @ .0001

BD	-	8.3	8.3	41.7	33.3	-	-	8.3
CS	6.9	3.4	3.4	27.6	24.1	3.4	6.9	6.9
CFA	22.2	22.2	22.2	22.2	22.2	33.3	22.2	22.2
MUT	-	-	25	25	25	-	-	-
GOV	-	-	25	25	-	-	-	-
PI	30.8	38.5	23.1	46.2	30.8	23.1	23.1	30.8
CL	15.4	15.4	7.7	23.1	38.5	15.4	23.1	23.1
CPAS	28.6	42.9	35.7	50	57.1	28.6	28.6	42.9
MGMT	-	-	8.3	8.3	16.7	-	-	-
PP	8.6	5.7	8.6	31.4	28.6	8.6	11.4	11.4
T	9.8	10.6	12.1	29.5	29.5	9.8	11.4	13.6

Is there some other report form not listed that you would prefer to the above alternative?

Board of Directors & Audit Committee Members	The SEC's insistence on more reports will tend to dilute more important information in annual reports.
	The auditor's certificate is all the reassurance needed.
Common Stock Investment Officers (Insurance)	A management statement listing uncorrected management letter comments.
Pilot Sample	N/A: Question was not included on pilot survey instrument.
Commercial Lending Officers	No report should be offered.
Certified Public Accountants	SEC proposal for Phase I only.
Controllers for DJIA Companies	Compliance is a matter of law under FCPA.
	In our view no additional reports should be required.
Private Placement Investment Officers	Some standard established by accounting profession.

With respect to potential harm, several respondents stated that such disclosures would be

> Dangerous to make . . . public due to (their) proprietary nature. (private placement)

Hence, some general consensus that internal control reports are not desired is reflected by marginal comments, and if such reports are made available, the respondents clearly do not prefer the most extensive or most expensive report forms. In general, for the total sample, the auditor's report on internal controls, perhaps accompanied by management's opinion, limited to materiality considerations, is the preferred report form *if* control reporting is required.

A Second Look at the Disparity Between Users' and Producers' Responses

When the same user/producer dichotomy described for Table 2 is applied to Table 3, the following significant differences (at a .05 level) are observed:

- the user group prefers reports
  A (2.8 versus 3.6),
  B (3.8 versus 5.1),
  C (3.7 versus 5.8), and
  D (4.6 versus 6.4)
  relative to the producer group and
- the producer group prefers reports
  F (2.6 versus 6.4) and
  G (3.0 versus 4.1)
  relative to the user group.

Obviously these difference statistics are not strictly appropriate for the data, given they are intercorrelated rankings, but they do provide insight as to which reports influence the overall significance of the Kendall Coefficient of Concordance, reported in Table 3.

Of particular interest, as suggested earlier, are the responses of the BD group, a continuing user of internal control disclosures by CPAs. As reported in Table 3, the BD group ranks public disclosure of either the external auditor's letter of recommendations (report D) or a listing of strengths and weaknesses in the internal accounting control system by the auditor (report E) extremely low relative to the other respondents (6.3 and 6.8 respectively, versus an overall mean for the total sample, including BD, of 4.3 and 5.1). It would appear that as frequent users of management letters, the BD members would oppose making such reports public. As reflected in the comments already cited, the BD group, as well as the other respondents, generally opposed the concept of such potentially long and complicated disclosures. A comment by one BD respondent reflects the overall message:

> The auditor's certificate is all the reassurance needed.

The Effect of Prior Beliefs on Observed Attitudes Related to Internal Accounting Control

The survey instrument was constructed to provide a means of gaining some understanding of the extent to which the survey responses are affected by the

- misunderstanding of current audit responsibilities,
- lack of awareness that internal control adequacy does not preclude fraud, and
- tendency of respondents not to consider cost factors in such policy issues.

This study utilizes an "attitude-behavioral intention" framework (see Fishbein and Ajzen, 1975 for a detailed theoretical discussion). Prior beliefs about internal accounting control systems or extended reporting responsibilities and their related costs are assessed as a basis for explaining the attitudes of respondents regarding

- the desirability of extending internal accounting control reporting responsibilities,
- internal accounting control report preference rankings, and
- the effect of internal accounting control points, reported in an auditor's management letter, on the evaluation of the degree to which management is fulfilling its responsibilities to stockholders and creditors.

The results are reported in Exhibit A of the Appendix.

Exhibit A first outlines the operational questions used to assess beliefs regarding auditors' present responsibilities with respect to internal control, limitations of internal control and audit procedures, the state of the art with respect to evaluating controls and management's implementation of controls, and the expected costs of expanded study and evaluation of controls. The belief codes are then related to respondents' attitudes regarding the desirability of auditors' involvement, preference for internal control report forms, and the evaluation of internal control points in management letters.

The key findings, as reported in Exhibit A include the following:

- respondents' beliefs regarding auditors' present responsibilities explain a substantial amount of the observed variation in opinions concerning
  - —whether management's opinion on the adequacy of the internal accounting control system is preferred (72%),
  - —whether a management letter point which indicates that employees are not adequately bonded would have an effect on how management is assessed (56%), and
  - —whether one's responses regarding the effect of internal control points on the assessment of management would change if the company involved was small (as opposed to a medium-sized or large company) (64%);
- respondents' beliefs regarding the limitations of internal control and audit procedures explain a substantial amount of the observed variation in opinions concerning

—whether a management letter point which indicates that a client does not have an audit committee would have an effect on how management is assessed (54%),
—whether a management letter point which indicates that all of the current year's comments were also noted in the management letter issued last year (60%), and
—whether one's responses regarding the effect of internal control points on the assessment of management would change if the company involved was small (as opposed to a medium-sized or large company) (61%);

- respondents' beliefs regarding the state of the art with respect to evaluating controls and management's implementation of controls explain a substantial amount of the observed variation in opinion concerning
  —whether a management letter point which indicates that a client does not have an audit committee would have an effect on how management is assessed (40%),
  —whether a management letter point which indicates that although all officers and employees take vacations, control duties and functions are not performed by other persons during their absence, i.e., work is delayed for the week, would have an effect on how management is assessed (44%), and
  —whether a management letter containing all of the management letter points cited would affect the assessment of management (39%);
- respondents' beliefs regarding the expected costs of expanded study and evaluation of controls explain a substantial amount of the observed variation in opinion concerning
  —the desirability of auditors' involvement in the evaluation of internal controls (32% due to expected costs; 17% due to the expectation that fraud would be deterred; 31% due to the expectation that the public will be misled) and
  —whether a management letter point which indicates that a client does not have an audit committee would have an effect on how management is assessed (16% due to expected costs; and 20% due to the expectation that the public will be misled).

The implication which can be drawn from interpreting the main effects in the analysis of variance models that are reported in Exhibit A is that the profession can influence the various respondent groups' attitudes on control-related reporting issues by providing public information that will have an effect on these individuals' beliefs regarding the auditor's current activities, inherent limitations in control systems, available technology, and the costs of expanding both auditors' responsibilities and disclosure requirements. The information responsibilities of the profession are substantial, and "miscommunication," particularly as to auditors' current activities, can be expected to influence attitudes on disclosure issues.

"Misinformation" About Internal Control in Management Reports

One potential source of "misinformation" on auditors' responsibilities is the management report. The profession should, in light of the evidence presented in Exhibit A, exercise considerable care in reviewing management's

disclosures to ensure that auditors' activities, as well as the limitations of control systems and the cost considerations in establishing such systems, are accurately represented.

Management reports were suggested by The Committee on Auditors' Responsibilities (1978, p. 76), and the American Institute of Certified Public Accountants' Special Advisory Committee issued "Tentative Conclusions and Recommendations of the Reports by Management," providing examples of wording.[2] However, no standard language is presented; per discussion with an AICPA representative, the Committee wanted to avoid a letter format that would result in "boilerplate" application. However, as demonstrated in the following content analysis of management reports that are being issued, there are hazards of not prescribing a standard report.

A Growing Concern

Increased concern over the problems of imprecise language in management's reports is warranted in light of the growing number of companies including such representations in their financial statements; *Business Week* reported in its April 16, 1978 issue that

> a surprising 38% of the (annual) reports (reviewed) carried such a note (companies acknowledging management's responsibility for developing the financial figures) compared with only four companies a year ago.

This number has grown in apparent response to the Financial Executives Institute's (1978) endorsement that a management report be furnished in annual reports to shareholders. Beresford et al (1980) report from a sample of 305 companies drawn from the Fortune top 1000 companies, 40% issued management reports in 1979 relative to 23% in 1978. Similarly, Price Waterhouse & Co. reports that 56% of a sample of large electric, gas, and water companies issued 1980 management reports, compared to 39% in 1979 (Smartt, 1981).

If the Securities and Exchange Commission (SEC) proposal to require a Statement of Management on Internal Accounting Control (1979), postponed by the SEC in its June 6, 1980 withdrawal, were to be implemented, the scope of the problem with "misinformation" about internal controls would increase. Loose language concerning auditors' responsibilities could not only persist in management reports, but could be carried over to statements by management on internal accounting control.

Such imprecision could have liability implications for both companies and auditors (particularly with respect to "perceived" attestations of compliance with the accounting provisions of the Foreign Corrupt Practices Act [Securities Exchange Act of 1934, Section 13(b)(2)]. In past litigation, auditors' internal control work has been liberally interpreted in its scope.

> The court reasoned that Ernst & Ernst had a common-law and statutory duty of inquiry into the adequacy of First Securities' internal control system because it had contracted to audit First Securities and to prepare for filing with the Commission the annual report of its financial condition required under Section _ 17 of the 1934 Act and Rule 17a-5, 17 CFR _ 240.17a-5.

While responsibilities for Securities brokers or dealers include a review of internal controls according to audit procedures prescribed by the jurisdictional agency, such statements of expanded scope are not recommended to be included in reports to the public (Committee on Auditing Procedure, "Audits of Brokers or Dealers in Securities"). The above quote from Ernst & Ernst v. Hochfelder extends the review responsibility to include the auditor/customer relationship, in spite of potential problems with the customer's knowledge of the nature of the review conducted, or understanding of its limitations.

In the Adams v. Standard Knitting Mills, Inc. case (1976, ¶95, 683), Peat, Marwick, Mitchell & Co. faced the claim[3] (among others) that the proxy statements were deficient for

> failure to disclose that Chadbourn (a company with whom Standard merged) had continuing serious deficiencies in its data processing systems that jeopardized its business future and cast substantial doubt upon internally generated business statistics.

It is clear that the courts are contesting the limited evaluation and reporting responsibilities of auditors regarding internal controls. The common issuance of management reports that claim an extended audit function is likely to provide added impetus to litigation disputes.

An additional ramification of "misinformation" is its potential effect on individuals' decision-making. If creditors and investors believe the attest function extends to internal controls, they may not assess the risk profile of individual companies properly. This implies misallocations of resources and wealth transfers which would not occur in the absence of such erroneous beliefs.

Methodology

From the population of annual reports on file at the Graduate School of Management Library, at the University of Rochester, the latest available report for 88 of the 1980 top Fortune 100 companies was examined and a sample of 49 management reports was identified. Exhibit B of the Appendix summarizes the results of the content analysis which was performed for six of the companies providing management reports. Similar information for the other 43 companies can be obtained by contacting the author, who is now at Southern Methodist University. Exhibit C of the Appendix lists those "latest" annual reports reviewed for the sample that contained no management report, as well as those 12 companies of the Fortune 100 for which no annual report was available.

Results

Although Exhibit B indicates that many of the management reports contain similar content and tend to concern the topics generally described in the literature, "misinformation" is present in many of the reports regarding

- the requirements of generally accepted auditing standards (GAAS), and
- the nature of internal control.

Under Generally Accepted Auditing Standards (GAAS) an auditor is permitted to make an economic choice between reliance on internal controls or non-reliance. If the auditor believes a more effective and efficient audit can be performed without testing the control system, or if the system has such significant weaknesses that reliance is unwarranted, the auditor may only perform substantive tests.

In addition, GAAS apply to internal accounting controls as distinct from internal controls. Operating controls like quality of production checks are not subject to the auditor's review. In addition, only administrative controls that directly affect the accounts are required to be considered in the normal course of an audit. This emphasis on internal accounting controls is a very small subset of a firm's internal controls, i.e., the nervous system that activates overall operating policies and keeps a business within practical performance ranges. Furthermore, any reference to an auditor's review of such elements as "timeliness of disclosure" suggests an efficiency orientation to an audit which misrepresents the general nature of the audit function. Other than meeting regulators' time limits, there will be no specific attention paid to whether production reports or other disclosures are prepared in a timely manner.

Not only do Generally Accepted Auditing Standards not require a comprehensive review of an entire system of internal accounting controls, they do not provide a basis for reporting on the adequacy of internal accounting controls (let alone internal controls). Communication of material weaknesses in internal accounting control *that come to an auditor's attention* during an examination of financial statements is required.

> However there is no requirement under generally accepted auditing standards to evaluate each control or to identify every material weakness. (Statement on Auditing Standards No. 20, ¶3).

In addition, the criterion applied by an auditor to identify a material weakness is whether reasonable assurance is provided that "errors or irregularities in amounts that would be material in the financial statements being audited would be prevented or detected within a timely period by employees in the normal course of performing their assigned activities." (Statement on Auditing Standard No. 1). These criteria may be broader than those that may be appropriate for evaluating weaknesses in accounting control for management or other purposes.

Auditors differ as to their policies regarding the recommendation of internal control modifications and improvements. There is no requirement that they make such recommendations, and when the suggestions are verbalized, they are not analyzed on a cost/benefit basis to determine the propriety of the changes. The frequent absence of comprehensive internal control review and written control suggestions by auditors and the responsibility of management to select a control system based on cost/benefit estimates suggest that regular duties of auditors are being exaggerated and the management decision process for selection of controls is not being appropriately communicated in representations by managers.

"The work of internal auditors cannot be substituted for the work of the independent auditor" (Statement on Auditing Standard No. 9). While internal

auditors' procedures affect the nature, timing, and extent of the independent auditor's work, such internal audit functions are a supplement to, not a substitute for, the work of the independent auditor. The independent auditor will duplicate the efforts of internal auditors in the sense that tests of some of the work of internal auditors will be performed. Obviously, if significant defalcations by management occurred, there could be an incentive for internal auditors to concentrate their "work" in that area in an attempt to deter the external auditor from testing that area of control and/or set of transactions. While an independent auditor does not expect or search for fraud, the independence issue precludes clear substitution of internal audit work in an examination by an external auditor.

Exhibit B illustrates phraseology that could be misleading to report users in understanding GAAS. Confusion already exists with respect to auditor responsibility for the detection of fraud, as reported in survey results by Professor Richard E. Ziegler. Ziegler reports that bankers, financial analysts, and individual shareholders agree

> That an examination made in accordance with GAAS means that the auditor conforms to GAAS; evaluates the adequacy of the accounting system; (and) uses procedures specifically intended to detect fraud or other irregularities (The Commission on Auditors' Responsibilities, 1977, pp. 174-175).

Furthermore, the nature of internal control, particularly its limitations, is not adequately discussed in most management reports. An analysis by a researcher at the AICPA concerns problems with discussions of internal controls, other than the auditor's role, in fifty-eight management reports (56 from 1977 annual reports and 2 from 1978 reports). Zuber (1978) found only five of the fifty-eight reports referred to "internal accounting control" as opposed to internal control or financial control. Only nine of the fifty-eight reports discussed cost/benefit considerations and even fewer (five) referred to "inherent limitations" of internal accounting control. Other evidence accumulated by Zuber on the elements contained in the internal control references found in annual reports clearly demonstrates "misinformation" on current design and implementation practices and the general nature of internal control systems. While the results of my own study demonstrate some improvement relative to Zuber's findings, "misinformation" is still apparent. A key problem is that discussions of the adequacy of internal accounting controls are frequently loosely coupled with descriptions of independent auditors' activities. While much literature has discussed the frequency of management reports and their general content (see, for example, Brown and Kintzele, 1980 and *Financial Analysts Journal,* 1980), to my knowledge, other than the Zuber (1978) research cited above, little attention has been given to the detailed disclosures that can "miscommunicate."

Implications for Disclosure

The evidence in Tables 2 and 3 and Exhibits A and B has several implications for the auditor:

- Although SAS No. 30 permits disclosure of both material and immaterial weaknesses in public reports that express the auditor's opinion of internal accounting control as of a specified time period, the auditor should refrain from short listings of internal control points such as those summarized in Table 2
  —to avoid misinterpretation,
  —to avoid disclosing proprietary information, and
  —besides, users appear to prefer an opinion, in contrast to detailed information.
- While SAS No. 30 specifies that reports on an entity's system based solely on a study and evaluation of internal accounting control made as part of an audit is intended for "restricted use," such use includes "other specified third parties"; since it is probable such parties will include some of the stakeholder groups sampled in this study, a mere listing of control points could cause problems similar to those typically anticipated for reports on which no restrictions are placed on use.
- If a description of a control weakness is required, such description must explicitly describe the risk exposure from such a weakness; otherwise users will draw their own inferences concerning risk, some of which are likely to overstate or understate the actual risk faced by the entity.
- When conferring with a client who is preparing a management report on controls, the auditor should make management aware of the observed diversity of interpretation of such disclosures and the possibility of disclosing proprietary information, as well as the importance of accurately describing the auditors' limited involvement with internal accounting controls and the inherent limitations and cost/benefit dimensions of a control system.
- When requested to provide services related to the evaluation of controls, the CPA can discuss the reported preferences for control disclosures, and thereby assist the client in selecting the preferred type of engagement.
- When asked to advise a client as to whether resources should be allocated to a report on internal accounting controls, the general lack of interest in such reports indicated in this study can be discussed, as can the regulatory threat by the SEC of requiring such reports in the absence of voluntary disclosure; presumably, a cost/benefit analysis could then be performed by the entity as to its preferred disclosure strategy.

To meet desired standards of disclosure, Table 2 with the reported diversity of interpretation demonstrates how not to disclose weaknesses; additional direction to the profession beyond SAS 30 as to the form of disclosure which would at least narrow the range of the perceived effects of a particular weakness would be useful in avoiding possible ill effects of experimenting with control disclosures. Furthermore, Exhibit B suggests some potentially misleading disclosures in management reports which warrant attention by the profession.

My analysis presented in Exhibit A of the Appendix suggests one approach to improving the consistency with which existing disclosures and future proposals for additional disclosures, particularly those related to internal

accounting controls, are evaluated by market participants. By informing the public as to the state of the art of audit technology, the requirements of GAAS, the current responsibilities of CPAs, and the verifiable costs of proposed requirements, market participants' beliefs on such matters will be more consistent with observed auditing practices, and, in turn, their attitudes involving disclosure policies can be expected to be less diverse than would be the case if erroneous beliefs as to auditing practices were permitted to persist.

Footnotes

1. A wave analysis comparing early and late respondents, as well as a paired-sample t-test of original responses with those received from a post-questionnaire study were performed as tests for nonresponse bias. No significant differences were observed.

2. Beresford et al (1980) provide a useful comparison of the subjects which have been proposed for inclusion in management reports by the Financial Executives Institute, the Cohen Commission, and the AICPA.

3. While this case was appealed and decided in favor of the accountant, as was the Hochfelder case, the mere claim in past litigation that auditors be held responsible for assessing the adequacy of internal controls suggests that litigious concerns are warranted.

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APPENDIX

- Exhibit A
  ANOVA Results Concerning the Relationship of Beliefs and Attitudes Related to Internal Accounting Control
- Exhibit B
  A Content Analysis of Management Reports
- Exhibit C
  No Management Report Included in Annual Report Reviewed

EXHIBIT A

ANOVA Results Concerning the Relationship of Beliefs and Attitudes Related to Internal Accounting Control

BELIEFS

	Operational Questions	Code
•Auditors' Present Responsibilities This series of statements is designed to determine your views about the nature of internal accounting control and its current relationship to the external audit function. For each item, please answer by circling one of the following categories: Definitely True (DT) More True than False (MTF) Uncertain (?) More False than True (MFT) Definitely False (DF)	All internal accounting controls that have a significant bearing on the prevention and detection of material fraud are tested by the external auditor annually.	A
	The auditor's unqualified audit report implicitly indicates that no material weakness exists in the internal accounting controls of the client.	B
	The determination of whether or not recommended internal accounting controls are justified on a cost/benefit basis is the responsibility of the auditor.	C
	Special examinations specifically designed to detect defalcations will uncover all current defalcations.	D
	If a financial statement item can be substantiated with less effort by not relying on internal accounting control, the auditor may omit testing of the related control procedures.	E
•Limitations of Internal Control and Audit Procedures • [Same Directions As Above]	If a current internal accounting control system is deemed adequate, it is reasonable to project the future adequacy of such controls.	AA
	Most embezzlement losses are due to lack of compliance with prescribed procedures or circumvention of the internal accounting control system, rather then the ineffectiveness of the system design.	BB
	Internal accounting control systems border on impotence when standing guard against collusion of management.	CC
	A fraud such as occurred at Equity Funding is possible without the auditor being at fault.	DD
	[Also applicable.]	EE
•State of the Art [Same Directions As Above]	The evaluation of internal accounting controls is a highly subjective process in which knowledgeable individuals can arrive at different conclusions concerning adequacy.	AAA
	Weaknesses in internal accounting control will cause unaudited financial statements to be misleading.	BBB
	Management should accept and implement recommendations by the auditor for improvements in the internal accounting control system.	CCC
•Expected Costs of Expanded Study and Evaluation of Controls Below is a list of possible effects of extending auditors' internal control responsibilities. Please indicate whether you believe each item is an effect of extended responsibilities. (Yes or No)		
	POSSIBLE EFFECTS OF EXTENDING AUDITORS' INTERNAL CONTROL RESPONSIBILITIES	
-Cost Effects	Audit costs will increase by 30%.	A1
	Companies on average will increase the investment in their internal accounting control systems in excess of the level of investment that can be justified on a cost/benefit basis.	A2
	The increased controls will be cumbersome, resulting in lower efficiency of operations.	A3
	The internal accounting controls are extended beyond the firm's cost/benefit point in order to cover the liability risk to directors and external auditors.	A4
	Public disclosure of internal accounting control information (e.g., material weaknesses) will create a competitive disadvantage to the reporting companies.	A5
-Financial Statement Effect	The risk of error in year-end financial statement balances will increase.	A6
-Fraud Deterrent Expected	Substantially greater protection against material fraud is not provided.	A7
-Less Information	Information items currently in annual reports, e.g., accident records, hiring and management training programs, will be deleted, i.e., replaced by a "boiler-plate" report.	A8
	Managers will be unwilling to respond to analysts' direct questions concerning internal control; the analysts will simply be referred to the public "boiler-plate" reports.	A9
-Misled Public	The extension and related disclosures will mislead the public.	A10
	Users of internal accounting control reports will project over the long-term future that such controls will be adequate.	A11
	Users of internal accounting control reports believe fraud is thereby precluded.	A12

Attitude	Belief Code	Sum of Squares df (Mean Square)	F (Signif.)	Main Effect SS (MS)	Main Effect F (Sig)	Grand Mean	Interpretation
•*The desirability of auditors' involvement Operational Question*	A1	1.71_1 (1.7)	10.24 (.002)	7.63_5 (1.53)	9.19 (.000)	.45	More desirable by +.2 if no; -.2 if yes
-Are you in favor of auditors being required to issue some form of report on internal accounting controls to the public that would require a more extensive study and evaluation of a system of internal accounting controls than is performed in an examination of financial statements? Yes No	A2	1.01_1 (1.01)	6.10 (.016)	7.63_5 (1.53)	9.19 (.000)	.45	Less desirable by -.3 if yes
Expected Cost Effects Explain .32 of the Variation in Attitude							
	A7	4.29_1 (4.29)	20.73 (.000)			.43	More desirable by +.17 if no; -.24 if yes
Expected Fraud Deterrent Explains .17 of the Variation in Attitude							
	A9	1.05_1 (1.05)	4.43 (.038)	1.89_2 (.942)	3.97 (.022)	.44	More desirable by +.1 if no; -.7 if yes
Less Information Expectations Explain .08 of the Variation in Attitude							
	A10	6.43_1 (6.43)	36.18 (.000)	7.33_3 (2.44)	13.74 (.000)	.45	More desirable by +.21 if no; -.35 if yes
Expectations that the Public Will be Misled Explain .31 of the Variation in Attitude							
•*Preference for report form Operational Questions*							
-Listed below are eight possible report forms related to internal control which have been proposed for public dissemination. Please rank these in order of preference (1 = most preferred, ..., 8 = least preferred); costs related to each report should be considered in your ranking. Use each of the rank numbers 1, 2, ..., 8 one time only per column. The reporting alternatives are listed in alphabetical order.							
--Auditor's opinion that a company's internal accounting control system adequately provides reasonable assurance that there is control over errors or irregularities that could be material to the financial statements.	A4	41.76_1 (41.76)	8.24 (.005)	46.6_5 (9.32)	1.84 (.114)	4.66	More preferred by +.5 if no; -.5 if yes
	A6	17.05_1 (17.05)	4.08 (.046)			3.08	More preferred by +.10 if no; -1.51 if yes
Expected Financial Statement Effect Explains .04 of the Variation in Attitude							
	E	54.38_4 (13.60)	3.97 (.01)	103.7_{18} (5.76)	1.68 (.11)	3.60	More preferred by +1.2 if believe tests are not omitted
	A2	24.22_1 (24.22)	4.79 (.031)	45.01_5 (9.002)	1.78 (.125)	4.29	Less preferred by -.31 if no; +.52 if yes
	A4	23.24_1 (23.24)	4.60 (.035)	45.01_5 (9.002)	1.78 (.125)	4.29	More preferred by +.24 if no; -.23 if yes
	A7	19.45_1 (19.45)	4.77 (.031)			4.18	Less preferred by -.35 if no; +.52 if yes
Expected Fraud Deterrent Explains .04 of the Variation in Attitude							

Attitude	Belief Code	Sum of Squares$_{df}$ (Mean Square)	F (Signif.)	Main Effect SS$_{df}$ (MS)	Main Effect F (Sig)	Grand Mean	Interpretation
--Description of the existing internal accounting controls by management (assume the length is constrained to five pages of an annual report).	EE	38.82_{3} (12.94)	3.46 (.030)	122.70_{19} (6.46)	1.72 (.10)	5.7	More preferred by +1.5 if uncertain -.8 if believe special exams will not uncover all fraud
	A2	23.27_{1} (23.27)	5.37 (.023)	42.89_{5} (8.58)	1.98 (.09)	4.9	Less preferred by -.45 if no; +.75 if yes
--External Auditor's Letter of Recommendations (i.e., Management Letter)	A7	25.37_{1} (25.37)	4.73 (.032)			4.3	Less preferred by -.39 if no; +.61 if yes
	Expected Fraud Deterrent Explains .11 of the Variation in Attitude						
--Listing of primary strengths and weaknesses of the internal accounting control system by the auditor (Assume the length is constrained to five pages of an annual report).	D	38.28_{3} (12.76)	3.15 (.04)	95.4_{18} (5.3)	1.31 (.26)	5.4	More preferred by +.6 if believe special exams will not uncover all fraud
	A2	23.7_{1} (23.7)	6.06 (.012)	32.0_{5} (6.40)	1.77 (1.27)	3.74	More preferred by +.35 if no; -.61 if yes
	A7	42.08_{1} (42.08)	10.14 (.002)			5.0	Less preferred by -.39 if no; +.77 if yes
	Expected Fraud Deterrent Explains .09 of the Variation in Attitude						
--Management's opinion on the adequacy of the internal accounting control system.*	A	42.71_{4} (10.68)	3.21 (.029)	222.8_{18} (12.38)	3.73 (.001)	5.5	More preferred by +2.53 if believe auditors do not test all controls
	B	81.24_{4} (20.31)	6.11 (.001)	222.8_{18} (12.38)	3.73 (.001)	5.5	More preferred by +2.2 if believe clean audit report does not mean no material weakness
	D	38.09_{3} (12.70)	3.82 (.022)	222.8_{18} (12.38)	3.73 (.001)	5.5	More preferred by +1.1 if believe special exams will not uncover all fraud
	Beliefs Regarding Auditors' Present Responsibilities Explain .72 of the Variation in Attitude						
	A7**	85.18_{1} (85.18)	13.09 (.000)			5.39	More preferred by +.73 if no; -1.06 if yes
	A9	29.06_{1} (29.06)	4.15 (.044)	39.57_{2} (19.79)	2.83 (.064)	5.43	More preferred by +.4 if no; -.8 if yes
	Less Information Expectations Explain .05 of the Variation in Attitude						
	A12	44.0_{1} (44.0)	7.04 (.009)	94.56_{3} (31.52)	5.05 (.003)	5.48	More preferred by +.82 if no; -.88 if yes
	Expectations that the Public Will Be Misled Explain .13 of the Variation in Attitude						

Attitude	Belief Code	Sum of Squares$_{df}$ (Mean Square)	F (Signif.)	Main Effect SS (MS)	Main Effect F (Sig)	Grand Mean	Interpretation
--Management's opinion, attested to by an independent auditor, that a company's internal accounting control system adequately provides reasonable assurance that there is control over errors or irregularities that could be material to the financial statements.	A7	19.01_{1} (19.01)	4.99 (.028)			3.78	More preferred by +.34 if no; -.51 if yes
	A10	15.34_{1} (15.34)	4.00 (.048)	24.87_{3} (8.29)	2.16 (.098)	3.76	More preferred by +.34 if no; -.6 if yes
	Expectations that the Public Will Be Misled Explain .06 of the Variation in Attitude						
--Management's opinion, attested to by an independent auditor, that a company's internal accounting control system adequately provides reasonable assurances of achievement of each of the objectives of internal accounting control (i.e., cost-benefit considerations are not limited to amounts material to the financial statements).	AAA	86.48_{4} (21.62)	4.36 (.006)	107.23_{11} (9.75)	1.97 (.066)	4.58	More preferred by +3.6 if no

•*Evaluation of Management Operational Questions*

-The following is a list of internal control points that might appear in a management letter issued by an external auditor to a medium-sized client (i.e., total sales of the client are approximately $50 million). Please indicate whether any of these points would affect your view of the quality of management--i.e., the degree to which management is fulfilling its responsibilities to stockholders and creditors.

INTERNAL CONTROL POINTS

Consider each statement independently; circle your response.

EFFECT ON YOUR ASSESSMENT OF MANAGEMENT:

Don't know (coded 1)	(?)
None	(N)
Slightly negative	(S-)
Negative	(-)
Extremely negative	(E-)
If it is not implemented, management should be subject to discipline (e.g., fined under the Foreign Corrupt Practices Act) (coded 6)	(D)

--The client does not have an audit committee.	BB	10.58_{4} (2.64)	2.70 (.05)	36.39_{19} (1.92)	1.94 (.049)	3.98	Less negative by -.65 if uncertain as to whether embezzlement is typically due to circumvention; even less negative by -.98 if do not believe this

Attitude	Belief Code	Sum of Squares$_{df}$ (Mean Square)	F (Signif.)	Main Effect SS$_{df}$ (MS)	Main Effect F (Sig)	Grand Mean	Interpretation
	DD	13.78$_4$ (3.44)	3.49 (.018)	36.39$_{19}$ (1.92)	1.94 (.049)	3.98	Less negative by -.65 if uncertain as to Equity Funding being possible without the auditor being at fault
	Beliefs Regarding the Limitations of Internal Control Explain .54 of the Variation in Attitude						
	AAA	17.33$_4$ (4.33)	4.23 (.006)	26.07$_{11}$ (2.37)	2.32 (.027)	3.98	More negative by +2.0 if uncertain or if do not believe evaluation of controls is highly subjective
	CCC	11.23$_3$ (3.74)	3.66 (.021)	26.07$_{11}$ (2.37)	2.32 (.027)	3.98	Less negative by -1.0 if uncertain or do not believe management should accept recommendations
	Beliefs Regarding the State of the Art Explain .40 of the Variation in Attitude						
	A3	4.89$_1$ (4.89)	4.93 (.029)	20.27$_5$ (4.05)	4.09 (.002)	3.73	More negative by +.27 if do not believe increased controls will be cumbersome; -.4 if do believe
	A4 **	4.83$_1$ (4.83)	4.86 (.030)	20.27$_5$ (4.05)	4.09 (.002)	3.73	More negative by +.35 if do not believe controls will cover liability risk; -.34 if do believe
	Expected Cost Effects Explain .16 of the Variation in Attitude						
	A8 ***	5.24$_1$ (5.24)	5.00 (.027)	5.48$_2$ (2.74)	2.61 (.078)	3.80	Less negative by -.1 if do not believe information will be deleted; +.36 if do believe
	A10 **	9.53$_1$ (9.53)	10.80 (.001)	23.01$_3$ (7.67)	8.69 (.000)	3.79	More negative by +.29 if do not believe public will be misled; -.5 if do believe
	A12 **	4.77$_1$ (4.77)	5.44 (.022)	23.01$_3$ (7.67)	8.69 (.000)	3.79	More negative by +.29 if do not believe public will be misled; -.32 if do believe
	Expectations that the Public Will Be Misled Explain .20 of the Variation in Attitude						
--Although all officers and employees take vacations, control duties and functions are not performed by other persons during their absence, i.e., work is delayed for the week	DD***	13.03$_4$ (3.26)	2.79 (.043)	28.67$_{19}$ (1.51)	1.30 (.26)	3.94	Less negative by -.7 if uncertain as to Equity Funding being possible without the auditor being at fault
	BBB	14.12$_4$ (3.53)	3.70 (.012)	28.58$_{11}$ (2.60)	2.72 (.011)	3.94	More negative by +1.1 if believe control weaknesses cause misleading unaudited statements; -.7 if uncertain
	Beliefs Regarding the State of the Art Explain .44 of the Variation in Attitude						

Attitude	Belief Code	Sum of Squares$_{df}$ (Mean Square)	F (Signif.)	Main Effect SS$_{df}$ (MS)	Main Effect F (Sig)	Grand Mean	Interpretation
	A3 **	13.72$_1$ (13.72)	12.85 (.001)	21.92$_5$ (4.38)	4.11 (.002)	3.74	More negative by +.4 if do not believe increased controls will be cumbersome; -.6 if do believe
	Expected Cost Effects Explain .18 of the Variation in Attitude						
	A9 ***	7.34$_1$ (7.34)	7.25 (.008)	7.41$_2$ (3.71)	3.66 (.029)	3.79	More negative by +.18 if believe management is willing to answer questions; -.4 if do not believe
	Less Information Expectations Explain .06 of the Variation in Attitude						
	A10	11.23$_1$ (11.23)	12.33 (.001)	18.97$_3$ (6.32)	6.94 (.000)	3.80	More negative by +.29 if do not believe public will be misled; -.55 if do believe
	Expectations that the Public Will Be Misled Explain .17 of the Variation in Attitude						
--Employees are not adequately bonded	C	8.97$_3$ (2.99)	4.16 (.01)	28.19$_{18}$ (1.57)	2.18 (.03)	4.1	More negative by +1.1 if believe auditors assess cost/benefit
	Beliefs Regarding Auditors' Present Responsibilities Explain .56 of the Variation in Attitude						
	BB	10.51$_4$ (2.63)	3.45 (.019)	26.90$_{19}$ (1.42)	1.86 (.061)	4.1	More negative by +1.2 if believed embezzlement is typically due to circumvention
	A2	4.87$_1$ (4.87)	4.69 (.033)	13.05$_5$ (2.61)	2.51 (.035)	3.85	Less negative by -.05 if do not believe investments will be beyond cost/benefit level; +.08 if do believe
	A4	7.77$_1$ (7.77)	7.49 (.007)	13.05$_5$ (2.61)	2.51 (.035)	3.85	More negative by +.25 if do not believe controls will cover liability risk; -.24 if do believe
	Expected Cost Effects Explain .12 of the Variation in Attitude						
--There is no internal auditor or audit staff	A7**	7.72$_1$ (7.72)	6.49 (.012)			4.14	More negative by +.22 if do believe fraud protection is provided -.32 if do not believe
	Expected Fraud Deterrent Explains .06 of the Variation in Attitude						
--No authorization procedures exist for the purchase or sale of investments	A9	6.67$_1$ (6.67)	10.65 (.001)	7.16$_2$ (3.58)	5.71 (.004)	4.38	More negative by +.2 if believe management is willing to answer questions; -.4 if do not believe
	Less Information Expectations Explain .10 of the Variation in Attitude						
	A10	7.12$_1$ (7.12)	6.84 (.010)	9.75$_3$ (3.25)	3.12 (.03)	4.15	More negative by +.2 if do not believe public will be misled; -.4 if do believe
	Expectations that the Public Will Be Misled Explain .08 of the Variation in Attitude						

Attitude	Belief Code	Sum of Squares$_{df}$ (Mean Square)	F (Signif.)	Main Effect SS (MS)	Main Effect F (Sig)	Grand Mean	Interpretation
--The firm has no manual of operating procedures	A3	7.43_{1} (7.43)	8.17 (.005)	13.71_{5} (2.74)	3.01 (.015)	3.94	More negative by +.27 if do not believe increased controls will be cumbersome; -.41 if do believe
	Expected Cost Effects Explain .12 of the Variation in Attitude						
	A6	6.46_{1} (6.46)	6.042 (.015)			3.08	More negative by +.06 if do not believe risk increases; -.93 if do believe
	Expected Financial Statement Effect Explains .05 of the Variation in Attitude						
	A7	9.05_{1} (9.05)	8.011 (.006)			3.89	More negative by +.23 if do believe fraud protection is provided; -.34 if do not believe
	Expected Fraud Deterrent Explains .07 of the Variation in Attitude						
--Access to computer facilities is not limited	AA	12.33_{4} (3.08)	2.74 (.046)	26.32_{19} (1.39)	1.23 (.295)	4.24	More negative by +1.1 if believe you can project the adequacy of controls
	CCC	11.42_{3} (3.81)	3.57 (.023)	19.49_{11} (1.77)	1.66 (.12)	4.20	Less negative by -2.2 if uncertain whether management should accept recommendations
	A3	6.74_{1} (6.74)	7.48 (.008)	8.19_{5} (1.64)	1.82 (.12)	4.21	More negative by .22 if do not believe increased controls will be cumbersome; -.32 if do believe
	A9	3.03_{1} (3.03)	4.16 (.044)	3.05_{2} (1.53)	2.09 (.13)	4.28	More negative by +.12 if believe management is willing to answer questions; -.22 if do not believe
--A perpetual inventory system that continually records purchases and costs of sales throughout the year is not used; instead, the company uses a periodic system, updating its inventory records once a year	A3	10.56_{1} (10.56)	9.66 (.003)	14.92_{5} (2.98)	2.73 (.02)	3.62	More negative by +.28 if believe increased controls will be cumbersome; -.41 if do believe
	Expected Cost Effects Explain .12 of the Variation in Attitude						
	A8	4.74_{1} (4.74)	4.68 (.033)	5.71_{2} (2.85)	2.82 (.064)	3.68	More negative by +.32 if believe information will be deleted
	Less Information Expectations Explain .05 of the Variation in Attitude						
--All records maintained in the branches are under the supervision of the branch managers	A7	7.32_{1} (7.32)	4.85 (.03)			3.26	Less negative by -.21 if do believe fraud protection is provided and +.31 if do not believe
	Expected Fraud Deterrent Explains .04 of the Variation in Attitude						

Attitude	Belief Code	Sum of Squares$_{df}$ (Mean Square)	F (Signif.)	Main Effect SS (MS)	Main Effect F (Sig)	Grand Mean	Interpretation
	A10	11.09_{1} (11.09)	8.44 (.005)	19.32_{3} (6.4)	4.91 (.003)	3.34	Less negative by -.2 if do not believe public will be misleading; +.38 if do believe
	A11	9.84_{1} (9.84)	7.49 (.007)	19.32_{3} (6.4)	4.91 (.003)	3.34	Less negative by -.32 if do not believe users will project; +.23 if do believe
	Expectations that the Public Will Be Misled Explain .13 of the Variation in Attitude						
--How would a management letter issued by an external auditor containing all of the above internal control points affect your assessment of management?	BB	14.49_{4} (3.62)	3.11 (.031)	36.96_{19} (1.95)	1.68 (.105)	4.27	More negative by +1.1 if believe embezzlement is typically due to circumvention; -2.27 if do not believe
	AAA	13.87_{4} (3.47)	3.20 (.024)	30.46_{11} (2.77)	2.55 (.017)	4.27	More negative by +1.7 if uncertain or do not believe evaluation of controls is highly subjective
	CCC	12.50_{3} (4.17)	3.84 (.017)	30.46_{11} (2.77)	2.55 (.017)	4.27	Less negative by -2.27 if uncertain whether management should accept recommendations
	Beliefs Regarding State of the Art Explain .44 of the Variation in Attitude						
	A3	9.0_{1} (9.0)	8.28 (.005)	18.97_{5} (3.79)	3.49 (.006)	4.33	More negative by +.22 if do not believe increased controls will be cumbersome; -.33 if do believe
	A5	9.36_{1} (9.36)	8.61 (.004)	18.97_{5} (3.79)	3.49 (.006)	4.33	Less negative by -.19 if do not believe a competitive disadvantage will result; +.25 if do believe
	Expected Cost Effects Explain .15 of the Variation in Attitude						
	A8	3.76_{1} (3.76)	4.03 (.047)	5.51_{2} (2.76)	2.96 (.056)	4.39	More negative by +.29 if do believe information will be deleted
--How would a management letter containing all of the above internal control points affect your assessment of management, if you knew that each of the points were also noted in the management letter issued last year?	BB	17.93_{4} (4.48)	4.38 (.007)	43.97_{19} (2.31)	2.26 (.023)	4.61	Less negative by -2.6 if believe embezzlement is not typically due to circumvention
	Beliefs Regarding the Limitations of Internal Control Explain .60 of the Variation in Attitude						
	AAA	12.97_{4} (3.24)	2.75 (.042)	28.20_{11} (3.24)	2.75 (.042)	4.59	More negative by +1.4 if uncertain or if do not believe evaluation of controls is highly subjective
	Beliefs Regarding State of the Art Explain .39 of the Variation in Attitude						

Attitude	Belief Code	Sum of Squares$_{df}$ (Mean Square)	F (Signif.)	Main Effect SS$_{df}$ (MS)	Main Effect F (Sig)	Grand Mean	Interpretation
	A3	5.71$_1$ (5.71)	5.33 (.023)	22.72$_5$ (4.55)	4.24 (.002)	4.63	More negative by +.21 if do not believe increased controls will be cumbersome; -.24 if do believe
	A4	7.49$_1$ (7.49)	6.99 (.01)	22.72$_5$ (4.55)	4.24 (.002)	4.63	More negative by +.25 if do not believe controls will cover liability risk; -.24 if do believe
	A5	11.58$_1$ (11.58)	10.81 (.001)	22.72$_5$ (4.55)	4.24 (.002)	4.63	Less negative by -.20 if do not believe a competitive diadvantage will result; +.26 if do believe
	Expected Cost Effects Explain .17 of the Variation in Attitude						
--Would any of your responses regarding the effect of the internal control points on your assessment of management change if the company involved was small (as opposed to a medium-sized or large company)? Yes No	D	1.64$_3$ (.55)	3.65 (.025)	7.10$_{18}$ (.40)	2.63 (.01)	.59	Less likely to change by -.4 if believe special exam will uncover fraud; +.4 if believe it will not
	Beliefs Regarding Auditors' Present Responsibilities Explain .64 of the Variation in Attitude						
	EE	4 43$_3$ (1.48)	8.77 (.000)	6.95$_{19}$ (.37)	2.18 (.032)	.57	Less likely to change by -.35 if believe special exam will uncover fraud; +.37 if believe it will not
	Beliefs Regarding the Limitations of Internal Control Explain .61 of the Variation in Attitude						
	A7	2.08$_1$ (2.08)	9.00 (.003)			.57	Less likely to change by -.21 if do believe fraud protection is provided; +.16 if do not believe
	Expected Fraud Deterrent Explains .08 of the Variation in Attitude						

*The chi-square for this item and the group classification is significant at a .05 level. The interpretation of how this belief differs within each group is analyzed in the manuscript.

**The main effect of group for this question is significant at a .05 level. The interpretation of how the belief differs within each group is beyond the scope of this paper.

***The main effect of group for this question is significant at a .05 level, and results in the insignificance of the main effect of this questionnaire item. The implication is that either groups are more important than the belief or that the beliefs are, in effect, group-dependent. Further investigation of how the belief differs across groups is beyond the scope of this paper.

NOTE: All belief codings above the italicized description of the R^2 values, which are not separated by lines, are significant variables in the ANOVA model. If beliefs are separated by lines, with no R^2 provided, the reported separate effects are significant at a .05 level, but the main effects are not. When main effects are not reported, they can be assumed to be identical to the reported separate effects, since only one variable was included in those ANOVA models.

EXHIBIT B

A Content Analysis of Management Reports

	COMPANY					
	Aluminum Company of America	American Brands, Inc.	Armco	Ashland Oil, Inc.	Beatrice	Bendix Corporation
Annual Report Reviewed	1980	1980	1980	1981	1981	1980
Management Responsibilities	Prepared F/S	Prepared F/S	Prepared F/S	Prepared F/S	Prepared F/S	Prepared F/S
Controls Designed for Reasonable Assurance ...	Yes	Yes	Yes	Yes	Yes "in all material respects"	Yes
Maintains System of Controls	Yes	Yes	Yes	Yes	Yes	Yes
Effective Systems Depend Upon ...	No	No	No	Yes	No	No
Inherent Limitations of Internal Control	No	No	No	No	No	No
Cost/Benefit Considerations	No	No	No	Yes	Yes	No
We Believe Cost/Benefit Relationships Appropriately Balanced	No	No	No	No	No	No
Internal Audit Department Exists	Yes	Yes	Yes	Yes	Yes	Yes
Ethics Policy Exists	Yes	No	Yes	No	No	No

	Aluminum Company of America	American Brands, Inc.	Armco	Ashland Oil, Inc.	Beatrice	Bendix Corporation
Audit Committee Exists	Yes	Yes	Yes	Yes	Yes	Yes
•Members are not Internal	Yes	Yes	Yes	Yes	Yes	Yes
•Meet With Auditors	Yes	Yes	Yes	Yes	Yes	Yes
•Recommend Auditors to Board	No	No	No Approved Mgmt's Recommendation	No	Yes	No "selects the independent public accountants"
•Other Activities are Described	No	No	Yes	Yes	Yes	No
External Auditors	Coopers & Lybrand	Coopers & Lybrand	Deloitte Haskins & Sells	Ernst & Whinney	Peat, Marwick, Mitchell & Co.	Deloitte Haskins & Sells
•Responsible for Fairness of Financial Statements	No	No	No	Yes	Yes	No
•Limited Responsibilities With Respect to Controls	No	No	No	No	No "Internal accounting controls are also monitored and tested by a program of internal and external audits"	No
-GAAS Includes Study & Evaluation	No	No	No	No	No	"GAAS, which require a review of the system of internal accounting controls in order to express the opinion shown below."
-GAAS Only Requires Tests of Controls to the Extent Deemed Appropriate	No	"selective tests of internal accounting controls"	No	No	"review and make appropriate tests of the systems of internal accounting control ... to the extent they consider necessary"	No
-Internal Accounting Control vs. Internal Controls	Yes	Yes	Yes	No	Yes	Yes
-Issuance of Mgmt. Letter vs. Report on Adequacy	No	No	No	No	No	No

	Aluminum Company of America	American Brands, Inc.	Armco	Ashland Oil, Inc.	Beatrice	Bendix Corporation
Form and Express Opinions on the Adequacy of Internal Control	"discuss their (internal auditor's and independent CPAs') evaluation of internal accounting controls"	No	No	No	No	No
Auditors Regularly Report on Modifications and Improvements in Internal Control	No	No	No	No	No	No
Auditors' Work is Replaced by Internal Auditing Work	No	No	No	No	The activities of the internal auditors and independent public accountants are coordinated to obtain reasonable audit coverage with a minimum of duplicate effort and cost.	No
Management's Involvement in Replying to Management Letter Suggestions	No	No	No	No	No	No
-Specific Reference to Material Weaknesses	No	No	No	No	No	No
Managers Regularly Appraise Controls	No	No	Yes	No	No	No
Signatures Provided	(1) Chrmn. of Board & CEO (2) Exec. VP--Finance	None	VP--Corp. Finance & Info. Resources	None	None	(1) Pres. & CEO (2) Exec. VP & Chief Financial Officer

EXHIBIT C

No Management Report Included in Annual Report Reviewed

Company	Year	Auditor
Allied Chemical	1980	Price Waterhouse & Co.
American Can Co.	1980	Coopers & Lybrand
American Home Products Corp.	1980	Arthur Andersen & Co.
Atlantic Richfield	1976	Coopers & Lybrand
Boeing	1973	Touche Ross & Co.
Borden, Inc.	1979	Price Waterhouse & Co.
Caterpillar	1978	Price Waterhouse & Co.
Champion International Corporation	1977	Arthur Andersen & Co.
The Charter Co.	1980	Peat, Marwick, Mitchell & Co.
Chrysler Corp.	1978	Touche Ross & Co.
The Coastal Corporation	1980	Touche Ross & Co.
Consolidated Foods Corp.	1975	Arthur Andersen & Co.
CPC International	1977	Main Lafrentz & Co.
Deere & Co.	1979	Deloitte Haskins & Sells
Dow Chemical Co.	1973	Deloitte Haskins & Sells
Esmark	1981	Arthur Young & Co.
Exxon	1979	Price Waterhouse & Co.
Farmland Industries	1981	Peat, Marwick, Mitchell & Co.
General Dynamics	1977	Arthur Andersen & Co.
The Greyhound Corp.	1976	Touche Ross & Co.
Gulf & Western Industries, Inc.	1974	Ernst & Ernst
International Paper Co.	1977	Arthur Andersen & Co.
ITT	1976	Arthur Andersen & Co.
Iowa Beef Processors, Inc.	1978	Touche Ross & Co.
Johnson & Johnson	1978	Coopers & Lybrand
The LTV Corp.	1975	Ernst & Ernst
Litton Industries, Inc.	1976	Touche Ross & Co.
McDonnell Douglas Corp.	1977	Ernst & Ernst
Minnesota Mining & Manufacturing	1977	Coopers & Lybrand
Occidental Petroleum Corporation	1976	Arthur Andersen & Co.
Owens-Illinois	1977	Arthur Young & Co.
Republic Steel	1980	Ernst & Whinney
The Signal Companies	1976	Haskins & Sells
Standard Oil Company (Indiana)	1977	Price Waterhouse & Co.
Tenneco	1979	Arthur Andersen & Co.
Union Oil Co.	1979	Coopers & Lybrand
Union Pacific Corp.	1975	Deloitte Haskins & Sells
Weyerhaeuser	1977	Arthur Andersen & Co.
Xerox Corporation	1977	Peat, Marwick, Mitchell & Co.

No Annual Report Available to Researcher:

Amerada Hess	Standard Oil (Ohio)
CBS	Texaco
Gulf Oil	Texas Instruments
International Business Machines	TRW
Marathon Oil	United Brands
Phillips Petroleum	US Steel

Discussant's Response to How Not to Communicate Material and Immaterial Weaknesses in Accounting Controls

Alan N. Certain
Price Waterhouse

Born, I believe, in response to the SEC's post-FCPA proposal to require management and auditor reporting on internal accounting controls, principally to provide the Commission an objective summary of the likely results of any rule it might adopt, Dr. Wallace's survey lives on to explain the difficulties management and auditors face when trying to describe internal accounting controls to the "stakeholders" of a business enterprise.

To cynically summarize the survey (in words somewhat different from those of Dr. Wallace), I read it to give evidence supporting four points:

> *Point one*—When given facts about control conditions within an enterprise, people—even such sophisticated users of financial and accounting data as the nine groups surveyed—place greatly varying interpretations on the facts.
>
> *Point Two*—Point One doesn't matter, because people—even such sophisticated users of financial and accounting data as the nine groups surveyed—don't want the facts. They want a summary overview or opinion from someone else.
>
> *Point Three*—When "someone else"—and so far this has been management, through the new breed of responsibility reports that proliferated after the recommendations of the Cohen Commission and the FEI—does summarize an enterprise's control responsibilities, it is likely to be in language that is sometimes technically incorrect and always subject to the same varying interpretations as are the underlying facts.
>
> *Point Four*—Point Three is not surprising, since the survey evidence supporting Point One demonstrates a great diversity of opinion about the facts of the effectiveness of internal controls and about the effects of various so-called control weaknesses, even among the preparers themselves, the preparers of the responsibility reports cited in Point Three.

Overall, Dr. Wallace's survey and analysis bear out the title of her paper. None of the methods implemented so far to disclose information about an enterprise's internal accounting control—whether a recitation of control weaknesses, a report by management of strengths and weaknesses, or an opinion by management—is likely to be successful in communicating a uniform message. One suggested communications device—an auditor's opinion—has yet to be tested in practice, but I'll have more to say about that device.

Future Prospects

However, this entire issue of the best methodology to report on internal accounting controls may be moot today. I say that because of current SEC inactivity in the area, and because of my belief in two points of human nature. The points are, first, people tend to devote a majority of their attention to those matters they believe are most important to their well-being, with balance between long-term and short-term effects. My belief in this point leads me to the conclusion that, by and large, in the period immediately before the SEC's post-FCPA proposal, managements were satisfied that there was a proper cost/benefit relationship for control documentation and disclosure.

The second point of human nature I believe in is that, in the short term at least, criticism from others, particularly critics who have the power to enforce their views on the individual, diverts the individual's attention to quelling those criticisms. My belief in this point is consistent with observed activity during the years since enactment of the FCPA of 1977. The SEC's proposal to require a management report on internal accounting controls, together with an audit opinion on such report, stimulated activity in the early part of this period. However, with the release of ASR 278 in June 1980, I believe we began to see a diminution of management's concern with this subject and of management's devotion of resources to strengthening internal accounting control. ASR 305, issued in January 1982, states, in essence, that the SEC is satisfied that the private sector has responded appropriately and that no regulatory disclosures are required. In my view, we have already seen the majority of developments in public disclosures of internal accounting control. I doubt that we'll see much auditor attestation in public reports.

And in my view, the current status of public disclosure of internal accounting control is not deficient. Dr. Wallace's survey tells me that people—even sophisticated users—aren't really interested in knowing a lot about internal accounting controls in business enterprises. And if I'm wrong—if knowledgeable users of internal accounting control data really want it, and really want auditor involvement—I believe the forces of the market will bring forth the level of disclosure wanted by the users.

Half of the top 100 companies and a significant percentage of other large companies do have management responsibility reports addressing internal accounting control. The SEC, in ASR 305, expresses satisfaction, not dismay, with the diversity of language found in these reports. A few of these companies have already included auditor opinions. If such information is truly useful, this fact should become apparent to other providers and they should raise their standards. In other words, I don't believe Gresham's Law applies to public financial reporting. But the cost/benefit ratio must be positive.

Let's assume, for purposes of further discussion, that users *do* want more reporting on internal accounting controls. What form should the reporting take?

Report Preferences

Dr. Wallace's survey presented eight possible forms. The preferences of preparers and users, I think, are interesting. Dr. Wallace presented the

alternatives alphabetically. I've rearranged them in ascending order from least expensive to most expensive and compared the preference rankings. (See Exhibit.) You might take some minor exception to the precise order of least expensive to most expensive, but I expect that in most cases you wouldn't want to alter an item by more than one place in the table.

Exhibit

A Cost/Benefit Comparison of Internal Accounting Control Reports

Reporting Basis	Preference Rank	
	Preparers	Users
Least Expensive		
F. Management's opinion *without* auditor involvement	1	4
C. Management's description of controls, *without* auditor involvement	6	2
D. Auditor's Letter of Recommendations (weaknesses)	7	6
E. Auditor's listing of both strengths and weaknesses	8	7
G. Management's opinion, *with* materiality limits, attested to by auditor	2	5
A. Auditor's opinion *with* materiality limits	3	1
H. Management's opinion *without* materiality limits, attested to by auditor	4	8
B. Auditor's opinion *without* materiality limits	5	3
Most Expensive		

In my view, the preferences of the preparer group are the most telling ones. I say that, of course, because I'm a member of the preparer group. My interpretation of the preference ranking for preparers is that preparers believe, first of all—and this is supported by Dr. Wallace's analysis, also—that an overall summary or opinion, rather than details, is preferred. But, second, my analysis says preparers believe that the benefits are of such doubtful quantification, that the less costly the approach, the more desirable the results. I agree. In other words, the rankings one to five of the preparer group are all summary disclosures, leading from least expensive to most expensive. And their last choices are the ones which involve a lot of details.

The user group is less clear in its message. But, except for the anomaly of a preference ranking of 2 for report Form C, the users also demonstrate a preference for summaries or opinions, rather than for details.

At the present time, the form and extent of internal accounting control disclosure is controlled by the preparer groups, and the present predominant

disclosure of internal accounting control is Form F. If we're going to have more disclosure, in the present voluntary climate, it will be the preparers—the board of directors, management and auditors—who determine the form of such expansion.

Looking again to the preference ranking, it seems most likely that the next step might be auditor attestation of a management opinion with materiality limits (Rank 2) and this, I believe, was Dr. Wallace's conclusion as well, from much more rigorous analysis.

Possibilities if Auditors Involved

If we are going to have more involvement of auditors, what form should it take? In my view, auditor involvement has four aspects which I call "Documentation," "Evaluation," "Verification," and "Attestation."

Statements on Auditing Standards, particularly SAS No. 30, provide a good starting point for auditor involvement. However, I note that little published reporting has appeared so far. I've seen no comprehensive surveys, but anecdotal evidence suggests that existing reports have been issued in conjunction with audits that already were compliance-test oriented and where the incremental cost was in the range of 5-10%. In other cases, where greater expansion of effort would be required (say in the 25% and more of audit fees range) auditors have not been retained to report on controls.

I do believe, though, that while it's a good foundation, SAS 30 rests in part on the pragmatic fact that control systems, by and large, are inadequately documented. This comes out in the provision of SAS 30 that mandates a method of *documentation* as a basis for common understanding between management and the auditor, while acknowledging this documentation might be prepared by the auditor himself. While this approach works for reporting on the past, it offers no comfort as to expectations for the future.

Internal control reporting is clearly future oriented. While it has been correctly said that the projection of evaluation into the future is subject to the risks that conditions will change and that the degree of compliance will deteriorate, and while these are valid risks, they simply point up the importance of proper documentation. Without proper documentation, the internal accounting control system is, as I call it, "personage dependent." Documentation makes the system "personage independent." Without documentation of the system, the loss of a key employee—that is, the only one with knowledge of the workings of systems or subsystems within that person's sphere of responsibility—creates a void in the control system that must first be recognized by others before it can be corrected. Since, in most organizations, people tend to not fully understand what other people do outside their immediate proximity, the absence of a procedure completed by a departed person may, in fact, not even be noticed until the condition has become irretrievably lost. *With* proper documentation, the system is personage independent and can recover, though its proper functioning may suffer for a time.

Importance of Documentation

For these reasons, I believe documentation of control systems is by far the number one requirement for the reliability of control systems with a future orientation.

Documentation should have four dimensions:

First, there should be documentation of each type of transaction, showing each procedure and control step to be performed all the way from inception to ultimate recording in the enterprise records. The typical flow chart is representative of this kind of documentation.

Second, a proper evaluation depends on consideration of all the accounting and control functions performed by an individual. This documentation is often called a job description. We might consider these to be individual *inclusionary* controls.

Third, and of equal importance, are *exclusionary* controls. To illustrate: Jones may reconcile the bank account and have no other assigned cash responsibilities. This would seem to be a good segregation of duties and a strong control. However, if Jones could obtain blank check stock without detection, the control is abrogated. The fact that the organization chart and job description indicate that Jones is independent loses its significance. This is why exclusionary controls, such as locked cabinets, restricted access areas and computer terminal ID's and passwords are so important. And without complete documentation of the system, these flaws can be overlooked for years.

Work Plans are the fourth dimension of the control documentation process. Work Plans outline procedures to be carried out or reports to be prepared on each day of the accounting period. A quarterly closing schedule, which is used to assure management that all the analyses and judgments required for preparation of financial statements have been completed, is a prime example of such a Work Plan.

Internal Control Evaluation and Verification

The *evaluation* stage of the process is adequately described in Statements on Auditing Standards, also. It consists of a searching contemplation of existing conditions looking for weaknesses. A common approach to the search is for the auditor to ask, "If I wanted to circumvent the system without detection, how could I do it?" The underlying rationale of this approach is that, by identifying all avenues to deliberately defeat the system, the auditor will also have covered accidental exposures. I observe without further comment that the enunciation of this "how can I beat it" view is probably a major contributor to the continuing view of many users that the detection of fraud is a primary purpose of an audit—a view that is apparent in responses to Dr. Wallace's survey.

Evaluation can be made of a system that is poorly documented. But that evaluation is much more biased toward the past than an evaluation of a well-documented system of internal accounting control Further, evaluation of a poorly-documented or undocumented system is a process that must be repeated from the ground up each time a conclusion is needed. The evaluation of a well-documented system, on the other hand, increases in reliability each time it is done because the auditor is able to build upon prior knowledge, perhaps exploring relationships between duties that were previously overlooked.

The *verification* phase, likewise, is adequately covered in Statements on Auditing Standards. While extensive compliance testing is certainly not employed in all audits, the procedures are familiar and the implications of the test results are understood.

Reporting on Internal Control

The *attestation* or reporting phase is the final one, and is one where, in my view, more information than provided by SAS 30 should be conveyed. The user should have access to more information than simply the final statement that the auditor is satisfied there are no material weaknesses in the internal accounting control system. By this, I don't mean we should remove materiality considerations, but rather, I mean the user should be told a little more about the basis of the opinion.

Again, in my view, the most significant factor is the extent of documentation, and the report should include information about it. One approach might be to define a term "gross transaction volume" as the sum of all debit and credit changes in all accounts during the period under examination and then to address an opinion to the adequate documentation of systems controlling X percentage of gross transaction volume.

In conclusion, I believe Dr. Wallace's survey and analysis clearly summarize the diversity of viewpoints between users and preparers and within groups on the subject of internal accounting control reporting. I agree that the approaches studied in the paper show clearly "How Not to Communicate Material and Immaterial Weaknesses in Accounting Controls." If further expansion of disclosure does develop, auditors stand ready to participate, but there is a great need for better systems documentation to provide a basis for future-oriented evaluation.

3

Human Information Processing Research in Auditing: A Review and Synthesis

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The importance of individual decision making to the audit process is increasingly being recognized. Decisions involving the collection, interpretation and integration of audit evidence are receiving attention from auditing firms concerned with improving the effectiveness and efficiency of audits. Concurrent with the profession's interest in audit decision making, a growing body of knowledge about decision making by practicing auditors is being generated by academic researchers. This body of knowledge, based on human information processing research, focuses on the understanding, evaluation and improvement of audit decision making. It offers great potential for identifying shortcomings of audit decision making, and for reducing or eliminating those shortcomings.

This paper reviews and synthesizes human information processing research in auditing. Its purpose is to introduce this body of knowledge to readers who are relatively unfamiliar with it. Coverage of the topic is fairly broad, emphasizing the questions of why this research is conducted and what its implications are, and de-emphasizing methodological issues of experimental design and analysis.[1] The discussion proceeds in four parts: (1) some background information on human information processing research in auditing, (2) an explanation of the reasons for conducting this type of research, (3) an overview of the research evidence, and (4) a consideration of some of its practical implications.

Introduction and Background

Human information processing research in auditing focuses on several decision-related activities of practicing auditors. Although a large audit may entail hundreds of judgments and decisions, it is useful for research purposes to abstract audit decision making to four basic types of decision-related activities: (1) evaluations or judgments of current information, (2) predictions of future outcomes, (3) assessments of the probability that particular outcomes will occur (and revisions of such probabilities), and (4) choices among alternative courses of action.

For example, auditors collect, interpret and combine various types of evidence in order to evaluate internal control system design, the materiality of an item, and the implications of sample outcomes. Auditors may predict error-rate levels in audit populations, or the future going-concern status of a client, or

they may assess probability distributions over error-rate levels or going-concern status. Auditors make choices among alternatives when selecting sample sizes, the type of opinion to issue, and disclosure alternatives.

Obviously, these are only a few of the areas in which auditors make evaluations, predictions, probability assessments and choices. Moreover, these four types of decision-related activities are not necessarily practiced as distinct phases of audit decision making. For example, an auditor might use the results of internal control evaluation and preliminary testing to predict the specific error-rate level in a population or to assess a probability distribution over several possible error rates, and then combine these evaluations, predictions and assessments with additional information in order to choose among alternatives types or amounts of subsequent testing. For research purposes, however, it is convenient to regard these four decision-related activities as relatively distinct, because rigorous research methods exist for studying each of the four.

These decision-related activities are studied by human information processing research in controlled experimental settings designed to mirror the real-world decision contexts of interest. This type of research does not rely on auditors' self-reports of their decisions (e.g., through surveys or interviews), and does not rest on anecdotal evidence about decision making. Instead, it takes advantage of the primary strength of the experimental method—the control over confounding variables, which, in other types of research methods, make it difficult to draw reliable scientific inferences.

Human information processing research is guided by decision-making paradigms (or models, or theories, or "world views") which provide operational frameworks for choosing variables to be examined, for forming expectations about relationships between independent and dependent variables, for designing particular studies, and for interpreting and integrating research results. In addition to providing comprehensive perspectives from which to conduct and interpret research, the paradigms also entail criteria for evaluating and improving human performance in information processing, judgment and decision making. These paradigms were developed primarily in the discipline of cognitive psychology, but they also were developed in economics and statistics.[2]

From a methodological standpoint, human information processing research in auditing can be traced directly to earlier developments in cognitive psychology. For all practical purposes, the interest in human information processing research began less than 30 years ago with the appearance of Ward Edwards' classic article on decision making.[3] To appreciate the enormity of the literature that has appeared since then, consider that in the past 20 years the *Annual Review of Psychology* has published five reviews of this research,[4] with each review covering the empirical studies published since the previous review. The number of studies cited has ranged from about 140 to about 320 for these five reviews. A complementary line of research that comes from psychology (as well as from business and economics) has been pursued since the mid-1950s by Herbert Simon and his colleagues.[5]

More to the point, however, is the sizable amount of human information processing research conducted in accounting and auditing contexts. This work has been done by researchers with training in accounting and auditing,

psychology, and statistics, and has been published in the accounting and auditing literature (and, increasingly, in the psychology literature). The research in accounting and auditing began approximately 10 years ago, and both its quantity and quality have grown significantly since then. By 1976/77, there were enough studies in accounting and auditing to warrant a literature review,[6] and enough interest in the future development of the area that an American Accounting Association committee was formed to evaluate its potential contributions. After the appearance of the committee's report[7] and the literature review, the number of human information processing studies in accounting and auditing increased dramatically. My own recent review identified some 100 published articles or unpublished working papers in this area.[8]

The human information processing studies in our literature relate to a wide variety of issues in financial accounting, managerial accounting, and auditing. However, the studies devoted to auditing are the most extensive and realistic of all. I am aware of approximately 50 articles or working papers which report empirical results on audit decision making. It is important to recognize that the people whose decision making was examined in these studies were practicing auditors, not college students or other surrogates for auditors. More than 2,500 auditors from national, regional and local firms have participated in these studies, and they represent all levels in these firms. Further, in many cases the researchers had the advice of practicing auditors in designing their research studies. While some of the studies might be considered "basic" research, since they relied on abstract and simplified representations of the audit process, most have had an applied orientation.[9] Taken as a whole, the set of human information processing studies in auditing is an invaluable source for understanding audit decision making, and for drawing practical implications.

Reasons for Studying Audit Decision Making

Before reviewing the research results and their potential implications, it may be useful to consider explicitly the reasons for doing human information processing research in auditing. The ultimate goal of this research is to improve audit decision making. Before decision making can be improved, however, it is useful to evaluate the current quality of decision making, and before decision quality can be evaluated, decision making must be understood. Thus, three reasons for studying audit decision making are to understand, evaluate and improve audit decisions.

Understanding Audit Decision Making. Before audit decision making can be evaluated or improved, it must be understood. The research in this area focuses on such general questions as: How do auditors make evaluations, predictions, probability assessments and choices? What items of information, or "cues," influence their decisions? Can their decision making be systematically explained by some information-processing biases or by some aspects of the decision setting?

Efforts to understand audit decision making involve attempts to describe audit decision making. Most such attempts rely on representational models of decision making; that is, models that represent the relationships among the multiple cues that serve as inputs for information processing and decision making, and the decisions that result. This type of "input-output" modeling is

frequently operationalized by constructing a linear multiple regression model that represents the auditors' processing of information. This is done by providing the auditor with several (experimentally controlled) combinations of values on each of certain cues that are used for making decisions, and recording the auditor's decision for each combination of cue values. The decisions (evaluations, predictions, etc.) are then regressed on the cue values. Other possibilities are to attempt to represent the auditor's intuitive probability revisions via Bayes Rule for probability revision, or to attempt to represent choices among alternatives via an expected utility model. Bayesian, regression, and utility models can then be used as starting points for describing, and understanding, audit decision making.

Evaluating Audit Decision Making. A second reason for doing human information processing research in auditing is to evaluate audit decision making, and, accordingly, much of the research goes beyond simply trying to understand audit decision making as it exists. Decision making in auditing has been evaluated against six criteria: (1) accuracy, (2) normativeness, (3) stability, (4) consensus, (5) insight, and (6) consistency with professional auditing standards.

The *accuracy* criterion implies that an auditor wants his or her decisions to be correct. This criterion can be used for evaluations or predictions if an external reference point is available, or will become available in the future. For example, an accuracy criterion can be used in going-concern evaluations by seeing whether firms predicted to go bankrupt actually do go bankrupt. An accuracy criterion can be used for evaluating subjective probability assessments if relative frequency information is available. However, the number of audit decision contexts in which an accuracy criterion can be used appears to be extremely small.

The criterion of *normativeness* can be (and has been) used more extensively in the research on audit decision making. Use of this criterion implies that an auditor wants his or her decisions to correspond with those prescribed by normative or statistical standards of decision making. For example, choices among alternatives might be evaluated in some contexts against the normative standard of expected utility maximization. Probability revisions can be evaluated against the statistical standard of Bayes Rule, a logical consequence of conditional probabilities that prescribes the optimal revision of prior probabilities upon the receipt of new data. Subjective probability assessments can be evaluated against several types of normative standards, including the probability axioms that relate to the combinatorial properties of probabilities. As a final example, an auditor's interpretations of sample outcomes can be evaluated by the extent to which these interpretations reveal an appreciation for (1) the inverse relationship between sample size and sampling variability, or (2) the impact of data reliability.

Three other criteria for evaluating audit decision making which are frequently employed in the research literature are stability, consensus and insight. *Stability* refers to the question of whether one auditor, given the same data at different points in time, will make the same decision. *Consensus* addresses the question of whether different auditors, given the same data at one point in time, will make the same decision. *Insight* refers to the degree of understanding that an auditor has into his or her own decision process as

represented by a model of that process. These three criteria can be employed in addition to accuracy and normativeness, but they are most often used when accuracy and normativeness cannot be employed. One rationale for stability is that perfectly stable decisions have no random component, which has a detrimental effect on decision accuracy. A rationale for both stability and consensus is that the cost and/or quality of an audit may fluctuate needlessly if decision making is inconsistent over time or across auditors. The rationale for insight involves the importance of an auditor's understanding his or her own decision making if he or she attempts to train other auditors in decision making.

A sixth criterion for evaluating audit decisions, which is rarely mentioned in the research literature but would appear to be extremely important, is the extent to which decisions are *consistent with professional auditing standards*. In some cases, auditing standards may be sufficiently precise that they can serve as criteria for decision evaluation. Examples include the SAS 39 statement that the extent of substantive testing required to obtain sufficient evidence should vary inversely with the auditor's reliance on internal control, and the SAS 31 statements that evidence based on the auditor's direct personal knowledge or obtained from independent sources outside the client entity should ordinarily be considered more reliable than evidence obtained indirectly or secured solely within the entity.[10]

Improving Audit Decision Making. When research finds shortcomings in audit decision making vis-a-vis any of these six criteria, attention naturally turns to finding ways of improving audit decision making. Five possibilities have been considered: (1) increasing the auditor's awareness of his or her information-processing shortcomings, (2) feedback, (3) changing the data set, (4) education/training, and (5) the use of decision models. Obviously, these possibilities are not mutually exclusive.

The first alternative, *increasing awareness,* may be a prerequisite for the application of the other four. It may also be a useful alternative in its own right. If auditors are aware of the possibility that their decision making may sometimes involve shortcomings, and if the nature of these shortcomings is made explicit, then they may be willing to monitor their decision making. Monitoring could involve the provision of *feedback* information about the outcomes of past decisions so that a "track record" could be established. It could also involve the provision of information about the auditor's own decision process or about data relationships in the environment. Such monitoring could also lead to *changing the data set* on which audit decision are based. This could involve a search for additional data to include in the decision process, as well as the elimination of data that already are included.

A fourth possibility for improving audit decision making is *education and training.* This could be undertaken in both university courses and in-house training modules in auditing firms, and could include training in statistical and probabilistic concepts as well as exposure to the results of human information processing research studies. Finally, *decision models* could be used to supplement or replace intuitive decision making in repetitive audit decision contexts. This alternative could entail the use of optimal models such as Bayes Rule, statistical models based on environmental data relationships, and models of the auditor's own decision process. One feature that these five decision-improve ment alternatives share, to a greater or lesser extent, is that of *providing*

structure for intuitive decision making. Establishing some type of structure may be necessary if audit decision making is to be improved.

Justifying or Defending Audit Decision Making. Although it is not explicitly addressed in the research literature, a fourth reason for doing human information processing research in auditing is to provide a sound basis for explaining, justifying or defending audit decision making to parties who might question the auditor's application of "professional judgment." These parties could include an auditor's superiors, peers or subordinates, as well as regulatory agencies and the courts. While the literature's overriding concern with improving audit decision making implies that it *needs* improving (and the research results generally support this contention), many studies have found auditors to be rather good decision makers vis-a-vis the six decision-evaluation criteria mentioned earlier. In addition, decision making by auditors has been found to be relatively good compared to that of other groups of experts such as physicians and clinical psychologists. Thus, auditors may wish to use the results of human information processing research as a basis for defending, as well as improving, audit decision making.

The Research Results

Most of the research has focused on understanding and evaluating audit decision making. A sufficient number of studies has appeared in four areas to permit some generalizations: (1) materiality/disclosure judgments, (2) internal control evaluation, (3) probability assessment, and (4) evaluation of sample outcomes and other types of audit evidence. A few studies have been reported in other areas.

Materiality/Disclosure Judgments. Some studies have addressed materiality/disclosure issues directly,[11] while others have addressed such issues indirectly as part of a study devoted primarily to some other topic.[12] Many of these studies have focused on the type of disclosure recommended for specific items (e.g., an inventory write-down) of varying sizes, while others have dealt with the specification of overall pre-audit materiality levels for planning purposes. Still others have examined the interaction between materiality and uncertainty.

One consistent finding is that simple linear models based on a small number of cues explain a large proportion of the variance in materiality/disclosure judgments of individual auditors. For virtually all auditors studied, impact on net income has been the most important factor in such judgments, but there has been little agreement on the importance of other factors, resulting in only moderate levels of consensus among different auditors. Differences in materiality and disclosure judgments have been found between auditors and other professional groups (e.g., investment analysts and lending officers) and among auditors from different firms and different levels of experience. The amount of uncertainty about the proper valuation of an item has been found to influence materiality/disclosure judgments, and, conversely, an item's materiality has been found to affect judgments about acceptable levels of uncertainty.

Internal Control Evaluation. More studies have been devoted to internal control evaluation than to any other topic.[13] Most of these studies have simply asked auditors to rate the strength of an internal control system (in a particular

area such as payroll or the sales/collections cycle) as certain internal control indicators changed. Others have studied the effects of changes in internal control strength on the allocation of audit work to different types of testing, or the effects of such changes on the judgmental selection of sample sizes for substantive testing.

As with materiality/disclosure judgments, the research has found that the internal control evaluations of individual auditors can be represented well by simple linear models based on a small number of cues. Consensus across auditors has been found to be relatively high for ratings of internal control strength, but moderate to low for the allocation of audit effort and the selection of sample sizes in response to internal control changes. Stability and self-insight have been found to be high.

Internal control cues related to separation of duties have been found to dominate internal control evaluations. Moreover, the number of hours planned for audit testing in specific areas has been found to vary inversely with the rated strength of internal control, and sample-size specifications have been found to change in the appropriate direction in response to changes in the strength of internal control. Finally, the evidence on firm and experience-level effects has been mixed: Some studies have noted small effects on consensus, insight and the importance of separation-of-duties cues, while other studies have found no effects.

Probability Assessment. Studies of probability assessment and revision have been conducted in both attribute[14] and variables[15] contexts. Most studies have provided the participating auditors with some background information and then asked for subjective probability assessments over error-rate levels or population values of account balances. Some studies, however, have focused on the revision of probabilities after new data are received, and others have investigated the impact of subjective probability assessments on sample sizes and on the chances of making Type I and Type II errors.

The studies have shown that auditors can understand and use several probability elicitation methods. In attribute contexts, however, low consensus in probability assessments has been found across auditors when the same elicitation method is used, and low convergence in probability assessments has been found when one auditor uses different elicitation methods. Different methods have also been found to result in different sample-size specifications. In addition, judgmentally-revised distributions have been found to be more diffuse and to result in larger sample sizes than distributions revised via Bayes Rule.

In the variables contexts studied, the variability in fractile assessments across auditors was greater for the more extreme fractiles assessed, and the variability for given fractiles was greater across individual auditors than across three-person teams of auditors. Also, the teams assessed higher probabilities near the actual population values, and lower probabilities elsewhere, than the individuals did. Studies in both attribute and variables contexts have found that internal control strength has some effects on probability assessments. For example, distributions assessed by individual auditors have been found to be tighter, and to be less variable across auditors, for stronger internal control systems.

Evaluation of Sample Outcomes and Other Types of Audit Evidence. Another set of studies has focused on some decision "heuristics," or rules-of-thumb,

that auditors might use to reduce the complexity of certain types of audit decisions.[16] Heuristics may be beneficial since they reduce the time and effort required for decision making, and in many cases they may result in "good" decisions. On the other hand, they may also lead to systematic biases in decision making by causing the auditor to ignore relevant information and/or to process irrelevant information. The studies in this group have attempted to demonstrate the existence of such biases across a variety of audit-related decision contexts.

Some studies suggest that many auditors are insensitive to the importance of sample size when evaluating sample outcomes, and do not have sufficient appreciation for the inverse relationship between sample size and sampling variability. Other studies have suggested that auditors are not sufficiently sensitive to the reliability of information or to the importance of prior probabilities. Still others have found that auditors' evaluations and probability assessments are influenced by irrelevant information.

Other Studies. Human information processing studies have been conducted in several additional auditing areas, but not in sufficient quantity to allow generalizations about the results. Topics addressed include: (1) analytic review, (2) review of financial forecasts, (3) evaluation of the competence of internal audit departments, (4) audit seniors' performance evaluations of their subordinates, (5) predictions of going-concern status, (6) perceptions of the messages intended by different types of audit reports, (7) perceptions of auditors' independence, and (8) the applicability of expected utility theory as a framework for audit decision making.[17]

Implications for Practice

Given the goal of improved decision making, the practical implications of human information processing research in auditing are suggested by the five decision-improvement alternatives discussed earlier: increasing awareness, education/training, feedback, changing the data set, and using formal models. This final section of the paper elaborates briefly on some of these alternatives.[18]

It seems reasonable to believe that auditors will be better able to improve decision making if they are aware of the information-processing shortcomings that affect their decisions. Therefore, efforts to communicate to auditors the results of human information processing research are important, and have been undertaken in some instances.[19] Such efforts could lead to the inclusion of training materials on judgment and decision making in formal in-house training programs. Auditing researchers are beginning to develop materials which might be useful for this purpose.[20] Another possibility is to include such materials in auditing courses in universities, and some efforts in this direction have been made.[21] The need for auditors to be trained in decision making, as well as in auditing, is one of the principal implications of this research.

Other important implications relate to structuring the audit decision process. This could involve the provision of checklists or other types of explicit guidance to assist auditors in both the selection of relevant information and the integration of multiple items of information to reach a decision.

A national auditing firm has recently implemented a structured approach for computing sample sizes for substantive testing when statistical sampling is not

used.[22] Actual sample sizes that depart from the computed sample sizes by more than 20 percent must be explicitly justified. the approach relies on a combination of equations and decision tables to mechanically process six types of information. This information is based on auditors' judgments related to expected monetary error in an account and the strength of internal control, in addition to information about the size of the account, materiality, the level of stratification of the sample, and the existence of overlapping substantive tests. In effect, this method specifies the variables to be used, the weighting factors for these variables, and the way in which the variables are to be combined to arrive at sample sizes. There is some arbitrariness in the weights for the variables, but the appropriate variables are included, and the directions of their impact on sample size are correctly specified. A large body of analytical and empirical research has shown that selecting the appropriate variables and weighting them in the appropriate directions is often more important to decision quality than is refinement of the weights themselves.[23] Moreover, the use of such a method should substantially reduce inconsistencies across auditors in the selection of sample sizes.

The structured approach just described relies on a formal model to aid the auditor in processing information and making decisions. The research evidence suggests that other types of formal models would also improve audit decision making. Examples include models for weighing and combining internal control indicators in order to quantify the strength of an internal control system, models for analytical reviews, and models of bankruptcy prediction to aid in going-concern evaluations.[24] The evidence strongly supports the use of statistical sampling and the statistical evaluation of sample results.

In conclusion, I believe the results of human information processing research have important implications for the practice of auditing. Some of these implications are at the level of the individual auditor (e.g., the need for awareness and education), but most are at the level of the auditing firm (e.g., the need for training programs and formal models). Indeed, some firms have already shown significant interest in potentially changing some aspects of their practice in response to the research results. At the very least, the evidence generated in this area is consistent with, and can be used to support, activities such as providing structure for decisions and using formal models, although these activities may not have been directly motivated by the research results.

In addition to having practical implications at the individual and firm levels, human information processing research can produce results that are relevant at the standard-setting level. For example, the Auditing Standards Board revised the exposure draft of SAS 39 to eliminate a suggested probability-assessment method which human information processing research had shown to result in excessive Type II errors.[25] While it would be an overstatement to claim that human information processing research is sweeping the auditing profession like wildfire, it does seem to be kindling some interest among practitioners and policy makers. Hopefully, this interest will increase as more people become familiar with its potential benefits.

Footnotes

1. Recent books by Ashton (1982) and Libby (1981) analyze human information processing research in auditing, and in other areas of accounting, in great detail. This research is also reviewed by Libby and Lewis (forthcoming).

2. The two major paradigms that have guided human information processing research in auditing are the "lens" and "probabilistic judgment" paradigms. The former, which is closely linked to the decision-related activities of evaluation and prediction, emphasizes the construction of linear models as representations of information processing by individuals. This paradigm further emphasizes the relative accuracy of intuitive predictions versus those made by formal information-processing models, as well as the "weights" that decision makers (implicitly) attach to various pieces of information in making evaluations or predictions. The probabilistic judgment paradigm (which is also called the subjectively expected utility, or SEU, paradigm) is more closely linked to choices among alternative actions and to the assessment, revision and use of probabilities in decision making. It emphasizes the relationship between intuitive assessments, revisions and choices and those prescribed by formal models. These paradigms are discussed at length by Ashton (1982) and Libby (1981).

3. Edwards (1954).

4. Edwards (1961); Becker and McClintock (1967); Rapoport and Wallsten (1972); Slovic, Fischhoff and Lichtenstein (1977); Einhorn and Hogarth (1981).

5. This research is summarized in several papers by Simon (1955, 1956, 1959, 1978, 1979a, 1979b).

6. Libby and Lewis (1977).

7. Ashton, Barrett, Elliott, Libby, Vasarhelyi and Wright (1977).

8. Ashton (1982).

9. Several aspects of basic and applied research in auditing are discussed by Kaplan (1977) and Ashton (1981b).

10. American Institute of Certified Public Accountants (1982, Sec. 350.19 and Sec. 326.18).

11. Boatsman and Robertson (1974), Firth (1979), Messier (1979), Moriarity and Barron (1976, 1979).

12. Lewis (1980), Newton (1977), Schultz and Reckers (1979), Ward (1974, 1976).

13. Ashton (1974a, 1974b), Ashton and Brown (1980), Biggs and Mock (1980), Gaumnitz, Nunamaker, Surdick and Thomas (forthcoming), Hall and Zimmer (1981), Hamilton and Wright (1977, 1980, 1981), Joyce (1976), Mock and Turner (1979, 1981), Reckers and Taylor (1979), Weber (1978).

14. Corless (1972), Crosby (1980, 1981), Felix (1976), Kinney and Uecker (1982).

15. Solomon (forthcoming), Solomon, Krogstad, Romney and Tomassini (forthcoming).

16. Bamber (1980), Biddle and Joyce (1979, forthcoming), Gibbins (1977), Joyce and Biddle (1981a, 1981b), Kinney and Uecker (1982), Uecker and Kinney (1977).

17. The references for these eight areas follow: 1—Blocher, Esposito and Willingham (1981). 2—Danos and Imhoff (1982). 3—Gibbs and Schroeder (1979). 4—Wright (1980). 5—Kida (1980). 6—Libby (1979). 7—Shockley (1981). 8—Ashton (1980, forthcoming), Lewis (1980), and Ward (1974, 1976).

18. Practical implications of this research are also discussed by Holstrum (1980), Joyce and Libby (1981), Libby (1981), and Messier and Snowball (1981).

19. An example is Holstrum (1980).

20. An example is Waller and Felix (1981).

21. Ashton (1981a).

22. Peat, Marwick, Mitchell & Co. (1980). Libby (1981) reports that Deloitte, Haskins & Sells and Touche Ross & Co. have developed similar approaches for certain types of decisions.

23. For elaboration, see Ashton (1979).

24. Altman (1982) reports that Arthur Andersen & Co. is testing a bankruptcy-prediction model for this purpose.

25. See Kinney and Uecker (1982) for elaboration.

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Discussant's Response to Human Information Processing Research in Auditing: A Review and Synthesis

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My comments on this paper and on the underlying research are in three categories: (1) a very favorable overall evaluation of the paper, (2) differences in emphasis regarding specific areas of research described in the paper, and (3) suggestions of tentative guidelines for using the implications of this research to improve auditor judgments.

Overall Comments

The paper does an excellent job of accomplishing its stated objective of reviewing and synthesizing the research in a manner designed to "introduce the body of knowledge to readers who are relatively unfamiliar with it." As mentioned in the paper, readers who wish to investigate the area in greater depth should refer to the recent monographs by Ashton (1982) and Libby (1981).

In this paper, Ashton provides helpful descriptions of six criteria used by researchers to evaluate auditors' judgments: accuracy, normativeness, stability, consensus, insight, and consistency with professional auditing standards. The distinction between accuracy and normativeness is important. Although auditor judgments are very rarely susceptible to evaluation by an accuracy criterion (because of the unavailability of external, verifiable reference points), they can often be evaluated on the basis of their degree of correspondence with normative or statistical standards. Furthermore, when neither accuracy nor normativeness criteria are feasible in the circumstances, researchers often utilize consensus, stability, or insight. Such criteria are helpful because evidence of lack of consensus or stability provides an indication of the lack of accuracy and normativeness. However, the converse does not logically follow—a high degree of consensus or stability does not necessarily indicate a high degree of accuracy or conformity with normative standards.

The issue of whether auditors' judgments are more accurately described as rather good or rather poor is not as important as the issue of how such judgments can be improved. I agree with Ashton's conclusions that the ultimate goal of this research is to improve auditors' judgments and that the most salient common feature of efforts to improve such judgments is the establishment of suitable structures for the decision making process.

Differences in Emphasis Concerning Specific Research Findings

1. Materiality judgment research has been limited to public industrial companies. In discussing the research on auditors' materiality judgments, Ashton describes some of the general findings, and notes that "for virtully all auditors studied, impact on net income has been the most important factor in such judgments." However, the fact that virtually all of this research was limited to public industrial companies effectively restricts the ability to generalize the research results. I question whether the impact on net income would have the same predominance for a nonpublic company (where primary users are likely to be creditors with an interest in using various financial statement relationships to predict future solvency) as it has for a public company (where the primary users are likely to be investors with a primary interest in using income and cash flows from continuing operations to predict future cash flows). It is also doubtful whether this research (concerning public industrial companies) could be validly generalized to financial institutions or nonbusiness entities.

2. Auditor consensus regarding internal control evaluation may not be "relatively high." In discussing the results of research (including his own) on auditor evaluations of internal control, Ashton concludes, "Consensus across auditors has been found to be relatively high for ratings of internal control strength." Categorizing auditor consensus in this area as "relatively high," however, may not be appropriate. The research that demonstrated a higher degree of consensus for such judgments than had been found generally for other professions (see Ashton, 1974) reported an average correlation of .7 between pairs of auditor judgments. Although the average correlation was generally higher than for other professions, it still explained only 49% of the variability in judgments. Furthermore, the correlations between judgments of some pairs of auditors in the Ashton study were as low as .04, and the introduction of a more realistic degree of complexity in the internal accounting control information presented to auditors resulted in a much lower degree of consensus (see Reckers and Taylor, 1979).

Suggested Guidelines for Improving Auditor Judgments

The goal of this research is to improve auditor decision making. Based upon the research findings, Ashton offers five decision-improvement alternatives and discusses some audit-practice examples that introduce a structured mechanism to improve auditor judgments. Although the alternatives and examples Ashton offers are helpful, the profession also has a need for general guidelines for utilizing this research to improve the audit judgment process. Accordingly, I believe the audit judgment process can be improved through an organized program that meets the following guidelines:

1. Recognize the capabilities as well as the limitations of individual experts in making audit judgments.
2. Identify potential decision aids.
3. Identify areas of comparative advantage of both the individual experts and the decision aids.
4. Develop structured frameworks that integrate the best features of both individual experts and decision aids.

The most difficult step in this process is the identification of the areas of comparative advantage of individual experts and decision models. The Ashton paper provides a good summary of the limitations of individual experts in making audit judgments, and the statistical and operations research literature identifies many potential decision aids. However, the research literature does not provide as clear or definitive directions regarding areas of comparative advantage. Nevertheless, I believe some general tendencies of comparative advantage can be identified, at least tentatively, as described below.

In identifying areas where individual experts do a better job than models (and conversely), it is helpful first to distinguish between unstructured and structured judgment situations. In unstructured situations, most decision models cannot effectively be applied, and individual experts are superior in identifying potential patterns and bringing about some type of structure. In structured situations, individual experts tend to be better at collecting and coding information relevant to the judgment, and decision models tend to be superior at combining and integrating the information.

For example, consider the process of confirming accounts receivable to form a judgment about the validity of recorded receivables. This situation is susceptible to being structured and successfully modeled in the sense that an appropriate sample size can be determined—given certain information such as required precision (tolerable error), required reliability, and expected error rate. After the sample of confirmations has been taken and the individual confirmation responses have been analyzed, the model can also be used to make inferences about the population of recorded receivables by computing an upper confidence limit. In this situation, the individual experts (auditors) can most effectively be used to *collect* the information (by preparing, reviewing, and sending the confirmation requests) and to *code* the information (by determining which sample items represent errors or invalid recorded receivables). The research has generally shown that the decision model is superior to individual experts (auditors) at *combining and integrating* the information in such audit situations. An effective and efficient audit process, therefore, will include a structured framework that provides the auditor with the decision model as an aid in the judgment process and thereby integrates tasks that are performed best by the individual expert with those that are performed best by a decision model.

Some recent trends have occurred in audit practice concerning the development of a structured approach for making audit judgments in areas that were previously regarded as being unstructured. Such approaches have tended to use decision models, statistical formulas, and other structured frameworks for combining and integrating information that has been gathered and coded by auditors. The above discussion concerning confirmations is an example related to tests of details. For analytical reviews, various structures (including the use of regression analysis) have been introduced to aid the auditor in integrating data. For evaluations of internal accounting control, decision tables and network analyses have been developed to evaluate the adequacy of segregation of duties. Audit risk models, such as the one described in SAS No. 39, have been utilized to aid the auditor in integrating the information from the various audit components—internal accounting control, analytical review, and tests of details. These examples not only indicate recent trends in practice, but they

also provide an indication of the likely directions for future improvements in the audit judgment process.

Conclusions

In summary, I believe the Ashton paper provides an excellent introduction to the research on auditor judgment. This research can also be used as a basis for developing tentative guidelines for future improvements in auditor judgments.

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4

Audit Detection of Financial Statement Errors: Implications for the Practitioner[1]

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Peat, Marwick, Mitchell & Co.

Financial statement errors are of great concern to the CPA and the financial executive alike. The auditor applies procedures attempting to ensure that all material errors in a client's financial statements are detected and adjusted. Numerous errors detected during an audit can increase auditing fees and be embarrassing to the financial management of a company if they result in audit adjustments. Practitioners should, whenever possible, assist management in preventing these errors which may indicate underlying weaknesses in a client's accounting systems and may cast doubt on the reliability of other financial reports prepared for internal use.

In this paper I review selected results of a study, "Audit Detection of Financial Statement Errors"[2], that I co-authored with Robert H. Ashton, Associate Professor of Accounting at New York University. The study focuses on errors that led to a financial statement adjustment. It suggests certain implications for the practitioner, both for designing and applying auditing procedures, and for ways of preventing accounting errors.

Due to the study's broad scope, the results are somewhat tentative. Future research is necessary to further explore the issues and questions raised and to validate any interpretations of these findings.

Study Method

The study analyzed errors uncovered during audits by Peat, Marwick, Mitchell & Co. of different-sized companies in a variety of industries. Audit team members reported the dollar amounts and account classifications of up to five audit adjustments for each company. They were also asked to describe the circumstances that led to the discovery of each error and their perception of the underlying causes of the error, including whether they believed it was intentional. We reviewed and classified 281 adjustments reported for 152 companies. Selected results appear throughout this paper.

Auditing Implications

The study results illuminate three important issues: How auditors find errors, why they occur, and where they occur. The most interesting result is the large number of errors found using analytical review and various "informal" audit procedures compared with the small number found by traditional

procedures. This finding is particularly surprising in light of the emphasis placed on these procedures in the audit literature and raises questions about the relative cost-effectiveness of audit procedures.

Not so surprising, but of potential importance to the auditor, is that most errors are unintended and due to random human error rather than to systems or procedural problems. The participating auditors attributed a great many errors to various personnel problems, including employee turnover and inexperience, time pressure, carelessness and even incompetence. Other related causes they noted included a lack of knowledge in accounting, and errors made in judgmental amounts. Relatively few errors were due to poor controls, a lack of follow-up or review, and other pervasive problems. Finally, errors tend to be concentrated into selected audit areas which vary somewhat by industry; more errors seem to occur in small companies; and detected errors typically understate income almost as frequently as they overstate it. These findings, discussed in more detail below, have important implications for the design of audits and for preventing errors.

How Auditors Find Errors

During an audit, a variety of different events or circumstances can lead the auditor to detect an error, ranging from formal audit procedures such as confirmation or inventory counts, to casual remarks by client personnel. We summarize these "initial events" and the error percentages detected by each in Tables 1 and 2.

As Table 1 indicates, analytical review and "informal" audit procedures, including client discussions and expectations from prior years, uncovered 45.6 percent of the errors reported in this study, and 54.9 percent of the large errors; that is, errors greater than 0.6 percent of a company's assets.

Table 1
How Errors Were Detected[3]

Initial Events	*All Errors*	*Small Errors*[a]	*Large Errors*[b]
Expectations from Prior Years	10.3%	3.7%	15.9%
Client Discussions	8.2	7.3	8.5
Analytical Review	27.1	31.7	30.5
General Procedures	2.1	1.2	4.9
Tests of Detail	47.3	49.9	35.3
Estimates of Value	5.0	6.1	4.9

[a] Less than or equal to 0.1 percent of total assets.
[b] Greater than or equal to 0.6 percent of total assets.

Tests of detail also detected a large percentage of errors (47.3 percent), although these procedures tended to detect small errors more frequently than large ones. Of the various types of detailed tests, confirmation and physical inspection in combination detected only 2.9 percent of the errors as indicated on Table 2. In contrast, detailed tests using client-supplied documentation, including both internally- and externally-prepared documents, detected 36.8 percent of the errors ("Obtaining Supporting Documentation," which led to

detection of 19.4 percent of the errors, and "Analysis and Review," which led to detection of 17.4 percent).

Analytical Review and Informal Procedures

Analytical review is a catch-all term for a group of techniques of growing importance in auditing. In our study it included comparisons of current unaudited balances with prior years, predictions of current balances based on exogenous data, analyses of interrelationships among account balances, reasonableness tests, estimates of account balances and initial review.

Together with informal procedures such as discussions with client personnel and expectations from prior years based on a knowledge of the company, analytical review detected almost half of the errors resulting in an adjustment (45.6 percent). This figure may be somewhat misleading, though, because auditors normally use these methods before beginning detailed testing, uncovering errors that later procedures might also have turned up. However, this high percentage does underscore that analytical review, combined with various informal procedures, is at least as worthwhile as detailed tests, and is perhaps more cost effective since it requires less time to perform.

Although prior year expectations and discussions with clients turned up mostly large errors (about 25 percent of them), analytical review by itself detected both large and small errors in almost equal proportions. As Table 1 indicates, auditors using analytical review found 31.7 percent of the small errors they reported, and 30.5 percent of the large errors. They found most small errors by using analytical review procedures on small subsidiary trial balances and other balances supporting aggregate financial statements. Since analytical review takes little time while finding a large proportion of both large and small errors, practitioners designing and conducting audits should emphasize these procedures where possible, in lieu of detailed testing, to reduce audit costs.

Analytical review and informal procedures are already required for limited reviews of interim and other unaudited financial statements. Professional standards require auditors to conduct inquiries, obtain a familiarity with a client's accounting practices, and apply analytical review and other general audit procedures (SAS No. 10). The study findings seem to validate the effectiveness of limited review procedures for unaudited financial statements.

Confirmation and Physical Inspection

The study findings show that confirmation and physical inspection procedures detect few errors. As Table 2 indicates, out of the 281 errors reported, these procedures found only 2.9 percent, or 8 errors. Additionally, of the seven errors detected through confirmation procedures, three of them were identified before the confirmations were actually sent.

Other research studies[4] have also cast doubt on the effectiveness of confirmation procedures. In these studies, researchers manipulated the dollar amounts they asked recipients to confirm. Although these confirmation requests contained incorrect amounts, many recipients nonetheless confirmed them. Because confirmation and physical inspection procedures do not appear

Table 2
Errors Detected by Tests of Detail

		Percentage
Physical Inspection Procedures		0.4%
Confirmation Procedures		2.5
Test Footings and Extensions		2.8
Obtaining Supporting Documentation:		
Externally Prepared	11.4	
Internally Prepared	3.2	
Legal Documents	2.5	
Combinations of Above	1.4	
Prior Years' Workpapers	0.7	
		19.4
Analysis and Review[a]		17.4
Scan		3.2
Other		1.8
TOTAL		47.3%
Number of Errors		133

[a] Analysis and review of internal information including account balance details, account balance detail activity, client work-ups, account classification and data consistency.

to detect most errors and are quite time consuming, these procedures may not be very cost effective.

The questions raised about the value of confirmation and physical inspection in this and other studies should spur practitioners to re-evaluate the objective of using these procedures. For instance, are confirmation and physical inspection actually most useful in detecting and preventing fraud? These procedures, in fact, first became required in response to the massive McKesson & Robbins fraud in the 1930's, which went undetected despite an audit. Unfortunately, the results of our study show little about detection of frauds, since only 10 of the reported errors were considered intentional, and they were not necessarily fraudulent.

If the primary audit objective in performing confirmation and physical inspection is indeed not to detect unintended errors but rather to prevent and detect fraud, different standards may be appropriate in selecting sample sizes for these procedures. For instance, merely performing limited confirmation and physical inspection procedures in and of themselves may be sufficient to deter frauds of certain types, regardless of the sample sizes used. Also, because fraud is relatively infrequent in comparison to unintended errors, as demonstrated by this study, sample sizes might be reduced.

Other Tests of Detail

A significant number of errors were detected by tests of detail other than confirmation and physical inspection procedures. These test procedures found 44.4 percent, or almost half of the errors. Almost all of these detailed test procedures relied on client-supplied documentation.

One interesting result is the large percentage of these errors detected through detailed tests that used internally-prepared documentation. This category includes at least the 17.4 percent of the errors detected through analysis and review, the 3.2 percent resulting from obtaining internally-prepared supporting documentation and perhaps portions of other categories not specifically broken out. In contrast, obtaining externally-prepared documentation led to detection of only 11.4 percent of the errors.

For the audit practitioner, these findings indicate that externally-prepared documentation is no more likely to be a source for detecting errors than internally-prepared documentation. Assuming that most errors are unintended, internal documents should be no less reliable than external documents and may indeed be a more direct means to uncover errors. This result seems to contradict the emphasis in the auditing literature on externally-prepared documentation.

Overall, the findings for detailed tests show that these procedures detect a large number of errors and they should continue to be emphasized. Auditors should, however, closely consider the appropriate mix of detailed test procedures in light of results of this study. These tests also seem to detect more small errors than large errors, indicating they may be effective in finding errors that informal procedures do not detect.

Why Errors Occur

Most errors that auditors discover appear to be unintentional. Auditors participating in the study considered fewer than 4 percent, or 10 out of 281, of the reported errors to be made purposefully. Another important finding is that errors discovered tend to understate as often as they overstate company income. Further, most errors did not seem to be the result of major systems or procedural problems, but rather resulted from various personnel and related problems including inexperience, inadequate knowledge of accounting and errors in judgmental amounts.

Personnel Problems

Personnel problems, as defined in this study, included turnover and the resulting inexperience of new employees, incompetent or poorly-trained employees, and excessive time pressures on employees. These problems (Table 3) accounted for 26.3 percent of the errors, many of them leading to major audit adjustments. Two related causes were lack of knowledge of accounting, including basic accounting concepts, new pronouncements, and other principles. Auditors cited this problem as a cause of 15.0 percent of the errors, and judgment errors as causing 15.3 percent of the errors. (These percentages cannot be added because multiple causes were cited for some errors).

Practitioners should be aware that personnel factors can affect the reliability of financial statements. Auditors should consider, for instance, reviewing the experience of accounting personnel in light of their current responsibilities, the rate of turnover among accounting personnel, and the provisions for replacing terminated or vacationing employees. They could look

Table 3
Causes of Errors

Categories	*Percentages*[a]	*Average Dollar Size*	*Average Percentage of Assets*
Personnel Problems	26.3	$180	1.19%
Insufficient Accounting Knowledge	15.0	$143	3.29%
Judgment Errors	15.3	$627	.74%
Cut-off or Accrual Errors	38.1	$236	.96%
Mechanical Errors	12.5	$67	.35%
Inadequate Control, Follow-up or Review	9.3	$135	.72%
Miscellaneous	19.2	$53	.58%

[a] Percentages add to more than 100% due to double counting of some errors attributed to more than one cause.

at personnel factors as part of their regular review of a client's internal controls. If they note significant personnel problems, it may indicate a need for more testing of the affected audit areas, and procedures directed towards specific transactions handled by new or inexperienced personnel.

Cut-Off and Accrual Errors

Another important cause of the errors cited was improper cut-off and accrual of accounts at year-end. These errors, which comprised 38.1 percent of total error, averaged about 1 percent of company assets. The findings indicate that the traditional emphasis placed on verifying year-end balances by examining transaction cut-offs and accruals is justified. Since most of these errors occurred in small companies, auditors may wish to perform a balance sheet audit on these companies stressing substantive tests on year-end balances rather than reviews of on-going controls. This is, in fact, the approach often taken for small companies.

Mechanical Errors

This category includes posting, coding, footing and extension errors. Although the study found that 12.5 percent of the errors reported were mechanical errors, many were small, averaging only 0.35 percent of company assets. Audit procedures specifically intended to detect a subset of these mechanical errors, footing and extension errors, actually found very few errors (2.8 percent of the total errors reported). These findings may suggest that less time should be devoted to uncovering these relatively small mechanical errors, particularly in large companies where material errors of this type are rare.

Where Errors Occur

We have summarized those auditing areas in which errors most frequently occur in Table 4. Auditors reported the majority of the errors (56 percent) in

five audit areas: (1) sales & receivables, (2) purchases & payables, (3) inventory and production, (4) other assets, and (5) fixed assets. These concentrations of errors differ somewhat by industry. For industrial companies, for instance, 31.7 percent of the errors involved inventory and production, while for wholesale and retail companies, 44.9 percent of the errors occurred in the sales and purchases cycle combined. The distribution of errors also differs for financial and service industries.

A concentration of errors into specific audit areas may suggest that auditors should devote more time to these areas during an examination than to those where few errors are expected. In fact, most auditing firms already identify critical areas of particular importance before beginning actual fieldwork, and perform additional testing and review in these areas. The results of this study confirm the worth of this policy for planning an audit.

Table 4
Where Errors Occur[6]

Audit Area	*All Companies*	*Industrial*[a]	*Wholesale*[b] *& Retail*	*Financial*[c]	*Service*[d]
Cash	2.1%	1.6%	—	4.7%	2.3%
Securities & Investments	3.2	—	2.6%	4.7	2.3
Sales & Receivables	15.7	11.2	18.4	5.9	38.6
Notes Receivable	5.7	1.6	2.6	16.4	—
Inventory & Production	11.3	31.7	7.9	4.7	4.5
Other Assets	7.5	4.8	5.3	7.1	6.8
Fixed Assets	10.0	3.2	15.8	8.2	18.2
Long-Term Debt	3.9	1.6	2.6	5.9	4.5
Purchases & Payables	11.0	15.8	26.3	5.9	4.5
Income Taxes	4.2	4.8	5.3	4.7	—
Other Liabilities	7.8	1.6	2.6	18.4	2.3
Stockholder's Equity	3.5	6.3	—	1.2	2.3
Commitments & Contingencies	3.9	7.9	—	1.2	6.8
Labor Costs and Benefits	5.0	4.8	5.3	7.1	2.3
Other Income	3.6	3.2	5.3	2.4	2.3
Other	2.1	—	—	1.2	2.3
Total Percentage	100.0%	100.0%	100.0%	100.0%	100.0%
Number of Errors	281	63	38	85	44

[a] SIC Nos. 2 and 3
[b] SIC Nos. 5
[c] SIC Nos. 6
[d] SIC Nos. 7 and 8.

The study findings also indicate that errors tend to occur more frequently in smaller companies. Although companies included in the study were broken into three categories of almost equal size, containing approximately 50 companies

each, many more errors were reported for companies in the small size category than for either the large- or medium-sized category (see Table 5). These results may indicate that controls to prevent errors are lacking in small companies and that auditors should be more concerned with the possibility of unintended errors when examining small companies.

Table 5
Company Sizes[6]

	Large[a]	*Medium*[b]	*Small*[c]
Number of errors	66	92	123
Number of Companies	49	52	51
No-Error Companies	23	22	12

[a] Assets greater than $50 million.
[b] Assets of $10 to 50 million.
[c] Assets less than $10 million.

Preventing Errors

Beyond the auditing implications of financial statement errors, practitioners have an opportunity to assist their clients in preventing errors that might show up in financial statements. The study results indicate certain areas where improvements in management practices could potentially reduce accounting errors.

Pre-Audit Review

The apparent effectiveness of analytical review and "informal" auditing procedures suggests that clients can benefit from using similar techniques to uncover and correct potential accounting errors before a year-end audit begins. Comparable internal procedures might include reviews of internal budgeting, planning, and other financial data using various analytical techniques such as ratio and trend analysis. Comparison of recorded financial data to budgeted amounts, for instance, often uncovers errors. Also, companies can use statistical techniques similar to audit tests to estimate expected account balances.

Client internal auditors can perform pre-audit reviews through discussions with preparers and users of accounting records. Discussions lead to detection of a surprising number of errors and identification of likely potential sources of errors. Employees who are aware of possible errors often are not given the opportunity to report or correct them and may have no specific responsibility to do so. Procedures and policies encouraging accounting and operating personnel to help correct known or potential errors can be an effective preventive measure.

Personnel Policies

Clients can take steps to reduce errors caused by personnel problems and other related causes. Improvements in personnel policies may reduce turnover

in the accounting staff. Hiring and promotion practices, employee pay scales, benefits programs, and staffing levels all have an impact on turnover. Also, screening of new employees during hiring and promotion should ensure that all accounting employees possess a basic understanding of accounting concepts and principles.

Accounting Department Organization

The proper organization and delegation of accounting department responsibilities may help clients to eliminate potential personnel problems that cause errors. Employee errors may be reduced if the department has clearly-defined job responsibilities, written job descriptions, and standardized procedures. Information about the organization and definition of duties may be particularly useful to employees who are unfamiliar with new responsibilities. Adequate department staffing is also important.

Accounting Expertise

Improvements in accounting expertise among accounting personnel can eliminate potential sources of errors. Companies can improve training, introduce self-study courses, and circulate current accounting pronouncements and other literature to accounting personnel to increase their knowledge of advanced accounting concepts and new pronouncements.

Conclusions

The study findings and implications may suggest the following scenario for a more effective and efficient audit:

The audit team members plan the examination to emphasize areas where errors are most likely. During a review of internal accounting controls, the auditors assess the level of experience and competence of client personnel to determine where errors are more likely despite adequate internal accounting controls. The client's industry may also indicate likely sources of error.

In the interim phase, members of the audit team review prior-year workpapers and other documentation, conduct analytical reviews, and discuss areas of concern with the client. The auditor can feel assured that these relatively easy procedures will uncover a major portion of any errors. These initial steps will also help further define those areas that warrant additional detailed tests.

During the year-end audit, the time needed and cost for detailed testing require the auditor to apply these techniques selectively. Wherever possible, analytical review procedures are applied to small accounts and areas where errors are not likely, supplemented only by limited detailed testing and compliance tests. Tests of detail are applied extensively only where errors are considered to be a distinct possibility. These tests include extensive analysis and review of client records and comparison of recorded balances and transactions to supporting documentation. Extensive tests of detail are also applied to year-end transactions to uncover errors in cut-offs and accruals, particularly for small companies. Tests of footings and extensions are held to a

minimum and are performed only to verify the basic integrity of client supplied documentation. As a precaution against fraud, the audit team sends a limited number of confirmations and, where appropriate, inspects inventory for a small sample of items at each company location.

Upon completion of the examination, the audit team will know the potential sources and causes of accounting errors and can assist the client to prevent the recurrence of similar errors. Such assistance might include improving personnel policies, accounting department organization, and expertise of accounting employees. At the conclusion of the engagement the practitioner will have made a significant contribution towards preventing the recurrence of similar accounting errors and has also helped to reduce future audit costs as a result.

This scenario is, of course, speculative. It is intended only to project some possible implications of the study and to stimulate further discussion into the issues raised. I hope that this research will lead to further study that will be beneficial both to practitioners and to client financial executives.

Footnotes

1. I wish to acknowledge the contributions of Janet Lewis, of Peat, Marwick, Mitchell & Co., who assisted in preparing this paper.

2. See R.E. Hylas, and R.H. Ashton, "Audit Detection of Financial Statement Errors," *The Accounting Review* (forthcoming).

3. Categories in Table 1 include the following quoted from the article referenced in (2).

> Our definition of *analytical review* was broad. It included procedures such as comparisons of current unaudited balances with balances of prior years, predictions of current balances based on exogenous data, and analyses of interrelationships among account balances. It also included what the auditors referred to as "reasonableness tests," "estimates" of account balances, and "initial review." The latter term refers to a cursory review of financial statements in the early planning stages of an audit.
>
> The category "Tests of Detail" is further categorized in Table 2: *Analysis and review* involves the examination of transaction or balance components of data produced by or contained in the client's accounting system. It involves examination of transaction amounts and descriptions, account balance details, "work-ups" to support account balances, and data appearing on various types of reconciliations. *Supporting Documentation—Externally Prepared* involves comparisons of accounting data with evidence obtained *outside* the client's accounting system. It includes reference to confirmations, invoices, cancelled checks, test counts, and checks of mathematical accuracy. *Scan* involves a cursory review of transactions or the details supporting balances, in a search for unusual items or obvious errors. This category may be contrasted with analytical review, which involves entire account balances or other aspects of overall activity.
>
> The category "General Procedures" includes reviews of accounting policies and procedures, legal letters, and minutes of boards of directors' meetings. "Estimates of value" includes both auditors' estimates and their evaluations of clients' estimates involving, for example, uncollectible accounts, net realizable value of inventory, losses on discontinued operations, and contingent losses.

4. See Davis et al. [1967], Hubbard and Bullington [1972], Sauls [1970, 1972], Sorkin [1978], and Warren [1974, 1975].

5. From article referenced in footnote (2). Nine errors excluded where no specific cause was identified, and ten additional errors excluded which were considered to be intentional. The following comments apply to the categories.

> The first category, *Personnel Problems*, refers to such things as turnover, new or inexperienced client employees, carelessness, incompetence, and time pressures. A related category, *Insufficient Accounting Knowledge*, includes errors caused by insufficient awareness of general accounting concepts, promulgated accounting principles, and specific accounting policies of the client. The category of *Judgment Errors* refers to items that had to be estimated because exact dollar amounts could not be determined, e.g., estimates of uncollectible accounts, obsolete inventory, and contingencies. Insufficient information at year-end, as well as "poor" or "unreasonable" estimates

based on adequate information, were cited by the auditors as the major causes of problems in this category. *Cut-off or Accrual errors* refers to incomplete, poorly-executed, or omitted cut-off or accrual procedures at year-end. The *Mechanical Errors* category refers to procedural errors—e.g., posting, coding, keypunching, footing and calculation—made by employees considered normally to be competent and conscientious. *Inadequate Control, Follow-up or Review* procedures includes errors caused by failure to perform, for example, reviews of old account balances for collectibility, follow-ups of reconciliation differences, and established internal control procedures. The *Miscellaneous* causes category includes, for example, errors that the auditors ascribed to coordination or communication problems, the use of outside service bureaus, the use of estimated amounts instead of actual amounts, differences between client accounting policies and generally accepted accounting principles, misunderstanding of contract terms, and inability to handle unusual items properly.

Of the above errors, the ten classified as *intentional* were considered by the auditors to have been purposely caused by client management or employees. In some cases the auditors were confident of this interpretation; in others, they only suspected that the errors were intentional.

6. From the article referenced in footnote 2.

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Discussant's Response to Audit Detection of Financial Statement Errors

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The recent competition among public accounting firms for clients has forced them to find more efficient ways to conduct audits. The methods chosen to improve efficiency, however, must be as effective as the old methods in detecting error or auditors must be willing to accept higher levels of risk on their engagements. The results reported in Hylas' paper (and which are based on the study by Hylas and Ashton[1]) provide many insights for practitioners and present some interesting areas of research for academicians. In particular, this study provides valuable information on how auditors can more efficiently *and* effectively conduct audits.

In my discussion I will first address some specific areas of the study that are particularly interesting and informative. Secondly, I would like to comment on Hylas' scenario for an effective and efficient audit.

Specific Areas of Interest

In this section I would first like to address two specific results that may have a significant impact on the way audits are presently conducted. I will folow this with a subsection which contains a number of miscellaneous comments.

Personnel Related Problems

The result that surprised me the most was that the auditors who participated in the study "attributed a great many errors to various personnel problems, including employee turnover and inexperience, time pressure, carelessness, and even incompetence." Relatedly, a large number of errors resulted from a lack of accounting knowledge by client personnel. There are some serious implications for accounting control from such findings. SAS Section 320.30-.48 outlines the basic concepts or elements of internal control. Of all the concepts listed in those standards, the most critical element to the internal control system is competent and trustworthy personnel. This results from the fact that even if all of the other concepts of internal control (e.g. segregation of duties, execution and recording of transactions, etc.) are present, incompetent personnel can destroy their effectiveness.

Does the fact that a large percentage of errors are caused by personnel problems pose difficulties for the auditor? My inclination is that it does. This is based on the belief that it is difficult for auditors to assess personnel related problems *ex ante* (i.e. early in the audit). Certainly, employee turnover and inexperience should be "red flags" to the auditor, but judging the competence

of client personnel may be very difficult. In fact, auditors may only get a "feel" for this *after* performing tests of transactions. Of course, prior experience with the client may help.

While I have not surveyed any public accounting firms, I suspect that auditors currently do not make "formal" assessments of client personnel. Given the results of this study, auditors should consider refining their approaches to personnel evaluation and/or develop new ways of identifying "problem" personnel early in the audit and allocate audit resources in their areas of responsibility.

Analytical Review Procedures

The result that analytical review procedures (ARPs) identified a high percentage of errors should be very encouraging to auditors because it provides empirical support for current auditing standards (SAS Section 318). These results are also encouraging because these procedures appear to be as effective as tests of details in detecting errors and probably can be conducted at a lower cost. I assume from reading the paper that the ARPs reported on did not include formal quantitative approaches such as regression analysis which may be more costly.

I have two comments about this result that require clarification. First, we normally think of ARPs as being useful in detecting unusual fluctuations. The implication to me is that this means "large errors." The results of the study indicates that ARPs were equally effective at finding "small errors." My concern here is why auditors would be investigating fluctuations that result in "small errors." The only explanation that appears reasonable was that these "small" errors were still material. Further research along these lines (i.e. investigation rules) would be helpful.[2]

Secondly, the study provides no information on the state of the sample companies' internal control systems. Kinney has pointed out that "The marginal effectiveness of preliminary analytical review in predicting error depends in part upon the effectiveness of internal control subsystems . . ."[3] In the current study we have no way of determining whether ARPs were effective in and of themselves or because the auditors knew of internal control weaknesses from prior experience and therefore knew where to suspect errors. Future studies of this type need to examine the evaluation of internal control on the effectiveness of ARPs.

I think the findings that ARPs and other informal procedures were effective in detecting errors is important for another reason that was given only casual comment in the paper. This relates to the use of ARPs for reviews of financial statements for non-public companies. The main procedures required by Statement on Standards for Accounting and Review Services No. 1 for a review engagement are inquiry and ARPs. My discussions with individuals from both large and small public accounting firms indicate that there is a great deal of diversity in how firms approach review engagements. I have been told by a number of CPAs that the type and amount of evidence gathered on review engagements often approaches the amount gathered on an audit (e.g. confirmations of accounts receivable, vouching of selected accounts, etc.). These same CPAs indicate that one of the reasons this occurs is that they are just not satisfied with the effectiveness of inquiry and ARPs. The results reported in

this paper should relieve some of their fears in relying on these evidence gathering procedures.

Miscellaneous Comments

The study contained a number of other findings that are worth mentioning. First, is the result that a small percentage (4%) of errors were intentional. This is noteworthy but we must be very careful not to place too much reliance on such a result. If the client or client personnel have "strategically manipulated" accounting information, traditional audit procedures may not be effective in finding them.[4]

Second, is the result "that externally-prepared documentation is no more likely to be a source for detecting errors than internally-prepared documentation." This result would be more meaningful if we knew what percentage of total documentary evidence was in each category. For example, if 80% of the documentary evidence that auditors examine on an engagement is internal, then we would expect internally-prepared documents to detect a high percentage of errors. In other words, I am suggesting we not dispose of the idea that external evidence is more reliable until we have more data.

A Revised Audit Scenario

Hylas' scenario for an effective and efficient audit is somewhat different from what auditors are currently doing, although I think competitive pressures are pushing them in that direction. I agree with him that auditors should allocate their resources where they *expect* errors. There are two points in the audit process where such an approach will prove most beneficial: (1) where auditors use ARPs early in an engagement for planning purposes and (2) in the study and evaluation of internal control. In the first instance the auditor will have to identify unusual fluctuations and then allocate resources to investigate their causes. In the second instance the auditor must "anticipate" what types of errors can result from a particular control weakness before allocating audit resources. Unfortunately, we have little evidence on how well auditors perform these tasks.[5]

A second comment on Hylas' scenario concerns the audit work at the test of details stage. He suggests that tests of details should be "applied extensively only where errors are considered a distinct possibility." If we assume that auditors are able to anticipate errors, then the current approach of taking large random samples could be modified. If auditors design audit procedures to assess the effect of *specific* types of errors then there is no need to take large random samples. At this point auditors would only be interested in the presence of "unanticipated" types of errors. In such instances some type of discovery sampling might be more appropriate.[6]

Conclusion

I view auditing as an evolutionary process where audit firms must adapt to a changing environment. Studies like Hylas and Ashton's provide valuable information which can assist audit firms in this adaptation process. I hope that the future will see further collaboration between practitioners and academics in studies similar to the one discussed today.

Footnotes

1. Hylas, R.E. and R.H. Ashton, "Audit Detection of Financial Statement Errors" *The Accounting Review* (forthcoming).

2. See W.R. Kinney, Jr. and G.L. Salamon, "Regression Analysis in Auditing: A Comparison of Alternative Investigation Rules" *Journal of Accounting Research* (forthcoming) for an example of such research.

3. W.R. Kinney Jr., "The Predictive Power of Limited Information in Preliminary Analytical Review: An Empirical Study" *Studies on Auditing-Selection from the "Research Opportunities in Auditing" Program*, Supplement to *Journal of Accounting Research* (1979), p. 151.

4. Studies by A.R. Sumutka, "Questionable Payments and Practices: Why? How? Detection? Prevention?" *Journal of Accountancy* (March 1980), pp. 50-64 and M.E. Romney, W.S. Albrecht and D.J. Cherrington, "Auditors and the Detection of Fraud" *Journal of Accountancy* (May 1980), pp. 63-69 indicate that traditional audit procedures are not very effective in detecting intentional actions by management or client personnel.

5. See W.F. Messier, Jr. and R.D. Plumlee, "Auditor Evaluation of Error Type and Frequency: Some Preliminary Results," working paper, University of Florida, July 1982, for some preliminary results on auditors' ability to anticipate errors resulting from internal control weaknesses.

6. See S. Moriarity, "Discussion of Decision Theory Aspects of Internal Control System Design/Compliance and Substantive Tests" *Studies on Statistical Methodology in Auditing*, Supplement to *Journal of Accounting Research* (1975) pp. 30-34. for a further discussion on a discovery sampling approach.

5

A Multi-Attribute Model for Audit Evaluation*

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Introduction

This paper concerns research directed at the development of a general procedure for assessing an overall, meaningful measure of the quality of an audit engagement from a systematic integration of several evaluative characteristics. Such a measure can serve as a key input for audit planning and cost-benefit analysis in complex assessment situations. The technical approach is based upon the creation and application of a hierarchical multi-attribute evaluation (MAE) model that decomposes an audit into manageable parts which can be analytically assessed and combined.

The importance of the need to parameterize and measure the quality of various audit procedures and their role in the overall process of evaluating audit evidence is widely recognized in the field. Accounting firms and their clients are continually striving to develop and refine useful criteria for assessing audit effectiveness. For example, Peat, Marwick, Mitchell & Co. (1976, p. 150) highlight a research opportunity objective to develop:

> . . . measures of effectiveness for individual and related sets of auditing procedures that take into account . . . the anticipated quality of evidence derived from their use.

Such auditing procedures include (p. 9):

> . . . all of the tools, techniques and procedures used to examine information . . . The methods for reporting the results of the examination, because, no matter how thorough and effective the examination, in the end a user can only rely on the assurance that is actually communicated by the auditor's report. Additionally, audit methods encompass all of the supporting functions and procedures used to plan, control, and carry out an audit.

At a more general level, the American Institute of CPAs has shown a continuing interest in audit quality and firm quality control practices. For

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example, *Statement on Auditing Standards (SAS) No. 4,* "Quality Control Considerations for a Firm of Independent Auditors" established nine elements of quality control which were subsequently incorporated into *Statement on Quality Control Standards (SQCS) No. 1.* In addition, most SASs contain explicit references to evaluative criteria and attributes which may be expected to impact on the quality of individual audit engagements.

Because of the disparate nature of the many different features of audit quality, a need exists for judging and expressing the overall procedural quality of an audit in an integrated, meaningful and useful manner. Toward meeting this need, a number of attempts have been made to condense and codify the vast literature on auditing know-how into a set of specific guidelines or evaluative criteria (i.e., the "do's" and "don'ts" of good procedures). These efforts have mostly taken the form of itemized considerations and check lists, such as are found in firm quality control review manuals and in related documents (Milliron and Mock, 1981). The different schemes suggested vary considerably in the degree to which they are comprehensive and well organized. For the most part, however, these schemes are loosely structured, and their originators rarely claim that they have employed a thorough/systematic/expert-consensus-based approach for specifying evaluative dimensions which are mutually exclusive and relatively exhaustive. Furthermore, the techniques do not usually provide quantitatively meaningful measures of audit quality. What appears to be needed, therefore, is a much more formal approach to establishing and configuring evaluative dimensions or attributes into a well-structured model that can provide traceable and dependable quantitative estimates of audit quality.

However, the evaluation of the quality of an entire audit is a difficult intellectual exercise which requires the combination of a number of evaluative factors into an overall measure of quality. This analysis is usually done using extensive review forms or quality control review manuals, and the complex set of qualitative judgments must be informally aggregated into one vaguely-specified audit evaluation. Although the informal approach may lead to a satisfactory evaluation, this method has numerous potential failings. Among these are that it may lack: (1) *reliability and validity,* since evaluators are often unable to combine so much information in a consistent, repeatable, accurate manner; (2) *generality and systematization,* since different audits cannot be compared and contrasted by the same evaluation model; (3) *intelligibility and communicability,* since the logic by which judgments are made often cannot be adequately explained; (4) *diagnosticity,* since it offers little or no information about the relative contributions of the various evaluation factors; and (5) *cost-effectiveness,* since most review processes require extensive lists of factors to be evaluated (see Milliron and Mock, 1981). Therefore, a more objective and standardized evaluation methodology which corrects these deficiencies may be desirable.

A recently popularized methodology known as multi-attribute evaluation (MAE) offers such an approach to making quantitative assessments involving multiple criteria (e.g., Keeney and Raiffa, 1976; Edwards, 1977). MAE methods can decompose a complex overall evaluation problem into more manageable sub-problems through scaling, weighting, and combining operations applied to specific criteria. With respect to audit evaluation, the MAE

approach offers to improve upon current, intuitive techniques of audit-practice assessment in the following ways: (1) making explicit what are conventionally implicit considerations; (2) quantifying what are usually qualitative descriptions; (3) simplifying the representation and integration of what are often complex configurations and interrelations among relevant information; and (4) providing an objective and general method for rating the overall quality of an audit. In sum, the MAE method is designed to provide a useful framework for evaluative analysis, discussion, and feedback.

Method and Results

The identification and definition of appropriate evaluative attributes for audit quality and their configuration into attribute clusters or categories (i.e., an MAE model) is a challenging task. The problem results from the fact that the attributes and their classification are *arbitrary;* they are subject to differences of opinion and there is probably no such thing as a "best" set. The approach taken here, therefore, was to use a systematic, iterative procedure to *distill* a "good" set of general evaluative criteria which are broad in scope yet are meaningful, practical, and internally consistent. This multi-phase approach involved repeated consultation with relevant literature and expert opinion, attribute content analysis, and empirical verification studies. In general, an attempt was made to satisfy the desirable properties of an attribute set as suggested by the framework of MAE theory (Keeney and Raiffa, 1976); namely, that it be *complete,* so that it covers all aspects of the problem; *operational,* so that it can be meaningfully used in analysis; *decomposable,* so that the evaluation process is simplified by breaking it down into parts; *nonredundant,* so that double counting of attribute impact is avoided, and *minimal,* so that evaluation dimensions are kept to a minimum. These guidelines were followed in the development of a cohesive set of attributes for evaluating the quality of an audit.

As a first stage of the attribute-definition process, the basic professional and authoritative sources (e.g., SASs, SQCSs, the AICPA Peer Review Manual (1978), PMM's Quality Controls (1980), AY's "Perspectives on Quality" (1980), etc.) were reviewed. In addition, suggestions for evaluative considerations were obtained from many auditing references such as Roberts' (1978) treatment of statistical auditing, and research studies such as Mock and Turner (1981) which focus on the evaluation of internal accounting controls. This process generated 110 initial considerations or factors. Working with an experienced auditor, these considerations were organized into a loosely structured list which was then presented to several practicing audit experts. These experts were interviewed, on a one-to-one basis, and they provided valuable comments for each consideration concerning its meaning (i.e., is it really different from some other consideration?), relevance (i.e., does it reflect significantly upon audit quality?), and scope (i.e., should it be combined with another audit consideration or perhaps decomposed into two or more separate considerations?).

Based on the first phase of attribute definition, 32 evaluative considerations were specified. Each consideration was phrased in the form of a specific question; for example, *"Were appropriate critical audit areas identified?"* A

tentative organizational or classification scheme for these considerations was then developed as a conceptual hierarchy in terms of attributes and attribute categories. Each attribute was defined by a set of a few related evaluative questions; and the attributes were grouped according to five major categories relating to audit performance (PLAN, ADMINISTRATION, PROCEDURES, EVALUATION, CONDUCT). Attributes within the PLAN category, for example, are "Objectives," "Research," and "Strategy."

As the second phase of attribute-set development, a set of simple paper-and-pencil sorting tasks was constructed that required the classification of question elements into attribute categories. These tasks were then presented, in the form of a pilot study, to ten faculty members and doctoral students in the School of Accounting at the University of Southern California. On one task, for example, participants were asked to sort questions (presented in random order without labels) into major categories (e.g., PLAN, ADMINISTRATION, etc.). In another task, the questions had to be sorted according to only attribute labels (e.g., "Objectives," "Research," . . .) without reference to the name of the major category to which each attribute belonged. In a third task, both attribute category names and attribute labels were presented in a hierarchically structured manner (i.e., PLAN—"Objectives," "Research," "Strategy;" ADMINISTRATION—"Personnel," "Budgeting," "Management;" etc.). For each sorting task, each question had to be placed into only *one* category or attribute as appropriate. Participants were instructed that the purpose of the exercise was to assess levels of agreement/disagreement—among people knowledgeable about auditing—concerning where specific issues related to audit quality fit into an overall schema. They were asked to respond in accordance with their individual subjective opinions since there were really no "right" answers.

The conduct and results of the pilot study demonstrated the success of the sorting-task technique for providing data that could be gainfully used toward the refinement of both specific attribute definitions (i.e., evaluative questions) and the organizational structure into which they are placed. A "confusion matrix," showing the frequency with which each question was assigned to each attribute category, was generated to represent the results for each sorting task; these matrices highlighted apparent difficulties that participants had in interpreting and appropriately classifying specific questions. Based on a systematic analysis of these data, modifications were made in the way certain questions were phrased or worded; and some changes were also effected in the labeling and organization of the attribute categories. In addition, it was determined from the data that the most diagnostic task (in terms of suggesting potential problems with the attribute scheme) was the one requiring participants to classify questions into attributes when both the names of the attributes and corresponding attribute categories were indicated. As a result of this latter finding, which is supported by other research (Beach, Townes, Campbell, and Keating, 1976), this particular structured sorting task was employed in the third phase of attribute-set verification.

The participants in this third phase of verification were 34 auditors who were taking part in a special program of advanced audit training. As mentioned above, these participants also performed a sorting task that utilized the latest

version, available at the time, of the attribute definitions (i.e., specific evaluative questions) and the categorization scheme (major category and attribute labels). Figure 1 provides an illustration of the format in which the task was presented; randomly ordered questions (like those shown in the table) appeared on the left side of a matrix, and participants were required to check the *one* column (i.e., attribute name) which they felt was *most likely* to contain the given question within its domain.

As in the case of the pilot study, the data obtained from this latter exercise were then carefully analyzed for each question in terms of the distribution of participant responses across the possible classification columns. The results are portrayed in Tables 1 through 5. Each table corresponds to a major category label (e.g., PLAN), and the attributes and questions within this category have been reorganized according to the intended attribute headings. For each question, the percent frequency distribution of classification responses (among the 34 participants) is given across the attributes belonging to the major category which contains the given question.

As an example of the results format consider Table 1. The first question listed, *"Were all audit objectives explicit and clearly specified?"*, belongs to the attribute "Objectives." Of the 34 participants, 63% placed the question into the appropriate ("correct") attribute and 3% placed it into the aligned attribute "Strategy." Thus, 66% of the participants assigned the question to the appropriate ("correct") major category, "PLAN;" and 34% of the sample put the question into various inappropriate ("incorrect") attributes distributed across the remaining four major categories. For the second question, 56%, 23%, and 3% of the participants placed it into the "Objectives," "Strategy," and "Research" attributes, respectively; consequently, 82% of the responders classified the question into the appropriate major category (PLAN) and 18% put it elsewhere. The circled number on each line of the table represents the modal classification response (i.e., highest frequency of assignment) among all possible attribute labels (not just those in PLAN). Hence, for every question in the PLAN category, the correct attribute was assigned more often than *any other* attribute identified in Tables 1 through 5.

The classification matrices shown in the tables provide an index of relative classification accuracy (i.e., adherence to the expected classification) as well a measure of inter-rater agreement with respect to question classification. Examination of the tables shows that the classification accuracy or agreement rate is reasonably high. For 29 of the 32 questions, the correct attribute and major category were selected by a greater number of participants than any other attribute or major category, respectively. In fact, across all 32 questions, the median modal selection frequency for the correct attribute was 56% compared to a chance value of 14%; for the correct major category, the median modal selection frequency was 73% compared to a chance value of 20%. For eight of the questions (i.e., 1/4 of all questions) for which a classification problem was still evidenced in the latter data, additional modifications were made in their wording so as to make them better fit the intended attribute/category. For example, the question *"Were appropriate statistical techniques correctly applied and interpreted?"* was more often classified under "nature" within "PROCEDURES" (26%) rather than under "analysis" within "EVALUATION" (21%). Consequently, the wording of the question was changed to read

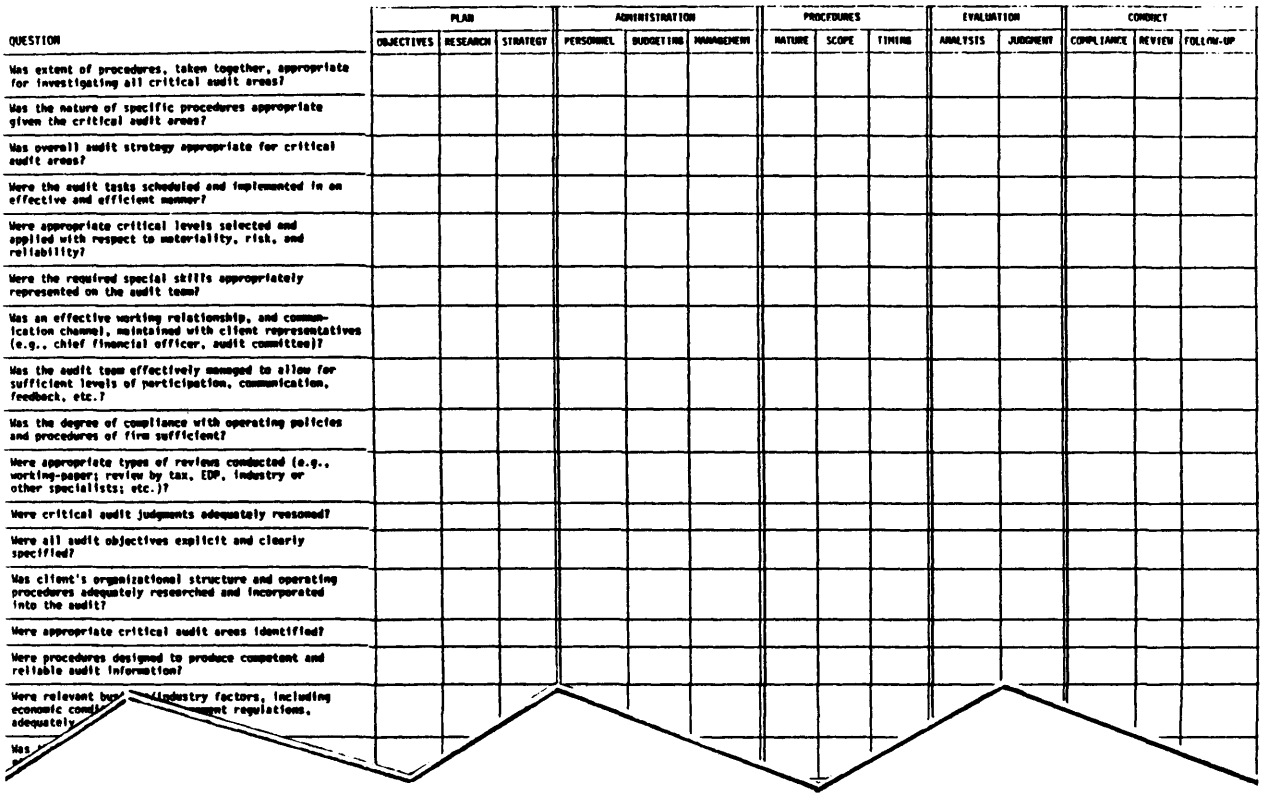

FIGURE 1. ILLUSTRATION OF FORMAT FOR SORTING TASK [The auditor was asked to check only one box in each row.]

TABLE 1

FREQUENCY DISTRIBUTION FOR QUESTION CLASSIFICATION:
CATEGORY I, PLAN

		ATTRIBUTE			
ATTRIBUTE	QUESTION	Objectives	Strategy	Research	CATEGORY TOTAL
Objectives	Were all audit objectives explicit and clearly specified?	(63%)	3%	0%	66%
	Were specific objectives appropriately tailored to the overall audit purpose?	(56%)	23%	3%	82%
Strategy	Were appropriate critical audit areas identified?	27%	(32%)	29%	88%
	Was overall audit strategy appropriate for critical audit areas?	3%	(52%)	3%	58%
	Were the elements of the audit strategy appropriately integrated (e.g., balance maintained between planned degree of compliance and planned substantive tests)?	0%	(50%)	0%	50%
Research	Were client's organizational structure and operating procedures adequately researched and incorporated into the audit?	0%	30%	(59%)	89%
	Were relevant business/industry factors, including economic conditions and government regulations, adequately researched?	0%	0%	(91%)	91%
Median Frequency of Correct Classification			56%		82%

TABLE 2

FREQUENCY DISTRIBUTION FOR QUESTION CLASSIFICATION:
CATEGORY II, ADMINISTRATION

		ATTRIBUTE			
ATTRIBUTE	QUESTION	Personnel	Budgeting	Management	CATEGORY TOTAL
Personnel	Did audit staff have the level of experience/training/capability required for this audit (given risks, needs, etc.)?	(94%)	0%	3%	97%
	Were the required special skills appropriately represented on the audit team?	(80%)	0%	3%	83%
	Were team members appropriately assigned to specific tasks (e.g., were key personnel involved with critical audit areas)?	(71%)	6%	15%	92%
Budgeting	Were budget estimates for work appropriate?	0%	(82%)	3%	85%
	Was audit budget appropriately allocated among audit tasks (e.g., were critical audit areas appropriately emphasized)?	0%	(82%)	6%	88%
Management	Were the audit tasks scheduled and implemented in an effective and efficient manner?	6%	21%	(29%)	56%
	Was the audit team effectively managed to allow for sufficient levels of participation, communication, feedback, etc?	12%	3%	(69%)	84%
	Was an effective working relationship and communication channel maintained with client representatives (e.g., chief financial officer, audit committee)?	21%	0%	(54%)	75%
Median Frequency of Correct Classification			75%		85%

TABLE 3

FREQUENCY DISTRIBUTION FOR QUESTION CLASSIFICATION:
CATEGORY III, PROCEDURES

		ATTRIBUTE			
ATTRIBUTE	QUESTION	Nature	Scope	Timing	CATEGORY TOTAL
Nature	Was the nature of specific procedures appropriate given the critical audit areas?	(30%)	15%	0%	45%
	Were procedures designed to produce competent and reliable audit information?	(47%)	9%	0%	56%
Scope	Was the scope (e.g., level of detail, sample size, etc.) for each individual procedure sufficient?	0%	(74%)	0%	74%
	Was extent of procedures, taken together, appropriate for investigating all critical audit areas?	3%	15%	0%	18%
Timing	Were individual procedures implemented in appropriate time sequence?	0%	0%	(65%)	65%
	Was each procedure accomplished at the correct point in time (e.g., during the appropriate stage of fiscal year)?	0%	0%	(77%)	77%
Median Frequency of Correct Classification			51%		61%

TABLE 4

FREQUENCY DISTRIBUTION FOR QUESTION CLASSIFICATION:
CATEGORY IV, EVALUATION

		ATTRIBUTE		
ATTRIBUTE	QUESTION	Analysis	Judgment	CATEGORY TOTAL
Analysis	Were appropriate statistical techniques correctly applied and interpreted?	(21%)	12%	32%
	Were appropriate critical levels selected and applied with respect to materiality, risk, and reliability?	9%	21%	30%
Judgment	Were competent evidential matter considered and interpreted in a suitable manner?	(44%)	26%	70%
	Were critical audit judgments adequately reasoned?	18%	(56%)	74%
Median Frequency of Correct Classification		24%		51%

TABLE 5

FREQUENCY DISTRIBUTION FOR QUESTION CLASSIFICATION:
CATEGORY V, CONDUCT

ATTRIBUTE	QUESTION	ATTRIBUTE			CATEGORY TOTAL
		Compliance	Review	Follow-up	
Compliance	Was the degree of compliance with operating policies and procedures of firm sufficient?	(59%)	18%	0%	76%
	Were standardized forms (flowcharts, ICQs, checklists, statistical approval forms, etc.) appropriately employed?	(24%)	9%	0%	33%
Review	Were appropriate types of reviews conducted (e.g., working-paper review; review by tax, EDP, industry or other specialists; etc)?	18%	(47%)	3%	68%
	Were review procedures performed in a timely manner?	0%	(53%)	6%	59%
Follow-Up	Were appropriate decisions and actions exercised to follow-up audit test and review findings?	0%	24%	(41%)	65%
	Were problems and conflicts, if any, followed-up and resolved in a timely and appropriate manner?	0%	18%	(65%)	83%
	Did follow-up actions appropriately adapt to changing circumstances in a flexible, efficient manner?	0%	4%	(64%)	68%
Median Frequency of Correct Classification			53%		68%

as follows: *"Were audit findings (in particular, results of statistical tests) correctly analyzed?"* In fact, the specific questions in the EVALUATION category were the most difficult for participants to classify, and the wording of all four questions in this major category was altered. As a result of this further iteration of modifications, additional refinements in attribute definitions were thus made.

The refined set of questions, attributes, and categories that resulted as a product of the third phase of empirical verification was then fashioned into a rating instrument called the Audit Quality Evaluation (AQE) form, which is presented in its entirety in the Appendix. The form includes a cover sheet (for evaluator and audit identification), instructions for evaluators, and a complete list of the rating scales that compose the AQE. A full description of the structure of the AQE is provided including major attribute category names, attribute labels, and specific attribute definitions (i.e., evaluative questions). In addition, the rating procedure used in completing the form is explained. It is worth noting that the AQE contains both qualitative, category rating scales (sometimes referred to as the "equivalence grouping" method) as well as direct, numerical rating scales (which are double anchored). The former scales are used for rating individual attributes (i.e., for answering specific questions about audit quality), whereas the latter are used to provide global ratings for attribute categories and the overall audit. The AQE might, therefore, be called a hybrid scale since it combines two different kinds of rating mechanisms. By having the individual qualitative judgments within an attribute category precede the quantitative, global judgment for the category, the rating procedure subscribes to the principles of MAE theory by imposing a "divide and conquer" technique upon the evaluator's thought process.

Discussion

The Audit Quality Evaluation (AQE) form was developed with the goal of improving upon current, intuitive techniques of audit evaluation in the following ways: (1) making explicit what are conventionally implicit considerations; (2) quantifying what are usually qualitative descriptions; (3) simplifying the representation and integration of what are often complex configurations and interrelations among relevant information; and (4) providing an objective and general method for rating the overall quality of an audit. To satisfy these criteria, the AQE was designed through a systematic and thorough application of the principles and methods of multi-attribute evaluation. However, although the current version of the AQE may be conceptually sound, it is certain to require refinements, and its ultimate effectiveness as an evaluation tool must be demonstrated before it can be advocated for general implementation.

In general, the specific content of the attributes that compose the AQE were empirically verified. The verification task, performed by a sample of 34 auditors, required each evaluative question to be classified according to an attribute label (name) and an associated attribute category. The modal classification responses from the auditor sample matched the expected (intended) classification for all but a few of the 32 basic questions in the AQE, indicating that the level of subjective agreement among auditors was reasonably high. These findings suggest that the AQE possesses considerable face

validity with respect to the definition and categorization of evaluative attributes that contribute to the quality of an audit. In other words, the multi-attribute evaluation model in which the AQE is couched appears to be acceptable.

The development of the AQE is not yet complete. Toward the process of validating the practicality and usefulness of the AQE, a comprehensive field study, and corresponding set of data analysis, are needed. The study should be designed to provide the information necessary for revising and improving the AQE components, structure, and rating procedures so that the overall form can better serve its intended purpose. Basically, the field study should require different raters to actually use the AQE to evaluate several audits performed by accounting offices. However, the success of such an evaluation will depend upon the cooperative response of qualified evaluators who are asked to participate in providing the necessary data. The results of such an investigation will enable a determination of how reliable, valid and useful the AQE may be in a variety of different audit situations.

In addition, research efforts should continue toward the systematic evaluation and refinement of the form so that it might become a valuable and generally applicable scheme for assessing the quality of an audit. The evaluation process should include an investigation of the necessity for, and development of, a differential weighting system for normatively combining component ratings into derived, higher-order quality scores (e.g., individual question ratings into attribute-category scores, or attribute-category ratings into a composite (overall) audit score). Similar research efforts applied to a comparable multi-attribute evaluation form developed in another context have been quite successful (e.g., Samet and Levine, 1978). Overall, these developments are expected to hold wide implications for improving the utilization of audit information and management decision making based on this information. For example, the audit evaluation model will provide a necessary initial step toward the larger problem of logically including subjective evaluations into a quantitative determination of the cost-effectiveness of various audit elements (e.g., Shakun, 1978) and of an overall audit. Furthermore, the model could be turned around so as to be employed prescriptively as a management aid for *planning* an effective audit.

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Appendix

AUDIT QUALITY EVALUATION (AQE) FORM*

Audit Title and/or Identification No.:

_____

_____

Evaluator's Name:_____

Office:_____

Telephone:_____

Date:_____

INSTRUCTIONS FOR EVALUATORS

The Audit Quality Evaluation (AQE) form represents a systematic technique for evaluating the quality of an audit engagement. The AQE is geared to a high-level evaluation of an audit. The approach is built upon a decomposition of an engagement into many descriptive characteristics or attributes which reflect audit quality. The attributes are logically clustered into categories so that the quality of various components of the audit can be independently assessed. The attributes are, in turn, composed of a few brief questions which address associated aspects of audit quality.

As shown below, each category is composed of a set of related attributes. For example, the first category, "PLAN," is composed of three attributes labeled "Objectives," "Strategy," and "Research." A separate rating sheet is provided for each attribute category which lists the constituent attributes, along with the corresponding specific questions used to evaluate audit quality. Your source of information for answering these questions would normally be the contents of audit work papers and relevant summary documents (e.g., practice review memo).

STRUCTURE OF AUDIT QUALITY EVALUATION (AQE) FORM

I. PLAN
   - A. Objectives
   - B. Strategy
   - C. Research

II. ADMINISTRATION
   - A. Personnel
   - B. Budgeting
   - C. Management

III. PROCEDURES
   - A. Nature
   - B. Scope
   - C. Timing

IV. EVALUATION
   - A. Analysis
   - B. Judgment

V. CONDUCT
   - A. Compliance
   - B. Review
   - C. Follow-up

The AQE rating procedure is identical for each of the attribute categories: each attribute-related question within a category is answered separately, then a single overall assessment is given for the entire category. You are required to respond to each question with respect to the particular audit under evaluation. The rating is made on a 3-point scale as either "Yes," "Yes, except for...," or "No...," and the appropriate box is checked. This evaluation reflects how well you feel the audit measures up on the respective question. Whenever the "Yes, except for..." or "No..." box is checked, you are required to explain the basis for this rating by commenting on the exceptions, evidence of inadequacy failure in the performance of the audit, etc. For this purpose, space has been provided on the right-hand side of the rating sheet.

In certain situations, you may be unable to meaningfully answer a given question because of insufficient information. Thus, a box (to the right of the quality rating), labeled "Poor Documentation," is provided that should be checked when you feel that the necessary documentation is either unavailable, unclear, or inadequate. Even when you have made a quality rating in response to the attribute question, you can still check the "Poor Documentation" box to indicate that you think the relevant documentation is poor. Whenever you do check the "Poor Documentation" box, you should briefly state your justification in the space provided to the right.

Once you have completed ratings for each question belonging to the attribute category, a global rating is called for that represents your assessment of the overall quality or "goodness" of the entire category. As shown on the bottom of each rating sheet, this rating is made on a 1 to 5 scale as follows: 1 - "Major Problems", 2 - "Minor Problems", 3 - "Average", 4 - "Good", and 5 - "Excellent"; you may use decimal ratings such as 1.5 or 3.5. Above the global rating scale, space is available to enable your free-form comments about the global rating for the category. You can also use this space for additional comments about individual attribute ratings.

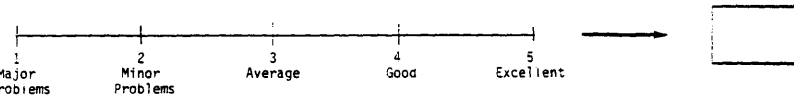
After the assessments have been completed for the five attribute categories, you are asked to make a final rating for the overall quality or "goodness" of the entire audit engagement. This rating is also made on a 1 to 5 scale extending from "Major Problems" (1) to "Excellent" (5), with decimal ratings permitted. Again, on this last rating sheet, your comments are encouraged. Finally, you are asked to indicate about how much time you spent to complete the AQE form.

I. PLAN

QUESTION	ANSWER: Yes	Yes Except for...	No...	Poor Documentation	EXPLANATION
A. OBJECTIVES					
(1) Were all audit objectives explicit and clearly specified?	☐	☐	☐	☐	
(2) Were specific objectives appropriately tailored to the overall audit purpose?	☐	☐	☐	☐	
B. STRATEGY					
(1) Were appropriate critical audit areas identified?	☐	☐	☐	☐	
(2) Was overall audit strategy appropriate for critical audit areas?	☐	☐	☐	☐	
(3) Were the elements of the audit strategy appropriately integrated (e.g., balance maintained between planned degree of compliance and planned substantive tests)?	☐	☐	☐	☐	
C. RESEARCH					
(1) Were client's organizational structure and operating procedures adequately researched and incorporated into the audit?	☐	☐	☐	☐	
(2) Were relevant business/industry factors, including economic conditions and government regulations, adequately researched?	☐	☐	☐	☐	

Comments

GLOBAL RATING FOR CATEGORY



Table

II. ADMINISTRATION

QUESTION	ANSWER: Yes	Yes Except for...	No...	Poor Documentation	EXPLANATION
A. PERSONNEL					
(1) Did audit staff have the level of experience/ training/capability required for this audit (given risks, needs, etc.)?	☐	☐	☐	☐	
(2) Were the required special skills appropriately represented on the audit team?	☐	☐	☐	☐	
(3) Were team members appropriately assigned to specific tasks (e.g., were key personnel involved with critical audit areas)?	☐	☐	☐	☐	
B. BUDGETING					
(1) Were budget estimates for work appropriate?	☐	☐	☐	☐	
(2) Was audit budget appropriately allocated among audit tasks (e.g., were critical audit areas appropriately emphasized)?	☐	☐	☐	☐	
C. MANAGEMENT					
(1) Were the audit tasks managed (scheduled, implemented, etc.) in an effective and efficient manner?	☐	☐	☐	☐	
(2) Was the audit team effectively managed to allow for sufficient levels of participation, communication, feedback, etc.?	☐	☐	☐	☐	
(3) Was an effective working relationship and communication channel maintained with client representatives (e.g., chief financial officer, audit committee)?	☐	☐	☐	☐	

Comments

GLOBAL RATING FOR CATEGORY

III. PROCEDURES

QUESTION	ANSWER: Yes	Yes Except for...	No...	Poor Documentation	EXPLANATION
A. NATURE					
(1) Was the nature of specific procedures appropriate given the critical audit areas?	☐	☐	☐	☐	
(2) Were procedures effective in producing competent and reliable audit information?	☐	☐	☐	☐	
B. SCOPE					
(1) Was the scope (e.g., level of detail, sample size, etc.) for each individual procedure sufficient?	☐	☐	☐	☐	
(2) Was extent of procedures, taken together, appropriate for investigating all critical audit areas?	☐	☐	☐	☐	
C. TIMING					
(1) Were individual procedures implemented in appropriate time sequence?	☐	☐	☐	☐	
(2) Was each procedure accomplished at the correct point in time (e.g., during the appropriate stage of fiscal year)?	☐	☐	☐	☐	

Comments

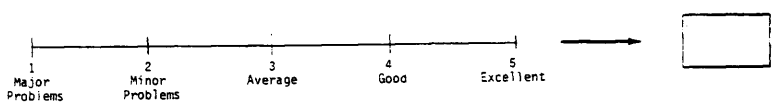
GLOBAL RATING FOR CATEGORY

IV. EVALUATION

QUESTIONS	ANSWER: Yes	Yes Except for...	No...	Poor Documentation	EXPLANATION
A. ANALYSIS					
(1) Were audit findings (in particular, results of statistical tests) correctly analyzed?	☐	☐	☐	☐	
(2) Were the criteria levels (with respect to materiality, risk, and reliability) appropriately utilized?	☐	☐	☐	☐	
B. JUDGMENT					
(1) Was the audit evidence interpreted in a suitable manner?	☐	☐	☐	☐	
(2) Were critical audit judgments reasoned adequately?	☐	☐	☐	☐	

Comments

GLOBAL RATING FOR CATEGORY



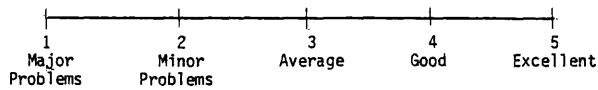
V. CONDUCT

QUESTION	ANSWER: Yes	Yes Except for...	No...	Poor Documentation	EXPLANATION
A. COMPLIANCE					
(1) Was the degree of compliance with operating policies and procedures of firm sufficient?	☐	☐	☐	☐	
(2) Were standardized forms (flowcharts, ICQs, checklists, statistical approval forms, review forms, etc.) appropriately used in compliance with guidelines of firm?	☐	☐	☐	☐	
B. REVIEW					
(1) Were appropriate types of reviews conducted (e.g., working-paper review; review by tax, EDP, industry or other specialists; etc.)?	☐	☐	☐	☐	
(2) Were review procedures performed in an effective and timely manner?	☐	☐	☐	☐	
C. FOLLOW-UP					
(1) Were appropriate decisions and actions exercised to follow-up audit test and review findings?	☐	☐	☐	☐	
(2) Were problems and conflicts, if any, followed-up and resolved in a timely and appropriate manner?	☐	☐	☐	☐	
(3) Did follow-up actions appropriately adapt to changing audit circumstances in a flexible, efficient manner?	☐	☐	☐	☐	

Comments

GLOBAL RATING FOR CATEGORY

OVERALL QUALITY OF AUDIT



OVERALL RATING

COMMENTS

Discussant's Response to A Multi-Attribute Model for Audit Evaluation

Joseph X. Loftus
Price Waterhouse

The ability to objectively determine the quality of an audit engagement has thus far eluded accounting firms and others interested in auditing. It has been suggested that if the annual report does not contain any typos, the auditor is not sued, obtains full realization of fees and is reappointed, the audit, at least in the eyes of the auditor, is of high quality. That assessment is somewhat cynical. Ted Mock and Michael Samet in their paper bring to bear a much more reasonable approach for determining a meaningful measure of the quality of an audit.

I concur with the authors that multi-attribute evaluation (MAE) provides a framework for evaluative analysis. However, I submit it is only a framework. Any evaluation analysis—any attempt to conclude as to quality—ultimately rests on the judgments, subjective judgments, of the evaluator. Yes, there are exceptions. We would all agree that the more famous auditing busts over the years were indeed audits with major problems. We have all reviewed audit workpapers which under any test would support calling the audit "excellent." Most audits would fall within the extremes and it is here that subjective elements are important. KNOW THY RATER is crucial in analyzing any results of any evaluation, whether it be the evaluation of an audit, evaluation of personnel or an evaluation of an auditing textbook.

Peer Review Experience

To date, the peer review committee of the AICPA SEC Practice Section has reviewed and accepted some 400 peer review reports. The objective of a peer review is to determine whether the quality control system of a firm met the objectives of the AICPA quality control standards and was being complied with so as to provide the firm with reasonable assurance of conforming with professional standards. Crucial to any such determination is the review of the firm's auditing and accounting engagements. As a result of the review, the reviewers issue a report and, if they note matters which would result in substantial improvement in the reviewed firm's quality control policies or procedures, the reviewers issue a letter of comments. The most difficult problem confronting the peer review committee is the unevenness of reporting resulting from this process. Some reviewers will consider an item so serious as to cause a modified report, while others, confronted with the identical situation, would issue an unqualified report but mention this matter in the letter of comments. We had our first peer review under the aegis of the SEC Practice Section in 1978. We have tinkered with the process ever since in a futile

attempt to resolve the "unevenness" problem. We have one consolation—the profession has been trying for a substantially longer time to define materiality.

The Mock/Samet AQE Form

The Audit Quality Evaluation form developed by Ted and his co-author would minimize the subjective element inherent in an evaluation process. It is certainly a vast improvement over the approaches currently in vogue. For example, after reviewing a set of audit or accounting workpapers a peer reviewer is asked to conclude with respect to two broad questions—whether he believed that (1) the firm had a "reasonable basis under professional standards for the opinion it expressed" and (2) the financial statements conformed with generally accepted accounting principles.

As to the methodology, I certainly have no quibble with the methodology followed by the authors in developing the AQE form. Indeed, I'm impressed. However, in the classical auditor's fashion, I must hedge by pointing out I'm not an expert in developing or testing a multi-attribute evaluation model. Nevertheless, the major categories—Plan, Administration, etc. seem appropriate as do the attributes and questions within the individual categories.

Allow me one personal bias in regard to the form itself. My limited experience indicates that forcing an evaluator to conclude "yes" or "no" to a given question is generally better than allowing a "yes but" or a "yes, except for." Too often evaluators use the "yes, except" option as an escape from making a hard, perhaps distasteful, call. The "except for" can be so overwhelming, so significant, that it negates the yes answer and the reviewer of the form is left to make the judgment as to whether the true answer is "yes" or "no."

The accommodation in the form to allow a conclusion on the sufficiency of audit documentation is a sound idea. In the peer review process, we have been plagued by the lack of documentation of key audit judgments. The lack of adequate documentation is the most frequent weakness found in a review. An observation that documentation is inadequate leads to the obvious question as to whether the work was really performed. In some cases, collaborating evidence is available. In other cases, one wonders. A quick review of a compendium of peer review comments compiled from letters of comments accepted by the SECPS peer review committee during the nine-month period ended in March 1982 indicates well over half of the comments are connected with the question of documentation. As a result of the findings of the peer review process, both the Auditing Standards Board and the Quality Control Standards Committee of the AICPA have issued guidance in the area of documentation. The ASB recently issued SAS No. 41 entitled *Working Papers*. The Quality Control Committee issued an interpretation in April specifying the level of documentation required for the nine elements of quality control enumerated in Statement on Quality Controls No. 1. For example, among the reports accepted at the peer review meeting earlier this week was a report and letter of comments covering a peer review of one of the larger firms. All of the matters noted in the letter of comments related to documentation:

- The firm should document procedures followed in resolving independence questions;

- The following areas were not adequately documented in accordance with firm policies:
  —Auditing procedures followed in the areas of related party transactions;
  —Procedures performed in connection with the acceptance of new clients and the decision to retain existing clients;
  —Disagreements with clients and resolution thereof;
  —Procedures performed between balance sheet date and report date.
- Firm policy should be amended to provide guidelines for the extent of audit consultation and the related documentation;
- Document the evaluation of the adequacy of the client's internal controls, including EDP controls.

It would be interesting to see how evaluators using the AQE form will react to the documentation questions.

To wrap up this part of the discussion, I agree with the authors that research efforts should continue in this area. The AQE has the potential for being a useful technique in evaluating an audit. The technique also has potential in other areas of concern to auditors, for example, promotion of staff to partner. The authors have developed a tool which could be of benefit to auditors and the users of their product.

6

Some Thoughts on Materiality

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Introduction

The invitation for this paper resulted from discussions with Professor Stettler at and subsequent to the 1981 Deloitte Haskins & Sells AuditSCOPE Update Seminar. The purpose of that seminar was to stimulate academic interest and research on the subject of materiality. That subject was chosen because the author and his associates involved in planning the seminar believe materiality is a pervasive problem that needs further attention by those who have responsibilities for financial reporting.

Management is forced to make decisions about materiality in preparing financial statements and auditors are forced to make similar decisions in planning, performing and reporting on audits of such statements. Both management and auditors face the potential need to defend their decisions in the event of challenges by those who use financial statements and audit reports as one of the various sources of information used in making investment decisions. Although not a pleasing prospect to either management or auditors, this potential is reasonable because the underlying concept of materiality is oriented toward the influence of financial information on users' decisions.

Yet no quantitative standards or guidelines have been developed by professional organizations in the U.S. and, in my view, relatively little useful results have been provided by user-oriented academic research. Research to date that relates, directly or indirectly, to materiality has consisted largely of behavioral experiments and opinion surveys based on hypothetical situations, and studies of the impact of accounting information on stock market prices. The latter, however, have been concerned more directly with the efficient market hypothesis and with policy questions concerning the establishment of accounting principles than with questions about materiality with reference to the financial statements of individual companies. Therefore, I believe management and auditors are sailing the uncharted waters of investors decisions without taking soundings to map the decision-making process and the parameters that lie below the surface.

I think the hazard and the challenge arising from this situation are obvious. From this perspective, I will comment briefly on the efforts of the FASB to deal with materiality, and make a few observations and suggestions for consideration by others.

FASB Actions

The FASB included a project on materiality on its initial agenda and assigned a relatively high priority to the project for some time thereafter. As a result, a comprehensive Discussion Memorandum was issued, substantial effort was expended by various organizations in performing research and preparing written responses, and public hearings were held for oral presentations to and discussions with the Board. From this encouraging beginning, the mountain labored and brought forth a mouse in the form of a few paragraphs dealing with materiality in Statement of Accounting Concepts No. 2, "Qualitative Characteristics of Accounting Information." In these paragraphs the Board reiterated the usual generalities that are expressed when the subject is discussed, but did little or nothing to add to or clarify existing concepts and provided no quantitative guidance. It included the obvious comments about the need for judgment in dealing with unusual situations, but said nothing about points of departure or benchmarks for the usual situations. In declining to do so, the Board indicated that those respondents who wanted it to issue quantitative guidelines were in the minority. Without knowing the Board's rules for weighing responses, it is interesting to observe that the three organizations that represent the preparers, the auditors, and a major segment of users of financial statements all endorsed the issuance of such guidelines by the Board. Excerpts from the responses of the Financial Executives Institute, the American Institute of Certified Public Accountants, and the Financial Analysts Federation are attached as Appendix A to this paper.

Appendix B is a report on a research study, "The Impact of Earnings on Stock Prices," which I conducted at the request of the AICPA and submitted to the FASB in response to its Discussion Memorandum. The premise underlying this research was that knowledge of the sensitivity of stock prices to reported earnings is relevant to materiality decisions in view of the user-oriented concept of materiality. Although this study was described in the Discussion Memorandum and commented upon favorably by several Board members at the public hearing, it was buried without the dignity of even a footnote reference in Statement No. 2. Instead, the Board described the general approach and referenced it to an article that was written by two professors who had been given a research grant by my firm's Foundation to review the approach and other aspects of the subject while the research was in progress. The board concluded that the approach was "too blunt an instrument to be depended on to set materiality guidelines."

Without challenging the Board's conclusion concerning this particular study, the report is being exhumed for an autopsy with the hope that a post-mortem will suggest ways to sharpen the instrument so that it can serve a useful purpose. I remain optimistic that this can be done if academic researchers or research-oriented practitioners study the problem seriously. Such study is particularly timely now because the subject of Materiality and Audit Risk is currently on the agenda of the Auditing Standards Board. With this view in mind, I set forth in the remainder of this paper a brief summary of my observations concerning the research results, some suggestions for further research, and some comments on other matters.

Research Results

The relative correlation between stock prices and the various earnings models summarized in Table 2 of the report conformed generally to my prior expectations, although the lower correlations with the five-year models presumably would not conform with the expectations of those who emphasize the importance of trends and growth rates. The other results in the first phase of the study which conformed to my expectations were the fact that the correlations were better for ordinary earnings than for earnings after extraordinary items or for cash flow. The most surprising result to me was the slightly higher correlation for historical earnings than for forecasted earnings. I had expected the latter to be significantly higher and, as indicated in the report, was unable to explain this result.

The results of the second phase conformed generally to my expectations in that the use of additional variables improved the correlation with stock prices, and that no single variable among those added was predominant, as shown in Table 6. I was surprised, however, that earnings were excluded from the set of significant variables for slightly more than half of the companies, as shown also in Table 6. For 18 of the excluded companies, however, the five-year earnings growth rate was a significant variable. Thus, either earnings or an earnings growth rate was significant for about two-thirds of the companies.

Further Research

As readers may reasonably infer from my earlier comments, I believe further research along the general lines indicated in the accompanying paper would be useful. With the passage of time, quarterly historical and forecasted earnings are now available for more years and such additional data offer the potential for better results.

The variables used in my study included both the levels of stock prices and earnings and the changes in those levels. However, the accompanying paper presented results in terms of levels only because those results appeared to be more significant. Nevertheless, I suggest that changes be studied further in any additional research that is performed. In addition, I suggest that differences between actual changes and expected changes, as indicated by historical standard errors or by variations from forecasts, be considered as possible explanatory variables.

I also suggest further study of both the underlying concept and the parameters of the decision model presented in the accompanying paper. Although I am convinced that the cost of making changes in investment portfolios is one constraint on the sensitivity of changes in stock prices to changes in earnings as discussed in the accompanying paper, there may be other and possibly more important constraints that should also be considered. For example, the cost of analyzing financial information for use in making investment decisions may be more important than the cost of executing the related transactions. Further, behavioral limitations on decision-making processes may be another form of constraint that should be considered. The report of my study focused entirely on composite results for the 100 companies for

each of the models considered. This was done in the interest of simplicity and what I then considered would be most useful for the FASB's purposes. However, the reported results could be improved substantially by using for each company the model that gave the best correlation for that company. This methodology as a starting point for applying judgment in individual situations may be worthy of further consideration in lieu of generalized quantitative guidelines.

Other Matters

The effect of an item on the trend of earnings is mentioned frequently in discussions of materiality, with the implication that this is a more stringent consideration than those that apply in determining the effect of an item on earnings for the current period. I believe these implications have resulted in an overemphasis or possible misunderstanding, because the effect on the current period will equal or exceed the effect on a projection of a trend to the next period with the limited exception of projections of a trend computed from either two or three periods only.* These exceptions, of course, should be considered in any situation in which users might reasonably be expected to rely on trends for two or three periods only, which presumably would be rare.

Some discussions of materiality also attribute additional significance to an item that changes a loss to a profit, or a downward trend to an upward trend. Beyond the actual effect of trends on projections as explained above, I believe this perception is more subjective than substantive.

The research study focused entirely on public companies, and primarily on earnings as the critical component or primary interest of the external users of financial statements of such companies. The primary interest of such users, however, is likely to shift from earnings to financial position if there is a significant concern about the liquidity or solvency of the company. Further, the principal external users of financial statements of private entities ordinarily are the present or prospective creditors and their primary interet is likely to be in liquidity or solvency, with earnings being of interest primarily in that context.

When liquidity or solvency is the principal matter of concern, the primary interest of creditors and owners is likely to center on their claims and their equity, respectively. Creditors, however, are likely to be interested also in owners' equity as one measure of the margin of security for their claims. Both groups are likely to be interested also in current assets as a primary source of funds to provide liquidity. Therefore, current assets and owners' equity are likely to be the more critical components when liquidity or solvency is the principal matter of concern to external users of financial statements.

My last comments on specific matters relate to the problem that may be described as one of nominal amounts or differences. The significance of earnings and of any related measure of materiality obviously diminishes as

* The projected effect on the next period (P) of a change in an item in the current period (C), based on the trend for a given number of periods (N) may be computed from the following formula: $P = C(4/N)$. Thus the projected effect of an item based on a trend computed from two or three periods would be 2 or 1.33, respectively, times the current effect.

earnings approach zero. In these circumstances, the matter of primary interest to investors is that the results of operations are substantially below normal expectations, rather than whether they are above or below the breakeven point by some nominal amount. I think the same rationale can reasonably be applied as the excess of working capital, or some other specified component of financial statements, over the minimum required under a loan agreement approaches zero. Although a nominal decline below such requirements technically would be a default, I doubt seriously that the practical consequences resulting solely from such a default ordinarily would differ materially from those where the requirements were exceeded by a nominal amount.

In addition to the above perceptions of the practical needs of users in such circumstances, two other considerations are relevant from the perspective of auditors. The first of these is that it is impracticable from a cost/benefit viewpoint to expand the scope of audit tests to the degree necessary to provide reasonable assurance of detecting errors that would be material if measured in relation to the foregoing amounts or differences as they approach zero. The second consideration is that the customary type of auditor's report relating to compliance with loan agreements is in the form negative assurance, and explicitly states that the examination was not directed primarily toward obtaining knowledge of noncompliance. I want to emphasize that both of these considerations are related solely to the scope of the auditor's examination, and are not intended to imply that special attention need not be given to known or reasonably estimated errors or to questions concerning disclosures in the circumstances described above.

I hope my comments on the matters mentioned in this paper will be helpful in stimulating consideration of materiality by the Auditing Standards Board and by academic researchers. The present situation which requires management and auditors to apply a clearly quantitative concept of materiality without the benefit of authoritative quantitative guidelines or methodology invites, and indeed requires the courts to fill this void on an after-the-fact, case-by-case basis when litigation arises. More important in the public interest however, is the need for professional guidance in the multitude of day-to-day decisions that are required but never involve litigation.

Appendix A

Excerpts from Responses to FASB Discussion Memorandum on Criteria for Determining Materiality by Representatives of Preparers, Auditors and Users of Financial Statements

Committee on Corporate Reporting of the Financial Executives Institute (CCR Committee)

The CCR Committee concurs that there is a need for materiality criteria, and we recommend that the FASB proceed with its deliberations and that the statement be issued with the explicit recognition that the statement of criteria will be subject to reexamination upon completion of the Board's project on the conceptual framework for accounting and reporting.

While we believe that a standard which establishes criteria for determining materiality cannot be finalized until the FASB adopts a statement on the objectives of financial reporting (a statement which we recognize must, of necessity, be subjected to lengthy FASB due process procedures), we are not suggesting postponement. On the contrary, we believe that the issuance of a statement on materiality at this time will enhance the credibility of financial reporting, even though the Board may announce its intention to reexamine and possibly amend the criteria after the "objectives" have been adopted.

We recommend that the Board establish a point of departure or threshold for the materiality decision process. We believe that a threshold of 5% of net income has support, since it seems to be the lower end of the issuer range and the upper end of the user range. While the need for a threshold for balance sheet items appears to be less urgent, we would anticipate that a threshold for the balance sheet would be higher than 5%, with the possible exception of situations relating to liquidity concerns and in the case of accounting changes. The adoption of quantitative criteria accompanied by logic and illustrative examples by the FASB would probably have an important influence on the courts in future litigation. The FASB statement should provide financial executives with a more authoritative basis for materiality decisions, as well as enhance the credibility of published financial reports.

Accounting Standards Task Force on Materiality of the Accounting Standards Division of the American Institute of Certified Public Accountants (The Division)

The Division believes that an FASB Statement establishing materiality criteria should be issued. Such a Statement would, perhaps, need to be reconsidered upon issuance of a Statement on the objectives of financial statements. Nevertheless, it is believed that a Statement at this time on materiality would provide guidance to the preparers of financial statements which would enhance the utility of financial statements and contribute to the understanding of users.

The Division was guided by practical considerations in recommending the criteria discussed below. The Division believes that quantitative criteria should be established and should be based on the assumption that an amount that is 5% or more of an appropriate denominator may reasonably be presumed to be material. The Division believes that this perception of the threshold of materiality could gain general acceptance and would be workable in practice. However, a minority within the Division believes the quantitative criteria should be a percentage greater than 5%. . . .

There should be a presumption that a matter is material if its current or potential effect is 5% or more of income or loss from continuing operations (i.e. income or loss before discontinued operations, extraordinary items and cumulative effect of an accounting change). Where necessary to prevent the use of an unreasonably low amount as a denominator, average income if greater than the current year's income (or loss) should generally be used. The Division recommends using an appropriate period (e.g., five years) to calculate average income, and loss years or "abnormal" years should be excluded from the calculation if the result would be to distort the average. The Division believes that income from continuing operations is a more useful base for decision making than net income, because this amount is more representative of the ongoing operations of the enterprise.

In certain unusual circumstances, even the use of average income would result in an overly stringent determination of materiality. For example, if a company's income from continuing operations for the past five years is near zero, 5% of this amount would not usually result in an amount which could reasonably be considered material. Where the quantitative criteria would clearly result in an overly stringent requirement, judgment is essential and a more appropriate base upon which to make the calculation should be selected. For example, in some circumstances 5% of net worth might serve as a substitute for income, and items which are 5% or more of this substitute would be presumed to be material. In other situations, published sources of average rates of return for particular industries might serve as a guide for selecting an income substitute.

The Division has concluded that it is not feasible to formulate quantitative materiality criteria based on earnings trends, since these trends vary so widely among companies. For example, a 5% increase in income over the prior year might be considered "normal" in one company, "significantly better than average" in another, and "significantly worse than average" in a third. In addition, if income increased 3% over the prior year and a "trend of earnings" factor was part of the criteria, the materiality level would be extremely low. Further, it is not known whether or not the treatment of an item which affected income by less than 5% but affected the "trend of earnings" by a higher percentage would have an effect on an investment or lending decision of a user in the majority of circumstances.

There should be a presumption that a matter is material if its current or potential effect is 5% or more of the appropriate balance sheet caption as follows: current assets—5% or more of total current assets; current liabilities—5% or more of total current liabilities; noncurrent assets or liabilities—5% or more of total assets. . . .

The Financial Analysts Federation

With regard to the income statement, the financial effect of a matter should be viewed in the context of its relationship to the change in net income. For example, items might be deemed material if they exceeded 5 percent of net income or 20 percent of the change in net income from the prior-period. In no case shall an amount less than 2 percent of the average net income for the most recent three years be considered material. Thus, materiality criteria would not only be related to a level of net income, but also to the change in net income.

Balance sheet matters could be handled in a similar manner. For example, items could be deemed material if they account for more than 5 percent of net quick assets, net working capital, or shareholders' equity.

Appendix B

The Impact of Earnings on Stock Prices*

Introduction

The research study described in this report was conducted at the request of the American Institute of Certified Public Accountants (AICPA) and is being submitted to the Financial Accounting Standards Board (FASB) in response to the FASB Discussion Memorandum dated March 21, 1975 relating to "Criteria for Determining Materiality." As contemplated in the AICPA's request, the research was conducted by the author and this report has not been reviewed or endorsed by any committee or representative of the AICPA.

Chapter II of the Discussion Memorandum discusses the concept of materiality in accounting and includes various definitions that have been promulgated or proposed for implementation of this concept. The central theme common to these definitions is that something is material if it would influence an investor's decision. In recognition of this decision-oriented formulation of the concept of materiality, Chapters V and VI set forth the results of interviews and other research concerning investors' decision processes. The interviews and other research underlying those chapters provided the basis for a comprehensive general description of investors' decision processes, but not for a definitive formulation of decision models with quantification of the variables comprehended in the models.

Such models are necessary if standards for materiality are to be related effectively to the impact of accounting information on investors' decisions. This may be illustrated by two oversimplified and extreme examples. Assume first, that the price of a particular stock was known to be exactly a given multiple of earnings; and second, that its price was known to be exactly a given multiple of the S & P average. In the first case, a change of 1% in earnings would cause a change of 1% in price, but in the second case the same change in earnings would not cause any change in price. If materiality is to be related to the effect on investors' decisions, the materiality of a given change in earnings clearly would be different under the two assumed models.

The purpose of the research described in this report was to determine whether a useful composite decision model might be derived from a study of the correlation between earnings and stock prices for reasonable sample of companies for a period of several years. The premise underlying this approach is that, given a general description of the principal factors considered in the decision process, the relative weight given to the respective factors may be inferred from the pattern of behavior suggested by such correlations.

This study was not conducted under any illusion that it would produce a precise or conclusive model, but only to determine whether it could provide information that would be useful in considering possible standards for materiality. To whatever extent the study may provide insight into investors'

* The author gratefully acknowledges the services of his partner, Dr. Maurice S. Newman, in providing mathematical consultation and computer programming; and of his research assistants, Mr. Steven Gillingham and Miss Swati Desai, in maintaining files, processing data, and assisting in other respects.

behavior, it may also be relevant to the FASB's consideration of the objectives of financial statements and the conceptual framework of accounting.

If, however, this study or other information furnished to the FASB does not provide a basis for inferring a decision model that is considered sufficiently definitive to be useful in establishing criteria for accounting materiality, this would appear to leave two remaining alternatives. The first alternative would be to establish quantitative criteria with appropriate flexibility based on the subjective perceptions of users, preparers, and auditors as to reasonable levels of sensitivity and practicability. The first alternative was advocated in the response to the Discussion Memorandum which was submitted by the AICPA's Accounting Standards Task Force on Materiality. The second alternative would appear to be a conclusion by the FASB that quantitative criteria are not feasible.

Data and Methodology

This study was described on page 44 of the Discussion Memorandum as follows:

> The study focuses principally on earnings per share in relation to the market prices of securities. It seeks to establish the extent of the relationship of those factors and, in turn, to determine whether any general inferences can be drawn about the sensitivity of investment decisions to earnings per share.
>
> The analysis comprehends 300 enterprises selected from the COMPUSTAT tapes of data for 1800 enterprises. Preliminary analysis has been confined to 100 enterprises, but will be extended to 300.
>
> In the first phase of the study, various earnings per share amounts are being correlated through regression analysis with average stock prices for each enterprise over a period of fifteen years. The earnings per share amounts included in the study are the five-year moving average, the five-year trend line (both exponential and linear), and various current measurements, combined in some cases with growth rates. The results of these analyses are expected to give indications of the most significant earnings per share amounts, insofar as it may be inferred that such information influences investment decisions.
>
> The second phase of the study introduces other factors to ascertain those that are significant in combination with earnings per share. These other factors include changes in earnings per share, dividends, changes in dividends, book value, the Standard & Poor's Industrial Stock Price Index, price stability, interest rates, enterprise sales, changes in sales, non-recurring income statement items, earnings variability, growth rates, turning points in growth rates, and changes in trends.
>
> The final phase of the study will attempt to determine whether inferences can be drawn concerning the sensitivity of stock prices to earnings per share that would provide any useful basis for establishing a materiality standard.

Data

The study was based primarily on annual data for the twenty years ended December 31, 1972. In order to permit the use of averages, trends, and other

data based on prior periods, the latest fifteen of the twenty years of annual data were used directly in the regression analyses.

The companies selected were from among those included in the Standard & Poor's Industrial Classification. The data files were screened using two criteria before making the final seletion systematically with a random start. The screening criteria used were (1) a full set of data for the periods covered and (2) fiscal years ending December 31.

Methodology

As mentioned earlier, the mathematical technique used for this research was regression analysis, which was applied through use of a stepwise multiple regression computer program. This methodology is generally accepted for use in studies having characteristics similar to those involved in this research. Any extensive explanation of regression analysis is beyond the scope of this report but may be found in standard textbooks on the subject or to a more limited extent in those on statistics or quantitative methods generally. The following brief explanation is considered sufficient for this report.

The purpose of regression analysis is to compute a mathematical function or equation that will best express the pattern or relationship existing between two or more sets of quantitative data (variables). The variable of primary interest is referred to as the "dependent" variable, and those whose relationship to the dependent variable is to be studied are referred to as the "independent" variables. In this study, average stock prices (the annual high-low average as carried on the COMPUSTAT tapes, adjusted for stock dividends and splits) were used as the dependent variable, and earnings and other data described in more detail later were used as the independent variables. "Simple" regression refers to the use of only one independent variable, while "multiple" regression refers to use of more than one independent variable.

The regression function derived from a regression analysis may be in the form of a linear or a non-linear equation. The form of a simple linear function is as follows:

$$Y'_i = a + bX_i$$

Where:

- Y' = estimated value of dependent variable.
- a = a constant value computed in the regression analysis.
- b = a coefficient (multiplier) computed in the regression analysis.
- X = the actual value of the independent variable.
- i = a subscript indicating a particular value included in the set of values of the respective variable; for example, $i = 1,2, \ldots 15$ if annual values of X and Y for 15 years are used in the regression analysis.

The form of a multiple linear function is the same as that described above for a simple function except for the addition of a separate coefficient (b) for each additional independent variable (X).

The actual value of each of the dependent variables (Y_i) will differ from the corresponding estimated values (Y'_i) by an amount referred to as the "residual" or "individual error of estimate" (e_i) and the relation between the actual and estimated values of the dependent variable may be expressed as follows:

$$Y_i - Y'_i = e_i$$

The computations by which the regression function is determined are designed to provide the "best fit" by minimizing the sum of the squares of the individual errors of estimate. The quantity minimized for this purpose is the sum of the squares, rather than of the actual amounts of the individual errors, because the actual errors will be both positive and negative and their sum will always be zero. A statistic commonly used as a measure of the closeness of the relationship between the variables, or the "goodness of fit" of the regression function, is the "coefficient of correlation." The range of values for this coefficient is from 1 to 0, indicating perfect correlation or the lack of any correlation, respectively.

The details from one of the analyses made in the course of the study are presented to illustrate the matters discussed above in Table 1.

Table 1

	*Actual Data**		*Regression Estimate of*	*Error of*
Year	*EPS* (X)	*Price* (Y)	*Price* (Y')	*Estimate* (e)
1958	.474	8.185	9.380	−1.195
1959	.326	9.169	7.977	1.192
1960	.698	9.469	11.502	−2.033
1961	.615	11.888	10.715	1.173
1962	.831	10.641	12.762	−2.121
1963	.906	13.660	13.473	.187
1964	1.414	18.391	18.287	.104
1965	1.800	23.285	21.945	1.340
1966	2.377	24.916	27.412	−2.496
1967	1.935	24.878	23.224	1.654
1968	2.520	36.950	28.767	8.183
1969	3.420	38.150	37.296	.854
1970	3.160	28.650	34.832	−6.182
1971	1.720	22.450	21.186	1.264
1972	1.840	20.400	22.324	−1.924
Average	1.602	20.072	20.072	-0-

The regression function for this example is a constant of 4.888 and a coefficient of 9.476, and the coefficient of correlation is .95.

* The actual data used in this example and throughout the study have been adjusted for stock dividends and splits.

The foregoing example is presented graphically in two forms. In Chart A each point represents the actual EPS and the actual average price for a

particular year as shown in Table 1 above. The solid line represents the regression estimates, and the distance between the line and the individual points plotted represents the errors of estimate. This form of graph illustrates the linearity of the regression estimates, but does not show the data by years and cannot be used where more than one independent variable is included in the regression function.

Chart B shows the same information in a form that obscures the linearity of the regression function but overcomes the two objections mentioned above. In this chart the points connected by the dotted line represent the actual prices and those connected by the solid line represent the estimated prices for the particular years, and the distances between the respective points represent the errors of estimate.

The foregoing example may also be used to illustrate the distinction between the regression coefficient for EPS, the price-earnings ratio, and the price-earnings sensitivity. The price-earnings ratio is discussed because of its common usage but it was not used in this study for the reasons given below.

The price-earnings ratio is itself a variable, and may be used in either a historical or a prospective sense. Historically, it represents the ratio between actual or average price for a particular date or period and actual earnings for a particular period. Prospectively, it may refer to the ratio of current price to estimated earnings for a period ending in the future, or to an estimated ratio of future price to future earnings. Mathematically, the price-earnings ratio would be equivalent to the regression coefficient if and only if the constant term in the regression function is 0 and no independent variables other than EPS are used. Because of these exceptions, the use of an average price-earnings ratio to compute ratio estimates will not provide as good correlation with actual prices as that provided by regression estimates.

In the foregoing example, the average historical price-earning ratio would be 12.529 [20.072/1.602], in contrast to the regression coefficient of 9.476 shown in Table 1; and the correlation of ratio estimates would be .88, in contrast to .95 for the regression estimates.

In this report, "price-earnings sensitivity" (PES) refers to the estimated average percentage change in price associated with a 1% change in earnings based on the regression function. It is clear from the form of the simple and multiple regression functions discussed earlier that the PES factor would be 1 if and only if the constant and any terms other than the one for EPS are 0. If the net effect of such terms is positive the PES factor will be less than 1, and if the net effect is negative the factor will be greater than 1. It should be noted that the sensitivity depends on the relationship of the EPS term to the other terms in the regression function, rather than on the magnitude of the EPS coefficient. In the foregoing example the PES factor is .76 [(9.476 $\times$ 1.602)/20.072].

A final point concerning the methodology deserves emphasis. This is that regression analysis identifies and measures a mathematical relationship, but does not necessarily establish a logical cause-and-effect relationship between the dependent and the independent variable(s). As one example, a close correlation might be established between rainfall and floods using either as the dependent variable; in this event it would be logical to infer that rainfall causes floods, but not that floods cause rainfall. Another classic example is that a high correlation was once found between increases in teachers' salaries and

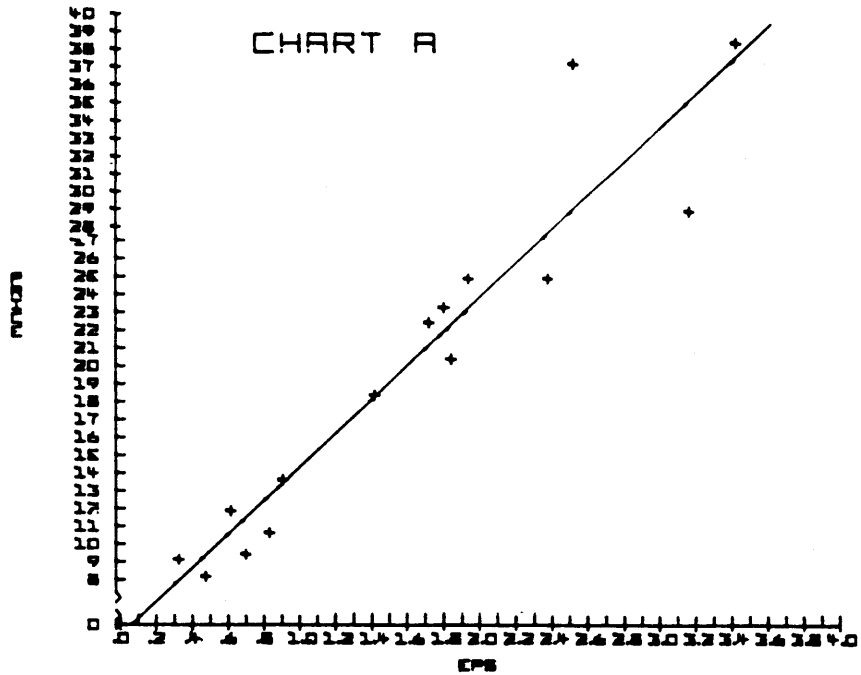
CHART A
EPS

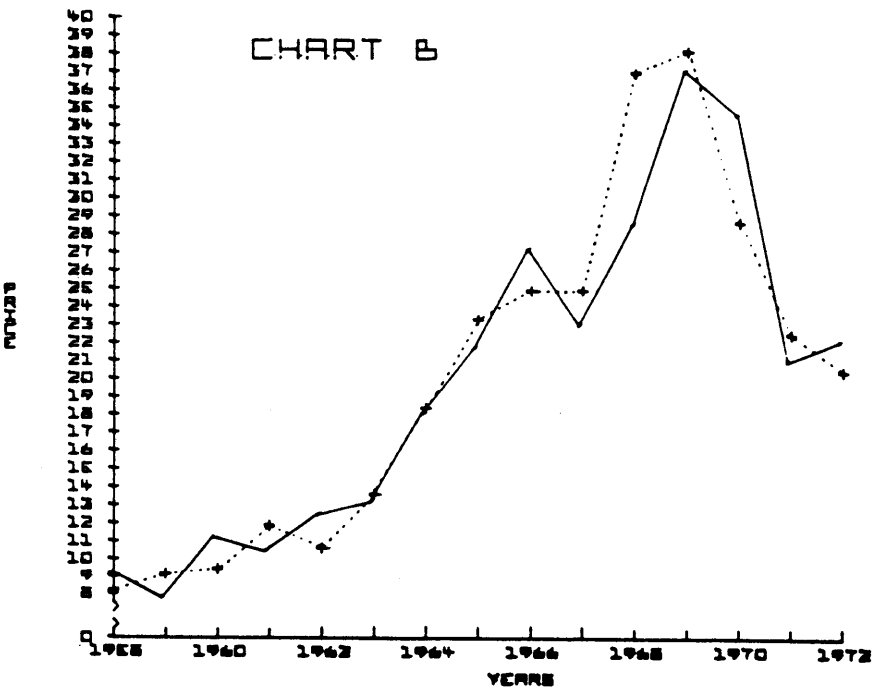
CHART B
1958
1960
1962
1964
1966
1968
1970
1972
YEARS

increases in sales of liquor, but this does not establish that the latter is caused by the former; the more logical inference is that both of the increases are caused by one or more common factors not included as variables in the analysis. The simple examples are given to emphasize the need for logical analysis and judgment in interpreting the results of regression analysis. For this reason the variables used in this study have been restricted to those for which it is plausible to expect that a meaningful relationship may exist, based on the description of the investors' decision processes and the other research referred to in the Discussion Memorandum.

Earnings

Since decision models may use earnings data from various periods and in various ways, the first phase of the study was designed to determine which of various assumed earnings models provided the best correlation with stock prices before considering any other variables. The Discussion Memorandum and accepted investment concepts indicate that the earnings with which investors are primarily concerned are those expected in the future. Consequently, the assumed models used in this study are considered surrogates for expected earnings.

The Discussion Memorandum and accepted investment concepts also indicate that the primary interest of investors is in ordinary or recurring earnings. For this reason, references to earnings or EPS in this report exclude, unless otherwise noted, amounts identified as extraordinary in the COMPUSTAT tapes from which the data were obtained for this study. It should be noted that the amounts so designated may not necessarily conform with accounting practices prevailing during the respective years or at the present time.

The various ordinary earnings models used in the study and the results obtained are discussed in the following section, and extraordinary items are considered separately in the next section of this report.

Ordinary Earnings

Because of the requirements for five-year summaries of earnings in prospectuses and annual reports, several models based on five-year periods were used. These models were included because of the frequent references in accounting and investment literature to average earnings, trends, and growth rates. These models are described more specifically below.

Five-Year Average—This model assumes that the average annual EPS for the most recent five fiscal years is the surrogate for expected EPS for the current year.

Five-Year Linear Trend—This model assumes that the trend of EPS for the most recent five fiscal years, projected through the current year, is the surrogate for expected EPS for the current year.

Five-Year Exponential Trend—This model is similar to the previous one except that it is based on an exponential rather than a linear function.

Five-Year Linear Growth Rate—This model assumes that EPS for the preceding fiscal year, projected on the basis of the average annual

growth rate in EPS for the most recent five fiscal years, is the surrogate for expected EPS for the current year.

The following additional models involving earnings for the current and prior year were also used. In these, as well as in those discussed above, a clear identification of the respective periods referred to is important. Throughout this report the "current" period refers to the period for which the average stock prices are determined and in which the financial statements for the "prior" period are issued; at the present time, for example, 1976 is the current year and 1975 is the prior year. Discussion of the additional models follows:

Prior Year—This model assumes that the EPS for the prior year is the surrogate for expected EPS for the current year. It should be noted that this is the latest fiscal-year EPS on which materiality and investment decisions may be focused.

Current Year—This model assumes that the actual EPS for the current year is the surrogate for the expected EPS for that year. Since the actual EPS for the current year, of course, cannot be known during that year this model is tantamount to assuming perfect foresight. Although this assumption is unrealistic, it appears useful for analytical and comparative purposes.

Average of Prior and Current Years—This model assumes that the average of the EPS for the prior and current years (referred to hereinafter as the "average EPS") is the surrogate for the expected EPS for the current year. This model attempts to compensate in a simplistic way for the decreasing relevance of the prior information, and the increasing availability and relevance of the current information from quarterly reports and other sources, as the current year progresses.

For each of the models described above, time-series regression analyses were prepared for each of the 100 selected companies for the 15 years ended December 31, 1972, using data for those 15 years and for the preceding 5 years for those models that required such data. The results are summarized in Table 2.

Table 2

Earnings Model	*Average Correlation**	*Number Significant**
Five-year models:		
Average	.33	43
Trends:		
Exponential	.50	62
Linear	.55	68
Growth rates—linear	.62	77
Prior year	.63	78
Current year	.66	80
Average (prior and current)	.70	84

* In this table and elsewhere in this report, unless otherwise noted, the statistical significance of correlations has been determined at the .05 level and average correlation has been computed for 100 companies, with those that were not significant being treated as zeros.

The pattern shown in Table 2 suggests clearly that the most recent earnings information available is the most closely related to stock prices. This suggests also that information about prior averages, trends, and growth rates may be overemphasized. Based on the results shown in Table 2, average EPS for the prior and current periods is used as the variable for ordinary earnings in the analyses discussed in the remainder of this report unless otherwise indicated.

An analysis was also prepared using average EPS to determine whether an exponential function would provide a better correlation than that obtained from the linear function as reported above. The form used for this purpose was: log $Y' = a + bX$. This form was used to the exclusion of those that involve log X because logarithms do not exist for negative values and average EPS (X) was negative for various companies for various years. The average correlation from this exponential function was .65 with 78 significant correlations, as compared with .70 and 84 respectively from the linear function as shown in Table 2. This suggests that the latter is more relevant for the purpose of this study.

To complement the time-series analyses reported above, cross-sectional analyses were prepared for each of the 15 years using average stock prices and average EPS for each of the 100 companies in each of the 15 years. The average of the correlations obtained for each of the 15 years was .80.

Because of the widespread interest in forecasts of earnings, analyses were run to determine the correlation of forecasted earnings with stock prices and to compare such correlation with that of historical earnings. The source of the forecasts used for this purpose was the *Standard & Poor's Earnings Forecaster* from 1967, the earliest calendar year available, through 1972. This publication lists the most recently available forecasts of EPS for the current fiscal year by various analysts. The data used in this study were compiled generally as follows. For each calendar year, the issue used was the one dated nearest the mid-point of each calendar quarter. Where forecasts from several analysts were given, any which appeared to be extreme in relation to the others were eliminated and the average of the remainder was used for the particular quarter. The average of the forecasts so determined for each quarter was used for the year.

The results obtained from using forecasted earnings determined on this basis for each of the 100 companies for the six years indicated above, and from using the historical average EPS for the same six years are shown in Table 3.

Table 3

	Average Correlation	*Number Significant*
Forecasts	.41	45
Historical	.44	48

The results shown above are substantially lower than those shown in Table 2 for historical earnings. This appears to be caused primarily by the effect of the lower number of years used in the tests of significance. To eliminate this effect, analyses were run using the same data, but with the significance tests suppressed. These analyses showed average correlations of .60 for forecasts

and .69 for historical, with the latter being more comparable to the results in Table 2. Apart from the level of correlation, however, the more important result is that both sets of analyses show lower correlation for forecasts than for historical earnings.

This somewhat surprising comparison suggests that either (1) the relative weight given to forecasts versus historical earnings in investment decision may be less than the popular belief, or (2) the analysis is faulty in some respect. As to the latter possibility, several observations seem pertinent. Insofar as the author was able to determine, the publication used is the most comprehensive compilation publicly available. The average of quarterly forecasts for the current year should provide a more timely measure of expectations throughout the year than the average of the earnings of the current and prior years as used in the historical analysis; otherwise the time frames are the same in the respective analyses. Three possible sources of bias in the data used are as follows: (1) forecasts not included in the publication used, (2) differences between the relative number of investors who may have been influenced by the different forecasts included and the relative number implicit in the averages used, and (3) the extremes eliminated in computing the averages as discussed earlier. The author doubts that any of these possible sources of bias is significant.

Extraordinary Earnings

As indicated earlier, the foregoing analyses were based on the assumption that the earnings of primary interest to investors exclude extraordinary items. To test the validity of this assumption, an analysis was prepared for the 100 companies for 15 years using the average total EPS (including extraordinary items) as the independent variable. The average coefficient of correlation from this analysis was .65 as compared with that of .70 obtained by using average ordinary EPS. This result, combined with the evidence cited in the Discussion Memorandum and other sources, seems to confirm the validity of the assumption that ordinary earnings are of primary interest to investors.

Cash Flow

There have been suggestions that investors may give more attention to cash flow than to earnings, either because they consider it more important, more objective, or more comparable between companies. For this reason, an analysis was prepared using average cash flow as the independent variable. This analysis showed an average correlation of .58 as compared with .70 for average earnings. This comparison suggests that investors do not consider cash flow more significant than earnings, and accordingly cash flow was not used further in this study.

Other Variables

In the second phase of this study, the other variables mentioned earlier under "Data and Methodology" as quoted from the Discussion Memorandum were used in various combinations. Those for which the results were considered of interest are discussed in this section.

In addition to the level of ordinary earnings as discussed above, the five-year growth rate and variability of such earnings, and extraordinary earnings were used because of their possible relevance to earnings expectations. Dividends were used because of the general presumption that the distinction between distributed and undistributed earnings is significant to investors. The average of the dividends for the prior and current years was used for the reason explained earlier with respect to the use of average earnings. Book value was used primarily to test the prevalent presumption that it is not significant to investors. The market-related variables used were the Standard & Poor's average of stock prices for 425 industrial companies and an index of price stability (or variability). It was assumed that the S&P average would appropriately measure the combined effect of external factors affecting the market generally, and accordingly no effort was made to analyze any such factors individually. The use of average prices by industry classifications was considered impracticable because of the difficulty of establishing consistency in such classifications for the number of years covered, and was considered unnecessary because of the limited effect of such classifications indicated by earlier studies. The price stability index was computed for each company for each year by dividing the high-low price range by the corresponding price average.

Three of the variables mentioned in the preceding paragraph—dividends, book value, and the S&P average—appear to be of sufficient interest to consider individually. The average correlation obtained from the respective analyses in which these variables were used was as shown in Table 4.

Table 4

Variables	*Average Correlation*	*Number Significant*
Average dividends	.53	67
S & P average	.36	53
Book value	.39	48

A multiple set of variables, consisting of average EPS and all of those mentioned in the second preceding paragraph, was used in (1) time-series analyses covering 15 years for each of 100 companies and (2) cross-sectional analyses covering 100 companies for each of 15 years. The results obtained from these analyses and a comparison with those obtained from using average EPS only are presented in Table 5.

Table 5

	Multiple Variables	*Average EPS Only*
Time-series analyses:		
Number significant	95	84
Average correlation	.85	.70
Cross-section analyses:		
Number significant	15	15
Average correlation	.82	.80

As was expected, the use of multiple variables improved the overall results of the time-series analyses by companies but reduced the number of companies for which average EPS was a significant variable. This reduction was from 84 to 45.

The following summary shows the number of companies for which significant correlations were obtained and the number of such companies for which the respective variables were included in the significant set of variables, with an analysis indicating whether average EPS was included or excluded from the significant set:

Table 6

	Total Significant	*Average EPS*	
		Included	*Excluded*
Companies	95	45	50
Variables:*			
Average EPS	45	45	-
S&P average	24	7	17
Book value (beginning)	22	8	14
Average dividends	21	7	14
Five-year earnings:			
Growth rate	20	2	18
Variability (standard error)	14	10	4
Extraordinary earnings	11	2	9
Price stability index	9	3	6

* The total of the variables listed exceeds the number of companies because of the cases in which more than one variable was significant for a particular company.

The number of years for which the respective variables were significant in the cross-sectional analyses is shown below:

Table 7

Variables	*Years*
Average EPS	15
S&P average	0
Book value (beginning)	1
Average dividends	9
Five-year earnings:	
Growth rate	0
Variability (standard error)	6
Extraordinary earnings	0
Price stability	8

Price-Earnings Sensitivity

The average price-earnings sensitivity factors computed as stated previously from the principal analyses are shown in Table 8.

Table 8

	Multiple Variables	*Average EPS Only*
Time-series analyses—		
Average sensitivity based on:		
Total companies (100)	.46	.78
Number of companies for which average EPS was a significant variable (45 and 84, respectively)	1.02	.93
Cross-sectional analyses—		
Average sensitivity based on total companies	.83	.99

With the foregoing presentation of data concerning price-earnings sensitivity, we move to the more difficult problem of evaluation of the possible implications for establishing criteria for materiality in accounting. For this purpose, we consider first the time-series vs. cross-sectional analyses, and second the use of multiple variables vs. average EPS only.

In considering the relative merits of time-series and cross-sectional analyses for the purposes of this study, it appears that the advantages of one are the disadvantages of the other and vice versa. The time-series analyses for individual companies eliminate the effect of differences between companies, while the individual cross-sectional analyses eliminate the effect of differences between years. Consequently, the results of the respective analyses are somewhat complementary. On balance, however, it appears that the time-series analyses may be more meaningful for this study because the variability between companies is greater than that between years. This is indicated by the fact that the average of the relative standard errors of estimate for the multiple-variable cross-sectional analyses was .48 as compared with .14 for the corresponding time-series analyses.

Conceptually, the results from using multiple variables are preferable to those from using only average EPS for two reasons. First, the plausibility of significant variables other than EPS is established in the Discussion Memorandum and investment literature. Second, the correlation obtained from the use of multiple variables is higher. However, it is difficult to discern significant patterns or in some cases a rationale for the regression functions developed from the multiple variables for individual companies.

The multiple-variable analyses present a dilemma in that they show average EPS as being significant for only 45 of the 100 companies. For this reason, any use of the average from such a skewed distribution of the 100 companies would be questionable. Conversely, any use of the average for the 45 significant cases could result in unduly restrictive criteria for companies as to which EPS may not be significant. However, the latter appears to be the more acceptable of the two unattractive alternatives offered by the multiple-variable analyses.

Another possibility is to discount the conceptual preferability of the multiple-variable analyses and assume that EPS data were the only significant variable. Pragmatically, the difference between this approach and the alterna-

tive suggested in the preceding paragraph would not be very great (1.02 vs. .93) as shown in Table 8.

Materiality Decision Model

Given any level of price-earnings sensitivity, further consideration is required to translate such information into logical criteria for accounting materiality. The considerations required for this purpose are referred to herein as a materiality decision model.

Any change in earnings could be considered material at any level of sensitivity if changes in investment portfolios could be made without incurring costs. This is not the case, however, and consequently such costs should be included in the decision model. Further, since changes in investments involve two transactions, the model should include the costs of both.

The principal costs to be considered are commissions and the price effects of blockage (size of blocks traded). A recent report by the SEC (Second Report to Congress on The Effect of the Absence of Fixed Rates of Commission, dated March 29, 1976.) indicates that the average commission as a percentage of the principal value of all trades is approximately 1.6% for individuals and .6% for institutions. Discussions with investment personnel familiar with "best execution" trading strategy, which is designed to minimize the total of commission and blockage costs, indicate that the latter ordinarily are significantly greater than the differential between the average commission costs of individuals and of institutions. Consequently, it seems reasonable for the purpose of this study to consider that the average cost of changing from one investment to another is at least 3.2% (1.6 x 2).

An important consideration in the decision model is that incurrence of transaction costs is certain, while realization of the expected benefits is uncertain. Consequently, the cost-benefit inequality inherent in the model requires that the expected benefits be expressed in terms of a high degree of assurance. This can be accomplished by using the standard error associated with the sensitivity factor to compute a "lower sensitivity limit" for comparison with the transaction costs. Since a range of three standard errors around a statistical estimate provides virtual certainty where a normal distribution of such estimates may reasonably be assumed, a lower sensitivity limit computed on this basis seems appropriate for use in the model being discussed here. Such a limit represents the maximum change in price that could be considered virtually certain from a 1% change in earnings—in contrast to the estimated change based on the sensitivity level, as to which there is an equal risk of variation in either direction. Based on the average standard error applicable to the sensitivity factor of 1.02 shown in Table 8 the lower sensitivity limit computed as suggested above is .50.

The materiality decision model described above can be summarized as follows:

$$M = C/S$$

Where:

- M = Materiality limit—the maximum effect on ordinary earnings that would be immaterial.
- C = Cost of change in investments.
- S = Lower limit of price-earnings sensitivity.

Based on this model and the data presented earlier, a reasonable materiality limit in relation to effect on ordinary earnings for a year would be 6.4% (3.2/.5).

The data and rationale culminating in the foregoing computation should be evaluated in the context of the caveat expressed earlier: "This study was not conducted under any illusion that it would produce a precise or conclusive model, but only to determine whether it could provide information that would be useful in considering possible standards for materiality." Two considerations seem particularly relevant in evaluating the usefulness of this study. First, insofar as known to the author, it is the only approach that has been developed for considering materiality criteria analytically rather than subjectively. Second, the results of the study tend to corroborate the general range of subjective judgments expressed by many practicing accountants. For example, the response by the AICPA's Accounting Standards Task Force on Materiality recommended a level of 5% of ordinary earnings, with appropriate flexibility for unusual circumstances, which compares with 6.4% developed in this study. (The author of this study was a member of the AICPA Task Force but the study had not been completed, no preliminary conclusions had been formed, and no consideration was given to the study at the time the recommendations of the Task Force were formulated.)

Discussant's Response to Some Thoughts on Materiality

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In addition to it being a real pleasure to be here at Kansas and to have the opportunity to exchange ideas with you, I am particularly honored to have the distinction of discussing the paper by Ken Stringer. I know of no other individual who is more responsible for moving the technical aspect of audit practice along more than Ken. I suspect that Ken would be the first to admit that progress is not always achieved without a few detours along the way. I think we would all acknowledge that without taking a few side trips down these unchartered roads, life would become static and dull. My remarks today center on the proposition that once again Ken is moving us in the right direction, but not necessarily along the four-lane. My remarks today will be divided into issues related to the paper and ideas on materiality generally.

The Paper

The concept of materiality is a threshold concept that relates to the users of information who make a myriad of decisions. In our society, a major group of these decisions are made by investors who buy, sell or hold securities based on this information. We, as accountants and auditors, are interested particularly in the role that financial statements play in that set of information. Society gives us general direction in carrying out our role as auditors. An indication of some of this direction is evidenced in the following excerpts.

> The term "material," when used to qualify a requirement for the furnishing of information as to any subject, limits the information required to those matters about which an *average prudent investor* ought reasonably to be informed. *Regulation S-X, Rule I-02.* (Emphasis added.)
>
> . . . A fact which if it has been correctly stated or disclosed would have *deterred or tended to deter* the *average prudent investor* from *purchasing* the securities in question. *Escott, et al. v. BarChris Construction Corporation.* 283 F. Supp. (S.D.N.Y.) 849 (1968). (Emphasis added.)
>
> The basic test of materiality . . . is whether a *reasonable* man would attach importance . . . in determining his *choice* of *action* in the transaction in question . . . (and the above test would encompass any fact) which in reasonable and objective contemplation *might affect the value of the corporation's stock or securities. SEC v. Texas Gulf Sulphur Co.* 401 F2d 849 (1968). (Emphasis added.)
>
> There must be a *substantial likelihood* that the disclosure of the omitted fact would have been viewed by the *reasonable investor* as having

significantly altered the *"Total mix" of information* made available. *TSC Industries, Inc., et al. v. Northway, Inc.* 426 US 438 (1976). (Emphasis added.)

These guidelines provide us with some direction that is unambiguous.

- Materiality is *user oriented.*
- Materiality is part of a *total mix of information.*
- The item subject to a materiality decision must have a *substantial likelihood* of significantly altering the total mix of information.

The excerpts, however helpful in their direction, fail to clarify a number of issues. For example:

- Should the auditor look solely to the investment community in judging materiality?
- How can the auditor identify the users' mix of information?
- Furthermore, how can the auditor assess the current state of the users in order to know what change would represent a substantial likelihood of significantly altering the user's mix?
- Should attention focus on the market value of the security or on the reasonably prudent investor?

This last point is subtle. Beaver (1968, pp. 69-70) differentiates between two types of market reaction to information—individual reaction within the market place (volume change) and aggregate market reaction (price change). Notice that only the guidance from the Texas Gulf Sulphur case directly mentions the market price and it is mentioned in conjunction with the individual orientation. Yet, the other three—including the most recent—still cling to the individual orientation. While this differentiation may not be terribly important in determining damages from an investors' standpoint, as such damage is based on changes in market price, it presents a problem for the auditor in assessing other users' needs and for basing his or her materiality judgments on any individual's judgments—even a reasonably prudent investor's.

The Market Data Approach

By adopting a market data based approach, Ken chooses to address the investment community, to consider the total mix of information that affects the prices, and to measure the sensitivity of the price to movements in several accounting variables (particularly net income). Finally, Ken elects to ignore the individual and focus instead on the market value of the security. Ken's paper represents a serious attempt to deal effectively with each of these major issues. In that regard, it is exemplary. However, as Dyckman, Downes, and Magee (1975) point out, this market based approach is not without peril. Indeed, as all researchers who have filtered through study after study know, there is no one project that is significantly likely to provide the answer to serious problems. Ken's paper and materiality fall into this category.

Perhaps the most serious problem with Ken's approach is that the time series of earnings levels and security price levels are probably nonstationary. Because they are not stationary their relationship, as expressed by a

correlation coefficient, is likely to be overstated. The accompanying figure may help us gain some insight into this problem. Chart A in Ken's paper gives us a picture of two variables which are highly dependent. Indeed, Ken reports a correlation of 0.95. However, one may justifiably raise several questions. Is there some underlying variable creating a trend in each of these variables? Also, is there some trend that each of these variables follows as a result of this other variable? Francis (1976, p. 587) cites a study that indicates that New York Stock Exchange stock prices rose about 6.8 percent per year from 1926 through 1965. It is likely that *EPS* also rose during this period. Indeed, it is likely that both have continued to rise generally until I invested about a year ago.

Let us examine Figure 1, which represents the data from Table 1 rearranged against time. The X's on the diagram represent EPS. The 0's represent price. I believe the impact of time is evident and generally consistent with an increasing trend for both of these variables.

How then can we get away from this problem? One way may be to fit various models to the data as they stand, which could compensate for the drift. Another way is to use a first difference model. That is, contrast the changes in EPS with the comparable changes in price. Figure 2 represents these first differences plotted against one another. The correlation coefficient of this series is .60. Notice that the amount of "explained" association has fallen from about 90% using Ken's approach to about 36% using a statistically more correct approach. This rearrangement points out a major problem with looking at the raw data—namely that the strength of the relationships is overstated and the significant number of relationships is overstated. Neter and Wasserman (1974, pp. 352 ff.) point out other problems. Francis (1976, pp. 587-588) points out that even the distribution of first differences is unstable. Since this evidence regarding the first difference is not as compelling, one might try to construct a measure based on first differences. One potential model may take the following form.

$$\text{Price}_{t+3} + \text{Dividends} - \text{Price}_{t-9} = a + b \left[\begin{array}{l} \text{EPS} \\ \quad \text{year ended} \\ \quad \text{month } t \end{array} - \begin{array}{l} \text{EPS} \\ \quad \text{year ended} \\ \quad \text{month } t-12 \end{array} \right]$$

This model would help the nonstationary problem, recognize the preponderance of findings regarding the time patterns of earnings, and assist with the problem of getting the amount of return matched to the period affected by the earnings' release time. One may also wish to try to use quarterly data (Foster, 1978, pp. 106 ff.). However, I feel that both these approaches are rather crude, and it seems to me that a model based on returns is a better approach. Francis (1976, pp. 588 ff.) indicates that such an approach may be better—at least given the statistical properties of security prices over time. Furthermore, using return data as the dependent variable would more closely relate to existing investment theory and practice models as I understand them.

The cross sectional analyses in the paper are subject to some rigorous statistical assumptions. With this in mind, I shall not discuss them, but merely refer interested parties to work by Johnston (1972).

Figure 1

Price and EPS Plotted Against Time
Data from Stringer's Table 1

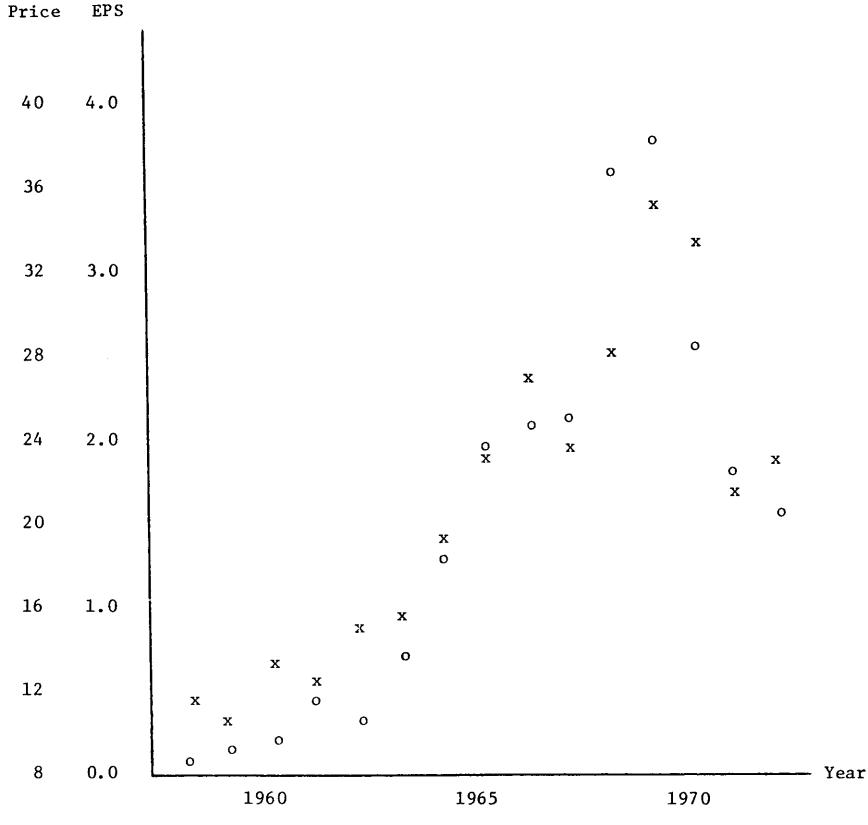
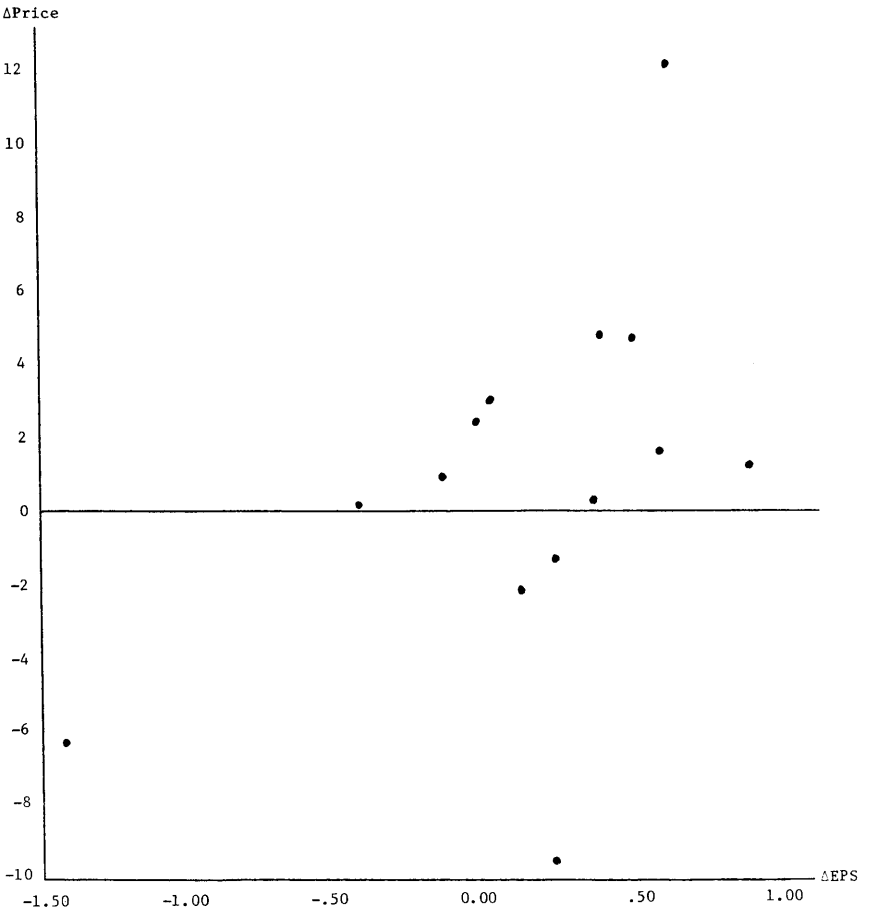


Figure 2

ΔPrice versus ΔEPS Data
from Stringer's Table 1



Some Specific Observations

The key point that should come out of my remarks is that Ken's work attempted to establish a paradigm that did describe behavior of prices as related to accounting data while considering many of the relevant issues. Since some of the problems that I have cited came into the literature *after* Ken's work, it should not bear adversely on his study. Rather, it should advance the challenge to those among us who are equipped to perform such research. I should also add that Dopuch and Watts (1972, p. 184) have proposed using time-series methodology to assist the auditor in making materiality decisions. Kaplan (1978) has cited some problems with these approaches, but Foster (1978b, pp. 47-48) has observed that they may not be insurmountable. The Dopuch-Watts' proposal would acknowledge a significant change in net income brought on by an item subject to a materiality decision as one criterion. I think we must remember that any of these models are merely surrogates for true materiality.

If we pursue a market-based approach, we should bear in mind several problems. First, it is unlikely to yield a model that is sufficiently sensitive to potential changes in accounting numbers that will help us much. This may be judged by some to imply the immateriality of such potential changes. Secondly, while it could be arguably better than the individual approach in assessing the impact of potential changes in an accounting number in a *mix* of information, it is not without problems in that such a model must be forward looking and necessarily depend on estimates. Thirdly, while it may better approach the social welfare paradigm than the individual approach, it does not, *per se,* constitute an appropriate measure for such paradigm (cf. Gonedes and Dopuch, 1974). Finally, it is not readily apparent that the courts would accept this approach even though one might conjecture that it would be acceptable based on some interpretations of market-based theory and the prudent man rule applicable to decisions of pension fund trustees under ERISA (Pozen, 1977). Foster (1980) points out some other issues that should be considered before attacking the topic using this approach.

The User Approach

Let me change orientation now and discuss the individual user approach to determination of materiality levels. Ken's paper implied that some materiality guidelines should be proposed for the "usual" situation. I am not sure that I understand this term. It seems to me that financial statements are likely to be used for a given company at a given point in time primarily for either equity investment decisions or credit decisions. There is implied support in this use specificity in professional standards. SAS No. 39 "Audit Sampling" (1981) indicates that the auditor should consider the effect of any potential misstatement on the *expected use* of such financial statements in determining ultimate risk. If the auditor knows a client well, then it should be possible to assess the intended principal use of the statements in most cases. Where there appears to be an "ordinary" situation, the auditor should be able to adequately assess the materiality bounds pretty well. I base this conclusion on the proposition that very, very few audits result in any serious allegations of misstatement. Thus,

the cost of the variability in materiality levels on the audit may be measured on a societal basis primarily by a misallocation of resources. In an "ordinary" case, this misallocation may take the form of an interest rate that differs from optimal or a security price that differs from optimal. Both of these differentials are probably minor. For, when trying to measure this misallocation, notice that financial statement numbers are only part of a complex set of other information on which interested parties base their decisions. Other components might include product development prospects, market share, quality of management, etc. Note also that these decisions are primarily based on future states of these variables and therefore are likely to contain a considerable degree of variation and subjectivity. Therefore, I see no immediate cost justification for implementing an unduly rigid materiality rule for "ordinary" audits.

What is an "ordinary" audit? I am not sure that I know, but I can offer a few under-developed guidelines. An ordinary audit involves an auditee who is not in financial distress, who is not an apparent merger target, who is not intent on spinning off subsidiaries, who is not registering securities, who is not blessed with management of doubtful integrity and who is not encumbered with a lousy internal accounting control system. These characteristics are meant to represent potential criteria that would have to be combined in some unknown manner to identify "extraordinary" audits. I feel sure that members of the AICPA Task Force on Materiality and Audit Risk as well as Albrecht, Romney, and others (cf. Albrecht, et al., 1982) could suggest other danger signals. The key point I want to make is to have these types of clients bear the cost of more stringent materiality bounds and more auditor time.

In such situations the prudent audit firm may wish to alter the nature of the audit procedures, involve more senior audit personnel, and push the timing of such procedures back as far as practicable. Thus, the extent of testing, which would be the primary variable affected by a quantitative guideline, would be only one dimension triggered by auditees in this unusual category. A broader view of materiality in conjunction with audit risk should increase the real audit quality associated with these financial statements. The risk would lie primarily with the accounting firm to do the job. Failures on its part could be expected to lead to market pressures that would diminish the reputation of the firm—even to the point of ruin.

Since the profession will also be damaged to an extent with any audit failure, it should provide guidance on characteristics that denote an extraordinary audit. For example, it could propose the assistance of one or more outside specialists in such audits. This action would raise the auditor's loss function if he ignored such guidance and the financial statements subsequently proved to be materially in error. On the other hand, the auditor who followed such guidance should have gone a long way toward establishing a good faith defense in the event that the statements were determined to be materially in error. At the present time, the auditor alone assesses the users' decision models, their current portfolio state, their attitudes toward risk, and so on. For a single unknown user in society, accurate assessment is impossible. Thus, the auditor could call in an expert financial analyst for the client's industry or an expert lending analyst familiar with the client's industry or some combination of one or more of each of these. The auditor could have him, her, or them assess the

critical assertions in the financial statements. I personally believe that some type of multiple attribute utility function could then be developed to assist the auditor in determining which numbers or disclosures in the statements were in the critical, threshold range. This in turn would allow the auditor to address those areas with the appropriate intensity to meet his or her own utility function.

An alternative approach would be to set some percentage of some earnings figure for an overall materiality bound. My understanding of firm valuation research (e.g., Miller and Modigliani, 1961) and other research findings (cf. Foster, 1978) including those from behavioral decision theory research (cf. Libby, 1981) leads me to believe that this referent is the most reasonable single candidate. Furthermore, it could satisfy the need that any specific guidance in any Statement on Auditing Standards at the current time must be relatively straight-forward and simplistic. Therefore, I believe this one would be as good or better than any other based on current knowledge.

More Finite Guidance?

If, however, more finite guidance is deemed necessary and appropriate, I feel the materiality bound should be set at one percent of net income. Such a bound would undoubtedly create an increased demand for auditors and tend to place upward pressure on my salary level. *Of course,* I am not serious about such a stringent bound. Rather, I wish to make the point that as auditors we should not let our strong desire for a quality product from a profession that is dear to many of us assembled here, lead us to standards that are apparently too costly for any reasonable benefit to our society. This proposition holds even if we perceive that that same society has unleashed some competitive forces upon us recently that, in my opinion, tend to reduce audit quality. One minor encouraging sign in this matter currently lies in my desk drawer in my desk back in Urbana. That is, someone has done a paper that strongly suggests that the perceived prestige and quality of members of the traditional Big Eight are positively related to the perceived cost of their services. If this perception carries over to actions (including increased quality of audit with increased cost) then audit clients with "better" audit firms may benefit by lower costs of borrowing, because the subjects of this study were the chief financial officers at the nation's 25 largest banks.

I have not discussed any specific research projects, but I feel we could do research at the individual level to help with generating an appropriate methodology for eliciting the outside specialists' multiple attribute utility function or contribute some studies that could assist the task force in determining if setting a selected percent of income for planning materiality would increase the consensus of judgments among auditors.

Before I end, I thank Ken for writing a paper that made me think about this important issue. I also thank Howard and Don for asking me to be a discussant which undoubtedly piqued my own utility function. Finally, I hope my ideas further the progress on the issue of materiality judgments in auditing.

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7

SAS 34 Procedures vs. Forecast Reviews: The Gap in GAAS

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Overview of the Paper

This paper explores the guidance given to auditors in early 1981 in SAS 34, "The Auditor's Considerations when a Question Arises About an Entity's Continued Existence," in comparison with procedures contained in the AICPA's 1980 *Guide for a Review of a Financial Forecast* ("forecast guide"). In the author's opinion, there is little differentiation in the satisfaction the auditor/reviewer is to obtain under these two forms of guidance, and the result may be that the auditor will be called upon for failure to have performed at the level of the forecast guide. Neither document has been in existence long enough for such problems to have matured, but based on the evolution of accountants' liability, the author foresees significant challenges in court unless the auditing profession promptly reconciles the two documents.

It is important to recognize that the forecast guide calls for a display of the most probable future result, which could be considerably more difficult to achieve than the prediction implied by SAS 34—that is, that a company will have zero or better net cash inflow, without identifying any specific amount thereof. To this extent, one would expect the forecast guide procedures to be more penetrating. Accordingly, this paper knowingly makes a more aggressive case than probably is applicable for audits today.

The views expressed in this paper are *a priori*, fortified by experience with several practice cases where the auditor recognized the problem and aimed at the forecast guide levels of attainment, believing this was the prudent approach in the clients' circumstances. In this sense, the author offers thoughts on what he perceives to be an emerging problem facing the auditing profession. Experienced accountants can be expected to disagree on whether a problem is emerging, and if so, how to solve it.

A Gathering Storm

In the current economic environment, businesses face an unprecedented and sustained liquidity crisis; failures are common and increasing. Consider for example the thrift industry, which in an unregulated environment (without FSLIC or FDIC assistance) would be faced with cataclysmic disaster through having lent long and borrowed short. Should the auditor be exceptionally alert in these circumstances? How much responsibility will have to be borne for these failures?

The authoritative auditing literature is liberally sprinkled with exculpations declaring that the auditor is not a fortune teller. For example, SAS 34, paragraph 9, says:

> The auditor's function, however, does not include predicting the outcome of future events, and an unqualified opinion on the financial statements does not constitute a guarantee or assurance by the auditor that the entity has the ability to continue for any particular period beyond the date of his opinion.

Experience shows that auditors should not take too much comfort in soothing passages of this type. The litigable issue will not be identified as the future orientation, but rather as the proper assessment of available facts (with "available" meaning discoverable through the "right" inquiries and investigation).

Legal Framework

Legal precedent over the years has developed to a point that auditors can expect to be called to task in the event a company fails. This is especially so for publicly held companies, given the opportunity to assert misrepresentations in the financial statements and the accompanying auditor's report under Section 11 of the 1933 Securities Act. This puts the burden of proof on the auditor as not being a party to whatever is alleged to be wrong with the financial statements (i.e., the auditor did not determine that the company was about to fail); and the test for auditor non-culpability is stringent:

> After making reasonable investigation (i.e., exercising "due diligence"), he had reasonable ground to believe, and did in fact believe, that the statements in his audit opinion were true; in effect, the auditor will be held liable unless he can prove that he exercised due care, i.e., was not negligent either in the performance of his audit or in the expression of his audit opinion (which is indeed a rigorous standard though not insurmountable).[1]

When considering going concern situations, the focus is on the future, or the post-balance-sheet period. If a company files a registration statement, Section 11(a) of the 1933 Securities Act is unique in continuing the audit opinion responsibility to the effective date of the registration statement, rather than only to the date of the audit opinion. "It is possible that the information available to the auditor at the audit opinion date might *justify* one audit opinion, but that additional information available to the auditor at or near the effective date might then *require* a different audit opinion."[2] The professional literature does not require a post-balance-sheet investigation to be as rigorous as the audit examination, but how much should have been enough is always debatable in the aftermath of a collapse.

Admittedly, companies in a noticeably precarious financial position and therefore candidates for going concern qualification are not likely to be filing 1933 Act registration statements.[3] But there is, as ever, an easy route that plaintiffs may take strictly based on periodic filings under the 1934 Securities Exchange Act. Section 10(b) prohibits the making of any untrue statement of a material fact or omission of a statement of material fact necessary in order to

make the statements made, in light of the circumstances under which they were made, not misleading. Rule 10b-5 deals with any offer or sale of securities, and has been interpreted to apply to any action taken in connection with the purchase or sale of any security. Thus, the rule has been construed broadly enough so that auditors' opinions on audited financial statements, and unaudited financial statements with which auditors have become associated, may be statements *in connection with* purchases and sales of the corporation's securities. The auditor is clearly "in the soup" even though he is not in the securities brokerage business.

The auditor is also not required to actively participate in or know about the presentation of misleading statements. The profession's euphoria over the *Hochfelder* decision, requiring the auditor to have *scienter* or "knowledge" to be held responsible, has rapidly dissipated. *Scienter* has been transmogrified into recklessness, a form of negligence, a prevalent definition of which is found in *McLean vs. Alexander*[4]*:*

> *Reckless conduct may be defined as . . . highly unreasonable [conduct], involving not merely simple, or even inexcusable negligence, but an extreme departure from the standards of ordinary care, and which presents a danger of misleading buyers or sellers that is either known to the defendant or is so obvious that the actor must have been aware of it.*

This may sound safe—what good auditor does that?—but in terms of going concern situations, one must at least wonder about whether some of today's situations will be deemed after the fact to have been "so obvious that the actor must have been aware of it."

One last bit of relevant law: a determination of failure to have made the inquiry that might have revealed a deficiency is negligence; if it is sufficiently extreme it could be recklessness.

It is tempting to assert that today, SEC enforcement is rapidly waning, and that litigation for the most part is running much in the accountants' favor. That would be, perhaps, foolhardy; the SEC retains all its powers and must be counted on to reactivate enforcement if a serious failure of auditors is perceived. Once the SEC "rings the gong," the litigants will swarm.

Auditors and Uncertainties

Uncertainties clearly existed in financial reporting long before auditors came into being. Thus, the consideration of effects of uncertainties on clients' financial statements has been an evolutionary process. An early exposition of this subject is contained in Statement on Auditing Procedure No. 32, "Qualifications and Disclaimers," issued in 1962 for purposes of clarifying reporting standards called for under what was then Rule 2.03 of the AICPA's Code of Professional Ethics. That ethical conclusion was intended to add further specification to the fourth standard of reporting (which was subsequently added to the nine original Generally Accepted Auditing Standards) indicating that "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."

The language of SAP 32 was carried forward into SAP 33, "Codification of Statement on Auditing Procedures," and, in substance, remained relatively

intact in the recodification in SAS 1 in 1972. However, the recodification procedure and the litigation against auditors in the early 1970's revealed a need for further attention to the auditor's forms of reporting including uncertainties. The result was the issuance of SAS 2, "Reports on Audited Financial Statements," in 1974. These are essentially the reporting formats we practice under today.

SAS 34, "The Auditor's Considerations When a Question Arises About an Entity's Continued Existence," does not alter the basic format in SAS 2; the SAS 34 exemplary report showing a qualification ("subject to," as contrasted with disclaimer) in a going concern situation is built on the preexisting SASs and gives specification to what otherwise might be a stock "fill-in-the-blanks" form of report.

Prior to SAS 34, auditing pronouncements seemed to heavily emphasize the financial statements—much as if they were disembodied from the company. SAS 34 appears to aim much more directly at the company itself—will it make it, or will it not? While SAS 34 necessarily hinges the auditor's concerns to the only outlet he controls—his audit report—and thus to the financial statements, it is apparent by reading SAS 34 that the issue of how to report is simple in comparison with what the auditor has to consider and do in relation to future oriented information, almost all of which is not incorporated in the client's accounting records. Only then can a conclusion be reached about including or not including a going concern qualification (or disclaimer) in the auditor's report.

SAS 34 vs. the Forecasting Guide

The basic premise of SAS 34 is that, any time up to the date of the report, once the auditor becomes aware (through what is referred to as "contrary information"), that the going concern assumption may be in question, regardless of the source of the information, the auditor had better investigate to determine whether (and how) the report needs to be amended to make reference to the situation.

Let us assume that auditors today are especially conscious about and inquire into a client's continued viability, rather than awaiting inspiration or evidence to come marching in. Whether or not such preconditioning is true, the focal issue is, once the auditor is concerned, what procedures should the auditor follow in considering a client's continued viability. Further, recognizing that prognostications could be wrong (i.e., some going concerns will become non-going concerns), what will the courts decide about the reasonable level of performance? Said differently, auditors make judgments and some judgments are invariably wrong. The auditor needs to support judgment with the proper defense, which could very well be something more penetrating than having followed SAS 34. That "something" probably will be the AICPA's 1980 *Guide for Review of a Financial Forecast.*

Some questions that might be asked about SAS 34 and the forecast guide are:

- What "forecasting" procedures are *implied* by SAS 34?
- In a SAS 34 situation, can the auditor simply "throw in the towel" and issue his "going concern" opinion after coursing through minimal

procedures, or are there situations in which review must be conducted to the extent contemplated in a review of a financial forecast?

- Under what circumstances would a prudent auditor expand SAS 34 procedures to incorporate some or all of the procedures for review of a financial forecast?
- How large is the gap between what the auditor already knows and does in an SAS 34 engagement and the knowledge and procedures called for in the forecast guide?

A comparison of the relevant forecast guide requirements with SAS 34 considerations follows, stated in terms of the forecast guide procedures, with reference to the substance of coverage in SAS 34. Particular reference should be made to paragraphs 7, 8 and 9 of SAS 34, reproduced in Appendix A.

Forecast Guide	*SAS 34*
Definitions	
• A forecast is the "most probable" estimate. • A projection may or may not be representative of the "most probable" estimate.	No definitions of forecast or projection; mentions both.
Management's Responsibilities	
• The forecast and underlying assumptions are the responsibility of management, regardless of the accountant's participation.	• This would be a given in any environment, whether in an audit examination or review of a forecast.
• The accountant may assist in the formulation of assumptions, but management must evaluate them and make decisions as to their reasonableness.	• Nothing revelationary. Just as in an audit, the auditor can assist the company and management in selecting accounting policies, but management makes the decision.
The Accountant's Review	*The Auditor's Considerations*
• In general, the forecast reviewer should: -have adequate technical training and expertise -maintain an independence of mental attitude -exercise due professional care -adequately plan and supervise the engagement -understand the forecasting process -obtain adequate support for the conclusions reached.	• Except for the possibility that the level of technical expertise needed in a forecast engagement is greater, the remainder of these qualities are GAAS-oriented and would be implicit in a SAS 34 engagement.
• The scope of the accountant's review is governed by the following: -*knowledge of the business,* focusing on its operating characteristics, the nature and condition of sales	-This is required by SAS 1, *Planning and Supervision* (AU 311).

markets, unique industry characteristics and patterns of past performance.	There is nothing here that the auditor shouldn't already know to a certain degree.
-*management's forecasting experience,* including review of past forecasts and related actual results.	-No specific requirement, but it is common sense. Would an auditor look at and believe a cash forecast without some level of inquiry about management's forecasting experience.
-*forecast period,* including consideration of the forecast period's length and extent of inclusion of historical results.	-Again, this would seem to be in the area of logical inquiry by the auditor.
-*forecasting process,* the knowledge of which is based on inquiry, observations and review of documentation.	-*This is not required in SAS 34; it requires more than inquiry by the auditor.*
• *Procedures to evaluate assumptions:*	
-based on knowledge of the business, identify key factors that influence the company's financial results. This considers their relevance, completeness, sensitivity in relation to financial results, and pervasiveness.	-In view of the "knowledge bank" possessed by the auditor, these factors should probably already be known, even in a non-SAS 34 engagement, though undoubtedly in a less formalized way than contemplated in the forecasting guide.
-evaluate whether the assumptions are suitably supported.	-*This is not REQUIRED by SAS 34 and would require some digging by the auditor.*
-no conclusion can be drawn *by the accountant* as to whether the forecast is the "most probable" outcome. Management's intentions and inherent uncertainties of forecasts necessarily place this conclusion on management's plate.	-Same under GAAS. Rule 201 of the AICPA Code of Professional Ethics prohibits vouching for the achievability of a forecast.
-the assumptions to be focused upon are those that are material, especially sensitive to variations, deviate from historical trends, or are uncertain.	-SAS 34 emphasis is identical.
-the adequacy of support for assumptions is based on: (1) existence of sufficient pertinent sources. (2) whether assumptions are consistent with their sources. (3) whether historical or other financial information and data are reliable. (4) whether the historical financial or other data are comparable or whether differences were factored in.	-SAS 34 requires review and comparison of the prospective information with past prospective information, historical financial information, and the accuracy of past prospective information. Further, omissions of relevant information and assumptions should be noted. This would encompass at least points (3) and (4) at left. Further, points (5), (6) and (7) would seem a logical extension of *any* review of a forecast.

(5) whether the assumptions are consistent with each other.
(6) whether the logical argument or theory, considered with the assumptions, is reasonable.
(7) whether alternate approaches support the reasonableness of the assumptions.

Management Representations

• Should be in writing and acknowledge management's responsibility for both the forecast and underlying assumptions	• SAS 34 does not mention written representations. However, such representations would seem called for anyway in an audit engagement representations letter, at least to back up management's disclosures within the financial statements about the effect of uncertainties on the company's future.

In a SAS 34 situation, the auditor must address all of the factors considered in that statement prior to drawing a conclusion about an entity's continued existence. This implies that the auditor's procedures for review of forecasts, projections, etc. prepared in conjunction with an audit of financial statements should be thorough and complete.

As the table above suggests, the detailed procedures called for in the forecast guide can be viewed as simply a logical and necessary articulation of the generalized procedures contained in SAS 34. In most cases, it would seem imprudent of the auditor to ignore the guide's suggested approach and procedures—they are formalized in an AICPA document written for accountants, not management consultants, and arguably should serve as the basis for the general procedures described in paragraph 7, 8 and 9 of SAS 34.

The only procedures stated in the forecast guide that are not direct and logical articulations of the SAS 34 approach are (a) knowledge of the forecasting process, and (b) evaluation as to whether the forecast assumptions are suitably supported. Something to keep in mind—the forecast guide implies the auditor should possess a certain level of knowledge about the entity and about forecasting. With the possible exception of a technical aptitude for forecast reviews based on experience, the knowledge required of an auditor in a forecasting engagement is not different from the knowledge required by GAAS in a SAS 34 engagement (or, for that matter, any audit).[5]

Analysis of Differences

The dimensions of the difference between SAS 34 and the forecast guide can be classified into four areas:

1. Nature of procedures
2. Extent of procedures (degree and quality of evidence obtained)
3. Severity of opinion (or lack thereof)
4. Extent of client disclosures.

Overall, the *nature* of procedures in either document is not that different, but SAS 34 is sufficiently non-imperative (i.e., "consider this; consider that") to permit a sincere case to be made by an auditor that reasonable procedural compliance with SAS 34 consists simply of a grasp of the situation and oral management representations.

Nature of Procedures. Differences between SAS 34 coverage and the nature of forecast review guide procedures lie in, (i) knowledge of the client's forecasting system, and (ii) the extent of articulation of the assumptions.

The audit client may not even have thought about having a forecasting or projection system, having no intention of ever publishing any such prospective data. Given that the auditor likewise is not planning on publicly reporting on the client's forecast, the extent (or lack) of sophistication of the forecasting "system" is probably secondary. What has to be of most concern to the auditor is the thoroughness, logic and credibility of the assumptions, and the correctness of calculations. While these are more difficult to deal with absent a formal system, they are nevertheless susceptible of analysis and understanding. Hopefully, the courts will not hold an auditor (or the company) deficient for the company's failure to have developed a formal forecasting system that generates data designed to show that the company will or will not go out of business. Being on the brink of disaster does not usually warrant the expenditure to establish and run a forecasting system. Thus, we will leave this issue, simply recognizing that without a system, the numbers and assumptions become more subjective.

To be able to better understand the client's conclusion, a good deal more articulation of assumptions might be needed. Though management may intuit an assumption, the numerous subassumptions must be communicated to an auditor, explicitly or implicitly, to permit focusing on their reasonableness and the type of evidence that may be available.

Extent of Procedures. SAS 34 identifies its procedures as "considerations." Most are listed in terms of "may" rather than "should." The exception lies in paragraph 9, requiring discussion with management about available forecasts, projections, budgets or other prospective data, particularly data relating to future cash flows. However, this paragraph does not require management to actually produce this information; the only standard is that it must be information that can *reasonably* be developed and that whatever is proffered is relevant. "Reasonable" will remain undefined except when a situation is litigated to a conclusion.

Paragraph 9 addresses the auditor thus: "The auditor should consider the support for significant assumptions underlying the prospective data and should give particular attention to assumptions that are material to the relevant forecasts or projections, [are] especially uncertain or sensitive to variations, [and that deviate] from historical trends." This sounds imperative, but it is immediately diluted by directing the auditor to base his considerations on:

a. Reading,

b. Knowledge of the entity, its business and its management, and

c. Analytical comparison of past, present and future data.

Even after doing these minimal procedures, the only admonition is this: "If the auditor becomes aware of relevant factors, the effects of which are not

reflected in such prospective data, he should also take those factors into account."

The forecast guide is much more specific about what the accountant must do. He must consider the following matters (page 9):

1. Whether sufficient pertinent sources of information about the assumptions have been considered. Examples of external sources the accountant might consider are government publications, industry publications, economic forecasts, existing or proposed legislation, and reports of changing technology. Examples of internal sources are budgets, labor agreements, patents, royalty agreements, engineering studies, historical financial statements and records, sales backlog records, debt agreements, and board of directors actions involving entity plans.
2. Whether the assumptions are consistent with the sources from which they are derived.
3. Whether the assumptions are consistent with each other.

The remaining three considerations (not listed above) are equivalent to those in SAS 34.

After this list of considerations in the forecast guide, there are two particularly incisive paragraphs about items probably infrequently considered in performing SAS 34 procedures. These state (page 10):

> Support for assumptions may include market surveys, engineering studies, general economic indicators, industry statistics, trends and patterns developed from an entity's operating history, and internal data and analyses, accompanied by their supporting logical argument or theory. The accountant may also obtain support during the evaluation of the forecasting process. Support for a forecast can range from information based on informed opinion (such as economists' estimates of the inflation rate) to data that can be tested in traditional ways (such as completed transactions).
>
> In addition to evaluating management's assumptions and their sources of information, the accountant should consider using alternative approaches to the development of assumptions in evaluating the forecasted amounts. For example, to test management's forecast of aggregate sales developed from individual salesmen's estimates, the accountant may employ a historical trend estimate.

The forecast guide also contains detailed illustrative procedures, many of which would be most apropos in a going concern situation.

It is almost obvious that SAS 34 studiously avoided a requirement that evidence be obtained. There are striking similarities between the going concern discussion in *Auditing Research Monograph 1* and the content of SAS 34, but ARM 1 ". . . deals almost entirely with the going-concern concept as it affected the evidence-gathering aspects of the examination."[6] A typical passage about evidence reads:

> Evidence that financing or operating problems have been mitigated may remove the immediate threat to the continued existence of a company.
>
> Financing problems may be mitigated by a waiver or default or an anticipated influx of funds. If there is sufficient competent evidential

matter that the terms of indebtedness will be adjusted or if an arrangement actually deferring payment is obtained, the peril to the continued existence of the company may be removed. An anticipated influx of funds—if supported by evidential matter—may also remove the peril of liquidation. The influx may be from a variety of sources, such as demonstrated ability to continue borrowing, the obligation or desire of a related entity not to allow liquidation, or viable alternatives open to management in financing operations.

Evidence indicating successful future operations may be in the form of reliable company plans or budgets, or operational or management changes essential to a "turn-around" of operations. To a large extent the auditor's ability to evaluate operating problems will depend on the extent of his past experience with the company's operations. The auditor's ability to determine the reasonableness of management's estimates will be influenced both by the company's experience and his own evaluation of management's objectivity and knowledgeability concerning the subject of estimation.[7]

Accountant's Forecast Report Vs. Auditor's Report. It is logical that the major difference between SAS 34 procedures and forecast guide procedures lies in the extent of evidentiary support obtained, because the form of forecast report does not allow for degrees of related uncertainty to be reflected in the wording. The forecast guide states (page 25):

> Limitations on the scope of the review, whether imposed by the client or by other circumstances, may require the accountant to state in his report that he cannot evaluate the presentation of the forecast or assess whether the assumptions provide a reasonable basis for management's forecast.

Further, a scope limitation includes one that is imposed "by circumstances, such as the accountant's inability to evaluate significant assumption(s) because they are not suitably supported." What this effectively amounts to is a disclaimer of opinion on the forecast—no "subject to" opinions.

When this condition occurs, the accountant is required to state:

> Since, as described in the preceding paragraph, we are unable to evaluate management's assumption regarding . . . and other assumptions that depend thereon, we express no conclusion with respect to the presentation of the accompanying financial forecast.

If this is where the auditor would end up after applying the forecast guide procedures in an audit going concern situation, should he say so, in addition to expressing a qualified opinion or disclaimer of opinion?

It could be asserted (perhaps it was even intended) that the auditor's SAS 34 approach in reporting on the examination of financial statements affords an appropriate opportunity to do less—because the auditor of historical financial statements seems to have more options about how much uncertainty he should accept before expressing other than an unqualified opinion.

SAS 34 seems to excuse the auditor from doing a great deal of work before considering the effects of going concern conditions on his report. Paragraph 11 states: "After making any substantive tests that the auditor considers necessary and practicable to assess such information, factors, and plans" the

auditor could reach a conclusion that the audit report need not be modified; then again, modification might not be necessary. Further, paragraph 11 alludes to what the auditor might do upon concluding that the company is not a going concern: "Identifying the point at which uncertainties about recoverability, classifications, and amounts require the auditor to modify his report is a complex professional judgment." An example follows in paragraph 12 of an opinion qualified for going-concern reasons, perhaps hinting at that course of action.

SAS 34 is silent on whether a disclaimer of opinion might be appropriate because of the magnitude of uncertainties, but defers, by reference to SAS 2 (including the particular paragraph that [by footnote] does not prohibit the auditor from expressing a disclaimer). SAS 2 indicates:

> The committee believes that the explanation of the uncertainties and the qualification of the auditor's opinion contemplated by this section should serve adequately to inform the users of financial statements. Nothing in this section, however, is intended to preclude an auditor from declining to express an opinion in cases involving uncertainties. If he disclaims an opinion, the uncertainties and their possible effects on the financial statements should be disclosed in an appropriate manner, and the auditor's report should give all the substantive reasons for his disclaimer of opinion. (AU 509.25, footnote 8.)

Thus, there is *absolutely nothing* in the professional literature demanding a disclaimer of opinion as a signal for increasing the user's perception of the severity of the situation.

Assume that following SAS 34 procedures, the auditor does not gather a great deal of independent evidence about the veracity of the client's assumptions used in a projection that indicates a workout of the going concern situation. Also assume that the auditor issues a "subject to going concern" opinion as exemplified in SAS 34. After all, SAS 34 does not contain mandates.

Will it be sustainable by the auditor, should the company shortly thereafter enter bankruptcy, that all professional standards applicable to the audit were fully adhered to? Would this be true if inquiry outside the company, such as with suppliers, customers, trade associations, etc., or analysis of competitors' strengths, could have indicated rather clearly that the company was going to be unable to achieve the assumptions indicated in its projections? Would, in such a circumstance, it be a better defense to have expressed a disclaimer of opinion?

A disclaimer may not serve to further insulate the accountant if procedures were, under the circumstances, less than might have been expected (i.e., "the standard of practice in the community"). Said differently, the auditor could argue the impossibility of objectively auditing the future (so why try too hard?); and that therefore there was justification for expressing such inability through a stronger form of negative opinion—i.e., a disclaimer.

If indeed the major assumptions are opaque—for example, a certain level of interest rate must be achieved on the company's borrowings or financing needs in the future, or the company's new product needs to be a success in order for the company to survive, the auditor is well advised to spell out these problems in his report, regardless of which kind of opinion or non-opinion is expressed. It is not as though the courts would hold the auditor responsible for having attested to such items if there was a failure to express the inability to do so, but

it could be held that readers were not sufficiently informed of the sensitivity of the assumptions to have been able to reason along with the auditor towards the conclusion reached. In the end, failure to have adequately communicated to users can be as fatal as the unlikely determination that the auditor should have used a crystal ball.

Extent of Disclosure

Naturally, the client should make all the necessary disclosures attendant to its circumstances. In those situations where neither the company nor the auditor express any concern about ability to continue to operate, and the company shortly thereafter fails, both are undoubtedly in jeopardy. What if, however, the company expresses (in its Management Discussion and Analysis portion of the annual report) that it foresees serious problems in the future, and while not being fatalistic about it in detail, puts in enough clues about dangers to continuation of the business? If under those circumstances the auditor addresses the situation via SAS 34 and concludes that a going concern qualification is not necessary, the auditor could be targeted in the event of business failure. It would seem that the auditor's opinion should be no better than the company's representations wherever made, even if it takes some effort to sort out exactly what the company is saying.

Sometimes the auditor in reviewing the company's situation may decide it is in sufficient danger to merit a going concern qualification, but the company does not agree, and refuses to paint the picture nearly so black as does the auditor's report. In the event of subsequent failure, presumably the company would then be in greater jeopardy than the auditor.

Forecasting has evolved a great deal in the past 10 years, commencing with the SEC's removal of its fiat against forward-looking information. Despite SEC allurements (e.g., safe harbor provisions) to companies to publish forecasts or prospective financial information, very few companies have done so. The SEC recently came at it in other ways, by encouraging companies to put prospective data in the MD&A section, as well as by permitting prospective information in pro forma statements.

A question worth asking is whether companies should regularly begin publishing, or at least preparing, forecasts in a uniform manner, making it possible for the auditor to apply a consistent set of procedures. Given the current economic malaise, most corporate managers must be thinking as far forward as possible, even if on scraps of paper. It would be far better that these be formalized.

Conclusion

Under today's conditions, is it reasonable for an auditor, when considering a client's going concern status, to do less than the "maximum" for which the profession has provided guidance? I believe there is a significant chance the auditor will be held responsible for not doing this, and it is time for the profession to close the gap.

There are numerous faltering companies today, whose entire asset/liability structure may be inconsequential in view of the risks involved in non-continuation as a going concern in the future. It seems the auditor is in a

precarious position if the forecast guide procedures are not performed—complete with market research, use of outside economists, industry data, etc.

Admittedly, an auditor would not be in a position to report on the forecast because the reporting requirements thereunder allow only positive opinions or no opinions. But perhaps the auditor should be permitted to report, using a qualified forecast opinion, when in an audit framework. Such an approach might even qualify for SEC safe-harbor treatment—far preferable to the expertised status of an accountant's report containing merely a going-concern qualification. Likewise, forecasts need not be updated if there is no stated undertaking to do so. Perhaps this feature could somehow blunt the impact of the auditor's responsibility for subsequent events.

The auditing profession indeed faces a gap in GAAS. At a minimum, a pronouncement is needed explaining the difference between SAS 34 and the forecast guide; the situation is not clear to auditors as it now stands.[8]

Footnotes

1. This annotated excerpt from Section 11 of the 1933 Securities Act is taken from Cormley, R. James, "Auditing and the Law," Chapter 46 in *Handbook of Accounting and Auditing*, edited by John C. Burton, Russell E. Palmer and Robert S. Kay. Boston: Warren, Gorham & Lamont, 1981, p. 46-26. Several other thoughts in this brief overview of legal considerations also come from this source.

2. Ibid., p. 46-29.

3. ASR 115 excludes companies that have an imminent threat of failure from offering securities under the 1933 Act. Yet, firms not reported to be in immediate danger can (and do) register for "shelf" purposes even though they might not be strong enough to have a public offering for cash.

4. 599 F.2d 1190, 1196-1197 (3d Cir. 1979).

5. For example, SAS 22, *Planning and Supervision*, states that:

> The auditor should obtain a level of *knowledge* of an entity's business that will enable him to conduct his examination in accordance with GAAS. That level should enable him to *understand* events, transactions and practices that may significantly affect the financial statements. *Knowledge* of an entity's business helps the auditor in *evaluating the reasonableness of estimates and management representations*. In addition, the auditor should have *knowledge* of the *nature of the entity's business, organization and operating characteristics* and *matters* affecting the entity's industry. Sources of this knowledge encompass data internal and external to the entity (AU 311.06-.08). [Emphasis added.]

6. Carmichael, D. R. Chapter 6, "Pervasive Uncertainties—Going Concern Problems," in *The Auditor's Reporting Obligation, Auditing Research Monograph 1*. New York: AICPA, p. 109.

7. Ibid., p. 99.

8. Kent St. Pierre and James Anderson, in "An Analysis of Audit Failures Based on Documented Legal Cases," *Journal of Accounting, Auditing and Finance*, Spring 1982, state (p. 243):

> The [Cohen] Commission's staff concluded that audit failures were not a result of deficiencies in auditing standards. Fifteen percent of the errors classified in this study pertained to the interpretation of auditing standards. Although the interpretation of accounting principles and the implementation of auditing procedures accounted for a larger percentage of errors, the 15 percent figure is significant. The staff stated that failures in this area were most frequently traceable to departures by auditors from the standards.
>
> The key issue seems to be whether the departure was intentional or whether the auditor misinterpreted what the study group felt was a clear set of standards. The staff's conclusion cannot be refuted based upon the analysis conducted here, but there is enough available evidence to question the statement that no deficiencies exist in the standards. If the standards are vague and open to misinterpretation, it is difficult to accept the argument that the standards are adequate and raise the level of auditor performance. The results of this study indicate that interpretation errors are common, even for auditors familiar with the general standards.

Appendix

SAS 34 Excerpt

Consideration of Contrary Information and Mitigating Factors

7. The auditor's initial consideration of contrary information focuses on the underlying conditions that resulted in the contrary information (for example, whether the conditions are indicative of a rapid or a gradual deterioration, whether they are temporary or recurring, whether they are susceptible of corrective actions solely within the entity, and whether they are applicable to identifiable elements or segments of the entity or are pervasive). The auditor's initial consideration of mitigating factors is based primarily on (*a*) knowledge of matters that relate to the nature of the entity's business and its operating characteristics and of matters affecting the industry in which it operates, including an awareness of the specific effects and general influence of international, national, and local economic conditions, (*b*) discussions with principal officers having responsibility for administration, finance, operations, and accounting activities, and (*c*) understanding of possible legal implications, if any, based on discussions with appropriate legal counsel when that is deemed necessary.

Consideration of Management Plans

8. Additional considerations often are necessary; they generally focus on management plans that are responsive to the observed conditions that resulted in the contrary information. The relevance of such plans to an auditor generally decreases as the time period for planned actions and anticipated events increases, although longer time periods may be more meaningful in industries with a lengthy operating cycle. Particular emphasis ordinarily is placed on plans that might have a significant effect on the entity's solvency within a period of one year following the date of the financial statements on which the auditor is currently reporting. The auditor's considerations relating to such management plans may include the following.

a. Plans to liquidate assets:

- Apparent marketability of the assets that management plans to sell.
- Restrictions on the disposal of assets, such as covenants limiting such transactions in loan or similar agreements or encumbrances against assets.
- Possible direct and indirect effects of the disposal of assets.

b. Plans to borrow money or restructure debt:

- Availability of debt financing, including existing or committed credit arrangements, such as lines of credit and arrangements for factoring receivables or sale-leaseback of assets.
- Existing or committed arrangements to restructure or subordinate debt or to guarantee loans to the entity.
- Possible effects on management's borrowing plans of existing restrictions on additional borrowing and the sufficiency of available collateral.

c. Plans to reduce or delay expenditures:

- Apparent feasibility of plans to reduce overhead and administrative expenditures, to postpone maintenance or research and development projects, or to lease rather than purchase assets.
- Possible direct and indirect effects of reduced or delayed expenditures.

d. Plans to increase ownership equity:

- Apparent feasibility of plans to increase ownership equity, including existing or committed arrangements to raise additional capital.
- Existing or committed arrangements to reduce current dividend requirements or to accelerate cash distributions from affiliates or other investees.

9. The auditor also should discuss with management any forecasts, projections, budgets, or other prospective data, particularly data relating to cash flows, that are available or that can reasonably be developed and that are relevant in relation to the plans discussed in paragraph 8. The auditor should consider the support for significant assumptions underlying the prospective data and should give particular attention to assumptions that are

- Material to the relevant forecasts or projections.
- Especially uncertain or sensitive to variations.
- In deviation from historical trends.

The auditor's considerations should be based on (*a*) reading of the prospective data and the underlying assumptions, (*b*) knowledge of the entity, its business, and its management, and (*c*) comparison of prospective data in prior periods with historical results and of prospective data for the current forecast period with results achieved to date. If the auditor becomes aware of relevant factors the effects of which are not reflected in such prospective data, he should also take those factors into account. The auditor's function, however, does not include predicting the outcome of future events, and an unqualified opinion on the financial statements does not constitute a guarantee or assurance by the auditor that the entity has the ability to continue for any particular period beyond the date of his opinion.

Discussant's Response to SAS 34 Procedures vs. Forecast Reviews: The Gap in GAAS

William R. Kinney, Jr.
University of Iowa

Let me begin by reminding everyone that my comments are conditioned by my background as a professor. I am not constrained by practical experience with going-concern qualifications, and I do not face legal liability for audit deficiencies with respect to going concerns. Thus, my comments may seem naive since they are based on only my reading of SAS 34 and not on attempts to judiciously apply it.

My interpretation of the words of SAS 34 differs from that expressed by Bob Kay. Also, my interpretation is that SAS 34 has clarified and extended the meaning of SAS 2. I presume that the Auditing Standards Board (ASB) wanted to clarify the meaning of going concern qualifications and specify desirable audit procedures. Whether the ASB has succeeded in changing the requirements and meaning in the accounting (and legal) practice environments is another question.

My comments on Bob Kay's paper will be organized into three related categories. These are:

1. An alternative interpretation of the reporting focus of SAS 34.
2. An alternative interpretation of audit procedures required or implied by SAS 34, and
3. The elimination of the "subject to" qualified opinion as it relates to going-concern situations.

Reporting Focus of SAS 34

The focus of the reporting requirements of SAS 34 is clearly on recoverability and classification of assets and classification of liabilities, and not on the entity's ability to continue in existence *per se*. In paragraph 1, SAS 34 states "When the continued existence of an entity is imperiled, there is heightened concern about the recoverability and classification of recorded asset amounts and the amounts and classification of liabilities." That is, the auditor may question the basis of accounting or whether generally accepted accounting principles are appropriate or a liquidation basis is required. The auditor has no responsibility to search for evidential matter relating to an entity's continued existence. If the auditor does not become aware of any contrary information, then under APB Statement No. 4, he or she may assume that the entity will continue as a going concern and not question whether a liquidation basis is the

proper basis of accounting. When the auditor is aware of contrary information for which sufficient mitigating factors are not present, then the auditor's opinion may be qualified as to recoverability and classification. The qualification is not for the ability to continue in existence *per se,* however (see SAS 34, paragraphs 11 and 12). In other words, under SAS 34, the going concern question is not an end but a means to an end which is the validation of an entity's basis of accounting.

The focus on the basis of the historical accounting of the assets and liabilities is consistent with the view that financial accounting reflects the past. Such reflection may require disclosure relating to the basis of accounting for those past events and transactions or, indeed, the presence of subsequent events relating to the past. The focus on the past is in contrast to the future oriented thrust of Bob Kay's paper in which the auditor must predict the future—i.e., predict whether an entity will continue to exist. This view would require forecasting and some attestation related to future events or states.

I realize that the focus expressed by the ASB in SAS 34 may differ from the common interpretation of a going-concern qualification (or the lack thereof) in the financial community. Also, the courts may indeed, in some cases, interpret the auditor's responsibilities differently than SAS 34 seems to indicate. Certainly, such predictions about the future of the company would be of potential benefit to users of financial statements. The question is whether the auditors are well situated to take such responsibility. Since they do not seem to be so situated, I suggest that we should drop discussion of how the financial community might misinterpret SAS 34 and try to reinforce its "correct" interpretation, perhaps through an education program.

Audit Procedures Required or Implied by SAS 34

SAS's are interpretations of generally accepted auditing standards and as such are related to the legal requirements of a "standard" quality audit required under the securities acts and most contracts for audits. Thus, the SAS's (and SAS 34) are important in assessing the auditor's responsibilities. Also, according to its charge the ASB must consider the cost and benefits of particular statements on standards. Bob Kay seems to say that 1) SAS 34 is too vague as to required procedures; 2) the auditor may be held to a standard of more work than is explicit in SAS 34 and, 3) the level of work is likely to be the level indicated in the AICPAs forecast guide.

Most of the audit procedure requirements of SAS 34 are preceded by a "should consider" modifier. The "should consider" modifier is generally used when the ASB believes that the cost benefit test does not support the conduct of the procedure in every case. In some cases the conditions may, indeed, warrant the application of the forecast guide's level of procedures and the auditor "should" apply that level. In other (and probably most) cases, the guide's level of procedure is not needed and the auditor would be justified in using his or her judgment to perform at a lesser level. The "should consider" requirement places the auditor on notice that substantial work may be needed in some cases, however.

Even if we accept the premise that audit procedures at a level greater than that set by SAS 34 are needed, it is not clear that the forecast guide is

particularly relevant since 1) in SAS 34, the auditor's considerations relate to management's plans which may not include specific forecasts and, 2) the object of prediction is different. In a SAS 34 situation, the immediate object of prediction is the entity's "ability to continue in existence" which is much different from a predicted number for earnings or assets. The continuation in existence prediction is in some cases easier and in other cases harder than prediction of a future accounting number. For example, some firms may need to justify a prediction of positive short term cash flows—it is easier to predict that cash flows will be greater than or equal to zero than it is to predict the exact amount of such flows as in a forecast. In other cases, future short-term cash flows may clearly be positive but the continued existence of a firm may depend on the willingness of bankers and other creditors to continue to provide a line of credit. Examples of both types of cases can be provided from the current financial press.

If auditors are to be held to a higher level of procedure than is required for a particular purpose by a particular pronouncement, then chaos may result. Allan Winter has conducted an analysis of current AICPA-sanctioned services by auditors and has found 19 different levels of assurance. These include assurance from "full" audits, SAARS compilations and reviews, quarterly and segment reviews, reviews of supplemental information and reviews of forecasts and projections, among others. One could argue that an auditor conducting a SAARS compilation is well advised to conduct "full" audit procedures since some court may inappropriately construe such a standard after the fact. I believe that the appropriate approach is for the standards setting body to reason out the economical level of procedure required *ex ante,* educate the users (and courts) as to the responsibility the practitioner is taking, and then *ex post* vigorously defend the practitioner who has applied the predetermined level of service.

Elimination of "Subject to" Opinions and the Non-going Concern

The ASB's current proposal to eliminate subject-to opinions for uncertainties would also apply to going-concern uncertainties. Basically, the proposal says "If in the auditor's judgment the financial statements are prepared in conformity with generally accepted accounting principles, including informative disclosure of uncertainties, then he or she should give an unqualified opinion." A lack of GAAP presentation would continue to require an "except for" qualification. The same requirements would apply in going-concern situations. Footnote disclosure of the question of the basis of accounting and the potential effect on recoverability and classification of assets and classification of liabilities would suffice.

Thus, the proposed elimination of subject-to opinions for uncertainty would require little change in thinking for those who believe that the correct focus of financial statements is on the past with prediction of the future only to assess the appropriateness of the basis of accounting for the past. These persons will not be disturbed by the proposed elimination. Those who believe that the auditor should take more responsibility for predicting the continued existence of firm *per se* will probably be quite disturbed by the proposed elimination.

In summary, I thank Bob Kay for stimulating my thinking about the particular question at hand and the relationships between GAAS, SASs, less

authoritative pronouncements, and the law. I believe that I have clarified some of my own thinking about these relationships. My conclusions as to the particular issues raised, however, differ substantially from those expressed in Bob's paper.

8

Developments in Governmental Auditing: Their Impact On the Academic and Business Communities

Richard E. Brown
Legislative Post Auditor, State of Kansas

Thank you very much for inviting me here tonight. The opportunity for a state official to give advice to representatives of the private and university worlds was an invitation I could not pass up! As Mark Twain was supposed to have said: "To do good is noble; to instruct others in doing good is just as noble and much easier."

My comments this evening will be in two parts. First, I want to tell you about what I know best: auditing in Kansas and the developments that I have witnessed here during the past nearly eight years. I believe you will find, as I always tell the classes I teach in auditing, that Kansas is indeed in the mainstream of what is happening nationally in governmental auditing. Second, based on this experience, I want to suggest some areas of concern in governmental auditing for all of us, problems which I believe will need our attention in the years ahead.

The Evolutionary Changes in the Kansas Audit Operation

The audit operation in the State of Kansas gets its basic mandate from the Legislative Post Audit Act of 1971. This is a well-researched document that was developed and written with a great deal of care and only after considerable expert testimony was received. That care and attention to detail shows in the legislation.

Under the terms of the statute, the audit operation in Kansas has two key units. The first is the Legislative Post Audit Committee. The composition of that Committee is made up of the bipartisan leadership of the two houses of the Kansas Legislature and includes the Speaker of the House, the President of the Senate, the Majority Leader and Minority Leader of the two houses, the chairmen of the House and Senate Ways and Means Committees, and a minority member of each Ways and Means Committee appointed by the Minority Leader. The duties of the Legislative Post Audit Committee include appointing the Post Auditor to a four-year term of office, choosing performance audit topics, and receiving and acting on all audit reports. The second main component of the audit operation in Kansas is the Legislative Division of Post Audit, which is the administrative arm of the audit operation. The Division is headed by the Post Auditor, who has complete management responsibility over the 40-member staff and all audit activity.

The day-to-day functioning of both the committee and the Division are guided by the Legislative Post Audit Act and by a fairly elaborate set of Committee rules covering all major aspects of operations, including media contacts, the release and distribution of audit reports, the availability of working papers, etc. The Legislative Division of Post Audit in Kansas performs financial audits, sunset audits, and performance audits.

As is true in most states, there have been a number of changes in the operations of the Kansas Post Audit machinery throughout the last decade. Formerly an elected State Auditor headed the operation. Many of the staff members were hired without degrees or other professional certifications. Now the Division of Post Audit has a diversified staff of CPAs, MBAs, lawyers, MPAs, EDP experts, and other professionals. Formerly the Division really had no financial audit cycle, leading to audit coverage, at best, over an extended period of time. Now the State is basically on a two-year financial audit cycle. As recently as just a few years ago, the Division did no financial auditing to satisfy federal audit requirements. In the belief that federal revenue sharing audit requirements might go away, they were largely ignored. Today the State is among the leaders in implementing the new single audit concept. Using our own staff resources, we have just completed a single audit of our Department of Social and Rehabilitation Services. The Department is one of our largest State agencies, spending in the neighborhood of $500 million annually. We have contracted out to private firms a number of other single audits and will continue to do so in the future.

As recently as 1975, the Legislative Division of Post Audit did little or no performance or sunset auditing. Now, I think it is fair to say, we are considered a leader in the field, having completed dozens of performance audits in recent years, including audits of social services, highway maintenance, university construction, off-campus courses, duplication of higher education courses, the transferability of courses from community colleges to four-year institutions, and school district performance audits. The latter are among the first in the nation to be completed. Kansas is also a leader in sunset auditing—auditing which in essence examines the need for regulation, the fairness of that regulation, and whether the regulation is being performed in the interest of the public or in the interest of the regulated activity. Sunset audits completed range from audits of small licensing groups like the cosmetologists and barbers, to the larger concerns of nursing home and utility rate regulation.

Indeed, legislative interest in more and more performance and sunset audit work, coupled with increased federal requirements for financial audits, has created such a strain on the audit resources in the State of Kansas that, with the approval of the Legislative Post Audit Committee and the Legislature, the Division has arrived at a solution of contracting more financial audits. In fiscal year 1980, our Division will contract roughly $300,000 of financial audit work to help accomplish that work and to make available resources for more performance audit activity. And that figure is likely to increase in the future. It is important to mention in passing that in the State of Kansas a decision has been made, at least for the time being, to avoid a statewide financial audit and instead conduct financial audits on an agency-by-agency basis.

These developments and changes have been significant, and to a great extent parallel the changes in auditing in other states in the country. The time

has not been without its anxious and even humorous moments. Let me give you a couple of illustrations. Back in 1975, we completed our first performance audit dealing with the regulation and use of water in Kansas. It is important to remember, of course, that this is a topic of grave concern in what is still very much an agricultural state. The audit was quite critical of the manner in which the State program was being operated, generating the following letter from a Senator:

> Dear Mr. Brown:
>
> I understand that your staff worked hard trying to understand and evaluate the operations of the . . . Act. However, when I looked over the members of the committee and learned the background of your staff, I realized the problem . . .
>
> Water is a highly emotional issue. I believe that I can best illustrate it thus: There are three ways to get shot: (1) fool with a neighbor's wife; (2) claim three feet of his worthless land; and (3) cut his water off.

Another elected official was equally sensitive about an audit we completed of her operation. Actually, the report was not that critical, but she certainly took it that way. She wrote:

> Dr. Brown:
>
> I have received a copy of your report . . . I hereby demand . . . an evaluation of . . . your office by an unbiased public accounting firm, free of political control and intervention. The report is grossly incorrect. It is malicious, prepared for purely political uses. It violates the code of ethics of your field. It is an attempt to discredit me personally.
>
> I remind you that although you were hired by a controlled committee, you are paid by the citizens. I demand you account to them for your actions.

But the letter was not the worst part of the whole process. When our audit manager and I visited this official to discuss the draft report, we found that she had invited the TV cameras and other media representatives into the meeting. We immediately reminded her that our Committee rules prohibited discussing a draft audit report in a public setting. At this point she literally jumped out of her chair and shouted at us "to get out of the office and never return." As embarrassing as this was, I was pleased that she was a woman and that she was located on the ground floor of the building. In this business one learns to take his blessings where he can find them. I could not help but be thankful that the then Secretary of Transportation did not receive his audit report in the same manner since he was a former All-American football player and has his offices on the seventh floor of the State Office Building.

Other Changes in Government Auditing

As I have already indicated, these developments and experiences in Kansas are virtually identical to those taking place in many other state governments. There has been a considerable increase in the authority and visibility of audits and of auditors. There has been a tremendous increase in the expectations for good useful audit work. And there has been a great increase in the quality and

influence of state audit officials and their staffs. The state auditors now meet on a regular basis to discuss issues of professional interest including pending legislative changes, and even have their own representative in Washington.

Intertwined with these developments are a number of other important related changes. The U.S. General Accounting Office has recently revised its "Yellow Book," the Comptroller General's governmental audit standards followed by most auditors engaged in governmental audit work. The revised standards cover many changes and place a great deal more emphasis on EDP audit work and on fraud and abuse. While no final decisions have been made, various proposals relating to the creation of a governmental accounting standards board are circulating—an idea which is certainly long overdue. There is considerable pressure on governmental jurisdictions from bond-rating firms for government to get its accounting and auditing systems in order, including the threat of a negative impact on bond ratings if they do not. Just a couple of year ago, the American Institute of Certified Public Accountants sponsored, in cooperation with the U. S. General Accounting Office, a conference in Cherry Hill, New Jersey, to discuss a variety of problems including the government's general dissatisfaction with the work quality on governmental audits by CPA firms.

All of these developments are hopeful signs for the future. The only question one might have is why did it take so long for all this to occur, and why did we have to wait until financial problems in government became so pervasive and so critical? And there is a related concern, a fear that the progress we are now making may not be permanent and that the cycle may swing again the other way.

Problems and Opportunities Suggested by the Kansas Experience

One senses some important questions and concerns beneath this great record of change. With regard to the financial audit in the public sector, there are many questions which still need to be resolved. In a State like Kansas where there is no general obligation bonded indebtedness, what is the value of the financial audit in such a setting—to whom does it convey information, and what is that information? If it is for "the investor" (the taxpayer), does this somehow suggest that the taxpayer may decide whether, on the basis of the audited financial statements, additional "investment" (taxes) should be withheld? Are these audits in any sense cost-beneficial? In our little State we are paying about a million dollars annually for financial audit work. The question is, what are we accomplishing—what if anything does a financial audit tell policymakers and the taxpayers about governmental performance? To illustrate the dimensions of the problem, it is not lost on any of us in Kansas that despite the fact that financial audits of the State's retirement system's financial statements had been conducted for a period of years, it was not until we did a performance audit of the system that we really learned anything about its then dubious investment performance.

A related question has to do with the matter of what is the best—most economical and effective—way to conduct a financial audit of state government. What are the trade-offs of the efficiencies of a statewide financial audit such as that conducted in states like Maryland and Minnesota vis-a-vis the value of the

audit presence provided by Kansas' agency-based approach? What of any importance is lost if the auditors do not conduct test work in a number of small agencies, presumably based on materiality concerns? Indeed, the whole issue of materiality in a government setting may need careful re-examination, since it is a setting which places great emphasis on compliance with law and regulations. In so many of these areas one senses that we are simply following tradition, piling on audit requirements instead of thinking these traditional audit concepts through for their application in a governmental setting.

As we in our state and local jurisdictions move to contract more and more audit work, other questions must also be addressed:

—Should the legislative or executive branch of government, the city council or city manager, do the contracting?

—What, if any, difference does it make?

Our experience in Kansas thus far indicates that this is an important area of concern, clearly impacting on the quality and objectivity of the final audit report.

The old "Yellow Book," under "Organizational Impairments," had some interesting language in it on this issue:

> When independent public accountants or other independent professionals are engaged to perform work that includes inquiries into compliance with applicable laws and regulations, efficiency and economy of operations, or achievement of program results, they should be engaged by someone other than the officials responsible for the direction of the effort being audited. This practice removes the pressures that may result if the auditor must criticize the performance of those who engaged him. To remove this obstacle to independence, governments should arrange to have such auditors engaged by officials not directly involved in opertions to be audited.

Unfortunately, this language has been dropped from the revised standards. The issue as to who does the contracting with CPA firms is an important matter because it may have a great deal to do with the difficulties that have arisen over quality control of contracted audits in government. It is possible, for example, that those doing the contracting at this point in time do not have a great deal of knowledge about audit requirements or what they anticipate receiving from an audit.

Some Educational Concerns

This leads me to my final area of concern, at least for tonight. I detect a great lack of interest at our universities in addressing these kinds of issues in governmental accounting and auditing. I understand that we in government are not alone in our complaints in this regard. For example, those concerned with internal auditing have similar difficulties in getting universities to offer course work in their area. The business schools seem to have a preoccupation with public accounting and with financial auditing, and do little or nothing for the rest of us in accounting and auditing.

The problem takes many serious forms. The courses in governmental accounting and auditing, if they exist at all, are small portions of other already compressed courses. Courses in performance and operational auditing are

lacking. A little attention may be given to management or operational auditing, but there is almost no coverage of program results or effectiveness auditing. Courses are almost entirely lacking in discussions of the "environment" of government, with the understandable result that students, given their lack of exposure and understanding, too often end up being unreasonably biased against government. This, in turn, leads to a situation in which the chances of students being successful in public sector work are greatly diminished. Government loses the trained attention of countless good, young minds while students lose considerable opportunities.

This inattention to the nonprofit sector creates enormous problems for CPA firms which must assign such graduates to do work for them in the governmental sector. One must question the preparation of these graduates for such work. While some steps have been taken by accreditation bodies to improve the curriculum in the governmental area, a great deal more needs to be done.

In conducting the research for my book, *Auditing Performance in Government* (John Wiley and Sons, 1982), I found that little help or guidance has been given by the American Accounting Association or its committees on the questions I have raised above about accounting and auditing in the public sector. Again, this is very regrettable. There has been little attention given to the entire issue of the interplay of budgeting, accounting, and audit systems in government, or to the development of appropriate performance measures which then become the basis for financial reporting and auditing in government.

For good or ill, most of the research and writing on performance auditing in government has been done by practitioners—Felix Pomeranz of Coopers and Lybrand, Leo Herbert, now of VPI and formerly with the U.S. General Accounting Office, and my book on performance auditing. Indeed, the whole development of performance auditing and evaluation in government has been far more a spontaneous groundswell on the part of policy makers than it has been a result of academic attention. It is clear that the profession has been most reluctant to play a leadership role in these innovative areas, suggesting a costly professional conservatism.

Government accounting and auditing has to date clearly not been a good advancement path at most universities, causing many professors to avoid the field and recognize that their careers will not be enhanced by research, teaching, and attention to this area. Again, all of this is most costly and regrettable for government and government finance.

Closing Comments

I recall living in Tennessee in the 1960s and reading one of Ralph McGill's books on the South and southerners, a book about rapid changes in the racial scene in the South at that time. McGill made a comment about that situation which went something like this: "To be a southerner in these times is the most magnificent agony of all."

I feel much the same way about governmental auditing and accounting in the 1980s. Those of us in the field have great power to do good. There is at the same time a great temptation to avoid the hard questions, questions like:

—How much auditing is enough?
—What are its costs and benefits?
—What forms should governmental auditing take?
—Is traditional auditing by itself enough in the public sector?
—Can we demonstrate to policymakers the value of public sector auditing?
—And, finally, who will lead us in thinking through some of the old notions about these issues?

In my judgment, while CPA firms may help find the answers to these questions, it is not their fundamental role to do so. And it is certainly not the role of the business community in general. But it is very much the role of the AICPA, the GAO, the FAF and FASB, the GASB and its predecessor, the National Council on Governmental Accounting. Most of all, the formal pronouncements of such groups must result from the research attention of our universities. And, frankly, the lack of attention to date to these issues by these groups is astounding.

If you will indulge me a moment, I will end on a light but I believe appropriate note coming out of a song. It strikes me as being most relevant to the fate of governmental accounting and auditing, and to the decisions that are before us in the 1980s and beyond:

> Thank you . . . for the time that is past, for all the values and thoughts that will last. May we all stagnant tradition ignore, leaving behind things that matter no more . . .
>
> . . . Make us afraid of the thoughts that delay, faithful in all the affairs of today; keep us . . . from playing it safe, thank you that now is the time of our life!